47th

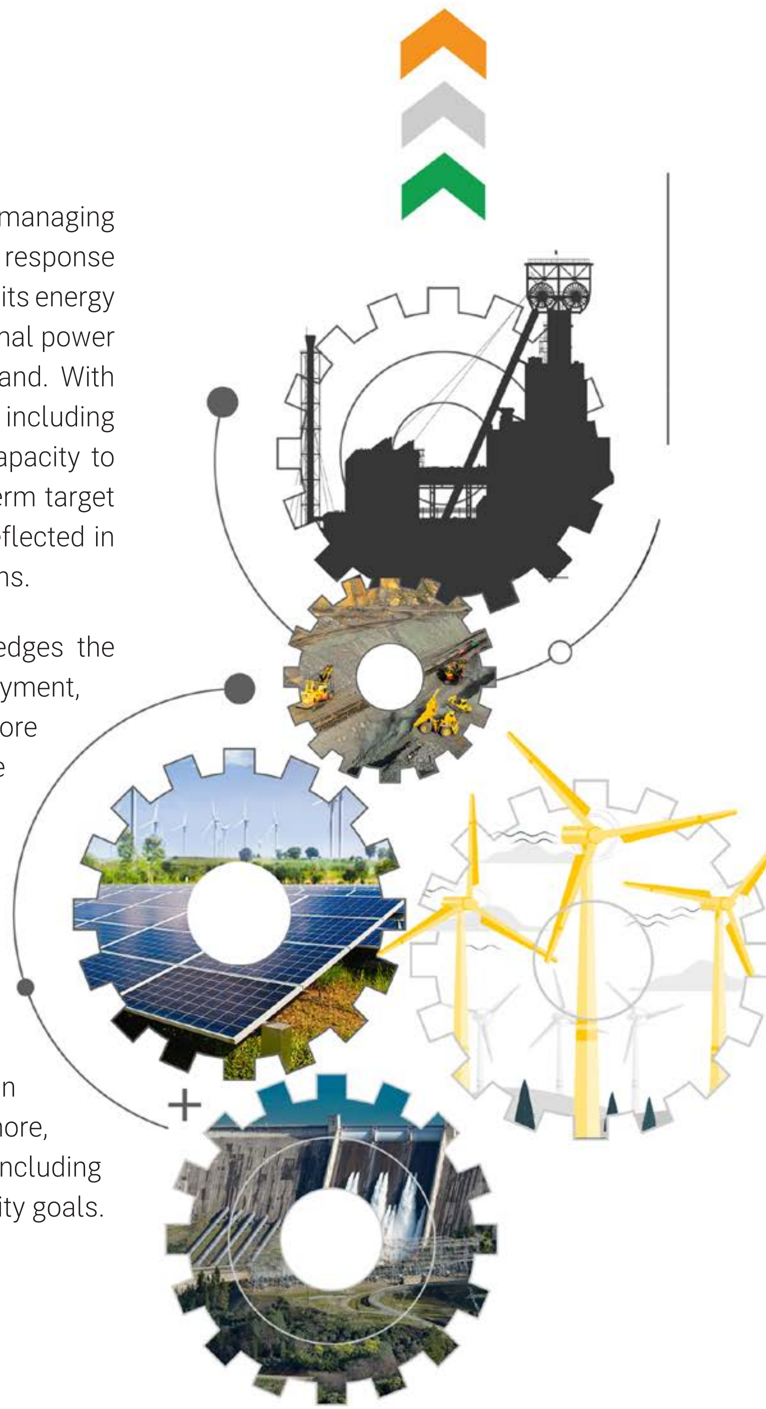
INTEGRATED ANNUAL REPORT 2022-23

Catalyzing Just Energy Transition

Catalyzing Just Energy Transition

NTPC, a sustainable energy leader in India, is proactively managing the nation's energy transition equitably and effectively. In response to climate change challenges, the company is diversifying its energy sources, focusing on a balanced mix of economical thermal power and cleaner renewable energy to meet increasing demand. With an aggressive approach to expanding renewable energy, including green hydrogen, NTPC aims for nearly 45-50% of its capacity to come from non-fossil fuels by 2030, with the medium term target of 60 GW of renewable capacity by 2032. This is also reflected in NTPC's Energy Compact goals submitted to United Nations.

Despite the drive towards renewables, NTPC acknowledges the importance of coal power plants for grid reliability, employment, and social inclusion. In response, we are transitioning to more efficient thermal technologies while exploring innovative energy solutions like biomass co-firing, green hydrogen production, and waste recycling based on circular economy principles. Concurrently, NTPC plans to transform its thermal plants into chemical complexes for carbon capture and alternate fuel production, thus avoiding premature closures and reducing dependency on imported fossil fuels. Commitment to emission mitigation includes implementing flue gas desulphurization systems and De-NOx combustion modifications. Furthermore, NTPC is investigating the potential of nuclear power, including advanced and modular reactors, to further its sustainability goals.



About the Report

Scope of the Report

The NTPC Integrated Annual Report follows the guidelines of the International Integrated Reporting Council (IIRC) as outlined in the <IR> Framework. NTPC Limited has reported in accordance with the GRI standards for the period from 1st April 2022 to 31st March 2023. Other frameworks such as EUSS, WEF - Stakeholder Capitalism Metrics, National Guidelines on Responsible Business Conduct (NGRBC), United Nations Sustainable Development Goals (UN SDGs), and the United Nations Global Compact (UNGC) Principles has been also referred. The financial and statutory information in the report complies with the Companies Act, 2013, Indian Accounting Standards, SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015, and Secretarial Standards.

Report Methodology

Uniform methodologies are used to collect performance data at all NTPC stations. The data is processed at each station using universally accepted approaches for measurement, calculation, and analysis. The measurement methods in this report remain unchanged from the previous report unless specified. The report's content and aspect boundary have been reviewed and approved by the company's top management.

Boundary of the Report

This report (sustainability indicators) includes NTPC Limited's business activities and its Joint Ventures & Subsidiaries, focusing on Electricity Generation (Thermal, Renewables, Hydro), Consultancy, Business Development, NETRA, and Energy Trading pertaining to entities including NTPC Ltd., NSPCL, BRBCL, NEEPCO, THDC, NGEL, APCPL, MUNPL, NTECL & RGPPL.

The report encompasses data and information from 1 April 2022 to 31 March 2023, specifically pertaining to operational power generation plants located in India. Noteworthy changes in installed power generation capacity during this period are outlined in the manufactured capital section of the report.

Assurance of the Report

Non-financial information in this report has been independently assured by M/s KPMG Assurance and Consulting Services LLP. A reasonable assurance was conducted as per ISAE 3000 Standards on select non-financial disclosures reported based on GRI 2021 standards.

NTPC appreciates feedback from all stakeholders. For any additional information regarding the IAR Report, please reach out to the addresses given below:

Headquarters

NTPC Limited
(A Govt. of India Enterprise)

NTPC Bhawan
Scope Complex,
7, Institutional Area, Lodhi Road,
New Delhi-110003

Chief Sustainability Officer's Office

Engineering Office Complex (EOC)

NTPC Limited
Sector - 24, Noida - 201 301 (U.P.)
Email - sustainability@ntpc.co.in
Phone: (+91) 120 - 2410466

Reference Information

Registered Office

NTPC Bhawan
Scope Complex, 7, Institutional Area,
Lodhi Road, New Delhi-110003

Registrar & Share Transfer Agent for Equity Shares

Beetal Financial & Computer Services Private Limited,
Beetal House, 3rd Floor, 99, Madangir, Behind LSC, Near
Dada Harsukhdas Mandir, New Delhi - 110 062

Contact person: Shri Punit Mittal or
Shri Ratan Kumar Karna

Phone: 011-29961281 – 83, 26051061
and 26051064
Email: ntpc@beetalfinancial.com

Depositories

National Securities Depository Limited
Central Depository Services (India) Limited

Shares listed at

National Stock Exchange of India Limited
BSE Limited

NTPC's Subsidiary Companies (as on 31 March, 2023)

- NTPC Vidyut Vyapar Nigam Limited
- NTPC Electric Supply Company Limited
- Bhartiya Rail Bijlee Company Limited
- Patratu Vidyut Utpadan Nigam Limited
- NTPC Mining Limited
- North Eastern Electric Power Corporation Limited
- THDC India Limited
- NTPC EDMC Waste Solutions Private Limited
- NTPC Green Energy Limited
- Ratnagiri Gas and Power Private Limited

Company Secretary

- Mr. Arun Kumar

Auditors

1. M/s S K Mehta & Co.
2. M/s Varma & Varma
3. M/s Parakh & Co.
4. M/s C K Prusty & Associates
5. M/s B C Jain & Co.
6. M/s V K Jindal & Co.

BANKERS

- AXIS BANK
- बैंक ऑफ इंडिया Bank of India
- बैंक ऑफ़ बड़ौदा Bank of Baroda
- बैंक ऑफ महाराष्ट्र Bank of Maharashtra
- केनरा बैंक Canara Bank
- सेन्ट्रल बैंक ऑफ इंडिया Central Bank of India
- HDFC BANK
- ICICI Bank
- IDBI BANK
- Indian Overseas Bank
- IndusInd Bank
- J&K Bank
- punjab national bank
- SBI
- यूको बैंक UCO BANK
- Union Bank of India
- YES BANK

Content

The detailed notice of our AGM can be accessed through the below QR

Annual General Meeting

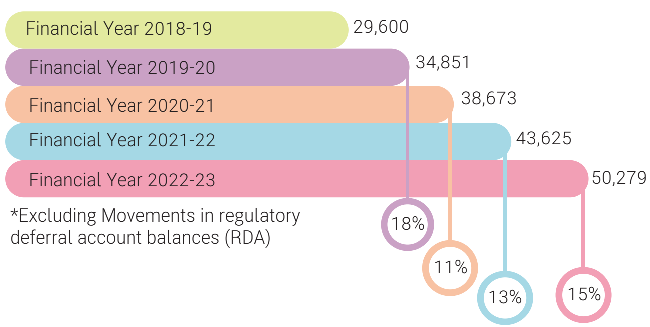
Date	:	30th August, 2023
Time	:	10:30 A.M.
Venue/Mode	:	Video Conferencing (V"C")/ Other Audio-Visual Means ("OAVM)

Performance Highlights

Select Financial Highlights for Financial Year 2022-23

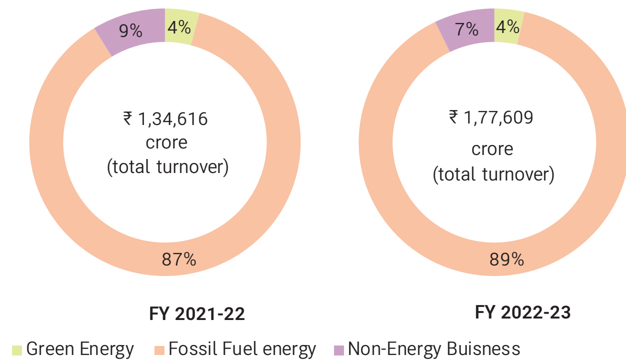
EBITDA* (₹ crore)

Y-o-Y increase (Consolidated)



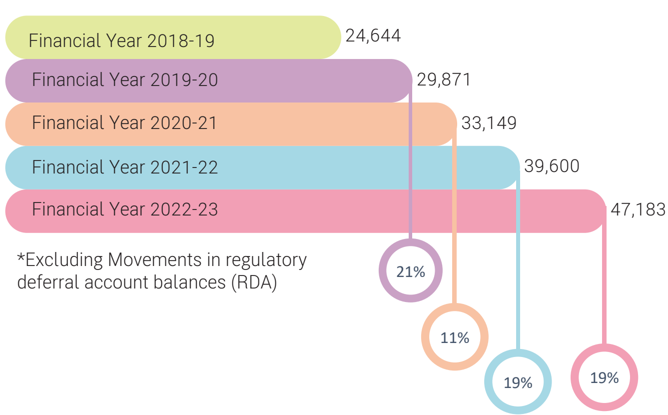
*Excluding Movements in regulatory deferral account balances (RDA)

Breakup of Revenue (Direct Economic Value Generated) (Consolidated)



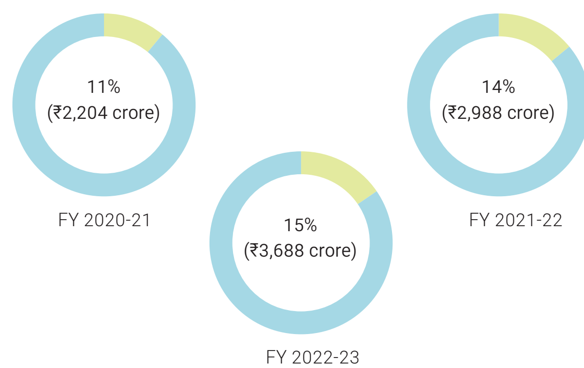
EBITDA* (₹ crore)

Y-o-Y increase (Standalone)

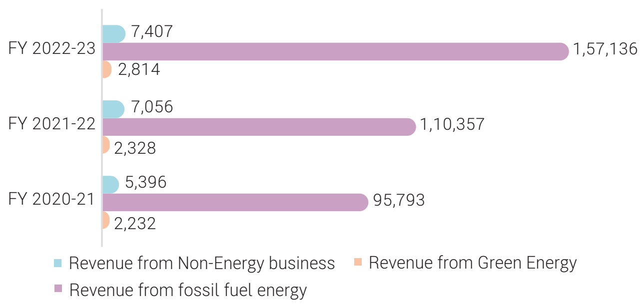


*Excluding Movements in regulatory deferral account balances (RDA)

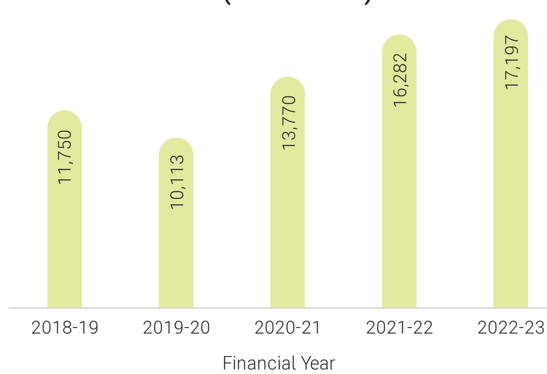
Capex on Environment (Standalone)



Revenue Sources (₹ crore) (Direct Economic Value Generated) (Standalone)

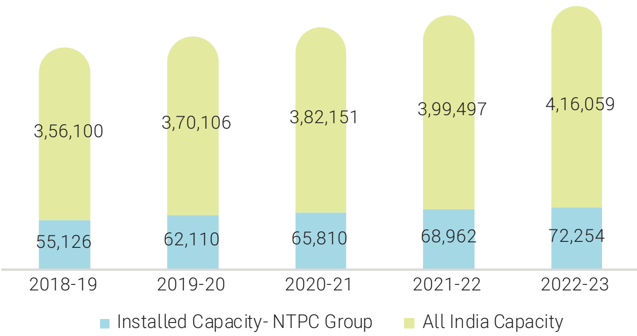


Profit for the Year (₹ crore) (Standalone)

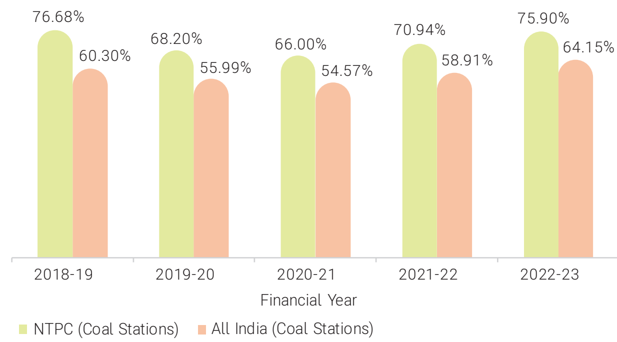


Select Operational Highlights for Financial Year 2022-23

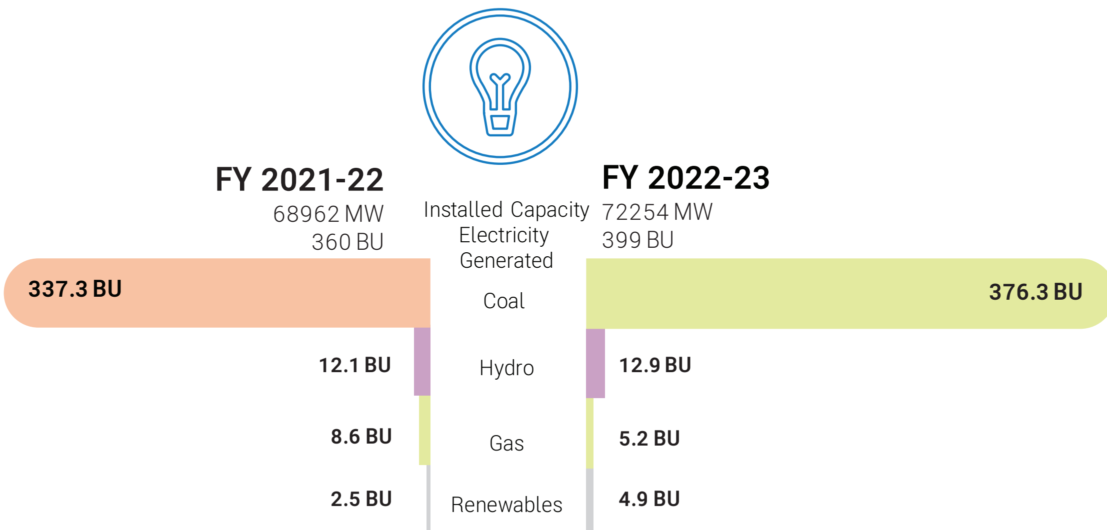
Growth in National Power Generation Installed Capacity (MW)



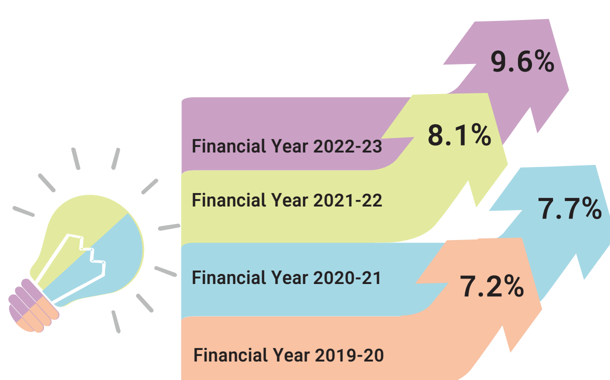
NTPC PLF vs All India PLF (Standalone)



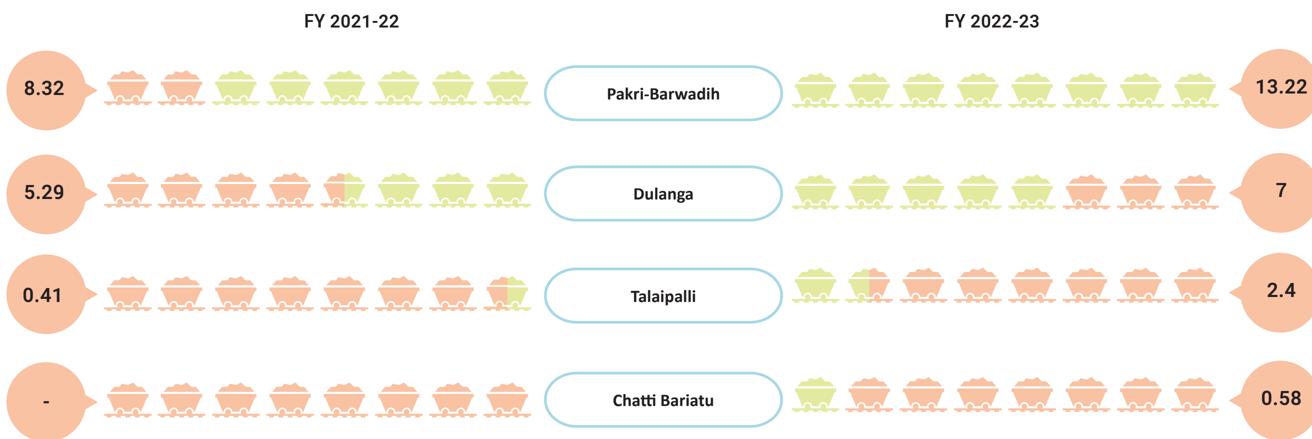
Operation Performance Trends



Share of Clean Energy in NTPC Generation Capacity

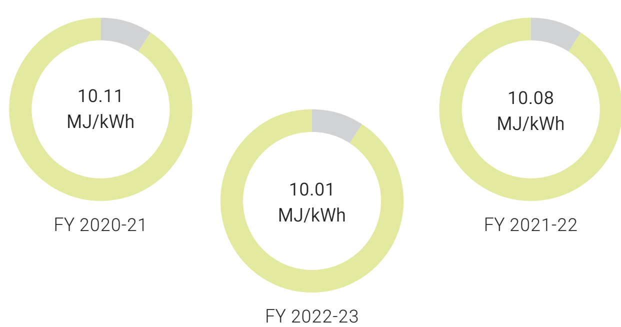


Coal Production (Million Tonnes)

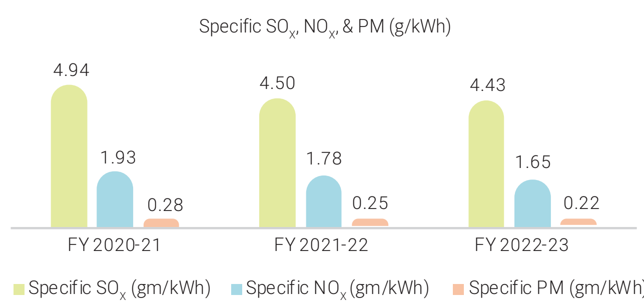


Select Sustainability Highlights for Financial Year 2022-23

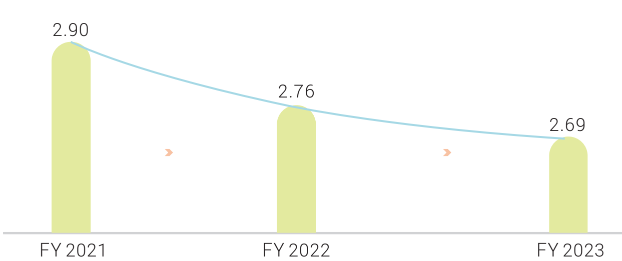
Energy Intensity



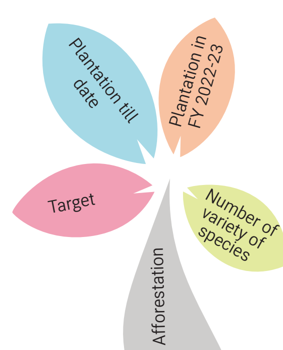
Reducing Air Pollution in Operations



Specific Fresh Water Consumption (l/kwh)



Creating Carbon Sinks by Planting Trees



1 Mn
Annual tree plantation target till 2026

38 Mn
Total cumulative number of trees planted at plant and outside the plant (since inception upto March'23)

1+ Mn
Total number of trees planted in Financial Year 22-23

656
Number of variety of species planted in Financial Year 22-23

Shri Gurdeep Singh
Chairman & Managing Director

Letter to Shareholders

"Amidst challenges and uncertainties, your Company achieved remarkable financial results, demonstrating strong growth and a commitment to providing reliable, affordable, and clean power supply. With a focus on customer relationships, shareholder value, and long-term sustainability, we are well-positioned for continued success in delivering consistent and sustainable growth."

Dear Shareholders,

The year 2022-23 was remarkable in many respects.

Your Company registered a strong and resilient performance by achieving the highest ever profit and highest ever power generation. It was also a year full of uncertainties in terms of supply chain constraints, fuel availability issues and rising interest rates, that we navigated with great agility. The turbulent operating environment of the past year has reinforced our commitment to the long-term objective of providing reliable, affordable, and clean power supply for all.

Despite a challenging economic environment, your Company demonstrated strong growth and achieved remarkable financial results. This growth was primarily driven by increase in generation from the existing assets and newly commissioned Units including renewables. Additionally, our diligent cost management strategies and operational efficiencies contributed to a healthy Earnings Per Share, which registered a growth of 5.62% over the previous year. We remain committed to driving sustainable growth and maximizing shareholder value through continued innovation, strategic partnerships, and a customer-centric approach.

I am delighted to share that our bills realization for the year reached an impressive ₹1,54,356 crore, 100% of the billed amount. This achievement demonstrates the effectiveness of our customer relationship and is a testament to the trust and reliability of our customers. We are grateful for their continued support, and we remain dedicated to delivering value and maintaining a strong relationship with the customers.

We continue with our commitment to optimizing financial performance, ensuring consistent returns for shareholders, and upholding our position as a trusted and responsible player in the industry. In FY 2022-23, the Board of Directors of your Company has recommended a final dividend of 30% of paid-up capital, equivalent to ₹ 3 per share. This recommendation is subject to the approval of our shareholders at the upcoming Annual General Meeting. Additionally, it's worth noting that this final dividend is in addition to the interim dividend of 42.5% of paid-up capital, already paid at ₹ 4.25 per share. Remarkably, this year marks the 30th consecutive year of dividend distribution by your Company, showcasing our steadfast commitment to providing value to our esteemed shareholders.

We are grateful for the ongoing support and confidence our shareholders place in the Company's growth prospects. With their belief in our vision, we are motivated to continue striving for excellence and delivering long-term value.

Looking ahead, your Company is well-positioned for continued success. By remaining agile, adapting to market dynamics, and leveraging our strong financial foundation, we are confident of our ability to deliver consistent and sustainable growth in the years to come. Together, we will navigate the dynamic business landscape, seize opportunities, and create a prosperous future for all stakeholders. We extend our gratitude to all our stakeholders for their unwavering support and look forward to maximizing value for them as well as the nation.

Robust Overall Performance:

We have fast tracked our energy transition plans and made significant progress in terms of starting work at many new locations. We have also finalised several renewable energy contracts and as a result, our total renewable pipeline has reached 20 GW mark. We have adopted multiple models for securing land banks and are well on track to achieve our targeted capacity addition of 60GW by 2032. Additionally, we have made several new partnerships in the renewable segment.

During the FY 2022-23, your Company recorded an all-time high-power generation of 399.2 BU, registering a growth of 11%. Further, eight of your Company's coal stations figured in the top twenty-five best-performing stations of the country in terms of PLF and our coal-based stations registered a PLF of 75% against the country's coal PLF of 64%. These numbers demonstrate your Company's best in class asset management practises, and the capability of its human resources.

I am happy to inform you that our relentless efforts have resulted in a capacity addition of 3,292 MW, with a commercial capacity addition of 3,952 MW in FY2022-23 including acquisition of Jhabua (1X600 MW) through NCLT. Notably, this includes a significant contribution of 1,352 MW from renewable sources and the first-ever overseas capacity of 660 MW in Bangladesh, elevating NTPC group's total installed capacity to 72,254 MW. What's even more important is that, for the first time, our organic non-fossil capacity addition has surpassed fossil capacity addition, showcasing our commendable progress in the energy transition journey. Your Company achieved this feat despite a lot of uncertainties and disruptions in the global supply chain.

Another notable highlight is the exceptional growth in coal production from our captive mines, which reached 23.2 million metric tons (MMT) during FY 2022-23, marking a growth of 65%. Further, in Q1 of FY 2023-24, your Company registered a growth of over 100% in coal production as compared to Q1 FY 2022-23. This significant progress underscores our commitment to ensuring fuel security for our power stations. Looking ahead, we have set an ambitious production target of 34 MMT for FY 2023-24, reinforcing our dedication to meeting the growing energy demands while prioritizing the stability and sustainability of our operations.

These achievements would not have been possible without the dedication of our talented team. As we forge ahead, we remain steadfast in our pursuit of innovative and sustainable business practices and the continued growth of our non-fossil fuel portfolio. We are proud of our accomplishments and look forward to the exciting opportunities that lie ahead in shaping a cleaner, greener, and more prosperous energy future.

Ambitious growth plans – Leading India's Energy Transition:

We are aware of the prevailing issues on the global and national business horizons. Nevertheless, we are well-positioned to address these challenges head-on. Our robust strategies, coupled with our agile decision-making processes, empower us to effectively mitigate risks and capitalize on emerging prospects.

We take great pleasure in sharing the continued success of your Company in securing renewable bids, cementing its position as a formidable player in India's renewable market. Our dedication to achieving the targeted renewable capacity addition has propelled us to the forefront of the industry to explore various models and devise innovative business strategies that ensure long-term viability and lucrative returns.

Presently, we have operational renewable capacity of 3.3 GW, with an additional 6 GW under construction. Furthermore, we have an extensive pipeline of 12 GW, reflecting our commitment to accelerating renewable capacity expansion. Additionally, we are working on various storage solutions including largescale PSP.

To facilitate our ambitious growth plans, your Company is actively collaborating with start-ups, innovators, manufacturers, commercial and industrial consumers, as well as leading institutions. By harnessing the collective expertise and synergies of these partnerships, we are confident in achieving our targeted capacities within the stipulated timelines. Further, the Ministry of New and Renewable Energy has identified us as one of the implementing agencies to auction 50 GW of renewable capacity in the current fiscal.

I would like to place on record that we have annulled the process of identifying a strategic investor for NTPC Green Energy Limited due to certain issues and are now working on other strategies including an Initial Public Offer (IPO) which will unlock more value.

We are proud to report progress in the green hydrogen space as well. We have successfully commissioned blending project that incorporate green hydrogen with PNG (Piped Natural Gas). Moreover, green hydrogen mobility projects in Leh and Delhi, are set to be commissioned in the current fiscal. We are also working with Indian Army for setting up green hydrogen-based microgrids in remote locations.

ESG Centric Growth:

Your Company prioritizes sustainability in a manner that respects the diverse contexts of our operations, both geographically and socially. Transparency is akin to a core value for us, and we are committed to promptly disclosing our performance in social, environmental, and economic aspects. We are consistently expanding our scope by incorporating additional sustainability standards and ESG frameworks. I am happy to share with you that Our ESG rating (by Sustainalytics) has improved by one band in the last fiscal.

Ramagundam Floating Solar

As a key player in India's energy transition journey, your Company holds a critical role due to its substantial share in the country's power generation. Water conservation and circular economy have always been a cornerstone of your Company's core business strategy. In FY 2022-23, we achieved a specific water consumption of 2.69 l/kWh. Additionally, the commencement of our first Air Cooled Condenser (ACC) at the North Karanpura plant is expected to save around 75% of water compared to conventional Water-Cooled Condensers. Furthermore, our ash utilization percentage increased to 83% in FY 2022-23, reflecting our commitment to sustainable waste management practices.

I am happy to inform you that we have achieved success in the demonstration of Municipal Solid Waste (MSW) to the "Green Charcoal" project at Varanasi. With this, we have taken action for installing more such plants in the days to come. This is expected to bring good value for your Company as well as society at large.

Safety is of paramount importance at our workplaces and in FY 2022-23, we provided 2.81 million man-hours (+106% YoY) of safety training, including contract workers. This significant investment in training underscores our commitment in creating a safe and secure working environment for all.

In terms of Corporate Social Responsibility (CSR), your Company continued to be one of the largest corporate spenders in India. In FY 2022-23, we spent ₹ 315.32 crore on CSR activities, reaffirming our commitment to social welfare and community development.

Your Company has embraced the principles of LiFE - Life Style for Environment, as promoted by our country on a global scale, and has implemented numerous campaigns and awareness programs across its business units to safeguard and conserve the environment.

Furthermore, your company is actively pursuing a "just transition" by incorporating clean energy into its portfolio. This will not only reduce carbon emissions but also contribute to a cleaner and more sustainable energy future. Additionally, by prioritizing the re-skilling of workforce, your Company is ensuring that the transition to clean energy is accompanied by opportunities for career development, safeguarding the livelihoods of its employees and other stakeholders.

We remain dedicated to our sustainability goals and are constantly striving to improve our performance across various dimensions. Through transparency, accountability, and proactive measures, we aim to create a positive impact on the environment, society, and economy.

We prioritize sound corporate governance and remain steadfast in our commitment to ethical corporate practices. Our actions are guided by principles of conscience, transparency, fairness, professionalism, and accountability. These values serve as the foundation for actions of our employees and management, shaping our approach to conducting business.

We recognize the importance of upholding the trust and confidence placed in us by our stakeholders. By practising sound governance principles and consistently fostering a culture of integrity, we aim to ensure that your Company operates in a manner that aligns with the best interests of all our stakeholders.

Ensuring energy security:

Meeting energy requirement of the country is of utmost priority for your Company. Accordingly, we have set ambitious targets for capacity addition in the fiscal year 2023-24. Our goal is to add approximately 5 GW of new capacities during this period. As of the first quarter, we have already commissioned 770 MW, and commissioning activities are progressing well on other projects which are in advanced stages of completion.

LiFE Lifestyle for Environment

Furthermore, as mentioned in our previous communication, while putting utmost thrust on renewable capacity addition, we are also considering the development of around 7 GW of additional coal-based capacity as brownfield projects. This is essential to meet the increasing power demand of the country. The commissioning of these capacities is planned in a phased manner, with the target timeframe set till 2030.

These expansion plans reflect our commitment to meeting the growing energy requirements of our nation for ensuring reliable and affordable power generation. Through timely project execution and adherence to stringent quality standards, we aim to enhance our capacity portfolio and contribute to the overall energy security of the country.

In the fiscal year 2022-23, your Company demonstrated a strong commitment to growth through substantial investments in capital expenditures. These investments play a pivotal role in driving our growth trajectory, enhancing our operational capabilities, and capitalizing on emerging opportunities in the market.

Accolades:

We are delighted to announce that our pioneering efforts in leading India's clean energy transition and emphasis on training have garnered global recognition. Your Company's significant contributions to the sector have been acknowledged through prestigious accolades, including the highly esteemed global awards presented by S&P Platts and ATD BEST.

These coveted awards represent your Company's commitment to sustainable practices and our relentless pursuit of excellence in the clean energy domain. The recognition reinforces the positive impact we are making within India and on an international scale, further validating our position as a leader in the clean energy revolution.

Bright future ahead:

The Indian power sector is undergoing a significant transformation, driven by government policies. Integration of digital technologies and smart grid solutions is revolutionizing the sector, optimizing grid operations, and enhancing system reliability. Ongoing power sector reforms address the challenges and create a conducive environment for growth.

With the economic activities gaining further momentum, leading to increased energy demand, as the largest utility in the country, your Company plays a crucial role in meeting the growing power requirement and is pursuing opportunities to expand our presence across the energy spectrum.

We have developed our expertise in renewables, storage, and green hydrogen. Amidst the energy transition, we are strengthening our existing core business while building a new core, leveraging digital tools, and adopting new-age technologies to stay ahead.

Our focus is on completing existing projects, fast-tracking new ones, and operating our fleet efficiently and reliably. Simultaneously, we are adding renewable capacity aggressively and exploring opportunities in

Rojmal Wind

green hydrogen, nuclear, SMRs, green charcoal, CCU, green chemicals, and more. Additionally, two nuclear power projects Chutka and Mahi Banswara through a joint venture between NTPC and NPCIL called ASHVINI with an aggregate capacity of 4200 MW are being considered for implementation. We are creating a future-ready workforce through reskilling, redeploying, and hiring talent to meet evolving business needs.

Through diversification, collaboration, and innovative business models, we aim to achieve new heights, maintain our leadership position, and ensure sustained returns for our shareholders. These initiatives position us for success in the dynamic energy landscape while contributing to a sustainable and prosperous future for all.

Acknowledgements:

I would like to extend my heartfelt thanks and gratitude to the Government of India, particularly the Ministry of Power, Ministry of Coal, Ministry of Railways, Ministry of Environment, Forest, and Climate Change, Ministry of New and Renewable Energy, DIPAM, CERC, CEA, CAG, State Governments, our esteemed Customers, Auditors, Vendors and other authorities and agencies who have provided continued support. Your continuous support has been instrumental in our success.

I would also like to express my appreciation to my fellow Board members for their invaluable contributions towards strengthening the Company. I am deeply grateful to our investors, shareholders, employees,

Sipat Super Thermal Power Station

and customers for their trust and support. Your trust is highly valued, and we remain committed to working tirelessly to uphold it.

Once again, I extend my sincere thanks to all stakeholders for their trust and confidence in your Company. We are dedicated to surpassing expectations and creating a sustainable energy future.

With Best wishes

Directors' Profile

Gurdeep Singh
Chairman & Managing Director

Gurdeep Singh [DIN: 00307037] is the Chairman & Managing Director of NTPC Limited, India's largest integrated power utility and a global energy major since 2016.

In an illustrious career spanning, more than three and a half decades, he has held leadership positions with several national and multinational companies like PowerGen, CESC, AES, IDFC, GSECL, NEEPCO, and DVC.

Mr. Singh is an alumnus of NIT Kurukshetra and IIM Ahmedabad and has undergone management and leadership training from Harvard and Oxford business schools.

An accomplished business leader with expertise in building and managing businesses across the power sector value chain, Mr. Singh is leading NTPC's transformational journey into a sustainable integrated energy company.

Mr. Singh embraces innovation and a people-centric sustainable approach to business. Under his leadership, NTPC has been consistently ranked as a 'best employer' internationally and received awards and recognitions for its community-oriented innovative CSR initiatives and business sustainability.

Mr. Singh's pioneering efforts in leading India's clean energy transition have earned him global acclaim, including the S&P Platts Global CEO of the year award.

Dillip Kumar Patel
Director (HR)

Dillip Kumar Patel, [DIN:08695490], has taken charge as Director (HR), NTPC on 1st April 2020.He started his career in NTPC way back in 1986 as an Engineering Executive Trainee (11th batch). Mr. Patel's ascent from his humble beginning as an Executive Trainee to the top echelons of HR function in NTPC signifies his passion, commitment and hard work. He graduated in Mechanical Engineering from NIT, Rourkela and did his Post Graduate Diploma in Business Management (HR & Finance) from MDI, Gurgaon. He has also received management and leadership training inputs from ESCP-EAP (Paris, Berlin & Turin), Harvard Business School (USA), ISB Hyderabad & XLRI Jamshedpur.

He has an illustrious career spanning over more than three decades entailing both line and HR functions. After initial exposure of working in Operation & Maintenance, he took a leap in his career and switched to core HR function in 1997. He looked after various facets of HR and subsequently moved on to become the Head of HR of Koldam, the first hydro project of NTPC. He had been Head of HR at various projects of NTPC such as NSPCL-Bhilai, Sipat, and Tanda for about 13 years. He had a short stint as Regional Head of HR of Eastern Region-II before being appointed to the post of Director (HR) in NTPC.

He has undertaken various challenging assignments and has successfully managed HR functions while working at various locations comprising of thermal, hydro, JVs as well as taken-over projects. He firmly believes in the philosophy of "People before PLF". His rich and varied experience will help the Organization to deal with energy transition effectively and take NTPC to new heights in the days to come. Shri Patel, in addition to his prime responsibilities as Director (HR) is also part time Chairman on the board of NTPC SAIL Power Company Limited (NSPCL), Aravali Power Company Private Limited (APCPL) and Convergence Energy Solution Limited (CESL).

Ramesh Babu V.
Director (Operations)

Ramesh Babu V. [DIN:08736805], a Mechanical Engineering graduate from NIT Srinagar and Masters in Thermal engineering from IIT Delhi, joined NTPC as 12th batch Executive Trainee in 1987. He has over 35 years of vast experience with outstanding contribution in management of large size plants in the area of power plant operation & maintenance, Renovation & modernization of old units and in area of efficiency and systems improvement of thermal plants. He, as a Professional Manager and Strategic Planner has led several initiatives for improving reliability and efficiency of Plants.

Shri Ramesh Babu's experience in power sector includes Senior Management level exposure as a "Business Unit Head" of NTPC Talcher Kaniha & NSPCL Durgapur. Prior to elevation to the post of Director (Operations), he was working as ED to CMD & was working on system improvement activities and strategies related to operational excellence of NTPC power plants.

Shri Ramesh Babu is also Part time Chairman on the Board of NTPC Tamil Nadu Energy Company Ltd. (NTECL), Bhartiya Rail Bijli Corporation Limited (BRBCL), Meja Urja Nigam Private Limited (MUNPL) and Jhabua Power Limited (JPL). He is a Permanent Invitee on the board of Northern Coalfields Limited (NCL) & Member of Central Pollution Control Board (CPCB).

As Director (Operations), he is responsible for overall planning for Safe, Reliable, sustainable, and Efficient operation of all power generating stations of NTPC group Portfolio, while ensuring fuel security, safety & environmental compliance at all the Power Stations.

Ujjwal Kanti Bhattacharya
Director (Projects)

Ujjwal Kanti Bhattacharya [DIN: 08734219] is an Electrical Engineering Graduate from Jadavpur University, Kolkata and Postgraduate in Management from MDI, Gurgaon. Besides many technical training from time to time, he has attended training in Leadership Development in Singapore and completed short term course on Strategic Management from Harvard Business School in USA.

He joined NTPC in the year 1984 as 9th Batch of Engineering Executive Trainees. He started his career in Green Field Project Construction in 2600 MW Korba STPP, followed by 2100 MW Farakka STPP working in the areas of Project management, Power Plant Operation & Maintenance, Renovation & Modernization, Environment Management, Technical Services, Fuel Management etc. at 1600 MW Farakka STPP.

In the year 1996, he moved to Talcher Thermal Power Station (460 MW), an Old and Underperforming asset, taken over by NTPC from Orissa State Electricity Board. He, along with his team, created history in turning around the station, which went on to become a top performing station in India for years thereafter, till as recent as 2021.

Thereafter in 1999, he was assigned Corporate Function in Delhi wherein he significantly contributed to NTPC's vertical & horizontal business diversification as well as Mergers & Acquisitions growth through inorganic route. During the stint of almost 14 years, he had an illustrious career in Business Development function of NTPC in Domestic as well as International Arena. Some of the achievements include NTPCs diversification into hydroelectricity, acquisition of 800MW Koldam Hydro Project, Creating subsidiary company NESCL for electricity distribution business, Structuring and setting up Trincomalee Power Company Ltd., in Joint Venture with Srilanka, Winning multiple consultancy bids overseas, Setting up a Renewable Energy Company in Joint Venture with ADB & Japan etc.

He has been at the forefront of JV formulation, Project conceptualization, Project financial closure and on ground implementation for 1320 MW Maitree Power Project at Bangladesh with USD 2 Billion investment.

Prior to taking over the position of Director (Projects), he worked as MD and CEO of BIFPCL (Bangladesh India Friendship Power Company Limited), ED (Business Development) and ED(Projects) in NTPC.

As Director(Projects), he is directly responsible for entire portfolio of Project Management, Contracts & Materials Management, Engineering Division, Project execution, R&D, Dispute Resolution, Digitalization & IT and International Business Development (IBD) activities, as functional Director of these major important verticals of NTPC.

Apart from being a member of NTPC board, he is also Part-time Chairman in Patratu Vidyut Utpadan Nigam Limited, NGSL (JV between NTPC and GE) & NBPPL (NTPC-BHEL Power Projects Pvt Ltd), Vice Chairman in Fertiliser JV Company Hindustan Urvarak & Rasayan limited, and Director on the Boards of Trincomalee Power Co. Ltd, Bangladesh India Friendship Power Company (Pvt.) Limited (BIFPCL) , THDC (India) Ltd. and North Eastern Electric Power Corporation Limited (NEEPCO).

Very recently, he has been nominated as 'Chairperson' of the Research Council(RC) for CSIR-Chennai. He is Managing Committee member of Chamber of Commerce and also Member on the Advisory Committee of the Centre for Indo-Pacific Studies, Osmania University.

He is an avid reader and likes to read fiction as well as non-fictions. He believes in continuous learning and takes keen interest in Training & Development of people including taking sessions himself. True to his ethos of being Friend, Philosopher & Guide for his team members, he keeps on taking the role of Mentor regularly.

Jaikumar Srinivasan
Director (Finance)

Jaikumar Srinivasan, [DIN: 01220828], has more than 31 years of experience in Power and Mining sector in State and Central PSUs in the field of Finance, Accounts, Taxation, Commercial, Electricity regulation, Renewables, IT, Project development etc. with 9 years Board level experience.

Before his appointment as Director (Finance), NTPC Limited, he has served in the Board of various companies. He was Director (Finance) in NLC India Limited as well as in Maharashtra State Electricity and Distribution Company Limited (MSEDCL) and in Maharashtra State Power Generation Company (MAHAGENCO).

He also holds charge of Commercial function of the Company. He is also in the Boards of THDC (India) Limited, North Eastern Electrical Power Corporation Limited (NEEPCO), NTPC Green Energy Limited and NTPC Renewable Energy Limited. He is also the Part-time chairman of Indianoil NTPC Green Energy Private Limited.

Shivam Srivastava
Director (Fuel)

Shivam Srivastava [DIN:10141887], a Mechanical Engineering graduate from Kamala Nehru Institute of Technology, Sultanpur (Avadh University), Post Graduate in Business Management from MDI Gurgaon, had joined NTPC as 13th batch executive trainee in 1988. He has also undergone a Leadership Management course from Harvard Business School, Boston (USA). In his professional career, he has accumulated over 34 years of experience with outstanding contribution in areas of Fuel Handling, Fuel management, Safety, plant operation & maintenance and in coal mining projects.

His experience in the energy sector includes exposures as Head of Fuel Management functions, Head of Operation & Maintenance functions in power plants along with experience as Business Unit Head of two coal mining projects of NTPC. Prior to his elevation to the post of Director (Fuel), he was working as CGM and Business Unit Head of Pakri Barwadih Coal Mining Project of NTPC Limited where he has been instrumental in ensuring fuel security and building self-reliance in coal supply to power projects of NTPC.

As Director (Fuel), NTPC, he is responsible for ensuring fuel availability, affordability, and security for generating stations along with development and safe operation of captive coal mines of NTPC. He is also responsible for Fuel Supply Agreements with Gas Suppliers, Coal suppliers and ensuring timely supply of quality coal at power stations as per power generation requirement alongside maintaining adequate stock levels. He is also Part-time Chiarman of NTPC Mining Ltd. (NML).

Ashish Upadhyaya
Government Nominee Director

Ashish Upadhyaya, [DIN: 06855349], IAS, Special Secretary & Financial Advisor, Ministry of Power, Govt. of India joined as a Part-time Official Director on the Board of NTPC on 22nd January 2020. Shri Upadhyaya is an IAS Officer of 1989 Batch belonging to Madhya Pradesh cadre. Having done his post-graduation in History from St. John College, Agra, he joined the civil services and has served for more than 32 years in various capacities in the State Government of M.P. including tenure in coal bearing areas of Anuppur, Shahdol and Umaria as the Addl. District Collector. He has been Collector for more than 5 years in 3 districts of M.P. & Chhattisgarh. Shri Upadhyaya has served at the State level as Secretary and Principal Secretary of various departments including Home, Higher Education and Finance for many years. As Joint Secretary, Coal, he has been instrumental in developing systems by application of space technology for curbing the menace of illegal mining. He has academic bent of mind and while being in the service, he continued his pursuit of education and completed post-graduation in Economics and L.L.B. He also did his Master's degree in Public Administration from Maxwell School of Citizenship, Syracuse University in U.S.A.

Piyush Singh
Government Nominee Director

Piyush Singh, [DIN: 07492389], is a 2000 Batch IAS officer from Maharashtra Cadre. He is working as Joint Secretary (Thermal and Coal, Distribution), Ministry of Power, Govt. of India.

He has done B. Tech (Civil) from IIT Delhi. He worked in various capacities in District Administration, Department of Social Justice & Empowerment and Department of health & family welfare, Government of Maharashtra. He also served in Uttarakhand in Planning department, Dehradun.

He has wide experience in the area of Public Administration and Planning.

Sangitha Varier
Independent Director

Sangitha Varier, [DIN: 09402812], is a Corporate Leader. She is a Commerce Graduate and Bachelor in Education (B. Ed.). During her career, she has held various positions. She is Director of The Arya Vaidya Pharmacy Ayurveda Hospital & Training Academy, a wing of The Arya Vaidya Pharmacy (Coimbatore) Ltd. She also headed the Administration and Academics of four Chinmaya Vidyalaya Schools as Correspondent. Presently she is state General Secretary in Seva Bharathi, Tamil Nadu.

Vidyadhar Vaishampayan
Independent Director

Vidyadhar Vaishampayan, [DIN: 02667949], is an M-Tech from IIT-Mumbai and he has also completed Executive Development Study from IIM-Bangalore. He is an active member of various social organizations and groups.

He was associated with TJSB Sahakari Bank Ltd., Thane, Maharashtra, since 1994 and was elected as a Board Member for the tenure of 1994-2002 and was a member of various sub committees. In tenure of 2002-2005, he has been elected as Vice-chairman then in the tenure of 2005-2015, he has been elected as a Chairman of the Bank and in the tenure of 2015-2020, he was a Director of the Bank. He was also Director in National Federation of Urban Co-Operative Bank and was member of RBI Task Force from 2014 to 2019. In technical field, he has developed multilevel parking system, which is essential requirement of present as well as future.

Jitendra Jayantilal Tanna
Independent Director

Jitendra Jayantilal Tanna, [DIN: 09403346], is a Chartered Accountant by profession. He is also a Commerce Graduate. He has functional expertise in areas of Direct Taxation, Audit and Finance Management.

Vivek Gupta
Independent Director

Vivek Gupta, [DIN: 08794502], is a serial entrepreneur. He is a Management Graduate with a degree of Law. He is founder CEO in Jaipur scientific instrument, Jaipur Scientific Agriculture Research Sol. Pvt. Ltd. and Director in Drinkbucket Pvt. Ltd.

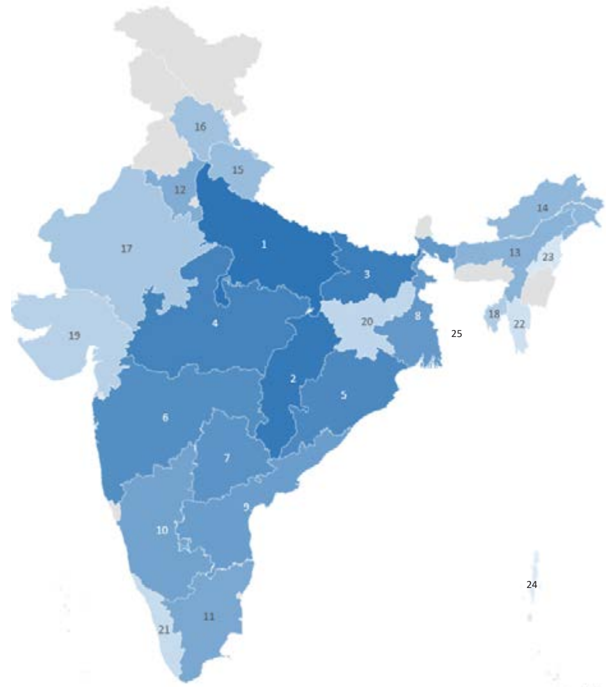
Senior Management Team (as on 1st August, 2023)

S. No.	Executive Directors S/Shri	Position Held
1	Partha Mazumder	RED (ER-II)
2	Manish Kumar Srivastava	ED (Engineering)
3	Praveen Saxena	RED (NR)
4	Sital Kumar	ED (HR) & CEO (UPL)
5	Debasish Chattopadhyay	RED (SR)
6	Mohit Bhargava	ED (Renewable Energy)
7	Harekrushna Dash	ED (CC&M)
8	DSGSS Babji	RED (ER-1)
9	Sudip Nag	ED (Biomass)
10	Satish Upadhyay	ED (Rammam)
11	Shambhu Nath Tripathi	ED (PM) & RED (Hydro)
12	MVR Reddy	RED (Mining)
13	Aditya Dar	ED (Finance)
14	C Sivakumar	RED (WR-II) & ED (USSC)
15	Ajay Kumar Chhabra	ED(Consultancy)
16	Prem Prakash	RED (WR-I)
17	Adesh	ED (Vigilance)
18	Avnish Srivastava	ED (Dispute Resolution Cell)
19	Pradipta Kumar Mishra	ED (Fuel Mgmt)
20	Asit Dutta	ED (Barh)
21	A K Bishoi	ED (BD)
22	Sandeep Aggarwal	ED (Finance)
23	Abhay Kumar Samaiyar	ED(Unchahar)
24	Diwakar Kaushik	ED (Lara)
25	N S Rao	ED (Sipat)
26	Arindam Sinha	ED (OS)
27	Goutam Deb	ED (TTPS)
28	Ajay Dua	ED (Commercial)
29	S S Kothandapani	ED (Talcher Kaniha)
30	Udayan Kumar	ED (Engg.)
31	R K Kanojia	ED (Khargone)

Posted in Subsidiary / Joint Venture Companies and others

S. No.	Executive Directors S/Shri	Position Held
1	Renu Narang	CEO-NVVN
2	Basuraj Goswami	CEO-NSPCL
3	Atanu Dutta	Project Director (BIFPCL)
4	Sunil Kumar	CEO- Meja
5	Ravi Prakash	CEO-BRBCL
6	Bodanki Srinivasa Rao	CEO-APCPL

NTPC at a glance



Unleashing the Power of Diversity

NTPC's 72,254 MW Capacity Empowering Progress with 399.31 Billion Units Illuminated from Diverse Sources

Location	Inst. Cap. (MW)	Gen (BU)	Inst. Cap. (MW)	Gen (BU)	Inst. Cap. (MW)	Gen (BU)	Inst. Cap. (MW)	Gen (BU)
1. Uttar Pradesh	11,450	75.43	1,493	0.91	295	0.58	32	0.11
2. Chhattisgarh	7,754	57.77	-	-	-	-	-	-
3. Bihar	8,410	55.21	-	-	-	-	-	-
4. Madhya Pradesh	8,280	54.35	-	-	300	0.47	-	-
5. Orissa	4,970	35.86	-	-	10	0.01	-	-
6. Maharashtra	3,640	20.61	1,967	0.32	10	0.004	-	-
7. Telangana	2,600	16.06	-	-	110	0.18	-	-
8. West Bengal	2,240	13.37	-	-			-	-
9. Andhra Pradesh	2,000	12.64	-	-	275	0.43	-	-
10. Karnataka	2,400	11.33	-	-			-	-
11. Tamil Nadu	1,500	9.79	-	-	230	0.15	-	-
12. Haryana	1,500	8.27	432	0.003	5	0.006	-	-
13. Assam	750	5.027	291	1.69	-	-	275	0
14. Arunachal Pradesh	-	-	-	-	-	-	1,115	4.82
15. Uttarakhand	-	-	-	-	-	-	1,400	4.54
16. Himachal Pradesh	-	-	-	-	-	-	800	3.13
17. Rajasthan	-	-	419	0.13	1,556	2.29	-	-
18. Tripura	-	-	236	1.59	5	0.007	-	-
19. Gujarat	-	-	1,313	0.53	66 163	0.09 0.32	-	-
20. Jharkhand	660	0.63	-	-			-	-
21. Kerala	-	-	360	0	142	0.27	-	-
22. Mizoram	-	-	-	-	-	-	60	0.2
23. Nagaland	-	-	-	-	-	-	75	0.18
24. A&N Islands	-	-	-	-	5	0.006	-	-
25. Bangladesh	660	0	-	-	-	-	-	-

Coal | Gas | Solar | Wind | Hydro

Inst. Cap.: Installed Capacity **Gen:** Generation

Vision

To be the World's Leading Power Company, Energising India's Growth

Mission

Provide Reliable Power and Related Solutions in an Economical, Efficient and Environment Friendly Manner, Driven by Innovation and Agility

Core Values

ICOMIT

Corporate Objectives

Policy and Objectives

- To foster a collaborative style of working with customers, growing to be a preferred brand for quality and reliable power supply.
- To expand the customer portfolio through profitable diversification into downstream business inter alia E-mobility and direct supply.
- To ensure rapid commercial decision-making, using customer-specific information, with adequate concern for the interest of the customer.
- To adapt business models and organisation structures to capture value which is progressively shifting towards the customers.

Financial Soundness

- To maintain and improve the financial soundness of NTPC by prudent management of the financial resources.
- To continuously strive to reduce the cost of capital through prudent management of deployed funds, leveraging opportunities in domestic and international financial markets.
- To promote innovative funding models to support entry into new businesses and sustain long-term growth.
- To develop appropriate commercial policies and processes which would ensure remunerative tariffs, balance capital work-in-progress and minimise receivables.

Sustainability and Corporate Social Responsibility

- To deliver business and environmental value through projects which are beneficial for business and the larger ecosystem.
- To ensure sustainable power development by ensuring minimal wastage across operations.
- To actively contribute towards societal development.
- To lead the sector in the areas of resettlement and rehabilitation and environment protection including effective ash-utilisation, peripheral development and energy conservation practices.

Human Resource Development

- To enhance organisational performance by institutionalising an objective and open performance management system.
- To align individual and organisational needs and develop business leaders by implementing a career development system.
- To build a lean organisation with diverse skills and a high ability to adapt to change.
- To build and sustain a learning organisation of competent world-class professionals.
- To institutionalise core values and create a culture of team-building, ownership, empowerment, equity, innovation and openness which would motivate employees and enable the achievement of strategic objectives.

Business Portfolio Growth

- To sustain NTPC's position as the leading power generation company in the world.
- To broaden the base of the generation, mix with a significant proportion of clean energy sources.
- To enable the generation fleet to operate at optimum efficiency while meeting the demand and stability in the grid.
- To diversify into emerging businesses and markets across the power value chain including coal mining, power trading, ancillary services, E-mobility, storage and related adjacencies.
- To establish a strong services brand in domestic and international markets.
- To assist in the capacity creation of key stakeholders.

Research & Development (R&D)

- To undertake R&D initiatives in sync with the overall business portfolio.
- To pioneer the adoption of reliable, efficient and cost-effective technologies by carrying out fundamental and applied research in alternate fuels and technologies.
- To collaborate with leading institutes, technology players and service providers, particularly in the area of power plant construction, generation technology, operations, renewable energy sources, storage, e-mobility etc. that can contribute towards efficiency, reliability and environmental friendliness.

Performance Leadership

- To continuously strive for innovation in reducing costs, enhancing operational flexibility, and addressing changing customer needs.
- To continuously improve on project execution time and cost in order to sustain long-term competitiveness.
- To effectively leverage Information Technology to drive process efficiencies and enable system flexibility in line with the market needs.
- To create capabilities to attain leadership in new and emerging businesses.
- To embed quality and safety in all systems and processes.
- Support the evolution of power markets to meet customer needs through products, platforms, services etc. to create a win-win opportunity across stakeholders.
- To lead development efforts in the Indian power sector through stakeholder consultation.

Agile Corporation

- To ensure effectiveness in business decisions and responsiveness to changes in the business environment by:
  - Adopting a portfolio approach to new business development.
  - Continuous and coordinated assessment of the business environment to identify and respond to opportunities and threats.
- To create lean organisation and business processes.
- To develop a learning organisation with a knowledge-based competitive edge in current and future businesses.
- To develop a culture of curiosity and innovation in learning and adopting new technologies, business models and operational philosophies in line with the evolving market and changing customer needs.

NTPC Group Organography (Subsidiaries & JVs)

Subsidiaries (10)

COAL MINING
- NTPC Mining Ltd. (100%)

POWER TRADING
- NTPC Vidyut Vyapar Nigam Ltd. (100%)

POWER GENERATION
- THDC India Ltd. (74.496%)
- North Eastern Electric Power Corporation Ltd. (100%)
- Bhartiya Rail Bijlee Company Ltd. (74%)
- NTPC Green Energy Ltd. (100%)
- Patratu Vidyut Utpadan Ltd. (74%)
- Ratnagiri Gas and Power Private Ltd. (86.49%)

SERVICES
- NTPC Electric Supply Company Ltd. (100%)
- NTPC EDMC Waste Solutions Private Ltd. (74%)

Joint Ventures (16)

Coal Acquisition
- CIL NTPC Urja Pvt. Ltd. (50%)

Equipment Manufacturing
- Transformers and Electricals Kerala Ltd. (44.60%)
- NTPC BHEL Power Projects Pvt. Ltd. (50%)

Power Generation
- Aravali Power Company Pvt. Ltd. (50%)
- Meja Urja Nigam Pvt. Ltd. (50%)
- NTPC Tamil Nadu Energy Company Ltd. (50%)
- Trincomalee Power Company Ltd. (50%)
- NTPC SAIL Power Company Ltd. (50%)
- Anushakti Vidhyut Nigam Ltd. (49%)
- Bangladesh - India Friendship Power Company Pvt. Ltd. (50%)
- Jhabua Power Ltd. (50%)

Fertilizers
- Hindustan Urvarak and Rasayan Ltd. (29.67%)

Power Services
- Utility Powertech Ltd. (50%)
- Energy Efficiency Services Ltd. (33.33%)
- NTPC GE Power Services Pvt. Ltd. (50%)
- National High Power Test Laboratory Pvt. Ltd. (20%)

Introduction to capitals and Value creation model

OUR INPUTS

FINANCIAL CAPITAL

- Debt of ₹ 2,19,805.18 crore
- Capital Expenditure ₹ 35,204.07 crore

MANUFACTURED CAPITAL

- Coal-based (35), Gas/Naptha-based (11), Solar (29), Hydro (11) and Wind-based (3) power plants
- 5 operating captive coal mines
- 72,254 MW of installed capacity

INTELLECTUAL CAPITAL

- ₹ 283.45 crore R&D expenditure
- 10 NABL & ISO 17025 accredited Labs
- ₹ 173.19 crore IT expenditure

HUMAN CAPITAL

- 21,745 Permanent employees
- 1,13,355 Contractual employees
- ₹ 6,528.34 crore spent on Employee Benefits
- 7 Regional Learning Institutes and PMI dedicated to training power professionals
- ₹ 42.82 crore spent on Training and development

SOCIAL CAPITAL

- 9,430 no. of suppliers across different SBUs
- 21 vendor development programmes for MSEs
- 51 Discoms / beneficiaries purchasing bulk power
- ₹ 352.79 crore spent on CSR
- ₹ 2,092 crore of cum. expenditure on Resettlement & Rehabilitation (R&R)

NATURAL CAPITAL

- 250.20 mn MT of coal consumption
- 20.03 kilo MT of Biomass consumption
- 10,737.86 MCM of freshwater consumption
- 19 ZLD stations

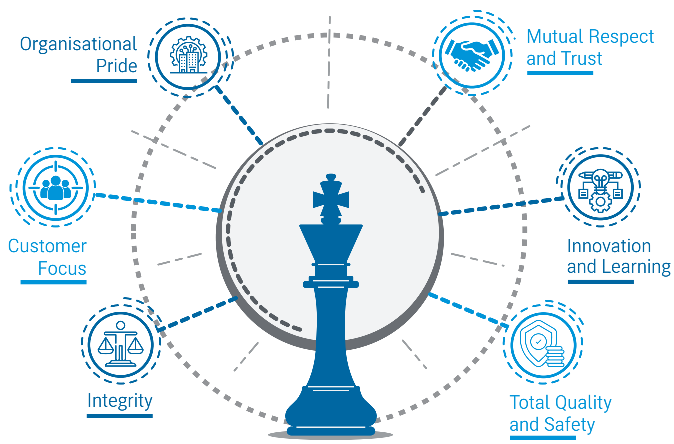
OUR BUSINESS MODEL

Our Vision

To be the World's Leading Power Company, Energizing India's Growth

Our Mission

"Provide Reliable Power and Related Solutions in an Economical, Efficient and Environment friendly manner Driven by Innovation and Agility"



OUR OUTPUTS

FINANCIAL CAPITAL

- ₹ 1,77,977 crore of revenue
- ₹ 17,121.35 crore of PAT
- ₹ 1,69,934.07 crore of Market Capitalisation
- Net worth of ₹ 1,46,280.48 crore
- ₹ 17.44 of earnings per share

MANUFACTURED CAPITAL

- 399.31 bn Units of Power Generation
- 75.10% PLF at coal stations
- 3,952 MW of commercial capacity addition
- 20 GW Renewable Portfolio

INTELLECTUAL CAPITAL

- 33 patents granted
- 15 copyrights granted
- E-library of 25,000 e-books, 1,00,000 articles, reports and journals
- ₹ 137.58 crore worth of business orders bagged by Consultancy

HUMAN CAPITAL

- 0.30 of Man-MW ratio
- 0.04% of Involuntary attrition rate
- 43 hours of Learning opportunities per employee per year
- 2.60 Mn man-hours of safety training

SOCIAL CAPITAL

- ₹ 69,311.71 crore indigenous purchase
- 96.57% Customer Satisfaction Score
- 1.60 million lives touched through CSR work

NATURAL CAPITAL

- 83% Ash utilised
- 2.69 L/kWh of specific water consumption
- 1,735.50 TJ of energy saved
- 38 mn trees/saplings planted since inception
- 45.77 Lakh KL of rainwater harvested

OUR OUTCOMES

FINANCIAL CAPITAL

- Sustainable cash flows and strong earnings per share
- Excellent MOU rating by the Government of India
- Best industry credit ratings e.g., CRISIL AAA/ Stable, ICRA AAA/ Stable, IND AAA/Stable and CARE AAA/ Stable
- 15.60% of Foreign shareholding in the business
- Cash contribution of ₹ 7,717.44 Crore to the Government of India's exchequer through dividend and income tax

MANUFACTURED CAPITAL

- Increasing presence in foreign countries
- Enhanced fuel security with reduced cost
- Strong technical capability able to operate thermal stations as balancing load to support grid
- NTPC trading cross-border power to the neighbouring countries

INTELLECTUAL CAPITAL

- Increased availability and improved efficiency of generating units
- Improved Water Conservation and better ash utilisation by R&D efforts
- State-of-the-art physical and digital infrastructure to impart learning
- Increasing share of the revenue from consultancy and foreign presence
- Increased digitalisation saving tons of paper, faster decision making, improved efficiency, transparency and security

HUMAN CAPITAL

- Improved productivity of employees
- Improved employee retention and lowest attrition rate
- NTPC awarded 'India's Best Workplaces in Manufacturing 2022 - Top 30' by GPW for the fifth consecutive year conferred as a Winner at the ATD BEST Awards 2023 for the sixth time
- Significant reduction in safety hazards and incidents

SOCIAL CAPITAL

- Strong & Sustainable Supply chain
- Focus on indigenous purchase
- More than 100% realization of current bills
- Enhanced inclusive growth and sustainable livelihoods through increased community engagement
- Reduction in the socio-economic vulnerability of communities

NATURAL CAPITAL

- Ensuring resource efficiency and circular economy
- Less emission through energy efficiency
- Improved freshwater availability through water usage optimisation and sustainable measures
- Mitigating climate change impacts
- Reduction in a specific quantity of the majority of air emissions including mercury

IMPACT ON SDG

Stakeholder and Materiality Assessment

Our Approach

At NTPC, we place paramount importance on creating value for all our stakeholders across the entire value chain. We consistently strive to align our operations and business processes to effectively meet the expectations of our esteemed stakeholders. Our strategies are meticulously crafted to prioritize the needs of our diverse range of stakeholders, encompassing employees, communities, contractors, customers, and vendors. We actively engage with them with unwavering commitment and undertake materiality assessment to capture and integrate stakeholder issues into our decision-making and business strategy. We prioritize critical and recurring stakeholder concerns within the analysis, which further inform our actions and responses as outlined in the materiality section.

Stakeholder Engagement[1]

We, at NTPC, recognize that stakeholder engagement is a continuous process, encompassing interactions at various management levels and through diverse communication channels. With a rich history spanning nearly five decades, we have diligently cultivated a positive and constructive relationship with our stakeholders, built upon the foundations of mutual trust, transparency, ethics, and accountability. Our growth and achievements can be attributed in large part to the ongoing dialogue that we maintain with stakeholders, actively seeking and incorporating their valuable feedback on matters pertaining to our operations.

To effectively manage stakeholder relationships, NTPC has implemented a comprehensive and structured stakeholder management process across verticals, functions, and establishments. This includes a 4 step systematic methodology that includes identifying key stakeholders, analyzing their perspectives and interests, and mapping and prioritizing their needs, leading ultimately to the framing of engagement strategy. Further details on this process can be found on the NTPC website at https://www.ntpc.co.in/sustainability/stakeholder-management.

Stakeholder Engagement Framework

Identification → Selection → Prioritization → Engagement

Our Stakeholders

Stakeholder Group	Modes of Engagement	Frequency of Engagement	Key Concerns	Materiality Topics Linkage
Government of India	• Secretary level review • Meetings with MoP, MNRE, MoEFCC, MoC, DAE, DPE, Parliamentary Committees, CEA, NITI Aayog etc.	• Quarterly • Need based	• 24x7 affordable power to all • Maximizing infrastructure utilization • Social development • Climate change & environment conservation • Promote Govt. schemes (viz. Make in India, Skill India, Swachh Bharat Mission, etc.)	All

[1] GRI-2-29

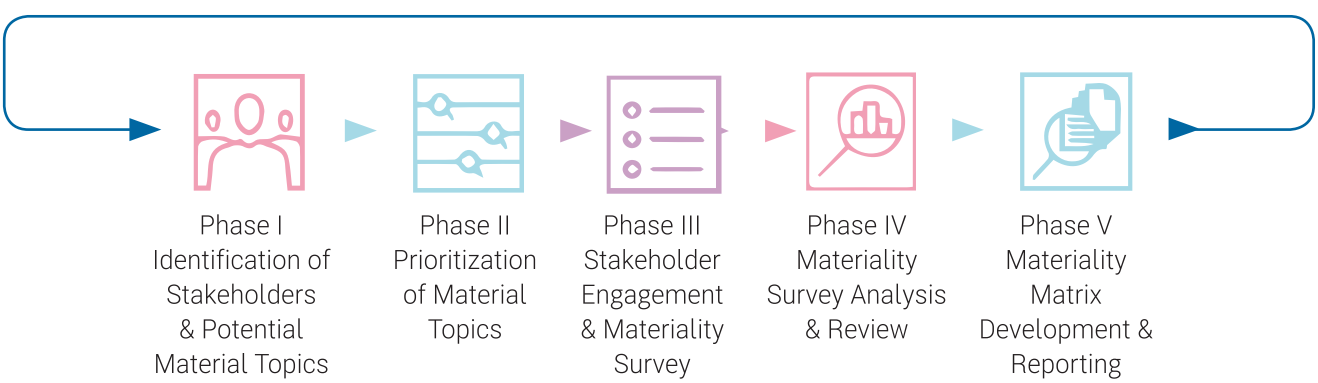
Stakeholder Group	Modes of Engagement	Frequency of Engagement	Key Concerns	Materiality Topics Linkage
Regulators	• Public hearings • Statutory audits & inspections, • Meeting for clearances, consents and compliances	• Need based • As per statutory provisions	• Optimum electricity tariff • Compliance with changing business environment	
Communities & NGOs	• Public hearings • Village Development Advisory Committee (VDAC) • Public information centers • Project-based stakeholder meets	• Need based • Annually	• Infrastructure development • Quality of life • Employment opportunities • Land acquisition and R&R issues • Increased community involvement	[4] [6] [7] [8] [9] [12]
Investors & Lenders	• Analyst and investors meetings • Annual general meeting • Review meets with bankers (Domestic and Foreign)	• Quarterly • Annual • Regular	• Improving RoI • Climate change & business sustainability • Risk and governance compliance • Increased disclosure on Environment, Social and Governance (ESG) aspects	[4] [10] [11]
Employees	• Participative forums • Communication meetings • Employee surveys • Intranet and website • Trainings and workshops • Internal magazines	• Defined frequency of concerned fora • Need based	• Professional growth • Work life balance • Health, safety and security • Timely resolution of grievances • Transparent appraisal and promotion cycle	[1] [2] [7] [10] [11] [14] [15]
Customers	• Regional customer meets • Regional Power Committees (RPCs) • Commercial meetings/interactions	• Quarterly • Monthly • Yearly • Need Based	• Resolving commercial issues • Resolving technical issues	[3] [4] [5] [10]

Stakeholder Group	Modes of Engagement	Frequency of Engagement	Key Concerns	Materiality Topics Linkage
	• Technical Coordination Committee • Operations Coordination Committee • Business partner meets • Customer support services			
Suppliers	• Pre-bid conference • Supplier meets • Vendor deveolopment programmes	• Before tendering • Need based	• Transparent dealings • Timely payments • Fair opportunities • Sustainable supply chain	[2] [10] [11] [13]
Media	• Press releases • Press conferences	• Need based • Event based	• Information sharing • Increased transparency	All
Indian Citizens	• Right to Information (RTI) Act queries • NTPC website	• Continuous	• Community development • Environmental issues • Progressive organization	All

Materiality Assessment[2]

NTPC recognizes the importance of conducting materiality assessments, which form a core component of our Integrated Annual Report and enable us to gain understanding of the relative importance of specific environmental, social, and economic issues and their potential impact on value creation. We have adopted a structured methodology for conducting materiality assessment using a dedicated materiality survey at a regular interval (3 to 4 years), in which we engage both internal and external stakeholders.

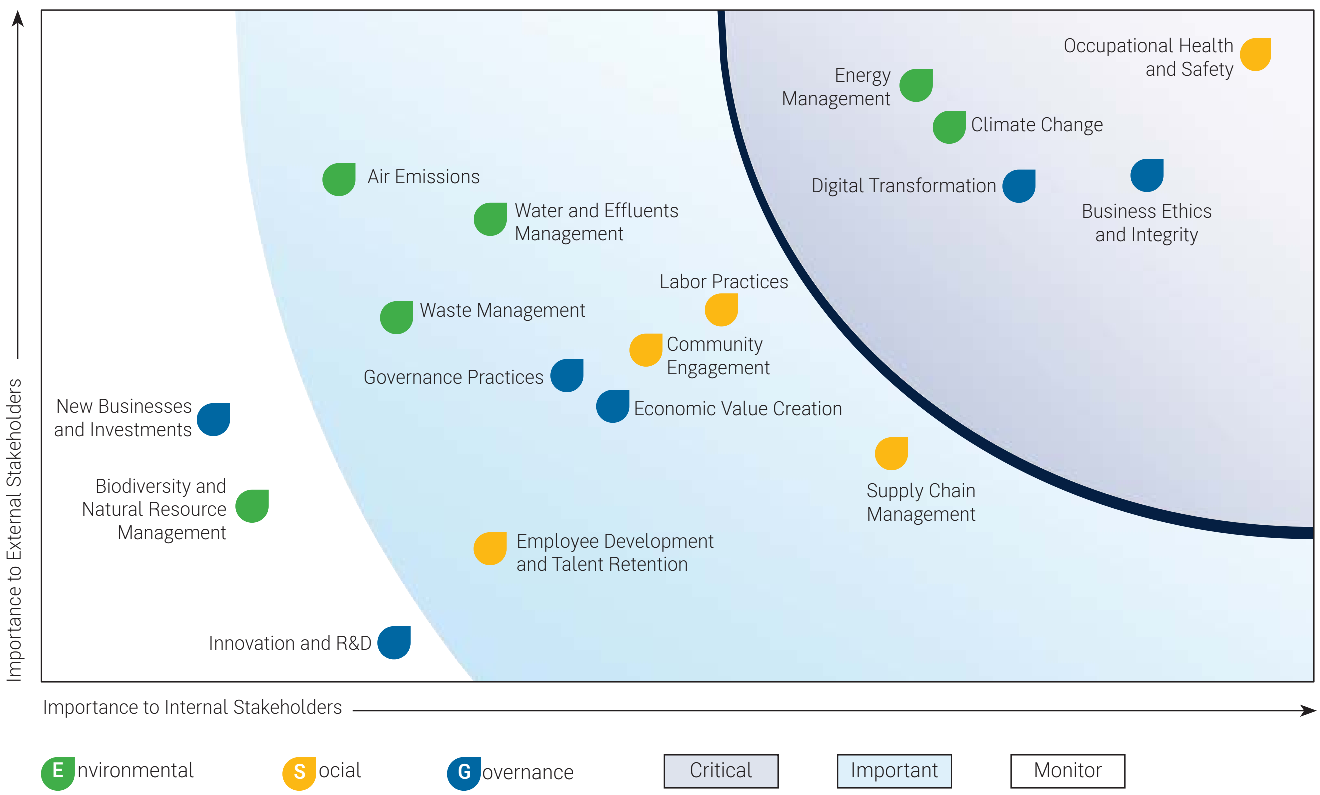
NTPC's Materiality Assessment Process



[2] GRI-2-29

Keeping in line with our robust materiality assessment methodology, we undertook a fresh assessment of our material topics in Financial Year 2021-22 (in accordance with the IIRC Framework and GRI standards) in a phase wise manner. This exercise was helpful in prioritising the inputs received from relevant stakeholders, as described in the previous section (Stakeholder Engagement), and incorporating them into the decision-making process of NTPC. The material topics also provide further insights into the challenges, risks, and opportunities that our company may face as described in the chapters on Risk and Governance, and Ethics and Vigilance. Our business sustainability depends on the effective management of material topics since it guides our strategic planning and management priorities towards creating long-term sustainable value for our stakeholders. The details about methodology and engagements undertaken can be accessed from NTPC's website.

NTPC's Materiality Matrix



Our approach to materiality topics

Material Topics	Key Actions	SDG Linkages	Capital Linkages
1. Occupational health and safety	• Safety is inculcated in the core values of NTPC; SAP Integrated NTPC Safety Framework developed • Target of zero incidents by establishment of robust safety culture and policy • Up-gradation of operating procedures to make the work environment safer • Mitigation of potential safety hazards owing to diversification into new technologies and business areas • NTPC Unchahar Safety Academy has been established to provide hands-on training on specific safety and emergency requirements • Mandatory Periodic Occupational Health Check-ups for all employees and contract labour • Record Keeping of medical history of employees and their family through online centralized HMS Framework "Jeevan Rekha"	3 Good Health and Well-Being	Human Capital
2. Business ethics and integrity	• Ethics being part of core values, all business processes are aligned to the principles of ethics and integrity • Policies of code of conduct, whistle-blower, complaint handling and banning of business dealings in place • 100% compliance with laws and regulations ensuring a transparent and corruption-free work environment • Display Boards at all offices exhorting any visitor not to succumb to pressure and report any case of corrupt practices directly to Chief Vigilance Officer	8 Decent Work and Economic Growth 16 Peace, Justice and Strong Institutions	Social Capital
3. Energy management	• Stress on efficient utilization of resources and use of technological advancements for improving energy efficiency • Dedicated groups (CenPEEP & CEETEM) created to improve the Energy Efficiency Management • Energy Efficiency Management System (EEMS) consisting of periodic assessments, field tests, performance gap analysis, deviations analysis and updation of action plans at all stations.	13 Climate Action 7 Affordable and Clean Energy	Manufactured and Natural Capital
4. Climate change	• Enhanced geographical and technological diversification, inherently reduces our risks to any location-specific natural catastrophe • Power plants and associated infrastructure are designed to withstand cyclones, heatwaves and increase in ambient temperatures • Decommissioning of old thermal plants and a revised target of 60 GW of RE capacity by 2032 • Our current low-carbon based energy capacity is 10% and with further massive RE addition, we anticipate reducing our specific CO_2 emissions substantially over the next few years.	13 Climate Action 7 Affordable and Clean Energy 14 Life Below Water 15 Life on Land	Natural, Social and Manufactured Capital
5. Digital transformation	• Launched notable digital platforms for business approvals and Suppliers/Labour bill payments • CPM & BI tool for data monitoring and reporting	9 Industry, Innovation and Infrastructure	Intellectual Capital

Material Topics	Key Actions	SDG Linkages	Capital Linkages
6. Water & effluents management	• Optimisation of water consumption through advanced technologies and process reengineering • NTPC is a signatory to the CEO Water Mandate • Implementation of "Water Policy" and "Rainwater Harvesting Policy" • Implementation of "Zero Liquid Discharge (ZLD)" at all stations, including ensuring good quality freshwater availability in and around plant locations through community investments and capacity building • Installation of Air-Cooled Condensers having potential to save 75% of water • Cycles of Concentration (CoC) is being increased at all stations for reducing freshwater intake	6 Clean Water and Sanitation 13 Climate Action 14 Life Below Water	Natural and Social Capital
7. Labour practices	• Uphold the best Global and Indian labour standards pertaining to wage determination, allocation of tasks, shifts & working hours, provision of training, incentive & reward schemes and occupational health & safety • Dedicated Human Rights Policy in place to promote and safeguard all kinds of human rights, including organizational rights • Operating bipartite collective bargaining forum (NTPC Bipartite Council) since 1982 • Implemented CLIMS for online labour payments, skill training and building health information profile	3 Good Health and Well-Being 8 Decent Work and Economic Growth 10 Reduced Inequalities 14 Life Below Water	Human and Social Capital
8. Air emissions	• Installation of FGD/ DSI system for SO_x control completed for ~3 GW while execution work for 56+ GW is in process • Combustion modifications for De-NO_x completed 44 units of ~19 GW, whereas execution work for rest of the capacity is in process • Retrofitting of ESP done at 13+ GW capacity to curb particulate emissions at stations • Continuous Emission Monitoring System (CEMS) of all stacks • Ambient air quality monitoring through an online Ambient Air Quality Monitoring System (AAQMS)	3 Good Health and Well-Being 7 Affordable and Clean Energy 11 Sustainable Cities and Communities 13 Climate Action 15 Life on Land	Natural Capital
9. Community engagement	• Dedicated CSR policy in line with Companies Act, 2013 and Department of Public Enterprises (DPE) Guidelines for CSR • Key community-based programmes through NTPC Foundation • Our focus areas include Health, Sanitation, Water and Education • One of the top CSR spending conglomerates in the country with expenditure of ₹ 352.79 crore in Financial Year 2022-23	1 No Poverty 2 Zero Hunger 3 Good Health and Well-Being 4 Quality Education 10 Reduced Inequalities 11 Sustainable Cities and Communities	Social Capital
10. Governance practices	• Committees of Audit, Nomination and Remuneration, Stakeholders Relationship, CSR and Risk Management • Govt. nominated directors on our Board, ensuring stricter monitoring and transparency in our governance system • Financial accounts are audited thrice including one by CAG with NIL comments • NTPC's pay policies are governed by DPE • Graded Excellent for Corp. Governance in DPE Rankings for Financial Year 2021-22	8 Decent Work and Economic Growth	Social, Human and Financial Capital

Material Topics	Key Actions	SDG Linkage	Capital Linkages
11. Economic value creation	• NTPC Group's economic performance during the Financial Year 2022-23 has resulted in a direct economic value generation of ₹ 1,77,608.87 crore	8 DECENT WORK AND ECONOMIC GROWTH	**Financial Capital**
12. Waste management	• Waste (Hazardous & Non-hazardous) generated is properly handled and disposed with approved agencies • Specific guidelines and systems instituted for handling domestic waste and bio-medical waste • The scrap and recyclable wastes are managed through auction on the MSTC e-platform • Other solid waste is managed according to our Waste Management Policy & applicable govt. regulations	11 SUSTAINABLE CITIES AND COMMUNITIES 12 RESPONSIBLE CONSUMPTION AND PRODUCTION 13 CLIMATE ACTION	**Natural Capital**
13. Supply chain management	• Implementation of Sustainable Supply Chain Policy • Capacity building programmes for suppliers on environment, social and economic fronts to create shared value • Capturing ESG data of suppliers on voluntary basis	8 DECENT WORK AND ECONOMIC GROWTH 11 SUSTAINABLE CITIES AND COMMUNITIES	**Social Capital**
14. New businesses and investments	• Transforming into an integrated energy player from a power generator only • Diversified into Renewables, Green Hydrogen, Green Chemicals, EV Ecosystem, Power Trading etc.	8 DECENT WORK AND ECONOMIC GROWTH	**Financial and Manufactured Capital**
15. Employee development and talent retention	• Continuously re-engineering HR systems to strengthen the relationship between business growth and systematic employee development • Continuous engagement activities and training programs • Systematic job rotation and career development scheme to aid employees in their horizontal and vertical growth	3 GOOD HEALTH AND WELL-BEING 8 DECENT WORK AND ECONOMIC GROWTH	**Human Capital**
16. Biodiversity and natural resource management	• Implementation of dedicated Biodiversity Policy • 38 Million saplings have been planted • Currently implementing 16 Wildlife and habitat restoration projects	14 LIFE BELOW WATER 13 CLIMATE ACTION 15 LIFE ON LAND	**Natural Capital**
17. Innovation and R&D	• Delivering sustainable technology solutions through applied research and providing advanced scientific services through dedicated R&D centre (NETRA) • Independently developing patented technology • Mitigation of greenhouse gas emissions by taking up the initiative to blend up to 10% of biomass-based fuels with coal at coal-based stations. • R&D projects to increase the reuse of wastewater in our plants	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 13 CLIMATE ACTION 14 LIFE BELOW WATER 15 LIFE ON LAND	**Intellectual Capital**

Risk and Governance[1]

NTPC has implemented a robust Enterprise Risk Management (ERM) system, supported by a comprehensive framework and established processes. In compliance with SEBI (Listing Obligations and Disclosure Requirements) Regulations, NTPC has constituted a Director-level sub-committee called the Risk Management Committee (RMC) to oversee the implementation of ERM practices. The RMC consists of key members, including the Chairperson (Director - Projects), the Director (Operations), an Independent Director, and the Chief Risk Officer (CRO). The RMC ensures that the company's Risk Management Policy adheres to the globally recognized ISO 31000 (Risk Management Guidelines) and has received a Letter of Conformity validating this compliance. In alignment with this policy, the RMC conducts holistic evaluation of operational risks and opportunities to ensure the continuity of business operations for attainment of long-term organizational goals.

The Risk Management Committee holds key roles and responsibilities, which include

- Developing a comprehensive Risk Management Policy that encompasses the identification of internal and external risks specific to the organization, such as financial, operational, sectoral, information, and cyber security risks, or any other risks determined by the Committee.
- Assessing, classifying, and prioritizing identified risks, while also reviewing the risk portfolio and plans for risk mitigation. This includes reviewing proposed changes to the risk register and determining Key Risk Indicators for various risks.
- Ensuring effective communication with the Board of Directors by sharing the nature, content, discussions, recommendations, and actions taken during Committee meetings.
- Conducting periodic reviews of the Risk Management Policy to account for evolving industry dynamics and increasing complexity.

The organization proactively manages enterprise risks, assessing their nature and impact on operations, activities, and long-term objectives. Details on risk management strategies are provided in the next section, highlighting proactive measures to mitigate risks and ensure resilience.

[1] GRI 201-2

Enterprise Risks

Operational Risks
The risks associated with processes, systems, or events that have the potential to disrupt business operations.

Long-Term Risks
The risks associated with the company's long-term objectives

Commercial Risks
The risks associated with bill realization, denial of Power Purchase Agreements (PPAs), despatch uncertainties, and market-driven energy pricing.

Operational Risks

Regulatory and Compliance Risk

NTPC implements Flue Gas Desulphurisation and combustion modification techniques for emission control. Modifications to ESPs control SPM emissions, while DAES and HCSD technology minimize water usage in ash handling. NTPC explores ash utilization in various sectors and seeks long-term off-take agreements.

Safety or Hazard Risk

NTPC has implemented the "SAP integrated Safety Framework" to integrate safety across operations, mitigate risks, and eliminate hazards effectively.

Legal Risk

NTPC has established committees at various levels and a dedicated Arbitration Cell to expedite the settlement of contractual cases. Mechanisms like Independent Engineers and the Conciliation Committee of Independent Experts are employed to prevent disputes. NTPC focuses on enhancing employee capabilities and timely contract closure to minimize disputes and fulfil contractual obligations.

Cyber Security Risk

NTPC prioritizes data security through a (24x7) SOC, network audits, and collaboration with CERT-IN and IB. CISO and SPOCs ensure cyber security at the corporate and project levels.

Fuel Security Risk

NTPC addresses fuel security through long-term coal supply agreements and production from captive mines like Pakri-Barwadih, Dulanga, Talaipalli, and Chatti-Bariatu. Importing coal and developing new mines are also part of the strategy to enhance fuel security.

Commercial Risks

Realization Risk

NTPC has implemented a strong payment security system utilizing Letters of Credit (LC) supported by the Tri-Partite Agreement (TPA), involving State Governments, GoI, and RBI.

PPA Denial and Despatch Risk

NTPC has been attempting steps like swapping of coal sources and blending of coal based power to provide cheaper power to the beneficiaries.

Furthermore, reallocation of surplus power is being taken up with government till such reallocation is being sold through power markets

Market Driven Energy Pricing Risk

NTPC meets over 24% of India's power demand with only 17% of the installed capacity, maintaining a competitive advantage in variable costs. The company utilizes market mechanisms like SCED and is preparing for MBED implementation.

Long-Term Risks

Climate Change: Physical and Transition Risk

NTPC has achieved geographic and technological diversification, operating in over 70 locations to minimize risks from natural disasters. Resilient design features in power plants and infrastructure enable them to withstand cyclones and adapt to climate change. NTPC is actively incorporating renewable energy sources to mitigate risks in the transition to a low-carbon economy and enhance sustainability.

Water Security Risk

NTPC actively promotes water conservation through process enhancements and technology integration. Measures such as cycle optimization and Zero Liquid Discharge systems are implemented to minimize freshwater usage. In water-stressed areas, Air-Cooled Condenser systems are adopted for cooling. Technologies like DAES and HCSD are utilized to minimize water usage in ash handling. These proactive measures reflect NTPC's commitment to sustainable water management.

Opportunities

Energy Transition

NTPC aims to achieve 60 GW of RE capacity by 2032, aligning with the government's climate change objectives. To enhance flexibility, NTPC is implementing strategies for coal plants to operate at minimum load and integrating them with renewable energy and battery storage. NTPC stations also provide ancillary services for grid security. Pilot projects are underway for eco-friendly chemical production like methanol, green hydrogen, and carbon capture and utilization (CCU).

Digitization

NTPC is implementing various measures to accelerate the adoption of digitalization across different functions and verticals of the company. Key digitalization initiatives by NTPC include:

- PRADIP: Digitizing business processes and enabling paperless transactions, including supplier bill payments.
- CLIMS: Facilitating online payments for labor.
- Water Dashboard: Providing real-time updates on water consumption across NTPC plants.
- RE Assets Monitoring System: Centralized platform for real-time monitoring of NTPC's renewable energy assets (solar and wind).

In addition to above, projects are also being undertaken for adoption of Robotic Process Automation (RPA), Artificial Intelligence (AI) and Machine Learning (ML) in business processes.

Increased Geo-strategic Presence

NTPC engages in overseas projects through collaborations and joint ventures. This includes a joint venture with BPDB in Bangladesh, a joint venture with CEB Sri Lanka for a solar power project, and agreements between NEA and NVVN for electricity sale/ purchase. NTPC provides Project Management Consultancy for solar projects under the International Solar Alliance. MoUs have been signed with EDF France and INTER RAO Russia for synergistic collaboration.

NTPC Pakri Barwadih

Ethics and Vigilance at NTPC

Ethics play a pivotal role in shaping the culture and driving the success of NTPC. At NTPC, we hold the values of integrity and trust at our core, ensuring that the highest ethical standards are upheld. By prioritizing fairness, transparency, and accountability in our practices, we foster positive relationships with customers, employees, and stakeholders. Ethical business conduct not only contributes to our long-term success but also builds a reputable brand, attracts loyal customers, and promotes employee engagement and loyalty.

To uphold high ethical standards, NTPC has implemented various initiatives that demonstrate our unwavering commitment to ethics. These initiatives are designed to foster transparency, accountability, and responsibility in the workplace, reinforcing our dedication to maintain an ethical work environment.

Implementation of Various Policies

NTPC has implemented several policies to enhance integrity, ethics & transparency in governance of the Company. During Financial Year 2022-23, we have developed a comprehensive Anti-Bribery and Anti-Corruption (ABAC) Policy to ensure that our business is conducted in accordance with the highest ethical standards within prescribed rules and applicable laws of India.

The detailed description of our policies can be accessed from https://www.ntpc.co.in/sustainability/policies

ABAC Policy: Primary policy guiding our business conduct and ethics
Additional Policies (connected to ABAC Policy)

- NTPC Conduct, Discipline and Appeal Rules (CDA Rules)
- Fraud Prevention Policy
- NTPC Policy & Procedure for Debarment from Business Dealings
- Integrity Pact
- Whistleblower Policy
- NTPC Complaint Handling Policy
- Applicable Standing Orders under the Industrial Employment (Standing Orders) Act, 1946
- Code of Conduct for Board of Directors, Senior Management Personnel and Employees
- Other Circulars/Policies as may be implemented from time to time

Implementation of Integrity Pact

NTPC has implemented the Integrity Pact since 2009. This pact covers tenders with an estimated value of ₹ 10 crore and above, excluding taxes and duties. By implementing the Integrity Pact, NTPC ensures transparency, fairness, and integrity in the tendering process, fostering an environment of trust and ethical conduct.

Vigilance Mechanism

To uphold transparency, objectivity, and high-quality decision-making across its operations, NTPC has implemented an ISO-9001:2015 certified Vigilance Mechanism. The Company's Vigilance Framework comprises Vigilance Executives stationed both at the Corporate Centre and various sites. At site locations, the Vigilance Executives report administratively to the Project Head and functionally to the Chief Vigilance Officer. This structure ensures robust oversight and

Corporate Vigilance Department Cells

- Vigilance Investigation and Processing Cell
- Departmental Proceedings Cell
- Technical Examination Cell
- MIS Cell

adherence to ethical practices within the organization.

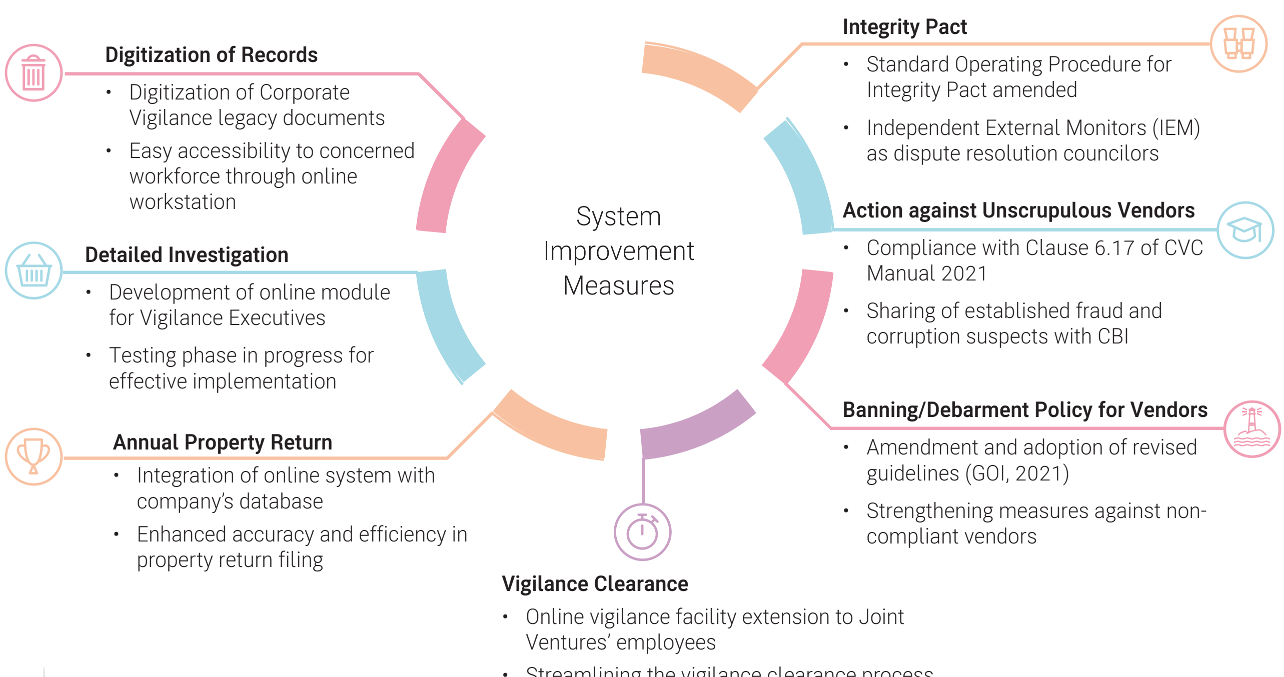
These Corporate Vigilance Department Cells cover various aspects of our Vigilance Mechanism. The responsibility for vigilance operations has been decentralized, with Regional Vigilance Executives assigned to Corporate Centre, ensuring prompt resolution of matters. Regular meetings are held among senior officials from the Vigilance Department, including the ED (Vigilance), Regional Vigilance Executives, and the Head of DPC/MIS Cell. These meetings foster open discussions on shared challenges, aiming to establish consistent practices across all regions. This collaborative approach promotes transparency, efficiency, and effectiveness among vigilance personnel, leveraging their collective knowledge, experience, and expertise. It also helps in breaking down silos and bridging gaps, enhancing our overall capabilities.

Vigilance Work during Financial Year 2022-23

During the Financial Year 2022-23, NTPC conducted a comprehensive examination of 72 vigilance complaints. As of 31 March, 2023, 51 of these complaints have been concluded, while the remaining 21 are still under investigation. Appropriate disciplinary measures were taken against employees who were involved in misconduct, and enhancements in the system were implemented to prevent future irregularities. Additionally, NTPC conducted 352 proactive vigilance checks, including surprise inspections, routine assessments, CTE evaluations, and scrutiny of files. These checks are crucial in identifying and rectifying any uncovered discrepancies. The company successfully recovered ₹ 32,05,774, for various identified discrepancies, demonstrating its commitment to upholding integrity. Furthermore, a total of 177 Preventive Vigilance Workshops were conducted throughout the Financial Year 2022-23, reaching 8,130 employees across different projects and locations.

Vigilance Awareness Week

The Vigilance Awareness Week 2022 (VAW 2022) was observed by NTPC and its associated entities nationwide from 31 October to 6 November, 2022. The theme for this year's VAW was "Corruption free India for a developed Nation." Alongside this week-long observance, a three-month campaign from 16 August to 15 November, 2022, was conducted, which involved preventive vigilance measures and housekeeping activities in various areas. These initiatives aimed to promote awareness about corruption, encourage ethical practices, and foster a culture of integrity and transparency within the organization. Through their active participation in these activities, NTPC and its associated entities showcased their dedication to combating corruption and contributing to the nation's development.



NTPC: Powering a Just Transition - Catalyzing Sustainable Change

India's G20 Presidency: Energy Transition Leadership

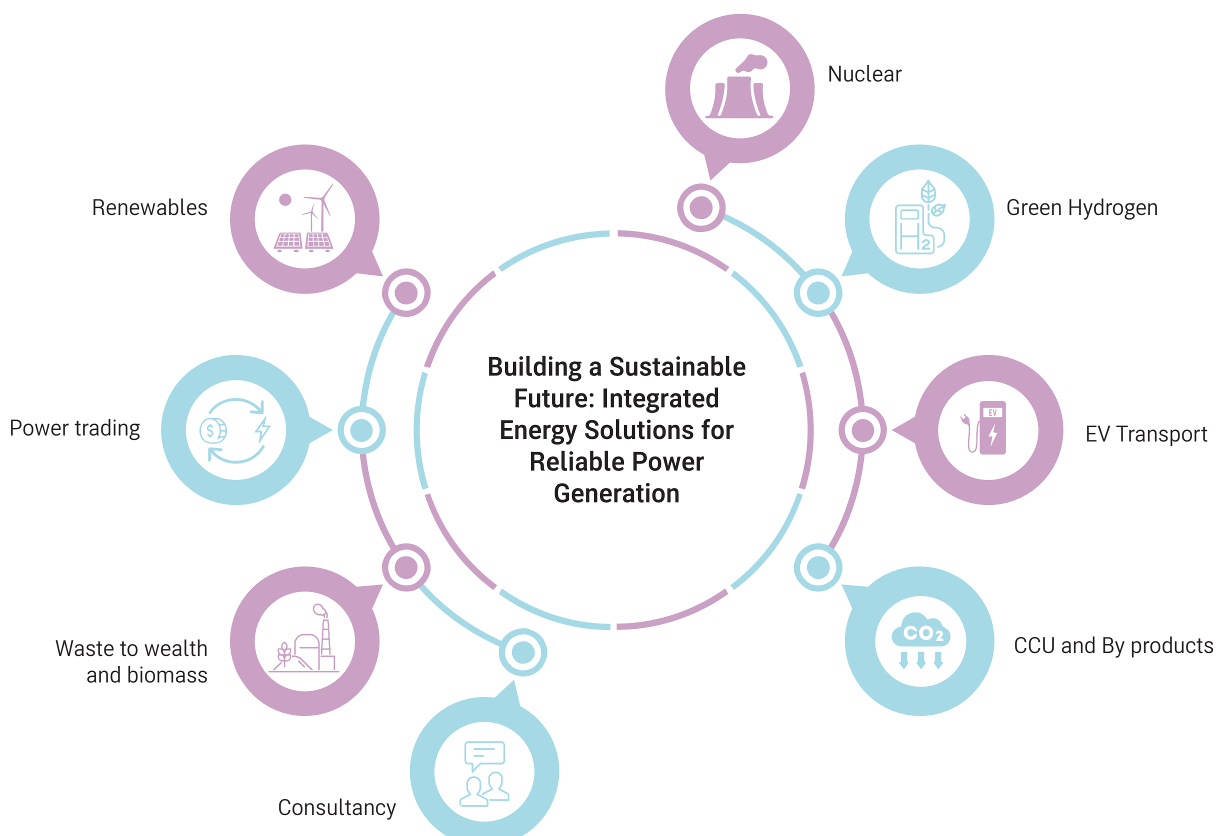
India, as the current G20 president, its Energy Transition Working Group Committee emphasizes the importance of "universal access" to sustainable energy and prioritizes energy transition. With a commitment to achieve net zero emissions by 2070 and achieve 50% of cumulative electricity capacity from non-fossil by 2030, India plays a crucial role in the global fight against climate change.

Given India's sheer size and potential for growth, its energy demand is expected to grow continuously in the coming decades. To achieve net zero emissions by 2070, a significant portion of future energy demand must be met by low-carbon sources.

India's energy transition goes beyond emissions reduction, aiming to benefit its citizens through well-designed policies that balance affordability, security, and sustainability. By pioneering a new model of economic development, India aims to avoid carbon-intensive approaches pursued by other countries in the past, providing a blueprint for developing economies.

Just and Fair Energy Transition

NTPC is committed to a just and fair energy transition, ensuring that job losses in fossil fuel industries do not lead to poverty and inequality. We aim to provide clean and affordable power while aligning with Goal 7 of the United Nations' 17 Sustainable Development Goals and India's energy security priorities. We recognize the significance of deep decarbonization and the accelerated adoption of non-fossil and renewable energy sources.



We are also diversifying our business areas to mitigate climate-related physical and transition risks. While recognizing the importance of coal power plants in ensuring grid reliability and providing employment opportunities, NTPC is mindful of the potential consequences of sudden retirement, such as jeopardizing energy security and equity within the socio-economic system. Therefore, our decarbonization strategy adopts a balanced approach in the short to medium term. This approach combines cost-effective thermal power with cleaner renewable energy sources until a viable long-term alternative to fossil power generation becomes feasible.

Our Net Zero Strategy

We are also working with NITI Aayog and have signed a Statement of Intent for preparing our "Net Zero" plan in line with the country's commitment of becoming Net Zero by 2070. With this collaboration, NTPC would be able to use the expertise of NITI Aayog's energy team for:

01 Development of Net Zero GHG emissions Roadmap for NTPC in alignment to GoI's 'Panchamrit' goals

02 Emissions and energy (portfolio mix) modelling including development of scenarios for 2030, 2037, 2047 and 2070

03 Assistance in establishment of Carbon Management Unit (CMU) in NTPC with the aim of integrating all GHG reduction initiatives under one umbrella

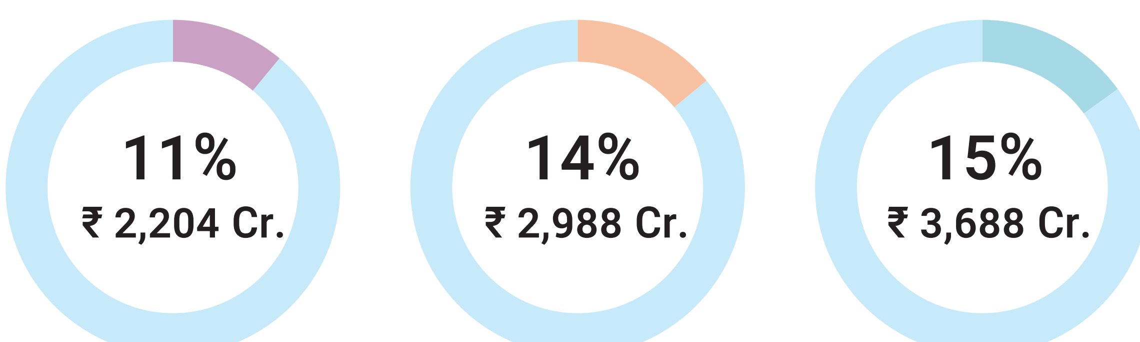
NET ZERO

NITI Aayog

Transforming Thermal: Decoupling GHG Emissions

At NTPC, besides massive renewable addition, our decarbonization strategy involves upgrading older thermal fleets for efficiency and emissions reduction while preserving employment. We invest in advanced pollution control measures like FGD, NO_x reduction, and SPM control measures. NTPC has already awarded contract worth more than ₹ 30,000 Cr. for pollution control technologies including FGD, De-NO_x and PM control.

Capex on Environment



FY 2021 | FY 2022 | FY 2023

In case of decommissioning, we relocate our employees to other operational plants. We explore converting coal plants into chemical complexes with carbon capture to prevent pre-mature closures and reduce reliance on imported fuels. Alternatives like biomass co-firing and small modular reactors are being considered for emissions reduction without replacing existing thermal assets. To counter climate impacts related to water, we are equipping our assets with highly water efficient technologies such as Air-Cooled Condensers (ACC) to minimize our exposure to physical risks.

Empowering Climate Action through Innovative Solutions

Our commitment to decarbonization is reflected in our five-pronged strategy.

1. Fuel Diversification

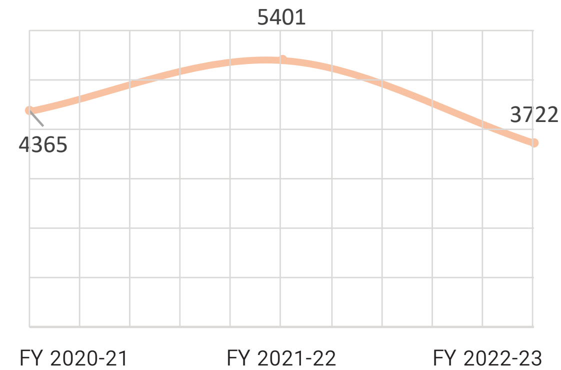
29 GW Non-Fossil Portfolio

NTPC is committed to achieving a remarkable cumulative renewable capacity of 60 GW by 2032. Currently, our renewable energy portfolio consists of approximately 20 GW of commissioned and pipeline capacity. This includes 6.979 GW of operational solar, wind, and hydro capacities, with 3,009 MW from solar sources, 163 MW from wind, and 3,757 MW from hydro.

In addition, our hydro portfolio encompasses commissioned, under construction, and under tendering capacities of around 9 GW.

We are also actively working on adding 4.2 GW of nuclear capacity to our portfolio. To reduce our reliance on conventional fuels, we have decommissioned 1,385 MW of thermal capacity. Through our initiatives in biomass pellet utilization, solar, and wind power generation, we have successfully avoided over 14 million tonnes of CO_2 equivalent emissions annually. NTPC remains dedicated to expanding its renewable energy footprint and contributing to a greener future.

RE Capex Trend (₹ crore)



2. Clean and Efficient Technologies

NTPC successfully reduced GHG emissions per unit of electricity through cleaner and more energy-efficient technologies. The shift to supercritical and ultra-supercritical technology led to an 8% reduction in emission intensity, an 8% increase in efficiency, and a fuel-saving of approximately 2% per unit of power. With 30 commissioned units using these advanced technologies, we have reached a total capacity of 21,060 MW. In the Financial Year 2022-2023, NTPC exceeded energy savings targets, achieving approximately 1,735.5 TJ.

119,809 ESCerts

of Net Surplus under PAT Scheme

3. Emission Reduction and Carbon Credit Initiatives

In Financial Year 2022-23, NTPC avoided 14 million tonnes of GHG emissions through non-fossil generation. The company has initiated efforts to register RE projects under programs like CDM, Verified Carbon Standard (VCS), and Global Carbon Council (GCC). A total of 6,043,278 carbon credits have been generated from 718 MW of projects. Prior Consideration forms have been submitted for 4,172 MW of projects to UNFCCC and MoEF&CC.

4. Carbon Sink & Carbon Capture Utilization Initiatives

We are dedicated to carbon sink development, utilizing afforestation efforts as 'sinks' for emissions from power stations. We target to plant cumulative 10 million trees by 2026 through our ongoing afforestation initiatives. Additionally, NTPC leads the development of the 884-acre Mega Eco Park at Badarpur, promoting environmental sustainability while providing ongoing employment opportunities.

38 million
trees planted

To capture and convert CO_2 from waste flue gases into hydrocarbons like methanol and ethanol NTPC is actively engaged in carbon capture and utilization (CCU) projects at NTPC Vindhyachal. This innovative approach not only produces clean fuel but also sequesters carbon, effectively addressing two critical challenges simultaneously.

5. R&D and Pilots on Clean Technologies

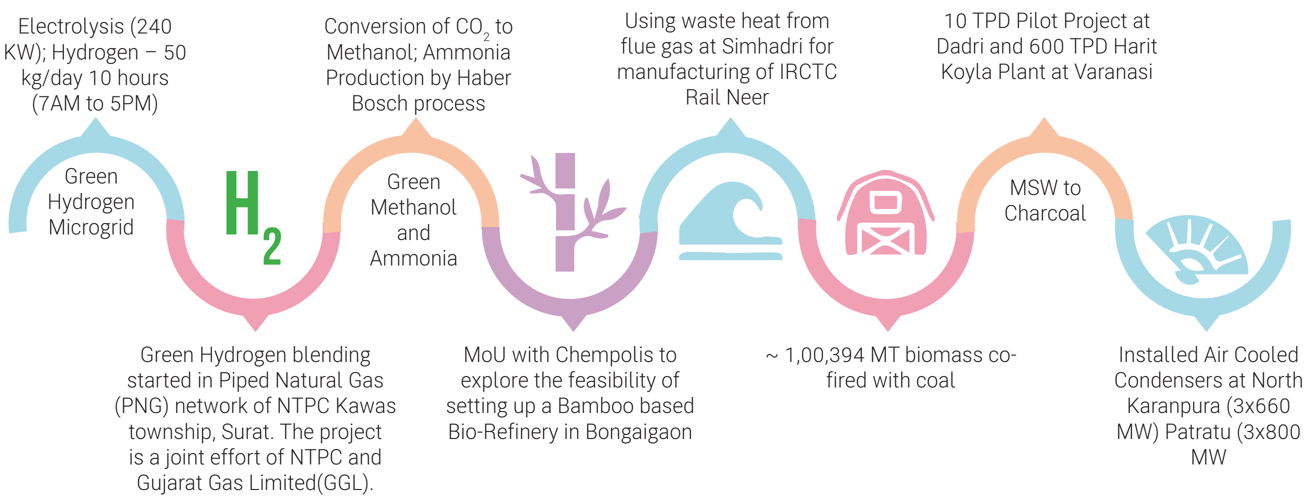
NTPC conducts pilots on green hydrogen and alternate chemicals to drive energy transition in various sectors. The total budget allocated for green demonstration projects, including green hydrogen, is approximately ₹ 350 Crore.

Contracts awarded worth
₹ 163 crore

Sustainability remains central to our operations as we move forward. We will prioritize renewable energy, embrace technology advancements, improve energy efficiency, and invest in carbon sink development. Our goal is to contribute significantly to India's sustainable development goals, reduce our carbon footprint, and create a cleaner and greener future for future generations.

Rojmal Wind

Driving Technological Advancements and Embracing Clean Energy Diversification



Empowering Communities with Green Jobs

Our renewable capacity targets have been increased from 30 to 60 GW by 2032, and NTPC Green Energy Limited has been established as a separate company to drive our renewable energy initiatives. Currently, we have approximately 7 GW of renewable capacity, including hydro projects.

173 Direct Employment Opportunities

In addition to our focus on India, we assist countries like Togo, Mali, Malawi, Cuba, and Niger in developing solar projects. We actively work on solarizing agriculture,

irrigation, and water systems in Small Island Developing States (SIDS) and Least Developed Countries (LDCs) associated with the International Solar Alliance (ISA).

We have implemented a pilot plant that converts Municipal Solid Waste (MSW) to charcoal, showcasing the potential for addressing MSW issues and utilizing charcoal as fuel for power plants, promoting a circular economy.

Unleashing Potential: Skill Development for Enhanced Employability

NTPC is actively involved in promoting sustainable development through various initiatives. We have partnered with the government's "Skill India Mission" and collaborated with NSDC to provide employment-linked skill development programs. By adopting 18 ITIs and establishing 8 new ITIs, we aim to train and empower 30,000 rural youth, including 8,000 from Jammu and Kashmir.

We also contribute to agricultural productivity in nearby villages by offering capacity building programs and expert guidance on techniques like drip irrigation and artificial insemination. We promote nutrient-rich fodder crops, supporting farmers in improving crop and animal productivity for regional sustainability.

We also play a crucial role in promoting entrepreneurship and employability among youth by providing training in various skills such as electrical and mobile repairing, motor rewinding, welding, car driving (including obtaining a LMV driving license), and computer skills. These programs empower young individuals, fostering economic growth and overall sustainability.

Fueling Growth, Fostering Energy Leadership

NTPC adopts a comprehensive and ambitious strategy for a Sustainable and Inclusive Energy future. By harnessing renewable energy sources, deploying advanced technologies, and prioritizing social equity, NTPC aims to drive positive change in the energy sector. With a target of reaching 60 GW of installed capacity by 2032, NTPC is dedicated to transitioning from conventional thermal power to clean and green energy solutions.

This vision encompasses a holistic transformation that not only reduces carbon emissions but also focuses on job creation, community engagement, and environmental conservation. NTPC actively pursues innovative initiatives and collaborations to build a just and resilient energy landscape that benefits all stakeholders while mitigating the impacts of climate change.

Ramagundam 10 MW Solar PV

Financial Capital

Management Approach

We place a significant emphasis on capital expenditure (Capex), ensuring a diverse deployment that aligns with our long-term objectives. We recognize the importance of efficient operation and maintenance, and to this end, we have embraced digitalization as a fundamental component of our strategy. By extensively implementing digital tools and technologies, we enhance operational efficiency and optimize resource utilization. This approach enables us to achieve our commitment to high capital productivity while supporting sustainable growth and resource conservation.

Key Highlights

₹1,77,977.17 crore
of revenues (consolidated) generated

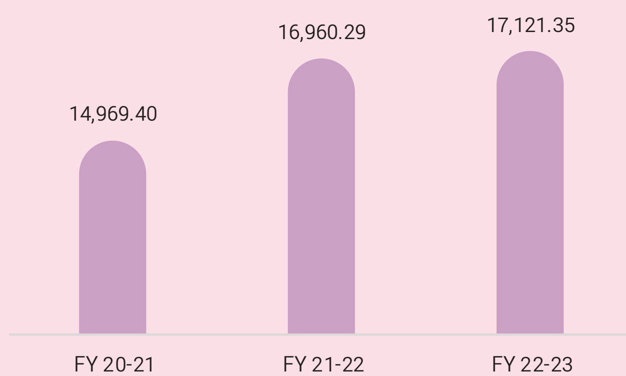
₹26,717.61 crore
worth of Economic value retained

₹352.79 crore
of community investments including donations

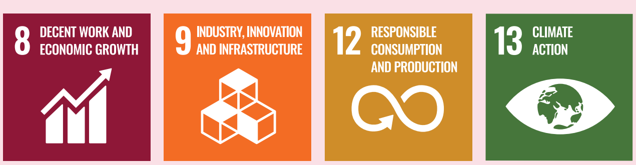
11%
revenue from non-fossil fuel business

Data Trends

Profit After Tax (in ₹ crore)



Mapping with SDGs



IPIECA

SE11, SE12, SE13, E2, E1

UNGC Principle

10

Overview of the capital

NTPC is dedicated to upholding the highest standards of corporate governance, fostering growth, and achieving performance excellence while prioritizing sustainability. Our strong financial position and esteemed corporate image are a direct outcome of our ethical and equitable corporate governance system and policies. We emphasize maximizing asset utilization, efficient capital allocation, and prompt payments to our capital providers and suppliers to maintain a solid balance sheet. Simultaneously, we actively seek opportunities to expand our presence and deliver value to our investors, shareholders, and workforce while optimizing overall expenses. Furthermore, we are committed to increasing revenue through non-fossil fuel ventures, aligning with our goal of sustainable development.

In the Financial Year 2022-23, we achieved remarkable milestones, with a net profit of ₹ 17,121.35 crore on a consolidated basis and ₹ 17,196.73 crore on a standalone basis. Our robust payment security mechanism resulted in realizing over 100% of the billed amount, exceeding ₹ 1.54 lakh crore, the highest ever realization from customers.

NTPC maintains a robust financial system and prioritizes responsible financial resource management to lower capital costs. Our weighted average cost of borrowing is most competitive at 6.40%, reflecting our credibility. We have earned the highest credit ratings from CRISIL, ICRA, India Ratings and CARE, and our foreign ratings from Fitch, S&P, and Moody's are equivalent to sovereign ratings. We actively explore domestic and international borrowing options, aligning with our strategy of business diversification. In line with our vision of providing comprehensive e-mobility solutions, we invest in both backward and forward integration across the energy value chain. Furthermore, our Consultancy Wing has successfully executed assignments worth ₹ 137.58 crore for various clients. NTPC's investments span both backward and forward integration in the power value chain.

>2% Of average net profits expenditure on CSR activities

While ensuring robust financial growth, we are equally committed to inclusive growth. In Financial Year 2022-23, we spent ₹ 315.35 crore (on a standalone basis) on CSR initiatives, exceeding the prescribed 2% limit. For group CSR projects on a consolidated basis, we incurred an expenditure of ₹ 352.79 crore. In addition to enriching lives through CSR activities, we undertake numerous initiatives to ensure environmental sustainability. These initiatives include large-scale tree plantation and maintenance, installation of rooftop solar PV systems on power stations, public utility buildings, and schools, as well as the implementation of vermicomposting, bio-methanation plants, and paper recycling machines. Approximately 15% of NTPC's project cost is allocated to environmental pollution control systems.

Direct Economic Value Generated and Distributed[1]

NTPC group's operational performance in Financial Year 2022-23 generated an economic value of ₹ 1,77,608.87 crore.

Sr. No.	Particulars	FY 2022-23
A	Direct Economic Value Generated	(₹ crore)
1	Revenue*	1,77,608.87
	Total (A)	1,77,608.87
B	Direct Economic Value Distributed	
2	Operating Costs	1,20,644.89
3	Employee Wages and Benefits	6,528.34

*Except provisions and certain other items.

[1] GRI 201-1

Sr. No.	Particulars	FY 2022-23
4	Payments to Providers of Capital	18,403.97
5	Payments to Government	4,961.27
6	Community Investments	352.79
7	Total (B)	1,50,891.26
A-B	Economic Value Retained	26,717.61

Supplier and Local Sourcing: Policies and Practices for Sustainable Operations

NTPC exemplifies its commitment to sustainability by implementing a transparent tendering process that aligns with its Procurement and Works Policy. The bidding documents are designed to support Indian suppliers in line with the Government of India's policy, incorporating provisions for price preference and deemed export benefits. Irrespective of whether the bidding process is international or domestic, NTPC ensures that supply cum erection packages include mandatory provisions for labor, welfare, and safety.

NTPC's projects serve as catalysts for local economic growth, creating favorable conditions for local suppliers to thrive and contribute goods and services. Additionally, NTPC goes above and beyond by extending additional facilities to project-affected families, surpassing their entitled benefits, in accordance with government policies.

In Financial Year 2022-23, NTPC's total income reached ₹ 1,77,977.17 crore, marking an increase from ₹ 1,34,994.31 crore in Financial Year 2021-22. The company's board recommended a final dividend of ₹ 3 per share for the Financial Year 2022-23, complementing the interim dividend of ₹ 4.25 per share. Thus, the total dividend for Financial Year 2022-23 equals ₹ 7.25 per share.

Financial Assistance from government

NTPC operates on a self-sustained basis and consistently contributes to the Government of India through regular dividends on its equity. Since Financial

Year 20, NTPC has successfully managed its capital investments without requiring any additional funding from the Government of India. Moreover, the company upholds its commitment to financial independence by not relying on any direct government benefits such as subsidies, grants, or royalties.

Description of Main Activity	Description of Business Activity	% of Turnover on consolidated basis	Operating Turnover (₹ in crore)
Generation of Electricity	Power Generation from – Coal	85.91	1,49,469.50
Generation of Electricity	Power Generation from – Gas	5.30	9,218.06
Generation of Electricity	Power Generation from – Solar	0.85	1,487.47
Generation of Electricity	Power Generation from – Hydro	3.11	5,414.52
Generation of Electricity	Power Generation from – Wind	0.08	134.24
Consultancy	Technical Consultancy services	0.07	118.80
Energy Trading	Sale of energy through trading	4.68	8,143.02

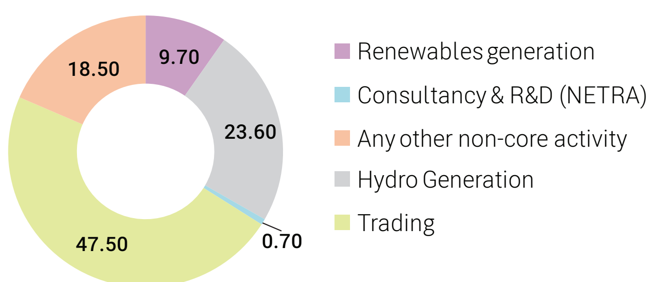
Financial implications due to climate change[2]

The growing concerns about climate change have prompted the adoption of stricter regulations and a greater focus on renewable energy. NTPC, as a socially responsible organization, has not only taken measures to address the risks posed by climate change but has also turned them into opportunities.

During the Financial Year 2022-23, an impressive ₹ 19,139.93 crore, accounting for a significant 11% of the NTPC group's total revenue, was derived from non-fossil fuel endeavors.The revenue breakdown for the various renewable energy sources is as below:

11% revenue from Zero-carbon emission-based businesses

Revenue Break Up from Non-Fossil fuel



NTPC Solar, Shimbhoo Ka Burj

Manufactured Capital

Management Approach

Our management approach is rooted in a steadfast commitment to pursue three primary goals that guide our operations: producing power at the lowest cost, minimizing emissions, and ensuring the highest level of safety. These objectives form the bedrock of our organizational priorities, fueling our drive for sustainable practices. To achieve these goals, we maintain an unwavering dedication to continuous research and development, fostering a culture of innovation that enables us to reduce both capital expenditure (CAPEX) and operational expenditure (OPEX). By optimizing our operational potential and flexibility, we empower ourselves to effectively respond to the ever-changing needs and expectations of our customers, positioning us at the forefront of sustainability in the energy industry.

Key Highlights

72.25 GW
total installed capacity

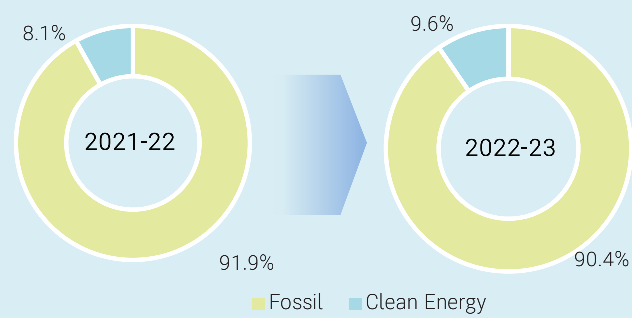
399 BU
total generation

3.29 GW
capacity added in reporting year

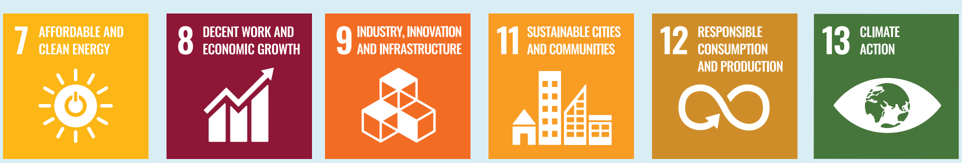
1.35 GW
non-fossil capacity added in reporting year

Data Trends

Installed Capacity Mix



Mapping with SDGs



Material Topics

[3] [4] [17]

NTPC kayamkulam

Overview

Manufactured capital at NTPC focuses on optimizing the utilization of material resources and energy throughout the electricity generation process in a sustainable manner. NTPC's manufactured capital encompasses a range of physical assets, such as power generating stations, captive coal mines, equipment, machinery, raw materials, and logistic infrastructure, which are essential for power generation.

NTPC strives to optimize the efficiency and effectiveness of its power generation capabilities through the implementation of policies and practices that prioritize the preservation of natural resources, as well as the long-term sustainability of the manufacturing ecosystem. By planning strategically, harnessing technological advancements, and practicing responsible resource management, NTPC aims to bolster the performance and resilience of its manufacturing infrastructure, fostering an environmentally conscious and sustainable future.

NTPC's Business Verticals

- **Power Generation**
  - Thermal Power
  - Renewable Power
  - Hydro Power
  - Nuclear Power
- **Green Hydrogen & Chemicals**
  - Green Hydrogen
  - Green Methanol & Ammonia
- **Mining**
  - Coal Mining
- **Waste to Energy**
  - Thermal Gasification based WtE
  - MSW to Charcoal
- **Energy Trading**
  - Cross Border Trading
  - Domestic Power Trading
- **Consultancy Services**
  - Technical Consultancy
- **EV Ecosystem**
  - Electric Vehicles
  - EV Charging Infrastructure
- **Ash Management**
  - Fly Ash Products
  - Mine Filling

1. Power Generation

Overview

NTPC, being the largest power generating company in the country, operates a total of 89 power stations across various Indian states, either independently or through our JVs and subsidiaries. Notably, in the Financial Year 2022-23, we achieved an all-time high-power generation of 399 BU, marking a remarkable growth of 10.80% compared to the previous year. Our core focus lies in power generation, as we strive to contribute significantly to India's energy and economic growth, ultimately creating sustainable long-term value for our stakeholders.

NTPC has adopted a comprehensive management approach to ensure sustainability in its operations, particularly in relation to its manufacturing optimization strategy and coal production from its coal mines. The company has implemented various measures aimed at enhancing coal production, aligning with its commitment to meet the nation's energy demands while supporting decarbonization objectives through consistent shift towards renewables and more efficient technologies. NTPC has set an ambitious target of establishing nearly half of its installed capacity through renewable energy sources by 2032, further reinforcing its commitment to a sustainable future. In the Financial Year 2022-23, NTPC achieved remarkable progress by recording a substantial growth of 24.24% in its non-fossil portfolio, which plays a vital role in the company's sustainability strategy i.e The Brighter Plan 2032. These achievements underscore NTPC's unwavering dedication to clean energy transition and its contribution towards achieving a greener and more sustainable energy landscape.

Installed Capacity and Generation

NTPC, a leading power company in India, demonstrates a strong commitment to provide uninterrupted and affordable power, bringing immense benefits to even the most remote corners of the country. With an impressive total installed capacity of 72.25 GW for the entire group,

including allied companies with an installed capacity of 15.88 GW, NTPC plays a pivotal role, accounting for approximately 17% of the nation's total installed capacity and contributing 25% of country's power supply. Notably, NTPC has achieved significant growth in its group installed capacity, adding an impressive 3.29 GW compared to the previous Financial Year. This remarkable progress underscores the company's relentless efforts to expand its energy portfolio and contribute to the nation's energy sector.

	FY 2020-21		FY 2021-22		FY 2022-23	
	Gross Capacity (MW)	Gross Gen (BU)	Gross Capacity (MW)	Gross Gen (BU)	Gross Capacity (MW)	Gross Gen (BU)
Coal	54,224	289.59	56,874	337.27	58,814	376.33
Gas/Liquid	6,511	11.25	6,511	8.60	6,511	5.18
Hydro	3,725	11.37	3,725	12.09	3,725	12.88
Renewable Energy	1,350	1.86	1,852	2.55	3,204	4.92
Total	**65,810**	**314.07**	**68,962**	**360.51**	**72,254**	**399.31**

NTPC Group diversified capacity comprises 89 NTPC Stations, consisting of 35 coal-based stations, 29 solar PV stations, 11 gas-based stations and 9 hydro, 2 small hydro and 3 wind power stations. This broad mix of energy sources demonstrates the group's commitment to leverage renewable and clean energy technologies while maintaining a sustainable and reliable power supply for the nation. The state-wise installed capacity & generation can be referred from NTPC website.

1.1 Fuel Security[1]

At NTPC we believe in sustainable production and consumption principles and hence we are committed towards achieving high operational efficiency in order to reduce the consumption of our primary resources which are mainly Coal, Gas, Biomass and Water.

Efficiently managing our raw material consumption not only benefits our shareholders but also positively impacts our communities. By optimizing our usage, we can lower electricity tariffs, making it more affordable for everyone. Additionally, reducing the burden on local resources through minimized extraction and waste generation helps preserve the environment and promote sustainability.

We understand that ensuring fuel security is vital for maintaining the energy security of our nation, and hence NTPC constantly explores new sources of fuels while also engaging in long-term supply contracts to enable uninterrupted operation of its plants.

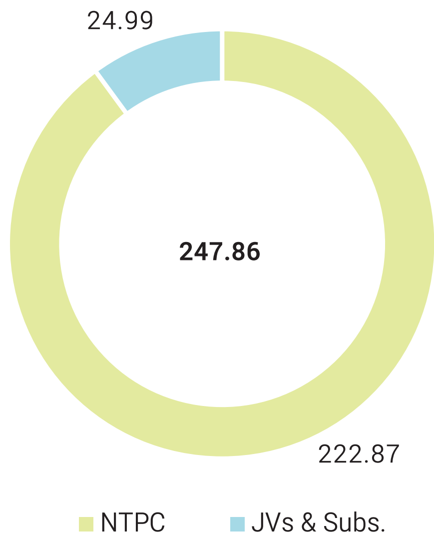
Coal Sourcing

NTPC has established both long-term and short-term coal supply agreements with domestic companies and foreign suppliers. Specifically, long-term Fuel Supply Agreements (FSAs) are in effect with the subsidiary coal companies of Coal India Ltd. (CIL) and Singareni Collieries Company Limited (SCCL) for Annual Contracted Quantity (ACQ) of 170.82 MMT and 13.74 MMT respectively as on 31 March, 2023.

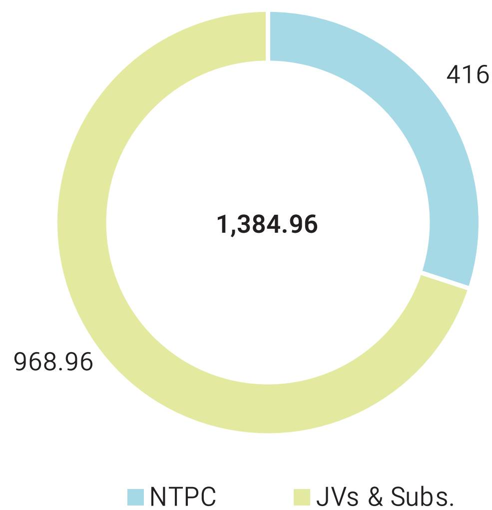
During the reporting year, we also received 21.8 MMT of coal from our own captive mines, while ACQ materialization for Financial Year 2022-23 was around 92%.

[1] GRI 301-1

Break up of Coal Sourcing (MMT)



Break up of Gas Sourcing (MMSCM)



Gas Sourcing

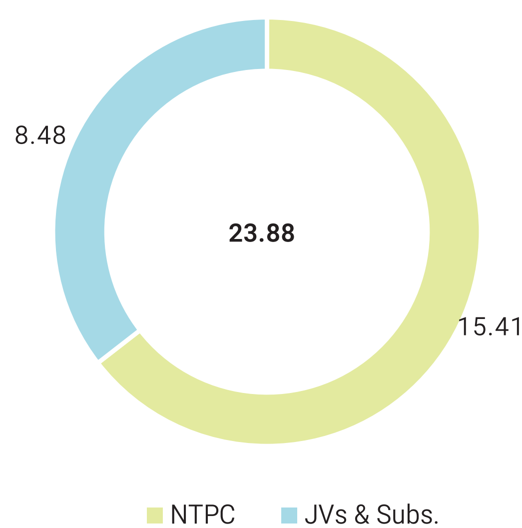
NTPC has long-term Gas Supply Agreements (GSAs) with GAIL for both Administered Price Mechanism (APM) gas and non-APM gas which is valid till 6 July 2026. However, due to the allocation of gas to the City Gas Distribution (CGD) sector based on the MoP&NG guidelines, the supply of domestic gas (both APM and non-APM) to power plants, including NTPC stations within the Gas grid, has been discontinued since June 16, 2021. In addition to the above agreement, NTPC also has a long-term agreement with GAIL for the supply of 1.1 Million Metric Standard Cubic Meter per Day (MMSCMD) of Regasified Liquefied Natural Gas (RLNG) on a firm basis, valid until December 2023.

To compensate for the shortfall in long-term domestic gas and RLNG supply, NTPC procures Spot RLNG through limited tender from domestic suppliers and on a 'Single Offer' basis from Public Sector gas marketing companies. These Spot RLNG supplies are contracted on a 'Reasonable Endeavour' basis, without penalties for short supply or off-take by either party. Furthermore, since March 2020, NTPC has been procuring Spot RLNG on a commitment basis from domestic suppliers, subject to the consent of the beneficiary DISCOMs (Distribution Companies). Adequate stock of liquid fuel is also maintained by NTPC to meet the requirements of the power grid.

Sourcing of Biomass for Co-Firing

We are India's first major energy company to commercialize biomass co-firing in our coal-powered plants, using up to 10% agro-residue-based biofuel alongside coal. The company is using these pellets, made out of stubble and husk, in its majority of the coal-fired power plants across the country. This approach reduces coal usage, mitigates carbon emissions, and discourages the burning of crop residue while generating economic value from agricultural waste. Our innovative method leverages existing coal-based power plant infrastructure to produce renewable energy, contributing to the renewable energy sector.

Biomass Sourcing (000'MT)



As of Financial Year 2022-23, NTPC has implemented commercial-scale biomass co-firing at 20 stations and 1 joint venture (APCPL-Jhajjar). We are in the process of procuring 4.56 million MT of biomass at these stations. Among them, 13 NTPC stations and 1 APCPL-Jhajjar station have already received biomass pellet, utilizing 97,678 MT of biomass on cumulative basis by end of reporting year.

Short Term Contracts

- Orders placed for 8,37,200 MT under various short term contracts.

Long Term Contracts

- 4,08,800 MT long-term contract awarded for Dadri, starting supply from February '21.
- NIT published for long-term procurement of biomass pellets for all 25 stations .
- LoA placed for 3.06 Million MT (1200 TPD) at Dadri, Unchahar, Tanda, and APCPL-Jhajjar.
- NIT floated for seven NTPC stations (Mouda, Solapur, Simhadri, Ramagundam, Kudgi, Gadarwara, and Khargone) for 9,540 TPD (24.37 MMT).
- NIT floated for fourteen NTPC stations (Vindhyachal, Singrauli, Rihand, Korba, Sipat, Farakka, Khalgaon, Barh, Bongaigaon, Talcher-Kaniha, Lara, Darlipali, NPGCL, and Kanti) for 27,000 TPD (70 MMT).

1.2 Renewable Energy (Excluding Large Hydro)

NTPC is fully committed to India's energy transition objectives and has set an ambitious target of 60 GW renewable energy generation capacity by 2032. We have implemented various initiatives such as solar parks, wind farms, Ultra-Mega Renewable Energy Power Parks (UMREPP), hydrogen-based energy, mobility, storage and chemical, manufacturing (Ammonia, Methanol) projects, and pump storage projects. To expedite our transition, NTPC has established two wholly owned subsidiaries, NTPC Green Energy Limited (NGEL) and NTPC Renewable Energy Limited (NREL) on 7 April 2022, and 7 December 2020, respectively.

Currently, our renewable energy portfolio (excluding large hydro) stands at around 20 GW, including commissioned and pipeline capacity. In the Financial Year 2022-23, we generated 4.3 billion units (BU) of renewable energy, achieving a growth rate of 93.26% compared to the previous year. Additionally, we have facilitated solar projects with a cumulative capacity of 7 GW in Developer Mode, acting as an intermediary procurer, acquiring power from developers and selling it to DISCOMs while earning a trading margin.

The breakdown of NTPC's solar projects at various stages is provided below, reflecting the current status:

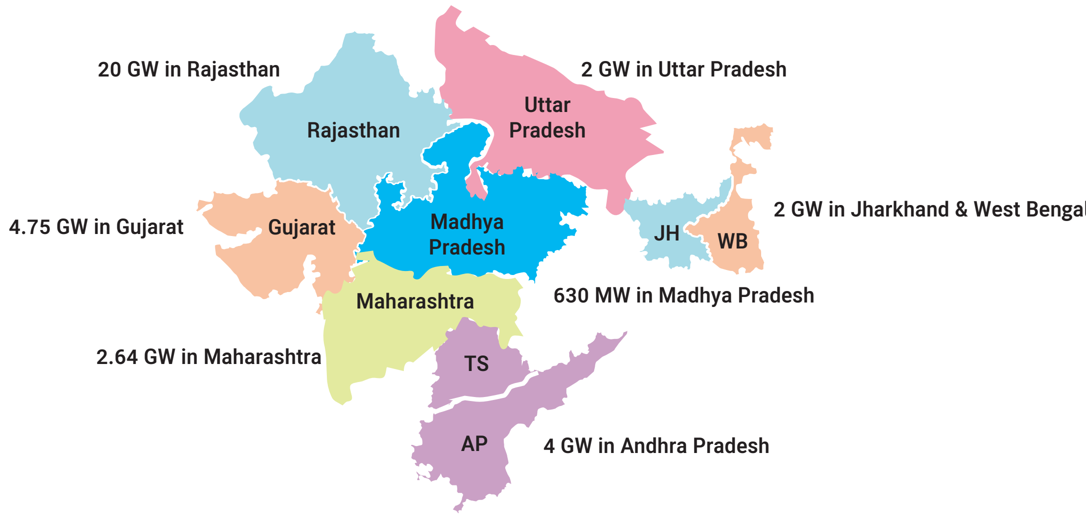
Description	NTPC Group EPC Mode Own Projects Capacity (18,322 MW)				Outsourced Projects Capacity (MW)
	NTPC	NGEL	NTPC REL	THDC & NEEPCO	NTPC
Commissioned	401	2,611	--	192	5,083
Under Execution	868	250	3,550	--	890
Under Tendering	--	--	10,060	--	770
Capacity won	--	--	390	--	--
Total	**1,269**	**2,861**	**14,000**	**192**	**6,743**

Floating Solar Power Project

NTPC possesses the largest floating solar portfolio in India (262 MW). In 2022, four floating solar projects were commissioned, including the two largest installations in India (Ramagundam - 100 MW and Kayamkulam - 92 MW). Additionally, two smaller installations were commissioned at Kawas (23 MW) and Auraiya (20 MW). We have also signed up for a project with the Government of Uttar Pradesh to establish a Floating Solar PV project on Rihand reservoir, with a capacity of up to 1 GW.

Ultra Mega Renewable Energy Power Parks (UMREPP)

NTPC is actively implementing Ultra Mega Renewable Energy Power Parks (UMREPP) across states, aiming to reach a cumulative capacity of 36 GW. Key contributors include Rajasthan (20 GW), Gujarat (4.8 GW), Maharashtra (2.6 GW), Uttar Pradesh (2 GW), Damodar Valley Corporation (2 GW), Andhra Pradesh (4 GW), and Madhya Pradesh (0.6 GW). These initiatives demonstrate NTPC's dedication to expand renewable energy infrastructure and promoting sustainable development in diverse regions.



MoUs Signed in Financial Year 2022-23

- NTPC-REL and Indian Army for setting up Green Hydrogen technology projects.
- NTPC REL and NFL for Green Ammonia (50 TPD) and 90 MW RE-RTC power.
- NTPC REL and GACL for Green Ammonia (35 TPD), Green Methanol (75 TPD), and 100 MW RE-RTC Power.
- NTPC-REL and Jubiliant Ingrevia Limited for RE-RTC power and synthesizing Green Chemicals.
- NTPC REL and NIWE for Strategic Collaboration in developing on-shore and off-shore wind projects in India.
- NTPC GEL and GRIDCO for development of Solar PV and Pumped Storage projects.
- NTPC GEL and HPCL for development of RE Power projects.
- NTPC REL and Govt of Tripura for development of Solar PV Projects.
- NTPC and Govt of Uttar Pradesh for setting up Floating Solar PV project up to 1 GW on Rihand reservoir.
- NTPC and Govt of Uttar Pradesh for Development of 2000 MW RE projects in TUSCO.

National Solar Mission

National Solar Mission Phase-I (2009-2013): NTPC Vidyut Vyapar Nigam Ltd (NVVN), a subsidiary of NTPC Ltd, was appointed as the Nodal Agency by the Government of India for the purchase and sale of 1,000 MW of grid-connected solar power. Solar power developers were selected through the Migration Scheme and the New Projects Scheme, resulting in a cumulative commissioned capacity of 733 MW (533 MW Solar-PV and 200 MW Solar-Thermal) under NSM Phase-I. The solar power generated from these projects is sold by NVVN to State Utilities/ DISCOMs at affordable prices, bundled with thermal power from NTPC coal-based power stations.

National Solar Mission Phase-II: NTPC Ltd has been designated as the implementation agency for setting up 15,000 MW of grid-connected power plants in three tranches. So far, the Ministry of New and Renewable Energy (MNRE) has issued guidelines for the selection of 3,000 MW capacity under Tranche-I, and this capacity has already been commissioned. In total, 5,083 MW of renewable energy capacity has been commissioned under the Outsource Mode.

International Solar Projects

NTPC has been actively involved in various international solar projects, demonstrating its expertise and contribution to the renewable energy sector. In March 2023, NTPC conducted two training sessions for power sector professionals from Myanmar, highlighting its commitment to knowledge sharing and capacity building in the region. NTPC was appointed as the Project Management Consultant (PMC) for solar rooftop pilot projects in São Tomé and Príncipe and Ethiopia under the aegis of International Solar Alliance (ISA), further strengthening its international presence in the solar energy domain.

In addition to its PMC assignments, NTPC has been engaged in multiple project execution activities. NTPC also conducted meetings with representatives from Mali, Venezuela, Niger, and other countries to explore potential collaborations and discuss legal frameworks for solar projects. Furthermore, NTPC actively participated in the ISA Solarization Programme, conducting physical inspections, kick-off meetings, and verification of technical documents for various countries such as Djibouti, Mozambique, Seychelles, Sudan and Uganda.

Overall, NTPC's involvement in international solar projects encompasses project management, capacity building, and technical assistance, showcasing its commitment to promote renewable energy globally and support the goals of the International Solar Alliance.

1.3 Nuclear Power

To expedite the clean energy transition, NTPC has also diversified its business portfolio into nuclear energy. At present, NTPC holds a 49% stake in ASHVINI, a joint venture with NPCIL, approved by both companies' boards. The Supplementary Joint Venture Agreement adheres to the Atomic Energy Act and features a revised 50:50 shareholding pattern. In addition to this, a committee comprising the Joint Secretary (ER) from the DAE and the Joint Secretary (Thermal) from the MoP is evaluating the transfer of assets for the Chutka Madhya Pradesh Atomic Power Project (CMPAPP 2x700 MW) and the Mahi Banswara Rajasthan Atomic Power Project (MBRAPP 4x700 MW) from NPCIL to the joint venture. A joint team of executives from NTPC and NPCIL is actively engaged in pre-project activities for Mahi Banswara to expedite regulatory consents. NTPC has also established a Nuclear Cell in Mumbai, which maintains regular interaction with NPCIL and other DAE departments. NTPC is continuously engaging with BARC to finalize the design of an Indigenous Small Modular Reactor (SMR) as part of its SMR development efforts.

Furthermore, NTPC considers light water reactors (LWR) and advanced SMRs (Gen IV reactors) in its nuclear technology development. The company is exploring the possibility of an MOU with the Uranium Corporation of India Limited for the global acquisition of uranium mines.

2. Green Hydrogen & Chemicals

NTPC, in its steadfast commitment to sustainable development, has undertaken a comprehensive management approach to reduce its carbon footprint and promote green energy. The company has been actively exploring alternate fuel sources and innovative chemical manufacturing processes. One of the primary areas of focus for NTPC is the utilization of biomass as an alternative fuel source, which has the potential to significantly reduce greenhouse gas emissions.

NTPC's Notable Green Hydrogen Initiatives

Green Hydrogen Blending Facility in Kawas, Gujarat

- India's first pilot facility blending green hydrogen into the Piped Natural Gas (PNG) network.
- Reduces approximately 1000 kg of carbon emissions annually.

Green Hydrogen Mobility Project in Ladakh

- Implementation of India's first project for green hydrogen mobility.
- Design capacity of producing 80 kg/day of green hydrogen.
- Introducing five green hydrogen-fueled buses (FCEBs) for intracity travel in Ladakh.

Green Hydrogen Fuelling Station in Badarpur, Delhi

- Establishing a station with a capacity of 260 kg/day of green hydrogen.
- Supports the operation of five FCEBs for intracity travel in the Delhi NCR region.

Solar-Hydrogen-BESS System in Ladakh

- Setting up a system combining solar power and hydrogen storage in Ladakh
- Ensures round-the-clock renewable power supply at a defense location.

Sourcing Electrolyzers for Green Hydrogen Projects

- NTPC is in the finalization stage of sourcing 400 MW PEM and 600 MW Alkaline type Electrolyzers for green hydrogen projects.

Moreover, NTPC has made substantial investments in the production and utilization of hydrogen as a clean fuel for power generation. In collaboration with prominent organizations like IOCL, Indian Army, and HPCL, NTPC is establishing a state-of-the-art green hydrogen plant, leveraging renewable energy sources such as solar power to produce hydrogen sustainably.

NTPC's green hydrogen initiatives align with its vision of becoming a prominent integrated energy major, propelling India's growth and expanding its global footprint. Through diversifying fuel sources and venturing into chemical manufacturing, NTPC aims to play a crucial role in India's sustainable development, ushering in a greener and prosperous future.

Along with green hydrogen, NTPC is working on multiple avenues of production of various chemicals and alternate fuels such as Green Ammonia, Urea, Methanol etc.

Green Methanol Projects

10 TPD	Vindhaychal, Madhya Pradesh
25 TPD (GACL)	Dahej, Gujarat
25 TPD (GNAL)	Dahej, Gujarat
25 TPD	Vadodara, Gujarat
185 TPD	Gajraula, Uttar Pradesh

Green Ammonia Projects

35 TPD	Dahej, Gujarat
50 TPD	Nangal, Punjab
100 TPD	Gajraula, Uttar Pradesh
1,000 TPD	Bhuj, Gujarat

Case Study

NTPC initiates India's inaugural green hydrogen blending in PNG network

NTPC, in collaboration with Gujarat Gas Limited (GGL), has successfully launched India's first green hydrogen blending project in the piped natural gas (PNG) network of NTPC Kawas Township near Surat. This achievement, accomplished shortly after the laying of the foundation stone by the Hon'ble Prime Minister of India, involves the supply of H_2-NG (natural gas) to households in Kawas Township through electrolysis of water using power from a 1 MW floating solar project. The regulatory body, PNGRB, has approved a gradual blending of green hydrogen with PNG, starting at 5% vol./vol. and eventually scaling up to 20%. This groundbreaking initiative positions India at the forefront of the global hydrogen economy, offering opportunities to reduce hydrocarbon imports and become a green hydrogen and green chemicals exporter, contributing to the reduction of CO_2 emissions.

Salient features of this initiative

200	5-20%	1 MW
Households will receive hydrogen blended PNG	Hydrogen blending by volume	Floating solar capacity

Green H_2 blending in PNG network, NTPC Kawas

3. Coal Mining

NTPC has been allocated seven coal blocks by the Ministry of Coal: Pakri-Barwadih, Chatti-Bariatu, Chatti-Bariatu (South), Kerandari, Dulanga, Talaipalli, and Badam. The Banhardih coal block has been allocated to Patratu Vidyut Utapadan Nigam Ltd. (PVUNL), a joint venture between NTPC and the Government of Jharkhand. With estimated geological reserves of approximately 5 billion tonnes and a projected mining capacity of 71 million tons per annum, these coal blocks position NTPC as one of the largest captive coal mining companies in the country.

In Financial Year 2022-23, NTPC achieved its highest-ever coal production of 23.20 million metric tonnes (MMT) from the Pakri Barwadih, Dulanga, Talaipalli, and Chatti Bariatu mines, representing a remarkable 65% growth compared to Financial Year 2021-22. Additionally, mine operations began at the Chatti Bariatu mine in September 2022 and the Kerandari mine on 5 April 2023. Moreover, Financial Year 2022-23 witnessed the highest-ever coal dispatch of 21.96 MMT, showing a significant 48% growth from the previous financial year.

In Financial Year 2022-23, there has been significant progress in coal production from the Talaipalli Coal mine, with the appointment of mining agencies in the South pit extension and West pit. However, there have been disputes and contractual issues with the main MDO appointed in August 2020, which led to the termination of the contract. The matter is currently undergoing conciliation before CCIE-1. Nevertheless, NTPC has taken steps to appoint a new MDO for the East Pit of Talaipalli to ramp up coal production.

Due to the contractual and legal issues with the MDO, the commercial operation of the mine could not be initiated within two years, and coal production and dispatch remained below 100% of the ATQ (annual targeted quantity) stipulated in the original approved mining plan. Declaring COD (Commercial Operation Date) during this period could have resulted in an under-recovery of fixed costs as per CERC regulations. However, with the forthcoming appointment of the MDO for the East Pit, we envision sustainable growth in coal production from Financial Year 2023-24 onwards. The mining plan has been revised to address the issues associated with the original plan and is pending approval from CCO. Once approved, the ATQs will also be revised accordingly. As a result, the Talaipalli Coal mine will be able to achieve 100% dispatch of ATQ on a yearly basis and meet the requirements of commercially prudent mining operations post the declaration of COD.

4. Waste to Energy

In line with the Government of India (GoI) Swachh Bharat Mission and our commitment for green energy, we at NTPC, through our subsidiary NVVN, have undertaken several initiatives in the field of waste to energy thereby ensuring pollution free environment for people's health and welfare.

As a testament to our unwavering commitment, we have successfully commissioned a thermal gasification-based Waste to Energy (WtE) plant with a demonstration scale of 24 TPD (Tons Per Day) in Varanasi. This project showcases our dedication in converting waste into valuable energy resources. Furthermore, we are in the final stages of establishing a Waste to Charcoal project with a capacity of 600 TPD in Varanasi, further emphasizing our focus on sustainable waste management. In addition to this, we have also signed MoUs with the Municipal Corporations of Bhopal and Hubli Dharwad for setting up state-of-the-art Municipal Solid Waste (MSW) to Charcoal plant.

Apart from the above, we have also awarded the EPC contract for setting up of a Charcoal Pellet plant at Bhatinda. Civil work is in progress and the Pellet plant shall be commissioned by July 2023, while the tender for two more pellet plants at NTPC Dadri and Jhajjar shall be awarded soon.

5. Energy Trading

Cross Border Trading

Government of India (GoI) has designated NTPC as the Nodal Agency for cross border trading of power with Bangladesh, Bhutan and Nepal. The wholly owned subsidiary of NTPC, NTPC Vidyut Vyapar Nigam Ltd (NVVN), oversees the operations and management of the cross-border trading of power with Bangladesh, Bhutan and Nepal. Currently we have PPAs signed with both the Bangladesh Power Development Board (BPDB) and the Nepal Electricity Authority (NEA).

During the Financial Year 2022-23, we have supplied a total of 5484 MU of electricity to Bangladesh as part of three PPAs with BPDB with a combined capacity of 710 MW (which contributes to around 62% of total power export to Bangladesh). These PPAs include a 300 MW PPA for supplying RTC power supply from the Damodar Valley Corporation, a 250 MW PPA and a 160 MW PPA (for supplying power from Tripura State Electricity Corporation Limited (TSECL) via radial mode).

Furthermore, NVVN also signed a PPA with NEA on 6 February 2023, for supply of upto 200 MW power from April to May 2023 through 400/200 kV Muzaffarpur - Dhalkebar A/C line under radial mode from Indian market. Apart from this, we have also traded 2393 MUs of energy for NEA in a first-of-its-kind initiative through Day Ahead Market platform of Power Exchange .

In addition to this, the Ministry of Power, Government of India, has nominated our company as the Settlement

Nodal Agency (SNA) for the settlement of Grid operation-related charges with neighboring countries, including Bangladesh, Bhutan, Nepal, and Myanmar. NVVN has signed the SNA agreement with the Nepal Electricity Authority and Druk Green Power Corporation Limited, Bhutan. The SNA agreement with the Bangladesh Power Development Board is in the finalization stage and will be signed shortly.

Domestic Power Trading

Our company has demonstrated exceptional performance across various areas, including expanding our customer base, selling captive power, trading power from Independent Power Producers (IPPs), engaging in power banking arrangements, and participating in power and Renewable Energy Certificate (REC) trading on power exchange platforms. As a result, our customer base has expanded significantly, surpassing 100 customers, including state government utilities, private power utilities, IPPs, and captive power generators across all five regions of India.

Furthermore, on 31 January 2022, our company acquired a 5% stake in Power Exchange India Limited (PXIL) by purchasing shares from NSE Investment, a co-promoter shareholder of PXIL. This strategic investment positions us as one of the leading power traders in India and offers NVVN a valuable opportunity to establish and maintain a strong presence in the power trading market. In the current financial year, our company has successfully traded 17,092 MU of energy on the platform, including cross-border transactions.

In accordance with the regulations set by the Central Electricity Regulatory Commission (CERC), our company has also sold over 639 MU of un-requisitioned surplus (URS) power from NTPC Ltd on the Power Exchange. This aligns with our commitment to comply with CERC regulations while optimizing the utilization of available power resources.

6. Consultancy Services

NTPC's Consultancy Wing supports the Indian power industry through its extensive experience and expertise. It provides a comprehensive range of tailored consultancy services, covering activities from project conceptualization to commissioning and beyond. These services include Engineering, Operations and Maintenance (O&M), Project Management, Contracts and Procurement, Renovation and Modernization, Quality and Inspection, Training and Development, Human Resources, Biomass Cofiring, Information Technology (IT), Solar and other renewable power projects, compliance with environmental norms, and the implementation of RDSS/APDRP schemes.

The Consultancy Wing operates domestically and internationally, having successfully executed assignments in several countries, including Bangladesh, Cuba, Ethiopia, Gulf countries, Malawi, Mali, Mauritius, Myanmar, Niger, Paraguay, Togo and other International Solar Alliance (ISA) members. Currently, it is executing around 135 ongoing consultancy assignments.

NTPC's Consultancy Wing provides a range of services to clients in the power sector, including project management consultancy (PMC) for thermal power projects, post-award services for multiple thermal power projects, delivery of Detailed Project Reports (DPR) and pre-award services for various stations, consultancy for O&M support, installation of Flue Gas Desulphurization (FGD), computerization projects, procurement of imported coal, replacement of C&I systems with new DDCMIS, and preparation of Project Feasibility Study Reports (PFSR) for hydro pump storage projects. We have diversified our business efforts in high-value consultancy assignments; the Consultancy Wing is exploring opportunities related to the complete Operations and Maintenance (O&M) of thermal power plants.

Highlights of Financial Year 2022-23

- A Pre NIT bid has been submitted for the Comprehensive O&M of the 2X660 MW Buxar Thermal Power Project (BTPP).
- Increased focus on thermal power expansion has led to multiple inquiries and submission of offers to different clients such as DVC, SCCL, and MPPGCL for DPR, pre-award, and post-award consultancy services.
- NTPC has received an order from MPPGCL for Owner's Engineering services for 1X660 MW unit at Sarni, and an order for Amarkantak's 1X660 MW for Owner's Engineering services is expected in April 2023.
- An order has been received from DVC for DPR and pre-award services for Raghunathpur II 2X660 MW and Koderma 2X800 MW TPSs.

7. EV Ecosystem

Our company has ventured into the e-mobility sector, offering zero-emission vehicles and related services as part of a comprehensive solution in various vehicle segments, particularly catering to public transport needs. NVVN (NTPC Vidyut Vyapar Nigam Ltd) has embarked on several projects in alignment with our dedication to eco-friendly transportation solutions.

NVVN (NTPC Vidyut Vyapar Nigam Ltd) has Undertaken the Following Projects

Agreement with the Department of Transport, Andaman and Nicobar Islands

- Supply of 40 electric buses and development of charging infrastructure.
- Buses have been in commercial operation for 2 years, covering 3 million kilometers.

Bengaluru Metropolitan Transport Corporation (BMTC)

- Won tender to operate 90 e-buses for BMTC.
- Provided buses and necessary charging infrastructure.
- Buses have traveled over 5 million kilometers.

Future Plans with NTPC Projects

- Planned supply of e-buses and e-cars to NTPC projects.
- Aim to reduce GHG emissions, pollution, and dependence on fossil fuels.
- Potential societal benefits include improved air quality and reduced healthcare expenses.

8. Ash Management

Ash, a by-product of coal-fired thermal power plants, has now gained recognition as a valuable resource material worldwide, suitable for diverse applications in the field of Civil Engineering. Extensive endeavors are being undertaken at various levels to effectively utilize ash in different applications, leading to significant achievements in ash utilization.

The Ministry of Environment, Forests & Climate Change (MoEF&CC), Government of India, has recognized the increasing importance of ash as a resource material. The most recent Gazette Notification, issued on 31 December 2021 followed by an amendment on 30 December 2022, superseding all previous notifications, introduces strict guidelines for thermal power plants (TPPs) and ash user agencies regarding the utilization of both generated ash and legacy ash. This notification mandates the use of ash in various applications such as building construction using ash-based products, road embankment construction, mine filling, land filling etc. Defaulter TPPs and ash user agencies are subject to heavy environmental compensation as per the provisions. Additionally, the notification includes new avenues for ash utilization, such as the use of geo-polymer technology-based fly ash building material, shoreline protection structures, and the export of fly ash. These avenues are recognized as environment friendly methods of ash utilization.

Efforts to Maximize Utilization of Fly Ash

- Supplying Fly Ash to the Cement Industry
- Use of Fly Ash Bricks
- Supply of Bottom/ Pond Ash for Road/ Flyover Construction Projects
- Use of Ash in Reclamation of Mine Voids

NTPC places significant emphasis on sustainable ash utilization as a key focus area within its operations. The company is committed to maximize the utilization of

ash across all its power plants. To address this, NTPC has implemented an Ash Policy, which serves as a comprehensive vision document that addresses the entire lifecycle of ash, from generation to end product. This policy aims to maximize the productive utilization of ash while fulfilling social and environmental responsibilities. By adopting this green initiative, NTPC aims to protect the environment, promote sustainability, and create a better future for generations to come.

During Financial Year 2022-23, approximately ~89 million tons of ash was generated by NTPC Group stations and ~83 % i.e., ~74 million tons of ash had been gainfully utilized in various areas such as issue to industries for cement, concrete, bricks/ blocks making, road embankment construction, mine filling, land development works etc. Fifteen stations have achieved 100% ash utilization.

Quality Assurance and Inspection (QA&I)

NTPC prioritizes maintaining high-quality standards for its plant and machinery, including spares used in power plant construction and operations. The Quality Assurance model ensures reliable plant performance through meticulous planning and construction. Rigorous tests and inspections are conducted at every stage, from raw materials to manufacturing, inspection, testing, erection, and commissioning, to meet specified requirements.

NTPC dedicates adequate resources to an effective Quality Management System. This includes a corporate-level Quality Assurance Team, Inspection Engineers, and Field Quality Experts. The exceptional operational performance of NTPC is a testament to the strength of its quality system. NTPC actively contributes to enhance power sector standards and aligned technology practices internationally by participating in technical committees of organizations like BIS and CIGRE.

As part of its commitment to technological advancement, NTPC implements digitalization initiatives such as the Integrated PRADIP based QA&I business processes. These initiatives reinforce NTPC's commitment to continuous improvement and innovation. Skill development in quality-related disciplines is given priority through training modules conducted by esteemed institutes like NCCBM, CSIR-SERC, and NML. This ensures that employees have the necessary expertise to maintain and enhance quality standards. Regular interaction with stakeholders through platforms like Sub-Vendor's Meets and Quality Meets fosters better understanding and system improvements, contributing to a sustainable supply chain.

By prioritizing quality, engaging in technical collaborations, embracing digitalization, promoting skill development, and fostering stakeholder interaction, NTPC is committed to deliver high-quality operations and contribute to a sustainable energy future.

NTPC Bongaigaon

NTPC Kayamkulam

Natural Capital

Management Approach

NTPC places great emphasis on environmental sustainability as a fundamental element of its long-term growth strategy. Our organization consistently invests in enhancing our systems to not only meet but surpass global environmental standards, complying with best practices, and demonstrating responsible stewardship. This dedication is firmly rooted in our core value of promoting sustainable production and consumption of natural resources.

Key Highlights

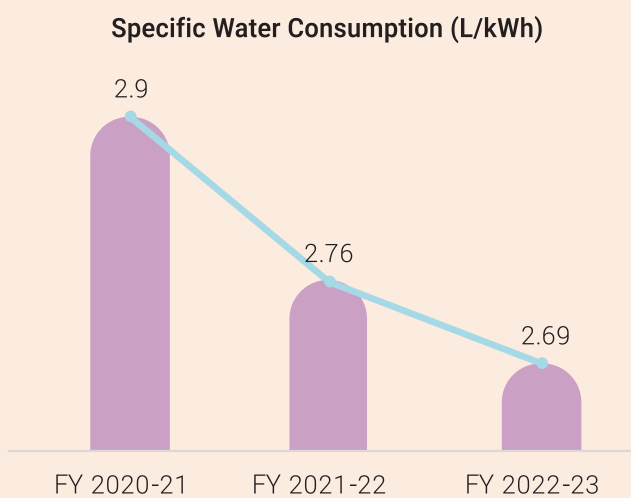
10%
(Y-o-Y) Reduction in specific PM Emission

2.48%
(Y-o-Y) Increase in energy savings

21.56%
(Y-o-Y) Increase in avoided emissions

1 MN+
Trees plantation

Data Trend



Mapping with SDGs

Material Topic(s)

[3] [4] [6] [8] [12] [16]

NGRBC Principle

[2] [6] [9]

NTPC Jhanor Gandhar

Overview

At NTPC, we prioritize environmental risk management and strive to ensure the well-being of our natural surroundings. Our comprehensive EIA studies serve as the foundation for developing and implementing Environmental Management Plans across all our stations. Our environmental policy centers around the efficient utilization of natural resources, waste reduction through recycling and reusing, adoption of cutting-edge technologies, and improving the performance of older units for increased efficiency ensuring minimum impact on the environment. We continuously enhance our environmental performance by implementing viable engineering solutions and complying with regulatory standards. NTPC stations hold ISO: 14001 certification[1] for effective environmental management systems and practices. Additionally, we have established an environmental grievance mechanism to ensure early resolution of the issues and the proper documentation of all concerns and complaints.

Water & Effluent Management[2]

NTPC recognizes water as a vital resource for life and maintains a steadfast commitment to its sustainable utilization. Through vigilant monitoring, we strive to optimize water consumption using the 3R principle of reduce, reuse, and recycle.

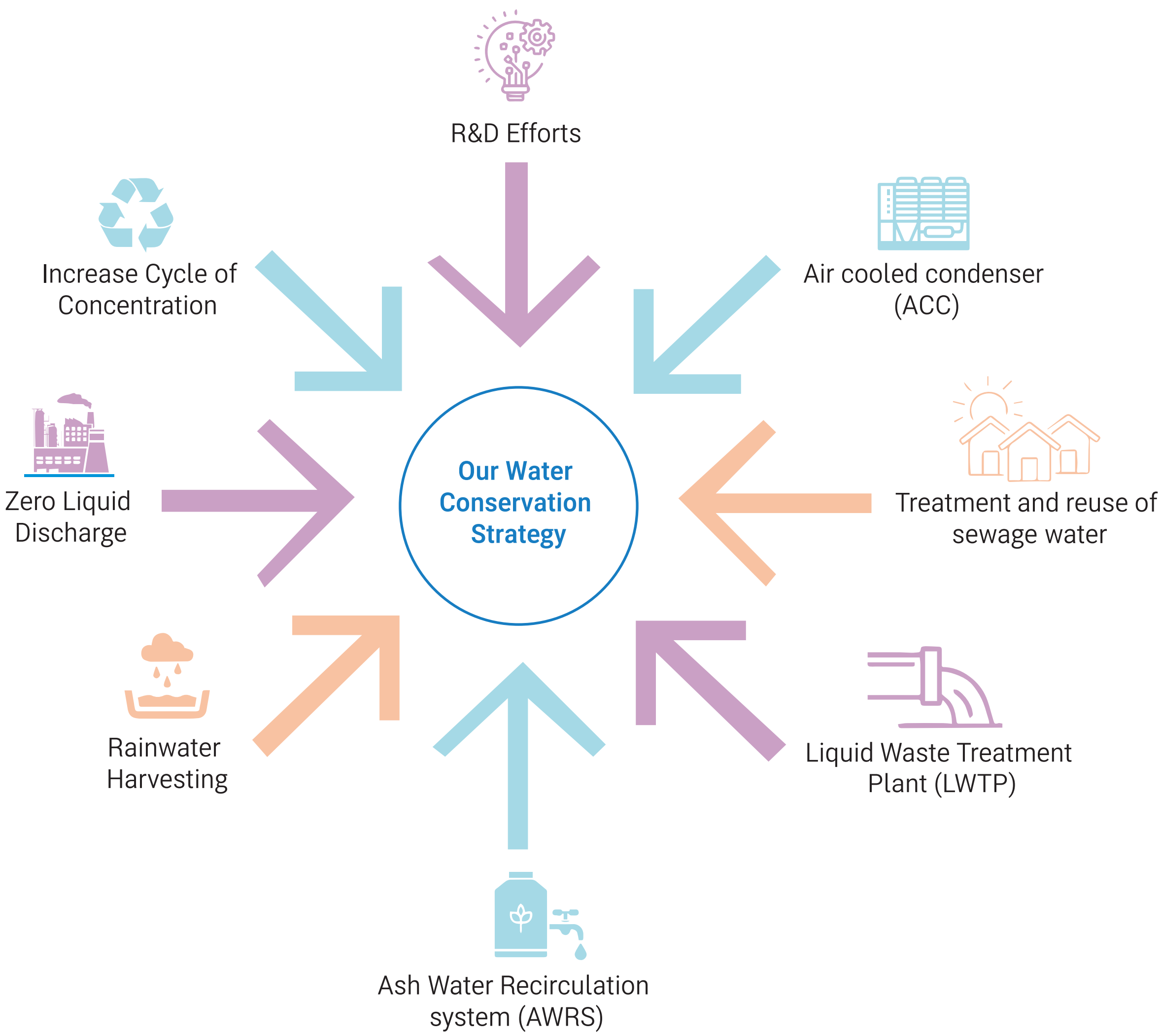
Almost all our thermal power plants employ a closed-cycle cooling system with cooling towers to ensure there is minimum impact on environment. Through the latest technology adoption and regular maintenance, we ensure there is minimal water loss primarily through evaporation, drift, and blowdown in the same. To enhance water efficiency, we are increasing the cycles of concentration (COC) and reusing high-TDS blowdown water in other processes. Furthermore, we are actively implementing zero liquid discharge (ZLD) across all stations, our nineteen power generating stations have already adopted this practice and the rest are in advanced stages of implementation. Our current water discharges, including treated effluents and runoff, comply with stipulated norms and conditions, ensuring no significant impact on water bodies or related habitats.

Efforts to enhance the reuse and recycling of effluents have resulted in reduced freshwater withdrawal needs over time. Nonetheless, the growing integration of renewable energy sources in the power grid is causing thermal units to operate at significantly lower plant load factors (PLFs), consequently raising per-unit water consumption. Furthermore, the implementation of wet flue gas desulfurization (FGD) systems across all stations presents a challenge in reducing water consumption. However, due to our various efforts towards water conservation, we have managed to bring our specific water consumption at our thermal units below prescribed norms of 3 litre/kWh.

[1] List of certifications can be accessed from NTPC website

[2] GRI 303-3 and GRI 303-4

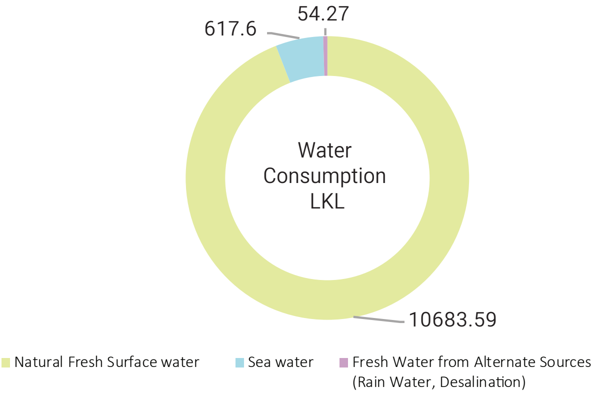
Our stations source water from diverse bodies such as rivers, reservoirs, canals, and for coastal plants, seawater. The majority of our stations are equipped with closed-loop systems and Zero Liquid Discharge resulting in minimal drawal of water and discharge of plant effluent into water bodies, thereby safeguarding biodiversity and ecosystems. In instances where non-zero liquid discharge (ZLD) plants are present, the discharge of treated effluent into natural watercourses strictly adheres to regulatory standards.



[3] GRI 303-5

Water Consumption[3]

Our freshwater consumption represents the volume of water extracted from natural sources, excluding the amount discharged back into the environment after undergoing necessary treatment to ensure its safety and compliance with established standards. In Financial Year 2022-23, there has been a noteworthy decrease of 2.53% in specific water consumption when compared to Financial Year 2021-22, although the installed capacity as well as generation as increased over the same period.



Case Study

The commissioning of an Air-Cooled Condenser (ACC) in the 660 MW first unit of NTPC North Karanpura on 01 March 2023, marks a significant step towards sustainability. This innovative project is designed to replace conventional water-cooled condensers (WCC) with ACC technology, resulting in a remarkable reduction in water consumption. Compared to units equipped with WCC, the ACC system has a water footprint that is approximately one-third. The installation of other ACCs is already under progress at NKSTPP for balance (2x660 MW) and Patratu STP (3x880 MW). This transition to ACC is expected to save an estimated 30.5 million cubic meters (MCM) of water annually, equivalent to fulfilling the water needs of approximately 1.5 million people in the region each year. Overall, this implementation will decrease the water requirement by an impressive 55%. By adopting ACC technology, NTPC showcases its commitment to sustainability and responsible resource management.

NTPC North Karanpura

Reduce-Reuse-Recycle

In our ongoing commitment to sustainability, we have effectively lowered our specific water consumption even below the norm notified by MoEF&CC, through a range of water efficiency initiatives. As an integral part of our dedicated Rainwater Harvesting policy, we are actively constructing rainwater harvesting systems across all our facilities, thereby reducing our reliance on freshwater resources. These systems encompass rainwater harvesting, which enables us to replenish groundwater and store water at the surface, utilizing a combination of these methods. Throughout the reporting period, we successfully collected and utilized rainwater at our plants to support our operational needs.

In addition, NTPC has successfully integrated an Ash water recirculation system (AWRS) to effectively utilize both the decanted ash slurry water and the drainage water from the embankments of the ash pond, meeting our ash handling and service water needs. Furthermore, we have embraced the adoption of Zero Liquid Discharge (ZLD) across all our stations, employing a cascaded water usage approach that optimizes water quality for various practical applications.

Efficient effluent management is ensured through the treatment of liquid waste from diverse plant sources in our Liquid Waste Treatment Plant (LWTP). The treated effluent, meeting specified standards, is utilized for operational needs like coal handling, ash handling and service water, promoting resource conservation. Any surplus treated effluent not utilized in Non-ZLD Plants is responsibly discharged in compliance with discharge standards, maintaining our commitment to sustainable practices.

We have implemented Sewage Treatment Plants for sewage effluent treatment and reuse, Effluent quality is consistently monitored, and the treated wastewater is utilized for horticulture and other activities within the NTPC premises. In the reporting year, 97% of generated wastewater was effectively recycled, reducing the need for freshwater consumption.

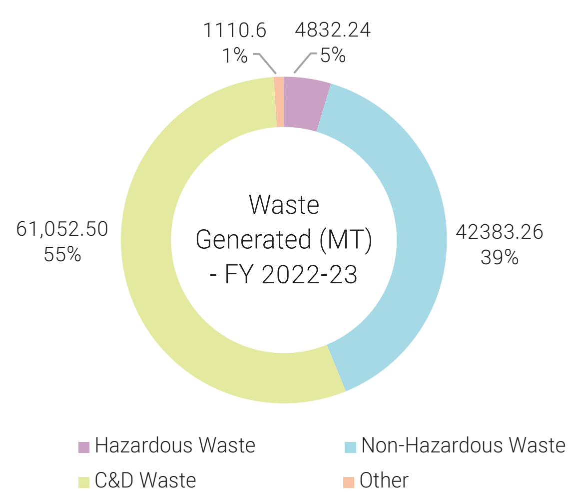
Waste Management

We are committed to managing and disposing of all on-site waste in an eco-friendly, socially responsible, and financially viable manner. Our comprehensive approach encompasses waste collection, segregation, transportation, processing, recycling, and disposal of various waste types. Our primary focus is on optimizing resource usage while minimizing waste generation. When disposal becomes inevitable, we strictly adhere to all rules and regulatory obligations, especially in managing hazardous and non-hazardous waste from our power plants, following the NTPC Waste Management Guideline.

Hazardous, Non-Hazardous, and Other Waste[4]

Our operating facilities generate hazardous wastes, including used lubricating oil, transformer oil, and spent resins, which are disposed of by authorized agencies following the Hazardous and Other Wastes (Management and Transboundary Movement) Amendment Rules, 2016. Non-recyclable waste undergoes appropriate treatment and disposal at a Treatment, Storage & Disposal Facility (TSDF) as mandated by the HWM Rules 2016.

Our operations are now free from Polychlorinated Biphenyl (PCBs), in compliance with the Basel Convention. We uphold strict adherence to this international agreement, refraining from the import or export of hazardous waste or materials. Additionally, our power plants have successfully eliminated the generation of radioactive waste, further ensuring our commitment to sustainability.



Waste type	Disposal Methods[5]
Used Lube oil	Sold to registered recyclers
Used Transformer oil	
Containers of hazardous wastes	

[4] GRI 306-3

[5] GRI 306-5

Waste type	Disposal Methods[5]
Spent resin	CPCB/SPCB-approved facilities or nearby co-processors.
Used Batteries	Sold to manufacturers under a buy-back policy
Bio-Medical Waste	By approved agencies authorized by SPCB
E-Waste	Via authorized recyclers/dismantlers endorsed by CPCB/SPCB

Hazardous & Non-hazardous waste

Hazardous and Non-hazardous waste generated due to our operations

Hazardous Waste

- Spent resin
- Used oil
- Containers of hazardous waste
- Insulation Waste
- FO Sludge

Non-Hazardous Waste

- Ferrous
- Non Ferrous
- Municipal Solid Waste (Biodegradable)
- Municipal Solid Waste (Non-Biodegradable)
- Plastic waste

In reporting Year, our commitment to waste minimization led to a remarkable reduction of over 30% in Municipal waste generation compared to the prior year. Additionally, we successfully enforced a ban on single-use plastic across all our facilities, further enhancing our sustainability efforts.

Paperless Office

The successful execution of "Project PRADIP" has led to significant paper savings and has also improved decision-making, transparency, and efficiency. In line with our commitment to digitalization, we have introduced a comprehensive vendor portal for submitting and tracking e-invoices.

Waste type	Disposal Methods[6]
Ferrous Scrap	Disposed through E-Auction
Non-Ferrous Scrap	
Municipal waste	Bio-degradable waste is composted/vermicomposted into manure, while non-biodegradable and plastic waste are managed through local traders/collectors and also sent for co-processing.

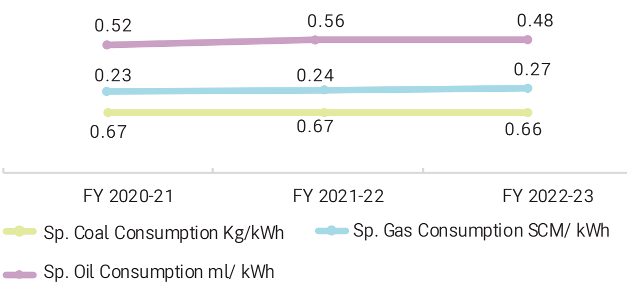
Resource Efficiency and Material Management

Material Consumed[7]

NTPC is committed to resource efficiency and regularly assesses consumption intensity to prioritize sustainability. Our approach includes measurement, monitoring, and conservation plans to enhance efficiency. In thermal power generation, the input materials are fully utilized in the boiler, making recycling not required.

[6] GRI 306-5
[7] GRI 301-1

Specific Fuel Consumption



Water treatment chemicals are also consumed fully. However, we have implemented various measures to improve cycle efficiency, resulting in overall efficiency gains and significant fuel savings per unit of energy produced. By adopting larger units with higher steam parameters and substituting coal with biomass, we have achieved better design and operational efficiency, reducing specific coal consumption. In the Financial Year 2022-23, NTPC utilized around 20,034 metric tonnes of biomass pellets, demonstrating our efforts to improve sustainability. Refer to the graph for the trends in enhancing specific coal and oil consumption performance parameters.

NTPC recognizes the vital role of not only coal, biomass, and water but also other crucial input materials in our operations. We remain committed to maximizing the efficient utilization of these resources.

Energy & Efficiency Management

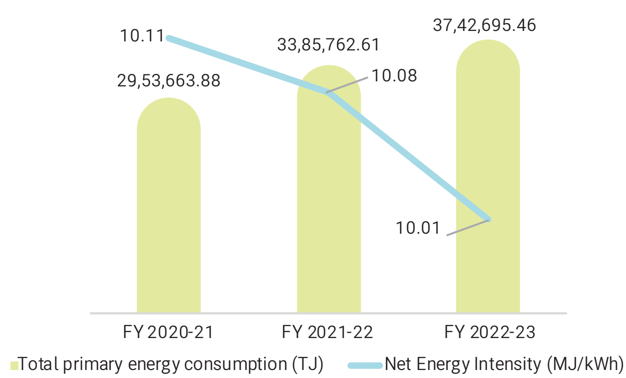
At NTPC Energy conservation plays a crucial role in our sustainable consumption strategy, extending beyond mere cost reduction. It serves as a vital component in our efforts to preserve the nation's energy reserves and mitigate the environmental impact of our operations. By implementing various measures, we aim to optimize our energy usage and contribute to a more sustainable future.

Incorporating larger units and successfully increasing efficiency of older thermal fleets has resulted in a significant decrease in coal consumption per unit. To further strengthen our commitment, we are actively pursuing agro-residue co-firing, implementing an Energy and Efficiency Management System, and reducing auxiliary power consumption. These combined efforts contribute significantly to a substantial reduction in our overall energy consumption. By prioritizing energy conservation and adopting sustainable practices, we are actively working towards a more environmentally responsible and energy-efficient future.

Energy Intensity[8]

During the Financial Year 2022-23, the Group maintained a Net Energy Intensity of 10.01 MJ/kWh, which signifies enhanced operational and energy efficiency and reduced dependence on fossil fuels. The accompanying graph illustrates the overall progress of total primary energy consumption and energy intensity across the NTPC group.

Total Energy consumption & Net Intensity

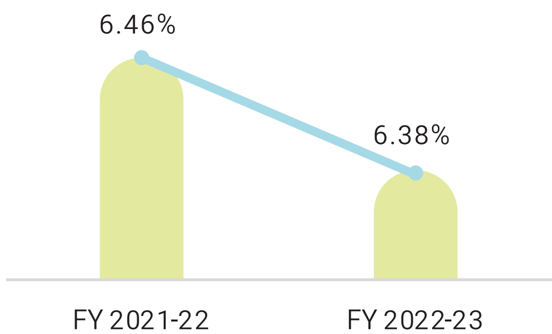


[8] GRI 302-3

Auxiliary Power Consumption[9]

Through a range of initiatives, we consistently enhance the efficiency of our auxiliary power consumption (APC), resulting in significant reductions.

Total APC (%) - NTPC Group



Our Energy Conservation Highlights[10]

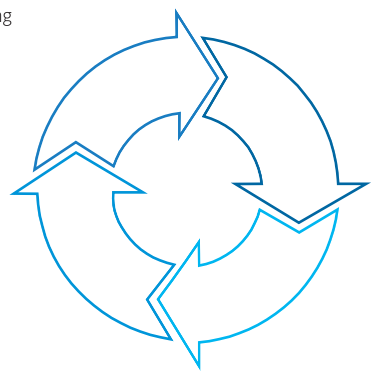
Energy Conservation Highlights

Thermal Energy

- HP and IP cylinder efficiency improvement during capital overhaul
- Boiler modifications to improve steam parameters & efficiency
- Condenser Jet Cleaning
- Cooling Tower water distribution & nozzle modification

Energy Audit

- Measurement & Verification audits under PAT scheme (4th & 5th cycle) of 02 stations
- Mandatory energy audits in 7 stations as per BEE regulations
- Auxiliary Power Consumption Energy Audits at all stations



Auxiliary Power Consumption

- Retrofitting HT VFD in CEPs of two unit of 500MW
- Retrofitting HT VFD in ID Fans of two unit of 500 MW
- Installing grid-connected roof top Solar PV systems
- Replacement of inefficient BFP cartridge based on high SEC
- Energy Efficient Coating on pump internal of Cooing Water/ Other large water pumps.
- Installing BFP scoop for drum level control
- Replacement of old compressors with screw compressors
- ESP duct modification using CFD
- Replacing existing motors with Energy Efficient motors.
- Optimizing nos. of auxiliaries as mills, ARCW, CW pumps and fans during prolonged partial loading on the units.

Performance on PAT (Perform, Achieve, and Trade)

Performance on PAT

Performance on PAT (Perform, Achieve, and Trade)

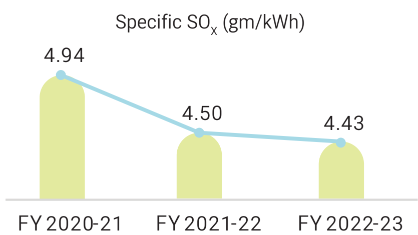
1. PAT (Perform, Achieve and Trade) is one of the schemes of National Mission on Enhanced Energy Efficiency (NMEEE). It is a market-based mechanism to enhance cost effectiveness of improvements in energy efficiency, in energy intensive large industries, through certification of energy savings achieved by improvement in Net Heat Rate. Achieved improvement in NHR can be traded in terms of Energy Savings Certificates (ESCerts).
2. Under PAT cycle-II, most of the NTPC stations had exceeded Net Heat Rate improvement targets. Currently NTPC has a stock of 265493 EScerts including balance from PAT cycle-I.
3. PAT cycle-III has been completed in March 2020 & PAT cycle-IV & V have also been completed in March 2022. All 04 NTPC stations covered under these cycles have earned ESCerts however, notification for the same is awaited.
4. For us, Energy Conservation is not only a means of reducing costs, but also a part of sustainable consumption strategy to conserve national energy resources.

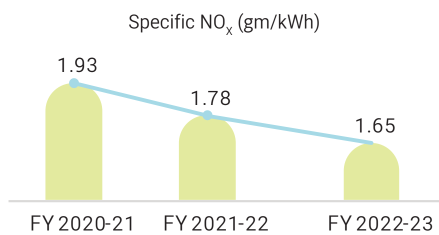
[9] GRI 302-1
[10] GRI 302-4

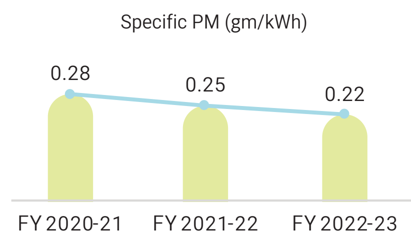
Air (Non-GHG) Emissions Management[11]

NTPC is actively engaged in mitigating air emissions by employing advanced technologies and monitoring systems, leading the power sector in adhering to the Ministry of Environment, Forests, and Climate Change's (MoEFCC) new emission limits and NTPC's Brighter Plan. To monitor real-time emissions of particulate matter, sulfur dioxide, and nitrogen oxides, Continuous Emission Monitoring Systems (CEMS) have been installed across all operational units. The company has implemented offline monitoring of stacks and online ambient air quality monitoring systems as well. NTPC has equipped its stations with highly efficient ESPs, boasting over 99.8% effectiveness in controlling particulate matter emissions, with further enhancements through renovation and modernization.

Moreover, the company has taken significant steps to address sulfur dioxide emissions by installing lime-based wet flue gas desulfurization (FGD) systems and dry sorbent injection (DSI) based FGD in 8 units, with ongoing execution in 126 units to achieve emission control. To bring NO_x emissions below 450 mg/Nm^3, various De-NO_x techniques/modifications have been implemented in 44 units, and execution work is underway for 6 additional units. Ozone-depleting substances (ODS) emissions are being monitored consistently. Mercury emissions are actively monitored which is below the minimum detectable limit (MDL). Furthermore, the company has phased out the use of PCBs across all operations, contributing to sustainability efforts.







GHG Emission

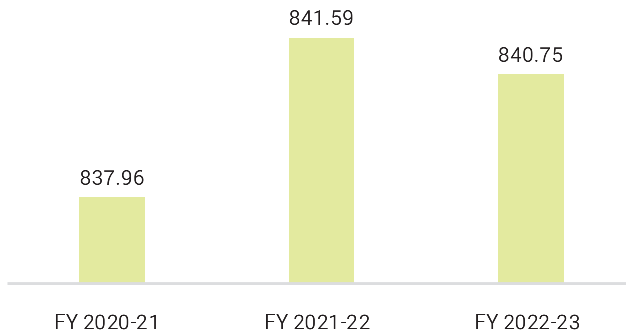
We at NTPC are continuously expanding the scope of GHG measurement and monitoring.

[11] GRI 305-6 and GRI 305-7

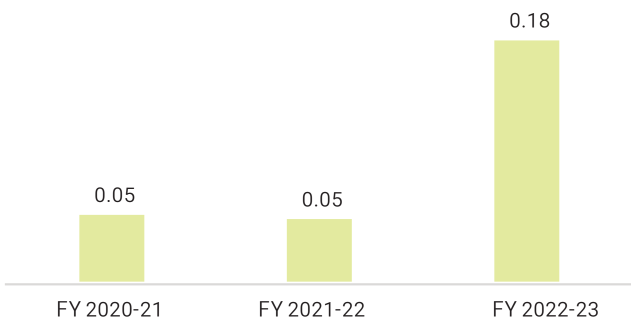
GHG Emissions – Scope 1[12]

As India's leading power sector organization, we understand the significance of monitoring our direct greenhouse gas (GHG) emissions, primarily stemming from the consumption of fossil fuels by our company facilities. In line with our commitment to sustainability, NTPC is actively working towards reducing these emissions. Though the total Scope 1 emission are on the rise due to additional thermal capacity addition, the specific scope 1 emissions as well as energy intensity both have reduced over the years.

Sp. GHG Emission Scope 1 (gm/kWh)



Sp. GHG Emission Scope 2 (gm/kWh)



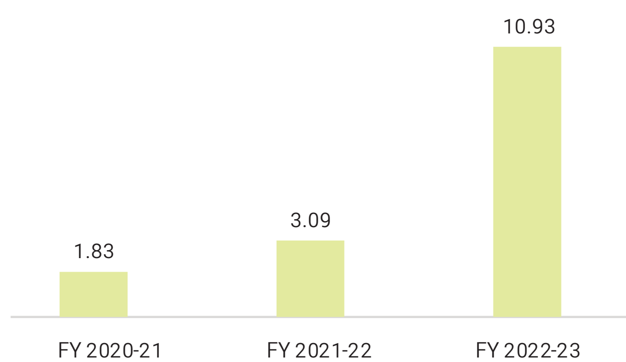
GHG Emissions – Scope 2[12]

At NTPC, we actively address our indirect emissions resulting from electricity consumption across our facilities. Our commitment to sustainability is reflected in the implementation of robust mechanisms to effectively track and monitor these emissions. Additionally, we continuously strive to reduce our indirect emission footprint through various initiatives and efforts. There has been increase in scope 2 emissions due to inclusion of grid electricity consumption by few of our gas & hydro plants during reserve shutdown.

GHG emissions – Scope 3[12]

We have strategically embraced a long-term vision to mitigate our scope 3 environmental footprint, recognizing the potential to transform climate challenges into advantageous prospects. Our comprehensive approach entails proactive collaboration with our scope 3 stakeholders, fostering mutual engagement and harnessing collective efforts towards sustainability goals. The increase in total emissions is on account of emissions increased due to coal imports.

Sp. GHG Emission Scope 3 (gm/kWh)



Climate Change Mitigation

As India's leading power generator, we understand the critical importance of sustainable practices in addressing the global challenge of climate change. We embrace our ethical duty to support the country's endeavors in reducing greenhouse gas (GHG) emissions and mitigating the adverse impacts of climate change. Our commitment goes beyond mere compliance; it is deeply rooted in our core values and the recognition of our role in shaping a sustainable future.

[12] GRI 305-4

By embracing sustainability as a guiding principle, we aim to be at the forefront of India's transition towards a low-carbon economy, playing a crucial role in securing a sustainable future for generations to come.

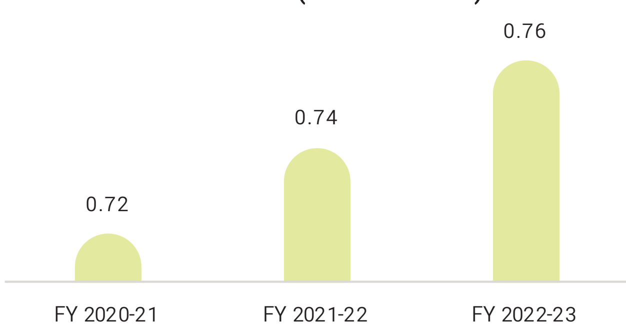
We at NTPC are taking various measures to mitigate GHG emissions and climate change. These measures include diversifying our operation into green energy generation such as Renewable Energy, Nuclear Energy, Green Hydrogen, and Biofuels. (The details of which can be found in the energy transitions overview section of the report)

In addition to this, we are also cognizant of the role of Nature-based removals and are committed to building carbon sinks through tree plantations.

Carbon Sink Development

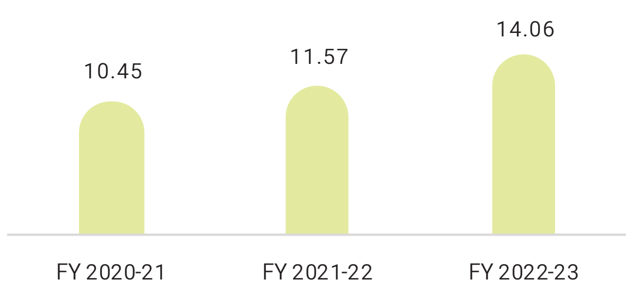
Our afforestation initiatives in India have a dual role, enhancing the country's green cover and oxygen supply while also acting as 'sinks' for pollutants emitted by stations and other sources. Since 2016, our target has been to annually plant a minimum of 1 million saplings. As of now, we have accomplished the successful planting of over 38 million trees.

Carbon Sink (million tonnes)



Avoided Emissions[15]

(million tonnes)



15 GRI 305-5

Carbon Offset projects (Regulatory & Compliance market)

NTPC is a pioneer in undertaking climate change issues proactively, we are cognizant of the importance of role of carbon offset and has taken several initiatives in Carbon Credit Projects in Power Sector.

At present NTPC has 8 RE projects registered under the Clean Development Mechanism (CDM), out of which 3 are registered through the CDM Programme of Activities (PoA) route. Apart from them, we also have 4 RE projects registered under Verra- Verified Carbon Standard (VCS).

In addition to the above, 23 other RE projects (having a combined capacity of 3,402 MW) are under registration with the Global Carbon Council (GCC) which has a potential to generate 86,02,303 ACCs. Furthermore, prior consideration form has veen send to UNFCCC and NCDMA for 6,752 MW of RE projects.

During the Financial Year 2022-23, NTPC generated 32,07,669 tCO_2e of carbon credits.

Biodiversity Conservation

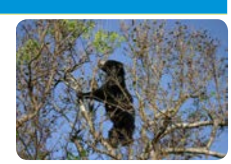
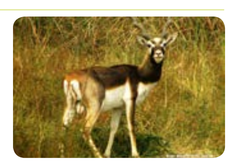
At NTPC, we understand that sustainable growth and the protection of our environment and its biodiversity go hand in hand. We firmly believe that our economic goals can only be achieved by prioritizing ecological responsibility. Hence, we are committed to making a positive impact on nature by giving back more than we take, and we dedicate sincere efforts to preserve it. Our NTPC Biodiversity Policy, initially established in 2018 and updated in 2022, serves as our guiding framework for conserving, restoring, and enhancing biodiversity. As an active participant in the Indian Business and Biodiversity initiative, we take immense pride in our role in promoting environmental stewardship.

Biodiversity Strategy

Mapping	**of biodiversity interface, including assessment of its risks & opportunity**
Implementation	**of biodiversity conservation and management plant**
Enrichment	**of biodiversity greenbelt for Biodiversity**
Engagement	**Including advocacy, capacity-building and dialogue with local communities, academics, NGOs and international fora**
Decision-making	**on the basis of applicable biodiversity aspects in the environment management systems**
Target	**setting of biodiversity management**
Monitoring	**and reporting on progress towards targets**
Accountability	**by designing a bio-diversity plan within the organization**

NTPC has ensured that none of its thermal project sites are located within protected areas or near the areas of high biodiversity outside the protected areas, thereby avoiding any potential impact on IUCN Red List species or national conservation list species. It is important to note, however, that the submergence area of the Koldam HEPP does overlap with a portion of the Majathal Wildlife Sanctuary, specifically affecting the habitat of the vulnerable Cheer Pheasant (Catreus wallichii) listed on the IUCN Red List. This submergence area accounts for approximately 4% of the total area of the sanctuary, amounting to 124.054 square kilometers.[16]

We actively engage in multiple biodiversity conservation projects, as outlined in the table below.[17]

Species	IUCN Red List	Location	
Wildlife			
Sloth bear (Melursus ursinus)	Vulnerable	Raigarh	
Black Buck (Antilope cervicapra)	Least Concern	Meja	

[16] GRI 304-1

[17] GRI 304-4

Species	IUCN Red List	Location	
Wildlife			
Gangetic Dolphin (Platanista gangetica)	Endangered	Kahalgaon	
Cheer Pheasant (Catreus wallichii)	Vulnerable	Koldam	
Elephant (Elephas maximus)	Endangered	North Karanpura	
Great Indian Bustard (Ardeotis nigriceps)	Critically endangered	Solapur	
Olive Ridley Turtle (Lepidochelys olivacea)	Vulnerable	Simhadri	
Snow Trout Fishes (Schizothorax richardsonii)	Vulnerable	Vishnugad Pipalkoti	
Lagerstroemia minuticarpa	Endangered	Pare, Arunachal Pradesh	

Habitats		Location
Ecopark	Urban Environment	Dadri
Ecopark	Urban Environment	Badarpur
Biodiversity conservation	Terrestrial & Riverine ecosystem	Khargone
Biodiversity conservation	Terrestrial ecosystems	Talaipalli
Marshlands and Bird Sanctuary	Wet zones	Unchahar

All thermal power plants developed by NTPC were strategically located beyond eco-sensitive zones, including protected areas and regions with significant biodiversity, ensuring minimal environmental impact, and safeguarding the critical habitats.

However, in the case of the following thermal power projects, wildlife sanctuaries were declared after the project was accorded Environmental Clearance (EC) or constructed:

- Kahalgaon Super Thermal Power Station, located in Bhagalpur (Bihar), is situated outside the sanctuary and its eco-sensitive zone, except for the water intake structure.
- The Feroz Gandhi Unchahar Thermal Power Station in Rae Bareli, Uttar Pradesh, and all its components are situated outside the sanctuary and its eco-sensitive zone.
- Bongaigaon Thermal Power Station, situated in Kokrajhar (Assam), is located outside the Chakrasila Wildlife Sanctuary. However, due to the recent declaration of the sanctuary's eco-sensitive zone by the State Government in 2021, certain portions of the project now fall within the eco-sensitive area. The clearance for these areas is currently being processed.

The establishment and functioning of thermal power plants and related infrastructure do not have any discernible effects, whether direct or indirect, on biodiversity. Nevertheless, a portion of the submergence area (124.054 Ha out of 1,357 Ha) designated for the Koldam Hydro Electric Power Project falls within the boundaries of the Majathal Wildlife Sanctuary (124.054 Ha out of 3,086 Ha). All necessary approvals from the State Forest Department and the Ministry of Environment, Forest, and Climate Change (MOEF&CC) have been successfully acquired for the project.[18]

Habitats protected or restored[19]

NTPC's commitment to environmental stewardship is evident in its generous financial support of ₹ 226.35 crore to the Forest Department of Himachal Pradesh, dedicated to crucial conservation and protection initiatives. Additionally, ₹ 40 lakh have been allocated for the Ex-Situ Conservation of Cheer Pheasant at Chail, Himachal Pradesh. Furthermore, the company actively collaborates with the State Forest Department to implement a range of sustainable schemes, such as the Compensatory Afforestation Plan, Catchment Area Treatment Plan, and Reservoir Rim Plantation at Koldam HEPP, aimed at restoring and enhancing wildlife habitats. This holistic approach showcases NTPC's unwavering commitment to preserving the natural environment while promoting biodiversity and ecological balance.

NTPC has made substantial contributions towards sustainability initiatives, demonstrating its commitment to environmental and social responsibility.

No. of biodiversity projects	Financial contribution towards biodiversity related Initiatives (in ₹ crore)	Hectares of land where habitat restoration projects have been developed
16	4.38	20

[18] GRI 304-2
[19] GRI 304-3

Conservation activities being implemented under CAT plan for Habitat Restoration

01 Afforestation in 11,600 Ha

02 Pasture Development: 2,619 Ha

03 Check Dams: 20,000 Nos

04 Terracing: 1,958 Ha

05 Rural and Forest Infrastructure: ₹ 690 Lakh

06 RIM Plantation: 1,531 Ha

In addition, NTPC has also undertaken the following activities for the protection of habitats at other sites.

01 Wildlife conservation and monitoring plan for the protection of Great Indian Bustard (GIB) at Maldhok Sanctuary Solapur, Maharashtra

02 Wildlife Conservation Plan for Lara STPP for Conservation of Sloth Bear for MGR Rail Corridor (35.413ha) from Kotaraliya to NTPC Lara. The total amount of ₹ 2.53 crore has been spent under this plan.

03 Mapping of Biodiversity Interfaces, Including Assessment & Inventorisation of Biodiversity at Vindhayachal Super Thermal Power Station, is under progress & to date, 5.75 lakh have been spent towards this study.

04 Wildlife Conservation Plan for Dulanga Coal Mine Project, Sundargargh, Orrisa, is being implemented with Orrisa State Forest Department. The total expenditure of ₹ 4.49 crore has been deposited with the state government for carrying out the biodiversity conservation at the Dulanga Coal mine area.

05 Studies on Dolphin Biodiversity monitoring in Vikramshila Gangetic Dolphin Sanctuary for preparation of conservation plan

06 The Wildlife Conservation Plan for the conservation of Black Buck at Meja STPP has been prepared in consultation with the UP State Forest Department and implemented. A total Budget of ₹ 2.92 crore so far has been spent for various conservation activities under this plan.

07 Conservation of Olive Ridley Sea Turtles along the coast of Andhra Pradesh in collaboration with AP Forest Department. An amount of ₹ 4.6 crore has been spent. NTPC Simhadri signed a five-year agreement with the Andhra Pradesh Forest Department to partner in conservation efforts in the nine coastal districts of Andhra Pradesh, covering 732 km out of the total 972 km of Andhra Pradesh's coastline.

Biodiversity of offset habitats

Since NTPC's thermal project sites are not situated within protected areas, no offset habitats were developed, making any comparison inapplicable. However, the hydropower project at Kol Dam involved the creation of

an offset habitat through collaboration with the State Forest Department. Nevertheless, a comparative study on this matter is still pending.

Afforestation

NTPC has proactively engaged in extensive afforestation endeavors to combat the impact of greenhouse gases, bolstering India's green cover and oxygen reserves while serving as a vital carbon sink for emissions stemming from power stations and other origins. Complementing these initiatives, NTPC has set up nurseries within its facilities and townships to facilitate the cultivation of seeds and seedlings, supporting internal plantation and horticulture operations. This collaborative effort with State Forest Departments, formalized through MOUs, effectively delineates crucial aspects such as the plantation timeline, maintenance duration, funding arrangements, and survival targets.

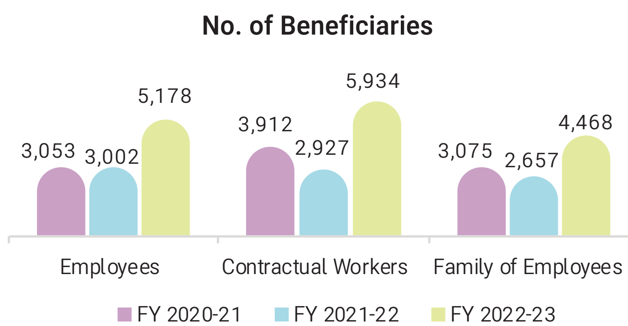
NTPC has implemented Guidelines for Afforestation, serving as the basis for afforestation across its projects. The plantation activities can be categorized into the following:

- **Development of green belts around the plants**: These green belts reduce pollution by capturing particulates from plant operations, minimize noise levels, act as carbon sinks, lower surrounding temperatures, and enhance atmospheric oxygen content. Green belts have been established in all operational NTPC stations, while new stations are creating green belts.
- **Plantation by individual stations**: NTPC plants do massive afforestation each year and add around 1 million trees each year.
- **Distribution of fruit-bearing trees to farmers and township residents**: NTPC provides small saplings of fruit-bearing, flower, and vegetable plants to local farmers and township residents. This initiative encourages plantation on individual land holdings, with the trees supplied free of cost. NTPC also promotes tree planting by its employees and their dependents during various occasions.

Overall, NTPC has successfully planted more than 38 million trees since its inception.

Environment Training[20]

We conduct capacity-building programs on environmental subjects for various stakeholders, including employees, the contract workforce, and communities, aiming to enhance knowledge and awareness. These programs cover topics such as waste management, water conservation, biodiversity protection, and more.



All NTPC stations have dedicated environmental cells, with 33 stations certified for ISO 14001. Regular inspections, audits, and compliance assessments of the Environment Management Systems are conducted by regulatory agencies, NGOs, and ISO certification bodies, both internally and externally. NTPC ensures full adherence to environmental laws and regulations mandated by statutory agencies, demonstrating its unwavering commitment to achieving 100% compliance. The company promptly responds to directives from regulators by implementing feasible engineering solutions within specified timelines. To meet stringent environmental standards, NTPC undertakes renovation and modernization (R&M) of pollution control technologies in older operating units, enabling the fulfillment of all legal requirements through R&M activities.

[20] GRI 404-1

NTPC Activities on Life

Mission as a part of World Environment Day 2023 celebrations at NTPC stations

NTPC stations, regions have conducted the awareness and mass drive for LiFE Mission activities from 15 May 2023 to 05 June 2023. Station has submitted the calendar of events planned for the month-long program on daily basis.

The MOEF& CC has listed Seven (7) Themes in the Mission "LiFE"

NTPC has organised events and activities on 7 themes at all stations. The participants are employee, ladies, school children's and all residents of township. In addition to this nearby villager were also sensitize on the above themes by organised nukkad natak, drama events. In the entire month massive tree plantation done at all stations, waste reduction at source, e-waste, cleanliness drive and adopt healthy life style, sustainable food systems and save energy & water and awareness through walkathon by employee , residents and competition among school children like essay writing, slogan painting, drawing , speech, fancy dress competition were organised in mass scale. The daily inputs of activities and events uploaded on merilife.org portal.

All the activities organised by all station uploaded on the merilife.org portal along with photographs, videos, with GPS tagging's. of events & activities organised at stations. Some of the activities snapshot is listed here.

All the activities organised by all station uploaded on the merilife.org portal along with photographs, videos, with GPS tagging's. of events & activities organised at stations.

Some of the activities snapshot is listed here

Awareness program on Mission life themes at Farakka

School competition & Awareness program on 7 life themes at Rihand.

Beach cleaning & reduction of waste under life mission

Walkathon Awareness program on Mission life themes at Gadarwara


Meri LiFE

Shiv Charan Meena

NTPC Limited - Dashboard

Ministry Of Power

New Action Report

Unique ID	Brief description of event	Location of the Event		Type of Event	Number of Event	Date(s) of event	Number of Participants	Uploaded Geotag Photo	Uploaded Video Cli
		Name Of State/UT	Name Of District						
511015	• NTPC Gadarwara Has Organized Environment Walk, & Mass Tree Plantation On The Occasion Of World Environment Day. The Participants Area Residents, School Children's, Employees, Ladies & Contract Staff. The Program Was Chaired By HOP & Address And Pledge Administrated For Environmental Protection.	Madhya Pradesh (MP)	Narsinghpur	Action & Awareness Both	7	05/06/2023	147	Not Uploaded	
507658	NTECL Vallur Has Organized Environment Walk, & Tree Plantation On The Occasion Of World Environment Day. Participant's Area Residents, School Children's, Employees, Ladies. The Program Was Chaired By HOP & Address And Pledge Administrated For Environmental Protection.	Tamil Nadu (TN)	Tiruvallur	Awareness	5	07/06/2023	80		Not Uploaded
507655	NTPC, Talchar, Kanhia Has Organized Environment Walk, & Tree Plantation On The Occasion Of World Environment Day. Participants Area Residents, School Children's, Employees, Ladies. The Program Was Chaired By HOP & Address And Pledge Administrated For Environmental Protection.	Odisha (OD)	Angul	Action & Awareness Both	6	05/06/2023	180		Not Uploaded
507652	NTPC Tanda Has Organized Environment Walk, & Tree Plantation On The Occasion Of World Environment Day. Participants Area Residents, School Children's, Employees, Ladies. The Program Was Chaired By HOP & Address And Pledge Administrated For Environmental Protection.	Uttar Pradesh (UP)	Ambedkar Nagar	Action & Awareness Both	5	05/06/2023	160		Not Uploaded

Human Capital

Management Approach

Our workforce is the foundation of our organisation, representing our most valuable asset. We prioritize their growth, well-being, and skill development, considering them essential to our success. By fostering a positive work culture and prioritizing employee career advancement and overall health, we have achieved remarkable levels of satisfaction. This dedication has propelled our growth and contributed significantly to our achievements.

Key Highlights

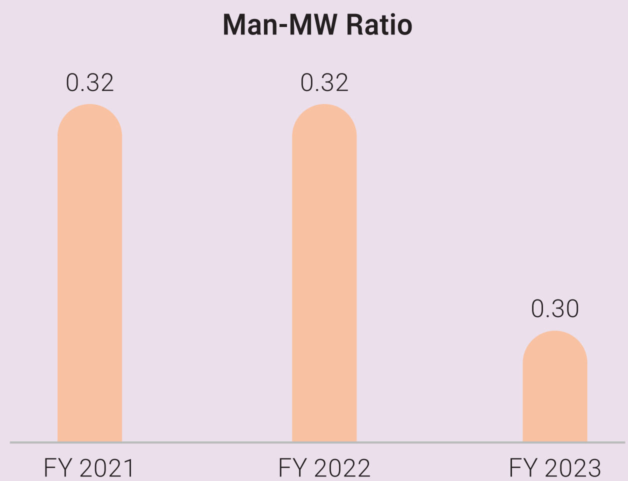
43 Hrs
Per Emp of Learning opportunities

2.60 Mn
Man-hours of Safety Training

₹ 6,528.34 crore
Spent on Employee Benefits

₹ 42.82 crore
Spent on Training & Development

Data Trends



Mapping with SDGs

Material Topics

[1] [2] [7] [10] [15]

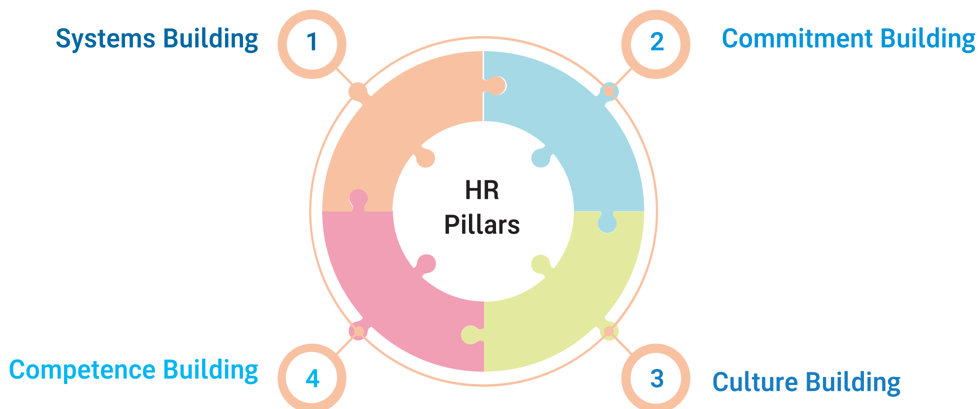
NGRBC Principle

[3] [5]

NTPC's first woman mining engineer

Overview

At NTPC, our highly skilled and dedicated professionals are the driving force behind our success. We prioritize attracting, nurturing, and retaining top talent, resulting in a remarkably low attrition rate. Our HR vision fosters a culture where employees are a closely-knit family of exceptional professionals, collectively propelling NTPC toward becoming a learning organisation. By empowering our workforce, we create a sustainable future where NTPC provides clean and reliable power while minimizing environmental impact. Our people-centric HR approach is built on 4 pillars:



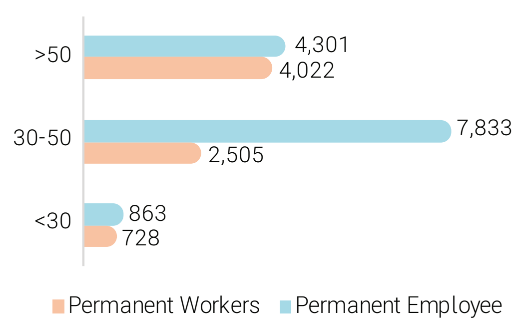
Our Dynamic Workforce[1]

Our commitment to human capital extends beyond effective management to creating a supportive and inclusive work environment that empowers our workforce. Evaluating employee productivity and financial metrics like sales per employee and value added per employee provide insights into workforce efficiency. We use the Man-MW ratio to measure employee productivity and optimize manpower planning. In Financial Year 2022-23, the ratio stands at 0.30 for the NTPC group.

Our workforce comprises experienced professionals and young talent, bringing together diverse perspectives, skills, and experiences. This diversity fuels innovation, agility, and organizational excellence.

To nurture a supportive work culture, we have implemented a dynamic Performance Management System (PMS) that recognizes and rewards employee contributions. The PMS includes continuous assessment of performance through Weekly Planner System, Monthly Ratings and final appraisals, enabling structured assessments and constructive feedback. It provides a framework for acknowledging and rewarding employees based on their contributions and potential.

Employee Distribution by Ages

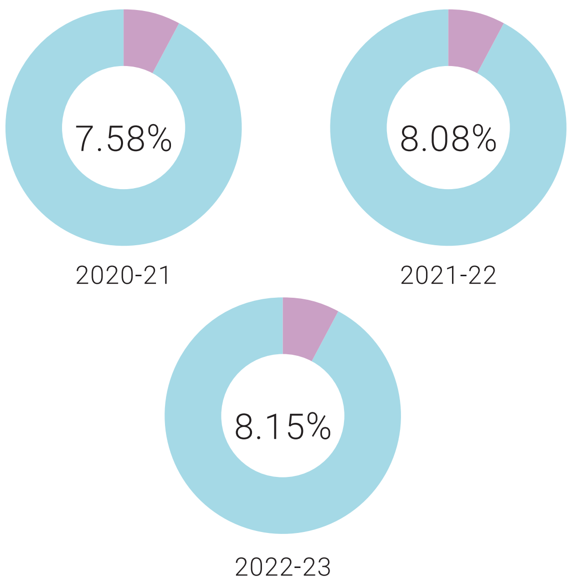


Fostering Equality, Embracing Diversity, and Promoting Inclusion[2]

At NTPC, we are dedicated to cultivating an inclusive work environment that embraces and honors diversity. We highly appreciate individuals from diverse cultures, backgrounds, and orientations, fostering an environment that is warm and fair. Upholding our commitment to diversity and inclusion necessitates continuous initiatives, including diverse recruitment and training programs that address unconscious bias. We foster open communication, respect, and swift resolution of any matters or concerns. Our aim is to guarantee employee diversity, prevent discrimination, and uphold equal treatment, fostering a robust organizational culture that recognizes and appreciates the uniqueness of each employee.

[1] GRI 404-3

Share of Female Employees in the workforce

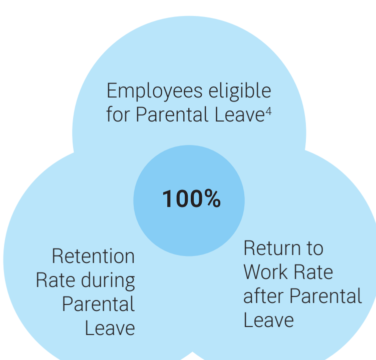


> Equal Remuneration irrespective of diversity

Provinding Best Employee Benefits[3]

NTPC provides its full-time employees with a comprehensive range of benefits, supporting employee well-being, a healthy work-life balance and providing long-term support. We provide benefits from paid childcare leave to comprehensive medical care, education, housing, and social security to post-retirement medical benefits.There is also a provision for sabbatical periods of a maximum of 5 years without fear of job loss . NTPC demonstrates its commitment to shared parental responsibilities by providing extended parental leave to all employees, regardless of gender. This inclusive policy fosters gender equality and empowers employees in their parenthood journey leading to a 100% rate of return-to-work rate and retention rate. Moreover, we adhere to regulatory requirements by offering additional benefits, including maternity leave and a special childcare leave of two years, exclusively for female employees. In the reporting year, ₹ 6,528.34 crore were in vested in our comprehensive employee benefits program.

Parental Benefits at NTPC



We prioritize the well-being and financial stability of our employees through a robust compensation and benefits program. NTPC offers a post-employment benefit plan with fixed contributions to the provident fund. These contributions are invested in permitted securities by a separate trust. We record related expenses in our profit and loss statement. NTPC ensures fixed contributions and minimum returns mandated by the Government of India. We also manage separate trusts for gratuity and pension schemes, providing retirement benefits and financial security to employees.

Under the Post-Retirement Medical Facilities (PRMS) Scheme, retired employees and their spouses have access to medical facilities in company hospitals or empanelled hospitals. As per the DPE (Department of Public Enterprises) guidelines, the company contributes up to 30% of Basic Pay plus DA (Dearness Allowance) as superannuation benefits towards Provident Fund (PF), Gratuity, Post-Retirement Medical Benefits, and Pension. Employees contribute 12% of Basic Pay plus DA towards PF as per the EPF (Employees' Provident Funds) Act, 1% of Basic Pay plus DA towards the

[2] GRI 406-1

[3] GRI 401-2

[4] Barring bachelors and people having more than 2 children

company's Pension Scheme, and the PRMS Membership Fee Amount as per the PRMS Scheme of the company.

Sr No	Benefits	Regular Employess	Temporary Employees (Fixed-Term Employees)
1	PF Benefit	Y	Y
2	Gratuity	Y	Y
3	Pension Benefit	Y	N
4	Post Retirement Medical Scheme	Y	N
5	Leave	Y	Y
6	Insurance Coverage	Y	Y
7	Medical Facilities	Y	Y

Sr No	Benefits	Contractual Workers
1	Minimum Wages as per statutory provisions	Y
2	Benefits of PF, Pension and Insurance as per statutory provisions	Y
3	Bonus as per statutory provisions	Y
4	Paid Leaves as per statutory provisions	Y
5	Medical and Accidental Insurance Coverage as per statutory provisions	Y
6	Additional Social Security Assistance for accident (by NTPC)	Y
7	Free Annual Medical Check-up	Y

Enhancing Employee-Management Collaboration and Engagement

Our commitment to human rights, individual dignity, and professional conduct is crucial to our operations. Our adherence to international standards and guidelines, such as the United Nations Universal Declaration of Human Rights, the 10 (UN) Global Compact principles, and the International Labor Organization Core Conventions, serves as a foundation for ethical business practices. Respecting the rights of employees, including their freedom of association, is essential to fostering a positive work environment. NTPC recognizes the freedom of workmen (non-executive) employees to associate themselves with various unions, facilitating collective bargaining agreements.[5]

There is no operational entity where manpower and suppliers faces risk related to the right to freedom of association and collective bargaining, child labour and forced or compulsory labor.[6]

To ensure smooth transitions during significant operational changes like location transfers, terminations, or resignations, a minimum notice period ranging from 4 to 12 weeks is required.[7]

Creating a safe workplace, particularly for women, is crucial for maintaining a secure and inclusive culture. We establish Internal Complaints Committees at operational locations to handle complaints of sexual harassment, promoting a proactive approach to addressing and preventing such issues. These committees are reconstituted every three years, and prompt resolutions are provided. During the reporting period, six cases of sexual harassment were reported and resolved promptly, with only one pending cases as of now. We have conducted over 100 workshops and programs to raise awareness and prevent sexual harassment.

Each NTPC project has its own Grievance Redressal Mechanism to address employee grievances promptly. We use various forums, such as communication meetings and organizational climate surveys, to capture and address these concerns. NTPC complies with statutory and regulatory requirements concerning payment of wages and benefits. We ensure that employees' rights are not violated and provide statutory benefits like Provident Fund and medical facilities.

[5] GRI 407-1,

[6] GRI 408-1, 409-1

[7] GRI 402-1

87% Males

13% Females

in new hires

Promoting Human Rights Awareness and Education

4,728 Man Hours Spent on Human Rights Training

All employees and contractors are sensitized on Human Right related topics through structured training programmes.We prioritize transparency and address human rights issues for external stakeholders, including Project Affected Families (PAF), through consultation and participation. Our policies specifically mention provisions for marginalized groups, ensuring comprehensive community development. We have established institutional mechanisms for grievance redressal, demonstrating our commitment to resolving stakeholder concerns in a timely and fair manner. To safeguard human rights, all significant investment agreements and contracts include clauses that minimize the risk of violations. We conduct regular monitoring to ensure compliance with regulations and internal policies. During the reporting year, no complaints regarding human rights issues such as child or forced labor at the workplace were reported. Find out more about our Human Rights Policy.

Enhancing Security Measures[5]

NTPC places utmost importance on workforce security and maintains a safe working environment across all its installations, operations. To ensure personnel and asset security, NTPC deploys Central Industrial Security Force (CISF) at all its units, in compliance with the Ministry of Home Affairs regulations. They are provided training on Human rights in their induction training by the concerned govt. department.

In addition, NTPC also collaborates with ex-servicemen security agencies in non-core areas such as project townships, headquarters, and offices. These agencies adhere to the norms established by the Directorate General of Resettlement, under the Ministry of Defence. These security personnel undergo rigorous training and refresher courses provided by the Government of India, encompassing security systems and human rights aspects.

To enhance security measures, NTPC is upgrading surveillance systems at all projects and stations by installing state-of-the-art security systems. The introduction of the Contract Labor Information Management System (CLIMS), a biometric labour attendance system, improves security and facilitates the monitoring and execution of labour payments and benefits. This initiative complements the upgrades in surveillance systems at all projects/stations.

[5] GRI 410-1

'People First' Environment

78% Employee Satisfaction index for FY 2022-23

At NTPC, HR policies prioritize the well-being of employees with the guiding philosophy of 'People before Plant Load Factor (PLF)'. Annual employee satisfaction surveys conducted gather regular feedback from employees. These surveys enable employees to contribute valuable feedback for improving various systems within the organisation. NTPC also recognizes the changing needs of its workforce by offering flexibility and remote work options, aiming to create a conducive environment for employee well-being and productivity. In addition to the satisfaction surveys, NTPC Corporate Safety conducts safety perception surveys among its employees and agency workers separately to formulate future strategiesfor strengthening safety systems. During Financial Year 2022-23, the survey has been completed for all stations and specific actionable points havebeen derived after analysing the result of the survey. The action on such deliverables is implemented at each station.

Nurturing Human Capital: Empowering Our Talent

Our commitment to employee growth is demonstrated through holistic development, aligning with emerging business trends, and fostering a culture of continuous learning. With "Learning at the Speed of Business," our agile initiatives empower employees to excel.

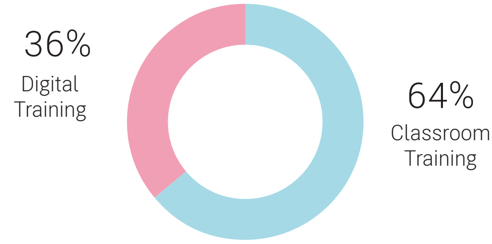
In Financial Year 2022-23, we invested ₹ 42.82 crore in training (on standalone basis), showcasing our dedication to comprehensive learning opportunities.

We utilize platforms like NTPC Power Management Institute (PMI), Apex Learning and Development (L&D) Centre, 7 Regional Learning Institutes (RLIs), and Employee Development Centers (EDCs) to create an effective learning grid. We prioritize international training and partner with renowned institutions like Harvard and Wharton Business School. Collaborations with organisations like the ISHA Foundation and Art of Living promote holistic development. Our objective is to inspire excellence in employees and their families, both professionally and personally.

Enhancing Employee Development: Training and Skill-Building Initiatives

We prioritize learning and development and have a robust training infrastructure, including the Power Management Institute (PMI), seven Regional Learning Institutes (RLIs), a Safety Academy, Employee Development Centers (EDCs), and Simulator training facilities. Our Learning and Development (L&D) team focuses on technology, business acumen, and leadership to prepare employees for the future. The PMI provides a modern learning environment.

Break-up of Training Man Hours



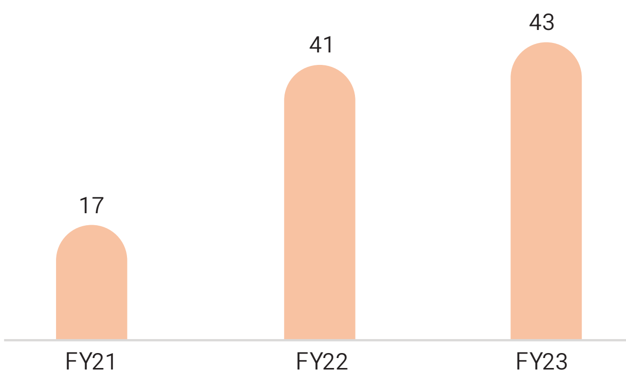
9,34,720 Man-Hours of Training

Our Executive Trainee (ET) program provides comprehensive training, including on-the-job, simulator, and skills modules. We regularize multiple ET batches and provide planned interventions like the Foundation Course, Enhancing Managerial Competence (EMC), and Advanced Management Program (AMP). Safety training is a priority for employees and contract workers, with certificate courses available throughout the organisation. Additionally, we have the NTPC School of Business (NSB), operating under the NTPC Education and Research Society (NEARS). NSB offers AICTE approved programs in management and energy management, with academic support from IIM Ahmedabad. Through our focus on learning and training, we aim to equip employees with the skills needed to excel and contribute to our organisation's growth and sustainability.

Empowering Talent: Skill Development Initiatives

We prioritize continuous skill development for our employees, empowering them to excel and achieve our strategic objectives. Our investment in enhancing their capabilities not only strengthens our human capital but also boosts employee satisfaction, resulting in enhanced performance. We extend our support to employees nearing retirement by providing skill development opportunities and facilitating a seamless transition from work to retirement. This steadfast commitment to valuing and supporting our employees throughout their career journey remains unwavering .

Hours per employee of Learning Opportunities



Workplace Wellness and Safety[6]

NTPC prioritizes the safety, health, and well-being of its employees and contractors as a core value that guides all operations. We have implemented a comprehensive set of procedures, safety rules, and internationally recognized safety management systems across all our plants and locations. Adherence to these measures is mandatory for all employees and contractors, aiming for a workplace with zero incidents.

We are proud to have received numerous prestigious awards and accolades for our outstanding safety performance. Twelve of our stations were honoured with the International Safety Award 2023 by the British Safety Council, with Talcher Kaniha and Anta stations achieving the distinction category. Additionally, five NTPC stations were recognized with the National Safety Council of India (NSCI) Award 2022 for exceptional performance in occupational safety and health. NTPC Kayamkulam station received the Golden Peacock Occupational Health and Safety Award 2022, while NTPC Anta station received the Golden Peacock Occupational Health and Safety Award 2023. NTPC Korba station achieved the Platinum Award in the 5th Confederation of Indian Industry (CII) National Safety Competition.

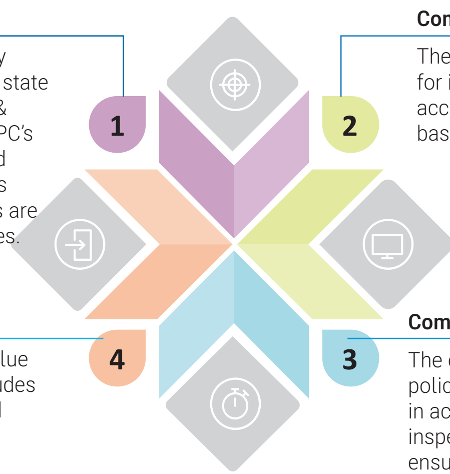
Overview of Safety Framework

Component 1: Safety Policy and Objectives

The Chairman & Managing Director periodically reviews and issues the Safety Policy to clearly state the company's stance on occupational health & safety. This policy forms the foundation of NTPC's Safety Framework, guiding its Components and Elements. Goals and objectives at the business unit, functional, and individual employee levels are aligned with the organization's overall objectives.

Component 2: Safety Risk Management

The objective is to establish a formal system for identifying hazards, enabling the avoidance, acceptance, reduction, sharing, or transfer of risks based on the specific circumstances.



Component 4: Safety Promotion

The objective is to promote safety as a core value and cultivate a strong safety culture. This includes activities such as communication, training, and promotional initiatives.

Component 3: Safety Assurance

The objective is to ensure compliance with safety policy, rules, procedures, and legal requirements in achieving safety targets and objectives. Regular inspections, audits, and reviews are conducted to ensure the effectiveness and continual improvement of the safety framework. This component also covers contractor management to ensure the effective achievement of safety policy objectives.

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[6] GRI 403-1

To ensure the well-being of our workforce, we have established a robust management system that covers all aspects of safety and compliance with legal, regulatory, and safety requirements. Our safety framework and comprehensive safety manual provide guidance, instructions, policies, participative forums, checklists, statutory documents, and procedures to promote safe practices in the workplace, including the operation of equipment, machinery, chemicals, and tools.

We regularly assess the safety of our operations through internal and external safety audits. Internal safety audits are conducted annually by a team of Safety Officers, while external audits are carried out by reputable organisations as per statutory requirements. We also conduct special audits to assess adherence to procedures and rules. NTPC has a pool of certified auditors, including National Occupational Safety Association (NOSA) certified auditors and ISO 45001 certified lead/internal auditors, ensuring quality audits. In Financial Year 2022-23, we initiated an additional expert safety audit for all NTPC stations for internal benchmarking purposes. The link to NTPC safety policy.

Prioritizing Health and Safety[7]

Managing Emergencies: Ensuring Preparedness and Response

To align with our objectives, NTPC has implemented effective engineering controls and comprehensive emergency plans at all stations. Clear responsibilities are assigned for handling emergencies, and regular mock drills are conducted to assess the systems. Suggestions from these drills are reviewed and implemented. The NTPC Disaster Management Cell formulates policies and action plans, collaborating with regional offices and stations.

Safety Indicators and Business Unit Head (BUH) review

NTPC maintains a robust safety observation and incident reporting system using proactive lead indicators. Business Unit Heads conduct monthly safety metric reviews, examining lead and lag indicators. The review report is shared with the CC safety team and discussed in meetings with Top Management.

Safety Indicators

Lead Indicators	Lag Indicators
Deviations	Fatal
Near Miss	Fire Incidents
Training	First-Aid
Pep Talk	Non-Reportable
Reward and Recognition	Reportable

Mitigating Work-Related Hazards: Prioritizing Employee Safety

NTPC has developed centralized Hazard Identification, Risk Assessment, and Control (HIRAC) documents for its stations. Station-specific HIRAC documents address site-specific risks and establish tailored control procedures. Capacity building and training programs ensure competency. Historical accident and incident data are collected to enhance hazard identification.

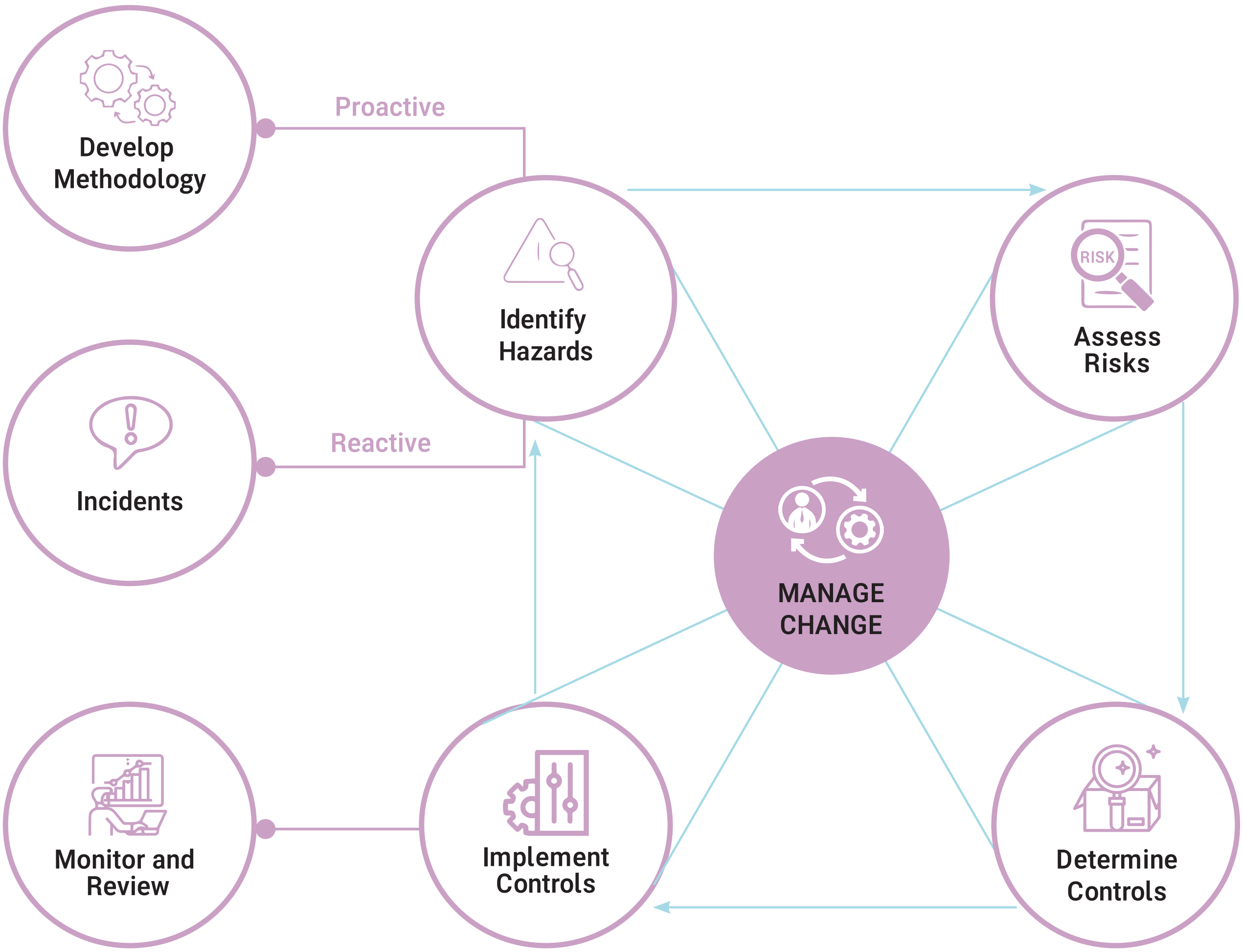
Promoting a Culture of Safety and Worker Participation

Workers at NTPC have processes to report work-related hazards, encouraging reporting and protecting against reprisals. NTPC has policies and processes for workers to remove themselves from potentially harmful work situations. Clear guidelines and procedures protect workers from reprisals.

Thorough Investigation and Continuous Enhancement

NTPC emphasizes a thorough investigation process for work-related incidents, analysing incidents, identifying hazards, and assessing risks. Valuable recommendations for corrective actions and enhancements are generated. Adhering to the NTPC Safety Manual 2015 guidelines, a hierarchy of controls is followed to determine appropriate corrective measures. The knowledge gained from incidents is integrated into the ongoing improvement of the occupational health and safety management system.

[7] GRI 403-2, GRI 403-3



SAP Integrated Safety Framework

Policy and Objectives

A guiding document aligned with Safety Policy and Objective of the company

Role Clarity

Contains defined set of expectations from all roles and functions within the company

Digital Integration

Integrated with SAP PM Module – Triggering reminder of safety activity in predefined set frequency

SFW order generation in PM Module of SAP – through Automatic Process

40 SFW Plans – ZSFW type order in predefined frequency

Action by Line Manager

Uploading of Documents and other evidences of Compliance by respective HOD

Checking by site Safety Department and technical closing of order

Evidence of Compliance Stored in Central repository

Ease of Tracking/ Auditing/Monitoring – Untamperable records

Ensuring Uniform Safety System across all stations

Excellent tool for seamless Knowledge Transfer

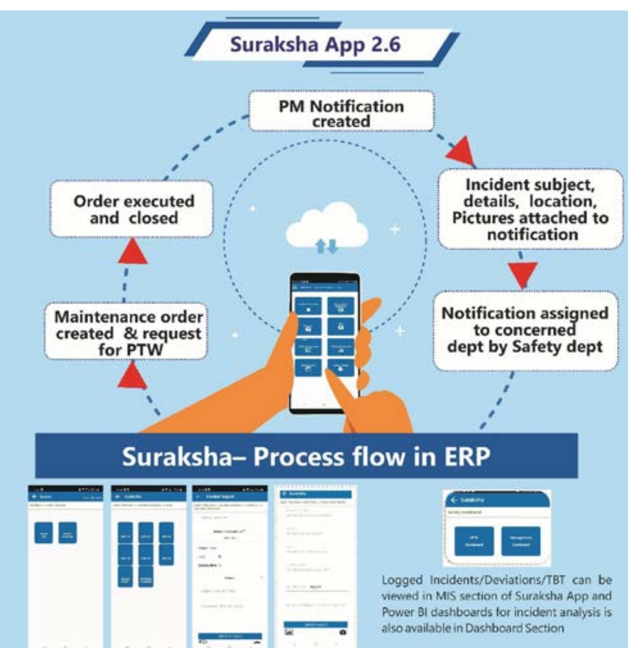
System Approach to achieve ZERO accident

Occupational Health Services[8]

NTPC prioritizes employee health, safety, and well-being through various measures. Our NTPC hospitals provide round-the-clock medical care for employees and their dependents. We have partnerships with over 250 specialized hospitals in 25 cities for specialized treatments. Power plants are equipped with ambulances featuring Advanced Life Support systems for emergencies.

Preventive checkups are mandatory, promoting proactive health management. We organize lectures, camps, and awareness programs on medical and lifestyle topics. Holistic employee welfare includes spiritual, mental, and physical healing through programs like Snehal, Kshitiz, Sparsh, etc. Activities include yoga, meditation, therapies, counseling, and promoting work-life balance, healthy habits, and ergonomics.

Corporate safety launched the mobile app "Suraksha" for reporting work-related injuries and incidents. It is regularly updated for user experience and new features. Over 12,000 employees have downloaded and used this app, providing real-time data for analysis and preventive actions. Medical facilities include First Aid Centers, Ambulance rooms, and qualified staff. Annual health check-ups are conducted, and personal health information is securely managed.



Regular workplace monitoring mitigates risks related to dust, gas, illumination, and noise levels. Trend analysis informs improvements. Sessions educate employees and contract workers about hazards, diseases, and lifestyle modifications. These measures foster a culture of safety and well-being.

Development of Safety Culture[9]

We promote a collaborative and participative approach by fostering employee participation, consultation, and communication on health and safety aspects. To be able to effectively carry forward and institutionalize such a participatory approach across all levels and functions, training programs for our employees and contract workers are conducted regularly.

1 Safety Task Force for Operation and Management

Safety Task Force is constituted on rotation on weekly basis for O & M area at each station. They are given specific terms of reference along with powers to stop work in case any unsafe act or condition is detected.

2 Safety Committee

Worker's participation in safety management as per section 41 of factories act is done along with management representative. The safety committee meeting being held on quarterly basis to discuss the safety and health issues of station and measures to mitigate these issues. A safety committee at each of our operating stations has been constituted as per the Factories Act.

[8] GRI 403-8

[9] GRI 403-4

Safety Culture at NTPC

Benchmarking
- Safety Evaluation Matrix
- Peer Comparison

Strengthening of Processes & Systems
- SURAKSHA App
- SAP Integrated Safety Framework
- OD/OGNs/LMIs
- Safety Dashboards
- HOP Review as per standard format
- Accident Examination & Recommendation Compliance System (AERCS)
- ISO 45001 Certification

Capability Development
- Employee Training-NSA/PMI/EDC
- Auditor Development programme-NOSA
- NEBOSH IGC/IOSH
- GPI learn
- Safety Induction linked with Gate Pass
- Job specific standard training module (Contractor's Workers)
- Training of Contract worker by OEM

Reinforcing Ownership
- KOM: SURAKSHA MITRA
- Routine & Surprise site visit by HOD's/Ros
- Incident Recall
- Departmental Self Audit
- PMS-Safety KPAs
- SOP/SMP/JSA
- Safety Perception Survey

Focus on Lead Indicators
- Pep Talks/TBT
- Capturing Deviations
- Reporting Near Misses
- Daily Random PTW Checking
- Cross-Functional Teams (CFT)
- Train The Trainer

Audits, Visits & Promotions
- External Safety Audit through reputed agencies
- Internal audits
- Centralized Expert Audit
- Surprise site visits
- Theme based Safety Observance
- Short films/audio clips
- Safety Pledge & Policy-Acceptance

Enhancing Safety Through Training Initiatives[10]

2.6 Million Man-Hours of Safety Training

All the agency workers are given safety induction training during their initial employment. In addition, 23 job-specific training modules are also prepared, and the agency workers are given the training as per their job requirements. Every year efforts are made to ensure that all our workforce undergo this safety training.

The training programs cover topics concerning work-related hazards and risks for our business, apart from topics about general operations and best practices on occupational health and safety.

To develop competency in safety management, among our employees and stakeholders, we have established NTPC Safety Academy at Unchahar. Our employees and stakeholders are provided hands-on training on safety and emergencies through physical mode as well as on a virtual platform. Power Management Institute of NTPC also organizes safety training for employees for different certification courses as well as topics as per requirement.

[10] GRI 403-5

Safety Dashboard for all NTPC Personnel

Contractor Safety: Promoting Collaboration and Safety Practices

Safety is a crucial aspect of our tender processes, and the performance of companies is closely monitored throughout the contract execution. We have implemented several control processes and tools to assess and evaluate the safety performance of our suppliers and contractors.

Any violation of the contractual conditions in the que¬stion will produce specific penalties up to termination of the contract and/or suspension of qualification. The dedicated guideline has been shared at our tender website http://www.ntpctender.com.

Supplier Safety Performance Evaluation Criteria

To strengthen the safety rules and create a safe environment during the execution of works at NTPC projects, the following measures have been incorporated into the Bidding Documents :

1

Site Regulations

The concerned site and the contractor are required to establish site regulations that outline the rules to be followed during the contract execution at the site. These regulations cover various aspects such as security, safety of facilities, gate control, sanitation, medical care, and fire prevention. The contractor is responsible for preparing and submitting proposed site regulations for the approval of the employer. The employer's approval should not be unreasonably withheld.

2

NTPC Safety Rules for Construction & Erection

We have formulated comprehensive safety rules for the construction and erection of power plants, which are publicly available. These safety rules define the safety requirements for the execution of project activities and outline the responsibilities of the contractor and all parties involved in construction and erection. The contractor, including their sub-contractors, must strictly adhere to these safety rules and statutory requirements applicable to the safety of personnel, equipment, and materials within the site area under their execution.

3

Penalty/Reward for Safety

The bidding documents specify provisions regarding penalties and rewards related to safety. In the Price Schedules, there is a Bill of Quantities (BOQ) item named 'Amount linked to Safety Aspects/compliance to Safety Rules.' Contractors are required to quote an amount as a percentage of the service portion of the contract (Civil plus Installation/Erection plus Structural Works) subject to a minimum percentage specified in the bidding documents.

Enhancing Training Opportunities for Contractor Workers

A comprehensive safety induction training module is implemented across NTPC to ensure uniformity. This mandatory training is conducted for individuals before they are granted access to the plant.

NTPC has developed job-specific training modules in local languages to address safety requirements for various roles and tasks in the plants.

To ensure the competency of agency workers, a Worker Role Competence Matrix is developed at the beginning of each contract, identifying specific training needs based on job nature and associated hazards. Regular training programs are conducted at all NTPC sites for contractor employees, covering various occupational health and safety topics. "Train the trainer" programs are organized by Corporate Safety to empower trainers for the effective delivery of job-specific training.

Before starting a job, a Job Safety Analysis (JSA) is performed to identify hazards and mitigation measures. The area engineer or supervisor delivers toolbox talks to workers, highlighting safety points mentioned in the JSA.

The CLIMS system serves as a crucial gate pass system for accessing the site, ensuring that only personnel with valid photo identity cards are allowed entry. This measure enhances site security and helps in maintaining a record of the individuals present on-site, contributing to better overall management and accountability.

Contractual workers in CLIMS (Standalone)
Male Workers: **1,02,615**
Female Workers: **1,687**

Periodic mass pep talks on general safety topics are conducted to create awareness and reinforce safety practices among workers. Incident Recall Talks are designed to refresh workers' learning from past incidents, reducing the likelihood of similar incidents and improving risk perception. Presentations developed by Corporate Safety are shared with stations for Incident Recall Talks at the site.

Ensuring Worker Safety and Well-being: Minimizing Injuries and Promoting Health[12]

Throughout the reporting year, NTPC had no incidents of work-related ill health, occupational diseases, legal cases, or risks affecting public health and safety. We regularly monitor the workplace to identify and address potential hazards related to work-related ill health, such as dust/coal dust, gas or vapour, and noise levels. These monitoring activities are well-documented, and appropriate measures are taken to mitigate the identified hazards.

In case of work-related injuries, we adhere to the NTPC Safety manual's accident reporting system. Accidents undergo thorough investigation following the prescribed procedure. Summaries of fatal and reportable accidents are shared on the Safety intranet, and details are communicated in project meetings, enabling the sharing of causes and recommendations. Work-related injuries are promptly reported to senior personnel through a mobile application, facilitating immediate corrective actions, and ensuring workforce safety and well-being.

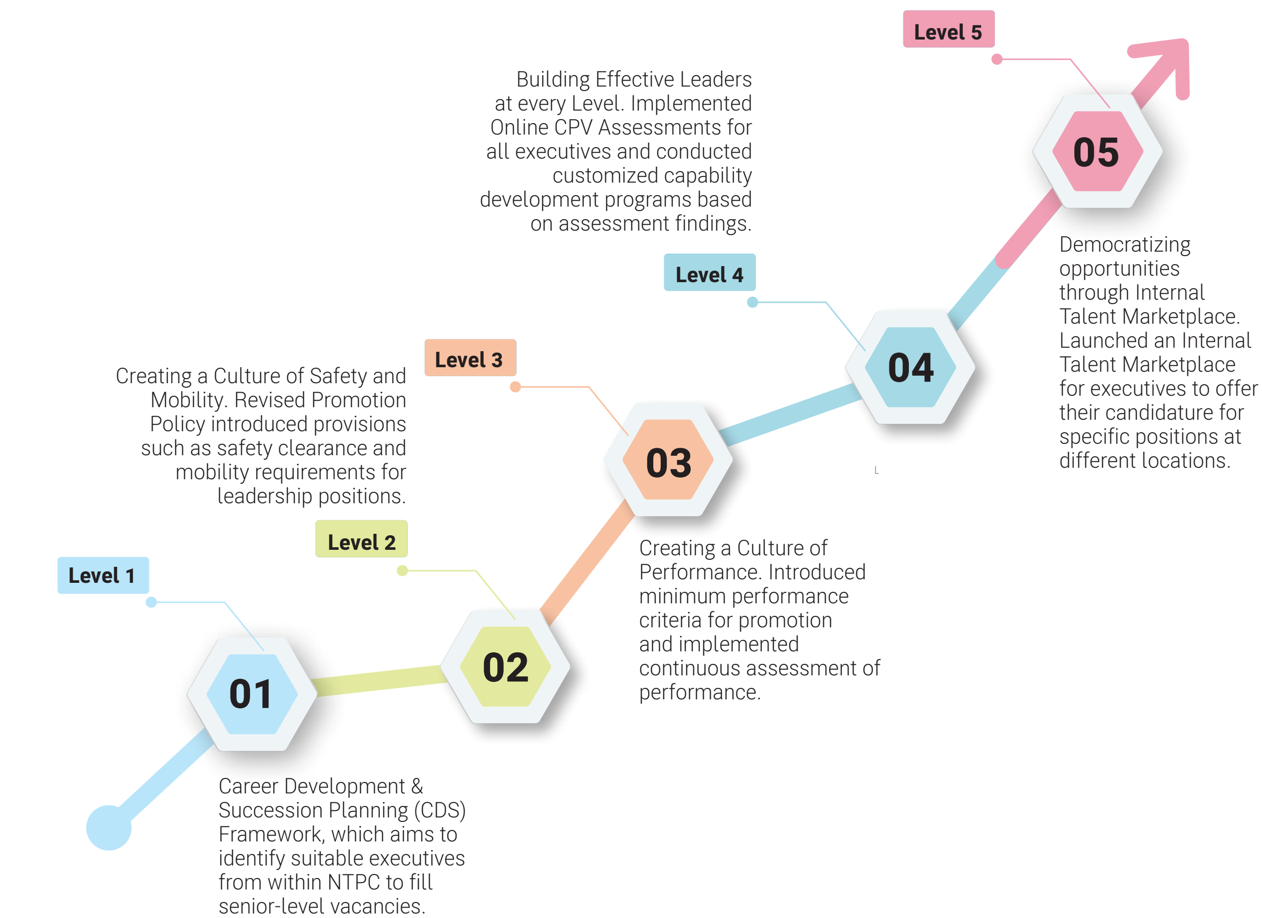
Safety Pep Talk at NTPC Plants

[12] GRI 403-7, GRI 403-10

Case Study

Integrated Leadership Development Framework

NTPC has developed an Integrated Leadership Development Framework, focusing on the following levels:



The initiatives have contributed to improved performance, reduced attrition rate, increased mobility, transparent performance assessment, and leadership development. The Continuous Performance Assessment and CPV Assessments have facilitated objective talent decisions and improved leadership behaviours. The launch of the Internal Talent Marketplace has provided employees with career opportunities and allowed the company to leverage the skills and capabilities of its workforce. The SAMARTH Modules have supported smooth job rotation transitions for executives.

Young Engineer at NTPC Station

Social Capital

Management Approach

NTPC's management approach is rooted in prioritizing partnerships over profits as our guiding principle. We firmly believe that people are the cornerstone of our success, placing them at the forefront of our strategy. Our commitment lies in fostering a people-centric and people-driven approach that promotes balanced, inclusive, and sustainable growth. We strive to create a mutually beneficial environment that uplifts our communities, customers, suppliers and other stakeholders, promoting equity and overall well-being for all involved.

Key Highlights

40%
procurement from MSEs

96.57%
Customer Satisfaction Score

₹ 352.79 crore
spent towards group CSR activities

16 LAKH
lives touched through CSR work

Mapping with SDGs

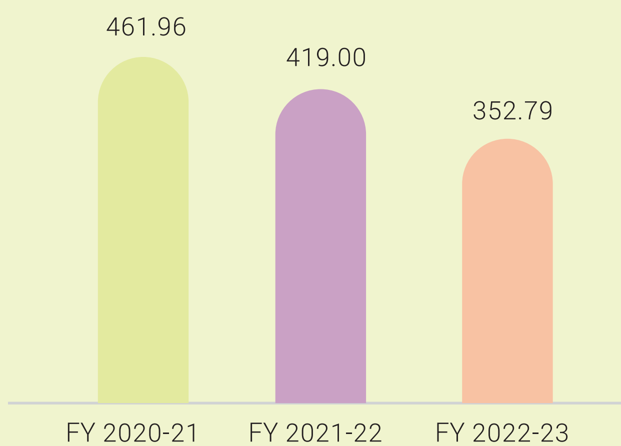
Material Topics
[9] [13] [11]

NGRBC Principles
[3] [5] [9]

IPIECA
HS4, SE1, SE2, SE3, SE4, SE5, SE6, SE7, SE9, SE13, SE14

Data Trends

CSR Expenditure (₹ crore)



Overview

Social capital within NTPC takes various forms, including shared values, strong social networks, active community participation, and robust mutual support systems. Its importance lies in its ability to foster social cohesion, resilience, and collective action, thereby enabling individuals and communities associated with NTPC to access opportunities, resources, and support networks that contribute to their well-being, development, and overall societal progress. NTPC recognizes the significance of social capital in building a sustainable and inclusive company that positively impacts the lives of its employees and the communities it operates in.

We actively strive to establish, nurture, and maintain meaningful connections with our stakeholders, which encompass a wide range of individuals and groups, including our valued suppliers, customers, and local communities. By engaging with and involving these stakeholders, we aim to foster collaboration, trust, and mutual understanding, thereby building strong social relationships that contribute to the overall success and sustainability of our operations.

Customer Engagement

Customer Focus is a fundamental principle deeply ingrained within NTPC's organizational culture, underscoring the utmost significance it places on fostering and nurturing robust connections with its valued clientele. In line with this commitment, NTPC has proactively deployed an all-encompassing Customer Relationship Management (CRM) framework, purposefully designed to optimize customer engagement and interaction. This holistic CRM system encompasses a multifaceted array of strategic initiatives, spanning customer support services, tailored training programs, dynamic interactive forums, and ongoing stakeholder consultations. By leveraging these comprehensive initiatives, NTPC endeavors to not only disseminate vital knowledge and insights but also proactively address customer concerns while fostering an environment conducive to meaningful collaboration.

Customer Engagement

Customer Support Services

NTPC offers technical and managerial support services to customers through workshops and seminars. These activities cover areas like operations and maintenance, efficiency, HR, IT, and finance, enabling the sharing of expertise and best practices.

Training at NTPC's Facility

Customers are provided with free participation in technical and managerial training programs at NTPC's Power Management Institute in Noida, facilitating knowledge enhancement.

Interactive Forums

NTPC engages with customers through various forums, including meetings with stakeholders, power committee participation, business partner meets, SEB manager interactions, and issue-based engagements. These interactions promote dialogue, address concerns, and drive development, sustainability, efficiency, and environmental protection.

NTPC actively attends Regional Power Committee (RPC) meetings and Technical Coordination Committee meetings to interact with customers and collect valuable feedback on their needs. These discussions cover important aspects like merit order operations, generation flexibility, and environmental compliance. Furthermore, we collaborate closely with regulators and government bodies at the central and state levels to address concerns and safeguard the interests of our stakeholders. Through these collaborative efforts, we strive to enhance cooperation, fulfill customer expectations, and adhere to regulatory requirements while promoting sustainability.

Engagement with Central and State Governments

Central Government

NTPC engages with the central government on policy issues, providing suggestions and views to shape the power sector's policy framework.

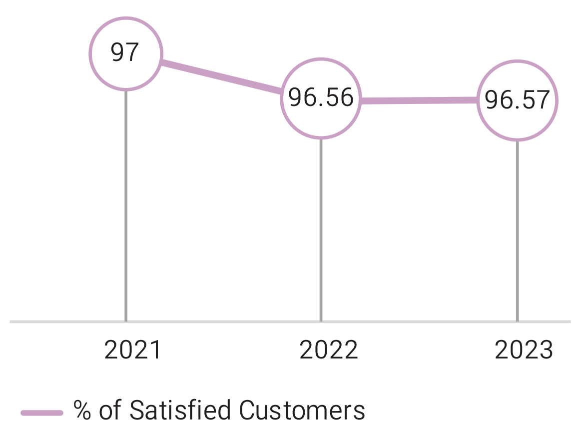
State Governments

Continuous engagement with state governments is undertaken for new project development, issue resolution related to payment by DISCOMs (distribution companies), and policy advocacy. NTPC collaborates with state governments on matters relevant to their jurisdiction.

Customer Data Privacy[1]

NTPC gathers energy billing data from Monthly Regional Energy Accounts provided by RPC, which can be accessed on the RPC website. CERC establishes the tariff information for NTPC stations, and the communication addresses of DISCOM officials can be found on DISCOM websites. Since the information is already public, data privacy is not an issue. Energy bills are created through ERP SAP software and delivered to authorized DISCOM personnel according to the Power Purchase Agreement (PPA). No customer data breaches, leaks, thefts, or losses were reported during Financial Year 2022-23.

Customer Satisfaction Score



Health and Safety Impacts of Our Product[2]

NTPC sells electricity to DISCOMs from its generating stations, which is transmitted through the grid owned by central and state utilities such as POWERGRID and supplied to end consumers by DISCOMs. While not directly involved in transmission and distribution, NTPC provides technical and managerial support services to its clients. We offer customer support in various areas, including health and safety through workshops and seminars, with safety instructions displayed in local languages. Our product, electricity, is not labeled solely as such due to its intrinsic nature. NTPC complies with applicable Grid Codes and Standards, both national and international. No instances of non-compliance with regulations and voluntary codes regarding health and safety impacts were reported throughout the lifecycle of our product and services.

Marketing Strategy[3]

Our marketing strategy is primarily managed by the Commercial Function for our Power Generation business and by the Consultancy and Business Development Wing for other avenues. The Commercial Function analyzes the demand and supply situation in the region, and markets power from our new proposed projects.

To expand our reach, we engage with all State Power Distribution Utilities of the region to obtain power requisitions for the new proposed stations. These requisitions serve as a basis for further studying the viability of the projects. Once we receive consent, we proceed to sign Power Purchase Agreements with the State Power Utilities. The allocation of power from

[1] GRI 418-1

[2] GRI 416-1, GRI 416-2

[3] GRI 417-1, GRI 417-2, GRI 417-3

Basis of Identification and Selection of Stakeholders with Whom to Engage

The overall responsibilities of Commercial Function can be sub-divided into the following areas of the activities. In each of these activities, Commercial Function has to engage with the different stakeholders in various ways.

Marketing of the Project

NTPC's thermal projects are regional power projects supplying electricity to specific states. The Commercial Function analyzes the demand and supply in the region and markets the power from the new project. NTPC approaches state power distribution utilities to determine their power requisitions. Based on this, viability of the project is assessed. Power Purchase Agreements (PPAs) are signed with willing utilities, and consent is sought from beneficiaries. The Ministry of Power allocates power to customers, including DISCOMs.

Regulatory Interface

NTPC, as a Central Generating Utility, falls under the jurisdiction of the Central Electricity Regulatory Commission (CERC). CERC determines tariffs for NTPC stations based on regulations. NTPC actively engages with CERC by submitting data, providing comments, and participating in hearings. The Commercial Function formulates NTPC's views on commercial aspects of policy documents and guidelines from the Central Electricity Authority and Ministry of Power.

Pricing of Electricity

CERC determines tariffs for NTPC's thermal stations as per regulations. Solar tariffs are discovered through competitive bidding. Wind and small hydro tariffs follow CERC's generic tariff. The Commercial Function prepares and files petitions with CERC, presents cases, and responds to queries.

Billing and Realization

Commercial Function raises monthly bills based on the Regional Energy Account issued by the Regional Power Committee. Billing is done according to the beneficiaries' energy schedule and the tariff of the respective stations. Timely bill realization is ensured, and early payment is incentivized through the Rebate Scheme. NTPC interacts with distribution utilities and state governments for timely payments.

the new Generating Station to the respective willing customers (State Utilities) is managed by the Ministry of Power, Government of India.

As we observe an increasing demand for clean and sustainable energy, we have been investing in and redirecting our strategy to provide renewable energy solutions to interested customers. Our focus is to reduce dependency on coal and gas through the infusion of renewable power. However, given the current emphasis on renewable energy generation in the country, there is a possibility of a reduction in scheduled generation from coal/gas plants, driven by the aggressive addition of renewable capacity, and policy mandates like Renewable Purchase Obligations. To optimize resource utilization, surplus power that is not requisitioned needs to be redirected. The Commercial Function ensures that this surplus power is made available to other consumers in need through the Power Exchanges or bilateral agreements. It is sold on both the Day Ahead Market (DAM) and Real Time Market (RTM) platforms. In the Financial Year 2022-23, around 639 million units of power were sold in the DAM and RTM in Power Exchanges.

Day Ahead Market (DAM)

Prior consent from DISCOMs is required for selling URS power in the Day Ahead Market (DAM), which operates from 10:00 to 12:00 Hrs of the previous day. This market accounts for 75%-80% of power trading volume in Power Exchanges.

Real Time Market (RTM)

RTM has been implemented since 01 June 2020, allowing generating stations to sell surplus power and enabling DISCOMs to buy power to meet contingency needs. It consists of 48 half-hourly auctions during the delivery date, facilitating price-sensitive bidding for generators and DISCOMs.

To streamline transactions and enhance customer convenience, we have developed an online portal that directly connects customers/beneficiaries with the Regional Load Despatch Centers (RLDC).

Stakeholders of the Commercial Function include regulators such as the Central Electricity Regulatory Commission (CERC), State Electricity Regulatory Commissions (SERCs), and the Appellate Tribunal for Electricity (APTEL). Customers/beneficiaries are also a key stakeholder group, including State Power Distribution Utilities with whom we engage for power requisitions and sign Power Purchase Agreements. The Central Government and State Governments are involved in policy-making and providing a conducive environment for power generation, transmission and distribution. The Regional Power Committee (RPC) and Load Despatch Centers (NLDC, RLDCs, and SLDCs) play a crucial role in ensuring efficient power despatch and coordination within their respective regions.

Supplier Engagement

NTPC implements a business model centered around asset acquisition, raw material sourcing, and service provision for power delivery to end-users via intermediate customers. Our primary objective revolves around enhancing supply chain sustainability and mitigating negative effects. We adhere to a triple bottom line framework, prioritizing environmental, social, and governance factors when making decisions. Moreover, we actively promote the adoption of exemplary environmental, social, and governance practices among our supply chain collaborators.

9,430

Total Vendor Base for Financial Year 2022-23

Supplier Enlistment[4]

NTPC prioritizes transparency and fairness in its procurement process, which includes supplier enlistment and vendor management. Our vendor onboarding process involves pre-qualification to ensure credentials, capability, and compliance with health, safety, and environmental norms, as well as statutory requirements, including human rights. Regular performance evaluations and transparent feedback initiatives are conducted to help vendors improve. Vendor enlistment is valid for three years, with periodic updates to match market conditions.

Supplier Groups	Total Applications Received	Total Vendors Enlisted
Goods/ Materials	840	191
Services	2,266	320
Total	3,106	511

To enhance efficiency and coordination with suppliers and contractors, NTPC employs a centralized Shared Services Centre (SSC) that consolidates goods and services requirements. This approach enables economies of scale and favorable conditions. The SSC platform ensures better control and compliance with policies and guidelines, including rigorous screening of vendors for environmental and social impacts. Only suppliers who meet the screening criteria are considered for procurement opportunities.

NTPC incorporates provisions related to human rights in bidding documents, aiming to prevent instances of child labor, forced labor, and compulsory labor. We establish policies and frameworks to protect the human rights of local indigenous communities throughout our supply chain.

We value the feedback from our vendors and actively seek to continuously improve our vendor management systems, fostering stronger relationships with our suppliers. Additionally, we have implemented measures to streamline payment procedures, embrace digital advancements, and build stronger partnerships with our vendors.

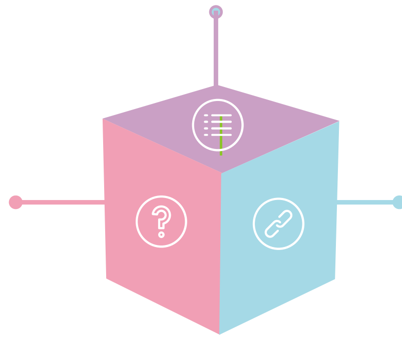
[4] GRI 414-1, GRI 411-1

TReDS On-boarding

NTPC joined all three RBI-approved Trade Receivables Discounting System (TReDS) platforms, providing liquidity to MSMEs by connecting them with attractive interest rates and early payment options.

Vendor Payment Portal

NTPC launched a dedicated portal for suppliers and contractors to track and manage their bills, ensuring transparency and smoother payment processes.



Digital Invoice Submission

NTPC implemented guidelines for 100% digital invoice submission in line with the Digital India initiative, enhancing efficiency, accuracy, and transparency in invoice management.

Indigenous Focus

At NTPC, we actively support Indian bidders and suppliers by incorporating provisions for price preference and deemed export benefits in our bidding documents. This promotes the use of indigenous goods and increases the value of our indigenous purchases. Since Financial Year 2017-18, over 96% of our total purchases have been from indigenous sources, demonstrating our commitment to support local industries and foster economic growth in India. We also prioritize local suppliers in alignment with the 'Public Procurement (Preference to Make in India) Guidelines', contributing to the 'Make in India' Initiative and the development of local businesses. These measures strengthen the domestic supply chain, promote self-reliance, and contribute to the growth of the Indian economy. In the reporting year, procurement for renewables constituted 8% of total procurement expenses.

Financial Year	Indigenous (₹ crore)	Imported (₹ crore)
2020-21	34,378.00	434.00
2021-22	5,975.65	103.22
2022-23	69,311.71	261.35

Sustainable Supply Chain[5]

At NTPC, we have implemented a Sustainable Supply Chain Management System to assess and mitigate supply chain risks. This includes Suppliers' Sustainability Performance Assessment and Sustainable Supply Chain Guidelines. To evaluate suppliers, a comprehensive 'Sustainability Performance Evaluation Framework' was developed in consultation with a third party. In the reporting year, assessments were conducted for 55 critical suppliers. In our assessment, Small category suppliers showed the greatest potential for improvement especially in environment performance. We also conducted capacity building workshops on ESG for around 150 suppliers through various Vendor Development Programs (VDPs). The workshop aimed to enhance their practices in line with Sustainable Supply Chain Guidelines. Through these initiatives, NTPC strives for continuous improvement in sustainability performance across its supply chain.

Procurement Practices

As part of our commitment to foster economic growth and inclusivity, we continue to prioritize procurement from Micro and Small Enterprises (MSEs). Our Public Procurement Policy reflects this commitment by setting an annual target for procurement from MSEs. In line with this, we actively encourage participation in tenders from local and small manufacturers, including MSEs, by providing various benefits. These benefits include exemption from Earnest Money Deposit (EMD), waiver of tender document fees, a purchase preference of 15% for MSEs, and the reservation of 385 items specifically for procurement from MSEs.

[5] GRI 414-2

Sr. No.	Period	Total Eligible Procurement (₹ crore)	MSEs %	SC/ST %	Women %
1	FY 2020-21	6,975.38	50.73	0.22	0.39
2	FY 2021-22	6,498.56	42.95	0.32	0.63
3	FY 2022-23	10,287.27	40.06	0.17	0.40

Furthermore, we understand the importance of supporting marginalized and vulnerable sections of society. In alignment with our social responsibility, we also emphasize procurement from these sections, providing them with opportunities to participate in our procurement processes and contribute to their economic empowerment.

Regulator Engagement

Being a centralized institution, our policy framework is developed on the basis of Government of India guidelines. We are regulated by the Central Electricity Regulatory Commission (CERC). The CERC also determines the electricity tariffs for our stations. We discuss issues, opportunities, and policies for the simultaneous growth of our organization as well as the national economy through periodic Regulators' Meets.

Engagement with Regulators

Formulation of New Regulations

NTPC actively participates in the formulation of new regulations by providing comments and suggestions to the concerned stakeholders. We engage with regulators through public hearings and present our views before any new regulation is finalized.

Tariff Determination Process for Different Stations

NTPC files detailed petitions following the formats prescribed by CERC for tariff determination of its stations. Additional information is provided as requested by CERC or customers during the hearing process. Once the hearings are completed, CERC issues tariff orders for individual NTPC stations.

Submission of Relevant Data/ Information

NTPC collaborates with CERC on various matters including the submission of mandated information, addressing implementation challenges, seeking relaxation for specific issues, and discussing other matters relevant to the company or the sector.

Regulators' Meet

A high-level Regulators' Meet is organized periodically to discuss the regulatory issues and other issues which may impact the power sector as a whole.

We are committed to comply with all regulatory compliances. In Financial Year 2022-23 we have had no cases of fines, penalties or warnings against us for non-compliance with government regulations. Our management bodies ensure that our power distribution partners and clients follow and stand at par with our commitment towards sustainability.

Socio-Economic Compliance[6]

No non-compliance with laws and/or regulations in the social and economic area were identified during Financial Year 2022-23. There were no legal actions for anti-competitive behaviour, anti-trust, and monopoly practices in the reporting year.

[6] GRI 206-1

Public Policy[7]

We do not support, in cash or in-kind, any political party or their members and related institutions.

Community Engagement

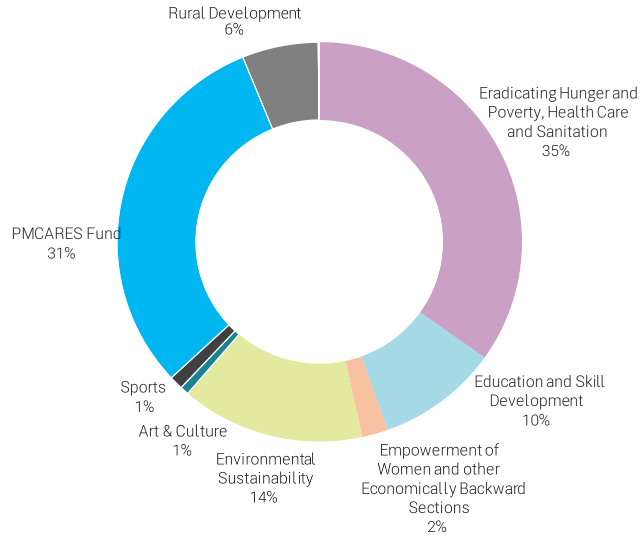
At NTPC, our operations also extend in the direction of creating societal value. Our spirit of caring and sharing is embedded in our vision and mission statement. As an organization, NTPC owes its success to the people of India and strives to work for their sustainable development. 100 % of our operating stations have implemented local community engagement, impact assessments, and/or development programs.[8]

Our core organizational belief of changing lives and adding value to our communities is manifested through constant engagement with local communities across our geographic locations. Corporate Social Responsibility (CSR) has been synonymous with our core business. Our Resettlement & Rehabilitation (R&R) Policy covers Community Development (CD) activities – which are initiated as soon as a new project is conceived. Extensive community/ peripheral development activities are taken up along with the project development.

Corporate Social Responsibility (CSR)

NTPC is deeply committed to Corporate Social Responsibility (CSR) practices, guided by the Companies Act 2013 and DPE Guidelines. Our CSR programs encompass a wide range of activities to benefit the community. We prioritize collaboration with stakeholders such as Panchayat officials, District Administration, Civil Society, Community members, and Public representatives, engaging in a participative and consultative process to address community needs. Regular monitoring, evaluation, and third-party assessments ensure the effectiveness of our initiatives and their positive impact on communities. We have established a local community grievance process to address concerns promptly and foster trust. Our CSR activities are aligned with government priorities, and in the Financial Year 2022-23, we focused on the "Health & Nutrition" theme, surpassing the prescribed minimum expenditure in this area. Through our comprehensive CSR approach, NTPC strives to make a lasting and positive impact on society, promoting inclusive growth,

CSR Expenditure Break-Up



environmental sustainability, and improved well-being.

None of our operating entities witnessed any significant actual and potential negative impacts on local communities in reporting year.[9]

NTPC Foundation

The NTPC Foundation is a charitable trust dedicated to addressing socioeconomic concerns and making a positive impact on various segments of society. It focuses on serving and empowering differently- abled and economically weaker sections of the society. The Foundation aims to uplift these individuals by providing them with opportunities for rehabilitation, education, skill development, and livelihood generation. Through various initiatives such as operating healthcare centers, establishing disability rehabilitation centers, offering IT education, providing scholarships, promoting sports, and empowering women through skill training programs, the NTPC Foundation strives to create a more inclusive and equitable society. Read more about the initiatives taken by the NTPC Foundation in Annexure II of Directors' Report.

Significant Indirect Economic Impacts

NTPC's initiatives have had a significant impact on poverty reduction and the overall prosperity of surrounding communities. Underdeveloped areas have witnessed remarkable progress through NTPC's

[7] GRI 415-1
[8] GRI 413-1
[9] GRI 413-2

interventions, including improved village infrastructure, better education and healthcare facilities, access to clean drinking water, and enhanced road networks. These benefits are accessible to all community members, regardless of their background. NTPC prioritizes support for individuals from low-income backgrounds through scholarships and vocational training opportunities, promoting education and skill development. Additionally, the company organizes free medical camps and contributes to the strengthening of village infrastructure. We conduct social impact assessments, and environmental impact assessments before start of our power projects and conduct timely monitoring.[10] The details can be found on government website of relevant locality.[11]

Grievance Redressal: Ensuring Fairness in CSR Implementation

NTPC ensures stakeholder participation in CSR activities through a consultative mechanism in the project's surrounding area. Panchayats, local communities, and authorities are involved in the planning, implementation, and monitoring phases. Feedback on CSR initiatives is sought and addressed to ensure community acceptance and support. Key issues are discussed in consultations and periodic meetings, with a focus on addressing community feedback. Grievances from project-affected villages or individuals are addressed according to policy provisions, and grievances received at the Corporate Center are appropriately responded to. This mechanism minimizes and addresses grievances during implementation of CSR activities.

01

Monitoring

- Ensures timely completion of activities to achieve deliverables.
- Regular reviews at the Unit Level identify and address bottlenecks through remedial measures.
- Periodic management information system (MIS) reports provide status updates and address issues in CSR and Sustainability activities. Regional level reviews support Senior Management.
- Corporate-level reviews evaluate company-wide CSR and Sustainability activities, and budget utilization.

02

Evaluation

- Effectiveness of CSR and Sustainability Programme is assessed through internal and external evaluations
- Internal audits verify implementation effectiveness, while external agencies conduct Social Impact Evaluations (SIE) to gauge the impact of CSR and Sustainability initiatives.
- Findings from the SIE inform corrective actions and future scheme/planning.

03

Reporting

- Our CSR and Sustainability activities are communicated to stakeholders through the Company's Annual Report, Sustainability/Business Responsibility Reports
- Communication on the progress of the Global Compact by uploading on UNGC Website.
- These reports are uploaded on our website and are available to the public.

Empowering Communities through our CSR Endeavors

Education

NTPC's education initiatives empower and enrich the lives of students in diverse communities. We establish smart classes in government schools near our plants, aiming to enhance learning outcomes. Our support extends to sponsoring the education of Baiga Tribal students, enabling their admission to prestigious colleges, and providing holistic education to Special Backward Tribe Pahadi Korwa students. Additionally, we contribute to school construction, collaborate on establishing English medium schools, and offer financial assistance to backward tribal students in residential schools. Active participation in initiatives like the Har Ghar Tiranga campaign showcases our commitment, while improving school infrastructure, providing essential assets, and ensuring access to education through scholarships and study materials for the benefit of underprivileged children.

Health, Water and Sanitation

NTPC takes a comprehensive approach to improve community well-being. We provide financial support to the Prime Minister's Citizen Assistance and Relief in Emergency Situations (PM CARES) Fund, ensuring

[10] GRI 413-1 i , 413-1 ii
[11] GRI 413-1 iii

resources for various services and activities. Our hospitals offer healthcare services, including primary, secondary and referral care, and diagnostic services, benefiting a significant number of patients annually. We also support health infrastructure development and implement disease prevention measures such as fogging, spraying, and mosquito net distribution. Ensuring water accessibility is another priority, achieved through hand pumps, drinking water facilities, and filtration systems. NTPC actively promotes sanitation and hygiene through initiatives like constructing toilets and supporting waste management projects. Awareness activities further contribute in fostering healthy practices within communities.

Skill Development and Income Generation

NTPC actively supports the Skill India Mission, aiming to empower individuals and create economic opportunities. Through partnerships with ITIs and the establishment of new ones, NTPC contributes to the development of a skilled workforce. Collaboration with NSDC enables employment-linked skill development programs for rural youth, enhancing their employability and socio-economic growth. NTPC also focuses on improving educational and vocational training infrastructure to ensure access to quality education and training facilities. The organization provides capacity-building training and expert guidance to farmers, promoting modern techniques for improved productivity. Moreover, NTPC offers training in various trades, equipping youth with valuable skills for entrepreneurship and employment.

Women Empowerment

The company collaborates with various organizations and provides skill and livelihood generation training to women. NTPC supports sustainable livelihoods through oyster and mushroom cultivation. NTPC also contributes to the higher education and rehabilitation of orphaned and abandoned girls. Additionally, NTPC conducts diverse training programs for women, covering a range of skills. These initiatives showcase NTPC's commitment to women's empowerment, fostering economic independence and overall well-being.

Sports

NTPC actively promotes sports in India through CSR initiatives, aiming to develop talent, enhance India's international presence, and support grassroots sports. The company collaborates with key stakeholders and provides infrastructure support to sports centers and facilities. NTPC's initiatives span various sports, including archery, water sports, and football clubs. These efforts demonstrate NTPC's commitment to nurture sporting talent and contribute to the growth of sports in the country.

Rural Infrastructure Development & Preservation of Heritage

The company installs LED-based Solar Street Lights and High Mast Lights near NTPC Stations, ensuring better lighting and community safety. NTPC actively supports the construction and redevelopment of Shri Badrinath Dham town, aiming to create a spiritual smart hill town. Additionally, the company contributes to essential infrastructure development, improving the quality of life for the local community. NTPC's involvement in preserving significant historical locations showcases its dedication towards heritage preservation.

Relief during Natural Calamity

The company extends financial support to organizations like the Uttarakhand State Disaster Management Authority for rebuilding government schools and health centers in districts affected by disasters. NTPC played a crucial role in the reconstruction of Kedarnath town and its surrounding areas after the devastating calamity in 2013. Additionally, the company contributes in establishing disaster management control rooms, ensuring effective coordination and response during crises. These initiatives showcase NTPC's dedication towards supporting communities affected by natural calamities, helping them to recover and rebuild.

Resettlement & Rehabilitation

We aim to minimize conflicts with our communities by addressing social issues early in our projects. Our R&R policy includes Resettlement and Rehabilitation measures and prioritizes the needs of Project Affected Persons (PAPs). We initiate community development activities from the beginning of a project, following the guidelines of the Initial Community Development Policy. We provide information through Public Information Centres/R&R Offices and communication materials like notices, pamphlets, and letters. Over the past nine years, upto Financial Year 2022-23, we have invested ₹ 2,092 crore in community development initiatives under the R&R Framework. Land compensation and R&R grants have been actively carried out in projects like Darlipali and Lara, and coal mining projects such as Pakri-Barwadih, Kerandari, Dulanga and Talaipalli in Financial Year 2022-23.

NTPC take utmost care of the natives and Project Affected Families (PAF) due to its projects and there is no Incidents of violations involving rights of indigenous peoples.[10]

01

Minimize R&R Issues

- Proactively minimize R&R issues during project exploration and relocation.
- Redesign layout to minimize acquisition of homesteads and agricultural land.
- Optimize plant layout and reduce land requirement.

02

Grievance Redressal System

- Established Grievance Redressal System for PAPs.
- Dedicated R&R groups at Projects, Regional Headquarters, and Corporate Centre.
- Address grievances received through RTI in a time-bound manner.
- No significant negative impacts or grievances were reported during the reporting period.
- No incidents of violations involving rights of indigenous peoples.

03

R&R Policy 2017

- R&R Policy aligned with 'The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013'.
- Mandates minimum R&R entitlements and compensation.
- Social Impact Mitigation Plan conducted prior to land acquisition.

04

Packages for Project Affected Persons

- Strive for the best possible R&R package for Project Affected Families.
- Compensate PAFs for loss of assets and livelihood.

05

Initial Community Development (ICD) Policy

- Initiate actions according to the ICD Policy after receiving land and water commitments.
- Conduct Social Impact Evaluation (SIE) to assess R&R plan implementation.

06

Comprehensive Community Development Plan

- Formulate a comprehensive Community Development Plan in consultation with stakeholders and District Administration.
- Establish Public Information Centres (PICs) and Village Development Advisory Committees (VDACs) for effective participation and transparency.
- Maintain continuous interaction with neighboring communities through Stakeholder Engagement Policy.

[10] GRI 411-1

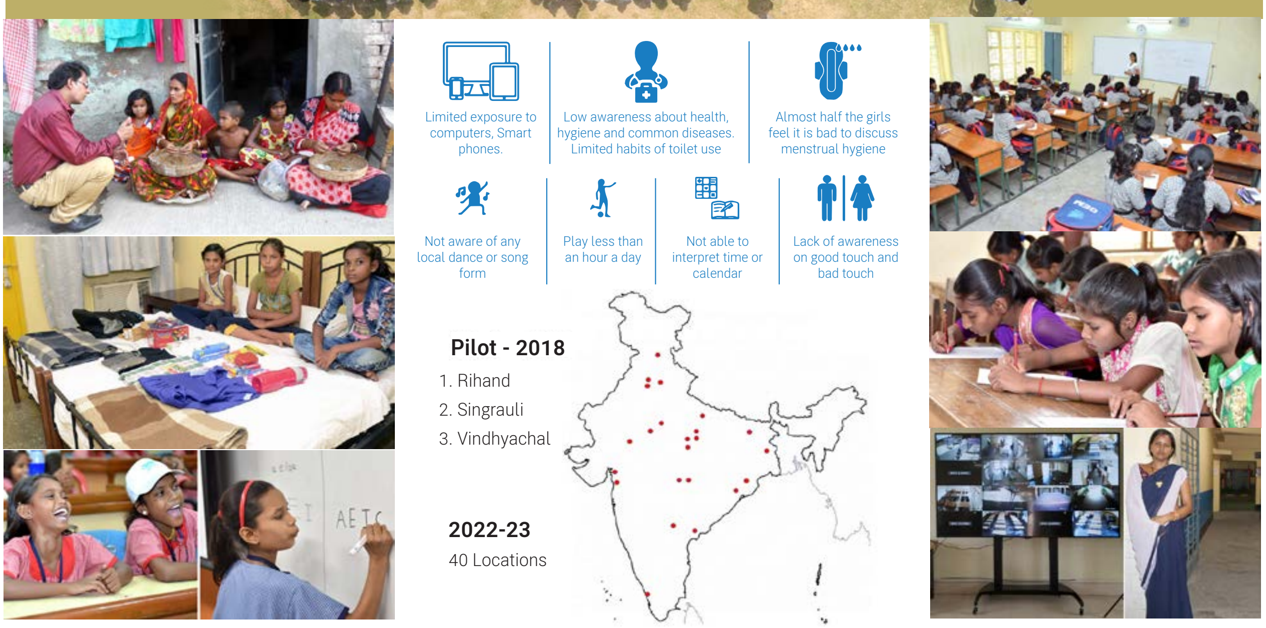
Case Study

Empowering Girl Children through Residential Workshops

NTPC has launched the Girl Empowerment Mission (GEM) to address the social challenges faced by girls from certain segments of society in India. Our initiative aims to empower girls by providing education and life skills, enabling them to become catalysts for change within their families, communities, and the nation.

In 2022, the program was implemented across 33 NTPC locations and welcomed approximately 2,405 girl participants. This year, in 2023, the program has expanded to 40 NTPC locations, with participation of around 2,700 girls.

GEM is a four-week residential workshop specifically designed for girls transitioning from Class V to Class VI. It equips them with academic knowledge, life skills, and engages them in extracurricular activities. The curriculum encompasses a wide range of subjects, including literacy, numeracy, hygiene, communication, and gender diversity awareness. We conduct awareness campaigns, identify eligible girls, and secure parental consent for participation. The program has yielded positive outcomes, such as improved academic performance, boosted self-confidence, enhanced decision-making abilities, and strengthened interpersonal skills. Beyond empowering the girls, the Girl Empowerment Mission has fostered a positive mindset towards gender equality and girls' education within the community. The sustainable impact of this initiative will shape a brighter future for the girls, their families, and the communities they belong to.



Intellectual Capital

Management Approach

NTPC's management approach for intellectual capital involves aligning R&D efforts with its business portfolio, recognizing the significance of embracing emerging technologies and enhancing existing ones in the global energy industry. By leveraging intellectual capital, NTPC aims to drive innovation, efficiency, and sustainability while delivering long-term value to stakeholders.

Key Highlights

33
patents granted to NTPC

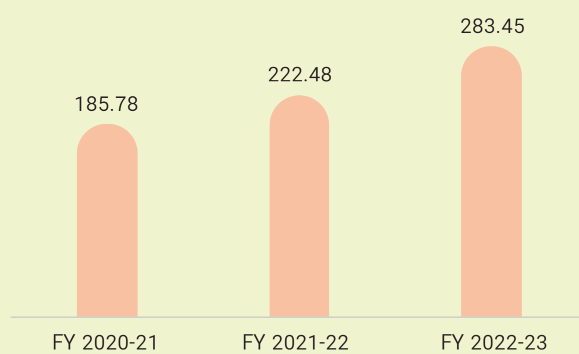
27.62% (Y-O-Y)
increase in R&D expenditure

29.67% (Y-O-Y)
increase in expenditure on IT/ digitalization

6TH TIME
NTPC won ATD BEST Awards 2023 for talent development

Data Trends

R&D Expenditure (₹ crore)



Mapping with SDGs

Material Topics
[5] [14] [17]

UNGC
[9]

Overview

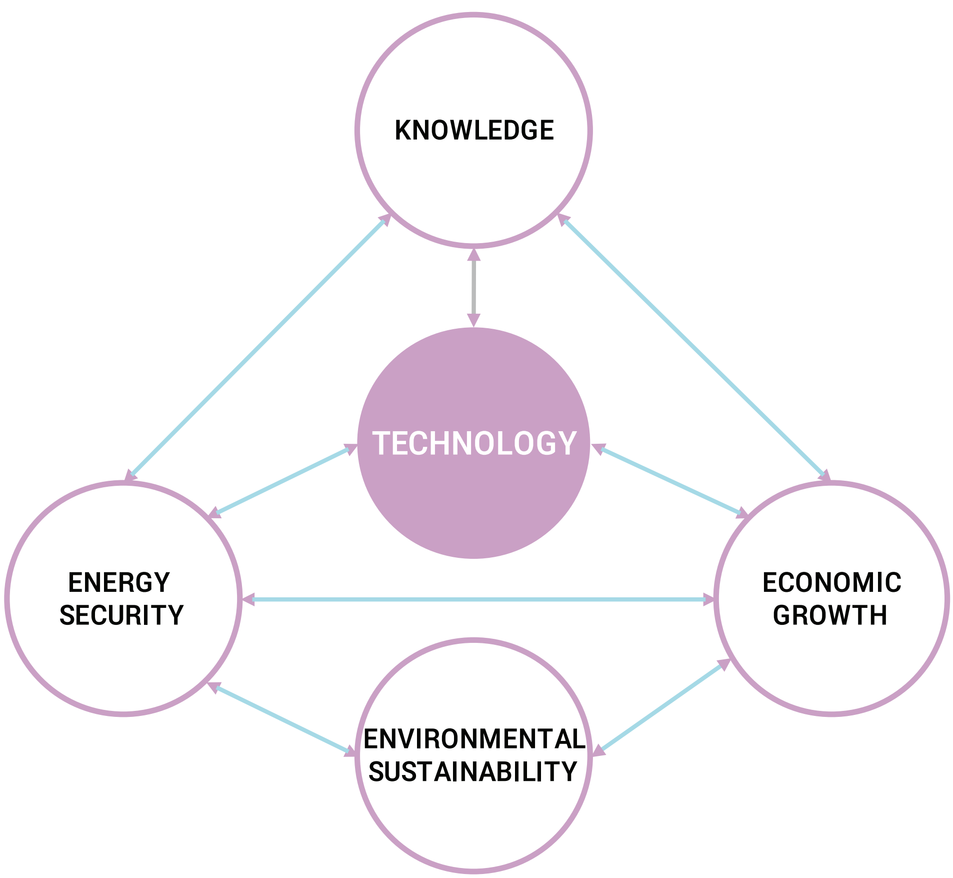
Intellectual capital represents the invaluable intangible assets and resources that drive the value and competitive advantage of NTPC. Our commitment to research and development solidifies this financial asset, transforming knowledge into tangible outcomes. It encompasses our cutting-edge methodologies, intellectual property including patents, trademarks, and copyrights, along with our extensive advisory services, educational facilities, and initiatives geared towards fostering innovation and sustainable practices. By nurturing and harnessing our intellectual capital, we pave the way for continued growth and success, driving positive impact and resilience within our organization and beyond.

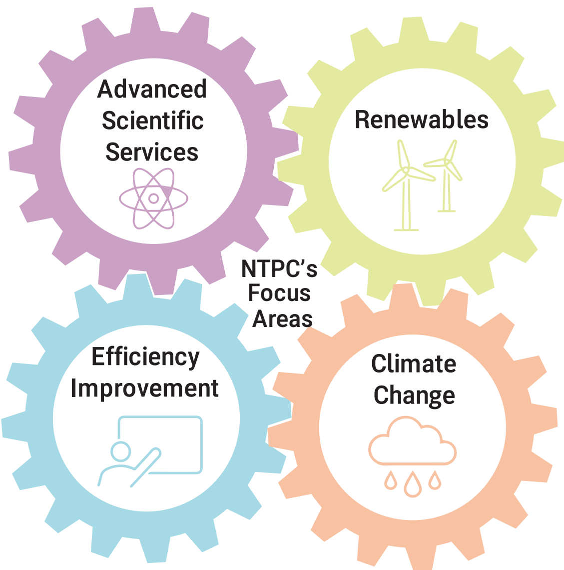
Research and Development

Our company acknowledges the significance of research and development (R&D) in the ever-changing energy sector. We firmly believe that the assimilation and conversion of knowledge into technologies will be the key differentiator in the future for enhancing the country's energy security, economic growth and environmental sustainability, and determining the company's competitiveness in the national and international market.

As an integral part of our long-term vision and strategic approach, R&D has become a cornerstone for both the growth of our company and the betterment of society. We are investing approximately 1.1% of our profit before tax (PBT) in R&D initiatives. To effectively tackle emerging challenges in the power sector and expand our presence across the entire energy value chain, NTPC established the NTPC Energy Technology Research Alliance (NETRA) in 2009. NETRA is a state-of-the-art centre dedicated to research, technology development, and scientific services. It serves as a collaborative platform, working in partnership with leading national and international institutes, technology players, and service providers.

Nexus between knowledge, technology, and sustainability





NETRA offers advanced scientific services in various domains, including non-destructive examination, metallurgy, failure analysis, oil/water chemistry, environment, electrical systems, and computational fluid dynamics. We have forged partnerships with renowned institutions to leverage their specialized knowledge and expertise in areas such as ash utilization, hydrogen, carbon capture, sensors, robotics, drones, and renewables.

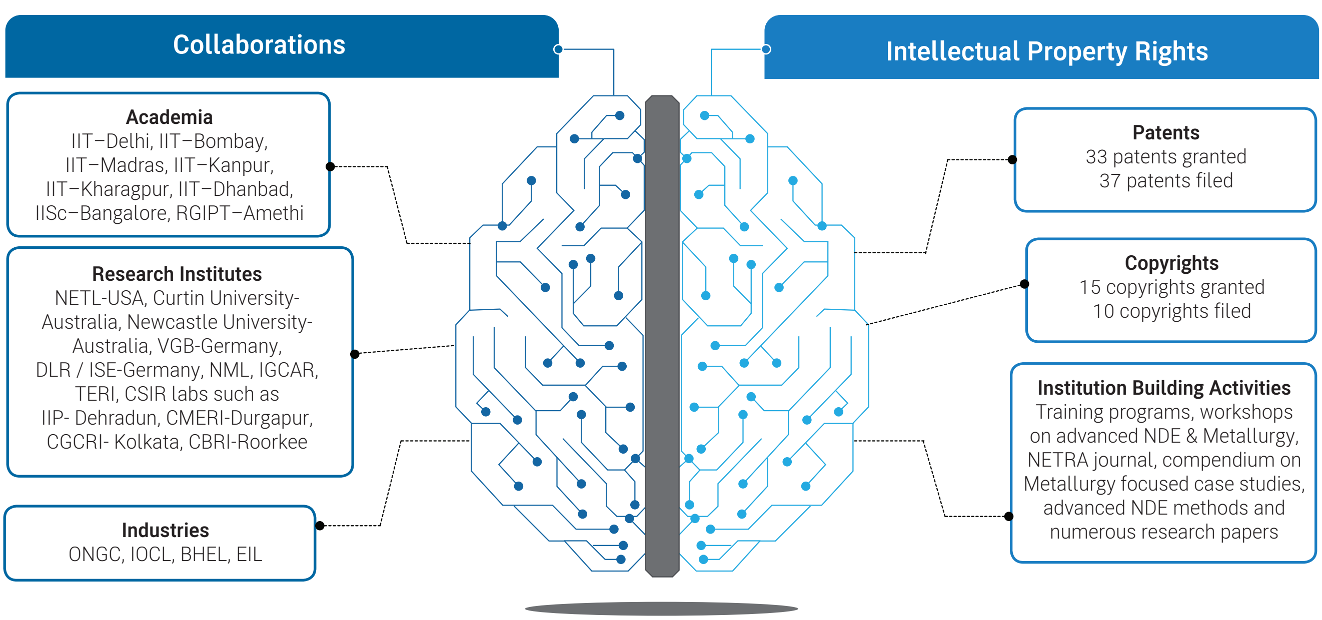
R&D Expenditure[1]

The R&D expenditure of NTPC for Financial Year 2022-23 has witnessed a noteworthy surge, reaching ₹ 283.45 crore, which marks an impressive increase of 27.62% compared to the previous financial year. This substantial growth exemplifies NTPC's unwavering dedication towards fostering innovation and embracing sustainable practices. By investing significantly in research and development, NTPC continues to demonstrate its proactive approach towards driving positive change and establishing itself as a leading force in the pursuit of a sustainable future.

Driving Innovation and Knowledge Sharing

NTPC's knowledge network showcases diverse collaborations and Intellectual Property Rights ownership, underscoring our commitment to foster innovation and knowledge sharing.

NTPC's Knowledge and Innovation System



[1] GRI 203-1

Key Project Areas

NETRA's initiatives encompass a diverse range of activities spanning 5 specific areas. In the Financial Year 2022-23, we have successfully executed a remarkable portfolio of 21 projects, demonstrating our expertise and commitment in the following areas:

I. Carbon Capture and Utilization	II. Hydrogen	III. Water Technology	IV. Ash Technology	V. Waste to Energy	VI. Other Areas
10 TPD 'CO_2 to Methanol' Demo Plant at NTPC-Vindhyachal	25 kW Green Hydrogen Based Micro Grid at NETRA campus	24 TPD Electro Dialysis Reversal Plant at NTPC NETRA	Development of Angular Shaped Coarse Aggregates from Fly Ash	400 KWe MSW-RDF Enhanced Steam Gasification Plant	4MW Ground Mounted Solar Photo Voltaic System with Battery Storage
10TPD 'CO_2 to Ethanol' Demo plant at NTPC-Lara	Development of Sea Water Electrolyzer for hydrogen production	240 TPD Non-Thermal Forward Osmosis based High Recovery System	Fly Ash based Light Weight Aggregate Pilot Plant setup at NTPC-Sipat	Development of 10 TPD 'Torrefied Pellet Manufacturing Plant for Agri-Waste' with Indian START-UP	WW Tube Deposit Wt. Density (DWD) Measure and Qualitative analysis of scale
Indigenous development of Catalyst & Reactor for conversion of CO_2 to Methanol	Development of High Temperature Steam Electrolyzer	3600 TPD Electro-coagulation System at NTPC Solapur			Development of AI based solution for inspection of boiler 1st pass
Pre-feasibility assessment of CO_2 storage potential in Cat-1 Fields of India- with NCOE-CCUS, IIT-B	Development of Metal Hydride (MH) Based Static Hydrogen Storage and Compression	4 MLD Activated Filter Media Plant at NTPC Dadri			
CO_2 based Carbonated Coarse Aggregate- with CBRI Roorkee					

Unlocking the Value of Research & Technology Development

NETRA has undertaken significant projects to address concerns related to the environment, climate change, reliability, efficiency improvement, and renewable energy. It is actively working on reducing carbon footprint through carbon capture and utilization, specifically through a project that aims to capture CO_2 from a thermal plant and convert it into valuable products like methanol, ethanol, carbonated coarse aggregates, etc.

It has also taken up research and development projects for hydrogen technology, water technologies such as desalination, and innovative ash utilization processes.

NETRA is dedicated towards enhancing reliability and efficiency through advanced scientific services like non-destructive evaluation, CFD analysis, and metallurgy and failure analysis. They are also involved in cutting-edge technologies like robotic solutions for inspections, asset digitization and monitoring through drones, and the development of novel sensors. NETRA's activities have been instrumental in analysing failures and implementing preventive measures at power stations, including regeneration treatments, chemical cleaning, and corrosion control. The majority of our projects involve the development and demonstration of new technologies, and technological trials are an integral part of the work.

New Products & Technologies Developed[2]

- 400 KW MSW-RDF Enhanced Steam Gasification Plant
- 24 TPD Electro-Dialysis Reversal (EDR) System for Treatment of STP Water
- Development of Sea Water Electrolyser in Collaboration with RGIPT, Amethi
- 20 TPD CO_2 Capture Block of 10 TPD CO_2 to Methanol Plant at NTPC -Vindhyachal

Electro-Dialysis Reversal System

Enhanced Steam Gasification Plant

Scientific Services Support to NTPC Stations on Continuous Basis[3]

NETRA, the R&D arm of NTPC, provides state-of-the-art scientific support to NTPC stations and other utilities in various critical domains such as Non-Destructive Examination (NDE), Metallurgy & Failure analysis, Oil/water chemistry, Environment, Electrical, and Computational Fluid Dynamics (CFD). With a steadfast commitment to specialized expertise, NETRA excels in these areas, empowering power utilities with enhanced efficiency and sustainable energy solutions. By leveraging extensive knowledge and proficiency, NETRA plays a pivotal role in strengthening the capabilities of power utilities, ensuring efficient and reliable performance. Details of specific projects can be accessed from NETRA page at NTPC website. (https://www.ntpc.co.in/about-us/corporate-functions/netra/about-netra)

Leveraging Decades of Knowledge Base[4]

NTPC's learning initiatives are endowed with sophisticated training centres like the Power Management Institute (PMI), Regional Learning Institutes (RLIs), the Safety Academy, Employee Development Centres (EDCs), and Simulator Facilities. Learning and Development (L&D) is focused on future roles, technology advancements, business acumen, and leadership in the VUCA world. Training is conducted through hybrid mode leveraging classrooms, simulators, online platforms, VR, and e-Learning.

[2] GRI 203-1

[3] GRI 203-1

[4] GRI 404-1, GRI 404-2

Executive Trainees undergo a year-long program with on-the-job, simulator, technical, managerial, and soft skills training. Planned Interventions such as the Foundation Course, Enhancing Managerial Competence (EMC) and Advance Management Program (AMP) are provided at three identified stages of career to the Executives. Job rotations, and transfers offer additional experiential learning. During the reporting year, 4 batches of Executive Trainees were regularised and 462 Executives were exposed to the Planned Interventions. In all, 2,629 training programs were conducted during Financial Year 2022-23, resulting in a total of approximately 1,48,916 learning person-days.

Employee well-being and safety are prioritized, with safety training for employees and contractors, along with safety certificate courses throughout the organization.

Talent Development Initiatives

GpiLearn Platform

- 6,127 O&M executives
- Technical and safety modules
- Customized LMIs
- Functional competency gaps bridged
- Required proficiency acquired

Virtual Reality Training

- VR equipment procurement
- 50 VR modules (300 minutes)
- Safety, Isolation, and Normalization training
- Train the trainer programs
- 3686 Beneficiaries

Targeted Competency Development

- Managerial competencies identified
- CPV assessment-based programs
- 251 executives covered

Samarth Training

- 474 O&M executives underwent job-rotation facilitation training
- Covers various standardized O&M modules
- Eases the process of knowledge transfer

24*7 Employee Assistance Program

- Unlimited support for employees and family
- Phone/video/chat/e-counselling
- Stress management, coping mechanisms, etc.

Operation Training Simulators

- Remote and offline training
- Simulators for practical experience

New Age Digital Courses

- AI, IoT, Blockchain, etc.
- NASSCOM-MeitY Future Skills platform

Special Programs through IIT Bombay

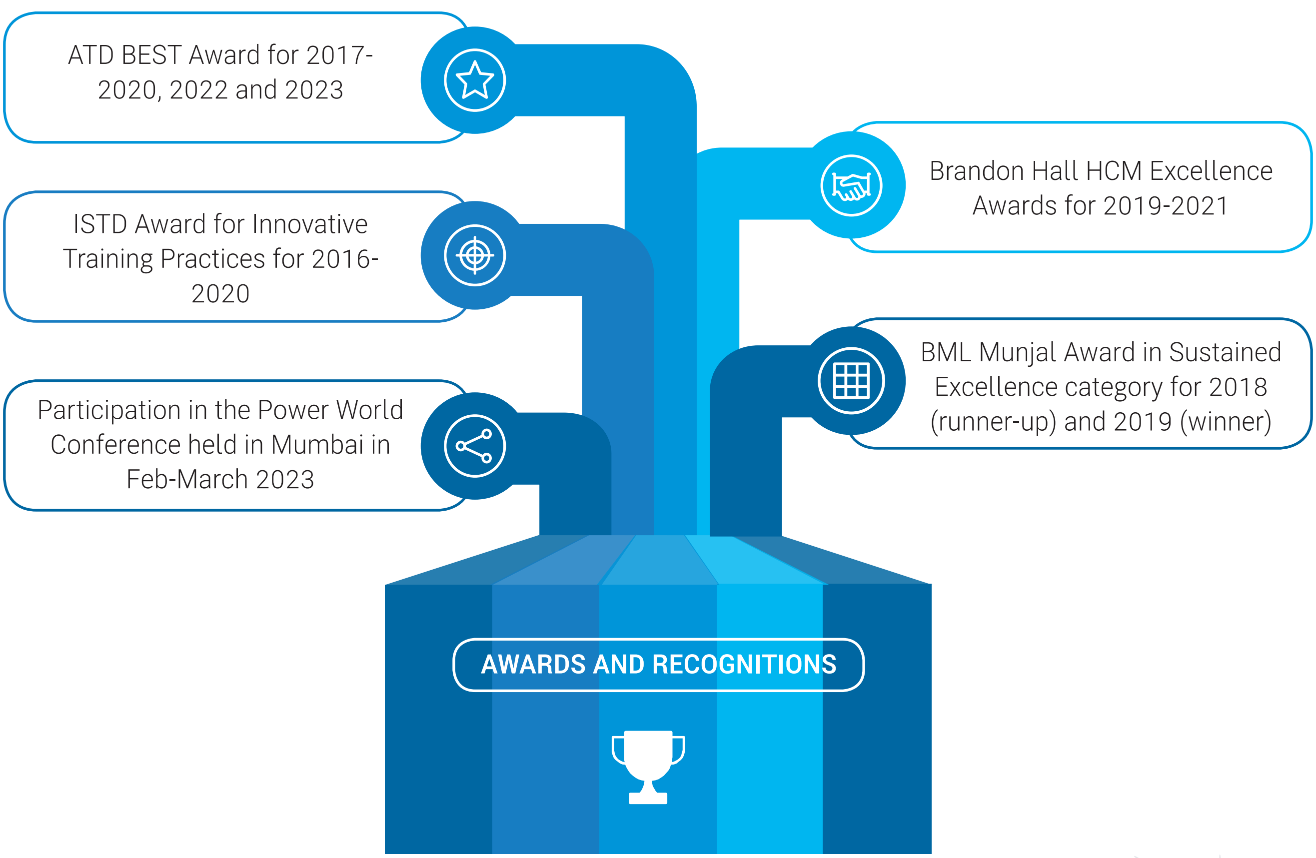
- Energy Storage: 3 batches
- Solar Thermal Systems: 2 batches
- Carbon Capture: 2 batches
- Green Hydrogen: 1 batch

Leadership Development Programs

- Customised Women Leadership Program
- 10X Leadership Program for 224 high potential and high performing executives
- Customized Leadership Development Program for 163 senior officials through IIMs

Awards and Recognitions

We are extremely honored to receive the prestigious ATD BEST Award, which is considered one of the highest accolades in the field of Learning and Development. NTPC has secured an impressive 13th global ranking and emerged as the top-ranked Indian PSU, making us the only PSU to have won this award six times. This recognition is a testament to our exceptional Learning and Development practices, innovative approaches, incorporation of technology, and our unwavering commitment towards fostering continuous learning for our employees. Our HR initiatives have consistently been acknowledged and praised, reaffirming our dedication to excellence.



Our Consultancy Services[5]

NTPC's Consultancy Division leverages its extensive experience and expertise to support the Indian power industry. It offers a wide range of services for large power stations, including engineering, operations and maintenance, project management, contracts and procurement, renovation and modernization, quality and inspection, training and development, human resources, information technology, and solar/renewable power projects. These services also ensure compliance with environmental regulations.

NTPC's consultancy services extend internationally, including projects in various countries and members of the International Solar Alliance (ISA). Overall, NTPC's Consultancy Division supports the power industry domestically and internationally, promoting sustainable practices and contributing to global energy initiatives. More information on these projects can be found on NTPC's website.

Business Development[5]

With over four decades of experience in energy value chain, NTPC is pioneering adoption and commercialisation of new technologies through its Business Development route. Some of the major initiatives undertaken are:

- Hydrogen Hub at Pudimadaka, Andhra Pradesh
- CO_2 to Chemicals at multiple locations
- Bamboo based Bio Refinery at Bongaigaon, Assam
- Industrial Park at NTPC Power Stations
- Initiatives for Start Up Eco-system
- Collaboration with State governments and other Companies

Driving Sustainable Digital Transformation

NTPC's Journey

At NTPC, we embrace digital transformation as a continuous practice to redefine customer interactions, streamline business processes, and shape our organizational culture. The Indian power sector is undergoing a transformative shift due to emerging technologies, digital advancements, and innovative business models, revolutionizing the industry. Aligned with our corporate vision, we strategically integrate IT to make data-driven decisions, gain a competitive edge and achieve goals. We are traversing through the following steps, as we progress in our journey of digital transformation.

01 Enterprise-wide Strategy: To align with NTPC's Vision and Mission

02 Digital Operating Model: To bring together Technology, People and Business.

03 Digital Foundation: Core Technology Layers to drive the Digital Transformation

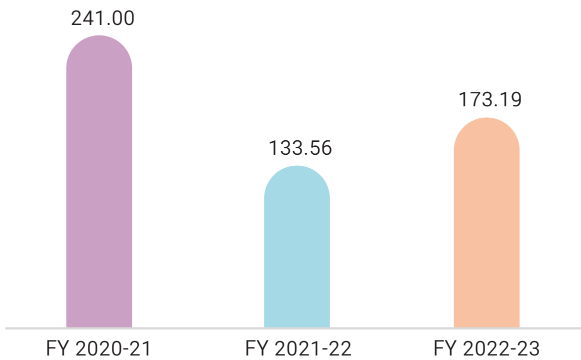
04 Business Case Driven Initiatives: To transform existing business processes using New Technology.

At NTPC, Core Technology Layers are the foundation for extensive transformation. We operate four organizational platforms: ERP (SAP), ECM (PRADIP), M365-Virtual Office, and Web/Mobile Apps. By adopting an enterprise-wide platform approach, we ensure scalability and efficient resource utilization, minimize duplication, enable rapid expansion, and optimize total cost. These layers empower our departments, functions, and units for time and financial optimization, scalability, integration, and innovation. We're steadily progressing towards our digital transformation goal.

[5] GRI 201-1

[6] GRI 201-1

IT Expenditure Trend (₹ crore)



Cloud Infrastructure

Hyperconverged Infrastructure (HCI) DR Setup, SAP for Joint Ventures, Delphi (Competency based Succession Planning System), CPCB Setup for AAQMS Data, Vendor Authentication System for PRADIP

Mobility Platform

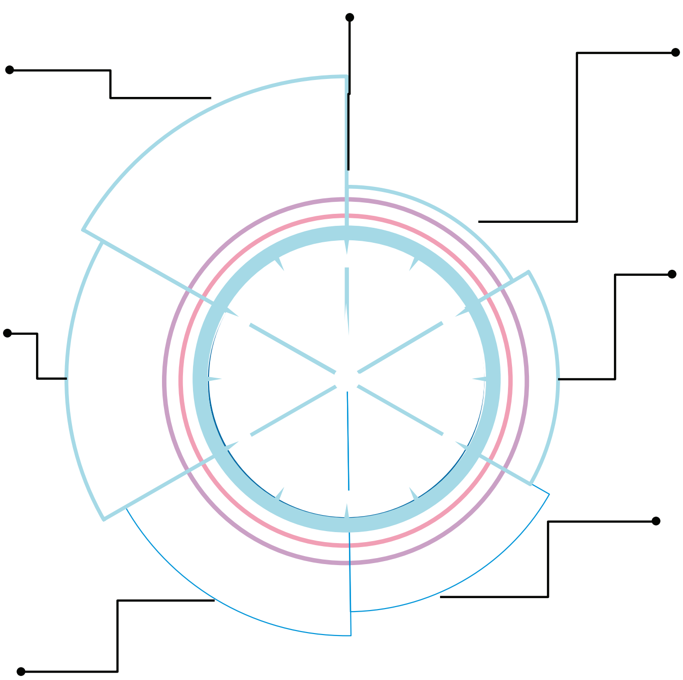
Power App Mobile First (PRADIP) SAP FIORI, React Native

Integrated Data Management

SAP Process Orchestration (PO), Data Lake, Web Services used for SAP-PRADIP, Plant Information System, Integration with REST and SOAP Protocols, APIs available for seamless movement of data.

Advanced Analytics

Data Lake is under Implementation



On-Cloud Integration

Microsoft365 Solution

Visualization Platform

SAP BW, Power BI, PI Vision

Document Management System

PRADIP and Digitalization, Knowledge Management Portal (Under Implementation), M365 SharePoint, SAP Document Management System

Web & Mobile Apps as Part of Digital Initiatives

With the new digital initiatives underway, NTPC intends to become a fully digitalized organization both for its core and non-core functions, and also act as a role model for the industry.

NTPC Business Mail Repository System (BMRS)

Keeping repository of all communications made with stakeholders.

Mail Vault ensures ease of retrieval of communication pertaining to an area, contract, or package by the authorized users.

Also act as a reference mail database when dealing employee has separated from company or has been transferred to another location

Project Management Tool - PROMPT

Mobile app for Management, Project Managers, EICs and Site Engineers to access project progress information anytime and anywhere

Jyoti BOT

One stop 24x7 FAQ support tool for addressing issues and answer simple questions by providing instant responses, leading to enhancement in user engagement

Knowledge Management Portal 1.0

Comprehensive KM Portal is for creating, capturing and curation of knowledge through collaboration and connection among employees.

Engineering Calculator & Tariff Calculator App- Nuclear

App designed to capture engineering Thumb-rule calculations for day-to-day design activity and understand the dynamic energy market scenario and carry out sensitivity analysis

Major Equipment History Dashboard - Erection & O&M Stage

The dashboard developed for Equipment failure history will provide an analytical view of major equipment failure history across NTPC plants based on the historical data in SAP for O&M Stage since 2007

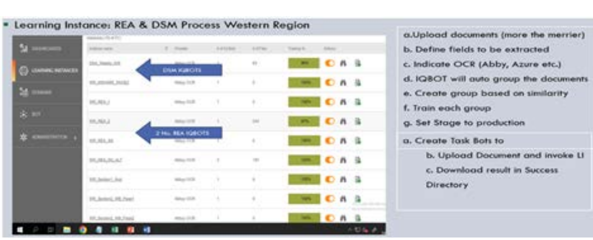
Case Study

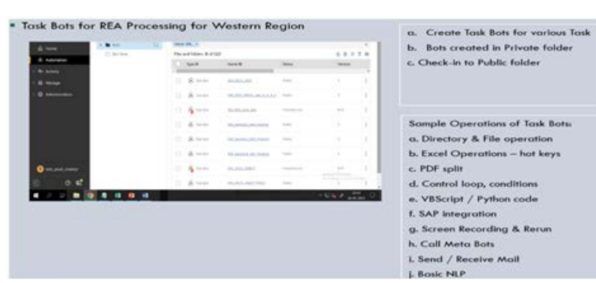
Commercial Billing through Robotic Process Automation (RPA)

The Commercial Billing process at NTPC has been successfully automated using Robotic Process Automation (RPA) tools integrated with SAP. The process, which involves reading Regional Energy Account (REA) documents, data processing, and generating commercial bills totalling ₹ 13,000 crore monthly, was previously carried out manually by senior executives. To improve accuracy and efficiency, RPA tools were implemented to automate all steps of the process.

The introduction of RPA led to several impacts. Firstly, the automation of REA document processing eliminated the need for manual downloading, data extraction, and posting in SAP. This significantly reduced the potential for errors and ensured accuracy in the Commercial Billing process. Secondly, the RPA tools integrated seamlessly with existing applications like SAP, requiring minimal intervention and preserving the end-to-end Commercial Billing workflow.

By leveraging RPA, NTPC successfully automated critical aspects of the Commercial Billing process, enhancing accuracy and efficiency while reducing the burden on senior executives.





Awards and Accolades

Leadership Awards

- NTPC awarded 'India's Best Workplaces in Manufacturing 2022 - Top 30' by Great Place to Work Institute for the fifth consecutive year.
- NTPC ranked among the top three organizations in the "Performance Management Category" of NHRDN People First ACE Awards 2022.
- NTPC awarded "Excellence in Developing Leaders of Tomorrow" and "Excellence in Community Impact" at the SHRM HR Excellence Awards 2022.
- NTPC acknowledged as one of the "Most Preferred Workplaces of 2022" in the inaugural edition of "Most Preferred Workplaces 2022" organized by Team Marksmen and India Today.

CSR / Environment Awards

- NTPC received the FICCI Special Jury Commendation Award for Environmental Sustainability for the Revival & Operation of the Municipal Solid Waste plant at Karsada, Varanasi.
- NTPC awarded for its contribution to Swachhta Pakhwada 2022 organized by the Ministry of Power, Government of India.
- NTPC received the Excellence in Corporate Social Responsibility award in the prestigious CII-ITC Sustainability Awards 2021 for its strategic approach to CSR and collaborative programs with the government and civil society.
- NTPC conferred the NATHEALTH Healthcare CSR Award 2023 in the category of Environmental Health for the Revival & Operation of the Municipal Solid Waste plant at Karsada, Varanasi.

Energy Conservation / Efficiency

- Shri Gurdeep Singh, CMD NTPC, received the award for submitting Energy Compacts to the UN, showcasing India's leadership in energy transition.
- NTPC received the CBIP Award 2022 for 'Outstanding Contribution in Power Generation' for its Vindhyachal Super Thermal Power Station.
- NTPC ranked No. 1 in the S&P Global Commodity Insights Top 250 Global Energy Company Rankings®-2022 among Independent Power Producers and Energy Traders.
- NTPC awarded the Best Globally Competitive Power Company of India and Power Sector Leadership award at the PRAKASHmay 15th Enertia Awards 2022.
- Shri Gurdeep Singh, CMD NTPC, received the CEO of the Year Award at the 24th Annual Platts Global Energy Awards.
- NTPC awarded for Excellence in Power Generation at the PSU & Government Summit organized by Dun & Bradstreet.

Economic and Procurement Awards

- Shri Gurdeep Singh, CMD NTPC Ltd appointed as co-chair of the Electricity Governors Community of the World Economic Forum, contributing to strategic discussions, and shaping cross-sectoral activities.
- NTPC awarded for Procurement from MSME Vendors and Vendor Development Initiatives, recognized by Shri Bhanu Pratap Singh Verma, Hon'ble Minister of State for MSME.
- NTPC effectively utilized the GeM portal during COVID-19 to procure medicines and medical equipment, ensuring timely treatment for those in need. GeM platform facilitated improved procurement from MSMEs, including women MSEs, startups, and young businesses, promoting entrepreneurship and inclusive growth. In Q1 of Financial Year 22-23, NTPC made ₹ 167 crore procurement from MSE vendors through GeM, supporting Atmanirbhar Bharat and creating new jobs. Considering this, NTPC was awarded the Third position in Highest Procurement by Number of Orders for Financial Year 2021-22.

Talent Development Awards

- NTPC selected as a 2022 ATD BEST Award winner, marking their fifth time receiving this prestigious global award in talent development.
- NTPC conferred as a Winner at the ATD BEST Awards 2023 for the sixth time, recognizing their enterprise-wide success in talent development.

Performance Snapshot

GRI 303-3 Water withdrawal by source

KPI	UOM	All Areas	Water Stressed Area
Surface water (Rivers,lakes, reservoir, Wetland)			
- freshwater (≤ 1,000 mg/l Total Dissolved Solids)	Lakh KL	54782.58	24895.08
- other water (> 1,000 mg/l Total Dissolved Solids)	Lakh KL	0.00	0.00
Collected Rain water (Artifical reservoir))			
- freshwater (≤ 1,000 mg/l Total Dissolved Solids)	Lakh KL	41.01	0.69
- other water (> 1,000 mg/l Total Dissolved Solids)	Lakh KL	0.00	0.00
Ground water			
- freshwater (≤ 1,000 mg/l Total Dissolved Solids)	Lakh KL	0.00	0.00
- other water (> 1,000 mg/l Total Dissolved Solids)	Lakh KL	0.00	0.00
Water from thirdparty			
- freshwater (≤ 1,000 mg/l Total Dissolved Solids)	Lakh KL	5.51	2.41
- other water (> 1,000 mg/l Total Dissolved Solids)	Lakh KL	0.00	0.00
Withdrawal from non scarce source:			
Sea water (used as is and dissalated)	Lakh KL	0.00	0.00
- freshwater (≤ 1,000 mg/l Total Dissolved Solids)	Lakh KL	0.00	0.00
- other water (> 1,000 mg/l Total Dissolved Solids)	Lakh KL	1791.02	0.00
Total Water Withdrawal	**Lakh KL**	**56620.13**	**24898.18**

GRI 303-4 Water Discharge

KPI	UOM	All Areas
Water Discharge by Destination		
Total Surface water (wetlands, lakes, rivers)	Lakh KL	44108.02
Groundwater	Lakh KL	0.00
Third party water	Lakh KL	0
Seawater	Lakh KL	1173.42
Water Discharge by Type		
Discharge of water used for once through cooling system	Lakh KL	45190.01
Other surface water discharge	Lakh KL	91.44
Total Water Discharge	**Lakh KL**	**45281.44**

GRI 303-5 Water Consumption

KPI	UOM	All Areas
Water Consumptions		
Natural Fresh Surface water	Lakh KL	10683.59
Sea water	Lakh KL	617.60
Fresh Water from Alternate Sources (Rain Water, Desalination)	Lakh KL	54.27
Total Water Consumption	**Lakh KL**	**11355.46**

GRI 303-4 Water Requirement Reduction as per NTPC's 3R

KPI	UOM	All Areas
Rain Water		
Surface water storage	Lakh KL	41.01
Ground water Recharge	Lakh KL	4.76
Waste Water Reuse & Recycling		
Waste Water Generated	Lakh KL	3542.33
Waste Water Reused (No Treatment)	Lakh KL	2731.40
Waste Water Treated		
Primary treatment	Lakh KL	0.76
Secondary treatment	Lakh KL	808.27
Tertiary treatment	Lakh KL	1.89
Waste Water Recycled		
Primary treatment	Lakh KL	0.63
Secondary treatment	Lakh KL	716.97
Tertiary treatment	Lakh KL	1.89
Waste Water (Treated) Discharged	**Lakh KL**	**91.44**
Percentage of recycled and reused water	**%**	**97.42**

GRI 301-1 Material (Non-Energy) used

Input Materials	Chlorine	Ammonia	Alum	HCl	H2SO4	Lube OIL	Transformer Oil
UOM	MT	MT	MT	MT	MT	MT	MT
Consumption	**4843.79**	**1320.23**	**28978.90**	**32905.49**	**34174.51**	**1169.10**	**355.23**

GRI 302-1 Material & Energy consumption inside of the organization

		FY 2020-21	FY 2021-22	FY 2022-23
Coal	MMT	195.39	226.54	250.20
	Kcal/Kg	3487.57	3487.62	3522.76
	TJ	2851164.93	3305688.84	3687815.61
Natural Gas	MMSCM	2603.66	2029.40	1386.95
	Kcal/SCM	9329.26	9320.97	9279.31
	TJ	101630.26	79144.42	53847.76
Naptha	MT	18279.54	8923.00	16355.58
	Kcal/Kg	11278.11	11353.00	11361.41
	TJ	862.57	423.85	777.48
LDO	KL	103297.55	139853.77	144360.29
	Kcal/KL	9588.00	9384.69	8870.84
	TJ	4.14	5.49	5.36

		FY 2020-21	FY 2021-22	FY 2022-23
HFO	KL	47561.65	49821.36	38087.07
	Kcal/KL	9893.18	9761.40	9249.86
	TJ	1.97	2.03	1.47
HSD	KL	284.69	18177.57	28835.93
	Kcal/KL	8754.50	9054.00	9033.86
	TJ	0.01	0.69	1.09
Biomass	MT	24600.00	40386.00	20034.00
	Kcal/Kg	2943.00	2943.00	2943.00
	TJ	302.91	497.29	246.69

GRI 302-1 Auxilary Power Consumption

Type	UOM	FY 2021-22	FY 2022-23
Coal Stations	MU	22797.14	25114.09
	%	6.78	6.68
Gas Stations	MU	285.71	187.11
	%	3.32	3.61
Hydro	MU	76.54	71.48
	%	0.63	0.56
Small Hydro	MU	1.12	2.13
	%	1.39	1.87
Solar	MU	42.72	81.12
	%	2.01	1.81
Wind	MU	3.42	2.75
	%	1.01	0.85
Total	**MU**	**23206.65**	**25458.68**
	%	**6.46**	**6.38**

GRI 302-4 Reduction of energy consumption

Name of Indicator	Unit	FY 2020-21	FY 2021-22	FY 2022-23
Electrical Energy	MU	132.95	135.55	139.61
Heat Energy (Eq. MT of coal)	MT	22995	26152	23022
Heat Energy (Eq. MCM of Gas)	MCM	0.087	0	0
Total Energy Saved	TJ	1643.3	1693.5	1735.5

1 Hazardous Waste

Type of Waste (MT)	GRI 306-3	GRI 306-4			GRI 306-5		
	Waste Generated	Waste diverted from disposal			Waste diverted to disposal		
	Total	Re-used	Recycled	Other Recovery Options	Incineration	Landfilling	Other Disposal Option
PCB	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Spent Resins	80.12	0.00	0.00	0.00	13.42	0.00	0.00
Used Oil	1783.84	0.00	1326.59	0.00	1.27	0.00	11.88
Discarded Containers	567.91	340.30	311.45	2.10	0.00	0.00	1.90
Insulation Waste	2204.98	0.00	0.00	0.00	0.00	1725.04	0.00
FO Sludge	195.39	0.00	65.36	0.00	25.15	0.00	0.00
Total Hazardous Waste Generation	**4832.2435**	**340.30**	**1703.3995**	**2.10**	**39.84**	**1725.04**	**13.775**

2 Non-Hazardous Waste

Type of Waste (MT)	GRI 306-3	GRI 306-4			GRI 306-5		
	Waste Generated	Waste diverted from disposal			Waste diverted to disposal		
	Total	Re-used	Recycled	Other Recovery Options	Incineration	Landfilling	Other Disposal Option
Ferrous	31550.01	39.90	33191.39	0.00	0.00	0.00	0.00
Non-Ferrous	3546.28	0.00	3498.36	6.28	0.00	0.00	2.55
Municipal Solid Waste Biodegradable	4952.24	198.94	2486.80	196.46	53.30	1495.27	66.03
Municipal Solid Waste Non-Biodegradable	1981.30	0.00	336.01	169.40	210.86	1111.62	116.39
Plastic Waste	353.43	0.00	53.15	0.00	164.96	0.00	0.00
Total Non-Hazardous Waste Generation	**42383.26**	**238.84**	**39565.71**	**372.14**	**429.12**	**2606.89**	**184.97**

3 Other Waste

Type of Waste (MT)	GRI 306-3	GRI 306-4			GRI 306-5		
	Waste Generated	Waste diverted from disposal			Waste diverted to disposal		
	Total	Re-used	Recycled	Other Recovery Options	Incineration	Landfilling	Other Disposal Option
BMW	138.44	0.00	0.00	0.09	129.66	7.80	2.06
E-Waste	84.88	0.00	79.56	3.58	0.00	0.00	2.92
Batteries	887.28	0.00	106.51	137.04	0.00	0.00	0.00
Construction and Demolition Waste	61052.50	12852.50	0.00	0.00	0.00	47896.50	0.00
Radioactive Waste	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Other Waste Generation	**62163.1**	**12852.50**	**186.07**	**140.71**	**129.66**	**47904.3**	**4.98**

GRI 305-7, 305-6 Air (Non-GHG) Emission

Name of Indicator	Unit	FY 2020-21	FY 2021-22	FY 2022-23
SOx	MT	1552254.00	1621349.00	1767481.60
NOx	MT	602832.00	640419.00	657376.38
Particulate Matter PM	MT	88431.00	91115.00	89294.96
ODS	kgCFC-11eq	23500.00	403.00	1484.37

GHG Mitigation

Mitigation Measures	Unit	FY 2020-21	FY 2021-22	FY 2022-23
Carbon Sink Created	mil t	0.72	0.74	0.76
Avoided emissions	mil t	10.45	11.57	14.06

GRI 305-1 GHG Emissions – Scope 1

Direct greenhouse gas emissions (Scope 1)	Unit	FY 2020-21	FY 2021-22	FY 2022-23
$C0_2$ emissions from the electricity production and heat	mil t	263.90	304.08	336.46
Emissions from coal electricity gen.	mil t	258.82	300.10	333.69
Emissions from gas electricity gen.	mil t	5.08	3.98	2.78
Other $C0_{2eq}$ emissions due to electricity production and other activities	mil teq	0.00	0.06	0.02
of which: emissions from losses of SF6 from energy production	toneq	0.00	57360.00	20250.47
of which: emissions from losses of HFCs from energy distribution	toneq	0.00	1048.80	210.64
Total direct emissions (Scope 1)	mil teq	263.90	304.14	336.48
SCOPE 1 Emissions (after adjustment)	mil teq	263.18	303.40	335.72

GRI 305-2 GHG Emissions – Scope 2

	Unit	FY 2020-21	FY 2021-22	FY 2022-23
Scope 2 Emission	Tonnes CO2	15221.86	16400.34	69933.23

GRI 305-3 GHG Emissions – Scope 3

Type	FY 2020-21	%	FY 2021-22	%	FY 2022-23	%
	(Tonnes CO_2)		(Tonnes CO_2)		(Tonnes CO_2)	
Employee Commuting	12309.00	2.15%	12034.30	1.08%	17421.13	0.40%
Business Travels	26918.79	4.69%	2103.62	0.19%	4202.26	0.10%
Fuel Transportation	534176.00	93.16%	1099741.00	98.73%	4342929.00	99.50%
Total	**573403.79**		**1113878.92**		**4364552.39**	

GRI 405-1 Diversity of governance bodies and employees

Employee Profile (NTPC Only)

		Age Group						Total		Vulnerable Group			
		<30		30-50		>50				Specially Abled Employees		Reserved category Employees	
	Employee Categories	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Permanent employee	Board of Directors and KMP*	-	-	-	-	5	-	5	-	-	-	-	-
	Top/ Senior management	-	-	-	-	43	1	43	1	-	-	3	-
	Middle management	-	-	2008	100	1667	82	3675	182	33	-	1278	50
	Lower/Junior management	698	77	4468	459	1445	61	6611	597	151	13	3493	277
Permanent workers	Workmen	608	50	1740	133	2602	251	4950	434	260	39	2616	183
	Total NTPC Group Employees	**1306**	**127**	**8216**	**692**	**5762**	**395**	**15284**	**1214**	**444**	**52**	**7390**	**510**
Other than permanent employee	Trainees	911	75	97	5	-	-	1008	80	8	-	636	50
	Employees	72	41	113	5	12	-	197	46	1	-	81	19
Other than permanent workers	Contractual Workers	31395	280	61047	1184	10173	223	102615	1687	-	-	-	-

*Excludes Govt. Nominee & Independent Directors

Employee Profile (NTPC Group)

		Age Group						Total		Vulnerable Group			
		<30		30-50		>50				Specially Abled Employees		Reserved category Employees	
	Employee Categories	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Permanent employee	Board of Directors and KMP*	-	-	-	-	5	-	5	-	-	-	-	-
	Top/ Senior management	-	-	1	1	54	2	55	3	-	-	5	-
	Middle management	-	-	2129	106	2024	99	4153	205	34	1	1420	67
	Lower/Junior management	772	91	5076	520	2013	104	7861	715	171	16	3850	324
Permanent workers	Workmen	673	55	2265	240	3611	411	6549	706	296	48	3392	368
	Total NTPC Group Employees	**1445**	**146**	**9471**	**867**	**7707**	**616**	**18623**	**1629**	**501**	**65**	**8667**	**759**
Other than permanent employee	Trainees	911	75	97	5	-	-	1008	80	8	-	636	50
	Employees	154	51	175	12	13	-	342	63	1	-	150	23
Other than permanent workers	Contractual Workers	31403	286	69881	1389	10173	223	111457	1898	-	-	-	-

*Excludes Govt. Nominee & Independent Directors

GRI 401-1 New employee hires and employee turnover

Employees Hired during Financial Year 2022-23

Employee Categories	Age Group						Total	
	<30		30-50		>50		Male	Female
	Male	Female	Male	Female	Male	Female		
Board of Directors and Key Managerial Personnel	-	-	-	-	1	-	1	-
Top/ Senior management	-	-	-	-	-	-	-	-
Middle management	-	-	-	-	-	-	-	-
Lower/Junior management	57	9	60	15	-	-	117	24
Workmen	53	7	8	6	21	-	82	13
Trainees	544	67	40	4	0	-	584	71
Other than Permanent	45	21	78	6	11	-	134	27

Employees Separated during Financial Year 2022-23

Employee Categories	Age Group						Total	
	<30		30-50		>50		Male	Female
	Male	Female	Male	Female	Male	Female		
Board of Directors and Key Managerial Personnel	-	-	-	-	2	-	2	-
Top/ Senior management	-	-	-	-	36	-	36	-
Middle management	-	-	5	1	370	17	375	18
Lower/Junior management	41	8	47	10	394	22	482	40
Workmen	4	1	7	1	563	43	574	45
Trainees	122	16	17	-	-	-	139	16
Other than Permanent Employees	17	14	17	3	3	-	37	17

Turnover Rates for Employees Separated during Financial Year 2022-23

Indicator	Sub-Indicator	Male	Female	Total
Total employee turnover rate %	Permanent employee	7.41%	6.28%	7.33%
	Permanent workers	8.76%	6.37%	8.53%
Voluntary employee turnover rate %	Permanent employee	7.36%	6.28%	7.29%
	Permanent workers	8.72%	6.37%	8.49%
Involuntary employee turnover rate %	Permanent employee	0.05%	0.00%	0.05%
	Permanent workers	0.05%	0.00%	0.04%

GRI 401-3 Parental leave related data for Financial Year 2022-23

S.No	Category	Unit	Permanent Employees		Permanent Workers	
			Male	Female	Male	Female
1	Employees entitled for parental leave	No.	12074	923	6549	706
2	Employees that took parental leave	No.	504	229	197	61
3	Employees that returned to work in the reporting period after parental leave ended	No.	504	229	197	61
4	No. of employees who returned to work after parental leave who were still employed 12 months after return	No.	504	229	197	61
5	Rate of Return to work that took parental leave	%	100	100	100	100
6	Retention rates of employees that took parental leave	%	100	100	100	100

GRI 405-2 Remuneration

Employee Categories	Ratio of basic salary of women to men	Ratio of total remuneration of women to men
Board of Directors and Key Managerial Personnel	1	1
Top/ Senior management	1	1
Middle management	1	1
Lower/Junior management	1	1
Workmen	1	1
Trainees	1	1
Other than Permanent Employees	1	1

GRI 404-1 Average hours of training per year per employee

Employees Training for the year 2022-23

BRSR Categorisation	Employee Categories	No. of employee trained		Man hours		Avg man hour per employee	
		Male	Female	Male	Female	Male	Female
Permanent employee	Board of Directors and KMP	0	0	0	0	0	0
	Top/ Senior management	51	1	3762	42	87	42
	Middle management	3553	175	232008	11322	63	62
	Lower/Junior management	6200	527	386334	32028	58	54
Permanent workers	Workmen	4202	330	84966	7818	17	18
Other than permanent employee	Trainees	767	69	119310	9798	118	122
	Employees	106	46	4590	1536	23	33

Training on Human Rights

BRSR Categorisation	Employee Categories	Number of employees covered	Man-hours	% covered
Permanent employee	Board of Directors and KMP	-	-	0.00%
	Top/ Senior management	-	-	0.00%
	Middle management	109	690	2.83%
	Lower/Junior management	174	1158	2.41%
Permanent workers	Workmen	298	2616	5.53%
Other than permanent employee	Trainees	35	234	3.22%
	Employees	5	30	2.06%

Program for upgrading employee skills and transition assistance program

BRSR Categorisation	Employee Categories	No of employees who attended skill development trainings	Total Man hours	Average hours of training
Permanent employee	Board of Directors and KMP	1	18.00	18
	Top/ Senior management	51	3696	72
	Middle management	3671	215304	59
	Lower/Junior management	6647	391554	59
Permanent workers	Workmen	4333	87690	20
Other than permanent employee	Trainees	835	128550	154
	Fix term employees	151	5952	39

Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings

Program name	No. of employee trained	Man hours	Avg Man hour per employee
Advance Management Program	161	11328	70.36
Enhancing Managerial competence	137	10584	77.26
Foundation Course in General Management	278	20658	74.31
Health Care and Ergonomics	186	1128	6.06
Health Care and Ergomics	1213	8298	6.84
Healthy Mind in a Healthy Body	1170	8736	7.47

Safety Training Modules

	Induction
1	Caught in caught by
2	Heavy Vehicle Safety
3	Work at Height
4	Electrical Safety
5	Confined Space
6	Struck by
7	Hand tools
8	Power tools

	Induction
9	Fire Prevention
10	Hot work
11	Work on or near water
12	Work Permit System Module
13	PPE
14	Manual Handling
15	Excavation Safety
16	Hazardous Substances

	Induction
17	Ergonomics
18	General Safety and Hygiene for Office
19	Demolition
20	Slips and Trips
21A	Material Handling
21B	Material Handling 2
22	CHP Housekeeping Workers of General Safety

GRI 403-1 Occupational health and safety management system

Safety Training for Financial Year 2022-23

Type	No. of Prog.			No. of persons trained			Man hours			Avg man hour per employee		
	FY 2020-21	FY 2021-22	FY 2022-23	FY 2020-21	FY 2021-22	FY 2022-23	FY 2020-21	FY 2021-22	FY 2022-23	FY 2020-21	FY 2021-22	FY 2022-23
Employees	683	1603	2484	12190	11789	16224	91173.8	68769	134631	7.48	5.83	8.30
Contract Workers	7153	9701	29452	173971	214097	616348	874970.8	1297459.25	2465392	5.03	6.06	4.00
Total	7836	11304	31936	186161	225886	632572	966144.6	1366228.25	2600023.00	5.19	6.05	4.11

Work-related injuries

Type	No. of Persons employed			Man hours			Incidents					
							First-Aid			Beyond First-Aid		
	FY 2020-21	FY 2021-22	FY 2022-23	FY 2020-21	FY 2021-22	FY 2022-23	FY 2020-21	FY 2021-22	FY 2022-23	FY 2020-21	FY 2021-22	FY 2022-23
Employees	18552	18817	17995	46713616	47423470	42439035	761	19	326	37	3	5
Contract Workers	96996	106662	89278	241937544	264912380	222837888	0	400	0	0	35	15
Total	115548	125479	107273	288651160	312335850	265276923	761	419	326	37	38	20

Type	Reportable Incidents						Total Man Days Lost		
	Fatal			Non-Fatal					
	FY 2020-21	FY 2021-22	FY 2022-23	FY 2020-21	FY 2021-22	FY 2022-23	FY 2020-21	FY 2021-22	FY 2022-23
Employees	1	1	1	4	3	5	6120	6147	9183
Contract Workers	6	4	4	21	18	11	37335	36962	28718
Total	7	5	5	25	21	16	43455	43109	37901

Type	Fatality Frequency Rate			Lost Time Freqency Rate (LTIFR)			Incident Rate (IR)			Recordable Injury Rate		
	FY 2020-21	FY 2021-22	FY 2022-23	FY 2020-21	FY 2021-22	FY 2022-23	FY 2020-21	FY 2021-22	FY 2022-23	FY 2020-21	FY 2021-22	FY 2022-23
Employees	0.021	0.021	0.024	0.11	0.084	0.141	0.27	0.213	0.333	0.90	0.15	0.26
Contract Workers	0.025	0.015	0.018	0.11	0.083	0.067	0.28	0.206	0.168	0.11	0.22	0.13
Total	0.024	0.016	0.019	0.11	0.083	0.079	0.28	0.207	0.196	0.24	0.20	0.15

Type	No. of High Consequences Injuries			Rate of High Consequences Injuries			No. of Near Misses		
	FY 2020-21	FY 2021-22	FY 2022-23	FY 2020-21	FY 2021-22	FY 2022-23	FY 2020-21	FY 2021-22	FY 2022-23
Employees	0	0	0	0.00	0.00	0.00	1397	2129	16225
Contract Workers	0	1	1	0.00	0.00	0.004			
Total	0	1	1	0.00	0.00	0.004	1397	2129	16225

Work-related ill health

Type	No.of cases of recordable work-related ill health			Fatalities due to ill health			Occupational Disease Rate		
	FY 2020-21	FY 2021-22	FY 2022-23	FY 2020-21	FY 2021-22	FY 2022-23	FY 2020-21	FY 2021-22	FY 2022-23
Employees	0	0	0	0	0	0	0	0	0
Contract Workers	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0

Enforcement of Safety aspects in Contracts and Procurement Aspects

The aforesaid minimum percentage shall be specified by the Package Coordinator (C&M executive handling the Contract Package) based on the estimated value (without taxes and duties) of package as under:

Packages having estimated value (excluding taxes and duties)	Minimum percentages to be specified for Safety Aspects/Compliance to safety rules
Supply cum Erection/Supply cum Erection cum Civil Packages	
More than ₹ 3,000 crore	1.00%
More than ₹ 1,000 crore but less than or equal to ₹ 300 crore	1.50%
More than ₹ 500 crore but less than or equal to ₹ 1,000 crore	2.00%
More than ₹ 100 crore but less than or equal to ₹ 500 crore	2.50%
Less than or equal to ₹ 100 crore	5.00%
Civil Packages/Services Contracts	
More than ₹ 100 crore but less than or equal to ₹ 500 crore	1%
Less than or equal to ₹ 100 crore	2%

GRI 406-1 Incidents of discrimination and corrective actions taken

GRI 408-1 Operations and suppliers at significant risk for incidents of child labor

GRI 409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labor

S. No.	No. of cases reported /pending	Unit	FY 2022-23	
			Cases reported	Cases Pending
			No. of complaints filed during the FY 22-23	No. of complaints pending as on 31-03-2023
1	Bribery & Corruption	No.	0	0
2	Anti- competitive practice	No.	0	0
3	Sexual Harassment	No.	6	1
4	Child Labour	No.	0	0
5	Forced Labour/Involuntary Labour	No.	0	0
6	Wages	No.	0	0
7	Discrimination at workplace	No.	0	0
8	Other human rights related issues	No.	0	0

GRI 205 Number of bribery/ corruption cases

S. No.	Bribery & Corruption cases related to	Unit	FY 2022-23			
			Cases reported	Cases Finalised after investigation	confirmed incidents of corruption.	No. of people against which disciplinary Action was Taken by any law enforcement agency
1	Employees- Executives	No.	26	11	Nil	Nil
2	Employees-Non Executives	No.	10	5	Nil	Nil
3	Suppliers/ Vendors	No.	11	10	9	Nil

Task Force on Climate-Related Financial Disclosures (TCFD)

TCFD was established by the Financial Stability Board with the aim of developing a framework for companies to disclose information on their climate-related risks and opportunities. The task force is composed of representatives from financial institutions, businesses, and other relevant stakeholders, who work together to provide recommendations and guidance on climate-related disclosures.

NTPC recognizes that by following the TCFD recommendations, we can provide more transparent and consistent information to our investors, lenders, insurers, and other stakeholders about the climate-related risks and opportunities. TCFD will help enhance our climate-related disclosures and improve the management and reporting of climate related risks, while facilitating our investors towards informed decision-making and supports the transition to a more sustainable and low-carbon economy.

Governance

NTPC's has instituted governance systems and structures including the oversight of responsibilities with respect to climate change risks at multiple levels ranging from operations to Board of Directors:

- Oversight & Committees:
- Board of Directors
- Board level CSR & Sustainability Committee
- Corporate level Sustainability Steering Committee
- Dedicated Departments:
- Sustainability Department
- CenPEEP - Centre for Power Efficiency & Environmental Protection

Strategy

NTPC's has form its Brighter Plan 2032 strategy to integrate and improve the overall ESG parameters across its operation. In addition to this, we also undertake analysis of climate change impacts on NTPC's all business segments.

For more details, please refer following sections:

- Materiality Assessment at Page no. 26
- Natural Capital at Page no. 68-70
- Powering a Just Transition at Page no. 36-41
- Financial Capital at Page no. 45

Risk

NTPC's regularly assess the risk and impact over its operation and is cognizant of the Climate change and its associated physical and transitional risks.

The same has been included in company's overall risk management framework.

For more details, please refer following sections:

- Risk Management at Page no. 33

Metrics & Targets

NTPC's understands that by accurately and timely disclosing metrics and targets, we can help our investors and stakeholders in making informed decisions.

NTPC has been periodically reporting annually its absolute and specific carbon emissions through Annual and Sustainability Reports.

For more details, please refer following sections:

- Natural Capital at Page no. 69

World Economic Forum- Stakeholder Capitalism Matrix

People

Theme	Core Metric	Key performance Indicator	2023	2022	Reference in report
Dignity and Equality	Diversity and Inclusion	Ratio of women to total employees	8.15%	7.86 %	Performance Snapshot
	Pay Equality	Remuneration Equality	100 %	100 %	
	Wage Level	CEO Pay Ratio			Corporate Governance
	Risk for incidents of child, forced or compulsory labor	Supply Chain Labor Compliance Evaluation	100%	100%	Human Rights
Health and Wellbeing	Health and Safety	Fatal accidents	5	5	Human Capital
		Fatalities frequency rate	0.19	0.16	
		"Life changing injury"	1	1	
		Life changing injury frequency rate	0.004	0.003	
Skills for the future	Training Provided	Average hours of training per employee (hour/emp)	43	41	Performance Snapshot
		Employees Training costs (Crore ₹)	42.82	21	Talent Management

Planet

Theme	Core Metric	Key performance Indicator	2023	2022	Reference in report
Climate Change	Greenhouse Gas Emissions	Direct Green House Gas emissions - Scope 1 (MMT)	335.72	304.14	GHG Emissions
		Indirect Green House Gas Emission - Scope 2 - Purchased electricity from the Grid (Location Based) (MMT)	0.07	0.0164	
		Indirect Green House Gas Emission - Scope 2 - Purchased electricity from the Grid (Market Based) (MMT)			
		Indirect Green House Gas Emission - Scope 3 (MMT)	4.36	1.10	
	TCFD Implementation				TCFD
Nature Loss	Land Use and Ecological Sensitivity	Hectares Restored	20	17.71	Biodiversity conservation
Fresh Water Availability	Water Consumption and withdrawal in water stress area	Water withdrawal (Mn m^3)	2,489.81	3,376.50	Water

Theme	Core Metric	Key performance Indicator	2023	2022	Reference in report
		Water withdrawal in "Water stressed area"	44%	64%	
		Total water consumption (Mn m³)	1,135.54	997.36	
		Water Consumption in water stressed area	25%	47%	

People

Theme	Core Metric	Key performance Indicator	2023	2022	Reference in report
Employment and Wealth Generation	Absolute number and rate of employment	People Hired	1,053	943	Performance Snapshot
		Hiring rate	4.84%	4.50%	
		People Separated	1,781	1,704	
		Turnover	8.19%	8.20%	
	Economic Contribution	Direct Economic Value Generated and Distributed			Financial Capital
	Financial Investment Contribution	Total Investment (crore ₹)	35,204	35,719	Consolidated Financial Statement
		Purchase of own shares			
		Dividends paid	7,030.08	6,933.12	
Innovation in better products and services	Total R&D Expenses	Investment in research and Development (crore ₹)	283.45	222.48	Intellectual Capital
Community and Social Vitality	Total Tax Paid	Total tax paid (crore ₹)	4,763.43	4,061.92	Consolidated Financial Statement

Governance

Theme	Core Metric	Key performance Indicator	2023	2022	Reference in report
Governing Purpose	Setting Purpose				Management discussion and Analysis
Quality of Governing Body	Governance body composition	Women in BOD	1	1	Performance Snapshot
Stakeholder Engagement	Material Issues impacting stakeholders				Stakeholder Engagement and materiality analysis
Ethical Behavior	Anti-Corruption	Employees who received training about anti-corruption policies and procedures	2,581	764	Performance Snapshot
		Ascertained violations related to conflict of interest/corruption	47	52	Vigilance
	Protected Ethics advice and reporting mechanisms	Reports received related to Violation of the code of ethics	0	0	
Risk and Opportunity Oversight	Integrating risks and opportunity into business process				Risk Management

Directors' Report

Dear Members

Your Directors are pleased to present the 47th Integrated Annual Report prepared as per the IIRG framework and in accordance with GRI standards 2021 on the business and operation of your Company along with the Audited Standalone and Consolidated Financial Statements for the Financial Year ended 31st March 2023, and the Auditors' report along with the comments on the financial statements by the Comptroller and Auditor General (CAG) of India.

Your Company continued to achieve success in the ffinancial year 2022-23 driven by a strong commitment to value creation and the energy transition. Mentioned below are the brief highlights of your Company's outstanding performance, highlighting the notable accomplishments attained during the reporting year.

Major Highlights of your Company for the financial year 2022-23 are briefly mentioned here to give an overview of accomplishments on all fronts:

i. During the Financial Year 2022-23, the total income of your group Company stands at ₹ 177,977 crore as against ₹134,994 crore in previous year, resulting in an increase of 31.84%.

ii. During the Financial Year 2022-23, your Company achieved 110% of its capex target (133% at group level) and realized more than 100% of the billed amount, resulting in realization of ₹ 154,356 crore. In addition to this, your Company trade receivables were ₹ 15,964 crore (excluding unbilled revenue).

iii. During the Financial year, your Company registered a growth of 10.95% and 10.68 % for NTPC standalone and NTPC group respectively in power generation against 8.89% growth of all India generation.

iv. Your Company achieved the Plant Load Factor (PLF) of 75.9% for its coal power plant against the 64.21% of all India coal power plants.

v. Your group Company has successfully developed an operational RE capacity of 3.2 GW and the total RE capacity in the pipeline has exceeded 20GW. To further diversify its RE portfolio, your group is entering Hydrogen and Energy solution, and has already started work for developing Hydrogen Hub at Pudimadaka in Andhra Pradesh.

vi. During the Financial Year 2022-23, your Company has achieved coal production of 23.20 MMT from four mines i.e. Pakri-Barwadih, Dulanga, Talaipalli & Chatti-Bariatu with the y-o-y growth of 65% over Financial Year 2021-22. Coal dispatch also registered a growth of 48% in Financial Year 2022-23 over Financial Year 2021-22

vii. During the Financial Year 2022-23, your Company had received dividend income of ₹ 2,336 crore from your Subsidiaries and Joint Venture Companies as against ₹ 1,736 crore received during Financial Year 2021-22.

1. Financial Results (Standalone):

Particulars	2022-23	2021-22	2020-21	2019-20	2018-19
Revenue					
Revenue from operations	163,769.77	121,174.55	99,206.72	97,700.39	90,307.43
Other income	3,954.64	3,575.11	4,345.99	2,778.02	1,872.13
Total revenue	**167,724.41**	**124,749.66**	**103,552.71**	**100,478.41**	**92,179.56**
Expenses					
Fuel	96,851.50	66,570.07	52,849.64	54,241.82	52,493.74
Energy purchased for trading	3,656.26	3,450.22	3,031.25	2,776.44	2,713.68
Employee benefits expense	5,559.03	5,412.07	4,942.19	4,925.60	4,779.89
Other expenses	14,474.59	9,717.19	9,580.28	8,663.81	7,548.63
Profit before depreciation, finance cost and tax	**47,183.03**	**39,600.11**	**33,149.35**	**29,870.74**	**24,643.62**
Depreciation, amortization and impairment expense	13,136.71	12,058.24	10,411.80	8,622.85	7,254.36
Profit before finance cost and tax	34,046.32	27,541.87	22,737.55	21,247.89	17,389.26
Finance costs	9,979.23	8,216.54	7,459.03	6,781.97	4,716.74
Profit before exceptional items tax and regulatory deferral account balances	24,067.09	19,325.33	15,278.52	14,465.92	12,672.52
Exceptional Items (+) income/ (-) loss	-	-	(1,363.00)	-	-
Profit before tax	**24,067.09**	**19,325.33**	**13,915.52**	**14,465.92**	**12,672.52**
Tax expense	6,279.27	4,457.77	1,925.39	9,181.95	(2,918.71)
Profit for the year before regulatory deferral account balances	17,787.82	14,867.56	11,990.13	5,283.97	15,591.23
Net movement in regulatory deferral account balances (net of tax)	(591.09)	1,414.43	1,779.39	4,828.84	(3,841.34)
Profit for the year	**17,196.73**	**16,281.99**	**13,769.52**	**10,112.81**	**11,749.89**
Other comprehensive income/(expense) for the year (net of tax)	(75.70)	(87.65)	(68.19)	(327.22)	(201.87)
Total comprehensive income for the year	**17,121.03**	**16,194.34**	**13,701.33**	**9,785.59**	**11,548.02**
Dividend	7,030.08	6,933.12	5,531.06	2,968.37	4,922.55
Dividend tax	-	-	-	607.80	1,000.49
Retained profit	10,166.65	9,348.87	8,238.46	6,536.64	5,826.85
Assets					
Property, plant & equipment	196,441.71	195,084.07	163,892.12	156,273.02	125,290.68
Capital work-in-progress	61,743.88	73,519.11	75,343.60	73,066.76	90,808.89
Investment property	465.18	-	-	-	-
Intangible assets	454.17	486.47	556.74	538.28	329.94
Intangible assets under development	44.92	98.47	94.90	292.52	397.80
Total Fixed Assets (Net block)	259,149.86	269,188.12	239,887.36	230,170.58	216,827.31
Investments in Subsidiaries, JVs & Others (Non-current)	29,719.75	23,249.37	28,125.65	26,400.89	13,145.94
Other non-current financial assets	4,556.18	2,306.48	2,686.96	2,003.86	1,968.67
Other non-current assets	12,353.64	12,355.11	13,790.02	11,464.50	13,269.30
Current assets	64,525.34	51,200.39	47,543.21	48,504.86	42,133.74
Assets held for sale	120.52	18.09	-	-	-
Regulatory deferral account debit balances	11,961.97	12,822.88	11,143.72	9,122.76	3,406.00
Total Assets	**382,387.26**	**371,140.44**	**343,176.92**	**327,667.45**	**290,750.96**

Particulars	2022-23	2021-22	2020-21	2019-20	2018-19
Liabilities					
Borrowings					
Non-current borrowings	156,315.69	160,122.17	150,509.00	146,538.70	119,698.08
Current maturities of non-current borrowings	17,172.23	17,366.26	10,247.45	6,154.92	7,732.40
Total borrowings	**173,487.92**	**177,488.43**	**160,756.45**	**152,693.62**	**127,430.48**
Other Non-current liabilities	13,733.74	14,427.64	13,638.31	10,182.85	6,151.34
Current liabilities	70,831.08	65,949.72	58,049.71	54,704.16	55,354.00
Less: Current maturities of non-current borrowings	17,172.23	17,366.26	10,247.45	6,154.92	7,732.40
Net Current liabilities	53,658.85	48,583.46	47,802.26	48,549.24	47,621.60
Deferred Revenue	2,616.87	1,973.39	1,994.41	2,672.30	2,139.37
Regulatory deferral account credit balances	-	-	-	-	-
Net-worth					
Equity	9,696.67	9,696.67	9,696.67	9,894.56	9,894.56
Other Equity	129,193.21	118,970.85	109,288.82	103,674.88	97,513.61
Net worth	138,889.88	128,667.52	118,985.49	113,569.44	107,408.17
Net worth excluding Fly ash utilisation reserve fund, Corporate social responsibility (CSR) reserve & reserve for Equity instruments through OCI	138,069.76	127,982.41	118,306.11	113,031.54	106,780.48
Total Liabilities	**382,387.26**	**371,140.44**	**343,176.92**	**327,667.45**	**290,750.96**
Value added	59,314.62	48,446.40	42,965.45	37,586.93	33,570.80
Number of shares	9,696,666,134	9,696,666,134	9,696,666,134	9,894,557,280	9,894,557,280
Number of employees	15,159	15,786	16,798	17,398	18,359
Ratios					
Return on Net Worth (Profit for the year/Average Shareholder's Equity) (%)	12.85	13.15	11.84	9.15	11.23
Book value per Share (₹)	143.23	132.69	122.71	114.78	108.55
Earnings per share (₹)	17.73	16.79	13.99	10.22	11.88
Current ratio	0.91	0.78	0.82	0.89	0.76
Debt equity ratio {(Non-Current Borrowings+ Current Borrowings)/(Total Equity)}	1.33	1.43	1.46	1.46	1.33
Value added per employee (₹ crore)	3.91	3.07	2.56	2.16	1.83

Furthermore, the extract of your Company's annual return (as per the sub-section (3) of section-92 of the Companies Act, 2013) has also been uploaded on your Company's website and the same can be accessed through www.ntpc.co.in.

The detailed financial results can be found in the Financial Statement section of the report under the Standalone Financial Statement and Consolidated Financial Statement from page no. 306 to page no. 658.

2. Acquisition of Jhabua Power Ltd. through NCLT (National Company Law Tribunal) route

With the NCLT's approval of Resolution plan submitted by your Company on 6th July 2022, Jhabua Power Ltd (JPL) has become the first acquisition of your company through the NCLT (National Company Law Tribunal) Route. Your Company implemented the Resolution Plan on 5th September 2022, with a total payout of ₹ 925 crore. This payout consists of ₹ 325 crore towards Equity and ₹ 600 crore towards Non-Convertible Debentures (NCDs). Currently, JPL is a joint venture (50:50) between your Company and Secured Financial Creditors JPL operates one unit of 600 MW in Madhya Pradesh. JPL has been fulfilling its obligations by servicing the NCDs and has paid a dividend of ₹ 100 crore for the financial year 2022-23.

3. Dividend

Financial Year 2022-23 marked the 30th consecutive year of dividend payments for your Company, demonstrating its commitment to providing returns to shareholders. Your Company has paid the interim dividend of ₹ 4,121.08 crore (at the rate of ₹ 4.25/- per share) in February 2023. Furthermore, the Board of Directors has recommended to pay a final dividend* of ₹ 2,909 crore (at the rate of ₹ 3/- per share) for Financial Year 2022-23. If approved by shareholders, the proposed final dividend will translate to a total dividend of ₹ 7,030.08 crore (at the rate of ₹ 7.25/- per share) for Financial Year 2022-23.

The dividend pay-ratio during the last five year was as:

S. no	Financial Year	Dividend Pay-out Ratio
1	2022-23	40.88%
2	2021-22	42.13%
3	2020-21	43.31%
4	2019-20	30.82%
5	2018-19	46.18%

* Final dividend shall be paid after your approval at the ensuing AGM.

The dividend has been recommended based on your Company's Dividend Distribution Policy which has been developed in compliance with Regulation 43A of the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015 (SEBI Listing Regulations). Your Company Dividend policy was implemented to outline the factors and situations that the Board will consider when deciding on the distribution of dividends to shareholders and/ or the retention of profits earned by your Company. Your Company dividend distribution policy can be found at your company's website at https://www.ntpc.co.in/sites/default/files/inline-files/DividendDistributionPolicyofNTPCLimited.pdf

4. Performance Highlights

4.1 Operational Performance

With the installed capacity of 56.37 GW (72.25 GW including JVs), your Company achieved the record power generation of 344 BUs (399 BUs including JVs) during financial year 2022-23, which translates to a Y-o-Y growth of 10.95% (10.68% including JVs). Out of the above, the total generation by thermal station stands at 394 BUs (including JVs), while the contribution from Renewable was 4.90 BUs (including JVs).

The detailed summary of our performance highlights can be found in the Manufactured Capital section of the report at page no. 46.

4.2 Commercial Capacity

During the financial year 2022-23, your Company achieved significant growth by adding 3,292 MW of installed capacity, with a notable contribution of 1,352 MW from solar energy. This expansion boosted your Company's total generation capacity to an impressive 56.37 GW. Additionally, when considering the collective efforts of your Company and its joint ventures, the commercial capacity was further augmented by 3,952 MW resulting in an overall generation capacity of 72.25 GW.

The detailed summary of our commercial capacity can be found in the Manufactured Capital section of the report at page no. 46.

4.3 Billing and realization

Your Company has achieved 100% realization of the current bills raised for energy supplied during 2022-23 resulting in successfully meeting the Government of India's (GoI) target for realizing dues related to energy supplied in 2022-23. This milestone is attributable to the timely payments made by a substantial number of beneficiaries in line with the Late payment Surcharge Rules 2022.

Your Company has implemented a strong payment security mechanism through the utilization of Letters of Credit (LC) supported by the Tri-Partite Agreement (TPA). These TPAs, along with LCs, ensure payment security by involving the State Governments, the Government of India (GOI), and the Reserve Bank of India (RBI). According to the TPAs, if there is any default in payment by the State-owned DISCOMs, the outstanding amount can be directly recovered from the respective State Governments' accounts in collaboration with the RBI. The original TPAs were initially valid until October 2016. However, based on the decision of the Union Cabinet and with the agreement of the various States and the RBI, these TPAs have been extended for an additional period of 10 to 15 years. As on March 2023, 29 out of a total of 31 States/Union Territories have already signed the extension documents for the TPAs. The process of signing the TPAs extension by the remaining States is currently underway.

4.4 Power Trading in Power Exchange

In accordance with the CERC (IEGC) (5th Amendment) Regulations 2017, your Company has actively participated in both the Day Ahead Market (DAM) and the Real Time Market (RTM) to sell un-requisitioned surplus (URS) power through its trading arm, NTPC Vidyut Vyapar Nigam Limited, a subsidiary company. This regulatory provision enables power generation companies to sell URS power with the consent of beneficiary states. During the Financial year 2022-23, your Company has successfully sold more than 639 MUs of un-requisitioned surplus (URS) power on the power exchange platform. The profit generated from these transactions has been distributed to the beneficiaries as per the prevailing regulatory provisions.

4.5 Strengthening Customer Relationship

With Customer Focus as a fundamental core value embraced by ICOMIT (with C standing for customer focus), your Company prioritizes enhancing the experience of external customers, and has taken a number of initiatives for the same. Among these initiatives, Customer Relationship Management (CRM) and Customer Satisfaction Index (CSI) hold significant importance. Within the framework of CRM, your Company has been executing a range of well-structured activities with the primary goal of sharing its experiences and best practices with customers, capturing their feedback and expectations, and effectively addressing any concerns they may have.

The details of the various initiatives taken by your company for strengthening its customer relationships can be found in the Social Capital section of the report at page no. 94.

5. Capacity Expansion Program

Your Company has been actively seeking ways to enhance its capacity through diversified fuel mix with a goal to achieve 130GW of installed capacity by 2032 and has developed its capacity expansion strategy for the same. Out of the 130 GW, your Company aims to add 60 GW of renewable energy capacity by 2032, through RE sources constituting nearly 50% of overall power generation capacity. The objective is to accelerate the renewable energy growth of your Company and increase the green footprint across the country, offshore, and overseas.

In the Financial Year 2022-23, your Company had already installed 2,782 MW of capacity, including an impressive 1,352 MW of solar capacity. Additionally, there are ongoing projects that will contribute an additional 868 MW of capacity. On the group level, your Company has achieved an overall capacity addition of 3,952 MW during the financial year 2022-23. Moreover, the NTPC Green Energy limited (wholly owned Subsidiary of your Company) is currently focused on developing an impressive 14,300 MW of renewable energy portfolio expansion.

The details of the same can be found in the Manufactured Capital and Intellectual capital section of the report at page no. 46 and page no. 106.

5.1 Capacity addition Programme:

In addition to expanding its own capacities, your Company actively undertakes the development of power projects through its subsidiaries and joint ventures, both within India and internationally.

The information of Indian Subsidiaries and JV Companies along with details of partners of joint ventures engaged in power generation of your Company is given below:

Name of Company	JV Partner(s)	Details
NGEL (NTPC Green Energy Ltd.)	A wholly owned subsidiary of your Company	Your company incorporated a new RE SPV i.e., NTPC Green Energy Limited (NGEL) on 7th April, 2022 after obtaining requisite approvals from DIPAM & NITI Aayog. Under the Approved Asset Monetization Scheme for monetization of Renewable Energy (RE) Assets, the transfer of 15 RE assets of 2861 MW (earlier on NTPC's balance sheet) to NGEL through a Business Transfer Agreement and transfer of shares of NTPC in NTPC Renewable Energy Limited ("NREL") to NGEL through a Share Purchase Agreement have been completed on 28th February, 2023. NGEL is taking up large Solar, Wind and Hybrid Projects all over the country and developing Gigawatt scale Renewable Energy Parks and Projects in different states under UMREPP (Ultra Mega Renewable Energy Power Park) scheme of Government of India. In addition to this, Green Hydrogen based Mobility projects are also being pursued.

Name of Company	JV Partner(s)	Details
NEEPCO (North Eastern Electric Power Corporation Limited)	A wholly owned subsidiary of your Company	NEEPCO was 100 % GOI held Mini-ratna Category-I Central Public Sector Enterprise. Your Company executed a Share Purchase Agreement with GoI and acquired 100% equity stake in NEEPCO on 27th March, 2020. NEEPCO is primarily engaged in the business of generation and sale of electricity in the north-eastern region of India. NEEPCO operates 6 number of hydro, 3 number of gas and 1 solar power stations with a combined installed capacity of 2057 MW. NEEPCO has paid dividend of ₹ 365 crore for Financial Year 2022-23 to your Company.
BRBCL (Bhartiya Rail Bijlee Company Ltd.)	Ministry of Railways	A subsidiary of your company in joint venture with Ministry of Railways with equity contribution in the ratio of 74:26 respectively for setting up power project of 1000 MW (4X250 MW) capacity at Nabinagar in Bihar. All units are under commercial operation. Generation in Financial Year 2022-23 was 6928 MUs at PLF 79.09%, and Availability Factor was 88.88%. BRBCL has paid dividend of ₹ 222.00 crore Financial Year 2022-23 to your Company.
NSPCL (NTPC-SAIL Power Co. Ltd.)	Steel Authority of India Ltd. (SAIL)	A 50:50 Joint Venture Company between your company and SAIL, owns and operates a capacity of 1084 MW Captive Power Plants of SAIL at Durgapur (1X20+2 x 60 MW), Rourkela (1 X 250+2 x 60 MW) and Bhilai (2 X 250+2 x 30 + 1 x 14 MW). NSPCL generated 6446 MUs at 68.47% PLF and Availability Factor of 88.89 % in Financial Year 2022-23. NSPCL has paid dividend of ₹ 325 crore for Financial Year 2022-23 to your Company.
NTECL (NTPC Tamil Nadu Energy Co. Ltd.)	Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO)	A 50:50 JVC has commissioned (3x500 MW) coal-based power project at Vallur, Tamil Nadu. Generation of NTECL during Financial Year 2022-23 was 9738.74 MUs at 74.12% PLF and Availability factor was 96.97%. NTECL has paid dividend of ₹ 375.33 crore for Financial Year 2022-23 to your Company.
APCPL (Aravali Power Company Pvt. Ltd.)	Indraprastha Power Generation Company Ltd. (IPGCL) and Haryana Power Generation Corporation Ltd. (HPGCL).	This JVC is operating (3x500) MW coal-based Indira Gandhi Super Thermal Power Project. Your Company, Indraprastha Power Generation Company Limited and Haryana Power Generation Corporation Limited have contributed equity in the ratio of 50:25:25. Generation of APCPL during Financial Year 2022-23 was 8106.13 MUs at 61.69% PLF & Availability factor was 83.91%. APCPL has paid dividend of ₹ 475 crore for Financial Year 2022-23 to your Company.
MUNPL (Meja Urja Nigam Pvt. Ltd.)	Uttar Pradesh Rajya Vidyut Utpadan Nigam Ltd. (UPRVUNL)	A 50:50 JVC has commissioned 1320 MW (2x660 MW) coal-based power project in the state of Uttar Pradesh. Generation of MUNPL during Financial Year 2022-23 was 7366.83 MUs at 63.71% PLF and availability was 77.75%.
RGPPL (Ratnagiri Gas and Power Pvt. Ltd.)	MSEB Holding Co. Ltd.	RGPPL owns and operates Gas Based Power Project of 1967 MW (1x640 MW + 2x663.5 MW) in Ratnagiri district of Maharashtra. Your Company's shareholding in RGPPL is 86.49%. Generation of RGPPL during Financial Year 2022-23 was 315.94 MUs at 1.83 % PLF and availability was 65.47 %.

Name of Company	JV Partner(s)	Details
ASHVINI (Anushakti Vidhyut Nigam Ltd.)	Nuclear Power Corporation of India Ltd. (NPCIL)	Your Company is having a stake of 49% in the JVC. The JV company was formed to set up Nuclear Power Project as may be mutually discussed and agreed between the parties, subject to establishment of techno-commercial viability. Your Company has signed a Supplementary Joint Venture Agreement (SJVA-I) with Nuclear Power Corporation of India Ltd. (NPCIL) for development of Nuclear Power Projects on 1st May, 2023. Through this SJVA-1, ASHVINI will be re-structured from 49:51 to 50:50 partnership JVC and this aligns JVA document with Atomic Energy Act Amendment 2016 to develop Nuclear Power Projects in the country in a time bound manner. Promoters of ASHVINI are in discussion for transfer of two PHWR projects, Chutka Madhya Pradesh Atomic Power Project (2x700 MW) and Mahi Banswara Rajasthan Atomic Power Project (4x700 MW) from NPCIL to ASHVINI for accelerated setting up of the Nuclear Power Projects in the country.
PVUNL (Patratu Vidyut Utpadan Nigam Limited) पीवीयुएन PVUN	Jharkhand Bijli Vitran Nigam Limited (JBVNL)	PVUNL has been incorporated on 15th October, 2015 as a subsidiary of your Company with 74% stake in the Company and 26% of stake held by Jharkhand Bijli Vitaran Nigam Ltd. PVUNL plans to set up 4000 MW Coal-based power projects in two phases. PVUNL is currently executing its Phase-I expansion project of capacity 2400 MW (3 X 800 MW) along with Banhardih Captive Coal Mine.
THDC India Ltd टीएचडीसी इंडिया लिमिटेड THDC INDIA LIMITED	Government of Uttar Pradesh	THDC India Ltd was a joint venture of the Government of India (74.496%) and the Government of Uttar Pradesh (25.504%) and a Mini-ratna Category-I CPSE. Your Company executed Share Purchase Agreement with GoI and acquired 74.496% equity stake in THDCIL on 27th March, 2020. THDC is now a subsidiary Company of your Company. Presently, THDCIL has a portfolio of 10 projects (Hydro, Thermal, Wind & Solar), with a total capacity of 4516 MW comprising of 1587 MW operational plants and 2764 MW are under construction projects and balance under feasibility studies. Generation of THDC during Financial Year 2022-23 was 4935.45 MUs at 34.8% PLF for Hydro and 23.7% PLF for Wind plants. THDC has paid dividend of ₹ 408.19 crore for Financial Year 2022-23 to your Company.

5.2 Strategic Diversification

To enhance its competitive edge in the power generation industry, your Company has strategically diversified its portfolio, positioning itself as an integrated power major. This diversification encompasses the entire power value chain, achieved through backward and forward integration into various sectors.

Notably, your Company has expanded its operations into coal mining, power equipment manufacturing, power trading, distribution, waste management and technical consultancy, while the focus is also being made to explore future opportunities in the field of Biofuels, green hydrogen. By venturing into these areas, your Company has fortified its position as a comprehensive player in the power sector.

The details of the same can be found in the Manufactured Capital and Intellectual capital section of the report at page no. 46 and page no. 106.

The details of other JV companies incorporated in India which are engaged in business other than in power generation are as under:

Name of Company	JV Partner(s)	Activities Undertaken
NVVN (NTPC Vidyut Vyapar Nigam Limited) एनटीपीसी NTPC विद्युत व्यापार Vidyut Vyapar	A wholly owned subsidiary of your Company	NVVN is engaged in the business of power trading and has a trading License under Category I (highest category). It undertakes sale and purchase of electric power, to effectively utilize installed capacity and thus enable reduction in the cost of power. The Company has been nominated as Settlement Nodal Agency (SNA) for settlement of Grid operation related charges with neighboring countries, namely, Bangladesh, Bhutan, Nepal and Myanmar. In the Financial Year 2022-23, NVVN traded 31.407 billion units (BUs). Besides this NVVN is undertaking various other Business activities such as e-mobility segment including providing vehicles and related services in various vehicle segments, Roof top Solar, Waste to Wealth etc. NVVN has paid dividend of ₹ 19.5 crore to your Company for Financial Year 2022-23.

Name of Company	JV Partner(s)	Activities Undertaken
NESCL (NTPC Electric Supply Company Limited)	A wholly owned subsidiary of your Company	NESCL, a wholly owned subsidiary, transferred and vested all its operations, with effect from 1st April, 2015, to your Company. NESCL was incorporated for the distribution business and later started deposit and consultancy works. Although currently, NESCL does not have any business operations in retail distribution, the same will be taken-up at an appropriate time when the opportunity becomes visible. NESCL was exploring to participate in bidding process for Privatization of DISCOM of Union Territory (UT) of Puducherry either on its own or in consortium with EDF, where EDF will be a lead member of consortium with 51% share. However, DIPAM has not accorded clearance to NESCL proposal for participation in the bidding process either solely or in consortium.
NML (NTPC Mining Limited)	A wholly owned subsidiary of your Company	Your Company has incorporated a wholly owned subsidiary, NTPC Mining Limited (NML), on 29th August 2019 for handling its mining business. It is expected that undertaking of mining business by this subsidiary would result in timely development of mines with efficient handling of contracts by dedicated team. This will ultimately achieve substantial efficiency and increased competitiveness. Your Company Board of Directors in its meeting held on 29th July, 2023 had accorded approval for transfer of NTPC Coal Mines to NML.
NEWS (NTPC EDMC Waste Solutions Private Limited)	East Delhi Municipal Corporation (EDMC)	In order to develop & operate state of art/modern integrated waste management and energy generation facility using municipal solid waste, your company has incorporated a JV Company with East Delhi Municipal Corporation (EDMC) with shareholding in the ratio of 74:26 respectively. However, due to non-availability of clear land site and Power Purchase Agreement, Waste to energy project could not be taken forward. Your Company has taken up with EDMC to transfer EDMC's stake in NEWS to your Company or its subsidiary.
UPL (Utility Powertech Ltd.)	Reliance Infrastructure Limited	A 50:50 JVC takes up assignments of construction, erection and supervision of business in power sector and other sectors like O&M services, Residual Life Assessment Studies, non-conventional projects etc. UPL has paid dividend of ₹10 crore to your Company for Financial Year 2022-23.
NGSL (NTPC GE Power Services Private Limited)	GE Power India Limited (GEPIL)	NTPC GE Power System GmbH was a 50:50 Joint Venture between your Company and GE Power India Ltd. NGSL has diversified to take up new business assignments in area of FGD, Ash Utilization, O&M, WTE and RE.
EESL (Energy Efficiency Services Ltd.)	PGCIL, PFC and REC	Your Company is having a stake of 33.33% in this Company. The Company was formed for implementation of Energy Efficiency projects and to promote energy conservation and climate change. EESL is working on Energy Audit of Buildings, Energy Efficiency Consultancy work, Agricultural & Municipal Pump replacement with energy efficient pumps for various State Governments. Your Company is taking up different energy efficiency improvement related works like replacement of normal bulbs with LED bulbs, Street Light National Programme (SLNP), & other new business areas like Electric Vehicle (EV), Electric Charging Infrastructure, Smart meters etc. A JV company has been formed on 10th December 2009 under the name "Energy Efficiency Services Limited" with Power Finance Corporation Ltd., Powergrid Corporation of India Ltd. and Rural Electrification Corporation Ltd. to carry on and promote the business of energy efficiency and climate change, including manufacture and supply of energy efficiency services and products. The Company is taking up different energy efficiency improvement related works like replacement of bulbs, Street Light National Programme (SLNP), agricultural pumps and other new business areas like Electric Vehicle (EV), Electric Charging Infrastructure etc.
NHPTL (National High Power Test Laboratory Pvt. Ltd.)	NHPC, PGCIL, DVC and CPRI	Your Company is having a stake of 20.0% in NHPTL. The JV Company was formed to establish a research and test facility for the power sector such as "Online High-Power Test Laboratory" for short circuit testing facility for transformers HVTR test Laboratory set up at Bina, M.P. was declared Commercial w.e.f. 1st July, 2017. Due to financial condition of NHPTL, a revival plan was agreed amongst the promotors in a meeting held in Ministry of Power (MoP) on 15th September, 2022 whereby Powergrid will contribute additional equity in NHPTL to take 50% stake and balance stake shall be owned equally by other four promotors. Your Company Board on 11th March, 2023 has inter-alia accorded approval for implementation of revival plan of NHPTL with proposal to convert your Company loan of ₹18.4 crore to NHPTL into equity and amendments to the Joint Venture Agreement in line with approved revival plan.

Name of Company	JV Partner(s)	Activities Undertaken
NBPPL (NTPC-BHEL Power Projects Pvt. Limited)	Bharat Heavy Electricals Limited	A 50:50 JVC was incorporated for taking up activities of engineering, procurement, and construction (EPC) of power plants and manufacturing of Power sector and components. Due to financial health of NBPPL, meeting under the chairmanship of Hon'ble Minister of Power, on NBPPL issues held on 3rd October, 2022. It was decided that the process of winding up of NBPPL be taken up by both the promoters BHEL and your Company after the completion of balance work at Unchahar. Application filed by the WIPRO, one of the contractors of NBPPL, admitted by NCLT and order passed on 3rd January, 2023 to initiate the Corporate Insolvency Resolution Process (CIRP) against NBPPL. Appeal filed in NCLAT by NBPPL for stay and dismissal of the NCLT case, which was granted, and case has been dismissed.
BF-NTPC (BF-NTPC Energy Systems Limited)	Bharat Forge Limited	Your Company is having a stake of 49% in this Company. This Company was incorporated to manufacture castings, forgings, fittings, and high-pressure piping required for power projects and other industries. However, since the project could not take off, it has been decided to wind up BFNESL. Liquidator has been appointed and voluntary liquidation of the company is in progress.
TELK (Transformers and Electricals Kerala Limited)	Govt. of Kerala (GoK)	Your Company is having a stake of 44.60% in this Company. The Company deals in manufacturing and repair of Power Transformers. Your Company had accorded in-principle approval for withdrawal of your company from TELK. Accordingly, Government of Kerala (GoK) was informed. Your Company had sent proposal to GoK based on consultant valuation and discussing modalities for exit with GoK.
ICVPL (International Coal Ventures Private Limited)	CIL, SAIL, RINL, NMDC	Your Company is having a stake of 0.11% in JVC. ICVPL was formed under Ministry of Steel for acquisition of stake in coal mines/ blocks/ companies overseas for securing coking and thermal coal supplies. In view of lack of suitable commercially viable opportunities for thermal coal, your Company has decided to exit from ICVPL. Modalities for exit are being discussed with ICVPL and other Promoters.
HURL (Hindustan Urvarak & Rasayan Limited)	CIL, IOCL, Fertilizer Corporation of India Limited (FCIL) and Hindustan Fertilizer Corporation Limited (HFCL)	Your Company is having a stake of 29.67% in HURL. HURL was incorporated on 15th June, 2016 to establish and operate new fertilizer and chemicals complexes (urea, ammonia, and associated chemicals) at Gorakhpur, Sindri and Barauni and market its products. HURL Gorakhpur plant was commissioned during Financial Year 2022-23. HURL's Sindri and Barauni plants have also been commissioned during 1st quarter of Financial Year 2023-24. During the financial Year, 2022-23 HURL has produced 7,29,965 MT of Ammonia and 12,13,577 MT of Urea. Your Company is considering monetizing this asset since fertilizer is not the core business area of your Company.
CNUPL (CIL NTPC Urja Private Limited	Coal India Ltd. (CIL)	A 50:50 JVC was incorporated on 27th April, 2010 between your company and CIL to undertake the development of Brahmini and Chichro-Patsimal coal mines. In June'2011, Government of India (GoI) had de-allocated these coal blocks. CNUPL is exploring new business areas. CNUPL had signed MoU with Northern Coalfields Limited (NCL) to support as Project Coordinator for development of 50 MW Solar PV Power Project at NCL Nigahi coal mine in M.P.

5.3 Asset Monetization

As part of the National Monetization Pipeline (NMP) initiative, your Company has been assigned a monetization target of ₹ 15,000 crore, to be accomplished in installments spanning from Financial Year 2021-22 to Financial Year 2024-25. In line with this objective, your Company has put forth a proposal for the monetization of its identified Renewable Energy (RE) portfolio.

a) Monetization of RE Assets:

For better marketability, your company has incorporated NTPC Green Energy Ltd. ("NGEL") as a wholly owned subsidiary of your company for consolidation of the identified RE portfolio in which RE assets of your Company were transferred to NGEL through a Business Transfer Agreement and shares of your Company in NREL were transferred to NGEL through a share purchase agreement on 28th February 2023.

On 17th March, 2023, the CCEA (Cabinet Committee on Economic Affairs) granted an exemption to your Company from the Maharatna Guidelines, allowing it to make investments in NGEL. Likewise, NGEL was exempted from the guidelines for making investments in each JV (Joint Venture) or Subsidiary, up to ₹ 7,500 crore.

As part of this restructuring, 15 RE assets with a capacity of 2,861 MW were separated from your Company's balance sheet and transferred to NGEL. NGEL repaid the outstanding liabilities of these assets to your Company, amounting to ₹ 5,000 crore. With the transfer of these assets, your Company achieved its asset monetization target for Financial Year 2022-23 amounted to ₹ 5,000 crore.

The plans to bring in a strategic/financial investor for NGEL have been abandoned. Instead, the possibility of conducting an Initial Public Offering (IPO) for NGEL will be considered in the future.

b) Monetization of NTPC's Coal Mines Asset:

Your Company coal mine developed under Mine Developer and Operator (MDO) route and awarded to MDO for operation and development of coal Mines have been considered for Asset Monetization under the ambit of National Monetization Pipeline. Hence, the MDO contracts awarded for your Company mines in Financial Year 2021-22 and Financial Year 2022-23 of ₹ 2,946 crore i.e., the award of MDO contract of Chatti Bariatu and Kerandari mines is also to be considered under the total monetization target of your Company.

5.4 New Business Areas:

In pursuit of creating value for its stakeholders, your Company continuously explores new business avenues. Your Company has undertaken various initiatives to venture into future energy products, aligning with its goal of becoming an integrated energy company. These initiatives signify your Company's commitment to adapt and expand its presence in evolving energy sectors.

During the Financial Year 2022-23, your Company has identified and explore several opportunities in the field of manufacturing, biofuels, Round the Clock Renewable Energy (RE-RTC), green hydrogen amongst others. Your company is also in process of collaborating with multiple state governments and agencies in the field of Renewable energy and Energy storage systems.

In addition to this, your Company is also working towards developing a holistic Innovation and Start-Up Ecosystem, to look for innovative and out of the box solutions to its existing problems.

The details of these initiatives can be found in the Manufactured Capital and Social capital section of the report at page no. 46 and page no. 94.

6. Global Initiatives

6.1 Bangladesh-India Friendship Power Company Private Limited (BIFPCL), Bangadesh:

You Company has formed a 50:50 JV with the Bangladesh Power Development Board (BPDB) and is implementing a (2x660) MW Maitree Super Thermal Power Project at Khulna in Bangladesh. The Unit#1 of which was declared commissioned in December 2022.

6.2 Trincomalee Power Company Limited (TPCL), Sri Lanka:

Your Company through its JV "Trincomalee Power Company Limited (TPCL)", is in the process of developing a 50 MW solar PV power project (extendable to 100 MW) at Sampur, Trincomalee.

Other Opportunities Abroad:

- Your Company has signed an MoU with MASEN Morocco in 2022 with the aim collaboration for international business. Through this route, your company intends to have more effective presence in respective focus regions and be able to contribute further in power sector development.
- Your Company has been working on multiple consultancy assignments, secured through competitive bidding, in Myanmar, Mauritius, Eswatini, Zambia, etc. The assignments in Myanmar and Mauritius has successfully completed and other assignments are under progress. Your Company has also secured assignment from International Solar Alliance for providing training to power sector officials from different countries.
- Your Company has been appointed as PMC for ISA Solar rooftop Pilot project of 100 kWp in the Ministry of Water and Energy, Ethiopia under ISA Program 06 and Solar Rooftop Pilot Project for 100kWp in Sao Tome & Principle under ISA program 04 in March'23
- A total of 24 RFQs/ RFPs, and 36 EOIs have been submitted for power sector opportunities overseas in the financial year 2022-23. Your Company has won 03 assignments through competitive bidding and many others are under evaluation by tendering authority.

Further your Company is associated as a corporate partner with International Solar Alliance (ISA) and has been awarded the following Project Management Consultancy (PMC) jobs abroad:

- ISA Solar Park PMC assignment: Appointed as PMC for implementation of a 285 MW solar project in Togo, 500 MW in Mali, 100 MW in Malawi, 50 MW in Niger, 1150 MW in Cuba, 500 MW in Paraguay, 410 MW in Ethiopia (including 10 MW floating solar), 400 MW in Zambia, 100 MW in Nicaragua, 1000 MW in DR Congo, 2000 MW in Venezuela and 60 MW in Guinea Bissau

Other consultancy assignments secured through competitive bidding/negotiated route:

- Organizational and Generation Improvement for Eswatini Electric Corporation.
- Feasibility study for Solar PV project in Zambia.
- Assignment from International Solar Alliance for providing training to power sector officials from different countries.

Your Company has also been registered as an overseas company in Kenya and is operating representative office in Togo in Africa through local representative.

Your Company is also exploring business opportunities in the areas of power generation, PMC, O&M contracting, R&M of power plants, capability building etc. in the regions such as Middle East, South East Asia, CIS regions, Latin America and Africa.

7. Consultancy Services

The consultancy wing of your Company plays a vital role in supporting the Indian Power Industry by leveraging its extensive experience and expertise. It offers a comprehensive range of consultancy services that cover the entire spectrum of power station operations, from the initial concept phase to commissioning and even beyond. These services encompass diverse areas such as engineering, operations and maintenance (O&M), project management, contracts and procurement, renovation and modernization, quality and inspection, training and development, human resources, IT, solar and renewable power projects, and compliance with environmental norms for power stations.

Your Company's consultancy services are not limited to India alone but are also provided internationally. You extend your consultancy support to various countries, including Gulf countries, Bangladesh, Myanmar, Mali, Togo, Malawi, Mauritius, Ethiopia, Cuba, Paraguay, Niger, and other member countries of the International Solar Alliance (ISA). This demonstrates your Company's global outreach and commitment to assisting the power industry beyond national borders.

The details of Financial Year 2022-23 highlights for consultancy services can be found in the MDA and Manufactured capital section of the report at page no. 160 and page no. 46.

8. Financing of New Projects

To finance its capacity addition programs, your Company adhere to specific debt to equity ratios depending on the type of projects. For thermal and hydro projects, the debt-to-equity ratio is generally set at 70:30, while for solar/wind projects, it is set at 80:20. Your directors are confident that the internal accruals of the Company will be sufficient to finance the equity component of the new projects. With a low-geared capital structure and strong credit ratings, your Company is well-positioned to raise the necessary borrowings.

Your Company is actively exploring both domestic and international borrowing options, including seeking overseas development assistance from bilateral agencies. These efforts are aimed at mobilizing the debt required for the planned capacity expansion program.

Furthermore, your Company consistently engages in debt swapping for domestic loans, taking advantage of cheaper loans to repay older loans with higher interest rates. This strategy enables your Company to repay loans without incurring any repayment penalties to the bank. By optimizing its debt management, your Company strives to reduce borrowing costs and enhance financial efficiency.

The details of funding are discussed in the MDA Report which forms part of this Report at page no. 160.

9. Fixed Deposits

Effective from 11th May 2013, your Company has ceased accepting new deposits and renewing existing deposits under the Public Deposit Scheme. Consequently, there are no deposits that are non-compliant with the provisions outlined in Chapter-V of the Companies Act, 2013.

The details relating to deposits, as per the Companies Act, 2013 are as under:

a	Accepted during the year 2022-23	Nil
b	Remained unpaid or unclaimed as at the end of year	6 deposits amounting to ₹15.91 lakh*
c	Whether there has been any default in repayment of deposits or payment of interest thereon during the year and if so, number of such cases and the total amount involved:	
	(i) At the beginning of the year	Nil
	(ii) Maximum during the year	Nil
	(iii) At the end of the year	Nil

* Pending for completion of legal formalities/ restraint orders/ non-receipt of claims.

10. Renovation and Modernization

The Renovation and Modernization (R&M) of various units of your Company, particularly those that have completed 25 years of commercial operation, is considered crucial for achieving several objectives. These objectives include ensuring the safe operation of the units, complying with the latest statutory norms and revised environmental norms, as well as adhering to the IEGC (Indian Electricity Grid Code).

The R&M process also focuses on recovering and improving the efficiency of the units, enhancing their reliability, enabling flexible operations to accommodate the integration of renewables on a large scale, sustaining operations in light of equipment health assessments conducted over the past 2 to 3 years, and addressing constraints arising from current operating conditions such as changes in coal quality, water supply arrangements, and changes in laws and regulations.

By undertaking R&M activities, your Company aims to optimize the performance and longevity of its units while aligning with evolving industry standards and operational requirements.

11. Human Resource Management

Your Company holds great pride in its highly motivated and skilled human resources, whose contributions have played a significant role in bringing the Company to its current heights of success. The dedication, competence, and hard work of the employees have been instrumental in driving the Company's growth and achievements. Their unwavering commitment and valuable expertise have enabled your Company to overcome challenges, seize opportunities, and consistently deliver exceptional results. The Company recognizes and values the exceptional contributions made by its human resources, who are considered an asset in the journey towards continued success and excellence.

To foster a positive work environment and promote the well-being of its employees, your Company has implemented several initiatives in the areas of employee relations, safety and security, training and development, women empowerment, and overall welfare. These measures aim to enhance the growth and development of your employees, ensuring their overall betterment within the organization. The details of the same are covered in the Human capital section of this report at page no. 78.

12. Sustainable Development

Sustainability is at the core of your company's business development strategy. Your company firmly believes in the idea that progress should not come at the expense of the environment and natural ecosystems. To drive sustainability, you are guided by two key motives:

a) Transforming into the most sustainable power producer by bringing about fundamental changes in its operational practices.

b) Enhancing transparency through timely disclosure of social, environmental, and economic performances.

Your Company has implemented "The Brighter Plan 2032", a comprehensive sustainability strategy aimed at becoming the most sustainable power producer. This plan focuses on key sustainability areas such as Decarbonization & Air Emission Control, Water & Biodiversity Conservation, Health & Safety, Circular Economy, Community Development, Finance & Ethics, and Sustainable Supply Chain. Through this strategy, you are formulating strategic approaches and actions in each of these areas to ensure the long-term sustainability of your business operations.

To ensure progress and accountability, your company has established short-term and long-term measurable goals and objectives that are aligned with the Brighter Plan 2032. By integrating sustainability targets into its corporate planning, your company aims to drive consistent progress across these priority sustainability areas.

Your Company follows a triple bottom line approach, considering people, planet, and profit as the primary pillars for business sustainability. This approach emphasizes the importance of balancing social, environmental, and economic responsibilities. By focusing on these interconnected aspects, you strive to achieve a harmonious integration of sustainable practices, enhancing the well-being of communities, preserving the environment, and ensuring long-term economic prosperity.

The further details of our sustainable initiatives and disclosures can be found in the Natural and Social capital section of the report at page no. 60 and page no. 94.

12.1 Inclusive Growth-Initiatives for Social Growth

"Corporate Social Responsibility"

CSR has been synonymous with your Company's core business of power generation. Your Company's spirit of caring and sharing is embedded in its mission statement. Your Company has a comprehensive Resettlement & Rehabilitation (R&R) policy covering community development (CD) activities, which has been revised and updated from time to time. CD activities in green field area are initiated as soon as project is conceived and thereafter-extensive community / peripheral area development activities are taken up along with the project development. CSR Policy formulated in July 2004 and revised in 2010, 2016, 2019 and 2022 as "NTPC Policy for CSR and Sustainability" in line with Companies Act, 2013 and Department of Public Enterprises (DPE) Guidelines for CSR. It covers a wide range of activities including implementation of a few key Programmes taken through NTPC Foundation- a charitable Trust set up by your Company to mainly serve and empower the Physically Challenged and Under Privileged Sections of the Society & women.

Focus areas of your Company's CSR activities are Health, Sanitation, Safe Drinking Water and Education. Moreover, Capacity Building of the youth, Women Empowerment, Social Infrastructure Development, livelihood creation through support for implementation of innovative agriculture & livestock development, support to Physically Challenged Person (PCPs), and for the activities contributing towards Environment Sustainability have also been taken up. Your company commits itself to contribute to the society, discharging its Corporate Social Responsibilities through initiatives that have positive impact on the society, especially the community in the neighborhood of its operations by improving the quality of life of the people, promoting inclusive growth and environmental sustainability.

Preference for CSR & Sustainability activities is being given to local areas around Company's operations, ensuring that majority CSR funds are spent for activities in local areas. However, considering Inclusive Growth and Environment Sustainability and to supplement Government effort, activities are also taken up anywhere in the country. During the year, about 450 villages and more than 400 schools have been benefitted by your Company's various CSR initiatives at different locations. Your Company's CSR initiatives have touched, in one way or the other, the lives of around 16 lakhs people residing at remote locations.

Apart from the CSR activities undertaken in and around stations to improve the living conditions of the local communities, other CSR initiatives undertaken pan-India are mentioned in the Annual Report on CSR activities annexed with this Report.

Your company spent ₹ 315.32 crore during the financial year 2022-23 towards CSR initiatives, which surpassed the prescribed two percent amount of ₹310 crore, thus achieving a CSR spend of 2.03% on Standalone basis.

"NTPC Foundation"

NTPC Foundation, funded by your Company, is engaged in serving and empowering the differently-abled and economically weaker sections of the society.

Details of expenditure incurred and initiatives undertaken by your Company under CSR are covered in the Annual Report on CSR annexed as Annexure-VI to this Report.

"Rehabilitation & Resettlement (R&R)

Your Company is committed to help the population affected on account of land acquisition. The Company has been making efforts to improve the Socio-economic status of the Project Affected Families (PAFs). As a part of its decision-making process, your Company has had an R&R Policy since the year 1993 which has been amended from time to time to keep abreast with the Govt. guidelines. Your Company's latest R&R Policy-2017 is in line with the extant Land Acquisition Act - The RFCTLARR Act, 2013 (The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013).

R&R activities are initiated at Your Company's projects by undertaking need-based community development activities in the areas of health & sanitation, education, drinking water, capacity building, infrastructure, solar electrification, etc. by formulating the 'Initial Community Development (ICD) Plan' in consultation with concerned Panchayats, District Administration and other Stakeholders. Your Company addresses the R&R issues in line with the extant R&R Policy of your Company/ Central Govt./ State Govt. / extant Land Acquisition Act, with an objective, that after a reasonable transition period, the conditions of PAFs improve or at least they regain their previous standard of living, earning capacity, and production levels.

As per your Company's R&R Policy-2017, which has been aligned with the 'The RFCTLARR Act 2013', a Social Impact Assessment (SIA)/Census Survey will be conducted by the State Govt. during the process of land acquisition for the project, so as to collect detailed demographic data of the area. This shall form the basis for the preparation of the 'Rehabilitation and Resettlement (R&R) Scheme' by the 'Appropriate Government'. The R&R Scheme consists of measures for Rehabilitation & Resettlement and need-based CD infrastructure in Resettlement Colony (RC).

Additionally, Your Company has retained the good practices of the Company on the Community Development (CD) activities which are primarily aimed at socio-economic development in the PAVs (Project Affected Villages) and the Project's vicinity. This is to ensure that the displaced families in the RC (Resettlement Colony) or the affected families settling in the neighboring villages may secure for themselves a reasonable standard of community life.

Expenditure on implementation of the R&R Plan is part of the Capital cost of the project. The Plan is implemented in a time-bound manner so as to complete it by the time of the project's commissioning. Upon completion of the R&R Plan implementation, a Social Impact Evaluation (SIE) is conducted by a professional agency to know the efficacy of the R&R Plan implementation for future learning & corrective actions, if any.

A. R&R achievements during the year:

- **Rehabilitation and Resettlement (R&R) Plan:**

R&R activities were implemented at the Greenfield / Brownfield Thermal Power projects - Barh, Darlipali, Gadarwara, Kanti, Khargone, Kudgi, Lara, Meja, North-Karanpura, NSTPS, Patratu, Solapur, Tanda-II, Telangana, Hydro projects–Tapovan- Vishnugad & Rammam-III and Coal Mining Projects at Pakri-Barwadih, Chatti-Bariatu, Kerendari, Dulanga and Talaipalli as per the R&R / CD Plans, which were finalized earlier in consultation with the stakeholders and approved by the State Govt.

Re-appropriations in cost provisions of R&R / CD Plans, as required on a case-to-case basis, for specific activities in view of the request/ needs of stakeholders/ district administration, were also approved to take care of the local needs & requirements.

B. Focus areas for Community Development activities:

The CD activities are generally initiated by your Company under ICD (Initial Community Development) Policy and subsequently under the R&R/ CD Plan of the Project. Your Company is sensitive to the needs and aspirations of the Project Affected Families (PAFs). Your Company also provides for Stakeholders' Participation through its Public Information Centers/ R&R Offices/ Village Development Advisory Committee (VDAC) Meetings to disseminate useful information sought by the villagers. Other useful information is also communicated through notices, pamphlets, letters, etc. from time to time.

In the last 9 years up to FY 2022-23, more than ₹ 2,092 crore worth of expenditure were incurred by your Company towards Community Development (CD) works by various Projects under R&R Plans.

- **Drinking water –** Planning and implementation of activities towards access to drinking water for 100% coverage of all Project Affected Villages are undertaken. Your Company's Policy- Jal Jyoti Mission embarks upon ensuring safe drinking water and rejuvenation of ponds in its project-affected villages.
- **Capacity building / Skill up-gradation –** Training programs were conducted by various projects towards the skill enhancement of youths. The specific focus was on imparting training to the villagers on modern farming methods. The support to dependents of PAFs for ITI training was also extended to increase their employability.
- **Education –** Infrastructure created for Medical College cum Hospital at Sundargarh (Odisha) has been handed over to State Government of Odisha and its Academic Sessions have already been started. Financial assistance was extended towards up-gradation of infrastructure and other basic amenities including setting up of latest

equipment in the existing Govt. Medical College at Raigarh (Chhattisgarh).

Construction of the Engineering College at Shivpuri (MP) has been completed and its Academic Sessions have already started (since Nov. 2020). Support has been extended for the construction of Hydro Engineering College, Bilaspur (Himachal Pradesh) & its Academic Sessions have already been started. Building constructed for Govt. Polytechnic at Dhak (Joshimath) is now being utilized by the Govt.

Your Company has the Policy on Improving Learning Outcomes & Quality of Education for children studying in Government Schools of its project-affected villages.

- **Health -** For the benefit of PAFs and neighboring populations, medical outreach through Mobile Health Clinics & Medical Camps/ your Company's own Hospital set-ups is ensured. Support is extended by the projects in augmenting the existing health- care infra in the vicinity of various projects. Your Company has the Policy on Maternal and Child Health Care to provide 650 days of antenatal/ prenatal & postnatal preventive health care to expectant & new mothers and new born babies.

13. NTPC Energy Technology Research Alliance (NETRA)

Your Company is dedicated to incorporating innovative technologies in our power plants to enhance safety, reliability, and efficiency. We strategically develop, adopt, and adapt frontier technologies to address major concerns in the power sector while exploring potential opportunities. In 2009, we established the NTPC Energy Technology Research Alliance (NETRA) as a state-of-the-art research center. NETRA collaborates with leading institutes, technology players, and service providers at the national and international levels. We are guided by a Research Advisory Council (RAC) comprising eminent scientists and experts, while our in-house Scientific Advisory Council (SAC) provides directions for improving plant performance and reducing costs.

NETRA's collaborative approach and focus on research and development demonstrate your Company's commitment to staying at the forefront of technological advancements. By embracing innovation, your Company aims to drive continuous improvement, overcome challenges, and unlock new opportunities in the power sector. Through the prudent mix of development, adoption, and adaption of frontier technologies, your Company ensures the safety, reliability, and efficiency of its power plants. NETRA plays a crucial role in driving high-end research, supported by the expertise of the RAC and SAC. This consolidated effort positions your Company as a leader in incorporating innovative technologies and pursuing a more sustainable and efficient energy future.

NETRA continuously adapts its focus areas to meet the evolving needs of the power sector. Currently, our R&D efforts are centered on carbon capture and utilization technologies, ash utilization technology, waste-to-energy solutions, water technology, as well as efficiency improvement, cost reduction, new and renewable energy, climate change, and environmental protection. Our laboratories, which are ISO 17025 accredited, provide advanced scientific services in areas such as non-destructive examination, metallurgy, failure analysis, oil/water chemistry, environment, electrical systems, and computational fluid dynamics. Recognized as a Remnant Life Assessment Organization, NETRA ensures efficient and reliable performance in our power plants while upholding the highest safety and quality standards.

The further details of the NETRA's performance highlights can be found in the Intellectual capital section of the report at page no. 106.

14. Implementation of Official Language

Your Company took several initiatives for the progressive use of Hindi in the day-to-day official work and implementation of official language policy of the Union of India in your Company. The compliance of official language policy in your Company projects and regional headquarters was inspected and need based suggestions were given to the respective heads of offices in this regard.

Quarterly meetings of official language implementation committee were held in which extensive discussions took place on progressive use of Hindi and the ways and means to bring about further improvements.

Hindi Divas was celebrated on 14th September 2022 and Hindi Fortnight was organised from 14-29 September 2022 at the Corporate Centre as well as regional headquarters and projects/stations to create awareness among the employees, Associates, and their family members. Our biannual Hindi magazine 'Vidyut Swar' published (in digitized from) to promote creative writing in Hindi.

Employees were motivated to use Hindi in official work by organising Hindi workshops, Hindi Seminar, Unicode Hindi Computer Training along with Hindi e-tools and popularization of Hindi incentive schemes. Hindi webpage was updated with improvement important information of Official Language for employees.

The second sub-committee of Parliament on official Language had inspected our units; reviewed the progress of Official Language implementation and appreciated our efforts.

Your Company's website also has a facility of operating in a bilingual form, in Hindi as well as in English.

15. Web based contractors' labour information and Management system (CLIMS)

Your Company has successfully implemented an in-house solution called 'Contractors' Labour Information Management System (CLIMS),' which operates on a captive private cloud. This system has been implemented to streamline labour management processes, ensure the physical and social welfare of workers, comply with statutory requirements, and provide real-time information on the availability of workers. The system digitizes record-keeping, guaranteeing accurate disbursement of wages and other benefits to labourers deployed at your Company's plants.

CLIMS incorporates a range of features to enhance labour management. You can track attendance using biometric technology, conduct medical fitness assessments, provide safety training and clearances, register for ESI (Employee State Insurance), and perform other necessary regulatory checks. This comprehensive system enables you to effectively monitor and manage your workforce, promoting transparency, efficiency, and compliance with applicable regulations. By adopting CLIMS, your Company has improved the overall labour management process, facilitating the timely and accurate provision of wages and benefits to your workers while ensuring their well-being and safety.

16. Vigilance

To ensure Transparency, Accountability and Impartiality, of decision-making in various operations, your Company has established a Vigilance Department led by a Chief Vigilance Officer. This department comprises Vigilance Executives who are present both at the Corporate Centre and various sites. At the sites, the Vigilance Executives report to the Project Head regarding administrative matters, while they report to the Chief Vigilance Officer regarding functional matters.

The Corporate Vigilance Department in your company consists of four specialized Cells:

1. Vigilance Investigation and Processing Cell
2. Departmental Proceedings Cell
3. Technical Examination Cell
4. MIS (Management Information System) Cell

In addition to this, your Company has also developed a dedicated vigilance help line portal to ensure timely and transparent addresal of any complaint received. The same can be access at your company's website through https://www.ntpc.co.in/helpline/

Moreover, your Company has also establish various policies such as "Fraud Prevention Policy (revised 2021)" and "Whistle Blower Policy" to ensure the integrity of its operations. The detailed policies can be accessed through https://www.ntpc.co.in/sustainability/policies?page=1

In addition to the above, your company has also implemented an Integrity Pact since 2009. Currently, this pact applies to tenders with an estimated value of 10 crore or more (excluding taxes and duties).

The details of your Company vigilance work are available in the Ethics and Vigilance section of our report at page no. 34.

17. Redressal of public grievances

Your Company values efficient and prompt resolution of public grievances. To ensure timely resolution of grievances from esteemed entities such as the President Secretariat, Prime Minister's Office, and Ministry of Power, we have designated the General Manager (HR) as the Director (Grievance). This role is responsible for facilitating the earliest resolution of public grievances.

To maintain transparency and timeliness, the Government of India's Department of Administrative Reforms & Public Grievances and Department of Personnel & Training have established a web-based monitoring system at www.pgportal.gov.in. This platform enables us to monitor and track grievances, ensuring transparency and accountability throughout the resolution process.

In accordance with the government's directive, we aim to resolve public grievances within 30 days. If it is not possible to resolve a grievance within this timeframe, we provide an interim reply is committed to making our Company every effort to address grievances within the specified time frame, ensuring efficient and satisfactory resolution for all parties involved.

18. Right to Information (RTI)

Your Company recognizes the importance of providing information to citizens and maintaining transparency and accountability. In accordance with the Right to Information Act 2005, your Company has implemented the necessary mechanisms to facilitate this. It has appointed individuals such as the Central Public Information Officer (CPIO), an Appellate Authority, and Assistant Public Information Officers (APIOs) at all sites and offices.

In the financial year 2022-23, your Company received a total of 1,913 applications under the RTI Act, which includes 50 pending applications from the previous fiscal year. Among these, 1,801 applications have been responded to, while 112 applications are still awaiting resolution. Additionally, your Company has voluntarily made disclosures under section 4(1)(b) of the RTI Act, and these disclosures have been audited by the Indian Institute of Public Administration (IIPA) in New Delhi.

By adhering to the provisions of the RTI Act, your Company strives to ensure that citizens have access to information and that transparency is upheld in all its operations.

19. Using Information and Communication Technology for Productivity Enhancement

Information Technology has emerged as a crucial catalyst for your Company's business growth. Since 2008, your Company has adopted an Enterprise Resource Planning (ERP) software to consolidate all its business operations. A PI data system has been put in place to effectively capture, present, and analyze real-time performance indicators of our power plants. Additionally, web-based applications outside of the ERP framework have been created to streamline various functions such as Engineering Drawings approval, Quality Control Management, Hospital Management, Contractor's Labour Information Management (CLIMS), RTI, Security Control, Safety, Ash Utilization, Integrated Complaint Management Nivaran 2.0, and other related areas.

Additionally, as part of the Project PRADIP, your Company has undertaken measures to promote environmental sustainability and embrace digitalization by going paperless. The business processes have been reengineered and revamped to operate in a paperless mode. This initiative has led to the implementation of e-Office, digitization of documents, and the adoption of paperless procedures across various functions. As a result, a significant amount of paper has been saved, while also enabling faster decision-making, enhancing transparency, and improving overall efficiency within your Company. This initiative proved particularly valuable during the period of lockdown.

To further enhance productivity and speed, your Company has continued to implement IT-enabled virtual office solutions through PRADIP. This includes providing internet access to key applications via a Secure Virtual Private Network (VPN) Access and utilizing Microsoft 365, a comprehensive cloud-based Software as a Service (SaaS) solution, for mail and messaging services, Teams, Share Point, Power App, Power BI, and more. These services are integrated with Single Sign-On (SSO) functionality to streamline access and improve efficiency.

To ensure seamless communication, your Company's plants and offices across India are interconnected with the Corporate Office and the main Data Centre (DC) through high-speed MPLS links, operating at 2x68/155 Mbps at each site. Additionally, the DC and Disaster Recovery (DR) site are linked via high-bandwidth 2x400 Mbps MPLS links to facilitate data replication. Both the Data Centres located in Noida and Hyderabad are ISO 27001 compliant, adhering to international standards for information security management.

In order to further harness the potential of IT within your Company, an IT Digital Strategy has been finalized. This strategy aims to achieve a 100% paperless office, implement data analytics for informed decision-making, and introduce new technologies such as Industrial Internet of Things (IIOT), Artificial Intelligence (AI), Machine Learning, Low Code/No Code platforms, and more within the next two years. Several pilots and proof of concepts have already been conducted in these areas to explore their feasibility and benefits.

Launch of Web & Mobile apps as part of digital initiatives

Your Company Business Mail Repository System

(BMRS) : This system is used for keeping repository of all communications made with stake holders to avoid litigation. The Mail Vault ensures ease of retrieval of communication pertaining to an area, contract, or package by the authorized users. This shall also act as a reference mail database when dealing employees / concerned employee has separated from company or transferred to another package.

Project Management Tool - PROMPT : PM Tool is a mobile app for Management, Project Managers, EICs and Site Engineers to access project progress information anytime and anywhere.

Jyoti BOT : This is a tool for one stop helping hand for most of the issues to address 24x7 support, answers to simple questions and instant responses having a BOT handled FAQs within applications enhances user engagement.

Knowledge Management Portal 1.0 : Knowledge is the most important organizational resource which should be recorded, preserved, and managed effectively so that it can be accessed, shared, and exchanged easily. This comprehensive KM Portal is for creating, capturing and curation of Knowledge through collaboration and connection among employees.

Engineering Calculator & Tariff Calculator App- Nuclear: Engineering Calculator App is designed to capture engineering Thumb-rule calculations for day-to-day design activity and understand the dynamic energy market scenario, carry out sensitive analysis.

Major Equipment History Dashboard - Erection & O&M Stage : Equipment Failure History O&M Stage: The dashboard developed for Equipment failure history will provide an analytical view of major equipment failure history across your Company plants based on the historical data in SAP for O&M Stage since 2007.

With the new digital initiatives underway, your Company will be a fully digitalized organization for its core and non-core functions and will also act as a role model for others in the industry.

Some of the highlights of the progress in IT/ERP area during the year 2022-23 are as follows:

- Digitization – All approve processes under E-Office was completed. Processes were redesigned for working in paperless mode and to enable Unified Shared Service center model. Digital invoicing was implemented, and all vendors were onboarded on PRADIP to submit their digital invoices and to track them. Also, management dashboard made ready to track payment status. PRADIP has been made more secure through implementing Multi-Factor Authentication and Single Sign-On technology.
- ERP – Several new modules were introduced in ERP as part of process improvements such as PMS for Non-Executives, Bill Discounting System, Selected Person Report Integration in SAP Permits, Honorarium Automation for Training, O&M cost sheet in SAP, Budget and SBI POS Integration with SAP.
- Microsoft Active Directory Services (ADS)- Phase-III of ADS has been completed. It enabled your Company to deploy and enforce policies through group policies and provide a uniform, standard and secure working environment to users across the organization. ADS DC-DR Setup has also been made operational at DR Hyderabad to enhance reliability of the system.
- Security – No major security breach was observed during the year 2022-23. A (24x7) Cyber Security Operation Centre (CSOC) is in operation where round the clock monitoring of all external and internal data traffic is being done. All latest threat management and security tools are being applied to prevent any cyber-attack or data theft. Timely communications are being sent to all users and admins based on threat perception. Your Company's data centers at Noida and Hyderabad are ISO 27001 compliant for ensuring adequate security posture.
- Several new web applications and mobile apps such as your Company Business Mail Repository System (BMRS), PM Tool - PROMPT (Dashboard + One Ledger), Jyoti ChatBOT, Knowledge Management Portal 1.0, Engineering Calculator & Tariff Calculator App- Nuclear, Major Equipment History Dashboard - Erection & O&M Stage etc. have been launched to take care of requirements of various departments. Dashboards on Power BI platform have been rolled out for REDs and Head of Projects.
- New Technology – Commercial Billing Process has been automated in SAP using Robotic Process Automation (RPA) tools apart from the initial process of reading data from the Regional Energy Account (REA) documents and processing them

suitably for ingestion in SAP billing, in short REA document processing.

- IT Consultancy assignments for ₹ 4.4 crore towards power sector improvement –
- SAP support in JV companies of your Company.
- M365 support in JV companies of your Company.
- PI System implementation in OPGC

20. Group companies: Subsidiaries and Joint ventures

As of 31 March 2023, your Company has 10 subsidiary companies and 18 joint venture companies (including 2 foreign companies) engaged in specific business activities.

In terms of restructuring, your Company has decided to exit from International Coal Ventures Private Limited due to a lack of commercially viable opportunities for thermal coal. Additionally, with the approval from the Ministry of Power, the winding-up process has commenced for BF-NTPC Energy Systems Limited, and a liquidator has been appointed for the voluntary liquidation of this joint venture Company.

A statement containing the salient feature of the financial statement of your Company's Subsidiaries, Associate Companies and Joint Ventures as per first proviso of section 129(3) of the Companies Act, 2013 is included in the consolidated financial statements.

21. Information Pursuant to Statutory and other Requirements

Information required to be furnished as per the Companies Act, 2013 and as per SEBI (Listing Obligations & Disclosure Requirements) Regulations, 2015 and any amendments thereto are as under:

21.1 Statutory Auditors

The Statutory Auditors of your Company are appointed by the Comptroller & Auditor General of India. Joint Statutory Auditors for the financial year 2022-23 were (i) M/s S K Mehta & Co., Chartered Accountants, New Delhi (ii) M/s Varma & Varma, Chartered Accountants, Hyderabad, (iii)M/s Parakh & Co., Chartered Accountants, Jaipur, (iv) M/s C K Prusty & Associates, Chartered Accountants, Bhubaneshwar, (v) M/s B C Jain & Co., Chartered Accountants, Kanpur and (vi) M/s V K Jindal & Co., Chartered Accountants, Ranchi.

The appointment of the Statutory Auditors for the financial year 2023-24 is yet to be made by the Comptroller & Auditor General of India.

21.2 Management comments on Statutory Auditors' Report

The Statutory Auditors of the Company have given an un-qualified report on the accounts of the Company for the financial year 2022-23. However, they have drawn attention under 'Emphasis of Matter' to the following notes of the Standalone Financial Statements:

(i) Note No. 50 (c) with respect to one of the projects under construction, wherein by the order dated 12 January 2023 of Hon'ble High Court of Uttarakhand, construction activities are banned till further order.

(ii) Note No. 59 (f) (iv & v) which describes the related party transactions entered into by the Company during the year, which are not approved as required under applicable laws and regulations.

(iii) Note No. 63 (iii)(b) with respect to appeal filed by the company with the Hon'ble High Court of Delhi in the matter of Arbitral award pronounced against the Company and the related provision made/ disclosure of contingent liability as mentioned in the said note.

The issues have been adequately explained in the respective Notes referred to by the Auditors.

Further, the Reports of Statutory Auditors forming part of the Annual Report on Internal Financial Controls with reference to the Standalone and Consolidated Financial Statements under Clause (i) of Sub-section 3 of Section 143 of the Companies Act, 2013, also contains a qualification that the Company did not have appropriate internal control system to ensure that related party transactions are undertaken only after approval under the provisions of sections 177 of the Companies Act, 2013 as well as the provisions of Regulation 23 of the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015 by the Audit Committee of Board and Shareholders of the company wherever applicable, as a result material transactions were entered into by the Company during the year without approval, as required under the abovesaid provisions. Statutory Auditors have considered the material weakness identified in determining the nature, timing and extent of audit tests applied in their audit for the year ended March 31,2023, of Standalone and Consolidated Financial Statements of the Company, and the material weakness has not affected their opinion on these Financial Statements of the Company.

The management's response is as follows:

The matter referred by the Statutory Auditors have been adequately disclosed in the Notes 59 (f) (iv & v) referred by audit. Subsequently the Company has sought a legal opinion from the Solicitor General of India about the recourse available to the Company for related party transactions that have taken place during the year 2022-23 but were not approved by the Audit committee. Based on the legal opinion obtained, the related party transactions mentioned at Note 59(f)(v) were approved ex-post facto by the Audit Committee in the meeting held on 28 July 2023 and transactions mentioned at Note 59(f)(iv) were approved ex-post facto by the Board of Directors in their meeting held on 29 July 2023. The material weaknesses observed by the auditors did not result in material misstatements to these annual financial statements.

21.3 Review of accounts by Comptroller & Auditor General of India (C&AG)

The Comptroller & Auditor General of India, through letter dated 20.07.2023, has given a Comment on the Standalone Financial Statements of your Company for the year ended 31 March 2023 after conducting supplementary audit under Section 143 (6) (a) of the Companies Act, 2013.

The Comptroller & Auditor General of India, through letter dated 20.07.2023, has also given a Comment on the Consolidated Financial Statements of your Company for the year ended 31 March 2023 after conducting supplementary audit under Section 143 (6) (a) read with Section 129 (4) of the Companies Act, 2013.

As advised by the Office of the Comptroller & Auditor General of India (C&AG), a comment of C&AG alongwith Management reply for both the standalone and consolidated financial statements of your Company for the year ended 31 March 2023 are being placed with the report of Statutory Auditors of your Company elsewhere in this Annual Report.

21.4 Cost Audit

As prescribed under the Companies (Cost Records and Audit) Rules, 2014, the Cost Accounting records are being maintained by all stations and Coal mines of your Company.

The firms of Cost Accountants appointed under Section 148(3) of the Companies Act, 2013 for the financial year 2022-23 were i) M/s Shome & Banerjee, Kolkata, ii) M/s Mani & Co., Kolkata, iii) M/s KG Goyal & Associates, Delhi, iv) M/s R. J. Goel & Co., Delhi, v) M/s Bandyopadhyaya Bhaumik and Company, Kolkata, vi) M/s Narasimha Murthy & Co., Hyderabad, vii) M/s B.G. Chowdhury & Co, Kolkata, viii) M/s Diwanji And Associates, Vadodara,ix) M/s M.Krishnaswamy & Associates, Namakkal, Tamil Nadu and x) M/s H.Tara & co., Delhi

The due date for filing consolidated Cost Audit Report in XBRL format for the financial year ended March 31, 2022 was upto 10th October, 2022 and the consolidated Cost Audit Report for your Company was filed with the Central Government on 23rd September, 2022.

The Cost Audit Report for the financial year ended March 31, 2023 shall be filed within the prescribed time period under the Companies (Cost Records & Audit) Rules, 2014.

21.5 Exchange Risk Management

Your Company is exposed to foreign exchange risk in respect of contracts denominated in foreign currency for purchase of plant and machinery, spares and fuel for its projects/ stations and foreign currency loans.

In terms of its Exchange Risk Management Policy, during financial year 2022-23, your Company has entered into derivative contracts amounting to JPY 1,470.91 Million, USD 264.09 Million and EUR 13.58 Million in respect of foreign currency loans exposure.

21.6 Policy for Selection and appointment of Directors' and their remuneration

Your Company being a Government Company, the provisions of Section 134(3)(e) of the Companies Act, 2013 do not apply in view of the Gazette notification dated 5th June, 2015 issued by Government of India, Ministry of Corporate Affairs.

21.7 Performance Evaluation of the Directors and the Board

Ministry of Corporate Affairs (MCA), through General Circular dated 5th June, 2015, has exempted Government Companies from the provisions of Section 178 (2) of the Companies Act, 2013 which requires of performance evaluation of every Director by the Nomination & Remuneration Committee. The aforesaid circular of MCA further exempted Govt. Companies from provisions of Section 134(3)(p) of the Companies Act, 2013 which requires mentioning the manner of formal evaluation of its own performance by the Board and that of its Committees and Individual Director in Directors' Report, if directors are evaluated by the Ministry or Department of the Central Government which is administratively in charge of the company, or, as the case may be, the State Government as per its own evaluation methodology.

Further, as per MCA Notification dated 5th July, 2017, in case the matters of performance evaluation are specified by the concerned Ministries or Departments of the Central Government or as the case may be, the State Governments and such requirements are complied with by the Government companies, provisions of Schedule IV w.r.t. performance evaluation of Directors are exempted for the Government Companies.

In this regard, Deptt. of Public Enterprises (DPE) has already laid down a mechanism for performance appraisal of all functional directors DPE has also initiated evaluation of Independent Directors

Your Company enters into a Memorandum of Understanding (MOU) with Government of India each year, demarcating key performance parameters for the company. The performance of the Company is evaluated by the Department of Public Enterprises vis-à-vis MOU entered into with the Government of India.

In terms of Regulation 25 of SEBI LODR, 2015, the performance of the Board as a whole and non-independent directors including Chairman & Managing Director were evaluated by the Independent Directors in a separate Meeting held by them on 20th March 2023.

21.8 Declaration by Independent Directors

During the year, all the Independent Directors have met the requirements specified under Section 149(6) of the Companies Act, 2013 for holding the position of 'Independent Director' and necessary declaration from each Independent Director under Section 149 (7) of the Companies Act, 2013 was received. Also, declaration under Regulation 25 of SEBI (LODR) Regulations, 2015 and Rule 6 of the Companies (Appointment and Qualification of Directors) Rules, 2014 are also obtained from all the Independent Directors of your Company.

21.9 Management Discussion and Analysis

In addition to the issues stated in the Directors' Report, some issues have been brought out in report on Management Discussion and Analysis placed at Annexure-I and forms part of this Director Report, as per the terms of regulations 34(2)(e) of SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015.

21.10 Corporate Governance

A detailed report on Corporate Governance as stipulated under Regulation 34(3) of SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015 is placed at Annexure-II and forms part of the Directors' Report.

21.11 Business Responsibility & Sustainability Report

The Business Responsibility & Sustainability Report, as stipulated under Regulation 34 (2) of the SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015, is given in Annexure-IX and forms part of this Directors' Report.

21.12 Investor Education and Protection Fund (IEPF)

Details of transfer of unclaimed dividends and eligible shares to IEPF have been placed in the Corporate Governance Report at Annexure-II, which forms part of the Directors' Report.

21.13 Secretarial Audit

Observations	Management's Comments
Compliance with the provisions of Section 149 of the Act read with Regulation 17 and 25(6) of SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015 regarding the requirements of having at least half of the Board of Directors as the Independent Directors and filing the vacancy of the Independent Directors within Specified Period. Further half of the Board of the Company was not "non-executive" for a certain period.	During the financial year 2022-23, Number of Independent Directors was less than the required limit. As per the provisions of the Articles of Association of the Company, the power to appoint Directors vests with the President of India. The Company had requested Ministry of Power, Government of India, being administrative ministry for appointment of Independent Director from time to time for compliance of the said regulations.
Compliance of Regulation 17(10) of Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015, the Company has not carried out the performance evaluation of the Directors.	Refer Para 21.6 & 21.7

Compliance of Regulation 19(4) read with Schedule II Part D of the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015, the required policies/criteria for Board of Directors were not formulated.	As the Government of India (GOI) is making appointment of Directors, evaluation of Directors are done by the GOI.
The Audit committee has not accorded its post facto approval for the related party transaction happened during the year.	Based on the legal opinion obtained from Solicitor General of India, the related party transactions which were not approved by Audit Committee during the year 2022-23, were approved/ ratified by the Board of Directors in their meeting held on 29 July, 2023
In the absence of requisite number of Independent Directors, the Company has not complied with the requirement pertaining to the composition and constitution of the Board and Committee thereof to be constituted as per the DPE Guidelines and SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015	The requisite number of independent Directors was available in Board level Committee during the financial year 2022-23, as per the Companies Act, 2013 and SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015. The requirement pertaining to the composition and constitution of the Board was less than the required limit of Independent Director. As per the provisions of the Articles of Association of the Company, the power to appoint Directors vests with the President of India. Accordingly , the Company had requested Ministry of Power, Government of India, being administrative ministry for appointment of Independent Director from time to time for compliance of the said regulations.

21.14 Particulars of contracts or arrangements with related parties

During the period under review, your Company had not entered into any material transaction with any of its related parties. The Company's major related party transactions are generally with its subsidiaries and associates. All related party transactions were in the ordinary course of business and were negotiated on an arm's length basis except with Utility Powertech Limited, which are covered under the disclosure of Related Party Transactions in Form AOC-2 (Annex-VIII) as required under Section 134(3) (h) of the Companies Act, 2013. They were intended to further enhance your Company's interests.

Web-links for Policy on Materiality of Related Party Transactions and also on Dealing with Related Party Transactions have been provided in the Report on Corporate Governance, which also form part of the Annual Report.

21.15 Significant and material orders passed by the regulators or courts or tribunals impacting the going concern status and company's operations in future

No significant and material orders were passed by any regulator or court or tribunal impacting the going concern status and company's operations during the Financial Year 2022-23.

21.16 Adequacy of internal financial controls with reference to the financial reporting

Your Company has in place adequate internal financial controls with reference to financial reporting. During the year, such controls were regularly tested and no reportable material weakness in the design, implementation and operation effectiveness was observed.

21.17 Loans and Investments

Details of Investments covered under the provisions of Section 186 of the Companies Act, 2013 forms part of financial statement, attached as a separate section in the Annual Report for Financial Year 2022-23.

Details of Loans granted to subsidiaries and Joint venture companies are disclosed at Note 59 to the standalone financial statements for the year 2022-23.

21.18 Prevention, Prohibition and Redressal of Sexual Harassment of Women at Workplace

Your Company has in place a policy on Prevention, Prohibition & Redressal of Sexual Harassment of Women at Workplace in line with the requirements of the Sexual Harassment of Women at Workplace (Prevention, Prohibition & Redressal) Act, 2013.

Internal Committees (ICs) have been constituted at all Projects/Locations of your Company to redress complaints received regarding Sexual Harassment. All female employees (regular, contractual, temporary, trainees) are covered under the policy. Every three years, the constitution of these committees is changed, and new members are nominated.

During the Financial year 2022-23, four cases were reported to different ICs across your Company project/ stations, out of which three were resolved and in one of the cases the Internal Committee has submitted its recommendations to the employer.

21.19 Procurement from Micro and Small Enterprises (MSEs) and Procurement through GEM

The Government of India has notified a Public Procurement Policy for Micro and Small Enterprises (MSEs) Order, 2012. The total procurement made from MSEs during Financial Year 2022-23 was ₹ 4,120.88 crore which was 40.06% of the total procurement* of ₹ 10,287.27 crore against the minimum threshold of 40% as stipulated by the Public Procurement Policy for Micro and Small Enterprises (MSMEs) Order.

The procurement percentage from MSEs owned by SC/ ST and Women Entrepreneurs was 0.17% and 0.40% respectively in Financial Year 2022-23.

*Excluding Primary fuel, Secondary fuel, steel, cement, project procurement including Renovation & Modernization and procurement from Original Equipment Manufacturer (OEM)/ Original Equipment Supplier (OES)/ Proprietary Article Certificate (PAC) as per Order of the Development Commissioner, Ministry of MSME vide letter No. F. No. 21(9)/2017-MA(Pt-I) (E-17230) dated 31-08-2021.

Your Company has organized 21 Vendor Development Programs (VDPs), including 9 Special VDPs for MSEs owned by SC/ST and Women Entrepreneurs across the company in Financial Year 2022-23.

Procurements of ₹ 24,166.75 crore (Including GST) have been done through GeM portal in Financial Year 2022-23, highest ever by any CPSEs in a year since inception of GeM.

Further, your Company has been conferred an award for achieving 3rd position in highest Numbers of Purchase Orders placed through GeM portal in Financial Year 2022-23 among 50 leading CPSE by Ministry of Commerce & Industries.

Annual procurement plan for 2022-23 from MSEs is uploaded on www.ntpc.co.in.

21.20 Particulars of Employees

As per provisions of Section 197(12) of the Companies Act, 2013 read with Rule 5 of the Companies (Appointment and Remuneration of Managerial Personnel) Rules, 2014, every listed company is required to disclose the ratio of the remuneration of each director to the median employee's remuneration and details of employees receiving remuneration exceeding limits as prescribed from time to time in the Directors' Report.

However, as per notification dated 5th June, 2015 issued by the Ministry of Corporate Affairs, Government Companies are exempted from complying with provisions of Section 197 of the Companies Act, 2013. Therefore, such particulars have not been included and do not form part of this Directors' Report.

21.21 Extract of Annual Return

Annual Return pursuant to Section 92 (3) of the Companies Act, 2013, read with Section 134(3) (a) and rule 12(1) of the Company (Management & Administration) Rules, 2014 for the Financial Year ended 31st March 2023 is available on the Company's website i.e www.ntpc.co.in.

21.22 Credit rating

Your Company's financial discipline and prudence is reflected in the strong credit ratings ascribed by rating agencies. The details of credit ratings are disclosed in the Management Discussion and Analysis Report, which forms part of the Annual Report.

21.23 Reporting of frauds by Auditors

During the year under review, neither the statutory auditors nor the secretarial auditor has reported to the audit committee, under Section 143 (12) of the Companies Act, 2013, any instances of fraud committed against your Company by its officers or employees, the details of which would need to be mentioned in the Directors' report.

21.24 Compliance with Secretarial Standards

Your Company is in compliance with the applicable Secretarial Standards issued by the Institute of

Company Secretaries of India and approved by the Central Government under Section 118(10) of the Companies Act, 2013.

21.25 Key Financial Ratios

Key Financial Ratios for the financial year ended 31st March, 2023, are provided in the Annexure-I forming part of this Report.

21.26 Consumption of Imported Goods (On consolidated basis)

The consumption of imported goods for your Group Companies is as follows:

Import Consumption	FY 2022-2023 (₹ crore)	FY 2021-2022 (₹ crore)
Coal	25,056.19	3,029.86
Others Spares	78.01	65.08
Total Import	**25,134.20**	**3,094.94**

21.27 Government of India (GoI) Memorandum of Undertaking (MoU) 2022-23 Achievementss

GoI MoU is an agreement between the management of the Central Public Sector Enterprises (CPSEs) and the Government of India. MoU is a major policy initiative of the Government of India to undertake regular performance evaluation of CPSEs and enhancing the performance levels of the CPSEs.

GoI MoU 2022-23 was signed between your Company and Ministry of Power on consolidated basis. The achievements against the various parameters defined under MoU 2022-23 are as under:

Revenue from Operation: Your Group Company has achieved highest ever Revenue from operations of ₹ 1,76,207 crores with a growth of 32.82%.

Power Generation: Your Group Company has registered a generation of 365,440 MUs (including generation from your Company Subsidiaries and excluding JV companies of your Company) with a growth of 10.10%. Your Company generation mix includes generation from Thermal, Hydro and RE sources.

Financial Ratios: Your Company has strong financial systems in place. It believes in prudent management of its financial resources and strives to reduce the cost of capital. It has robust financials leading to strong cash flows which are being progressively deployed in generating assets. Your Company has a strong balance sheet coupled with low gearing and healthy coverage ratios. As a result, your Company has been able to raise resources for its capital expansion projects at very competitive interest rates in domestic as well international market. With respect of GoI MoU, your Company has achieved following financial ratios:

EBITDA as a percentage of Revenue	Return on Capital Employed	Asset Turnover Ratio
28.25%	10.47%	39.90%

CAPEX: Your Company has incurred a CAPEX of ₹ 31,985.83 crore including CAPEX of JVs and Subsidiaries of your Company for the year 2022-23 on accrual basis.

TReDS Portal: Your Company has onboarded Trade Receivable electronic Discounting System (TReDS) portals. TReDS is an institutional mechanism set up in order to facilitate the discounting of trade receivables of MSMEs from corporate buyers through invoice discounting by multiple financiers avoiding any procedural time lag, on acceptance of invoice by corporate buyers. Being a responsible company, it is ensured that payments to MSEs are prompt, and hence only a few MSE vendors uploaded their bills in TReDS portal for processing. The Acceptance/ Rejection of invoices of Goods & Services of the same were ensured for 100% of the invoices within the stipulated timeline in the portal.

Procurement from GeM: Your Company has registered a procurement of Goods & Services worth ₹ 3980.16 crore from GeM Portal (including procurement by your Company Subsidiaries). This excludes the one time highest ever procurement of ₹ 20,402 crore for MDO package of Kerandari Coal Mine.

In FY 2022-23, your Company ranked #1 in terms of value of procurement and ranked #2 in terms of numbers of orders amongst all CPSEs.

Trade Receivables: As on 31st March, 2023, trade receivables amounted to ₹ 31,463.9 crore. Trade receivables include unbilled revenue for the month of March 2023 amounting to ₹ 13,959.59 crore billed, net of advance, to the beneficiaries after 31st March 2023 excluding the unbilled revenue, trade receivables are equivalent to 36 days of Revenue from Operations as on

31st March 2023 in comparison to 45 days of Revenue from Operations as on 31st March 2022.

Expenditure on Research & Development: Your Company understands the importance of Research and development (R&D) in the ever-changing dynamics of the energy sector. Therefore, R&D has been incorporated in the long-term vision and strategy for the benefit of the company and society. The total expenditure on R&D during the financial year stands at ₹ 283.45 crore.

Performance on Stock Exchanges: Your Company has outperformed BSE 500 index during the financial year. The Market Capitalisation on BSE exchange improved during the financial year from ₹ 1,30,856.51 crore to ₹ 1,69,934.07 crore. Your Company has paid a total of ₹ 7,030.08 crore as Dividend to the shareholders. Further Interest and redemption on Bonus debenture paid to shareholders during the financial year was ₹ 2,934.02 crore.

Asset Monetization: The asset monetization target given to your Company is of ₹ 15,000 crore to be achieved by FY25. 15 RE assets of 2,861 MW capacity have been hived-off from your Company's Balance Sheet and outstanding liability of 15 RE assets transferred to NGEL has been repaid by NGEL to your Company to the extent of ₹ 5,000 crore in financial year 2022-23.

Further, your Company coal mines developed under Mine Developer and Operator (MDO) route and awarded to MDO for operation and development of coal Mines have been considered as Asset Monetization under the ambit of National Monetization Pipeline. Hence, MDO contracts awarded for the your Company mines in FY 22 of ₹ 798 crore and in FY 23 of ₹ 2,148 crore towards the award of MDO contract of Chatti Bariatu and Kerandari mines respectively is also considered under the total monetization target of your Company.

Procurement from MSEs: The Government of India has notified the Public Procurement Policy for Micro and Small Enterprises (MSEs) Order, 2012. Your Company has registered a procurement of Goods & Services worth ₹ 4,288.20 crore from MSE vendors out of which procurement from SC/ ST MSE vendors was ₹ 18.43 crore and Woman MSE vendors was ₹ 46.16 crore.

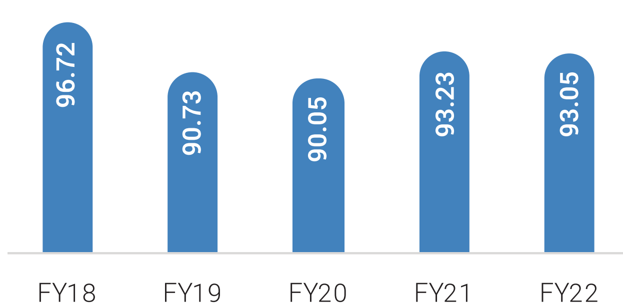
Total Procurement* during the financial year 2022-23 by your Company & its subsidiaries stands at ₹ 10,801.68 crore.

*Excluding Primary fuel, Secondary fuel, steel, cement, project procurement including Renovation & Modernization and procurement from Original Equipment Manufacturer (OEM)/ Original Equipment Supplier (OES)/ Proprietary Article Certificate (PAC) as per Order of the Development Commissioner, Ministry of MSME vide letter No. F. No. 21(9)/2017-MA(Pt-I) (E-17230) dated 31.08.2021.

Symposium/conference on health issues for employees: Occupational health and safety at workplace is one of the prime concerns for your company. The utmost importance is given to provide safe working environment and to inculcate safety awareness among the employees. There were a total of 9 different conferences and symposiums organized on health-related issues and awareness for your Company employees and their families during the financial year.

SAP based Safety Framework: Your Company has implemented a SAP based Safety Framework in all your Company Coal based operating stations during Financial year 2022-23. This ensures implementation of a uniform and evidence-based safety management system across all stations. It triggers auto generated orders for uploading evidence of compliance (in central repository) for mandatory safety activities as per defined set of expectations for different roles and functions. It enables the executives with ease of tracking, monitoring and auditing the safety system of the plants in a seamless manner.

NTPC GoI MoU Score



Your Company has been rated Excellent under GoI MoU for 25 years since 1994-95.

21.28 Proceeding pending under the Insolvency and Bankruptcy Code, 2016

During the year under review, no application was made or any proceeding pending under the Insolvency and Bankruptcy Code, 2016 during the financial year 2022-23.

21.29 One-time Settlement and Valuation

During the financial year 2022-23, no event has taken place that give rise to reporting of details w.r.t. difference between amount of the valuation done at the time of onetime settlement and the valuation done while taking loan from the Banks or Financial Institutions.

21.30 Other Information

Information on Number of Meetings of the Board held during the year, composition of committees of the Board and their meetings held during the year, a chart or a matrix setting out the skills/expertise/ competence of the board of directors, Total fees for all services paid by the listed entity and its subsidiaries, on a consolidated basis, to the statutory auditor and all entities in the network firm/network entity of which the statutory auditor is a part, Details of utilization of funds raised through preferential allotment or qualified institutions placement as specified under Regulation 32(7A), if any, establishment of vigil mechanism/ whistle blower policy and web-links for familiarization/ training policy of directors, Policy on Materiality of Related Party Transactions and also on Dealing with Related Party Transactions and Policy for determining 'Material' Subsidiaries have been provided in the Report on Corporate Governance, which forms part of the Directors Report at Annex-II

21.31 Para on development of risk management policy including therein the elements of risks are given elsewhere in the Annual Report.

21.32 Your Company has followed the applicable Secretarial Standards, i.e. SS-1 and SS-2, relating to 'Meetings of the Board of Directors' and 'General Meetings' respectively.

21.33 No disclosure or reporting is required in respect of the following items as there were no transactions on these items during the year under review:

1. Issue of equity shares with differential rights as to dividend, voting or otherwise.
2. Issue of shares (including sweat equity shares) to employees of the Company under any scheme.

The Particulars of annexure forming part of this report areas are as under:

Particulars	Annexure
Management Discussion & Analysis	I
Report on Corporate Governance	II
Information on conservation of energy, technology absorption and foreign exchange earnings and outgo	III
Statistical information on persons belonging to Scheduled Caste / Scheduled Tribe categories	IV
Information on Differently Abled persons	V
Annual Report on CSR Activities	VI
Project Wise Ash produced and utilized	VII
Disclosure of Related Party Transactions in Form AOC-2	VIII
Business Responsibility & Sustainability Report for the year 2022-23	IX
Secretarial Audit Report in Form MR-3	X

22. Integrated report

Your Company being one of the top companies in the country in terms of market capitalization, has voluntarily provided Integrated Report, which encompasses both financial and non-financial information to enable the Members to take well informed decisions and have a better understanding of the Company's long-term perspective. This Report also touches upon aspects such as organization's strategy, governance framework, performance and prospects of value creation based on the six forms of capital viz. financial capital, manufactured capital, intellectual capital, human capital, social and relationship capital and natural capital.

23. Change in Board of directors & Key Managerial Personnel (KMP)

Shri Shivam Srivastava has been appointed as Director (Fuel) w.e.f. 30th April 2023.

Shri C K Mondol ceased to be Director (Commercial) of the Company w.e.f. 31st January 2023 on attaining the age of his superannuation.

Ms. Nandini Sarkar ceased to be the Company Secretary on 30th September 2022 consequent upon her superannuation. Shri Arun Kumar was appointed as Company Secretary & Compliance Officer w.e.f. 29th October 2022.

The Board wishes to place on record its deep appreciation for the valuable services rendered by Shri C K Mondol during his association with the Company.

The Board welcomes Shri Shivam Srivastava on the Board of your Company.

24. Material changes and commitments affecting financial position between the end of the financial year and date of the report

There have been no material changes and commitments, which affect the financial position of the Company, that have occurred between the end of the financial year to which the financial statements relate and the date of this report.

25. Directors' responsibility statement

As required under Section 134(3)(c) & 134(5) of the Companies Act, 2013, your Directors state that:

1. in the preparation of the annual accounts for the year ended March 31, 2023, the applicable accounting standards had been followed along with proper explanation relating to material departures;
2. the Directors had selected such accounting policies and applied them consistently and made judgments and estimates that are reasonable and prudent so as to give a true and fair view of the state of affairs of the company as at March 31, 2023 and of the profit of the company for the year ended on that date;
3. the Directors had taken proper and sufficient care for the maintenance of adequate accounting records in accordance with the provisions of the Companies Act, 2013 for safeguarding the assets of the company and for preventing and detecting fraud and other irregularities;
4. the Directors had prepared the Annual Accounts on a going concern basis;
5. the Directors had laid down internal financial controls to be followed by the company and that such internal financial controls are adequate and were operating effectively; and
6. the Directors had devised proper systems to ensure compliance with the provisions of all applicable laws and that such systems were adequate and operating effectively.

26. Acknowledgement

The Directors of your Company acknowledge with deep sense of appreciation, the co-operation received from the Government of India, particularly the Prime Minister's Office, Ministry of Power, Ministry of New & Renewable Energy, Ministry of Finance, Ministry of Environment, Forests & Climate Change, Ministry of Coal, Ministry of Petroleum & Natural Gas, Ministry of Railways, Ministry of Corporate Affairs, Ministry of Labour and Employment, the Central Board of Direct Taxes, the Central Board of Indirect Taxes and Customs, GST authorities, Department of Public Enterprises, Department of Investment and Public Asset Management, Central Electricity Authority, Central Electricity Regulatory Commission, Comptroller & Auditor General of India, Appellate Tribunal for Electricity, State Governments, Regional Power Committees, State Utilities, Stock exchanges, Governments of various countries and Office of the Attorney General of India without whose active support, the achievements of the Company during the year under review would not have been possible.

The Directors of your Company also convey their gratitude to the shareholders, various international and Indian Banks and Financial Institutions for the confidence reposed by them in the Company.

The Board also appreciates the contribution of contractors, vendors and consultants in the implementation of various projects of the Company.

We also acknowledge the constructive suggestions received from the Office of Comptroller & Auditor General of India, Statutory Auditors and Cost Auditors.

The Board appreciates the contribution of contractors, vendors and consultants in the implementation of various projects of the Company.

Furthermore, our heartfelt appreciation for the untiring efforts and contributions made by the NTPC's family at all levels to ensure that the company continues to grow and excel.

For and on behalf of the Board of Directors

Sd/-
(Gurdeep Singh)
Chairman & Managing Director

Place: New Delhi
Date: 29th July, 2023

Annexure - I to Directors' Report

Management Discussion and Analysis

ECONOMIC AND SECTOR OUTLOOK

According to provisional estimates of National Income, released by the National Statistical Office of Ministry of Statistics and Programme Implementation, for the financial year 2022-23 the growth rate of GDP is estimated at 7.2%, as compared to 9.1% in the previous year. International Monetary Fund (IMF) has made mild growth projections for most of the economies across the world, however, India has fared better than most of the emerging and developing economies, IMF expects India to grow by 6.1% in the financial year 2023-24 and also by an average rate of 6.1% over the next five years.

Based on the Indices of Industrial Production (IIP), electricity sector has shown a growth of 8.9% over the last fiscal. The growth is also higher when compared to IIP for mining and manufacturing sectors during the same period (5.8% and 4.5% respectively).

Financial year 2022-23 has seen India's power sector achieving new milestones and meeting the aspirations of a rapidly growing nation. While peak demand touched a new high of ~216 GW, gross generation crossed 1600 BUs for the first time. With the addition of more than 15 GW of RE capacity during the year, the installed RE capacity(including large Hydro) crossed 40% of the total installed capacity. Amidst all these developments, universal access to affordable power remains the primary goal for the Power sector.

However, to meet this goal, the biggest challenge is restoration of the financial health of the DISCOMs across the country. In this direction, the implementation of the Revamped Distribution Sector Scheme (RDSS) launched by Government of India (GOI) in the financial year 2021-22 has gathered pace and its positive impact can be seen with the reduction of the ACS-ARR gap. However, further efforts are required for modernisation of the distribution sector through rapid adoption of smart grid technologies and digitalization of processes & customer interface. Additionally, ever increasing share of renewable energy into the grid poses a challenge for grid stability. To meet these challenges and move ahead with the decarbonization of the economy, Government of India and Electricity Regulator has taken several initiatives in the financial year 2022-23, key among them are:

Power Sector Reforms

- Indian Electricity Grid Code 2023
- General Network Access Regulations 2022
- Energy Conservation Act (Amendment) 2022, (Introduction of Carbon Markets),
- Electricity (Late Payment Surcharge and Related Matters) Rules, 2022

Renewable Energy Promotion

With a commitment to increase non-fossil fuel-based energy capacity to 500 GW by 2030, the following initiatives have been taken to promote RE capacity addition:

- Green Energy Open Access Rules
- National Green Hydrogen Mission
- Revised Renewable Purchase Obligation trajectory including energy storage obligations
- Introduction of Renewable Generation Obligation
- Bidding Guidelines for Battery Energy Storage System
- Performance Link Incentive Tranche-II for Solar Manufacturing
- Guidelines for Promotion of Pump storage projects
- Waiver of ISTS charges for RE and allied activities
- CEA (Flexible Operation of TPP) Regulations, 2023
- Electricity (Amendment) Rules, 2022 for creation of central pool of ISTS RE sources
- Scheme for flexibility in generation through bundling with RE

INDUSTRY STRUCTURE AND DEVELOPMENTS

The power sector is a key enabler of India's economic growth. Electricity contributes ~21% to the final energy consumption of India. The sector with its three pillars: Generation, Transmission, and Distribution, is crucial to India's infrastructure and economic growth. The global stature of the Indian Power Sector is depicted well by its positioning in terms of generation capacity. India is ranked 3rd in the World in terms of electricity generation, 4th in installed renewable energy capacity, 5th and 6th

in installed Solar and Hydro capacity respectively as reported by international agencies like IEA, Statista, IRENA, etc.

The achievements and various issues/ challenges faced by the Power Sector and key initiatives taken by the Ministry of Power are discussed in the following paragraphs.

SNAPSHOT 2022-23

- Gross generation of the country (including imports from Bhutan) increased from 1492 BUs in the previous year to 1624 BUs, registering a growth of about 9%.
- Generation from Renewable sources increased by about 19% from 171 BUs to 203 BUs, (excluding Large Hydro) while generation from conventional sources (Thermal, Nuclear and Large Hydroexcluding Bhutan import) increased by about 8% from 1321 BUs to 1421 BUs.
- Conventional Capacity addition was 1580 MW during the financial year 2022-23 as compared to 4878 MW during the previous year.
- With the addition of 15402 MW, the renewable energy capacity has reached 172 GW (including large hydro) as at 31 March 2023, an increase of about 10% over the previous year.
- With an addition of 14625 Ckms of transmission lines, total installed transmission capacity reached 471341 Ckms as on 31 March 2023.
- 75902 MVA of transformer capacity was added during the year as against 78982 MVA in the previous year.
- PLF of coal based stations increased to 64.21% in the financial year 2022-23 from 58.74% in the financial year 2021-22.
- The energy deficit stands at 0.5% marginally higher than 0.4% in previous year however peak demand deficit has increased from 1.2% to 4.0%, on YoY basis.
- Peak demand met stands at 211856 MW and maximum energy demand met stood at 4722 MUs, both achieved on 10 June 2022.

Existing Installed Capacity

The total installed capacity in the country as on 31 March 2023 was more than 416 GW (including renewables) with the Private Sector contributing 51% of the installed capacity followed by the State Sector with 25% share and the Central Sector with 24% share.

Sector	Total Capacity (MW)	% Share
Central	1,00,055	24%
State	1,05,726	25%
Private	2,10,278	51%
Total	**4,16,059**	**100%**

(Source: Central Electricity Authority)

Mode-wise installed capacity in the country as of 31 March 2023 is as under:

Mode	Total Capacity (MW)	% Share
Thermal	2,37,269	57%
Nuclear	6,780	2%
Hydro	46,850	11%
RES (Renewables)	1,25,160	30%
Total	**416,059**	**100%**

(Source: Central Electricity Authority)

Capacity Utilization and Generation

Sector-wise PLF in % (Coal based stations)

Sector	2022-23	2021-22
Central	75.00	69.33
State	62.44	55.08
Private	68.45	66.95
Private IPP	55.79	52.46
All India	**64.21**	**58.74**

(Source: Central Electricity Authority)

Generation

Sector-wise and fuel-wise break-up of conventional generation (in BUs) for the financial year 2022-23 is detailed as under:

Sector	Thermal	Hydro	Nuclear	Bhutan Import	Total
Central	456	63	46	--	565
State	379	83	--	--	462
Private	371	16	--	--	387
Bhutan Import	--	--	--	7	7
Total	**1206**	**162**	**46**	**7**	**1421**

(Source: Central Electricity Authority)

Sector-wise share in Installed Capacity (conventional) vis-a-vis share in Generation (conventional):

Sector	Share in installed capacity (%)	Share in generation (%)
Central	24%	40%
State	25%	33%
Private	51%	27%

(Source: Central Electricity Authority)

Central sector generation utilities have performed better as compared to those of State and Private sector in terms of share in generation with respect to installed capacity, as well as Plant Load Factor.

Electricity Consumption

The per capita consumption of power in India has reached 1255 units in the financial year 2021-22. It is still well below 50% of the global average, providing enough room for growth. The total electricity requirement in India increased from 1380 BUs in the financial year 2021-22 to 1512 BUs in the financial year2022-23 growing by ~10%.

Major end-users of power are broadly classified into 6 categories: Agricultural, Commercial, Domestic, Industrial, Traction, and others. Their shares of electricity consumption, during the financial year 2021-22, were approximately 17.7%, 8.3%, 25.7%, 41.1%, 1.5% and 5.9%, respectively. During the financial year 2022-23, although absolute consumption of all the sectors has increased, the share of agriculture and domestic consumption in the total consumption has increased whereas for other sectors it has decreased slightly.

Transmission

The total inter-regional transmission capacity of the country has increased to 112250 MW as on 31 March 2023. This augmentation of the national grid is essential for supporting the higher injection of renewable energy into the grid for the transfer of power from RE-rich states to other states.

Further, to meet the power evacuation requirement of 500 GW non-fossil fuel-based capacity planned by 2030, connectivity of RE generators to the load centres through Inter-State Transmission System (ISTS), is essential. It is estimated that the length of the transmission lines and sub-station capacity required under ISTS for integration of additional wind and solar capacity by 2030 will be 50890 Ckms and 433575 MVA respectively.

Distribution

Distribution is the key link in realizing the Government of India's vision of supplying reliable 24x7 Power for all. In this regard, the financial health of distribution companies is of prime importance, enabling them to efficiently discharge their functions and responsibilities. However, their poor financial health has remained a matter of concern. To reverse this trend, reduction of AT&C losses and ACS (Average Cost of Supply) - ARR (Average Revenue Realization) gap are critical factors. With these intentions, Revamped Distribution Sector Scheme (RDSS) has been launched to reinvigorate the DISCOMs. Important objectives of RDSS are:

- Reduction of AT&C losses to pan-India levels of 12-15% by the financial year 2024-25.
- Reduction of ACS-ARR gap to zero by the financial year 2024-25.
- Improvement in the quality, reliability, and affordability of power supply to consumers through a financially sustainable and operationally efficient distribution sector.

This results-linked scheme, launched in July 2021, has pushed the utilities and states to address performance gaps, and chart action plans to avail the benefits worth ₹300,000 crore. The outlay includes an estimated Government Budgetary Support (GBS) of ₹97,631 crore.

The Scheme is comprised of two components:

- Part-A: Financial support for Prepaid Smart Metering, System Metering, and Up-gradation of Distribution Infrastructure; and
- Part-B: Training and capacity building and other enabling and supporting activities.

Under this scheme Action Plans for 46 DISCOMs (28 States/UTs) have been approved where ~20.46 crore pre-paid smart consumer meters, ~54 Lakh smart DT meters and ~1.98 Lakh smart feeder meters have been sanctioned.

The impact of these initiatives is reflected in the finding of the 11th Integrated Rating & Ranking of Power Distribution Utilities. The key indicators of the improvement of DISCOMs performances are as below:

- In the financial year 2021-22, performance of 39 DISCOMs have improvement over the last fiscal.
- While total sectoral debt rose 24% to ₹6.20 lakh crore till the financial year 2021-22, the pace of debt addition slowed considerably. Debt increased by ₹34,000 crore in the financial year 2021-22, versus ₹85,500 crore in the financial year 2020-21.

- Sectoral absolute cash-adjusted gap (between expenditure and income) dropped substantially to ₹53,000 crore in the financial year 2021-22 from ₹97,000 crore in the financial year 2019-20.
- This was driven by significant improvement in the ACS-ARR gap, which captures the cash-adjusted gap per unit. The power distribution entities were recording a loss of 79 paise/unit in the financial year 2019-20, which reduced to 40 paise/unit in the financial year 2021-22.
- AT&C losses have improved to 16.5% in the financial year 2021-22, significantly lower than 21.5% in the financial year 2020-21.

Power Trading

In India, power is transacted largely through long-term Power Purchase Agreements (PPA) entered, between Generating companies and the distribution utilities. A small portion is transacted through various short-term (contract period<1 Year) mechanisms. This includes Day Ahead Market and Real-Time Market (RTM), followed by bilateral contracts (through traders, term-ahead contracts on power exchanges, and directly between DISCOMs) and through Deviation Settlement Mechanism (DSM).

Around 90% of the power generated in the country is transacted through the long-term PPA route while the remaining power is transacted through short-term trading mechanisms.

KEY INITIATIVES/REFORMS & REGULATORY CHANGES IN THE POWER SECTOR

SECTORAL REFORMS

1. **Electricity (Amendment) Bill, 2022**

   The Union Power Ministry on 8 August 2022 introduced Electricity (Amendment) Bill, 2022.It has been referred to the Standing Committee on Energy for a detailed examination. Key points of the proposed amendment bill are given below:

   - **Non-discriminatory open access:** DISCOMs owning network in a particular area of supply shall provide non-discriminatory open access to other licensees (Section-42).
   - **Sharing of power and associated costs** from existing power purchase agreements (PPAs) among all DISCOMs in the area of supply (Section-60).
   - **Cross subsidy balancing fund:** The State Government will set up cross subsidy balancing fund for depositing surplus of cross-subsidy from distribution licensee and for providing any deficit with another distribution licensee in same area of supply (Section-60).
   - **Empowerment of National Load Despatch Centre** for ensuring safety and security of the grid, and for the economic and efficient operation of the power system (Section-26).
   - **Payment security mechanism** to ensure timely payment of dues (Section-28).
   - **Ceiling tariff and minimum tariff:** The Appropriate Commission will determine maximum ceiling tariff and minimum tariff for retail sale of electricity (Section-62).
   - **Suo-motu determination of tariff** by the Appropriate Commission, thereby reducing the time required for tariff determination and provision for interim tariff (Section-64).
   - **Penalty Imposition on** the obligated entities for shortfall in meeting the RPO (Section 142).

2. **Electricity (Late Payment Surcharge and related matters) Rules, 2022**

   Issued in June 2022, these rules supersede the earlier Late Payment Surcharge Rules 2021. Under these rules, outstanding past dues including the Late Payment Surcharge from the effective date of scheme i.e., 3 June 2022, have been rescheduled and are being paid in instalment over 12 to 48 months, based on quantum of past dues.

   Rules have provision for regulation of power supply by generators, in case of non-maintenance of Payment Security Mechanism (PSM) by DISCOMs. The short-term open access of the DISCOMs to power exchange will also be regulated.

3. **CEA (Flexible Operation of Coal based Thermal Power Generating Units) Regulations, 2023**

   Notified on 25 January 2023, these regulations shall apply to all coal based thermal power generating units owned or under control of the Central Government, State Governments or owned by any private company, connected with the grid and to the load despatch centre. As per the regulations all coal based thermal power plants should be capable of providing flexible operation with minimum power level of 40% as per CEA phasing plan.

   Further, coal-based units shall achieve ramp rate capability of minimum 3% per minute for their operation between 70% to 100% of maximum continuous power rating, ramp rate capability of minimum 2% per minute for their operation between 55% to 70% of maximum continuous power rating and ramp rate capability of minimum 1% per minute for their operation between 40% to 55% of maximum continuous power rating in a phased manner as specified in these regulations.

4. CEA Scheme for National Level Optimization of surplus Generation Capacity

Applicable to Central Generating Stations (CGSs), Inter-State Generating Stations (ISGS)/IPP, Surplus power with the States/Distribution companies and covering generators with tariff determined under Section 62 & Section 63 of The Electricity Act, 2003. The salient features of the scheme issued in November 2022 are:

- Original beneficiaries to submit willingness in advance for surplus power & any other Discom to requisition to avail such power.
- Buyer Discom shall pay as per regulated tariff for availing such surplus power.
- After checking availability of transmission corridor, CEA shall allocate the power to new beneficiary through portal.
- Beneficiaries shall open the Payment Security Mechanism (PSM) and Generating Station will record the acceptance of such PSM.
- Scheduling shall be as per Grid Code and Payment settlement will be as per Regional Energy Account.

5. Indian Electricity Grid Code Regulations 2023

The salient features of the regulations notified on 29 May 2023, are:

- National Reference Frequency of 50.000 Hz (Resolution of 0.001 Hz against existing 0.01 Hz).
- Compensation for generation below technical minimum level shall be either as per the mechanism in the Tariff Regulations or in terms of the contract entered into with buyers.
- Technical minimum/Minimum Turndown Level for a unit of a regional entity thermal generating station shall be 55% of MCR or as per CEA regulations whichever is lower.
- If a unit is taken under reserve shut down by a GENCO, it shall fulfil its obligation to supply to the beneficiaries who made requisition prior to unit going under shutdown.
- Merit order scheduling principles introduced
  - ✓ While furnishing block-wise requisition on behalf of the DISCOMS, SLDC shall duly factor in merit order of the ISGS with which it has contracts.
  - ✓ RE stations shall be requisitioned first followed by other generating stations as per merit order, subject to technical constraints.

6. CERC (Sharing of Inter-state Transmission Charges and Losses) (First Amendment) Regulations 2023:

Notified inFebruary 2023 (Effective date to be notified), the Regulations amended the various clauses of existing CERC (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 for incorporating newly introduced concept of GNA (General Network Access) and TGNA (Temporary GNA).

7. CERC Regulation for Connectivity and General Network Access to ISTS system 2022: Notified in July 2022 (partly effective from 5 April 2023). The salient features of the regulations are:

- Introduction of concept of GNA (General Network Access) and TGNA (Temporary-GNA) instead of existing mechanism of Long-Term Access (LTA), Medium Term Open Access (MTOA) & Short-Term Open Access (STOA).
- The new generators connected to the grid shall be granted deemed GNA equal to their installed capacity.
- In case of existing stations prior to 2009, wherein LTA application was not made,deemed GNA has been granted equal to their installed capacity.
- In case of stations where LTA application was made as per 2009 LTA Regulations,deemed GNA equal to LTA quantum has been granted.

8. CERC (Deviation Settlement Mechanism and Related Matters) Regulations, 2022 Regulations came into force with effect from5 December 2022 and were subsequently amended vide CERC order dated 6 February 2023. The salient features of these regulations are:

- Deviation rate is maximum of Area Clearing Price (ACP) of the DAM/RTM/Average Ancillary Service Charge.
- Deviation volume limit increased from (2%) to (10% or 100 MW, whichever is less).
- When Freq.<49.95 Hz & Freq.>50.03 Hz, deviation volume limits removed.
- In case of forced outage, the DSM charges shall be at the rate of Energy Charge Rate (ECR).
- DSM charges for infirm power shall be zero except when infirm power has been scheduled.
- DSM charges for drawl of start-up power before COD or APC during shutdown shall be payable at the ECR or contract rate. In absence of ECR or contract rate, the weighted average ACP of the DAM of time block shall be charged.

FUEL RELATED REFORMS

1. **MOP modifies coal allocation methodology under SHAKTI Policy**

   On 6 April 2022, MOP modified methodology for allocation of coal as per SHAKTI Policy. According to the modification, all power plants which do not have PPAs, shall be allowed to participate in the auction of coal linkage for short term period (maximum up-to one year). Auction of coal linkages will be carried out under 3 separate windows of SHAKTI policy for delivery periods of 3 months, 6 months & 12 months.

2. **CERC order on Blending of imported coal with domestic coal to mitigate the domestic coal shortage**

   On 26 July 2022, CERC issued an order on blending of imported coal with domestic coal up to 30%, subject to technical feasibility, without requirement of prior consultation with beneficiaries.

3. **Empanelment of Third-party sampling agency in addition to CIMFR**

   To have additional third-party agencies other than CIMFR, MOP has empanelled an agency for sampling and testing of coal at the loading end, with the choice of Coal Consumer for taking services from empanelled agencies. Further, second round of empanelment is also underway and some more agencies are expected to be empanelled.

4. **Notification for Agro-residue Utilization by TPP Rules, 2023**

   Notified on 16 February 2023, these Rules are applicable to all Thermal Power Plants located in the National Capital Region (NCR) and adjoining areas. According to these rules, all coal based thermal power plants, on an annual basis, shall mandatorily use minimum 5% blend of pellets/ briquettes made of crop residue along with coal. Failing to do so, will lead to levy of Environmental Compensation at the rate specified in the rules from the financial year 2024-25.

ENVIRONMENTAL REFORMS

1. **Environment (Protection) Second Amendment Rules, 2022**

   As per the new notification by MOEF & CC dated 5 September 2022, the deadline for compliance for SOx and other parameters has been extended by two years for non-retiring plants, while for retiring plant the deadline has been extended upto 31 December 2027.

2. **Amendment in implementation of the ash utilisation notification dated 30 December 2022**

   According to this MOEF & CC notification, areas where fly ash is stored can also be reclaimed by setting up solar and wind power plants, along with plantations.

RENEWABLE ENERGY RELATED REFORMS

1. **Renewable Purchase Obligation (RPO) and Energy Storage Obligation Trajectory till 2029-30**

   Issued on 22 July 2022, the trajectory has been progressively increased from the financial year 2022-23 to the financial year 2029-30, as mentioned below

   - Wind RPO from 0.81% to 6.94%
   - HPO will increase from 0.35% to 2.82%
   - Other RPO from 23.44% to 33.57%
   - Energy Storage Obligation from 1% to 4%

   The Energy Storage Obligation (ESO) will be calculated in energy terms, as a proportion of total electricity consumption and will be satisfied only when at least 85% of total energy stored is obtained from RE sources each year.

2. **MNRE Draft "National Repowering Policy for Wind Power Projects - 2022"**

   With an objective for optimal utilization of Wind energy by maximizing energy yield/sq.km of area & utilizing latest onshore Wind turbine technologies, MNRE issued Draft "National Repowering Policy for Wind Power Projects - 2022" on 17 October 2022.

Following Wind turbines are eligible for repowering under the policy:

- Wind turbines of rated capacity below 2 MW
- Wind turbines which have completed their design life
- Set of existing Wind turbines over an area eligible for Repowering provided Project area is geographically contiguous land area.

All turbines considered for repowering connected to single PSS & >90% of total capacity of project should have completed its design life. Capacity of repowered Wind turbines should be enhanced by at least 1.5 times of its aggregate capacity of old turbines.

3. Electricity (Promoting Renewable Energy through Green Energy Open Access) Rules, 2022

On 6 June 2022, MOP issued Electricity (Promoting Renewable Energy through Green Energy Open Access) Rules, 2022. Under the rules, Open Access limit has been reduced from 1 MW to 100 kW, which paves the way for small consumers to purchase RE and there is no limit for Captive Consumers.

Any Consumer can demand supply of green power from DISCOMs, for a minimum period of 1 year for which approval shall be granted in 15 days or else it will be deemed to have been approved. The obligated entity can also meet its RPO by purchasing green hydrogen or green ammonia.

Further in the Amendment dated 23 May 2023, the limit of 100kW or more can be through a single connection or through multiple connections, located in same electricity division of a distribution license. Exemption from cross subsidy surcharge shall be applicable in case of electricity produced from offshore wind projects, which are commissioned up to December 2032 and supplied to the Open Access Consumers.

4. CERC issues final Renewable Energy Certificates Regulations 2022

CERC issued CERC (Terms and Conditions for Renewable Energy Certificates for Renewable Energy Generation) Regulations, 2022. Amendment in the extant REC mechanism was done to align it with the emerging changes in the power sector. As per these regulations, RE generating station and Captive Power Plants, Distribution licensee, and Open Access consumers will be eligible for issuance of Certificates under certain conditions. A DISCOM or an Open Access consumer, which purchases RE more than its RPO target will also be eligible for the issuance of Certificates.

5. Waiver of ISTS Charges and Losses

MOP vide order dated 2 December 2022, has extended the waiver of ISTS charges on the transmission of power from new hydro power projects, for which construction work is awarded and PPA is signed on or before 30 June 2025. ISTS charges on transmission of electricity generated from new hydro-power projects are waived for 18 years from the date of commissioning.

ISTS charges shall not be levied on renewable energy used for production of green hydrogen and its derivatives such as green ammonia. This exemption is limited for those green hydrogen units which are commissioned until 31 December 2030. The waiver shall apply for a period of 25 years from the date of commissioning,

6. Green Hydrogen Mission

India has a large potential market for green hydrogen, in energy intensive sectors including petrochemicals, transportation, power generation, and agricultural/industrial applications.To capitalize on this potential, GOI approved the National Green Hydrogen Mission, with the goal of developing green hydrogen production capacity of 5 million metric tonnes (MMT) and an associated RE capacity addition of about 125 GW by 2030. Total investments expected are over ₹8,00,000 crore providing jobs and boosting economic growth.

7. Renewable Generation Obligation

Renewable Generation Obligation (RGO) has been introduced vide MOP order dated27 February 2023, according to which any generating company establishing a coal/lignite-based thermal generating station and having the Commercial Operation Date (COD) of the project on or after 1 April 2023 shall be required to establish renewable energy generating capacity of minimum 40% of thermal capacity or procure and supply renewable energy equivalent to such capacity.

8. Promotion of Development of Pumped Storage Projects (PSPs)

Issued by MOP on 10 April 2023, the guidelines broadly encompass the methodologies for the allotment of PSPs and standardizing time frame for project execution. Policy support guidelines for suitable monetisation of PSP including reimbursement of SGST on PSP Component, exemption of stamp duty & registration fees, waiver of transmission charges and priority in environmental clearance for PSPs have been provided.

Subsequently, MOEF & CC has exempted all pumped storage hydropower (PSHP) projects from environment impact assessment regime, citing 'lesser' impact on the environment and their 'critical' role in ensuring India's growing energy storage and infrastructure development needs.

OPPORTUNITIES AND THREATS/CHALLENGES

OPPORTUNITIES

India assumed the Presidency of the G20 in 2023 with the motto of 'One Earth, One Family, One Future'. To achieve this, with equity and climate justice, India has updated Nationally Determined Contributions (NDC). At the heart of India's vision of a safe planet is the Mantra - Lifestyle for Environment, that Prime Minister of India has set forth in our Statement at COP-27.

'To put forward and further propagate a healthy and sustainable way of living based on traditions and values of conservation and moderation, including through a mass movement for 'LIFE'- 'Lifestyle for Environment' as a key to combating climate change.'

Key Nationally Determined Commitments (NDCs) announced by India are:

- India will reduce the carbon intensity of its economy by 45% by 2030 from the levels of 2005.
- India will achieve about 50% cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030.
- To create an additional carbon sink of 2.5 to 3 billion tons of CO2 equivalent through additional forest and tree cover by 2030.
- India will achieve the target of Net-Zero by the year 2070.

While the first two NDCs have put further emphasis on expediting capacity addition in Renewables, the net zero target provides opportunity for decarbonization and electrification of sector like Transportation, Steel, Aviation, Cement and Agriculture. This will provide further growth impetus to the power sector which is already registering robust growth with every passing year.

This scenario coupled with the supportive policy framework provides opportunities in Renewable energy sector, green chemicals and fuels, E-mobility, Power trading, and new business development domestically as well as internationally, as elaborated below:

1. **Renewable Energy**

As India targets to achieve 500 GW of non-fossil fuel-based capacity by 2030, some of the key opportunities in the renewable energy sector are as below.

a. Energy Security and Independence: Expanding renewable energy can reduce India's dependence on fossil fuel imports and enhance energy security. This diversification of the energy mix will help to mitigate the impact of global fuel price fluctuations and geopolitical uncertainties.

b. Decentralized Power Generation: Renewable energy allows for decentralized power generation, which can benefit remote and rural areas with limited access to the grid. Off-grid and mini-grid solutions using renewable sources can provide clean energy access to under-served communities.

c. Innovation and Technology Advancements: Continued research and development efforts in renewable energy technologies offer opportunities for innovation, efficiency improvements, and cost reductions. Advancements in areas like solar photovoltaics, energy storage, and smart grid technologies can further enhance the renewable energy sector.

d. Green Hydrogen: The green hydrogen initiatives are a step toward decarbonization, and various pilot projects are being taken up in domains like mobility, chemicals, energy storage, and natural gas blending. The green chemicals cover green methanol as well as green ammonia. Green hydrogen shall also be used in the future as feedstock for petrochemicals, steel making, and different chemical processes. For making green hydrogen, RE power is essential in bulk quantity.

NTPC is taking up large solar, wind, and hybrid projects all over the country and developing Gigawatt-scale renewable energy parks in different states under the Ultra Mega Renewable Energy Power Park (UMREPP) scheme of the Government of India.

As on 31 March 2023, NTPC Group has a commissioned RE capacity of 3204 MW. The projects developed under own capacity addition mode and through developer mode are described below:

✓ **Projects under Own Capacity Addition**

Commissioned RE Projects: 3204 MW. It covers solar (ground and floating), wind, and small hydro installations spread over the country.

Projects Under Implementation: RE capacity under various stages of implementation totals 4668 MW.

✓ **Developer Mode Projects**

MNRE has accorded its approval to NTPC to act as a designated agency for the issue of tenders for setting up renewable power projects covering wind and solar under developer mode. Under this, 5083 MW of RE projects have been commissioned and 890 MW of RE projects are under implementation.

2. **Carbon Capture and Utilization, Green Chemicals and Green Fuels**

Your Company is exploring opportunities in the domain of carbon capture and utilization, green hydrogen, green fuel, and green chemicals. Salient projects in these areas are listed below:

a. **Carbon Capture & Utilization (CCU)**

The projects being undertaken under CCU are as follows:

- Setting up of 10 TPD Flue Gas CO2 to Methanol demonstration plant at NTPC Vindhyachal.
- Development of Indigenous Catalyst for hydrogenation of CO2 to Methanol by NETRA.
- Setting up of 10 TPD Flue gas CO2 to Gen-4 Ethanol demonstration plant at NTPC Lara

b. **Green Hydrogen Technology**

The projects being undertaken for producing green hydrogen are as follows:

- Development of Sea Water Electrolyser
- Development of Metal Hydride based H2 compression and storage
- Set up of 25 kWe Green Hydrogen Grid at NETRA
- India's first Green Hydrogen Blending facility on pilot basis to blend green hydrogen in Piped Natural Gas (PNG) network commissioned at Kawas, Gujarat.
- India's first Green Hydrogen Mobility project with design green hydrogen production capacity of 80 kg/day, is under implementation at Leh, Ladakh.
- Green Hydrogen fuelling station being setup at Badarpur, Delhi with a capacity of 260 kg/day and 5 numbers of FCEV buses for Intercity travel between Delhi to Agra and back.

c. **Water Technology**

The projects being undertaken for producing clean water from wastewater and to subsequently produce hydrogen are as follows:

- Development of 24 TPD Electrodialysis Reversal Project
- Set up of 240 TPD Non -Thermal Forward Osmosis plant

3. **E-Mobility**

Your Company envisions to provide zero emission mobility solutions for public transport which includes providing vehicles based on various technologies. Your Company's subsidiary NVVN has supplied 40 E-buses to the Department of Transport Andaman & Nicobar and 90 E-buses to Bengaluru Metropolitan Transport Corporation. The buses in A&N are under commercial operation for last 2 years and have logged approximately 3 million kms. Buses in Bangalore are under commercial operation and have travelled more than 5 million kms till 31 March 2023. NVVN also plans to provide E-buses and E- cars to various projects of NTPC.

4. **Cross Border Power Trading**

The guidelines issued by MOP, and CERC regulation for cross-border trading of power have opened opportunities to export power to neighbouring countries. Presently, India exports electricity to Nepal, Bangladesh, and Myanmar. India imports power from Nepal and Bhutan but exports power during the lean hydro season.

NVVN has been assigned the role of Nodal Agency for cross-border trading of power by GOI. NVVN has also been nominated as Settlement Nodal Agency (SNA) for the settlement of Grid operation-related charges with neighbouring countries, Bangladesh, Bhutan, Nepal, and Myanmar. Following this, NVVN has signed an SNA agreement with Nepal Electricity Authority (NEA) and with Druk Green Power Corporation Bhutan. SNA agreement with Bangladesh Power Development Board (BPDB) shall be signed shortly.

NVVN has commenced the CrossBorder Electricity Trade (CBET) in power exchange platform by supplying power to Nepal Electricity Authority through day ahead market platform of Power Exchange. This is a first of its kind initiative that helped NVVN to further expand its cross-border portfolio. NEA through NVVN had started export of hydro power to India through its power exchange market.

NVVN has signed various Power Purchase Agreements with Bangladesh and Nepal aggregating to 742 MW and up to 200 MW respectively. NVVN is exploring possibilities for sale of power from NEA hydro power stations to BPDB through Indian Grid. Also, the agreement to supply 192 MW of power to BPDB through Tripura has been renewed till March 2026.

5. **International Business**

Your Company, building on the proven project management and O&M experience with an expanding power generation portfolio, has made a global presence in various countries as below:

a. **Project Development**

Bangladesh-India Friendship Power Company Private Limited: This 50:50 joint venture company formed with the BPDB, is constructing a coal-based power plant of 1320 MW capacity at Rampal (Khulna) christened as 'Maitree Super Thermal Power Plant'. The first unit of 660 MW is under commercial operation since 23 December 2022. Second unit has also been synchronised on 28 June 2023.

Trincomalee Power Company Limited (TPCL): A 50:50 joint venture with Ceylon Electricity Board, Sri Lanka was formed to undertake the development, construction, establishment, operation, and maintenance of an electricity generating station in Trincomalee in Sri Lanka. TPCL shall develop a solar power project for 50 MW in Phase I and 85 MW in Phase II at Sampur. The Joint Venture & Shareholders' Agreement (JVSHA) has been signed. IEE (Initial Environment Examination) report has been submitted to CEA, Sri Lanka for further processing of Environment Clearance.

b. **PMC consultancy work with International Solar Alliance**

Your Company is associated as a corporate partner with International Solar Alliance (ISA) and has been awarded the following Project Management Consultancy (PMC) jobs abroad:

ISA Solar Park assignment (ISA Program 06)

Appointed as PMC consultant for implementation of 6520 MW Projects in various countries, NTPC's mandate is to structure projects, tendering for selection of developers on behalf of the countries and oversee the construction activities till successful commissioning. More countries are being approached for assignments on similar lines.

Country	PMC Capacity
Togo	250 MW
Mali	500 MW
Malawi	100 MW
Niger	50 MW
Cuba	1150 MW
Paraguay	500 MW
Ethiopia	410 MW
Zambia	400 MW
Venezuela	2000 MW
Guinea Bissau	60 MW
DR Congo	1000 MW
Nicaragua	100 MW
Total	**6520 MW**

Your Company has been awarded PMC assignment for setting up 100 kWp Rooftop Solar PV Projects by Governments of Ethiopia and Sao Tome and Principe. The projects are being funded by ISA.Your Company is also carrying out PMC assignments for setting up solar demonstration projects in 11 ISA member countries viz. Seychelles, Sudan, Senegal, Djibouti, Cuba, Ethiopia, Suriname, Burundi, Mozambique, Malawi & Uganda. The project developers have been identified and the execution activities are in progress.

Your Company has recently signed a tripartite letter of intent with African Development Bank (AfDB) and International Solar Alliance to enhance the bankability of the projects under ISA Program 06 in Africa for which NTPC is acting as PMC.

c. **Consultancy assignments secured through competitive bidding**

Your Company has secured several consultancy assignments through competitive bidding which are in various stages of development.

- **Myanmar**: Successfully completed a Mini Grid project under Rural Electrification in Rakhine state and a project on promotion of solar-based technologies in the agriculture sector of Myanmar along with UNDP.

- **Mauritius**: Execution of a consultancy assignment for 2 MW Floating Solar PV Plant at Tamarind Falls Reservoir in Mauritius by CEB Mauritius. 1st phase of the assignment has been completed and PMC services for 2nd phase are to be provided.
- **Zambia**: Secured a consultancy assignment for preparation of Feasibility Report for ground mounted Solar PV project for Surya Energy Limited Zambia in December 2022.
- **Eswatini**: Organization Efficiency Study of Eswatini Electricity Company (EEC), Kingdom of Eswatini
- **Oman**: Technical support services for 7 MW A'Saffa Food SAOG Solar PV Plant in Oman. Training program on Integrating Solar Energy in the existing and developing new Schemes/ Programmes for ISA member countries.

d. International MOU

Your Company signed an MOU with Moroccan Agency for Sustainable Energy (MASEN), in July 2022 for collaboration in power sector in Morocco and other African countries. Your Company is also exploring business opportunities through MOUs signed with other international power sector entities of Europe and Africa etc.

e. Training and Capability Building Programs

Your Company is actively engaged with stakeholders across the globe to run capability building programs for the power sector officials. Such training programs are strategic in nature as these shall not only create increased outreach and goodwill for your Company but also may generate various business prospects through people-to-people networking.

Recently, your Company has provided training to 39 Power sector professionals from Myanmar in India under ITEC program of GOI. More such trainings are being discussed with Ministry of External Affairs under various programs of GOI for power sector professionals of several countries.

f. Other Initiatives

Further, your Company has been registered as an overseas company in Kenya and is looking for business opportunities through local representatives in Dubai in the Middle East and Togo in Africa. Your Company is also exploring investment opportunities in Renewable Energy and consultancy opportunities in the areas of PMC, O&M services, R&M of power plants, capability building, etc. in the regions such as the Middle East, Southeast Asia, CIS regions, Latin America, and Africa.

Your Company is taking important initiatives for increasing global presence of Indian CPSEs and organised the CPSE Meet in joint association with Ministry of External Affairs (MEA), being chaired by Secretary (ER), MEA and attended by CMDs and Directors of India's leading CPSEs.

6. Inorganic growth opportunities

Jhabua Power Ltd. (JPL) became your Company's first acquisition through the NCLT route. NCLT approved the Resolution plan submitted by NTPC on 6 July 2022 and NTPC implemented the Resolution Plan on 5 September 2022. Jhabua Power Limited is now 50:50 JV Company of NTPC and Secured Financial Creditors and has one operational unit of 600 MW in Madhya Pradesh.

7. Efficiency improvement

Your Company has laid major stress on the efficient utilization of resources and the use of technological advancements for improving energy efficiency.Till March 2023, your Company along with its JVs and Subsidiaries, has implemented 18,880 MW capacity based on Super Critical technology. Your Company has commissioned the country's first two Ultra-Super Critical (USC) power units with a capacity of 2x660 MW at Khargone, while at Telangana it is in the final stage of commissioning the units. Your Company aims to enhance the overall efficiency of its coal plants, thereby achieving a substantial reduction in CO2 emissions. Adoption of USC parameters shall result in a reduction of CO2 emission (as also others like NOx and SOx) by around 8% when compared to conventional subcritical power plants for every unit of electricity generated.

Further, for reduction of CO2 emissions, Torrefied biomass co-firing up to 20% and provision of Carbon Capture and Utilization from 10% to 20% is being kept in the future thermal power projects.

Air Cooled Condenser (ACC) System has been adopted at North Karanpura and Patratu STPP, this will bring a significant reduction in specific water consumption for the respective projects. Unit#1 at North Karanpura STPP has been successfully commissioned with ACC in March 2023. Adoption of ACC for such large-scale power plant is a unique initiative towards water saving.

IE4 efficiency class motors (super premium efficiency class) for ratings up to and including 50 KW have been included in technical specifications for all future NTPC projects. All other ratings of LT motors are IE3 efficiency class (premium efficiency class).

8. Consultancy

NTPC's wealth of knowledge, experience, expertise, and brand image in the entire value chain of power generation business positions us as the preferred Consultant for providing consultancy services in power generation and related areas. NTPC Consultancy offers comprehensive services in conventional and renewable power generation, providing value-added solutions tailored to the specific needs of its clients within the power sector and beyond.

NTPC Consultancy provides a range of offerings, including:

- **Owner's Engineer Services**

  NTPC Offers concept to commissioning services through Owner's Engineer Assignment in conventional as well as renewable energy systems, encompassing:

  ✓ Prefeasibility, feasibility studies, Pre-award services including Bid process management and post award engineering services including inspection.

  ✓ Project Management, Site Supervision, assistance in commissioning and PG Test

  ✓ Quality Assurance & Inspection Services - NTPC's stringent Quality Management System, Vendor assessment process, inspection offices all over India and capability to undertake inspections abroad with experienced professionals help client to achieve high quality standards.

- **Operation & Maintenance of Power Plants** NTPC offers a bouquet of O&M services including:

  ✓ Complete O&M of power plants and O&M management services like Technical Audits, Performance Improvement Services, O&M Management System, Efficiency Management etc.

  ✓ Environmental Audits

  ✓ Renovation & Modernization - NTPC offers solutions for R&M of old plants for enhancement of performance and life cycle from its extensive experience in system restoration, efficiency improvement and R&M of old thermal power projects.

- **Implementation of New Environment norms:** NTPC also provides Owner's Engineer Consultancy service from Concept to Commissioning for Flue Gas Desulphurization (FGD) systems, SPM control and reduction in water consumption.

- **Technical Due Diligence:** NTPC supports lenders in management of stressed assets through technical due diligence.

- **IT and HR Services:** NTPC offers IT services including some of its flagship home-grown products such as DREAMS (Drawing Review and Management System), CLIMS (Contract Labour Management Information System), Implementation of ERP, Plant Information (PI) System etc. NTPC conducts Organizational restructuring studies, policy framing and system formation.

- **Contract & Procurement Services**

  NTPC from its wide experience in procurement of equipment & items in line with the guidelines & procedures of funding agencies like World Bank, Asian Development Bank, JICA etc. supports its client in contract and procurement services on their behalf.

- **Distribution Business Opportunities**

  Your Company has signed Project Implementation Agreements (PIAs) with KPDCL & JPDCL on 27 February 2023 for loss reduction works under RDSS in specific districts of Jammu & Kashmir.

THREATS/CHALLENGES/CONCERNS

1. RE Capacity Growth

The following factors will increase the input cost leading to challenges for the fast-paced growth of RE Capacity:

- Policy and Regulatory Uncertainty: Changes in policies, regulations, and incentives can create uncertainty for investors and project developers. Delays in project approvals can add on to the business risk and hinder the growth of the renewable energy sector.

- Limited Grid Capacity: The existing grid infrastructure may have limited capacity to absorb large-scale renewable energy. Without adequate grid upgrades and expansion, renewable energy projects may face challenges in injecting power into the grid.

- Land and Resource Constraints: Scaling up renewable energy projects requires significant land and resource availability. Land acquisition challenges, conflicts over land use, and competition for limited land resources can pose hurdles to the development of renewable energy projects.

Efforts are made to obtain all statutory clearances and ensure land availability before the commencement of the projects. Timely tie up for power evacuation and expediting the installation of associated transmission system is helping in mitigating the grid capacity constraints. Further, GOI has planned the enhancement of the transmission capacity to meet target of 500 GW non-fossil fuel-based capacity by 2030.

2. Flexible operation of Thermal Units

To integrate variable RE into the grid, coal-based power plants must regulate their generation to maintain grid balance. Therefore, the influx of more RE power in the grid would require many coal-based plants to operate at technical minimum capacity, frequent load fluctuations, and two-shift operations. This will result in lower efficiency at partial load leading to a higher cost of generation. Other factors like the cost of balancing services, and reduced life due to flexible operation of the thermal plant would also adversely affect the cost of generation.

Most of the NTPC plants have achieved the ramping rate required for flexible operation and policy advocacy for compensating the additional cost due to flexible operation is also being taken up at various levels.

3. Environmental Concerns

The environmental concerns particularly relating to coal-based thermal stations have emerged as a major challenge to the sector. To comply with new standards for water consumption, PM, SOx, NOx, and mercury, thermal power plants need to install emission control equipment like FGD (Flue Gas Desulphurisation), and DSI (Dry Sorbent Injection) along with necessary combustion modifications and retrofitting of ESP (Electrostatic Precipitator). The cost of retrofitting appropriate systems to meet these norms will have an adverse impact on tariffs. Logistics and supply chain for sourcing the consumables and disposing of the waste generated impose additional challenges. Non fulfillment of Environmental norms may result in levy of environmental compensation as per the latest MOEF&CC notification dated 5 September 2022. To meet the norms, FGD and DSI technology has been commissioned at 8 Units (2990 MW) and under erection at 126 units (59290 MW). Combustion Modification for NOx completed at 45 out of 50 units and R&M of ESP completed at 40 out of 50 units.

Further, as per new environment norms, all plants must achieve 100% ash utilization within a 'compliance period' based on their level of Ash utilization.Various initiatives have been undertaken for the development of new products and processes for bulk Ash utilization and as a result novel technologies & products such as Geo Polymeric (GPC) Road, Geo polymeric Pavers & Tetrapod, etc. have been successfully developed and implemented.

4. Non-availability of Gas

GOI has accorded higher priority for allocation of domestic gas to CGD (City Gas Distribution) sector. Due to the diversion of allocated gas to the CGD sector as per MOP&NG guidelines, allocated domestic gas (APM/Non-APM) supplies to your company became Nil w.e.f. 16 June 2021. Further, due to high reserve prices and onerous terms & conditions, the Power sector is not able to tie up new domestic gas from the KG basin. Gas stations are dependent upon costlier RLNG for declaring capacity/generation, however, the generation schedule on RLNG is not available on a sustained basis. Gas is procured from available sources and spot market as per the requirement.

5. Coal Shortage

The unprecedented rise in power demand coupled with constraints in coal transportation and a steep rise in the price of imported coal may result in inadequate coal stock at thermal plants, pushing them below critical levels.

However, your Company is making all efforts to secure fuel supply through existing Fuel Supply Agreements (FSA), increasing captive coal production and tying up for additional fuel sources domestically. Import of coal has also been undertaken as per the requirement and in alignment with Government guidelines.

OUTLOOK FOR THE COMPANY

Strategic focus of the Company

As India is expected to grow at a fast pace in the 'Amrit kaal', your Company's priority is to support this pace of economic development by providing accessible, affordable, and reliable power to the consumers. The demand for power registered a growth of 9.6% in the financial year 2022-23 due to the post pandemic economic recovery and an abnormally hot summer. Under these testing circumstances your Company has not only catered to this surge in demand, but also did it more efficiently. This is reflected in the generation touching ~400 BUs and average PLF of your Company's coal stations reaching 76%, way higher than the country average of 64%. In terms of market share your Company supplied around 25% of the Country's power demand while having around 17% of installed capacity thus maintaining its leadership position in power generation. This has been made possible with a diversified portfolio and an integrated supply chain from coal mining to power trading.

The stature of your Company is well depicted by its worldwide rankings such as 1st Independent Power Producer (IPP) in the PLATTS IPP and Energy Trader Rankings (2022), 16th in Fortune India 500 Companies (2022) and 11th largest among Indian Companies (485th Globally) in Forbes Global 2000 Companies (2022).

The focus of your Company is to fulfil the ever-increasing power requirements of the country, critical for meeting the growth aspirations. While doing this, it is of cardinal importance to be a major contributor in the energy transition fostering the achievement of net zero milestone.

In this regard, your Company has an ambitious plan to reach a total installed capacity of 130 GW by 2032. In Renewable space, the target is to achieve 60 GW by 2032. The present portfolio of RE projects is around 20 GW, out of which 3.2 GW has already been commissioned, while remaining is under various stages of development.

Further, capacity addition is planned through Ultra Mega Renewable Energy Power Projects (UMREPPs), collaborating with other companies, partnering with State Governments and through competitive bids. To focus on RE business, your Company has consolidated its RE portfolio in NTPC Green Energy Limited (NGEL).

To ensure the optimal utilization of the vast renewable capacity planned, energy storage solutions will be of vital importance. In this regard, it is planned to develop substantial storage capacity. In this regard, GOI has indicated power CPSEs for development of PSPs across the country, under this PSPs totalling 11.5 GW have been indicated for your Company and we are taking up with State Governments for implementing these.

Considering the high level of variable RE infusion, it is important to provide base load support to the grid, to ensure grid stability. For this purpose, a thermal capacity of around 6GW through brown field projects is also under various phases of planning/development.

Further to foray into nuclear power sector, your Company is collaborating with Nuclear Power Corporation of India Limited (NPCIL). This will also help the country in meeting the net zero emission target by 2070.

It is also planned to foray into the Hydrogen ecosystem for production of Green Chemicals and Fuels (Methanol & Ammonia) supported by research & development and collaboration with OEM/OES, research institutes, etc.

To expand its RE-C&I (Commercial and Industrial) portfolio, your Company has also entered into agreements with various companies for supply of RE-RTC power.

Further, your Company envisages enhancing its current presence in consultancy services, power trading, and ancillary services and has targeted a 25% market share in ancillary services and storage by 2032 under its long-term plan.

Fuel security is of critical importance for the thermal portfolio; therefore, your Company's focus is on increasing the captive coal production. Efforts are on to acquire new coal blocks through participation in commercial auctioning by the Ministry of Coal.

Growth Outlook

Your Company is looking for opportunities to expand and diversify its business in new areas both domestically and globally by working in close coordination with the Indian and global energy community. Some of the key growth opportunities identified by the company are:

Renewable Energy

On careful consideration of the prevalent market conditions, NTPC has directed its focus broadly into 4 major sectors as elaborated below:

1. **Ultra-Mega Renewable Energy Power Park**

   NTPC is implementing and planning cumulative capacity of 36 GW in different states through UMREPP scheme such as Rajasthan (20 GW) and Gujarat (4.8 GW), Maharashtra (2.6 GW), Uttar Pradesh (2GW), Andhra Pradesh (4 GW), Madhya Pradesh (0.6 GW) and DVC (2 GW) for realizing 60 GW RE capacity plan.

   Green Valley Renewable Energy Limited, a subsidiary of NTPC REL in 51:49 Joint Venture with

DVC, has been incorporated on 25 August 2022 with an objective to develop, operate and maintain Renewable Energy Park and Project(s) in reservoirs and land owned by DVC.

2. **Green Hydrogen**

Various projects are being undertaken to produce Green Hydrogen as discussed earlier in the 'Opportunities' Section.

3. **Energy Storage**

CEA has projected Battery Energy Storage (BES) capacity of 236 GWh as a part of the installed capacity by 2032. The storage requirement for grid balancing and grid support activities is an opportunity for RE deployment and countering intermittency.

Your company has tendered 500 MW/3GWh and 1500 MW/9 GWh of Storage capacity for use in tandem with RE projects.

Exclusive energy storage based green hydrogen projects are also in the pipeline to be executed at suitable location(s) across India. A MOU has been entered between NTPC and Indian Army to this effect.

4. **Offshore Wind**

India has a long coastline of ~7000 kms, with this vast coastline, the offshore wind energy potential is estimated at around 70 GW, significantly higher than the total onshore wind capacity of about 40 GW presently installed.

NTPC is exploring collaborations with global partners to share expertise and leverage their experience in developing offshore wind energy projects and exploring innovative financing mechanisms, such as green bonds and debt financing, to fund offshore wind energy projects. NTPC is playing its part in developing India's offshore wind energy sector and supporting the country's broader energy transition goals.

Diversification

Your Company is exploring new business opportunities in different areas as summarised below:

1. **RE-RTC (Round the Clock) Power**

To diversify its business further, JV has been formed with IOCL and various MOUs with others have been signed for supply of Renewable Energy - Round the Clock (RE- RTC) power for captive use.

- **JV with IOCL**

  NGEL has formed JV with Indian Oil under the name "Indianoil NTPC Green Energy Private Limited" for developing Renewable Energy based power projects, to supply 650 MW or more renewable power on round the clock basis, to cater to the requirements of Indian Oil.

- **MOU with HPCL**

  NGEL has signed an agreement with HPCL for supply of 400 MW of round-the-clock power to HPCL.

- **Agreement with Greenko ZeroC Pvt. Ltd.**

  NTPC REL, has signed agreement with Greenko ZeroC Pvt. Ltd. (a Greenko Group Company) to supply 1300 MW RE-RTC power for powering Greenko's upcoming Green Ammonia Plant at Kakinada, India. The agreement between the two companies is one of the world's single largest contracts for supply of RE-RTC power for an industrial client.

- **MOU with GACL**

  NTPC REL has signed a MOU with Gujarat Alkalies and Chemicals Limited (GACL) for collaborating in the field of Renewable Energy, Green Methanol & Green Ammonia and mutually exploring the opportunities for the supply of RE-RTC power and synthesizing Green Methanol and Green Ammonia for captive use by GACL.

- **MOU with National Fertilizers Limited (NFL)**

  NTPC REL signed an MOU with NFL for collaboration in the field of Renewable Energy & Green Chemicals and mutually explore opportunities for the supply of RE-RTC power in phases and synthesizing Green Ammonia for captive use for production of Industrial products by NFL.

2. **CO_2 to Chemicals:**

An EOI has been floated seeking response from Industries for setting up CO_2 capture, hydrogen generation, and CO_2 to Methanol production in NTPC Plants. A non-binding MOU was signed with M/s Tecnimont to jointly evaluate and explore the possibility of developing commercial scale green methanol production at NTPC.

New Business Initiatives

NTPC is exploring opportunities to produce green hydrogen using electricity from RE sources and using green hydrogen for various applications. These are for mobility, production of green fuel (methanol, ammonia), establishing microgrids, natural gas blending with hydrogen for the City Gas Distribution system, etc. These are the steps of a low carbon transition effort of the Company. In this regard, the following initiatives are pursued at different locations:

1. **Nuclear Energy**

   NTPC has signed a Supplementary Joint Venture Agreement (SJVA) with Nuclear Power Corporation of India Ltd. (NPCIL) for development of Nuclear Power Projects. Initially, the JV company shall develop two Pressurized Heavy-Water Reactor (PHWR) projects in Chutka, Madhya Pradesh of 2x700 MW capacity and in Mahi Banswara, Rajasthan of 4x700 MW capacity.

2. **Industrial Parks**

   Kudgi: Your Company is developing Industrial Park for energy intensive industries within the land available in Kudgi. Through this unique initiative, NTPC plans to supply 24x7 reliable electricity at competitive tariff directly to energy intensive industries, which is a primary requirement for their sustainability. KPMG has been appointed as the marketing and branding consultant.

   Hydrogen Hub at Pudimadaka: Your Company has conceptualised setting up of a Green Hydrogen Hub at Pudimadaka near Vishakhapatnam. The Project shall involve establishment of Manufacturing facility for Hydrogen related equipment and production & export of Green Hydrogen.

   A detailed proposal was submitted to Andhra Pradesh Government for development of this Hydrogen Hub at Pudimadaka. The State Investment Promotion Board (SIPB) and State Cabinet has cleared NTPC's proposal.

   A non-binding MOU with Govt of Andhra Pradesh for facilitating the project has been signed during Global Investor Summit hosted by Government of Andhra Pradesh. The Project DPR & strategy for implementation are under preparation.

3. **Bamboo-based Bio-Refinery at Bongaigaon**

   Your Company is currently pursuing a techno-economic Feasibility Study through M/s EIL to setup a Bamboo based 2G Bio-Refinery project at Bongaigaon Thermal Power Station. Through this project, NTPC aims to extract valuable bio-chemicals from naturally available bamboo in the region and use the by-product produced i.e., Bio-coke as a fuel for blending with coal to fire in the Bongaigaon Thermal Power Station. A non-binding MOU with Chempolis was signed for exploring the feasibility of setting up an integrated bamboo based biorefinery with NTPC Bongaigaon Thermal Power Station.

4. **Commercial operation of Desalinated Distillate/ Mineral Water generated at NTPC Simhadri–**

   NETRA had developed the "Flash Desalination Technology (FDT)" for production of quality water (desalinate/distilled) from sea/brackish water utilizing the heat from flue gas of power plant. A facility for production of 120 ton per day of desalinated water using FDT technology was set up by NETRA at NTPC Simhadri. Subsequently, for commercial utilisation of desalinated water a RAIL NEER packaged drinking water bottling facility at NTPC Simhadri has been commissioned on 26 August 2022 under MOU with IRCTC.

5. **Collaboration with State Governments**

   Uttar Pradesh

   Your Company has signed following proposals for investments in UP Power Sector during UP Global Investors Summit:

   - Setting up of Floating Solar of up to 1 GW capacity on Rihand Reservoir, subject to feasibility and bathymetric studies.
   - Expansion of MUNPL (a JV of NTPC & UPRVUNL) by 2400 MW capacity (3x800 MW), subject to feasibility, statutory clearance, and equity infusion by GOUP.
   - Expansion of Singrauli Coal based thermal plant with Stage-III of 1600 MW capacity (2x800 MW), subject to feasibility and statutory clearance.
   - Jointly setting up 2x800 MW supercritical Thermal Power Plants at Obra and Anpara with UPRVUNL.

   Andhra Pradesh

   Your Company and GOAP have signed MOU at Global investor summit hosted by Government of Andhra Pradesh in the following areas:

   - Development of various Pumped Storage Projects.
   - Development of 20GW renewable energy capacity in the state for which land in the state can be identified and allotted by GOAP on which the wind and solar projects can be setup.

   Tripura

   NTPC Renewable Energy Ltd. (NTPC REL) has signed an MOU with Government of Tripura for development of Floating and Ground Mounted solar renewable energy Projects in the State of Tripura. This MOU shall help Government of Tripura in meeting its Clean Energy Commitments and obligations.

FUEL SECURITY

Your Company is producing coal from four mines i.e., Pakri-Barwadih, Dulanga, Talaipalli & Chatti-Bariatu. Total coal production for the financial year 2022-23 stood at 23.20 MMT with a growth of 65% over previous financial year while cumulative production till 31 March 2023 stood at 69.60 MMT. Production from the Chatti-Bariatu mine started in September 2022. Kerandari mine started mining operations in April 2023. The process for appointment of MDO (Mine Developer cum Operator) for Badam mine is in progress.

Development activities and process of acquiring statutory clearances are going on in the Banhardih mine, allocated to Patratu Vidyut Utpadan Nigam Ltd. (PVUNL), a JV of your Company.

NTPC's subsidiary THDCIL is developing Amelia Coal Mine to meet the fuel requirement of the Khurja STPP which is being constructed by THDCIL.

Efforts are being made for acquisition of new coal blocks through participation in commercial auctioning of coal blocks by the Ministry of Coal (MOC). Your Company aspires to become one of the largest captive coal mining companies in the country by adding new coal mines to its portfolio and increasing the capacity to 100 MMTPA from existing 71 MMTPA.

To focus on the mining business, NTPC Mining Ltd. (NML), a wholly owned subsidiary of your Company, was incorporated. While Ministry of Coal (MOC) had granted the permission for transfer of Pakri-Barwadih mine to NML in December 2020, transfer of other mines to NML has been allowed by MOC and amendments in allotment agreements were signed by MOC and NTPC on 20 March 2023.

REALISATION

Your Company has in place a robust payment security mechanism in the form of Letters of Credit (LC) backed by the Tri-Partite Agreement (TPA). In addition to LCs, payment is secured by the Tri-Partite Agreements (TPAs) signed by the State Government(s), GOI, and RBI. As per the TPAs, any default in payment by the State-owned DISCOMs can be recovered directly from the account of the respective State Government(s) in association with RBI. The original TPAs signed were valid up to October 2016. As per the decision of the Union Cabinet and as agreed by the various States and the RBI, these TPAs have been further extended for a period of 10 to 15 years. As on 31 March 2023, 29 out of a total of 31 States/UTs have signed the TPA extension documents. The signing of TPA extension by remaining States is in progress.

During the financial year 2022-23, your Company has realized 100% of its current bills raised for energy supplied. Most of the beneficiaries have made timely payments in line with Late Payment Surcharge Rules 2022.

Leveraging on Strengths for Delivering Better Future Performance

Your Company derives its competitive edge from its strengths and is confident of meeting future challenges.

a. Project Management

Your Company has adopted an integrated system for planning, scheduling, monitoring and controlling of projects under implementation. To coordinate and synchronise all the support functions of project management it relies on a three-tiered project management system known as the Integrated Project Management Control System (IPMCS), which integrates its engineering management, contract management and construction management control centres. The IPMCS addresses all stages of project implementation, from concept to commissioning. The IPMCS system provides regular monitoring, analysis of variations identified both within the external and internal control parameters and taking managerial action based on "Management by Exception" philosophy.

In addition to above, in order to make monitoring of projects more effective, your Company is now adopting Integrated Software monitoring tool for integrating progress of Engineering, Supplies and Erection at one place and capturing progress online. Features like mobile app based updation of progress and role-based access make the tool more user-friendly as it enables regular updation of progress and taking timely remedial actions. In a changing global scenario, your Company has added various other project management tools which are Online CAPEX monitoring system/ Digital Hindrance register/ Digital Chronology register/ Safety Register etc.

b. Operational Efficiency

The operating performance of your Company has been consistently above the national average. Over the years, the Company has consistently operated at much higher operating efficiency as compared to All India operating performance.

In order to achieve cost-competitive, environment friendly, efficient & reliable power generation, the Company has adopted following strategies:

- To improve reliability of the units and to reduce the forced outages, close monitoring of start-ups & shutdowns and root cause analysis of all the outages is carried out and action plan generated to mitigate the outages.
- Continuous real time monitoring of critical parameter deviations (both reliability & efficiency related) and implementation of action plan to mitigate the deviations.
- Optimizing planned outage period through implementation of Overhaul Preparedness Index (OPI), ensuring all quality checks and time bound monitoring of each activity.
- Improvement in Heat Rate & Auxiliary Power Consumption achieved by parametric optimization, specially at part loads by operation of units in sliding pressure mode & optimizing excess air.
- To minimize efficiency losses in stations, Plant Information (PI) system-based applications for real time efficiency & loss calculations.
- Structured & regular energy audits to identify potential areas of improvement in APC reduction and Implementation of action plans.
- To reduce cost of generation steps have been taken to reduce Energy Charge Rate (ECR) by swapping of coal supplies and optimizing operations.
- Use of Comprehensive Performance Evaluation Matrix (PEM) for relative evaluation of the performance of various power plants to create an environment of in-house challenge and competition. The parameters are reviewed annually to include new parameters commensurate with market dynamics and developments in power sector.
- Adopting advanced technologies in new units e.g., commissioning of super critical units, which improves system efficiency & reduces carbon footprint and retrofits of DeNOx & DeSOx technologies in older units.
- Renovation & modernization for reduction of greenhouse gas emissions, effective modernized control systems for environment friendly economic generation and particulate emission control.
- Water conservation measures like increasing the Cycle of Concentration (CoC) of circulating water and ash water recirculation, implementation of zero effluent discharge, high concentration ash-slurry discharge, dry evacuation of ash and Air Cooled Condensers (ACC) etc.
- Strict compliance of Grid Code, Restricted Governor Mode Operation (RGMO) implementation, Automatic Generation Control and other system requirements.

c. Human Resources

Your Company has a highly talented team of committed professionals and has been able to induct, develop and retain the best talent. Your Company has a very low executive attrition rate. Your Company is deeply passionate about ensuring the holistic development of all its employees as distinct individuals and good citizens. Competence building, Commitment building, Culture building and Systems building are the four pillars on which HR Systems of your Company are based.

Your Company has been conferred with various HR Awards over the years by reputed institutions and consistently features among the "Great Places to Work for". The commitment of the employees is also reflected in consistent improvement of financial parameters such as sales per employee, value added per employee etc.

d. Sound Corporate Governance

Your Company's corporate governance practices have been recognised and awarded at several forums. Your Company believes in following the highest standards of transparency, integrity and accountability. It enjoys the confidence of all stakeholders alike. Your Company not only believes in adopting best practices but also includes public interest in its corporate priorities and has developed extensive social outreach programmes.

e. Robust Financials and Systems

Your Company has strong financial systems in place. It believes in prudent management of its financial resources and strives to reduce the cost of capital. Your Company enjoys highest credit-rating assigned by CRISIL, ICRA, CARE and India Ratings. The foreign ratings by Fitch, S&P & Moody's are at par with sovereign ratings. It has robust financials leading to strong cash flows which are being progressively deployed in generating assets. Your Company has a strong balance-sheet coupled with low gearing and healthy coverage ratios. As a result, your Company has been able to raise resources for its capital expansion projects at very competitive interest rates in domestic as well international markets.

Internal Control

To ensure regulatory and statutory compliances as well to provide highest level of corporate governance, your Company has robust internal systems and processes in place for smooth and efficient conduct of business and complies with relevant laws and regulations. A comprehensive delegation of power exists for smooth decision making which is periodically reviewed to align it with changing business environment and for speedier decision making. Elaborate guidelines for preparation of accounts are followed consistently for uniform compliance. To ensure that all checks and balances are in place and all internal control systems are in order, regular and exhaustive internal audits are conducted by experienced firms of Chartered Accountants in close co-ordination with the Company's own Internal Audit Department. Besides, your Company has two committees of the Board viz. Audit Committee and Committee on Management Controls to keep a close watch on compliance with Internal Control Systems.

A well-defined internal control framework has been developed identifying key controls. The supervision of operational efficiency of designed key controls is done by Internal Audit. The framework provides an elaborate system of checks and balances based on self-assessment as well as audit of controls conducted by Internal Audit at the process level. Gap tracking report for operating efficiency of controls is reviewed by the management regularly and action is taken to further strengthen the Internal Control System by further standardizing systems & procedures and implementing process changes, wherever required, keeping in view the dynamic environment in which the Company is operating. The Internal Control Framework system presents a written assessment of effectiveness of Company's internal control over financial reporting by the process owners to facilitate certification by CEO and CFO and enhances reliability of assertion.

FINANCIAL DISCUSSION AND ANALYSIS

A detailed discussion and analysis on financial statements is furnished below. Reference to Note(s) in the following paragraphs refers to the Notes to the standalone financial statements for the financial year 2022-23 placed elsewhere in this report.

A. Financial position

The items of the Balance Sheet are as discussed under:

1 Property, plant & equipment (PPE), Capital work-in-progress, Investment property, Intangible assets and Intangible assets under development (Note-2 to Note-6)

The PPE, Capital work-in-progress, Investment property, Intangible assets and Intangible assets under development of the Company are detailed as under:

(₹ Crore)

Particulars	As at March 31 2023	As at March 31 2022	% Change
Gross block of PPE (Note-2)	2,69,166.05	2,56,364.00	5%
Net block of PPE (Note-2)	1,96,441.71	1,95,084.07	1%
Capital work-in-progress (Note-3)	61,743.88	73,519.11	(16)%
Investment property (Note-4)	465.18	-	-
Net block of Intangible assets (Note-5)	454.17	486.47	(7)%
Intangible assets under development (Note-6)	44.92	98.47	(54)%

During the year, total gross block of PPE has increased by 5% while capital work-in-progress has decreased by 16% mainly due to addition of new commercial capacity.

Freehold land pertaining to one of the RE stations transferred to NGEL remains with the Company and has been leased to NGEL and accordingly been classified as Investment property during the year considering the requirements of Ind AS 40.

2 Non-current financial assets (Note-7 to Note-11)

(a) Equity investments in subsidiaries and joint ventures (Note-7)

The break-up of equity investments in subsidiaries and joint ventures is as follows:

(₹ Crore)

Particulars	As at March 31 2023	As at March 31 2022
Subsidiaries	19,661.63	15,273.19
Joint ventures	9,427.04	7,873.70
Total	**29,088.67**	**23,146.89**

During the year, equity investments in subsidiaries and joint ventures increased by 26%. The increase/(decrease) is as under:

(₹ Crore)

Name of Company	Amount
NTPC Green Energy Limited	4,719.61
Hindustan Urvarak and Rasayan Ltd.	666.53
Bangladesh-India Friendship Power Co. Pvt. Ltd.	541.64
Patratu Vidyut Utpadan Nigam Ltd.	400.00
Jhabua Power Limited	325.00
Meja Urja Nigam Private Ltd.	34.41
NTPC Renewable Energy Ltd.	(731.17)
Total investments during the year	**5,956.02**
Less: Provision for impairment made during the year	
National High Power Test Laboratory Private Ltd.	14.24
Net increase in investments	**5,941.78**

(b) Other Non-current financial assets (Note-8 to Note-11)

Other Non-current financial assets mainly comprise of investment in equity and debt instruments, loans to related parties, employees & others, share application money, claims recoverable, finance lease receivables and mine closure deposit.

(₹ Crore)

Particulars	As at March 31		% Change
	2023	2022	
Other investments (Note-8)	631.08	102.48	516%
Loans (Note-9)	1,233.47	1,288.50	(4)%
Trade receivables (Note-10)	2,399.78	-	-
Other financial assets (Note-11)	922.93	1,017.98	(9)%
Total	**5,187.26**	**2,408.96**	**115%**

Other investments mainly comprise of investment in equity instruments of PTC India Ltd. and debt instruments of Jhabua Power Limited.

Outstanding dues of the beneficiaries have been rescheduled upto a maximum period of 48 months in the manner prescribed in the Electricity (Late Payment Surcharge and Related Matters) Rules, 2022 and accordingly presented at their fair value under Non-current Trade Receivables

Other financial assets include share application money pending allotment in subsidiaries and joint ventures, claims recoverable, finance lease receivables and mine closure deposit.

(₹ Crore)

Other financial assets (Note-11)	As at March 31		% Change
	2023	2022	
Share application money pending allotment	137.93	-	-
Claims recoverable	517.28	696.19	(26)%
Finance lease receivables	201.56	281.93	(29)%
Mine closure deposit	66.16	39.86	66%
Total	**922.93**	**1,017.98**	**(9)%**

Claims recoverable represents the cost incurred in respect of one of the hydro power projects, the construction of which has been discontinued on the advice of the Ministry of Power (MOP), GOI and it is expected that the same will be compensated in full by the GOI. Hence, no provision is considered necessary.

3 Other non-current assets (Note-12)

The changes in other non-current assets during the year are as follows:

(₹ Crore)

Other non-current assets	As at March 31		% Change
	2023	2022	
Capital advances	6,026.69	5,752.78	5%
Security deposits	306.87	310.31	(1)%
Advances to contractors and suppliers (other than capital advances)	1,810.82	1,989.50	(9)%
Advance tax and tax deducted at source (net of provision for tax)	2,476.02	2,668.30	(7)%
Deferred foreign currency fluctuation asset	1,565.41	1,480.72	6%
Others	167.83	153.50	9%
Total	**12,353.64**	**12,355.11**	**(0)%**

4 Current assets (Note-13 to Note-20)

The changes in the current assets during the year are as follows:

(₹ Crore)

Current assets	As at March 31		Y o Y	%
	2023	2022	Change	Change
Inventories (Note-13)	13,679.75	9,691.00	3,988.75	41%
Investments (Note-14)	50.00	-	50.00	-
Trade receivables (Note-15)	24,741.45	24,747.45	(6.00)	(0)%
Cash and cash equivalents (Note-16)	3.13	117.48	(114.35)	(97)%
Bank balances other than cash and cash equivalents (Note-17)	3,738.60	2,629.70	1,108.90	42%
Loans (Note-18)	312.45	313.45	(1.00)	(0)%
Other financial assets (Note-19)	11,273.81	4,599.61	6,674.20	145%
Other current assets (Note-20)	10,726.15	9,101.70	1,624.45	18%
Total current assets	**64,525.34**	**51,200.39**	**13,324.95**	**26%**

(a) Inventories (Note-13)

Inventories mainly comprise of coal and stores & spares, which are maintained for operating plants. Value of coal inventory has increased from ₹2,876.49 crore as at 31 March 2022 to ₹5,064.63 crore as at 31 March 2023. Further, stores and spares inventory has increased from ₹5,062.92 crore as at previous year end to ₹6,231.13 crore, mainly on account of addition of new commercial capacity.

(b) Investments (Note-14)

Current investments comprise of current maturities of debt instruments held in Jhabua Power Limited.

(c) Trade receivables (Note-15)

Trade receivables include unbilled revenue for the month of March amounting to ₹11,176.95 crore (31 March 2022: ₹9,987.46 crore) billed, net of advance, to the beneficiaries after 31 March. Including non-current trade receivables and excluding the unbilled revenue, trade receivables are equivalent to ~36 days of sales as on 31 March 2023 in comparison to ~45 days of sales as on 31 March 2022.

Based on arrangements between Company, banks and beneficiaries, the bills of the beneficiaries have been discounted. Accordingly, trade receivables have been disclosed net of bills discounted amounting to ₹1,287.19 crore (31 March 2022: ₹8,202.03 crore).

(d) Cash and cash equivalents (Note-16) & Bank balances other than cash and cash equivalents (Note-17)

Cash and cash equivalents & Bank balances other than cash and cash equivalents have increased from ₹2,747.18 crore as at 31 March 2022 to ₹3,741.73 crore as at 31 March 2023. The main reason for change is increase in earmarked balances from ₹1,251.88 crore as at 31 March 2022 to ₹2,150.00 crore as at 31 March 2023.

(e) Other financial assets (Note-19)

Other current financial assets have increased by ₹6,674.20 crore. This is mainly due to increase in Advances to related parties by ₹3,218.94 crore and Contract assets by ₹2,995.33 crore.

Advances to related parties mainly include balance amounts recoverable in terms of Business Transfer Agreement (BTA) for transfer of RE assets to NGEL.

Contract Assets represent Company's right to consideration in exchange for goods and services that the Company has transferred / provided to customers when that right is conditioned on matters, other than passage of time, like receipt of income tax assessment orders, truing up orders from CERC etc. and are net of credits to be passed to customers.

(f) Other current assets (Note-20)

Other current assets comprise of security deposits, advances to related parties, employees, contractors and suppliers, claims recoverable etc.

(₹ Crore)

Particulars	As at March 31		%
	2023	2022	Change
Security deposits (unsecured)	2,322.88	1,996.85	16%
Advances	4,426.26	3,003.57	47%
Claims recoverable	3,852.26	3,975.89	(3)%
Others	124.75	125.39	(1)%
Total	**10,726.15**	**9,101.70**	**18%**

Other current assets have increased mainly due to increase in Advances to contractors and suppliers by ₹1,425.95 crore and increase in deposits with courts by ₹320.38 crore.

Advances to contractors and suppliers mainly include payment made to coal companies amounting to

₹3,143.51 crore (31 March 2022: ₹1,993.63 crore) for supply of coal to various stations of the Company.

Claims recoverable includes claims against Railways amounting to ₹2,023.76 crore (31 March 2022: ₹2,006.86 crore) mainly towards diversion of coal rakes and claims amounting to ₹1,615.66 crore (31 March 2022: ₹1,893.68 crore) made against coal companies towards various issues such as credit notes to be received as per referee results for grade slippages, supply of stones, claims under settlement through AMRCD, surface transportation charges, etc.

5 Assets held for sale (Note-21)

Land, Building, Plant and equipment and Other assets which have been identified for disposal has been classified as Assets held for sale. These assets are expected to be disposed within the next twelve months.

Assets held for sale has increased from ₹18.09 crore as at 31 March 2022 to ₹120.52 crore as at 31 March 2023.

6 Regulatory deferral account debit balances (Note-22)

Expense/income recognized in the Statement of Profit & Loss to the extent recoverable from or payable to the beneficiaries in subsequent periods as per CERC Tariff Regulations are recognized as 'Regulatory deferral account balances'. Regulatory deferral account balances are adjusted from the year in which the same become recoverable from or payable to the beneficiaries.

The regulatory assets recognized in the books to be recovered from the beneficiaries in future periods are as follows:

(₹ Crore)

Particulars	Regulatory deferral account debit balances
A. Opening balance as on 1 April 2022	**12,822.88**
B. Additions during the year	(479.48)
C. Amount realized/recognised during the year	(236.75)
D. Regulatory deferral account balances recognized in the statement of profit and loss (B+C)	(716.23)
E. Adjustments during the year	(144.68)
F. Closing balance as on 31 March 2023 (A+D+E)	**11,961.97**

The Company expects to recover the carrying amount of regulatory deferral account debit balance over the life of the projects. Refer Note-71 of financial statements for detailed disclosures.

7 Total equity (Note-23 & Note-24)

The total equity of the Company at the end of financial year 2022-23 increased to ₹1,38,889.88 crore from ₹1,28,667.52 crore in the previous year, an increase of 8%. Major reasons for the same are tabulated below:

(₹ Crore)

Particulars	Total Equity
Opening balance	1,28,667.52
Profit for the year	17,196.73
Other comprehensive income and other adjustments to reserves	55.71
Dividend paid during the year	(7,030.08)
Closing balance	**1,38,889.88**

The President of India, acting through the Ministry of Power, holds 495,53,46,251 shares constituting 51.10% of total equity shares and balance 474,13,19,883 i.e., 48.90% of equity shares are publicly held.

The increase in total equity resulted in book value per share rising to ₹143.23 as on 31 March 2023 from ₹132.69 as at the end of previous year.

8 Non-current and current liabilities (Note-25 to Note-38)

a. Non-current financial liabilities-Borrowings (Note-25):

Details of non-current borrowings including current maturities are as under:

(₹ Crore)

Particulars	As at March 31 2023	As at March 31 2022
Non-current financial liabilities-Borrowings (Note-25)	1,56,315.69	1,60,122.17
Current maturities of non-current borrowings included in current financial liabilities-Borrowings (Note-32)	17,172.23	17,366.26
Total borrowings	**1,73,487.92**	**1,77,488.43**

Total non-current borrowings have decreased by 2% over the previous financial year. Debt amounting to ₹16,257.48 crore was raised during the financial year 2022-23. The amount raised through term loans,

bonds and foreign currency borrowings is used for capital expenditure, refinancing, recoupment of capital expenditure and other general corporate purposes.

Details in respect of proceeds and repayment of borrowings for the financial year 2022-23 are as under:

(₹ Crore)

Source (Principal Amount)	Debt raised	Repayment	Net
Rupee term loans	5,285.00	9,446.19	(4,161.19)
Domestic bonds	4,000.00	6,044.87	(2,044.87)
Foreign borrowings	6,972.48	6,880.80	91.68
Total	**16,257.48**	**22,371.86**	**(6,114.38)**
FERV on foreign borrowings			2,155.14
Transaction costs			(41.27)
Total			**(4,000.51)**

Rupee Term Loans: Banks and domestic financial institutions continued to support the capex program of the Company by extending term loans for financing the on-going capacity expansion plans. During the financial year 2022-23, agreements for term loans of ₹6,900 crore were entered into with various banks. An amount of ₹5,285 crore was drawn from domestic banks & financial institutions during the year and an amount of ₹9,446.19 crore was repaid during the year. The undrawn balance available under various sanctioned loans from domestic banks and financial institutions was ₹6,351.58 crore as at 31 March 2023.

Domestic Bonds: During the financial year 2022-23, Company raised ₹4,000 crore through private placement of domestic bonds. Bonds amounting to ₹6,044.87 crore were redeemed during the year.

Foreign Borrowings: During the financial year 2022-23, the Company executed a syndicated unsecured term loan of JPY 54.4 billion equivalent to US$400 million with a consortium of banks. The proceeds of the facility shall be utilized towards the financing of capital expenditure for ongoing and/or new capacity addition programs, renewable energy projects including hydro-based projects, coal mining projects and such other purposes, to the extent the same is in compliance with end-use or other requirements stipulated under the RBI's ECB Guidelines. The facility has a average maturity of 7 years and is repayable in 7 equal instalments starting from 4th year from Weighted Average Disbursement Date (WADD) of the facility agreement. Amount drawn under this facility till 31 March 2023 is NIL.

In all, the Company has drawn ₹6,972.48 crore and repaid ₹6,880.80 crore of foreign currency borrowings during the year.

The Company continues to enjoy highest credit ratings for its bonds program and borrowings from banks, while Company's International Ratings are at par with sovereign ratings as detailed hereunder:

Credit Rating Agency	Rating	Remarks
Domestic		
CRISIL	CRISIL AAA/ Stable	Highest ratings
ICRA	[ICRA] AAA (Stable)	
CARE	CARE AAA; Stable	
INDIA Ratings	IND AAA/Stable	
International		
S&P	BBB-/Stable	Equivalent to sovereign ratings
Fitch	BBB-/Stable	
Moody's	Baa3/Stable	

The maturity profile of the principal amount of borrowings (excluding unamortised transaction costs and interest accrued) of the Company is as under:

(₹ Crore)

Particulars	Domestic Borrowings	Foreign Borrowings	Total
Up to 1 year	15,998.29	1,173.93	17,172.22
Beyond 1 and within 3 years	26,024.19	14,206.00	40,230.19
Beyond 3 and within 5 years	18,702.28	15,799.85	34,502.13
Beyond 5 and within 10 years	53,142.67	12,781.74	65,924.41
Beyond 10 years	15,377.07	626.30	16,003.37
Total	**1,29,244.50**	**44,587.82**	**1,73,832.32**

b. Non-current financial liabilities - Lease liabilities (Note-26), Trade payables (Note-27) & Other financial liabilities (Note-28)

Lease liabilities have increased from ₹815.07 crore as at 31 March 2022 to ₹815.44 crore as at 31 March 2023. The lease liabilities are repayable in instalments as per the terms of the respective lease agreements, generally over a period of more than 1 year and up to 99 years.

Non-current trade payables have increased from ₹84.62 crore as at 31 March 2022 to ₹86.52 crore as at 31 March 2023.

Other financial liabilities primarily consist of liabilities for capital expenditure and others. Other financial liabilities have decreased from ₹815.47 crore as at 31 March 2022 to ₹419.29 crore as at 31 March 2023.

c. Non-current liabilities - Provisions (Note-29)

Non-current provisions consist of amounts provided towards employees' benefits as per actuarial valuation, which are expected to be settled beyond a period of 12 months from the Balance Sheet date. Non-current provisions also consist of Mine closure obligations and Stripping activity adjustments. Non-current provisions as at 31 March 2023 were ₹1,727.78 crore as compared to ₹1,446.48 crore as at 31 March 2022.

d. Non-current liabilities - Deferred tax liabilities (net) (Note-30)

Deferred tax liabilities (net) have increased from ₹10,184.39 crore as at 31 March 2022 to ₹10,614.07 crore as at 31 March 2023. The increase in deferred tax liabilities (net) during the year is mainly due to capitalisation of new units during the year.

e. Other non-current liabilities (Note-31)

Other non-current liabilities have decreased from ₹1,081.61 crore as at 31 March 2022 to ₹70.64 crore as at 31 March 2023. Other non-current liabilities comprise of government grants received in advance amounting to ₹8.47 crore (31 March 2022: ₹522.31 crore) for which attached conditions are to be fulfilled / works to be completed relating to various solar power plants. This amount will be recognized as revenue corresponding to the depreciation charge in future years on completion of related projects. Other non-current liabilities also include un-amortised portion of grants received from Solar Energy Corporation of India under MNRE Scheme for setting up Solar PV power projects amounting ₹39.64 crore (31 March 2022: ₹534.94 crore). These amounts will be recognized as revenue corresponding to the depreciation charge in future years.

f. Current liabilities (Note-32 to Note-38)

The break-up of current liabilities is as under:

(₹ Crore)

Particulars	As at March 31		Y o Y Change	% Change
	2023	2022		
Borrowings (Note-32)	28,681.96	24,472.43	4,209.53	17%
Lease liabilities (Note-33)	170.79	168.01	2.78	2%
Trade payables (Note-34)	12,007.34	9,734.35	2,272.99	23%
Other financial liabilities (Note-35)	21,224.80	23,169.61	(1,944.81)	(8)%
Other current liabilities (Note-36)	1,212.97	1,099.84	113.13	10%
Provisions (Note-37)	7,470.25	7,171.31	298.94	4%
Current tax liabilities (net) (Note-38)	62.97	134.17	(71.20)	(53)%
Total	**70,831.08**	**65,949.72**	**4,881.36**	**7%**

Borrowings (Note-32) comprise of short-term borrowings and current maturities of long-term borrowings. In order to finance the mismatches in the short-term fund requirement, short-term borrowings in the form of commercial papers, short-term working capital loan from Banks and cash credit were resorted to by the Company. Short-term borrowings outstanding as on 31 March 2023 were ₹11,509.73 crore as against ₹7,106.17 crore as on 31 March 2022.

Current financial liabilities - Lease liabilities (Note-33)comprise of current maturities of lease liabilities. The same has increased from ₹168.01 crore as at 31 March 2022 to ₹170.79 crore as at 31 March 2023.

Trade payables (Note-34) mainly comprise amount payable towards supply of goods & services, deposits & retention money from contractors etc. Trade payables have increased by ₹2,272.99 crore.

Other current financial liabilities (Note-35) mainly comprise of interest accrued but not due on borrowings and payables towards capital expenditure. The details of other current financial liabilities are as under:

(₹ Crore)

Particulars	As at March 31	
	2023	2022
Interest accrued but not due on borrowings	2,523.78	2,365.34
Payables for capital expenditure	15,375.83	17,268.61
Others	3,325.19	3,535.66

Other current financial liabilities have decreased mainly due to decrease in payables for capital expenditure by ₹1,892.78 crore.

Other current liabilities (Note-36) mainly consist of advances from customers & others and statutory dues. Other current liabilities have increased by ₹113.13 crore.

Current liabilities - Provisions (Note-37) mainly comprises of provisions for employee benefits, obligations incidental to land acquisition, tariff adjustments, arbitration awards and others. During the year current liabilities-provisions have increased by ₹298.94 crore.

The provision for employee benefits has increased from ₹1,540.03 crore as on 31 March 2022 to ₹1,597.14 crore as on 31 March 2023.

Provision for tariff adjustments is detailed below:

(₹ Crore)

Opening Balance as at 1 April 2022	482.28
Provision for interest, which could be payable on the differential amount considered for revenue recognition and others	335.33
Closing Balance as at 31 March 2023	**817.61**

Provision for arbitration awards has increased from ₹2,274.72 crore as on 31 March 2022 to ₹2,646.94 crore as on 31 March 2023 while provision for obligations incidental to land acquisition has decreased from ₹2,726.80 crore to ₹2,295.07 crore. Provision for others has also decreased from ₹147.48 crore to ₹113.49 crore.

Current tax liabilities (net) (Note-38) denotes the excess of current tax for the year over advance tax paid amounting to ₹62.97 crore (31 March 2022: ₹134.17 crore).

9 Deferred revenue (Note-39)

Deferred revenue consists of income from foreign currency fluctuation detailed as under:

(₹ Crore)

Deferred revenue on account of	As at March 31 2023	As at March 31 2022
Income from foreign currency fluctuation	2,616.87	1,973.39

Foreign exchange rate variation (FERV) on foreign currency loans and interest thereon is recoverable from/payable to the customers in line with the Tariff Regulations. Keeping in view the opinion of the EAC of ICAI, the Company is recognizing deferred foreign currency fluctuation asset by corresponding credit to deferred income from foreign currency fluctuation in respect of the FERV on foreign currency loans adjusted in the cost of property, plant and equipment, which is recoverable from the customers in future years as provided in accounting policy. This amount will be recognized as revenue corresponding to the depreciation charge in future years. The amount does not constitute a liability to be discharged in future periods and hence, it has been disclosed separately from equity and liabilities.

B. Results from operations

1 Total Income (Note-40 & Note-41)

(₹ Crore)

Sl. No.	Particulars	FY 2022-23	FY 2021-22	% Change
	Revenue			
1	Energy sales (including electricity duty)	1,57,762.43	1,16,169.60	35.80%
2	Sale of energy through trading	3,753.48	3,549.65	5.74%
3	Consultancy & other services	154.08	168.18	(8.38%)
4	Lease rentals on assets on operating lease	19.58	19.59	(0.05%)
		1,61,689.57	**1,19,907.02**	**34.85%**
	Other operating revenues			
5	Interest from beneficiaries	1,609.33	917.69	75.37%
6	Energy internally consumed	92.04	65.17	41.23%
7	Interest income on assets under finance lease	32.53	45.07	(27.82%)
8	Recognized from government grants	94.88	117.10	(18.98%)
9	Provision written back-others	242.98	122.50	98.35%
10	Income from Trading of ESCerts	8.44	-	-
		2,080.20	**1,267.53**	**64.11%**
	Revenue from operations	**1,63,769.77**	**1,21,174.55**	**35.15%**
	Other income	3,954.64	3,575.11	10.62%
	Total income	**1,67,724.41**	**1,24,749.66**	**34.45%**

The income of the Company comprises of income from energy sales, sale of energy through trading, consultancy and other services, operating lease rentals on assets, interest and surcharge received from the

beneficiaries, interest earned on investments such as term deposits with banks, interest on loan to employees & subsidiary companies, interest on other investment in joint venture companies, interest income on non-current trade receivables and dividend from equity investments in subsidiary, joint venture and other companies. The total income for financial year 2022-23 is ₹1,67,724.41 crore as against ₹1,24,749.66 crore in the previous year registering an increase of 34.45%. The main reasons for increase in total income are increase in the energy sales, dividend from investments in subsidiary and joint venture companies, increase in interest from beneficiaries, interest income on non-current trade receivables and provisions written back-others.

The major revenue comes from energy sales. The tariff for computing energy sales is determined in terms of CERC Regulations as notified from time to time, which are briefly discussed below:

Tariff for computation of sale of energy

CERC vide notification dated 7 March 2019 notified the Tariff Regulations 2019, effective for the period 2019-24. Further, CERC vide notifications dated 25 August 2020 and 19 February 2021 notified the CERC (Terms and Conditions of Tariff) First Amendment Regulations 2020 and Second Amendment Regulations, 2021, respectively.

Sales have been provisionally recognized based on principles enunciated in Tariff Regulations, 2019. CERC has issued provisional tariff orders in respect of twenty-four stations for the tariff period 2019-24. As per Regulation 10(4) of Tariff Regulations 2019, pending issue of provisional/final tariff orders in respect of balance stations with effect from 1 April 2019, capacity charges are billed to beneficiaries in accordance with the tariff approved and applicable as on 31 March 2019. In the case of new projects, which got commercialized from 1 April 2019 onwards and projects where tariff approved and applicable as on 31 March 2019 is pending with CERC, billing is done based on capacity charges as filed with CERC in tariff petition. Energy and other charges are billed as per the operational norms specified in Regulations 2019.

Capacity charges

Tariff regulations 2019 are applicable from 1 April 2019, the capacity charge shall be recovered under two segments of the year, i.e., High Demand Season (period of three months) and Low Demand Season (period of remaining nine months), and within each season in two parts viz., Capacity Charge for Peak Hours of the month and Capacity Charge for Off-Peak Hours of the month.

Energy charges

The energy charges cover the primary and secondary fuel cost and limestone consumption cost (where applicable). Energy charges for coal-based station are to be calculated based on normative heat rate, normative APC, weighted average landed price of primary fuel & secondary fuel and weighted average GCV of coal on 'as received' less 85 Kcal/kg on account of variation during storage & weighted average GCV of secondary fuel respectively as per the Tariff Regulations 2019.

Energy charges for gas-based station have been calculated based on normative heat rate, weighted average landed price of primary fuel and weighted average GCV of primary fuel.

Other charges

Besides the capacity and energy charges, the other elements of tariff are:

- Special Allowance: For the financial year 2022-23, special allowance has been considered for units which have completed 25 years as on 31 March 2022 in terms of Tariff Regulations 2019.
- Sharing of gains due to variation in norms: As per Regulation 60, financial gains on account of controllable parameters- station heat rate, auxiliary consumption and secondary fuel oil consumption, have been accounted for based on monthly operating parameters, to be shared with the beneficiaries on annual basis, in the ratio of 50:50.
- Sharing of Non-Tariff Income: As per Regulation 62, non-tariff income from rent of land or building, sale of scrap and advertisements has been shared with beneficiaries on annual basis, in the ratio of 50:50.
- Compensation for degradation: Compensation for degradation of heat rate, APC and secondary fuel consumption due to part load operations and multiple start/stop of units are being accounted as per CERC order dated 5 May 2017 relating to operating procedures and the compensation mechanism in terms of Grid Code.
- Incentive: As per Regulation 49(B)(a), incentive to be accounted for ex-bus schedule energy corresponding to scheduled generation in excess of ex-bus energy corresponding to 85% PLF.

With effect from 1 April 2019, CERC issued directions for implementation of the pilot project on Security Constrained Economic Dispatch (SCED) for inter-state generating stations. This mechanism helps in optimization of total schedule of the Inter State Generating Stations based on the variable cost, resulting in savings in cost of procurement for the DISCOMs. CERC has extended the implementation of the SCED pilot until further orders.

Elements of Total income are discussed below:

Energy sales (including electricity duty)

Your Company sells electricity to bulk customers, mainly electricity utilities owned by State Governments as well as private DISCOMs operating in States. Sale of electricity is generally made pursuant to long-term Power Purchase Agreements (PPAs) entered into with the beneficiaries.

Income from energy sales (including electricity duty) for the financial year 2022-23 was ₹1,57,762.43 crore constituting 94% of the Total income. The income from energy sales (including electricity duty) has increased by 35.80% over the previous year's income of ₹1,16,169.60 crore.

Capacity charges provisionally billed to beneficiaries for the year ended 31 March 2023 is ₹47,631.73 crore (31 March 2022: ₹46,278.65 crore). Energy and other charges are billed as per the operational norms specified in the Regulations 2019. The amount billed for the year ended 31 March 2023 is ₹97,042.05 crore (31 March 2022: ₹66,047.20 crore).

Capacity charges for the year ended 31 March 2023 have been provisionally recognized considering the provisions of CERC Tariff Regulations amounting to ₹49,832.28 crore (31 March 2022: ₹46,036.00 crore). Energy and Other charges for the year ended 31 March 2023 have been recognized at ₹1,00,306.61 crore (31 March 2022: ₹66,352.35 crore) as per the operational norms specified in the Regulations 2019.

Capacity charges for the year ended 31 March 2023 include ₹1,829.50 crore (31 March 2022: ₹1,286.51 crore) pertaining to earlier years is on account of impact of CERC orders and other adjustments. Energy and other charges for the year ended 31 March 2023 include ₹3,206.12 crore (31 March 2022: ₹604.36 crore) pertaining to earlier years on account of revision of energy charges due to grade slippages and other adjustments. Other adjustments include an amount of ₹3,097.04 crore on account of adjustment of 'Net movement in regulatory deferral account balances (net of taxes)' relating to reimbursement of ash transportation cost.Sales for the year ended 31 March 2023 also include ₹262.97 crore (31 March 2022: Nil) on account of income tax receivable from the beneficiaries as per Regulations, 2004 and ₹87.51 crore (31 March 2022: ₹87.60 crore) on account of deferred tax materialized which is recoverable from beneficiaries as per Regulations, 2019. Energy sales include electricity duty amounting to ₹1,516.71 crore (31 March 2022: ₹1,352.73 crore).

The average tariff for the financial year 2022-23 is ₹4.89/kWh as against ₹4.01/kWh in the previous year. The average tariff includes adjustments pertaining to previous years. If the impact of such adjustments were to be excluded, the average tariff would be ₹4.73/kWh in the financial year 2022-23 as against ₹3.95/kWh in the previous year.

Sale of energy through trading

Your Company is purchasing power from the developers and selling it to the DISCOMs on principal-to-principal basis. During the financial year 2022-23, your Company has accounted sales of energy purchased from solar power plants set up under National Solar Mission of ₹3,753.48 crore (31 March 2022: ₹3,549.65 crore).

Consultancy and other services

During the financial year 2022-23, Consultancy, project management and supervision fees amounted to ₹154.08 crore as against ₹168.18 crore in the previous financial year.

Lease rentals on assets on operating lease

The Power Purchase Agreements (PPA) signed in respect of one of the power stations was operative initially for a period of five years with the beneficiary which may be extended, renewed or replaced as the parties mutually agree. The Company has continued to classify these arrangements with its customers as lease based on the practical expedient provided in Appendix C of Ind AS 116. Accordingly, recovery of capacity charges towards depreciation, interest on loan capital & return on equity (pre-tax) components from the beneficiary are considered as lease rentals on the assets which are on operating lease. Accordingly, lease rentals amounting to ₹19.58 crore has been recognised in the financial year 2022-23 (31 March 2022: ₹19.59 crore).

Sale of captive coal

CERC vide notification dated 19 February 2021, notified the Second amendment to Tariff Regulations 2019, which inter alia includes mechanism for determination of transfer price of coal from integrated coal mines to generating stations and are effective for the period 2019-24. Coal extracted from Company's captive mines and supplied to generating stations have been accounted considering these Regulations.

Interest from beneficiaries

CERC Regulations provides that where after the truing-up, the tariff recovered is less/more than the tariff approved by the Commission, the generating Company shall recover from/pay to the beneficiaries the under/over recovered amount along-with simple interest. Accordingly, the interest recoverable from the beneficiaries amounting to ₹1,609.33 crore (31 March 2022: ₹917.69 crore) has been recognised during the year as Interest from beneficiaries.

Energy internally consumed

Energy internally consumed relates to own consumption of power for construction works at station(s), township power consumption, etc. It is valued at variable cost of generation and is shown in 'Revenue from operations' with a debit to corresponding expense head under power charges. The value of energy internally consumed during the financial year 2022-23 was ₹92.04 crore as compared to ₹65.17 crore in the previous financial year.

Interest income on assets on finance lease

The Company had ascertained that the PPA entered into for Stage-I of one of the power stations with the beneficiary falls under the definition of finance lease. Accordingly, recovery of capacity charges towards depreciation (including AAD), interest on loan capital & return on equity (pre-tax) components from the beneficiary are being adjusted against FLR. Accordingly, an amount of ₹32.53 crore has been recognised in the financial year 2022-23 as compared to ₹45.07 crore in the previous financial year.

Provision written back-others

Provision written back-others represents write back of provision towards water conservation fund at few projects of the Company amounting to ₹242.98 crore (31 March 2022: ₹122.50 crore towards water charges at one of the projects of the Company), which is no longer required.

Other income (Note-41)

The break-up of other income is as under:

(₹ Crore)

Particulars	FY 2022-23	FY 2021-22
Interest from		
Advance to contractors and suppliers	166.02	120.98
Non-current trade receivables	149.88	-
Loan to subsidiary companies	81.45	85.17
Loan to employees	61.92	65.00
Deposits with banks	67.76	54.80
Others	95.74	168.97
Dividend from subsidiaries, joint ventures and other investments	2,342.54	1,745.08
Other non-operating income		
Surcharge from beneficiaries	429.82	822.81
Provisions written back	124.06	180.85
Sale of scrap	148.67	161.68
Others	343.05	225.44
Total	4,010.91	3,630.78
Less: Transferred to EDC (net) /development of coal mines	56.27	55.67
Net other income	**3,954.64**	**3,575.11**

Other income has increased by ₹379.53 crore mainly due to increase in dividend income by ₹597.46 crore and interest from non-current trade receivables by ₹149.88 crore. However same is offset to some extent by decrease in Late payment surcharge from beneficiaries by ₹392.99 crore.

2. Expenses (Statement of Profit & Loss and Note-42, 43, 44, 45 & 46)

2.1 Expenses related to operations

Particular	FY 2022-23		FY 2021-22	
Commercial generation (MUs)	3,43,959		3,09,075	
Expenses	**₹ Crore**	**₹ per kWh**	**₹ Crore**	**₹ per kWh**
Fuel cost	96,851.50	2.82	66,570.07	2.15
Employee benefits expense	5,559.03	0.16	5,412.07	0.18
Other expenses	14,474.59	0.42	9,717.19	0.31
Total	**1,16,885.12**	**3.40**	**81,699.33**	**2.64**

Expenses indicated above includes expenses of consultancy and coal mining.

The expenditure incurred on fuel, employee benefits and other expenses for the financial year 2022-23 was ₹1,16,885.12 crore as against the expenditure of ₹81,699.33 crore incurred during the previous year. In terms of expenses per unit of power produced, it was

₹3.40 per unit in the financial year 2022-23 as against ₹2.64 per unit in the previous year. A discussion on each of these components is given below:

2.1.1 Fuel

Expenditure on fuel is ₹96,851.50 crore in the financial year 2022-23 in comparison to ₹66,570.07 crore in the financial year 2021-22, an increase of 45.49%. The fuel-wise break-up of fuel cost is detailed as under:

(₹ Crore)

Fuel Type	FY 2022-23	FY 2021-22	%Change
Coal	92,081.38	63,773.80	44.39%
Gas	3,052.30	1,682.71	81.39%
Naphtha	158.43	63.41	149.85%
Oil	1,495.00	1,015.59	47.21%
Biomass pellets and other chemicals	64.39	34.56	86.31%
Total	**96,851.50**	**66,570.07**	**45.49%**

Includes the cost of captive coal ₹3,039.06 crore (FY 2021-22: ₹1,983.14 crore) & adjustment due to Intra company elimination by (-) ₹3,980.12 crore (FY 2021-22: (-) ₹2,456.47 crore). Includes adjustment related to earlier years: Coal ₹55.64 crore (FY 2021-22: ₹229.01 crore) & Gas Nil (FY 2021-22: ₹0.01 crore). Includes balance transferred from KBUNL & NPGCL after completion of merger.

The expenditure towards fuel has increased by 36.68% due to price variation mostly on account of more quantity of Imported Coal purchased. There is further increase in fuel cost by 9.07% because of quantity variation as a result of increased commercial generation in coal & gas plants. However, there is a decrease of 0.26% due to decrease in previous year fuel cost.Overall, fuel cost per unit generated increased to ₹2.82 in the financial year 2022-23 from ₹2.15 in the financial year 2021-22. These expenses account for 83% of operational expenditure in the financial year 2022-23.

2.1.2 Employee benefits expense (Note-43)

Employee benefits expense includes salaries & wages, bonus, allowances, benefits, contribution to provident & other funds and welfare expenses.

Employee benefits expense have increased to ₹5,559.03 crore in the financial year 2022-23 from ₹5,412.07 crore in the financial year 2021-22.

An amount of ₹94.18 crore is attributable to new commercial capacity added during the year as well as on commercial capacity added during previous year which was operational for part of the previous year as compared to full year operations during the current year.

In terms of expenses per unit of generation, it is ₹0.16 in the financial year 2022-23. These expenses account for ~5% of operational expenditure in the financial year 2022-23.

2.1.3 Other expenses (Note-46)

Other expenses primarily consist of the expenses for repair and maintenance of plant & equipment, buildings, water charges, security expenses, CSR expenses, electricity duty, travelling, power charges, insurance, loss on fair valuation of non-current trade receivables at amortised cost, interest to beneficiaries, ash utilisation and marketing expenses, training and recruitment and provisions. Other expenses increased to ₹14,474.59 crore in the financial year 2022-23 from ₹9,717.19 crore in the financial year 2021-22.

During the financial year 2022-23, the increase in other expenses is majorly due to increase in impact of Loss on foreign currency transactions and translations by ₹1,322.83 crore, Ash utilization and marketing expenses by ₹905.55 crore, Repair and maintenance by ₹890.73 crore, Loss on fair valuation of non-current trade receivables by ₹386.84 crore, Provisions by ₹281.09 crore, Interest to beneficiaries by ₹236.94 crore, Electricity duty by ₹150.44 crore, Water charges by ₹125.41 crore and Stores consumed by ₹99.09 crore in comparison with previous year.

An increase of ₹977.95 crore is on account of new commercial capacity added during the year as well as on commercial capacity added during previous year which was operational for part of the previous year as compared to full year operations during the current year.

In terms of expenses per unit of generation, it is ₹0.42 in the financial year 2022-23 as compared to ₹0.31 in the previous year. These expenses account for 12% of operational expenditure in the financial year 2022-23.

2.2 Energy purchased for trading

Company has incurred expenditure of ₹3,656.26 crore in the financial year 2022-23 as compared to ₹3,450.22 crore in the previous year on purchase of energy for trading from solar power plants set up under National Solar Mission.

2.3 Finance costs (Note-44)

The finance costs for the financial year 2022-23 are ₹9,979.23 crore in comparison to ₹8,216.54 crore in the financial year 2021-22. The details of interest and other borrowing costs are tabulated below:

(₹ Crore)

Particulars	FY 2022-23	FY 2021-22
Finance costs on financial liabilities measured at amortized cost		
Borrowings-Domestic/ Foreign-Bonds/Loans/ Notes	11,490.32	11,036.80
Cash credit, Commercial papers and unwinding of discount on vendor liabilities/provisions	780.68	456.59
Sub-total	**12,271.00**	**11,493.39**
Exchange differences regarded as an adjustment to borrowing costs	457.54	(74.88)
Others	36.64	35.99
Finance costs before EDC	**12,765.18**	**11,454.50**
Less: Transferred to		
Expenditure during construction period (net)	2,589.03	3,022.36
Development of coal mines	196.92	215.60
Total Finance costs	**9,979.23**	**8,216.54**

Finance costs before EDC has increased by 11.44% over previous financial year due to increase in finance costs on Cash credit and Commercial papers from ₹337.44 crore in previous year to ₹653.41 crore in the financial year 2022-23 and increase in the average cost of borrowings from 5.94% to 6.40% on account of higher rate of interest on new/existing borrowings. Exchange differences regarded as an adjustment to borrowing costs have also increased from (-) ₹74.88 crore to ₹457.54 crore due to weakening of INR against other currencies (USD & EURO).

2.4 Depreciation, amortisation and impairment expense (Note-45)

The depreciation, amortisation and impairment expense charged to the Statement of Profit and Loss during the financial year 2022-23 was ₹13,136.71 crore as compared to ₹12,058.24 crore in the financial year 2021-22, registering an increase of 9%. This is mainly due to increase in the gross PPE by ₹12,802.05 crore in the financial year 2022-23 over the previous year.

The increase in gross block is largely on account of additional capitalization on account of commercial declaration of new units. The depreciation on new units capitalized during the year is on pro-rata basis. Further, depreciation for units declared commercial during financial year 2021-22 has been charged for the entire financial year 2022-23 as against a pro-rata charge during the financial year 2021-22. The impact on depreciation on this account for the financial year 2022-23 is ₹964.77 crore.

3. Profit before tax & Regulatory deferral account balances

The profit of the Company before tax & Regulatory deferral account balances is tabulated below:

(₹ Crore)

Particulars	FY 2022-23	FY 2021-22
Total Income	1,67,724.41	1,24,749.66
Less:		
Expenditure related to operations	1,16,885.12	81,699.33
Electricity purchased for trading	3,656.26	3,450.22
Finance costs	9,979.23	8,216.54
Depreciation, amortisation and impairment expense	13,136.71	12,058.24
Profit before tax and regulatory deferral account balances	**24,067.09**	**19,325.33**

4. Tax expense (Note-55)

The Company provides for current tax in accordance with provisions of Income Tax Act, 1961 and for deferred tax considering the accounting policy of the Company.

Provision for current tax

A provision of ₹4,499.91 crore has been made towards current tax for the financial year 2022-23 as against the provision of ₹3,397.53 crore made for the financial year 2021-22. Current tax provision is mainly higher because of higher profit before tax in the financial year 2022-23 and due to creation of tax provision of ₹206.35 crore pertaining to earlier years' income.

Provision for deferred tax

Net increase in deferred tax liability during the year amounting to ₹1,779.36 crore (previous year: ₹1,060.24 crore) has been debited to the Statement of Profit and Loss. Net deferred tax liability is higher because of lower MAT credit during the financial year 2022-23.

Details of tax expense

(₹ Crore)

Particulars	FY 2022-23	FY 2021-22
Provision for current year	4,293.56	3,398.47
Adjustments for earlier years	206.35	(0.94)
Current tax	4,499.91	3,397.53
Deferred tax liability	4,532.62	4,618.61
MAT Credit	(2,753.26)	(3,558.37)
Deferred tax	1,779.36	1,060.24
Total Tax expense	**6,279.27**	**4,457.77**

5. Net movement in regulatory deferral account balances (net of tax) (Note-71)

Net movements in regulatory deferral account balances (net of tax) for the financial year 2022-23 is (-) ₹591.09 crore in comparison to ₹1,414.43 crore for the financial year 2021-22 as detailed below:

(₹ Crore)

Particulars	FY 2022-23	FY 2021-22
Exchange differences	960.93	(730.39)
Pay Revision	(0.49)	(359.58)
Deferred tax	1,650.50	1,639.68
Ash transportation cost	(3,090.42)	1,478.64
Arbitration cases	-	(110.81)
Sub-total (i)	**(479.48)**	**1,917.54**
Amount realised/ recognised during the year (ii)	(236.75)	(218.42)
Net movement in regulatory deferral account balances (i)+(ii) (I)	(716.23)	1,699.12
Tax on net movements in regulatory deferral account balances (II)	(125.14)	284.69
Total amount recognised in the statement of profit and loss [I-II]	**(591.09)**	**1,414.43**

Refer Note-71 of financial statements for detailed disclosures.

6. Profit after tax

The profit of the Company after tax is tabulated below:

(₹ Crore)

Particulars	FY 2022-23	FY 2021-22
Profit before tax and regulatory deferral account balances	24,067.09	19,325.33
Less: Tax expense	6,279.27	4,457.77
Add: Net movement in regulatory deferral account balances (net of tax)	(591.09)	1,414.43
Profit after tax	**17,196.73**	**16,281.99**

7. Other comprehensive income

The other comprehensive income net of tax for the financial year 2022-23 is (-) ₹75.70 crore in comparison to (-) ₹87.65 crore for the financial year 2021-22. For the financial year 2022-23, net actuarial loss on defined benefit plans is (-) ₹96.09 crore, while net gain on fair value of equity instruments is ₹3.60 crore as against net actuarial loss on defined benefit plan and net gain on fair value of equity instrument amounting to (-) ₹112.74 crore and ₹5.40 crore respectively in the previous year.

C. Cash flows

Statement of Cash flows is tabulated below:

(₹ Crore)

Particulars	FY 2022-23	FY 2021-22
Opening cash & cash equivalents	**117.48**	**176.69**
Net cash from/ (used in) operating activities	35,398.57	37,898.21
Net cash from/ (used in) investing activities	(14,062.76)	(18,080.05)
Net cash flow from/ (used in) financing activities	(21,450.16)	(19,877.37)
Net increase / (decrease) in cash and cash equivalents	(114.35)	(59.21)
Closing cash & cash equivalents	**3.13**	**117.48**

Statement of cash flows comprises of cash flows from operating activities, investing activities and financing activities. Net cash generated from operating activities decreased to ₹35,398.57 crore during the financial year 2022-23 as compared to ₹37,898.21 crore in the previous year.

Cash outflows on investing activities arise from expenditure on setting up power projects, acquisition of power plants, investments in joint ventures & subsidiaries and tax outflow on income from investing activities. Cash inflows arise from interest from banks, sale of investment in subsidiaries, sale of assets to subsidiary, and dividend income from joint ventures and subsidiaries. Cash invested on purchase of fixed assets (property, plant and equipment & intangible assets) decreased from ₹19,267.79 crore in financial year 2021-22 to ₹17,320.53 crore in financial year 2022-23. Cash inflow on account of dividend received has increased from ₹1,745.08 crore in previous year to ₹1,992.54 crore in the financial year 2022-23. Cash inflow on account of sale of assets to subsidiary of ₹12,010.55 crore and sale of investment in subsidiaries of ₹1,094.46 crore is received during the year, pursuant to BTA. Considering all the investing activities, the net cash used in investing activities was ₹14,062.76 crore in the financial year 2022-23 as compared to ₹18,080.05 crore in the previous year.

During the financial year 2022-23, the Company had an inflow of ₹16,257.48 crore from non-current borrowings as against ₹19,911.50 in the previous year and inflow of ₹4,403.56 crore from current borrowings as against outflow of ₹6,189.43 crore in the previous year. Cash used for repayment of non-current borrowings during the financial year 2022-23 was ₹22,371.86 crore as against ₹15,680.33 crore in the previous year. Interest paid during the year was ₹12,557.58 crore as compared to ₹10,950.39 crore during the previous year. Cash used for paying dividend was ₹7,030.08 crore during the financial year 2022-23 as compared to ₹6,933.12 crore in the previous year. Thus, from financing activities during the year, the Company has an outflow of ₹21,450.16 crore as against an outflow of ₹19,877.37 crore in the previous year.

FINANCIAL SUMMARY OF SUBSIDIARY COMPANIES

The Company has 10 subsidiary companies as on 31 March 2023, out of which 5 (NESCL, NVVN, NML, NEEPCO & NGEL) are wholly owned by the Company.

A summary of the financial performance of the subsidiary companies during the financial year 2022-23 is given below:

(₹ Crore)

Sl. No.	Company	NTPC's investment in equity	Total Income	Profit/ (Loss) for the year
1	NTPC Electric Supply Company Ltd.	0.08	2.09	0.25
2	Bhartiya Rail Bijlee Company Ltd.	1,774.12	3,433.84	248.14
3	NTPC Vidyut Vyapar Nigam Ltd.	30.00	4,628.84	175.89
4	Patratu Vidyut Utpadan Nigam Ltd.	1,637.62	0.16	(0.51)
5	NTPC Mining Limited	0.05	-	(0.01)
6	North-Eastern Electric Power Corporation Ltd.	4,000.00	4,570.63	396.89
7	THDC India Ltd.	7,500.00	2,014.52	672.84
8	NTPC Green Energy Limited	4,719.61	170.64	173.37
9	NTPC EDMC Waste Solution Pvt. Ltd.	0.15	-	(0.56)
10	Ratnagiri Gas & Power Pvt. Ltd.	-	541.31	(199.94)
	Total	**19,661.63**	**15,362.03**	**1,466.36**

FINANCIAL SUMMARY OF JOINT VENTURE COMPANIES

Proportion of ownership and financial performance of the joint venture companies for the financial year 2022-23 are given below:

(₹ Crore)

Sl. No.	Company	NTPC's Ownership (%)	NTPC's investment in equity	Total Income	Profit/ (Loss) for the year
A.	Joint venture companies incorporated in India				
1	Utility Powertech Ltd.	50.00	1.00	1,635.58	32.61
2	NTPC-GE Power Services Pvt. Ltd.	50.00	3.00	440.58	5.99
3	NTPC-SAIL Power Co. Ltd.	50.00	490.25	3,707.74	470.34
4	NTPC Tamil Nadu Energy Co. Ltd.	50.00	1,436.40	5,874.29	848.21
5	Aravali Power Co. Pvt. Ltd.	50.00	1,433.01	5,376.48	496.47
6	Meja Urja Nigam Pvt. Ltd.	50.00	1,784.41	3,849.25	85.87
7	NTPC-BHEL Power Project Pvt. Ltd.	50.00	-	46.45	(5.49)

Sl. No.	Company	NTPC's Ownership (%)	NTPC's investment in equity	Total Income	Profit/ (Loss) for the year
8	National High Power Test Laboratory Pvt. Ltd.	20.00	-	20.18	(16.74)
9	Transformers and Electricals Kerala Ltd.	44.60	31.34	192.18	2.89
10	Energy Efficiency Services Ltd.	33.33	463.61	2,448.79	(331.74)
11	CIL NTPC Urja Pvt. Ltd.	50.00	0.08	0.15	0.12
12	Anushakti Vidyut Nigam Ltd.	49.00	0.05	-	(0.01)
13	Hindustan Urvarak and Rasayan Ltd.	29.67	2,295.95	4,449.20	(61.04)
14	Jhabua Power Limited*	50.00	325.00	905.60	18.83
B.	Joint venture companies incorporated outside India				
15	Trincomalee Power Company Ltd., Sri Lanka	50.00	0.92	0.07	(0.27)
16	Bangladesh-India Friendship Power Company Private Ltd., Bangladesh	50.00	1,162.02	710.00	(40.42)
	Total		**9,427.04**	**29,656.54**	**1,505.62**

** Total Income and Profit for the year of Jhabua Power Limited are considered for the post aquisition period i.e., from 5 September 2022 to 31 March 2023.*

Consolidated financial results

A brief summary of the financial results on a consolidated basis is given below:

(₹ Crore)

Particulars	FY 2022-23	FY 2021-22
Total income	1,77,977.17	1,34,994.31
Profit before tax and regulatory deferral account balances	24,330.59	20,520.91
Tax Expense	6,796.12	5,047.10
Profit before regulatory deferral account balances	17,534.47	15,473.81
Net movement in regulatory deferral account balances (net of tax)	(413.12)	1,486.48
Profit for the year	17,121.35	16,960.29
Other comprehensive income (net of tax)	(203.00)	(87.25)
Total comprehensive income for the year	16,918.35	16,873.04

CAUTIONARY STATEMENT

Statements in the Management Discussion and Analysis and in the Directors' Report, describing the Company's objectives, projections and estimates, contain words or phrases such as "will", "aim", "believe", "expect", "intend", "estimate", "plan", "objective", "contemplate", "project" and similar expressions or variations of such expressions, are "forward-looking" and progressive within the meaning of applicable laws and regulations. Actual results may vary materially from those expressed or implied by the forward-looking statements due to risks or uncertainties associated therewith depending upon economic conditions, government policies and other incidental factors. Readers are cautioned not to place undue reliance on these forward-looking statements.

For and on behalf of the Board of Directors

Sd/-
(Gurdeep Singh)
Chairman & Managing Director

Place: New Delhi
Date: 29th July, 2023

Annexure - II to Directors' Report

Report on Corporate Governance

Corporate Governance has a pivotal role in steering a company towards greater accuracy and transparency in management and control, ultimately building trust in the company's ability to maximize value for all stakeholders. In the age of rapid evolution, where environmental and regulatory compliances are increasing manifold, corporate governance has become all more pervasive. Corporate Governance is more than just a system, it is an ethos which drives the company and its officials at the helm of affairs to be accountable, fair, and conscious in delivering and adhering to its objectives.

NTPC's Corporate Governance Philosophy

"As a good corporate citizen, our Company is committed to sound corporate practices based on conscience, openness, fairness, professionalism and accountability besides building confidence in its various stakeholders, thereby paving the way for long term success."

1. NTPC's Corporate Governance Philosophy

For NTPC, Corporate Governance is not just a set of regulatory rules or compliances rather a philosophy that cements our foundation and characterise us. It is an all encompassing set of system and values that ensures to uphold the highest standard of integrity and professionalism.

Our dedicated initiatives in fostering and maintaining these highest standards of governance are detailed in this report.

2. The Board of Directors

The Board of Directors play a crucial role in the overall functioning, strategic decision making and leadership of the company. The Board functions in accordance with the powers delegated under the Companies Act, 2013, SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015 as amended {hereinafter referred as SEBI (LODR)}, Memorandum & Articles of Association, Maharatna Guidelines issued by Department of Public Enterprise (DPE) and other guidelines issued by the Government of India from time to time, as may be applicable to the Company.

2.1 Size & Composition of the Board

NTPC is a Government Company within the meaning of Section 2(45) of the Companies Act, 2013. As mandated by the Articles of Association of the Company, all Directors on Board are appointed by the President of India. The Articles of Association further provides that the strength of the Board shall not be less than four directors or more than twenty Directors. Presently, the sanctioned composition of the Board is as under:

(i) Six Functional Directors including the Chairman & Managing Director,

(ii) Two Government Nominee Directors, and

(iii) Eight Independent Directors, including one-woman Independent Director as per the requirements of the SEBI (LODR).

However, against the sanctioned strength, as on 31st March, 2023 the Board of Directors of the Company comprise of:

(i) Five (5) Functional Directors,

(ii) Two (2) Government Nominee Directors, and

(iii) Four (4) Independent Directors.

The number of Independent Directors were less than 50% of total number of Directors during the FY 2022-23.

As NTPC is a Government Company, the request for the appointment of requisite number of independent directors has been made to the Administrative Ministry i.e. Ministry of Power from time to time.

The Board composition and other directorship details of each Director, as on 31st March 2023, are detailed here under:

Sl. No.	Director	Designation	No of Directorships in Other Companies	Directors in other Listed Entities & Category	No of Committee Memberships in other Companies	
					As Chairman	As Member
1	Shri Gurdeep Singh	Chairman & Managing Director	3	-	-	-
2	Shri Dillip Kumar Patel	Director (HR)	8	-	-	2
3	Shri Ramesh Babu V	Director (Operations)	5	-	-	-
4	Shri Ujjwal Kanti Bhattacharya	Director (Projects)	6	-	-	-
5	Shri Jaikumar Srinivasan[1]	Director (Finance)	4	-	-	4
6	Shri Ashish Upadhyaya	Director (Govt. Nominee)	-	-	-	-
7	Shri Piyush Singh[2]	Director (Govt. Nominee)	2	-	-	-
8	Shri Vidyadhar Vaishampayan	Independent Director	-	-	-	-
9	Shri Vivek Gupta	Independent Director	1	-	-	-
10	Shri Jitendra Jayantilal Tanna	Independent Director	-	-	-	-
11	Smt. Sangitha Varier	Independent Director	-	-	-	-

1. Appointed as Director on 21.07.2022 2. Appointed as Director on 31.05.2022

Shri Chandan Kumar Mondol ceased to be a director of the company on 31st January, 2023, upon reaching his retirement age.

Shri Shivam Srivastava has been appointed as Director (Fuel) of the Company w.e.f 30th April,2023.

None of the directors on Board is a member of more than 10 Committees or Chairperson of more than 5 Committees across all the Public companies in which they are a Director as prescribed under Regulation 26 of SEBI (LODR).

None of Directors of the Company is inter-se related to other directors of the Company.

2.2. Tenure of Directors

The Chairman & Managing Director and other whole-time Directors are generally appointed for a period of five years from the date of taking over the charge or until the date of superannuation or until further orders from the Government of India, whichever event occurs earliest. The tenure of the whole-time director can be extended further by the Government of India till the age of superannuation i.e. 60 years. Independent Directors are generally appointed by the Government of India for tenure of three years. Government Nominee Directors are appointed on ex- officio basis during their tenure in Ministry of Power (MOP).

2.3. Resume of Directors

Brief resume of directors seeking appointment or re-appointment at the Annual General Meeting is appended to the Notice calling the Annual General Meeting.

2.4 Core competencies of Directors

The Board comprises qualified members who bring in the required skills, competence and expertise to effectively contribute in deliberations at Board and Committee meetings.

The Board of Directors, in its 251st meeting held on 25th November 2003, had approved the job description, qualification and experience for Board level posts including that of the Chairman & Managing Director.

The desirable qualification and experience of the incumbents are as per the requirements in the functional areas. At the time of recruitment of the Functional Directors, job description, desirable qualification & experience of candidates are sent to the Public Enterprise Selection Board through the Administrative Ministry for announcement of vacancy and recruitment of candidates.

Further, Board of Directors, in 288th meeting held on 26th June 2006, had deliberated on the areas of expertise of Independent Directors required on the Board of the Company. In the above Board meeting, the Board decided that the Independent Directors, to be nominated by the Government of India on the Board of NTPC should be having expertise in the diverse areas like Economics, Human Resources Management, Regulatory Framework, Management Consultant, Research and Development, Academics, Energy & Power Sector, Finance & Banking etc.

The matrix given below summarizes a mix of skills, expertise and competencies possessed by Directors. It is pertinent to mention that being a Government Company, appointment of Director is made by the Government of India in accordance with the DPE Guidelines.

Name of Director	Designation	Area of Skill/Expertise/Competence									
		Technical/ Engineering	Energy & Power	Finance & Banking	Economics	Human Resource	Regulatory Framework	Management	Environment	Academics	Research & Development
Shri Gurdeep Singh	Chairman & Managing Director	✓	✓					✓			
Shri Jaikumar Srinivasan	Director (Finance)		✓	✓			✓	✓			
Shri Dillip Kumar Patel	Director (HR)	✓	✓			✓		✓			
Shri Ramesh Babu V	Director (Operations)	✓	✓								
Shri Ujjwal Kanti Bhattacharya	Director (Projects)	✓	✓					✓	✓		
Shri Ashish Upadhyaya	Nominee Director		✓	✓	✓		✓				
Shri Piyush Singh	Nominee Director	✓	✓				✓				
Shri Vidyadhar Vaishampayan	Independent Director	✓		✓	✓						
Shri Vivek Gupta	Independent Director			✓			✓	✓			
Shri Jitendra Jayantilal Tanna	Independent Director			✓	✓		✓	✓			
Smt Sangitha Varier	Independent Director					✓				✓	
Shri Shivam Srivastava*	Director (Fuel)	✓	✓					✓			

* Appointed on 30.4.2023

2.5 Board Meetings during the Year

During the financial year ended 31st March, 2023, fifteen (15) meetings of the Board were held on 30th April 2022, 20th May 2022, 31st May 2022, 25th June 2022, 18th July 2022, 29th July 2022, 25th August 2022, 10th September 2022, 12th October 2022, 29th October 2022, 13th January 2023, 28th January 2023, 30th January 2023, 11th March 2023 and 24th March 2023. Details of attendance of Directors in the Board meeting held during FY 2022-23 are as under:

Directors	Designation	Other Details	No of Meetings held during the FY/Tenure	No. of meetings Attended	Whether attended AGM held on 30.08.2022
Shri Gurdeep Singh	Chairman & Managing Director		15	15	Yes
Shri Dillip Kumar Patel	Director (HR)		15	14	Yes
Shri Ramesh Babu V	Director (Operations)		15	15	Yes
Shri Ujjwal Kanti Bhattacharya	Director (Projects)		15	15	Yes
Shri Jaikumar Srinvasan	Director (Finance)	Appointed on 21.07.2022	10	10	Yes
Shri Anil Kumar Gautam	Director (Finance)	Ceased to be Director on 31.05.2022	3	3	NA
Shri Chandan Kumar Mondol	Director (Commercial)	Ceased to be Director on 31.01.2023	13	13	Yes
Shri Ashish Upadhyaya	Govt. Nominee Director		15	14	Yes
Shri. Piyush Singh	Govt. Nominee Director	Appointed on 31.05.2022	12	11	Yes
Shri. Vivek Kumar Dewangan	Independent Director	Ceased to be Director on 30.05.2022	2	1	NA
Shri Vidyadhar Vaishampayan	Independent Director		15	15	Yes
Shri Vivek Gupta	Independent Director		15	15	Yes
Shri Jitendra Jayantilal Tanna	Independent Director		15	15	Yes
Smt. Sangitha Varier	Independent Director		15	15	Yes

2.6 Board Independence

All the Independent Directors have given the declaration that they meet the criteria of independence to the Board of Directors as per the provisions of the Companies Act, 2013 and SEBI (LODR). Terms and conditions of appointment of independent directors are hosted on the website of the Company at https://www.ntpc.co.in/sites/default/files/inline-files/CommontermsandconditionsofappointmentofIndependentDirectors.pdf

2.7 Performance Evaluation of Board Members

Ministry of Corporate Affairs (MCA) vide General Circular dated 5th June 2015 has exempted Government Companies from the provisions of Section 178 (2) which provides about manner of performance evaluation of Board of Directors, Committee of Board of Directors and Director by the Nomination & Remuneration Committee. The aforesaid circular of MCA further exempted listed Govt. Companies from provisions of Section 134(3) (p) which requires mentioning the manner of formal evaluation of its own performance by the Board and that of its Committees and Individual Director in Board's Report, if directors are evaluated by the Ministry or Department of the Central Government which is administratively in charge of the company, or, as the case may be, the State Government as per its own evaluation methodology. In this regard, Department of Public Enterprise (DPE) has already laid down a mechanism for performance appraisal of all functional directors. In case of Government Nominee Directors, their evaluation is done by the Ministry or Department of the Central Government which is administratively in charge of the company as per the procedure laid down by them. DPE has also initiated evaluation of Independent Directors. In view of above, as per requirement of Regulation 17(10) of the SEBI (LODR), evaluation of Independent Director was not made by the Board of Directors. Further, as Directors are appointed by the Government of India, succession planning at the Board Level was not done by the Company.

The Company enters Memorandum of Understanding (MoU) with Ministry of Power (MoP) every year wherein Company is evaluated on various financial and non-financial parameters. The performance of the Company & Board of Directors is evaluated by the Department of Public Enterprises in terms of MoU entered with MoP.

2.8 Meeting of Independent Directors

In conformity with Regulation 25(3) of SEBI(LODR) separate meeting of Independent Directors was held during the Financial Year. In the meeting Independent Directors reviewed and assessed the performance of the non-independent Directors and the Board as a whole, the quality, quantity, and timeliness of flow of information between the Company management and the Board necessary for effective and reasonable performance of their duties including the performance of the Chairman & Managing Director.

2.9 Information Provided to the Board

Access to information is of vital importance to assess the value of company's assets and deploy or redeploy capital towards the opportunities with growth prospects and attractive returns.

Our Company has a sound framework and integration of all departments and units to ensure seamless and timely flow of information both vertically and horizontally. The Board has absolute access to all data, documents, reports to enable the Board to make timely and informed decisions and exercise control over the organisation. Information provided to the Board normally includes:

- Annual operating plans and budgets and any updates.
- Capital Budgets and any updates.
- Quarterly financial results.
- Financial Statements and Board's Report (including the Annexures thereto).
- Major investments, formation of subsidiaries and Joint Ventures or collaboration agreement, Strategic Alliances, etc.
- Details of amount borrowed by the Company.
- Minutes of meetings of Audit Committee, Board meetings and other Committees of the Board.
- Minutes of meetings of Board of Directors of subsidiary companies.
- Fatal or serious accidents, dangerous occurrences, etc.
- Operational highlights and substantial non-payment for goods sold by the Company.
- Award of large value contracts.
- Disclosure of Interest by Directors about directorships and committee positions occupied by them in other companies.
- Declaration of independence by Independent Directors.
- Quarterly Report on foreign exchange exposures.
- Quarterly status of investors complaints.
- Quarterly Report on Foreign Travel of Chairman & Managing Director, Functional Directors and Employees.

- Quarterly Report on Short Term Deposits and Investments.
- Report on Contract awarded on nomination basis.
- Quarterly Report on Reconciliation of Share Capital Audit.
- Quarterly Report on Business Activities of various Joint Venture Companies and Subsidiaries of NTPC.
- Quarterly Report on Compliance of various laws including show cause demand, prosecution notices.
- Quarterly Report on Compliance with Corporate Governance norms.
- Non-compliance of any regulatory, statutory or listing requirements and shareholders services such as non-payment of dividend, delay in share transfer, etc.
- Appointment of Key Managerial Personnel and information on recruitment and promotion of senior officers to the level of Executive Director which is just below the Board level and Company Secretary.
- Any significant development in Human Resources/ Industrial Relations like signing of wage agreement, implementation of Voluntary Retirement Scheme, etc.
- Information relating to major legal disputes.
- Highlights of important events from last meeting to the current meeting.
- Any other information as may be required to be presented to the Board for information or approval.

The important decisions taken at the Board/Committee meetings are communicated to the concerned departments promptly.

3. Board Committees

With a view to ensure effective decision making, the Board of Directors has constituted various Statutory and Non-Statutory Committees to have focused attention on crucial issues. The details of such committees are given below.

3.1 Audit Committee

The composition, quorum, scope, etc. of the Audit Committee are in line with the Companies Act, 2013, SEBI (LODR) and DPE Guidelines on Corporate Governance.

Composition, Meetings & Attendance

The details of the Audit Committee constitution as on 31st March, 2023, meeting held during FY 2022-23 and attendance there at are as under:

Sl. No.	Names	Designation	Total No. of Meetings Held	Total No. of Meetings Attended
1.	Shri Jitendra Jayantilal Tanna	Chairman	13	13
2.	Shri Ashish Upadhyaya	Member	13	10
3.	Shri Vivek Gupta	Member	13	13
4.	Shri Vidyadhar Vishampayan	Member	13	13
5.	Smt. Sangitha Varier	Member	13	13

During the FY 2022-23, thirteen (13) meetings of the Audit Committee were held. The meetings of Audit Committee were held on 30th April, 2022, 20th May, 2022, 31st May, 2022, 25th June, 2022, 18th July, 2022, 29th July, 2022, 10th September, 2022, 29th October, 2022, 5th December, 2022, 2nd January, 2023, 27th January, 2023, 11th March, 2023 & 24th March, 2023 respectively.

Director (Finance) is the permanent invitee to the Audit Committee meetings. Head of Internal Audit Department and Senior Executives are invited to the Audit Committee Meetings for interacting with the members of the Committee, if required. The Joint Statutory Auditors and Cost Auditors of the Company are also invited to the meetings of the Audit Committee while discussing financial statements/ financial results and Cost Audit Reports respectively.

The Company Secretary acts as the Secretary to the Committee.

Scope of Audit Committee

The scope of Audit Committee is as follows:-

1. To conduct detailed discussions during pre and post commencement audit meetings with auditors on scope of audit and potential areas of concern for process and functional improvements.
2. Facilitate communication for important information dissemination among the independent auditors, internal auditors, and the Board of Directors.
3. Approval or any subsequent modification of transactions of the company with related parties.
4. Scrutiny of inter-corporate loans and investments.
5. Reviewing, with the management, the quarterly financial statements before submission to the Board for approval.
6. Reviewing, with the management, the annual financial statements and draft auditor's report thereon before submission to the board for approval, with particular reference to:
    a. Matters required to be included in the Director's Responsibility Statement to be included in the Board's report in terms of clause (c) of sub-section 3 of section 134 of the Companies Act, 2013;
    b. Changes, if any, in accounting policies and practices and reasons for the same;
    c. Major accounting entries involving estimates based on the exercise of judgment by management;
    d. Significant adjustments made in the financial statements arising out of audit findings;
    e. Compliance with listing and other legal requirements relating to financial statements;
    f. Disclosure of related party transactions;
    g. Qualifications in the draft audit report.
7. Noting the appointment and removal of independent auditors. Recommending audit fee of independent auditors and also approval for payment for any other service.
8. Recommending to the Board the appointment and remuneration of the cost auditors of the Company.
9. Review of observations of C&AG including status of Government Audit paras.
10. Reviewing with the management, statement of uses/application of funds raised through an issue (public issue, rights issue, preferential issue etc.), statement of funds utilised for purposes other than those stated in the offer documents/prospectus/notice and the report submitted by the monitoring agency monitoring the utilisation of proceeds of a public or rights issue, and making appropriate recommendations to the board to take up steps in this matter.
11. Valuation of undertakings or assets of the company, wherever it is necessary.
12. Evaluation of internal financial controls and risk management systems.
13. To look into the reasons for substantial defaults in the payment to the depositors, debenture holders, shareholders (in case of non-payment of declared dividends) and creditors.
14. To review the functioning of the Whistle Blower mechanism.
15. Reviewing the findings of any internal investigations by the internal auditors into matters where there is suspected fraud or irregularity or a failure of internal control systems of a material nature and reporting the matter to the Board.
16. To review the follow up action taken on the recommendations of Committee on Public Undertakings (COPU) of the Parliament.
17. Review of:
    a. Management discussion and analysis of financial condition and results of operations;
    b. Management letters/ letters of internal control weaknesses; issued by the statutory auditors
    c. Internal Audit Reports relating to internal control weaknesses.
18. Oversight of the company's financial reporting process and the disclosure of its financial information to ensure that the financial statement is correct, sufficient and credible.
19. Review with the independent auditor the co-ordination of audit efforts to assure completeness of coverage, reduction of redundant efforts and the effective use of all audit resources.

20. Reviewing the adequacy of internal audit function, if any, including the structure of the internal audit department, staffing and seniority of the official heading the department, reporting structure coverage and frequency of internal audit.
21. Consider and review the following with the independent auditor and the management:
    a) The adequacy of internal controls including computerized information system controls and security, and
    b) Related findings and recommendations of the independent auditors and internal auditors, together with the management responses.
22. Consider and review the following with the management, internal auditor and the independent auditor:
    a) Significant findings during the year, including the status of previous audit recommendations.
    b) Any difficulties encountered during audit work including any restrictions on the scope of activities or access to required information.
23. Review of appointment and removal of the Chief Internal Auditor.
24. Reviewing, with the management, the performance of the internal auditors and of the independent auditors and effectiveness of the audit process.
25. Review of internal audit observations outstanding for more than two years.
26. Reviewing the utilization of loans and/ or advances from/ investment by the holding company in the subsidiary exceeding rupees 100 crore or 10% of the asset size of the subsidiary, whichever is lower including existing loans / advances / investments.
27. To review compliance with the provisions of SEBI Insider Trading Regulations at least once in a financial year
28. To verify that the systems for internal control are adequate and are operating effectively.
29. To consider and comment on rationale, cost-benefits and impact of schemes involving merger, demerger, amalgamation etc., on the listed entity and its shareholders.
30. Any matter referred to it by the Board or any other terms of reference as amended by the Companies Act, 2013 & rules made thereunder, SEBI (LODR) and DPE Guidelines.

3.2. Stakeholders' Relationship Committee

This Committee has been constituted in line with the provisions of SEBI (LODR) and Companies Act, 2013. It considers and resolves the grievances of security holders of the Company inter-alia including grievances related to transfer of shares, non-receipt of Annual Report, non-receipt of dividend etc. The Committee also reviews measures taken for effective exercise of voting rights by shareholders, adherence to the service standards adopted by the listed entity in respect of various services being rendered by the Registrar & Share Transfer Agent and measures and initiatives taken by the listed entity for reducing the quantum of unclaimed dividends and ensuring timely receipt of dividend warrants/annual reports/statutory notices by the shareholders of the Company.

Composition, Meeting & Attendance

The details of constitution of the Stakeholders' Relationship Committee as on 31st March 2023, meeting details held during FY 2022-23 and attendance there at are as under:

Sl. No.	Names	Designation	Date of Meetings	
			19.05.2022	05.12.2022
1	Shri Vivek Gupta	Chairman	Yes	Yes
2	Shri Ashish Upadhyaya	Member	Yes	Yes
3	Shri Vidyadhar Vaishampayan	Member	Yes	Yes
4	Shri Jaikumar Srinivasan*	Member	NA	Yes
5	Shri Anil Kumar Gautam**	Member	Yes	NA

*Appointed as Director on 21.07.2022 | ** Ceased to be Director on 31.05.2022

Name & Designation of Compliance Officer

The Board of Directors has appointed Shri Arun Kumar, Company Secretary as the Company Secretary & Compliance Officer of NTPC Limited in terms of Regulation 6 of SEBI (LODR) w.e.f 29th October, 2022

Ms. Nandini Sarkar ceased to be Company Secretary & Compliance Officer of NTPC w.e.f 30th September, 2022.

Investor Grievances

The Company has always valued its investors' relationship. During the financial year ended on 31st March 2023, Company has attended its investors grievances expeditiously except for the cases constrained by disputes or legal impediments. The details of the requests/queries/complaints received, resolved and disposed off during the year under review are as under:

Particulars	Opening Balance	Received	Resolved	Pending
Complaints relating to				
Equity Shares	0	1011	1011	0
Bonus Debentures	0	109	109	0
Public Issue of Bonds	0	512	512	0
Private Placement of Bonds	0	0	0	0

3.3. Nomination and Remuneration Committee including PRP

As per the requirements of Section 178 of the Companies Act, 2013, Regulation 19 of SEBI (LODR) and DPE Guidelines, a Nomination & Remuneration Committee (NRC) including Performance Related Pay (PRP) has been constituted. The scope of this Committee includes approval of annual bonus/ variable pay pool and policy for its distribution across the executives and non-unionized supervisors within the prescribed limit in addition to scope as defined under the Companies Act, 2013 and SEBI (LODR).

Being a Government Company, as per the Articles of Association, all Directors including the Chairman & Managing Director are appointed by the Government of India. Their tenure and remuneration are also fixed by the Government of India. Accordingly, evaluation of Directors is done by the Government of India. It may also be noted that Ministry of Corporate Affairs (MCA) vide notification dated 5th June, 2015, has exempted Government Companies from the provisions of section 178(2), (3) and (4) which requires formulation of criteria for determining qualifications, positive attributes, independence and annual evaluation of Directors & policy relating to remuneration of Directors. In view of above, Nomination & Remuneration Committee including PRP has not formulated criteria for evaluation of performance of independent directors and the board of directors as required under Regulation 19 read with Schedule II Part D of the SEBI (LODR).

Members, Meetings & Attendance

The details of the constitution of Nomination and Remuneration Committee as on 31st March 2023, meeting details held during FY 2022-23 and attendance thereat are as under:

SL No	Names	Designation	Date of Meetings						
			20.05.2022	31.05.2022	18.07.2022	29.07.2022	10.09.2022	29.10.2022	28.01.2023
1	Smt. Sangitha Varier	Chairperson	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	Shri Ashish Upadhyaya	Member	Yes	Yes	Yes	Yes	Yes	Yes	No
3	Shri Jitendra Jayantilal Tanna	Member	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	Shri Vidyadhar Vaishampayan	Member	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	Shri Vivek Gupta	Member	Yes	Yes	Yes	Yes	Yes	Yes	Yes

3.4. Corporate Social Responsibility and Sustainability Committee

This Committee has been constituted in line with the provisions of Section 135 of the Companies Act, 2013 and DPE guidelines on Sustainability (SD). This Committee is constituted to formulate and recommend to the Board, Corporate Social Responsibility Policy as per Schedule VII of the Companies Act, 2013 as amended from time to time; to recommend the amount of expenditure to be incurred on the activities specified in the CSR Policy; to monitor the Corporate Social Responsibility Policy of the company from time to time; and any other matter as the Board may delegate from time to time.

Members, Meetings & Attendance

The details of constitution of the Corporate Social Responsibility and Sustainability Committee as on 31st March 2023, meeting details held during FY 2022-23 and attendance thereat are as under:

Sl No	Names	Designation	Date of Meetings			
			19.05.2022	25.06.2022	05.12.2022	04.01.2023
1	Shri Dillip Kumar Patel	Chairman	Yes	Yes	Yes	Yes
2	Shri Ramesh Babu V	Member	Yes	Yes	Yes	Yes
3	Smt. Sangitha Varier	Member	Yes	Yes	Yes	Yes
4	Shri Jitendra Jayantilal Tanna	Member	Yes	Yes	Yes	Yes
5	Shri Vivek Gupta	Member	Yes	Yes	Yes	Yes

NTPC's Policy on CSR & Sustainability can be viewed at the weblink: https://www.ntpc.co.in/sustainability/policies.

3.5. Risk Management Committee

Pursuant to Regulation 21 of the SEBI (LODR), Risk Management Committee has been constituted to finalise risk assessment including cyber security under the Risk Management Framework; monitor and review risk management plan/ framework as approved by the Board; informing the Board about the risk assessed and action required to be taken/ already taken for mitigating the risks and take up any other matter as directed by the Board from time to time.

Details on risk management mechanisms are given in the Management Discussion and Analysis report annexed with the Directors' Report.

Composition, Meetings & Attendance

The details of constitution of the Risk Management Committee as on 31st March 2023, meetings details held during FY 2022-23 and attendance thereat are as under:

Sl No	Names	Designation	Date of Meetings	
			24.08.2022	12.02.2023
1	Shri Ujjwal Kanti Bhattacharya	Chairman	Yes	Yes
2	Shri Ramesh Babu V	Member	Yes	Yes
3	Shri Vidyadhar Vaishampayan	Member	Yes	Yes
4	Shri Animesh Jain*	Member	Yes	Yes
5	Ms. Sangeeta Kaushik**	Member	NA	NA

*Ceased w.e.f. 13.03.2023 **Appointed w.e.f. 13.03.2023

The scope of the committee is in line with the requirement of SEBI (LODR).

3.6. Other Committees of the Board of Directors

S. No.	Name of the Committee	Role & Responsibility	Members (As on 31.03.2023)
1.	Committee on Management Controls	Review of significant deviations in project implementation and construction, operation and maintenance budgets etc.	1. Shri Jaikumar Srinivasan * 2. Shri Ramesh Babu V. 3. Shri Ashish Upadhyaya 4. Shri Vivek Gupta 5. Smt. Sangitha Varier
2.	Projects Sub-Committee	To examine and give recommendations to the Board on proposals for Investment in New/ Expansion Projects and approves Feasibility Reports of new projects.	1. Shri Ujjwal Kanti Bhattacharya 2. Shri Jaikumar Srinivasan * 3. Shri Ramesh Babu V. 4. Shri Vivek Gupta 5. Shri Vidyadhar Vaishampayan 6. Shri Jitendra Jayantilal Tanna
3.	Committee of Functional Directors for Contracts	Award of works or purchase contracts or incurring of commitments exceeding ₹ 300 crore but not exceeding ₹ 500 crore.	1. Shri Gurdeep Singh 2. Shri Jaikumar Srinivasan * 3. Shri Dillip Kumar Patel 4. Shri Ramesh Babu V. 5. Shri Ujjwal Kanti Bhattacharya
4.	Contracts Sub-Committee	Award of works or purchase contracts or incurring commitments of value exceeding ₹ 500 crore but not exceeding ₹ 1000 crore, Consultancy assignments including foreign consultancy assignments exceeding ₹ 10 crore each and Appointment of Sponsor/ Agents for Overseas Consultancy Assignments involving sponsorship/ agency commission exceeding ₹ 10 crore each.	1. Shri Gurdeep Singh 2. Shri Jaikumar Srinivasan * 3. Shri Ujjwal Kanti Bhattacharya 4. Shri Piyush Singh 5. Shri Jitendra Jayantilal Tanna 6. Smt. Sangitha Varier

S. No.	Name of the Committee	Role & Responsibility	Members (As on 31.03.2023)
5.	Committee for Allotment and Post-Allotment Activities of NTPC's Securities	To approve allotment, issue of Certificate(s)/ Letter of allotment(s), transfer, transmission, re-materialisation, issue of duplicate certificate(s), consolidation/ split of NTPC's domestic and foreign Securities.	1. Shri Dillip Kumar Patel 2. Shri Ujjwal Kanti Bhattacharya 3. Shri Ramesh Babu V. / Shri Jaikumar Srinivasan*
6.	Committee for Vigilance Matters	To examine all the petitions which are submitted before the Board as appellate/ reviewing authority in terms of CDA rules. It also reviews other major complaints as referred to it from time to time other than complaints registered under whistle blower mechanism under purview of Chief Vigilance Officer.	1. Shri Ashish Upadhyaya 2. Shri Piyush Singh 3. Shri Dillip Kumar Patel 4. Shri Vidyadhar Vaishampayan 5. Smt. Sangitha Varier
7.	Exchange Risk Management Committee	To review the foreign currency loan portfolio, hedged and un-hedged exposures and effectiveness of hedging strategy, approve amendments in Exchange Risk Management Policy, new derivative instruments, etc.	1. Shri Jaikumar Srinivasan* 2. Shri Ashish Upadhyaya 3. Shri Vivek Gupta
8.	Committee for Guiding Acquisition of Power Assets	To guide the process of acquisition of power assets and to make recommendation to the Board	1. Shri Jitendra Jayantilal Tanna 2. Shri Ashish Upadhyaya 3. Shri Jaikumar Srinivasan* 4. Shri Ujjwal Kanti Bhattacharya 5. Shri Vivek Gupta 6. Smt. Sangitha Varier
9.	Committee of Directors on Fuel Management and Development & Operation of Coal Blocks	To examine proposals for appointment of MDO, review of availability of fuel at NTPC Stations and to recommend measures for improvement etc.	1. Shri Vidyadhar Vaishampayan 2. Shri Jaikumar Srinivasan* 3. Shri Ramesh Babu V. 4. Shri Piyush Singh 5. Shri Vivek Gupta 6. Shri Jitendra Jayantilal Tanna 7. Smt. Sangitha Varier
10.	Committee for Considering the Proposal Having Financial Implication Beyond Provisions of the Contract	For considering the proposal having Financial Implication beyond provisions of the Contract	1. Shri Jitendra Jayantilal Tanna 2. Shri Jaikumar Srinivasan* 3. Shri Ujjwal Kanti Bhattacharya 4. Shri Vidyadhar Vaishampayan 5. Smt. Sangitha Varier
11.	Sub-Committee of the Board of Directors for Business Development	For giving in-principle approval for new business initiatives/ Pilot Projects etc.	1. Shri Vidyadhar Vaishampayan 2. Shri Jitendra Jayantilal Tanna
12.	Standing committee of the Board regarding wholesome compliance with rules and regulations of Govt. of India	To monitor compliance with rules and regulations issued by the Govt. of India from time to time	1. Shri Dillip Kumar Patel 2. Shri Piyush Singh

* Appointed as Director on 21.07.2022

3. Remuneration of Directors

The remuneration of Functional Directors and employees of the Company is fixed as per extant guidelines issued by DPE, from time to time. The Part time Non- official Independent Directors are paid sitting fees for attending Board and Committee meetings. As per the norms of Government of India, the Government Nominee Directors are not entitled to get any remuneration/sitting fee from the Company.

Sitting fee of ₹ 40,000/- is payable to Independent Directors for attending each meeting of the Board and ₹ 30,000/- for attending each meeting of the Committee.

No stock option was given to any Director during the financial year 2022-23.

Details of remuneration of Functional Directors for the financial year 2022-23 are given below:-

₹ in Lacs

Sl No	Name of CMD & Directors	Designation	Salary	Benefits	Performance Linked Incentives	Total
1	Shri Gurdeep Singh	Chairman & Managing Director	77.82	43.63	46.61	168.06
2	Shri Dillip Kumar Patel	Director (HR)	54.41	28.53	29.31	112.25
3	Shri Ramesh Babu V	Director (Operations)	55.68	27.81	30.24	113.72
4	Shri Ujjwal Kanti Bhattacharya	Director (Projects)	60.80	14.47	30.43	105.70
5	Shri Jaikumar Srinivasan*	Director (Finance)	27.64	10.40	0.00	38.04
6	Shri Chandan Kumar Mondol**	Director (Commercial)	53.37	68.66	30.34	152.36
7	Shri Anil Kumar Gautam***	Director (Finance)	18.95	55.33	33.28	107.55

* Appointed on 21.07.2022 ** Ceased to be Director w.e.f 31.01.2023 *** Ceased to be Director w.e.f 31.05.2022

Note:-

1. Performance linked incentives paid is based on the incentive scheme of the Company.
2. Besides above, Functional Directors are also entitled for medical benefit as per the applicable rules of the company.
3. Benefits include the retirement benefits paid to the superannuated Directors.

Details of payments towards sitting fees, for attending Board/Committee meetings, to Independent Directors during the financial year 2022-23 are given below:

₹ in Lacs

Sl No.	Members	Designation	Sitting Fees (Excluding GST)		
			Board Meeting	Committee Meeting	Total
1	Shri Vidyadhar Vaishampayan	Independent Director	6.00	11.10	17.10
2	Shri Vivek Gupta	Independent Director	6.00	12.00	18.00
3	Shri Jitendra Jayantilal Tanna	Independent Director	6.00	12.60	18.60
4	Smt Sangitha Varier	Independent Director	6.00	11.70	17.70

5. Material Subsidiary

In accordance with Regulation 16(1)(c) of SEBI (LODR), the Company has a Policy for determining 'Material Subsidiaries' which is available at the weblink: http://www.ntpc.co.in/sites/default/files/inline-files/policy-determining-material.pdf.

In the FY 2022-23, the Company had no 'Material Subsidiary' as defined under Regulation 16(1)(c) of SEBI (LODR).

6. Directors Familiarizations Programme

Directors are imparted training organised from time to time by the Company and other agencies/ institutions with a view to augment leadership qualities, knowledge and skills. The training also enables them to get a better understanding of sector as well as the Company. Directors are also briefed from time to time about changes/developments in Indian as well as international corporate and economic scenario including Legislative/ Regulatory changes.

At the time of induction, new Directors undergo a familiarization programme which highlights organisation structure, subsidiaries/ joint ventures, business model of the company, risk profile of the business etc. Web link of details of familiarization programme imparted to independent directors is as under: https://www.ntpc.co.in/corporate-governance/familiarisation-program-directors.

7. General Body Meetings

Annual General Meetings

Date, time and location where the last three Annual General Meetings along with details of Special Resolutions passed are as under:

Date	24th September, 2020	28th September, 2021	30th August, 2022
Time	10:30 A.M.	10:30 A.M.	10:30 A.M.
Venue	NTPC Bhawan, SCOPE Complex, Lodhi Road, New Delhi 110003 through Video Conferencing/Other Audio Visual Means	NTPC Bhawan, SCOPE Complex, Lodhi Road, New Delhi 110003 through Video Conferencing/ Other Audio Visual Means	NTPC Bhawan, SCOPE Complex, Lodhi Road, New Delhi 110003 through Video Conferencing/Other Audio Visual Means
Special Resolution	i) To alter the object clause of the Memorandum of Association of the Company. ii) To alter Articles of Association of the Company. iii) Authorization to Board to raise funds upto ₹ 15,000 Crore through issue of secured/ unsecured, redeemable, taxable/ tax-free, cumulative/ non-cumulative, non-convertible Bonds/ Debentures on Private Placement Basis in one or more tranches through Private Placement in domestic market and authorising the Board to decide the terms and conditions of the Issue.	i) To increase borrowing powers of the Company from ₹ 2,00,000 Crore to ₹ 2,25,000 Crore. ii) Authorization to Board to mortgage or create charge over the movable and immovable properties of the Company in favour of lenders in connection with the borrowings of the Company. iii) Authorization to Board to raise funds upto ₹ 18,000 Crore through issue of Bonds/Debentures on Private Placement basis.	i)To appoint Shri Vivek Gupta as an Independent Director of the Company ii) To appoint Shri Jitendra Jayantilal Tanna as an Independent Director iii) To appoint Shri Vidyadhar Vaishampayan as an Independent Director iv) To appoint Ms. Sangitha Varier as a Woman Independent Director v) Authorization to Board to raise funds up to ₹ 12,000 Crore through issue of Bonds /Debentures on Private Placement basis

46th Annual General Meeting of the Company was held on 30th August, 2022 through Video Conferencing/ Other Audio Visual Means in line with the Ministry of Corporate Affairs ("MCA") circular dated May 5, 2020 read together with other circulars issued from time to time. Meeting was attended by the partner/authorised representative of four statutory auditors firms. Meeting was also attended by the Scrutiniser appointed by the Board for Remote e-voting/ e-voting at AGM and Secretarial Auditor of the Company.

In accordance with Regulation 44 of the SEBI (LODR) and Section 108 of Companies Act 2013, remote e-voting facility was provided to the shareholders, in respect of resolutions passed at the AGM held on 30th August, 2022. In addition to above, facility of voting during the AGM was also provided to those shareholders who did not, cast their vote through remote e-voting through link appearing in their log-in.

Special Resolution passed through Postal Ballot

No special resolution was passed during last year through postal ballot. There is no immediate proposal for passing any special resolution through Postal Ballot.

8. Disclosures

(a) Related Party Transaction:-

The Company has formulated a Related Party Transaction (RPT) Policy containing criterion of deciding Materiality of Related Party Transactions and dealing with Related Party Transactions.

The RPT Policy is available at the web link: https://www.ntpc.co.in/sites/default/files/inline-files/NTPC-RPT-Policy-2022.pdf.

The details of Related Party Transactions are given in form AOC-2 forming part of Board's Report.

During the FY 2022-23, NTPC has entered into Related Party Transactions with its Joint Ventures and subsidiaries pertaining to consultancy, contribution to Employees' benefit Trust, transfer of spares equity investment and renting of premises etc. Some of the transactions were done in absence of prior approval of the Audit Committee. On the basis of expert opinion since obtained, these transactions were granted ex-post facto approval by the Audit Committee in its meeting held on 28th July 2023.

In case of Related Party Transactions with Utility Powertech Limited ("UPL"), a Joint Venture, during the financial year, contracts totalling ₹ 2,041.26 crore were awarded for sourcing of manpower for plant operations & maintenance. These contracts were issued as per in-principle approval accorded under Power Station Operation & Maintenance Agreement for a period of five years i.e. an umbrella agreement approved by the Audit Committee in its meeting held on 22nd March, 2021. However, individual transactions done under the aforesaid agreement during 2022-23 were not approved by the Audit Committee. Further, works amounting to ₹ 647.62 crore only were executed during the year against these contracts. The value of contract awarded to UPL was reduced subsequently to less than ₹1,000 crore by foreclosing/change of scope of work in respect of some of the purchase orders during the financial year 2023-24.

On the basis of expert opinion since obtained, it has been opined that shareholders' approval is not required for the transactions with UPL in view of the subsequent reduction of the contract value as stated above, and that the Board of Directors is authorised to ratify those transactions which are not approved by the Audit Committee of the Board. Accordingly, the Board of Directors in its meeting held on 29th July, 2023 had granted ex-post facto approval for those Related Party Transactions which were not approved by the Audit Committee. Details of Related Party Transactions entered by the Company during the FY 2022-23 and other matters relating thereto are given in the Note no. 59 of the Standalone Financial Statements.

(b) The Company has complied with the Guidelines on Corporate Governance for Central Public Sector Enterprises issued by DPE, Ministry of Heavy Industries and Public Enterprises, Government of India.

(c) The Company had received notices for payment of fine from the NSE and BSE for non-compliance with the provisions of Regulation 17 (1) of the SEBI (LODR) due to insufficient numbers of Independent directors in respect of Q2 and Q3 of 2018-19, Q4 of 2019-20 and Q1 to Q4 of 2020-21, 2021-22 and 2022-23. Notices for payment of fine under Regulation 17(2A) for Q2 of 2021-22, under Regulation 18, 17(2A), 19(1) & (2), 20(2) and 21(2) for Q3 of 2021-22. These notices pertain to the insufficient quorum of Independent Directors in various Committees. As powers of appointment of independent directors are vested with the Government of India and compliance was not within the powers of the Board of Directors, request was made to the Stock Exchanges for waiver of fine. BSE has waived fines imposed for the Q2 and Q3 of 2018-19 and Q2 of 2020-21.

The Company had received notices for payment of fine from the NSE and BSE for non-compliance with the provision of Regulation 29 of the SEBI LODR in respect of prior intimation of Board meeting for approval for raising funds up to ₹ 15,000 crore though private placement of Bonds. As the proposal was subject to approval of Shareholders in AGM held on 24th September, 2020, it was informed to the stock exchanges along with the notice of the AGM. Request for waiver of penalty had been made to the Stock Exchanges.

NSE had imposed penalty of ₹ 70,000/- under Para.8.4 of Chapter XVII of SEBI Operational Circular for delay in certificate of confirming fulfilment of payment obligation. However, penalty was waived vide letter dated 19th June, 2023.

Except mentioned above, there were no penalties or strictures imposed on the Company by any statutory authorities for non-compliance on any matter related to Indian capital markets, during the last three years.

(d) The Company has complied with corporate governance requirements specified in Regulations 17 to 27 and clauses (b) to (i) of sub-regulation (2) of Regulation 46 of SEBI (LODR), except to the extent specifically mentioned in this report. The discretionary requirements as specified in Part E of Schedule II adopted by the Company are at Annexure-1 of the Report.

(e) Schedule of Compliances with Presidential Directive issued during the financial year 2022-23 and during last three years preceding the financial year 2022-23 is at Annexure -2.

f) Credit Ratings:

Domestic Credit Instruments:

Instruments	CRISIL	ICRA	CARE	India Ratings
Long Term Loans	CRISIL AAA/Stable	ICRA AAA/Stable	CARE AAA/Stable	IND AAA/Stable
Domestic Bonds	CRISIL AAA/Stable	ICRA AAA/Stable	CARE AAA/Stable	IND AAA/Stable
Commercial Papers	CRISIL A1+	ICRA A1+	CARE A1+	IND A1+
Bank Guarantees	CRISIL A1+	ICRA A1+	CARE A1+	IND AAA/Stable/IND A1+
Letter of Credit	CRISIL A1+	ICRA A1+	CARE A1+	IND AAA/Stable/IND A1+
Cash credit/ STWCL/ WCDL/ Bill Discounting	CRISIL AAA/Stable	ICRA AAA/Stable	CARE AAA/Stable	IND AAA/Stable/IND A1+

There has not been any revision in credit rating of above mentioned domestic credit instruments during the relevant financial year.

International Credit Instruments

Instruments	S&P	Moody's	Fitch
Company Rating/Outlook	BBB-/Stable	Baa3/Stable	BBB-/Stable
Rating of USD 6 billion MTN Programme	BBB-	Baa3	BBB-

Fitch Ratings has upgraded the outlook from "Negative" to "Stable".

(g) Disclosure under the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act 2013 are given in the Directors' Report of the Company for the FY 2022-23.

(h) Dis-qualification of Directors:

M/s A.Kaushal & Associates, Company Secretaries certified that none of the Directors on the Board of the Company have been debarred or disqualified from being appointed or continuing as Directors of the Companies by the SEBI/Ministry of Corporate Affairs/ any such authority as on 31st March, 2023. Copy of certificate is enclosed as Annexure-3.

(i) During the year 2022-23, there was no Preferential Allotment / Qualified Institutional Placement of Shares which is required to be reported under Regulation 32(7A) of the SEBI (LODR).

(j) During the year 2022-23, the proposal for appointment of KMP and Senior Management Personnel, placed on the 32nd Meeting of Nomination and Remuneration Committee (NRC) was approved by the Board of Directors which was not recommended by the NRC. The Board was of the view that proposal for appointments were made as per the approved policy and guidelines of the Company. Recruitment/Promotion policy will be reviewed, if required, as per request of NRC.

(k) During the year 2022-23, total fee of ₹ 6.44 Crore was paid to the Statutory Auditors by the Company. Further, the statutory auditors of the company have not carried out any work of subsidiary companies.

(l) During the FY 2022-23, there were following changes in the Whole time Directors and Senior Management Personnel.

a. Shri C. K. Mondol ceased to be Director (Commercial) w.e.f. 31.01.2023.

Shri Anil Kumar Gautam ceased to be Director (Finance) & CFO w.e.f. 31.05.2022.

b. Ms. Renu Narang, was appointed as CFO w.e.f. 01.06.2022 to 29.07.2022.

c. Shri Jaikumar Srinivasan was appointed as Director (Finance) w.e.f. 21.07.2022 and designated as CFO w.e.f. 29.07.2022.

d. Ms. Nandini Sarkar ceased to be Company Secretary and Compliance Officer w.e.f. 30.09.2022.

e. Shri Arun Kumar was appointed as Company Secretary & Compliance officer w.e.f. 29.10.2022.

f. Changes in EDs i.e. one level below functional directors are as under:

Appointed during the Year:

Names	Names
Shri Ajay Kumar Chhabra	Shri Nasaka Srinivasa Rao
Shri Sanjay Kumar Singh	Shri Arindam Sinha
Shri Adesh	Shri Goutam Deb
Shri Basuraj Goswami	Shri Ajay Dua
Shri Avnish Srivastava	Shri Shanmugha Sundaram Kothandapani
Shri Suvash Chandra Naik	Shri Udayan Kumar
Shri Atanu Dutta	Shri Rajesh Kumar Kanojia
Shri Pradipta Kumar Mishra	Shri Sebastian Joseph
Shri Sunil Kumar	Shri Achal Kumar Arora
Shri Asit Dutta	Shri Narinder Mohan Gupta
Shri Ghanshyam Prajapati	Shri Chinnanan Ravi
Shri Ajit Kumar Bishoi	Shri Debabrata Paul
Shri Ravi Prakash .	Shri Manoj Kumar Singh
Shri Sandeep Aggarwal	Shri Pabitra Mohan Jena
Shri Abhay Kumar Samaiyar	Shri Kamlakar Singh
Shri Bodanki Srinivasa Rao	Shri Kamjula Jayarami Reddy
Shri Diwakar Kaushik	Shri Narendra Kumar Gupta

Retirements/Superannuation during the Year:

Names	Names
Shri Achal Kumar Arora	Shri Manoj Kumar Singh
Shri Anil Nautiyal	Shri K Srinivasa Rao
Shri Ok Murukadas	Shri Munish Jauhari
Shri Arabinda Kumar Munda	Shri Biswarup Basu
Shri Sebastian Joseph	Shri Pabitra Mohan Jena
Shri Narinder Mohan Gupta	Shri Ghanshyam Prajapati
Shri Dileep Kumar	Shri Anil Kumar Pandey
Shri Vinay Kumar	Shri Kamlakar Singh
Shri Chinnanan Ravi	Shri Kamjula Jayarami Reddy
Shri Debashis Sen	Shri Narendra Kumar Gupta
Shri Debabrata Paul	Shri Asim Kumar Samanta

9. CEO/CFO Certification

As required under Regulation 17(8) of SEBI (LODR), the certificate duly signed by Chairman & Managing Director and Director (Finance) was placed before the Board of Directors at the meeting held on 19th May 2023 and the same is annexed to the Corporate Governance Report.

10. Means of Communication

The Company communicates with its shareholders through its Annual Report, General Meetings and disclosures through Stock Exchanges & its own Website. The Company also communicates with its institutional shareholders through a combination of analysts briefing and individual discussions and also participation in investor conferences from time to time. Annual analysts and investors meet is held normally during the month of August where Directors of the Company interacts with the investing community. Financial results are discussed by way of conference calls regularly after approval of financial results of each quarter.

In compliance with the provisions of Regulation 44(6) of the SEBI (LODR), the Company provides live webcast of proceedings of AGM on the website of the Company.

Information, latest updates and announcements regarding the Company can be accessed at company's website: www.ntpc.co.in including the following:-

- Quarterly/ Annual Financial Results
- Quarterly Shareholding Pattern
- Quarterly Corporate Governance Report
- Transcripts of conferences with analysts
- Corporate Disclosures made from time to time to the Stock Exchanges

The Company's official news releases, other press coverage, presentations made to institutional investors or to the analysts are also hosted on the Website.

During FY 2022-23, Quarterly Results have been published as per details given below

Q1	Q2	Q3	Q4
Published on 30.07.2022	**Published on 30.10.2022 & 31.10.2022**	**Published on 29.01.2023 & 30.01.2023**	**Published on 20.05.2023**
The Times of India (English), Economic Times (English), Hindustan Times (English & Hindi), Business Standard (English & Hindi), Financial Express (English), Jansatta (Hindi), Mint (English), Business Line (English), The Statesman (English), Free Press Journal (English), Pioneer (English), Millenium Post (English), Dainik Jagran (Hindi), The Asian Age (English).	Midday (English), Economic Times (English),Amar Ujala (Hindi).	Hindustan Times (Hindi), Mint (English), Economic Times (English).	Indian Express (English), Business Standard (English & Hindi).

11. Code of Conduct

The Company has in place Code of Conduct for Directors and Senior Management Personnel (Code) with a view to enhance ethical and transparent process in managing the affairs of the Company. This code is applicable to all the Board Members including Government Nominee(s) & the Independent Director(s) and the Senior Management Personnel of the Company. A copy of the Code of Conduct is available at the website of the Company at the web link: http://www.ntpc.co.in/sites/default/files/inline-files/Code-of-conduct-for-Board-Members-and-Senior-Management-Personnel.pdf.

Declaration as required under Regulation 34 (3) Schedule V of the SEBI (LODR) Regulations, 2015

The members of the Board and Senior Management Personnel have affirmed compliance of the Code of Conduct for Board Members & Senior Management Personnel for the financial year ended on 31st March, 2023.

New Delhi
17th July 2023

Sd/-
(Gurdeep Singh)
Chairman & Managing Director

12. Code of Internal Procedures & Procedures for Prevention of Insider Trading

Pursuant to Regulation 9(1) of SEBI (Prohibition of Insider Trading) Regulations, 2015 as amended by the SEBI (Prohibition of Insider Trading) (Amendment) Regulations, 2018, the Board has laid down Internal Code of Conduct for Prevention of Insider Trading in dealing with Securities of NTPC Limited (Insider Trading Code).Copy of the Insider Trading Code is available on following web-link: https://www.ntpc.co.in/sites/default/files/inline-files/NTPC-Insider-Trading-Code-2019.pdf

To strengthen the internal controls for monitoring & enforcing compliance with the Insider Trading Code, an IT enabled system has been installed, to aim at mapping of designated employees, monitor compliance with the provisions of the Insider Trading Code by the designated employees, dissemination of information etc.

13. Whistle Blower Policy

The Company has a Board approved 'Whistle Blower Policy' for directors and employees to report to the management, concerns about unethical behaviour, actual or suspected fraud or violation of the company's code of conduct or ethics policy. It also provides adequate safeguard against victimization of employees, who avail the mechanism and direct access to the Chairman of the Audit Committee, if required.

No personnel of the Company had been denied access to the Chairman of audit committee. The Whistle Blower Policy is available at the web link: https://www.ntpc.co.in/sites/default/files/inline-files/WhistleBlowerPolicy.pdf

14. Directors and Officers Insurance

As per approval accorded by the Board of Directors in its 263rd meeting, NTPC is taking Directors and Officers Insurance Policy (D&O Policy) every year. Present D&O Policy is for ₹ 100 Crore and it also covers Independent Directors. The Board had delegated power to decide extent of coverage, settlement terms and conditions etc. to the Chairman & Managing Director or Director (Finance).

15. Secretarial Audit

Secretarial Audit Report, given by a Company Secretary in Practice for the FY 2022-23 is enclosed with the Directors' Report.

16. Securityholders' Information

i) Annual General Meeting

For details, please refer to the Notice of this AGM.

Financial Calendar For FY 2023-24

Particulars	Date
Accounting Period	1st April , 2023 to 31st March , 2024
Unaudited Financial Results for the first three quarters	Announcement within stipulated period under SEBI (LODR)
Fourth Quarter Results	Announcement within stipulated period under SEBI (LODR)
AGM (Next year)	August, 2024 (Tentative)

ii) Payment of Dividend and Record Date

The Board of Directors of the Company has recommended payment of final Dividend of ₹ 3.00 per share (30.0%) on the paid-up share capital, for the financial year ended 31st March, 2023 in addition to the Interim Dividend of ₹ 4.25 per share (42.5%) on the paid-up share capital. The date of payment/dispatch of interim dividend was on February 24, 2023.

The Company has fixed 11th August, 2023 as record date for payment of final dividend. The final dividend on equity shares, if declared at the Annual General Meeting, will be paid on 12th September, 2023 to the Members whose names appear on the Company's Register of Members on record date. Copy of Dividend Distribution Policy is available on weblink: https://www.ntpc.co.in/sites/default/files/inline-files/DividendDistributionPolicyofNTPCLimited.pdf

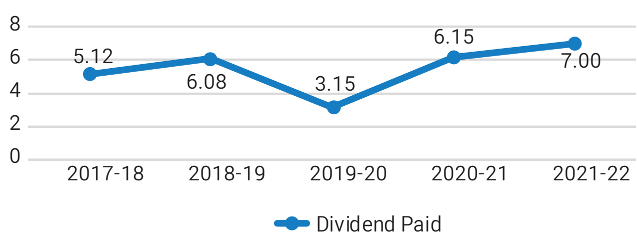
iii) Dividend History

Details of Dividends Paid

Year	Total Paid Up Capital (₹ In cr)	Dividend Paid/ Share(₹)	Total Dividend Paid (₹ In Cr)	Date of BOD in which Interim Dividend was declared	Date of Payment of Interim Dividend	Date of AGM in which Final Dividend was Declared	Date of Payment of Final Dividend
2017-18	8245.46	5.12	4221.68	31.01.2018	15.02.2018	20.09.2018	10.10.2018
2018-19	9894.56#	6.08	5425.52	30.01.2019	14.02.2019	21.08.2019	03.09.2019
2019-20	9894.56	3.15	3116.79	19.03.2020	31.03.2020	24.09.2020	03.10.2020
2020-21	9696.67$	6.15	5963.45	04.02.2021	26.02.2021	28.09.2021	08.10.2021
2021-22	9696.67	7.00	6787.67	29.01.2022	21.02.2022	30.08.2022	12.09.2022
2022-23	9696.67	4.25*	4121.08	28.01.2023	24.02.2023	-	-

Paid up share capital was increased from ₹ 8245.46 Crore to ₹9894.56 Crore due to Bonus Issue
$ Paid up share capital was reduced subsequent to Buyback of shares
* Interim Dividend for FY 2022-23

Dividend Paid



iv) Listing On Stock Exchange

NTPC equity shares are listed on the following Stock Exchanges:

National Stock Exchange of India Limited (NSE)

- Address: Exchange Plaza, Plot No. C/1, G Block, Bandra (E), Mumbai - 400051
- Scrip Code of NTPC: NTPC EQ

BSE Limited (BSE)

- Address: Phiroze Jeejeebhoy Towers, Dalal Street, Mumbai - 400001
- Scrip Code of NTPC: 532555

Stock Code : ISIN – INE733E01010

Details of Listing of Domestic Bonds

Listed on National Stock Exchange of India (NSE)

- Bond Series:
- 32, 34 to 36, 38 to 49, 53,74,76,78 & 80

Listed on BSE Limited (BSE)

- Bond Series:
- 73, 75, 77 & 79

Listed on NSE & BSE

- Bond Series:
- 50 to 52, 54 to 72

The Annual Listing Fees for FY 2023-24 has been paid to NSE and BSE.

v) Details of Listing of Bonds outstanding as at 31.03.2023 Issued Under the MTN Programme:

Sr. No.	Series	ISIN No.	Name of Bond	Listed on Stock Exchanges
1	Euro Bond-IV	XS1143390679	USD 500 million 4.375% Notes due 2024	SGX, India INX & NSE IFSC
2	Euro Bond-V	XS1372846003	USD 500 million 4.25% Notes due 2026	SGX, India INX & NSE IFSC
3	Euro Bond-VII	XS1551677260	EUR 500 million 2.75% Notes due 2027	SGX, FSE, India INX & NSE IFSC
4	Euro Bond-IX	XS1792122266	USD 400 million 4.50% Notes due 2028	SGX, LSE, India INX & NSE IFSC
5	Euro Bond-X	XS1967614469	USD 450 million 3.75% Notes due 2024	SGX, India INX & NSE IFSC

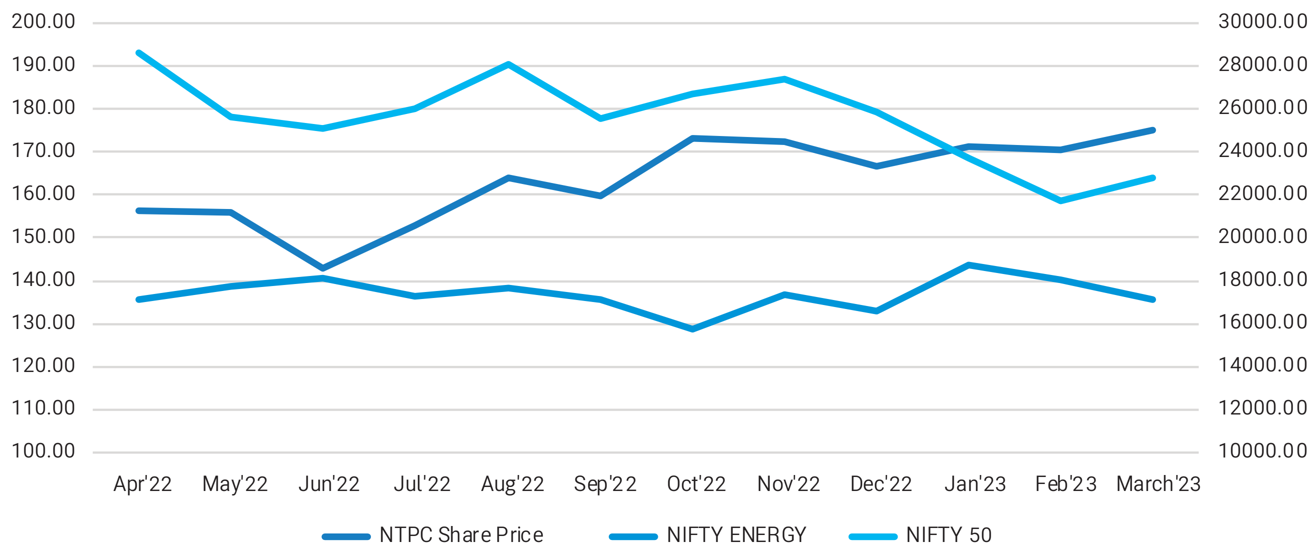
SGX	Singapore Exchange Ltd., SGX Centre Office, 2 Shenton Way, #02-02, SGX Centre 1, Singapore 068804
India INX	INDIA INTERNATIONAL EXCHANGE (IFSC) LTD, 1st Floor, Unit No. 101, The Signature,Building no. 13B, Road 1C, Zone 1, GIFT SEZ, GIFT City, Gandhinagar, Gujarat – 382355
NSE IFSC	NSE IFSC Limited, Unit No.1201, Brigade International Financial Centre, 12th floor, Block-14, Road 1C, Zone -1, GIFT SEZ, Gandhinagar, Gujarat – 382355
LSE	London Stock Exchange, 10 Paternoster Square, London EC4M 7LS, United Kingdom
FSE	Deutsche Börse AG, 60485 Frankfurt/Main

Listing fees to the above exchanges in respect of the securities was paid (wherever applicable) at the time of the listing of the securities

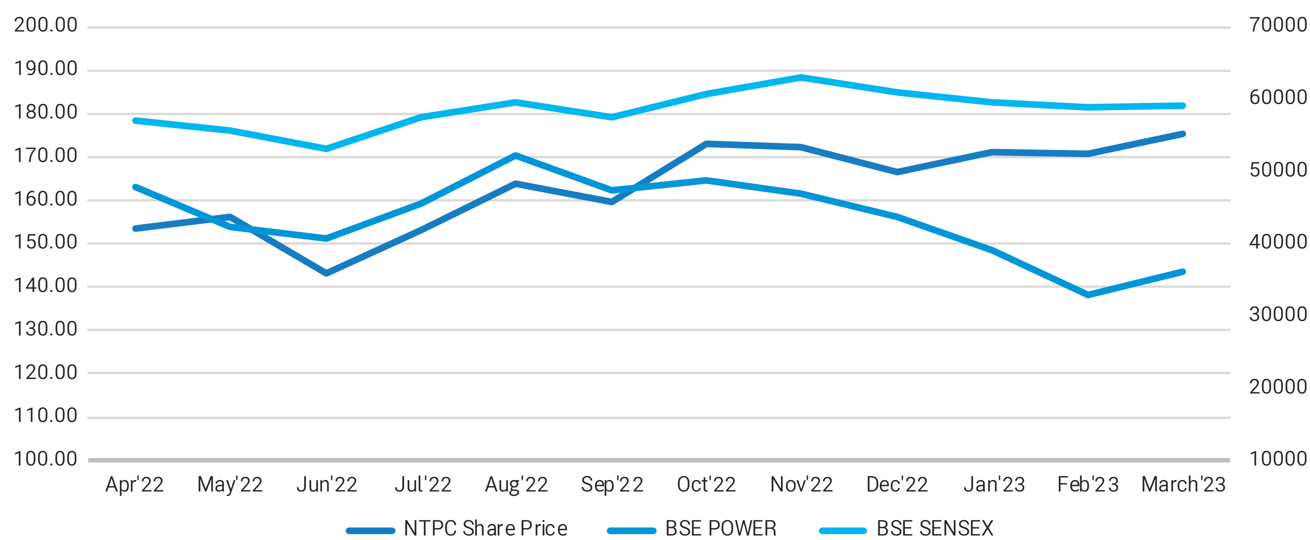
vi) Market Price Data

Month	NTPC on BSE				NTPC on NSE				INDEX	
	High Price (in ₹)	Low Price (in ₹)	Close Price (in ₹)	Volume (No.In Lakhs)	High Price (in ₹)	Low Price (in ₹)	Close Price (in ₹)	Volume (No. In Lakhs)	BSE SENSEX	NSE NIFTY 50
Apr'22	166.30	136.85	153.60	242.56	166.35	136.80	156.20	4,986.30	57060.87	17102.55
May'22	161.75	141.75	156.15	201.96	161.90	141.65	156.00	4,957.41	55566.41	17759.30
Jun'22	160.15	135.00	143.15	118.36	160.20	134.95	142.90	4,199.70	53018.94	18105.30
Jul'22	154.40	136.15	152.95	174.34	154.45	136.10	152.95	2,324.50	57570.25	17303.95
Aug'22	165.45	151.05	163.85	278.54	165.45	151.00	164.00	3,298.36	59537.07	17662.15
Sep'22	176.15	155.05	159.75	306.40	176.15	155.00	159.65	3,856.57	57426.92	17158.25
Oct'22	174.65	158.80	173.10	270.16	174.70	158.95	173.10	2,165.54	60746.59	15780.25
Nov'22	182.80	164.10	172.25	279.45	182.95	164.15	172.20	2,936.64	63099.65	17359.75
Dec'22	176.00	161.20	166.35	139.04	176.00	161.90	166.45	1,827.98	60840.74	16584.55
Jan'23	172.65	164.10	171.15	163.92	172.65	164.00	171.15	2,336.29	59549.90	18758.35
Feb'23	174.20	162.65	170.55	148.41	174.25	162.55	170.50	2,403.44	58962.12	18012.20
March'23	182.15	170.10	175.25	86.42	182.20	169.95	175.10	2,702.80	58991.52	17094.35

vii) Comparison of Company's Share Price with NSE Nifty and NSE Nifty Energy in FY 2022-23



viii) Comparison of Company's Share Price with BSE Sensex and BSE Power in FY 2022-23



ix) Registrar and Transfer Agent Details:

For Equity Shares & Bonds (For Series: 27 to 49, 51 to 53, 55, 57 to 80)	Tax Free Bonds (Series 50) and Bonus Debentures (Series 54) and Tax Free Bonds 2015 (Series 56)
Beetal Financial & Computer Services Pvt. Ltd.99, Madangir, Near Dada Harsukh Das Mandir New Delhi-110062. Phone No: 011-29961281, 011-29961282 Fax: 011-29961284 Email: ntpc@beetalfinancial.com	KFin Technologies Limited,Selenium Tower B, Plot No. 31 & 32,Gachibowli Financial District, Nanakramguda, Serilingampally, Hyderabad-500008 Toll Free/ Phone Number: 1800 309 4001 WhatsApp Number: (91) 910 009 4099 Fax: (+91 40) 2343 1551 Email: einward.ris@kfintech.com

x) Share Transfer System

In terms of Regulation 40(1) of SEBI Listing Regulations, as amended, securities can be transferred only in dematerialized form w.e.f. April 1, 2019, except in case of request received for transmission or transposition of securities. Members holding shares in physical form are requested to consider converting their holdings to dematerialized form. Transfers of equity shares in electronic form are affected through the depositories with no involvement of the Company.

xi) Transfer of Unclaimed Amount of Dividend to Investor Education & Protection Fund (IEPF)

In accordance with Section 125 of the Companies Act, 2013 read with Regulation 61A of Securities and Exchange Board of India (LODR) (Fifth Amendment) Regulations, 2021, during the financial year 2022-23, an amount of ₹ 43.58 lakh pertaining to unclaimed interim dividend (2014-15), ₹ 75.11 lakh pertaining to unclaimed final dividend (2014-15), ₹ 10.55 lakh pertaining to unclaimed refund of application money on Tax Free Bonds 2015 and ₹ 2.38 lakh pertaining to second unclaimed interest on Tax Free Bonds 2013 have been transferred to Investor Education and Protection Fund.

The Company has uploaded the details of shareholders/depositors of the Company containing information like name, address, amount due to be transferred to IEPF and due date of transfer of amount to IEPF on its website. The Company has been issuing notices in the newspapers from time to time in order to invite attention of the shareholders/depositors who have not preferred their claims, to submit their claims towards the unpaid and unclaimed dividend/interest.

xii) Transfer of Shares to IEPF

In terms of Section 124(6) of the Companies Act, 2013 and IEPF Authority (Accounting, Audit, Transfer and Refund) Rules, 2016 as amended from time to time (IEPF Rules), the shares in respect of which the dividend has not been paid or claimed for a period of seven years or more, is required to be transferred to Investor Education and Protection Fund (IEPF) Authority account.

In line with the provisions of Section 124(6) and rules made thereunder as well as in accordance with the circulars/notifications issued by the MCA from time to time, for the financial year 2022-23, 270125 shares of 2604 shareholders were transferred to the DEMAT Account of the IEPF Authority opened with CDSL. Details of the shareholders whose shares were transferred to the IEPF Account is available on the website at the following link: https://www.ntpc.co.in/iepf-details/iepf-account. Members may check their details on the aforesaid web-link.

xiii) Claim from IEPF Account

Any person, whose shares, unclaimed dividend, matured deposits, matured debentures, application money due for refund, or interest thereon, sale proceeds of fractional share, redemption proceeds of preference shares etc. has been transferred to the IEPF, may claim the shares under provision to sub-section (6) of section 124 or apply for refund under clause (a) of sub-section (3) of section 125 or under proviso to sub-section (3) of section 125, as the case may be, to the Authority by making an online application in Form IEPF-5. Detailed procedure regarding claiming shares from IEPF account is available on NTPC website at the following link: https://www.ntpc.co.in/sites/default/files/inline-files/procedure-for-claiming-dividend-shares-from-IEPF-Authority.pdf.

xiv) Debenture Trustees for Various Series

For Series: 44 to 50 (TFB-2013), 53 to 55, 57 to 66	For Series: 27 to 43, 51 to 52, 56 (TFB-2015), 70 to 78
Vistra ITCL (India) Ltd. (Formerly known as IL&FS Trust Company Limited) The IL&FS Financial Centre, Plot No. C-22, G-Block, Bandra – Kurla Complex, Bandra (East), Mumbai – 400051 Tel: (+91 22) 26533908 | Fax: (+91 22) 26533297 E-mail: itclcomplianceofficer@ilfsindia.com Website: www.itclindia.com	IDBI Trusteeship Services Limited Asian Building, Ground Floor, 17, R. Kamani Marg, Ballard Estate, Mumbai – 400 001 Tel : +91 22 4080 7000 Fax : +91 22 6631 1776 E-mail : itsl@idbitrustee.com Website: www.idbitrustee.com

For Series 67 to 69	For Series: 79 to 80
AXIS TRUSTEE SERVICES LTD. GDA House, Plot No. 85, Axis House, Bombay Dyeing Mills Compound, Pandurang Budhkar Marg, Worli, Mumbai- 400 025 Email: debenturetrustee@axistrustee.com Website: www.axistrustee.com	BEACON TRUSTEESHIP LIMITED 4C & D Siddhivinayak Chambers, Gandhi Nagar, Opp MIG Cricket Club, Bandra (East), Mumbai 400 051 Toll-Free No. 9555449955 Email: contact@beacontrustee.co.in Website: www.beacontrustee.co.in

xv) Distribution of Shareholding

Shares held by different categories of shareholders and according to the size of holdings as on 31st March 2023 are given below:

A. On Basis of Size

Category	Cases	%	Shares	%
1-5000	933534	92.35	78551753	0.81
5001-10000	43315	4.29	30568937	0.32
10001-20000	19631	1.94	27057416	0.28
20001-30000	5555	0.55	13824233	0.14
30001-40000	2287	0.23	8059894	0.08
40001-50000	1456	0.14	6700611	0.07
50001-100000	2460	0.24	17138768	0.18
100001-above	2593	0.26	9514764522	98.12
Total	1010831	100	9696666134	100.00

B. On Basis of Ownership

Category	As on 31/03/2022			As on 31/03/2023			
	No of shareholders	Total Shares	%	No of shareholders	Total Shares	%	Change
Government Of India	1	4955346251	51.1	1	4955346251	51.10	0.00
Indian Financial Institutions/ Bank	16	42361793	0.44	16	21189861	0.22	-0.22
Mutual Funds	34	1718837470	17.73	347	1931200011	19.92	2.19
Foreign Portfolio Investors/ FII	538	1428891190	14.74	687	1512391505	15.60	0.86
Resident Individuals	947142	205449741	2.12	983390	200516135	2.07	-0.05
Bodies Corporates	2114	16600863	0.17	2391	39886160	0.41	0.24
Insurance Companies	34	1219929472	12.58	101	862598414	8.90	-3.68
Trusts	58	496644	0.01	70	526362	0.01	0.00
H U F	11188	6637729	0.07	10941	6436047	0.07	0.00

Category	As on 31/03/2022			As on 31/03/2023			
	No of shareholders	Total Shares	%	No of shareholders	Total Shares	%	Change
Others	11340	102114981	1.04	12887	166575388	1.70	0.66
Total	972465	9696666134	100	1010831	9696666134	100.00	0.00

C. Major Shareholders

Name of the Shareholder	No. of Shares	%	Category
President Of India	4955346251	51.1	Indian Promoter
Life Insurance Corporation of India P & Gs Fund	574173389	5.92	Insurance Co.
ICICI Prudential Value Discovery Fund	556001423	5.73	Mutual Fund
HDFC Trustee Company Ltd. A/C Hdfc Balanced Advantage Fund	322733379	3.33	Mutual Fund
CPSE Exchange Traded Scheme (CPSE ETF)	311740486	3.21	Mutual Fund
SBI-ETF Nifty 50	169572588	1.75	Mutual Fund

xvi) Dematerialisation of Shares & Liquidity

The shares of the Company are in compulsory dematerialised segment and are admitted with both the Depositories i.e. National Securities Depository Ltd. (NSDL) and Central Depository Services (India) Limited (CDSL).

In pursuance of Article 7 of the Articles of Association of the Company and as per Rule 6 of the Companies (Share Capital and Debentures) Rules, 2014, the Company has prescribed a fee of ₹ 50/- per share/ bond certificate on issue of certificates on splitting/ consolidation/ rematerialisation/ duplicate on loss of shares/ bonds.

Secretarial Audit Report for Reconciliation of the Share Capital of the Company obtained from Practising Company Secretary has been submitted to Stock Exchanges within stipulated time.

Details of shareholding in dematerialized and physical mode as on 31st March, 2023 are as under:

Holding Type	No.of Shares	Share %
Demat		
CDSL	377800839	3.90
NSDL	9318789282	96.10
Physical	76013	0.00
Total	9696666134	100

xvii) Depository Details

National Securities Depository Ltd

- National Securities Depository Ltd. Trade World, 4th Floor Kamala Mills Compound Senapathi Bapat Marg, Lower Parel, Mumbai-400 013

Central Depository Services (India) Limited

- Marathon Futurex, A-Wing, 25th floor, NM Joshi Marg, Lower Parel, Mumbai 400013

xviii) Demat Suspense Account

Details of shares/ debentures in the suspense accounts opened and maintained after Initial Public Offering, Further Public Offering of Equity Shares of NTPC and Bonus Debentures as on 31st March, 2023 is furnished below

Demat Suspense Account Type	Opening Balance as on 01.04.2022		Requests disposed off during FY 2022-23		Closing Balance as on 31.03.2023	
	Cases	Shares	Cases	Shares	Cases	Shares/ Debentures
IPO Unclaimed Shares[1]	4	1050	0	0	4	1050
IPO- Unclaimed Bonus Debentures[1]	176	31197	0	0	176	31197
FPO- Unclaimed Shares[2]	6	1139	0	0	6	1139
FPO-Unclaimed Bonus Debentures[2]	23	2828	0	0	23	2828
Bonus Debentures-Unclaimed Debentures[3]	29	5474	0	0	29	5474
Unclaimed Securities Suspense Account[4]	N.A.	N.A.	0	0	1	1000

1.Account opened and maintained after IPO 2. Account opened and maintained after FPO 3. Account opened and maintained after Issue of Bonus Debentures 4. Opened as per SEBI Circular dated 25.01. 2022.

xix) Outstanding GDRs/ ADRs/ Warrants or any Convertible instruments, conversion date and likely impact on equity

No GDRs/ ADRs/Warrants or any Convertible instruments has been issued by the Company.

xx) Commodity price risk or foreign exchange risk and hedging activities

The Company does not deal in commodities and hence the disclosure pursuant to SEBI Circular dated November 15, 2018 is not required to be given. For a detailed discussion on foreign exchange risk and hedging activities, please refer to Directors' Report and Management Discussion and Analysis Report.

xxi) Loans and advances in the nature of loans to firms/companies

During the financial year 2022-23, no loan or advances in the nature of loan has been given to firms/companies in which directors are interested.

xxii) Number of Shares held by the Directors

Name of Directors	No. of shares (as on 31/03/2023)
Shri Gurdeep Singh	5828
Shri Jaikumar Srinivasan	5
Shri Dillip Kumar Patel	NIL
Shri Ramesh Babu V.	3240
Shri Ujjwal Kanti Bhattacharya	6508
Shri Ashish Upadhyaya	NIL
Shri Piyush Singh	NIL

Name of Directors	No. of shares (as on 31/03/2023)
Ms. Sangitha Varier	NIL
Shri Vivek Gupta	NIL
Shri Vidhyadhar Vaishampayan	NIL
Shri Jitendra Tanna	NIL

xxiii) Location of NTPC Plants

Thermal Projects

Dadri, Badarpur & Faridabad (DBF) Region

National Capital Power Station-Gautam Budh Nagar, Uttar Pradesh

Eastern Region I

i) Barh Super Thermal Power Project- Patna, Bihar

ii) Farakka Super Thermal Power Station – Distt. Murshidabad, West Bengal

iii) Kahalgaon Super Thermal Power Project- Distt. Bhagalpur, Bihar

iv) North Karanpura Super Thermal Power Project – Distt. Hazaribagh, Jharkhand

v) Barauni Thermal Power Project, Distt. Begusarai, Bihar

vi) Nabinagar Super Thermal Power Project,Dist- Aurangabad, Bihar

vii) Muzaffarpur Thermal Power Station (Kanti Bijli)- Dist. Muzaffarpur, Bihar

Eastern Region II

i) Talcher Super Thermal Power Station- Distt. Angul, Odisha

ii) Talcher Thermal Power Station- Distt. Angul, Odisha

iii) Bongaigaon Thermal Power Project, Distt. Kokrajhar, Assam.

iv) Darlipalli Super Thermal Power Project, Distt. Sundergarh, Jharsuguda, Odisha

Northern Region

i) Feroze Gandhi Unchahar Thermal Power Station – Distt. Raebareli, Uttar Pradesh

ii) Rihand Super Thermal Power Project – Distt. Sonebhadra, Uttar Pradesh

iii) Singrauli Super Thermal Power Station- Distt. Sonebhadra, Uttar Pradesh

iv) Tanda Thermal Power Station- Distt. Ambedkar Nagar, Uttar Pradesh

v) Vindhyachal Super Thermal Power Station- Distt. Singrauli, Madhya Pradesh

Southern Region

i) Ramagundam Super Thermal Power Station- Distt. Karimnagar, Telangana

ii) Simhadri Super Thermal Power Project- Distt. Vishakapatnam, Andhra Pradesh

iii) Telangana Super Thermal Power Project, Distt. Karimnagar, Telangana

iv) Kudgi Thermal Power Project, Distt. Bijapur, Karnataka

Western Region I

i) Solapur Super Thermal Power Project – Distt. Solapur, Maharashtra

ii) Mouda Super Thermal Power Project – Distt. Nagpur, Maharashtra

Western Region -II

i) Korba Super Thermal Power Station- Distt. Korba, Chhattisgarh

ii) Sipat Super Thermal Power Project-Distt. Bilaspur, Chattisgarh

iii) Gadarwara Super Thermal Power Project, Distt. Narsinghpur, Madhya Pradesh

iv) Lara Super Thermal Power Project, Distt. Raigarh, Chattisgarh

v) Khargone Super Thermal Power Project, Distt. Khargone, Madhya Pradesh

vi) Barethi Super Thermal Power, Distt. Chhatarpur, Madhya Pradesh

GAS PROJECTS

Dadri, Badarpur & Faridabad (DBF) Region

i) Faridabad Gas Power Project – Distt. Faridabad, Haryana

ii) National Capital Gas Power Station- Distt. Gautam Budh Nagar, Uttar Pradesh

Northern Region

Auraiya Gas Power Project – Distt. Auraiya, Uttar Pradesh

Southern Region

i) Rajiv Gandhi Combined Cycle Power Project – Distt. Alappuzha, Kerala

Western Region -I

i) Jhanor Gandhar Gas Power Project- Distt. Bharuch, Gujarat

ii) Kawas Gas Power Project- Distt. Surat, Gujarat

iii) Anta Gas Power Project – Distt. Baran, Rajasthan

SOLAR PROJECTS

Dadri, Badarpur & Faridabad (DBF) Region

i) 5MW, Dadri Solar Power Plant, Dadri, Distt. Gautam Budh Nagar, Uttar Pradesh

ii) 5MW, Faridabad Solar Power Plant, Distt. Faridabad, Haryana

Eastern Region - II

i) 10MW Talcher Kaniha Solar Power Station, Distt. Angul, Odisha

Northern Region

i) 5MW, Dadri Solar Power Plant, Dadri, Distt. Gautam Budh Nagar, Uttar Pradesh

ii) 5MW, Faridabad Solar Power Plant, Distt. Faridabad, Haryana

iii) 10 MW Unchahar PV Solar Power Station, Distt. Raebareli, Uttar Pradesh

iv) 15 MW Singrauli Solar PV Power Stations, Distt. Sonebhadra, Uttar Pradesh

v) 20 MW Auraiya Solar Power Project – Distt. Auraiya, Uttar Pradesh

vi) 20 MW Auraiya Floating Solar Power Project – Distt. Auraiya, Uttar Pradesh

vii) 20 MW Rihand Solar Power Project – Distt. Sonebhadra, Uttar Pradesh

viii) 735 MW Nokh Solar Project- Dist. Jaisalmer, Rajasthan

Southern Region

i) 5 MW Solar PV Power Plant, Port Blair, A&N Islands

ii) 10 MW Ramagundam Solar Power Station, Distt. Karimnagar, Andhra Pradesh

iii) 25 MW Simhadri Floating Solar Power Station, Distt. Vishakapatnam, Andhra Pradesh

iv) 92 MW Kayamkulam Floating Solar Station, Distt. Alappuzha, Kerala

v) 100 MW Ramagundam Floating Solar Power Station, Distt. Karimnagar, Andhra Pradesh

Western Region -I

i) 20 MW Jhanor Gandhar Solar Power Project- Distt. Bharuch, Gujarat

ii) 56 MW Kawas Solar Power Project- Distt. Surat, Gujarat

iii) 90 MW Anta Solar Power Project – Distt. Baran, Rajasthan

iv) 23 MW Solapur Solar Power Project – Distt. Solapur, Maharashtra

NTPC SUBSIDIARIES

Thermal Power Projects

1. Bhartiya Rail Bijlee Co. Ltd. : Nabinagar Thermal Power Project, Distt. Aurangabad, Nabinagar, Bihar (in JV with Railways)
2. Patratu Vidyut Utpadan Nigam Limited: Patratu Thermal Power Project, Patratu, Jharkhand
3. Ratnagiri Gas & Power Pvt. Ltd. : Ratnagiri Power Project - Maharashtra
4. THDC India Ltd, Ganga Bhawan, Pragatipuram, By-Pass Road Rishikesh-249201.

5. North Eastern Electric Power Corporation Limited, Brookland Compound, Lower New Colony, Shillong

RENEWABLE ENERGY

1. NTPC Green Energy Limited

Solar Power Projects under NTPC Green Energy Limited

Northern Region

i) 140 MW Bilhaur-I and 85 MW Bilhaur-II Solar Power Project, Dist. Kanpur, Uttar Pradesh

ii) 160 MW Jetsar Solar Power Project- Dist. Ganganagar, Rajasthan

iii) 296 MW Fatehgarh Solar Project- Dist. Jaisalmer, Rajasthan

iv) 150 MW Devikot-I & 90 MW Devikot-II Solar Project- Dist. Jaisalmer, Rajasthan

v) 250 MW Sambhu Ki Bhurj-I & 300 MW Sambhu Ki Bhurj-II Solar Project- Dist. Bikaner, Rajasthan

vi) 300 MW Nokhra Solar Project- Dist. Bikaner, Rajasthan

Southern Region

i) 250 MW Anantapur Solar PV Project, Distt. Anantapur, Andhra Pradesh

ii) 230 MW Ettayapuram Solar Power Station, Distt. Thoothukudi, Tamil Nadu

Western Region -I

i) 260MW Bhadla Solar Power Project, Distt. Jodhpur, Rajasthan

Western Region -II

i) 50 MW Solar PV Power Plant, Rajgarh, Madhya Pradesh

ii) 250MW Mandsaur Solar Power Project, Distt. Mandsaur, Madhya Pradesh

WIND POWER PROJECT

i) Rojmal Wind (50 MW) Project, Gujarat

2. NTPC Renewable Energy Limited

Solar Projects Under NTPC Renewable Energy Limited

i) 320 MW Bhensada Solar Power Project, Distt. Jaisalmer, Rajasthan

ii) 150 MW Chhatargarh Solar Power Project- Distt. Bikaner, Rajasthan

iii) 200 MW Amreshwar Solar Power Project- Distt. Vadodara, Gujarat

iv) 150 MW Limdi, Mithapur, Mesanka Solar Power Project- Distt. Surendranagar, Gujarat

v) 150 MW Dayapar Wind Power Project- Distt. Kachchh, Gujarat

JOINT VENTURES

Thermal Power Stations

a. NTPC –SAIL Power Company Ltd.

   i) Rourkela CPP-II - Distt. Sundargarh, Odisha

   ii) Durgapur CPP-II - Distt. Burdwan, West Bengal

   iii) Bhilai CPP - Bhilai (East), Chattisgarh

b. NTPC Tamil Nadu Energy Co. Ltd: Vallur Thermal Power Project – Chennai, Tamil Nadu

c. Aravali Power Co. Pvt. Ltd.: Indira Gandhi Super Thermal Power Project - Distt. Jhajjar, Haryana

d. Meja Urja Nigam Pvt. Ltd.: Meja Super Thermal Power Project – Tehsil Meja, Allahabad

Overseas Joint Venture Projects

i) Trincomalee Power Co. Ltd. : Trincomalee Power Project, Trincomalee, Srilanka

ii) Bangladesh- India Friendship Power Company (Pvt) Ltd. : Maitree Power Project at Khulna, Bangladesh

COAL MINING SITES

i) Pakri Barwadih Coal Mining Project, Hazaribagh, Jharkhand

ii) Chatti-Bariatu Coal Mining Project, Hazaribag, Jharkhand

iii) Kerandari Coal Mining Project, Hazaribagh, Jharkhand

iv) Talaipalli Coal Mining Project, Raigarh, Chattisgarh

v) Dulanga Coal Mining Project, Sundargarh, Odisha

JOINT VENTURE COAL MINES

Banhardih Coal Mining Project, Latehar, Jharkhand (in JV with JVBNL)

xxiv) Address for Correspondence

NTPC Bhawan, Scope Complex, 7, Institutional Area, Lodhi Road, New Delhi-110003

The phone numbers and e-mail reference for communication are given below:

Details	Telephone No.	Fax No.
Registered Office NTPC Limited NTPC Bhawan, Scope Complex, 7, Institutional Area, Lodhi Road, New Delhi-110003	011-24387333	011- 2436 1018
Company Secretary & Compliance Officer Shri Arun Kumar	011-24367431	011-2436 0241
E-mail id	arunkumar10@ntpc.co.in	
Chief Investor Relations Officer Mr. Aditya Dar, Executive Director (Finance)	011-2436 7072	011-2436 1724
E-mail id	adityadar@ntpc.co.in	
Nodal officer for IEPF Director (Finance)	011- 24365552	011-24361018
E-mail id	isd@ntpc.co.in	
Dy. Nodal officer for IEPF Mr. Aditya Dar Executive Director (Finance)	011-24367072	011-24361724
E-mail id	isd@ntpc.co.in	
E-mail ID (exclusive) for redressal of investors complaints	isd@ntpc.co.in; csntpc@ntpc.co.in	

Awards & Recognitions

During the year NTPC has won various awards in recognition of its commitment towards achievements as a responsible corporate citizen. To mention among the few,

- The Economic Times-Sustainable Organisations 2022: The Company has been assessed on various parameters such as innovation, ESG Goals, responsible business activities.
- ICAI Award for Excellence in Financial Reporting- NTPC has been conferred with the ICAI Award for Excellence in Financial Reporting for 2021-22, Silver Shield, in the category of "Public Sector Entities"
- ATD Best Award- NTPC has been bestowed with the prestigious ATD BEST Award by the Association for Talent Development, USA in the field of Learning and Development.

For and on behalf of Board of Directors

Sd/-

(Gurdeep Singh)

Chairman & Managing Director

Place: New Delhi

Date: 29th July, 2023

Annexure - 1

DISCRETIONARY REQUIREMENTS

Besides the mandatory requirements, as mentioned in preceding pages, the status of compliance with the discretionary requirements under Regulation 27(1) of SEBI (LODR) are as under:

1. **The Board:** The Company is headed by an Executive Chairman.
2. **Shareholder Rights:** The quarterly financial results of the Company are published in leading newspapers as mentioned under heading ' Means of Communication' and also hosted on the website of the Company. These results are not separately circulated.
3. **Modified opinion(s) in audit report:** The Auditor's report is unmodified.
4. **Reporting of Internal Auditor:** The Internal Auditor reports to the Audit Committee of the Board.

Annexure-2

Schedule of Compliances with the Presidential Directives issued during the financial year 2022-23 and during the last three years preceding the financial year 2022-23.

Year	Content of Presidential Directives	Compliance
2022-23	NIL	NIL
2021-22	NIL	NIL
2020-21	NIL	NIL
2019-20	NIL	NIL

Annexure - 3

CERTIFICATE OF NON-DISQUALIFICATION OF DIRECTORS

(pursuant to Regulation 34(3) and Schedule V Para C clause (10)(i) of the SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015)

To,
The Members of
NTPC LIMITED
NTPC Bhawan, SCOPE Complex,
7, Institutional Area, Lodhi Road,
New Delhi – 110 003

We have examined the relevant registers, records, forms, returns and disclosures received from the Directors of NTPC Limited having CIN: L40101DL1975GOI007966 and having registered office at NTPC Bhawan, SCOPE Complex, 7, Institutional Area, Lodhi Road, New Delhi – 110 003 (hereinafter referred to as 'the Company'), produced before us by the Company for the purpose of issuing this Certificate, in accordance with Regulation 34(3) read with Schedule V Para-C Sub clause 10(i) of the Securities Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015, for the Financial Year ending on 31st March, 2023 (hereinafter referred to as 'financial year under review').

In our opinion and to the best of our information and according to the verifications [including Directors Identification Number (DIN) status at the portal www.mca.gov.in] as considered necessary and explanations furnished to us by the Company & its officers, we hereby certify that none of the Directors on the Board of the Company, as on the closure of the financial year under review, have been debarred or disqualified from being appointed or continuing as Directors of companies by the Securities and Exchange Board of India, Ministry of Corporate Affairs or any such other Statutory Authority.

Ensuring the eligibility for the appointment/continuity of every Director on the Board is the responsibility of the management of the Company. Our responsibility is to express an opinion on these based on our verification. This certificate is neither an assurance as to the future viability of the Company nor of the efficiency or effectiveness with which the management has conducted the affairs of the Company.

For A. Kaushal & Associates
Company Secretaries

CS Amit Kaushal
Mem. No.: F6230
C. P. No.: 6663
UDIN: F006230E000499901

Place: New Delhi
Date: 26/06/2023

Chief Executive Officer (CEO) & Chief Financial Officer (CFO) Certification

We, Gurdeep Singh, Chairman & Managing Director and JaiKumar Srinivasan, Director (Finance) of NTPC Limited, certify that:

(a) We have reviewed financial statements and the cash flow statement for the year ended March 31, 2023 (stand alone and consolidated) and to the best of our knowledge and belief:

(i) these statements do not contain any materially untrue statement or omit any material fact or contain statements that might be misleading;

(ii) these statements together present a true and fair view of the Company's affairs and are in compliance with existing accounting standards, applicable laws and regulations.

(b) To the best of our knowledge and belief, no transactions has been entered into by the Company during the year, which is fraudulent, illegal or violative of the company's various code(s) of conduct.

(c) We are responsible for establishing and maintaining internal controls for financial reporting and we have evaluated the effectiveness of the internal control systems of the Company pertaining to financial reporting and have disclosed to the auditors and the Audit Committee, deficiencies in the design or operation of internal controls, if any, of which we are aware and the steps we have taken or propose to take to rectify these deficiencies.

(d) We have indicated to the Company's auditors and the Audit Committee of NTPC's Board of Directors:

(i) significant changes, if any, in internal control over financial reporting during the year;

(ii) significant changes, if any, in accounting policies during the year and the same have been disclosed in the notes to the financial statements; and

(iii) instances of significant fraud of which we have become aware and the involvement therein, if any, of the management or an employee having a significant role in the company's internal control system over financial reporting.

Place: New Delhi	**(Jaikumar Srinivasan)**	**(Gurdeep Singh)**
Date : 19th May 2023	Director (Finance)	Chairman & Managing Director

Independent Auditors' Certificate on Compliance of Conditions of Corporate Governance

To

The Members of

NTPC Limited

1. This certificate is issued in accordance with the terms of our engagement letter dated September 15, 2022.
2. We have examined the compliance of conditions of Corporate Governance by NTPC Limited ('the Company') for the year ended 31st March, 2023 as stipulated in regulations 17 to 27, clause (b) to (i) of regulation 46 (2) and paragraphs C and D of Schedule V of the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015 ("the Listing Regulations") and as stipulated in the Guidelines on Corporate Governance for Central Public Sector Enterprises issued by Department of Public Enterprises (DPE), Government of India ("the DPE Guidelines").

Management's Responsibility for compliance with the conditions of Listing Regulations

3. The compliance with the terms and conditions contained in the corporate governance is the responsibility of the Management of the Company including the preparation and maintenance of all relevant supporting records and documents. This responsibility includes the design, implementation and maintenance of internal control and procedures to ensure the compliance with the conditions of Corporate Governance stipulated in the Listing Regulations and DPE Guidelines.

Auditor's Responsibility

4. Our examination is limited to procedures and implementation thereof adopted by the Company for ensuring the compliance of the conditions of Corporate Governance. It is neither an audit nor an expression of opinion on the financial statements of the Company.
5. Pursuant to the requirements of the Listing Regulations and DPE Guidelines , it is our responsibility to provide a reasonable assurance whether the Company has complied with the conditions of Corporate Governance as stipulated in the Listing Regulations and DPE Guidelines for the year ended 31st March, 2023.
6. We conducted our examination in accordance with the Guidance Note on Reports or Certificates for Special Purposes (Revised 2016) (the 'Guidance Note') issued by the Institute of Chartered Accountants of India ('ICAI'). The Guidance Note requires that we comply with the ethical requirements of the Code of Ethics issued by ICAI.
7. We have complied with the relevant applicable requirements of the Standard on Quality Control (SQC) 1, Quality Control for Firms that Perform Audits and Reviews of Historical Financial Information, and Other Assurance and Related Services Engagements.

Opinion

8. In our opinion, and to the best of our information and according to explanations given to us, we certify that the Company has complied with the conditions of Corporate Governance as stipulated in the above-mentioned Listing Regulations and DPE Guidelines subject to the following:
   a) As stated in Point No. 2.1 of the Corporate Governance Report, the Company has not complied with the Listing Regulations, with regard to the appointment of minimum number of Independent Directors in the composition of the Board of Directors, as during the financial year the number of Independent Directors were less than 50% of total number of Directors.

b) As stated in Point No. 2.7 and 3.3 of Corporate Governance Report, regarding compliance with the requirements in relation to appointment, remuneration and performance evaluation of board members including independent directors as applicable.

c) As stated in Point No. 8(a) of the Corporate Governance Report, certain related party transactions which were undertaken during the year without the prior approval of the Audit Committee of Board as required under Regulation 23 of the Listing Regulations, have since been granted ex-post facto approval by the Audit Committee and by the Board of Directors for those transactions where ex-post facto approval was not given by the Audit Committee, as stated therein, based on the expert opinion subsequently obtained in this regard. Further, in respect of material transactions entered into with a Joint Venture Company, based on the expert opinion since obtained, the management is of the view that shareholder's approval is not required in view of the facts stated therein.

d) As stated in Point No. 8(j) of the Corporate Governance Report, the proposal for appointment of Key Managerial Personnel and Senior Management Personnel was approved by the Board of Directors which was not recommended by the Nomination and Remuneration Committee (NRC).

9. We state that such compliance is neither an assurance as to the future viability of the Company nor the efficiency or effectiveness with which the management has conducted the affairs of the Company.

For S.K.Mehta & Co Chartered Accountants FRN 000478N	For Varma & Varma Chartered Accountants FRN 004532S	For Parakh & Co. Chartered Accountants FRN 001475C
(Rohit Mehta) Partner M. No.091382 UDIN: 23091382BGWXTE2581	(K P Srinivas) Partner M. No.208520 UDIN: 23208520BGUHGD4329	(Thalendra Sharma) Partner M. No.079236 UDIN: 23079236BGYTGV5104
For C K Prusty & Associates Chartered Accountants FRN 323220E	For B C Jain & Co. Chartered Accountants FRN 001099C	For V K Jindal & Co Chartered Accountants FRN 001468C
(C.K.Prusty) Partner M. No.057318 UDIN: 23057318BGXQBH8887	(Ranjeet Singh) Partner M. No.073488 UDIN: 23073488BGYTIW7826	(Suresh Agarwal) Partner M. No.072534 UDIN: 23072534BGUVZQ4107

Place : New Delhi
Dated : 29th July, 2023

Energy Conservation, Technology Absorption and Foreign Exchange Earnings & Outgo

{PURSUANT TO SECTION 134(3)(m) OF THE COMPANIES ACT, 2013 READ WITH RULE 8(3) OF THE COMPANIES (ACCOUNTS) RULES, 2014}

A. CONSERVATION OF ENERGY:

a) Energy conservation measures taken:

Some of the important energy conservation measures taken during the finacial year 2022-23 in different areas by your company are as under:

ENERGY AUDITS:

During 2022-23, under PAT scheme (4th and 5th cycle) Measurement & Verification audit of 02 stations was carried out. Seven stations had got Mandatory Energy Audit conducted as per BEE regulation. All stations of your Company have conducted Auxiliary Power Consumption Energy Audits.

AUXILIARY POWER CONSUMPTION:

Some of the actions undertaken to reduce auxiliary power consumption at various stations of your company are:

Retrofitting HT VFD in ID fans of 02 units and in CEP of 02 units of 500MW, Replacement of inefficient BFP cartridges based on high SEC, Installing grid-connected roof top Solar PV systems, Energy Efficient Coating on pump internals of Cooling Water / other large water pumps, Installation of BFP scoop for drum level control, ESP duct modification using CFD analysis, Replacing existing motors with Energy Efficient motors, Replacement of old compressors with screw compressors, Optimizing nos. of running BFP's, CEP's, mills and CW pumps and fans during prolonged partial loading.

LIGHTING:

Replacement of conventional lighting, wherever balance, in main plant, off sites, office buildings, area and street lighting of the station and township, common facilities and residential units of township were continued during the year.

HEAT ENERGY:

HP / IP cylinder efficiency improvement during capital overhaul, Boiler modifications to improve steam parameters & efficiency, Condenser Jet cleaning and cooling tower water distribution & nozzle modification.

b) Additional investments and proposals for reduction in consumption of energy:

Provision of ₹ 85.85 crore has been kept in BE 2023-24 for different energy conservation schemes like:

- Retrofitting VFD's in CEP's & LT drives
- Energy efficient air conditioners, LED & ceiling fans
- Grid-connected roof top Solar PV systems
- Energy efficient LT motors
- Installation of high efficiency nozzles in CT
- Energy efficient slurry pumps.
- Various instruments for energy audits

c) Impact of measures taken for energy conservation:

Savings achieved during FY 2022-23 on account of specific efforts for energy conservation by your company:-

S. No.	Area/Activities	Energy Unit	Savings Qty.	₹ (Crore)
1	Electrical	MU	139.61	48.94
2	Heat Energy (equivalent MT of coal)	MT	23022	9.51
	Grand Total			**58.45**

Savings achieved during FY 2021-22 - ₹ 43.01 crore.

B. TECHNOLOGY ABSORPTION:

Efforts made towards technology absorption are contained in enclosed Form – B.

C. FOREIGN EXCHANGE EARNINGS AND OUTGO

The Foreign Exchange earned in terms of actual inflow during the year and the Foreign Exchange Outgo during the year in terms of actual outflow as under:

Total Foreign Exchange Used/ Earned (2022-23)	(₹ in Crore)
1. Actual foreign exchange outgo on account of	
Procurement of capital goods, coal and spare parts	778.04
Interest & Foreign currency loan/bond issue expenses	1,366.99
Professional & consultancy fee	3.28
Others	2.01
TOTAL	**2,150.32**
2. Actual foreign exchange earnings	**NIL**

FORM B

Form for disclosure of particulars with respect to Absorption of Technology

1. Specific areas in which NETRA (NTPC Energy Technology Research Alliance) have been carried out during 2022-23

Major Projects:

Carbon capture and Utilization:

I. 10 TPD 'CO_2 to Methanol' Demo Plant at Vindhyachal project of your Company

II. 10TPD 'CO_2 to Ethanol 'Demo plant at Lara project of your Company

III. Indigenous development of Catalyst & Reactor for conversion of CO_2 to Methanol in parallel

IV. Pre-feasibility assessment of CO_2 storage potential in Cat-1 Fields of India- with NCOE-CCUS, IIT

V. CO_2 based Carbonated Coarse Aggregate- with CBRI Roorkee

Hydrogen:

I. 25 kW Green Hydrogen Based Micro Grid at NETRA campus

II. Development of Sea Water Electrolyze for hydrogen production

III. Development of High Temperature Steam Electrolyzer

IV. Development of Metal Hydride (MH) Based Static hydrogen storage and Compression

Water Technology:

I. 24 TPD Electro Dialysis Reversal plant at your Company NETRA

II. 240 TPD Non-Thermal Forward Osmosis based high recovery system.

III. 3600 TPD Electrocoagulation system at your Company Solapur plant

IV. 4 MLD Activated Filter Media Plant at your Company Dadri

Ash-Technology:

I. Development of Angular Shaped Coarse Aggregates from Fly Ash

II. Fly Ash based Light Weight Aggregate Pilot Plant Setup at NTPC-Sipat

III. FALG technology: 100 cum/day fly ash based angular shaped coarse aggregates plant.

Waste to energy:

I. 400 KWe MSW-RDF Enhanced Steam Gasification plant

II. Development of 10 TPD 'Torrefied Pellet Manufacturing Plant for Agri-Waste' with Indian START-UP

Renewables:

I. 4MW Ground Mounted Solar Photo Voltaic System with Battery Storage

Apart from various projects NETRA also provided advanced scientific support to your Company Stations and outside power utilities in various areas such as Non-Destructive Evaluation and Imaging, Metallurgy & Failure Analysis, CFD Services for process improvement Transformer, Generator Health, Creep & fatigue analysis, Corrosion & Water Chemistry, Coal & Combustion and Environment, etc.

II. Advanced Scientific Services Support to your Company's Stations on Continuous basis

NETRA also provides advanced scientific support to your Company Stations and outside power utilities mainly in the following areas:

I. Health assessment and residual life assessments of power plant components for improving the reliability and availability of boiler, steam turbine, Gas turbines components by using different advanced NDE tools and techniques.

II. Remote Inspection of boiler header using in-house developed robotic system.

III. Evaluation of Post Weld Heat Treatment Quality of Ferromagnetic Steel Weld etc. using Magnetic Coercive Force Measurement.

IV. Implementation of Advance NDE Techniques such as Phased Array Ultrasonic Testing (PAUT) for inspection of weld joints on Boiler Tubes, in-situ detection of hydrogen damage in water wall, in-situ detection of crack in root region of LP turbine blades, Time of Flight Diffraction (TOFD)

V. Microstructural characterization of various alloys, stainless steels, super alloys and other advanced materials:

   a. Identification of damage mechanisms in pressure part components to reduce forced outages and thereby improve availability & reliability of components; and, suitable measures recommended to OS, QA and O&M departments.

   b. Root cause analysis of boiler, turbine, generator and auxiliaries of power plant

VI. Substitution of OEM on high end & costly health assessment of GT components.

VII. Development of Chemical Formulations for Cooling Water Treatment for high COC, to reduce the specific water consumption of plant.

VIII. Quantitative and Qualitative analysis of deposit, solvent selection and post operational chemical cleaning recommendations for boilers and Condenser.

IX. Corrosion analysis, monitoring & its control in Power plants for Fire Fighting System and CW System.

X. Specialized analytical support for characterizing the turbine, boiler, condenser, CT and De aerator deposits, corrosion products, heavy metals in effluents using state of art equipment's such as SEM, XRD, IC, TOC, particle count analyzer, AAS & ICPMS etc.

XI. Improvement in STP water quality by enhancing the performance of sewage treatment and by carrying out testing of organic matter, COD, BOD and TKN. Trace level Mercury testing's in Coal and Effluent.

XII. Residual life assessment of ACF, Cation Exchange Resin, Anion Exchange Resin, MB-SAC resin, MB-SBA resin, CPU resin through analysis such as TEC, SSC, WRC, density.

XIII. Particle size distribution and bead integrity of Cation Exchange, Anion Exchange, MB & CPU resin.

XIV. Condition Monitoring of:

- High voltage transformers through tools such as Dissolve gas Analysis (DGA), FDS, SFR and Interfacial Tension (IFT).
- Super heater / re-heater tubes of ageing boilers through accelerated creep testing.
- Lubricating oils of rotating components using wear debris analysis.
- Ion exchange resins & activated carbon for capacity enhancement and its kinetics

XV. Advanced coal & ash characterization of samples of station to determine ash fusibility characteristics, slagging & fouling behavior of coal, elemental composition of coal & biomass, particle size analysis of fly ash, reactivity, abrasion behavior & grade determination of coal. Compositional analysis of fly ash using EDXRF. Estimation of mercury in coal in ppm/ppb level.

XVI. CFD services in power plant domain and other relevant areas.

2. Benefits derived as a result of above Research & Technology Development:

NETRA activities are aligned for solving some of the major concerns of your Company and the power sector in today's scenario. In this regard, NETRA has taken up major projects for addressing concerns such as environment and climate change, reliability and efficiency improvement, new and renewable energy etc.

NETRA has taken projects for reducing carbon footprints by means of carbon capture and utilization. 10 TPD CO_2 to Methanol project is aimed at capturing CO_2 from existing thermal plant and its utilization for production of valuable product such as Methanol. CO_2 capture block has been commissioned in Aug'22. Work is going on for the indigenization of catalyst and reactor for conversion of CO_2 to Methanol plant.

R&D, lab-scale and pilot-scale demonstration projects such as development of Sea water Electrolyser, High Temperature steam electrolysers, Static hydrogen storage and Compression etc have been taken up for hydrogen technology.

NETRA is working on the development of innovative water technologies such Non-Thermal Forward Osmosis, Electro-Dialysis Reversal, Desalination etc. for the processing of STP and Sea water. Electro-Dialysis Reversal plant was commissioned in June'22.

Continuous work is going on for the development of new products and processes for bulk Ash utilization and as a result novel technologies & products such as Geo Polymeric (GPC) Road, Geo polymeric Pavers & Tetrapod etc. have been successfully developed and implemented.

Through advance scientific services like Non-Destructive Evaluation, CFD analysis and Metallurgy & Failure Analysis, etc., NETRA is working constantly for improvement in reliability, efficiency and as well as for reduction in O&M cost by the diagnosis of faults. NETRA is also working on cutting-edge technologies such as development of robotics solutions for inspection of CW Duct & water pipeline, visual inspection of boiler headers, boiler 1st pass internal inspection. Asset Digitization & Monitoring through Drones, development of novel sensors to increase reliability, safety and to reduce inspection & monitoring time as well as manpower requirements.

NETRA activities have helped the stations in the analysis of failures and their prevention. Techniques developed by NETRA are implemented at stations wherever required. Regeneration treatments of resins, chemical cleaning/treatment and corrosion control measures supported the stations in improving the efficiency and availability of boilers and various heat exchangers/ cooling towers, etc.

Majority of projects of NETRA involves development, implementation and demonstration of new technologies, so almost all projects mentioned in above section (Work carried out by NETRA in FY 2022-23) have technological trial component in it.

3. R&D Expenditure:

₹ in Lakhs

S. No	Description	Revenue	Capital
a)	NTPC	23348.14	4666.67
b)	THDC	270.00	-
c)	NEEPCO	59.88	-
	Total of your Company and group Company		**28344.69**

4.0 Technology Absorption, Adaptation and Innovation:

Particulars of some of the important technology imported during last Five (5) years are as follows:

S.No.	Technology	Year	Stations
1.	Environmental norms compliance (SO_2 emission control by FGD & DSI)	2017-23	For SO_2 emission compliance, FGDs are under implementation in 59,290 MW and FGD/DSI in 2,990 MW are already under operation.
2.	Environmental norms compliance (NOx emission control by Combustion Modification i.e. installation overfired dampers and others)	2018-23	Combustion Modification in 43 units of around 19 GW including units located in NCR i.e. 2 units of Dadri, 3 units of Jhajjar have already been completed. Further, combustion modification work in balance 7 units (2410MW) is in progress.
3.	Early Warning System for Hydro Power Projects	2021-22	NTPC has developed and implemented state of art automatic Early Warning System at TVHPP (Tapovan Vishnugarh Hydro Power Project) based on measurement of Level and Velocity (mass flow) for warning and evacuation in case of catastrophic event.
4.	Air Cooled Condensers (ACC) for reduction of water footprint	2022-23	The first Unit of the NKSTPP (3x660 MW) with Air Cooled Condenser technology was successfully commissioned on 18th January 2023 and is currently operational. The remaining two units of NKSTPP and three units of Patratu STPP (3*800 MW) are currently in the execution phase.
5.	Dry Bottom Ash Handling System for reduction of water footprint	2022-23	To minimize water consumption, Dry Bottom Ash Handling System is adopted instead of conventional Wet Bottom Ash Handling System for Coal Based Thermal Power Project at BIFPCL (Bangadesh India Friendship Power Company), Patratu (3x800 MW). With extraction of bottom ash in dry form and requirement of meagre quantity of water for conditioning and dust suppression, water requirement will be practically eliminated for handling bottom ash.
6.	Municipal Solid waste (MSW) to Charcoal	2022-23	200 Ton per day MSW to charcoal through torrefaction technology implemented in Ramna, Varanasi Plant. This Charcoal will be co-fired in Boiler.
7.	Sewage Treatment Plant sludge Co-firing in Boiler	2022-23	170 Metric ton STP sludge fired in Dadri Unit# 4 & 5.

For and on behalf of the Board of Directors

Sd/-
(Gurdeep Singh)
Chairman & Managing Director

Place: New Delhi
Date: 29th July, 2023

Statistical information on reservation of SCs/STs/OBCs

Representation of SCs/STs/OBCs as on 01.01.2023:

Group	Employees on Roll	SCs	%age	STs	%age	OBCs	%age
A	11401	1705	14.95	715	6.27	2760	24.21
B	2438	392	16.08	214	8.78	329	13.49
C	2626	385	14.66	208	7.92	1033	39.34
D	421	102	24.23	46	10.93	123	29.22
Total*	**16886**	**2584**	**15.30**	**1183**	**7.01**	**4245**	**25.14**

*The above data is inclusive of manpower posted at JVs and Subsidiaries and manpower of taken over projects and FTE.

Recruitment of SCs/STs/OBCs during the year 2022:

Group	Total Recruitment	SCs	%age	STs	%age	OBCs	%age
A	1121	164	14.63	88	7.85	377	33.63
B	2	0	0	0	0	1	50
C	112	14	12.5	5	4.46	65	58.04
D	36	4	11.11	0	0	13	36.11
Total	**1271**	**182**	**14.32**	**93**	**7.32**	**456**	**35.88**

Promotions of SCs/STs during the year 2022:

Group	Total Promotion	SCs	%age	STs	%age
A	2396	362	15.11	159	6.64
B	484	83	17.15	36	7.44
C	613	85	13.87	42	6.85
D	0	0	0.00	0	0.00
Total	**3493**	**530**	**15.17**	**237**	**6.78**

For and on behalf of the Board of Directors

Sd/-
(Gurdeep Singh)
Chairman & Managing Director

Place: New Delhi
Date: 29th July, 2023

Information on persons with benchmark disabilities (PwBD)

With a view to focus on its role as a socially responsible and socially conscious organization, your Company has endeavored to take responsibility for adequate representation of physically challenged persons in its workforce. With this in view, total of 32 PwBD (Persons with Benchmark Disabilities) were recruited during the year 2022. As on 1st January, 2023, 492(2.91%) PwBD (91 with Blindness and low vision, 108 with Deaf and Hard of Hearing and 293 with Locomotor Disabilities) are on the rolls of the company. Reservation has been provided as per rules/policy. Some of the other initiatives taken for the welfare of PwBD over the years by your Company are as under:

- In compliance to RPwD Act 2016, your Company has in place Equal Opportunity Policy under CHRC No.847/2018.
- Additional benefit of 4(four) days in the form of Special Casual leave in a calendar year for specific requirements relating to the disability of the employee has been provided to PwBD.
- Travelling Allowance in respect of Attendant/Escort for accompanying a Employee with Disabilities on travel during Tour/Training.
- Liaison Officer (PwBD) and Grievance Redressal Officer has been nominated at all Projects/ stations/Regions of your Company.
- For individual needs of the VH employees, screen reading software and Braille shorthand machines are made available by the Projects. A website has been made DAP friendly, particularly for Low Vision Employees.
- Changes in the existing building have been/are being made to provide barrier free access to differently abled. Ramps have also been provided for unhampered movement of wheel chairs.
- At most of the your Company Projects, wherever houses are located in multi-storied structures, allotments to PwBD has been made on the ground floor. Wherever required, gates/ door of the quarter has been widened.
- Your Company Medial Attendance and Treatment (MAT) rules provide reimbursement towards expenses incurred by the employees towards purchase/replacement/repair/adjustment of artificial limbs/appliances for self and/or dependent family members and reimbursement towards Low Vision Aids for visually challenged employees and/or their dependents and Hearing Aid for hearing impaired employees and/or their dependents.
- Medical camps have been organized in various projects of your Company for treatment and distribution of aids like artificial limbs, tricycles, wheelchairs, calipers etc.
- Shops have been allotted in your Company Township to DAP(Differently abled Persons) so that they may earn their livelihood.
- Regular interactive meetings are being organized with PwBD.
- In order to encourage and motivate children and youth from neighborhood villages of your Company Projects/Stations for higher studies, your Company has in place 'NTPC Utkarsh'-Merit Scholarship under "NTPC Foundation" for students(including Physically Challenged) from the neighborhood of its projects / stations . The scheme benefits students from neighborhood communities pursuing X, XII, ITI, BE/B.Tech and MBBS studies.
- Physically challenged (Orthopedically Handicapped) employees have been allowed to purchase a three wheeler vehicle with a hand fitted engine against their normal entitlement (advance for scooter/ motorcycle/ moped) under your Company conveyance Advance Rules.
- Relaxation in qualifying marks: Pass marks in lateral recruitment and 10% relaxation in Executive Trainees recruitment. 10% relaxation in written test and interview.
- The minimum performance level marks for promotions (in workman categories) within the cluster is relaxed by 3 marks in case of employees belonging to SC/ ST/ Physically Challenged category.

For and on behalf of the Board of Directors

Sd/-
(Gurdeep Singh)
Chairman & Managing Director

Place: New Delhi
Date: 29th July, 2023

Annexure - VI to Directors' Report

Report on CSR activites

FORMAT FOR THE ANNUAL REPORT ON CSR ACTIVITIES TO BE INCLUDED IN THE DIRECTORS' REPORT

1. **A brief outline of your Company's CSR policy, including overview of projects of programs proposed to be undertaken and a reference to the web – link to the CSR policy and projects or programs.**

CSR has been synonymous with your Company's core business of power generation. Since inception your Company has been very sensitive to the needs of the neighboring community and people whose livelihood has been affected due to the establishment of a power plant. The Company's spirit of caring and sharing is embedded in its mission statement. The Company has a comprehensive Resettlement & Rehabilitation (R&R) policy covering community development (CD) activities, which has been revised and updated from time to time. CD activities in green field area are initiated as soon as project is conceived and thereafter-extensive community / peripheral area development activities are taken up along with the project development.

Your Company CSR Policy formulated in July 2004 and revised in 2010, 2016, 2019 and 2022 covers a wide range of activities including provision for implementation of a few key Programmes taken through NTPC Foundation- a charitable Trust set up by your Company to mainly serve and empower the Physically Challenged and Under Privileged Sections of the Society & women.

CSR programs undertaken by company include activities specified in Schedule VII of the Companies Act 2013 & Rules made thereunder for the benefit of community at large. Focus areas of your Company's CSR activities are Health, Sanitation, Safe Drinking Water and Education. However, company also takes up activities in the areas of Capacity Building of the youth, Women Empowerment, Social Infrastructure Development, livelihood creation through support for implementation of innovative agriculture & livestock development, support to Physically Challenged Person (PCPs), and for the activities contributing towards Environment Sustainability. Your Company CSR efforts are focused on the immediate vicinity of its stations where the Company's operations are situated, ensuring that the majority of CSR funds are spent on activities addressing the needs of the local community. However, considering inclusive growth & environment sustainability, some of the activities are also taken up in different parts of the country to supplement governmental efforts. During the year, about 450 villages and more than 400 schools have been benefitted by your Company's various CSR initiatives at different locations. Your Company's CSR initiatives have touched the lives of around 16 lakhs people generally residing at remote locations in various parts of the country in one or the other way.

Apart from the regular CSR activities undertaken around your Company's operations, support has also been provided by your Company for some of the major CSR initiatives undertaken all across the country:

Health, Water & Sanitation

- A financial support of ₹ 250 Crore in FY 2020-21, ₹ 80 Crore in FY 2021-22, and ₹ 80 Crore in FY 2022-23 to Prime Minister's Citizen Assistance and Relief in Emergency Situations Fund (PMCARES) has been made for Covid-19 and other Services/ Activities.
- NTPC hospitals have provided quality primary, secondary, and referral care along with diagnostic services to more than 3,00,000 patients from the community every year.
- Health related infrastructure support is being extended to various PHCs, CHCs and District Hospitals located in the vicinity of your Company Projects/Stations.
- Your Company supports the local administration by regularly carrying out the works of fogging, spraying etc. in villages located in its vicinity and distributes mosquito nets for prevention of vector borne diseases.
- Your Company makes primary care accessible, affordable, and inclusive through health camps – both general and specialized (Eye, Respiratory Diseases/ Cancer detection etc.), outreach services through mobile health clinics and by augmenting

and strengthening rural health infrastructure. About 3000 surgeries are performed every year in these camps.

- Your Company is committed to develop Chinmaya Mission Hospital, Bengaluru by providing a Neuro Operation theatre with necessary equipments.
- Your Company is supporting the availability of adequate tertiary care in the country:
  - Support for Development of King George Hospital, Visakhapatnam.
  - Support for construction and equipment for 3rd Floor and diagnostic labs at National Cancer Institute Nagpur, Maharashtra.
  - Setting up of Special burn unit at KGMU Lucknow, AIIMS Bhubaneshwar, and AIIMS Patna.
  - Establishing Integrated Muscular Dystrophy Rehabilitation Centre "Manav Mandir" at Solan Himachal Pradesh.
  - Cancer Screening Program of Bihar Govt. and Tata Memorial Cancer Hospital for four Districts of Bihar.
- Your Company ensures access to water for the community through installation of hand pumps and piped drinking water etc. To ensure that people have access to potable drinking water, your Company has set up RO water plants/ Water ATMs in public locations near your Company operations. Your Company also distributes water filters/ coolers in various villages/ schools near your Company operations. Further, during extreme summers, your Company ensures availability of water through Water Booths and Water Tankers.
- Your Company has taken initiatives for the rejuvenation of Ponds located in the vicinity of many of its Plants with an objective to improve ground water table.
- Your Company has extended support for installation of about 10,000 Energy Efficient Pump System in the fields of farmers residing near your Company stations located in 05 districts of UP.
- Your Company supported the Government of India's Swachh Bharat Abhiyan or Swachh Bharat Mission, a nation-wide cleanliness campaign by the Government of India, by making available more than 24,000 toilets in about 16,000 schools covering 650 blocks in 83 districts spread over 17 states, out of the said number of toilets repair and maintenance is being done for around 20,000 toilets.
- Your Company has revived MSW Plant at Varanasi & Pilot Project done for Mechanized Sweeping, Collection & transportation of MSW. Varanasi jumped from 428th ranking in 2014 to 21st rank in 2022 in Swachh Survekshan rankings 2022. Varanasi has secured 2nd rank among the cleanest cities along the banks of the river Ganga.
- Your Company with active involvement of its employees, local school children etc. had organized Nukkad Natak, debates, slogan competitions, essay competitions, painting competitions, walkathons, pamphlet distribution etc. in the vicinity of its various projects and stations to spread awareness about sanitation and hygiene.
- Your Company has constructed Individual Household Toilets and Public Toilets in the adjoining villages and Public Places located in the vicinity of your Company Projects and Stations with an objective of creating an open defecation free society.

Education

- Your Company as a part of its Policy on Improving Learning Outcomes & Quality of Education for children studying in Government Schools of its project-affected villages has established Smart Classes and has taken many initiatives in various Government schools located in the vicinity of its Plants and Stations.
- Your Company Sipat has so far sponsored education to more than 300 Baiga Tribal students for getting admission into engineering and medical colleges through Commissioner, Tribal Welfare, Chhattisgarh.
- Your Company Korba (aspirational district) is supporting the holistic education to 30 Special Backward Tribe Pahadi Korwa students every year from class VI to XII.
- Your Company is supporting the construction of facilities for tribal school in Chapki, Distt. Sonebhadra (UP).
- Your Company has set up an English Medium School through Shree Ramakrishna Ashram, M. Rampur, Kalahandi.

- Your Company Korba has provided financial assistance to backward tribal students studying in Eklavya Adarsh Residential School.
- Your Company has distributed national flags to its neighbouring communities as part of Har Ghar Tiranga campaign under the aegis of Azadi ka Amrut Mahotsav.
- Supporting education in rural areas by augmenting and strengthening school infrastructure including additional classrooms, hostels, toilets, boundary walls, gates, science labs, libraries, kitchen sheds, providing assets like furniture, computers, water coolers, filters etc. Your Company also ensures the right to education of children from the underprivileged sections of society by providing them with scholarships, study material, & uniforms etc.

Skill Development and Income Generation

- Your Company has adopted 18 nos. ITIs and set up 8 new ITIs at various locations.
- Your Company is supporting "Skill India Mission" of GoI through MoU with NSDC for various employment linked skill development programs for 30,000 rural youth including 8,000 youth of J&K.
- Your Company is supporting the construction of auditorium at Rajkot, Gujrat for developing educational & Vocational training infrastructure.
- Your Company has provided various capacity building training programmes, exposure visits and provided hand holding through experts to the farmers of villages in its vicinity on various techniques of crop/animal productivity such as use of drip irrigation to produce more crop per drop, in improving milk yield through improving breed through artificial insemination, cultivation of nutrient rich and rapidly growing fodder crops etc.
- Your Company makes youth entrepreneurial, enterprising, and employable by providing them with training in Electrical Repairing, Mobile Repairing, Motor Rewinding, Welding, Car Driving including obtaining LMV driving license, Computer Training, etc.

Disaster Relief

- Financial support to Uttarakhand State Disaster Management Authority (USDMA) for undertaking reconstruction and restoration of Govt. Schools and Govt. Health Centers in various districts of Uttarakhand.
- Your Company is supporting the Redevelopment of Kedarnath town, Uttarakhand and its surrounding areas devastated during natural calamity of 2013.
- Your Company is supporting for setting up of disaster management control room at Bilaspur, Chhattisgarh.

Women Empowerment

- Providing skill & livelihood generation training to around 1,250 No. of women through NTPC Foundation in collaboration with Apparel Made ups & Home Furnishing Sector Council.
- Your Company is supporting cultivation of mushrooms and creating sustainable livelihoods for rural women through Oyster mushroom cultivation in Loni & Bhandegaon Villages.
- Your Company has supported Udyan Care at Jaipur, Rajasthan for the higher education and rehabilitation of orphan and abandoned girls.
- Your Company has conducted various training on embroidery, dress designing, cutting, stitching, tailoring (including providing sewing machines), beautician, food preservation & processing, nursing etc. to women from various villages located in its vicinity.

Promotion of Sports

Your Company provides support to Archery sport in India with an objective of scouting for talent in remote parts of India and nurture them through coaching camps to enhance India's presence in the sports internationally. In Asia Cup 2022 at Sharjah Indian Archers bagged 10 medals (05 Gold, 03 Silver & 02 Bronze). Through this partnership, your Company aims to provide platform to Indian youth to showcase their talent and elevate India's reputation in the field of Archery. From November 2018 to March 2023, the Indian archers have won 130 medals comprising of 53 Gold, 44 Silver and 33 Bronze medals in various international Archery tournaments. i.e., Asian Archery Championships, Asia Cup World Ranking Tournaments, Para Archery World Ranking Tournaments, World Cup Stage I, II, III, IV, World Archery Para Championships, Tokyo Paralympics Games etc.

The best performance by Indian Archers in Olympics and paralympic Games IN Tokyo 2020. In the Paralympic Games won Bronze medal. The Indian Archers shot there way to second rank by bagging 4 medals (2 Gold, 1 Silver,1 Bronze) in the recently held Antalya 2023, Archery World Cup Stage 1 from 18th to 23rd April 2023.

- Your Company, through NTPC Foundation, is collaborating in a big way with Ministry of Youth Affairs and Sports (NSDF), Sports Authority of India (SAI) and Archery Association of India (AAI) to develop Archery Sports at the grassroot level.
- Infrastructure support to NTPC-SAI Water Sports Centre at Koldam, Himachal Pradesh for promoting Kayaking, Rowing and Canoeing water sports.
- Your Company, Dadri is supporting construction of playgrounds in village Khangora & Sidhipur.
- Your Company has supported a Football Club in Mizoram by providing 02 No. buses.

Others (Rural Infrastructure Development, Protection of National Heritage etc.)

- Installation of LED based Solar Street Lights & Solar High Mast lights in Gorakhpur, Ambedkar Nagar, Sant Kabir Nagar located in Uttar Pradesh, in Satna located in Madhya Pradesh, in Arrah located Bihar, and in locations adjoining to your Company Stations & Projects.
- Your Companys support is committed for construction and redevelopment of Shri Badrinath Dham town as a spiritual smart hill town.
- Your Company's support is committed for development of Ramna Maidan and Collectorate Chhath Ghat of Ara- a place of historical importance from the First war of Independence /Sepoy Mutiny of 1857.
- Your Company supports the development of basic infrastructure such as roads, bridges, culverts, bus shelters, community centers, schools, health centers, electrical infrastructure etc. enabling the local community to fulfil their basic needs and to enhance the quality of their lives.

NTPC Foundation

- With an objective to serve and empower the physically challenged and economically weaker sections of the society including women, NTPC Foundation has been set up by your Company to take up projects & programs addressing domains of socio-economic concerns. Major activities of the foundation include:
- Girl Empowerment Mission (a) – A four-week residential workshop for girl children in the age group of 10 to 12 years. The workshop aims at empowerment/upliftment of girl children through various interventions to make girls self-reliant and confident in all walks of life and become a catalyst in transforming their lives, the lives of their family and bring positive changes in the community they live and the nation at large. A summer residential workshop for 4 weeks is organized for girl children in the age group of 10-12 years selected from various Govt. Schools of villages in the vicinity of your Company Projects/Stations including your Company Joint Ventures & Subsidiaries. The entire cost of the program including their boarding & lodging in a safe & secure environment for these girl children is borne by your Company. Further, free education of around 255 girl students admitted to different NTPC Township Schools. In the year 2023, the said programme is being conducted at 41 Projects / stations/ JV & Subsidiaries of your Company where about 2700 girls are participating.
- Directly Observed Treatment cum Designated Microscopy Centre (DOTs cum DMC) with Mobile ambulance facilities being operated at 9 your Company hospitals under Revised National Tuberculosis Control Programme (RNCTP) that cater to villages up to 25-30 Km from your Company stations and has benefited 16033 cases during the year through Screening for TB/HIV and treatment provided to patients diagnosed with TB/HIV.
- Disability Rehabilitation Centre (DRC) at your Company Tanda, Rihand, Korba, Dadri, Bongaigaon and Farakka established in collaboration with National Institute of Locomotor Disabilities (NILD) erstwhile National Institute for the Orthopedically Handicapped (NIOH), under the Ministry of Social Justice and Empowerment, Government of India has benefitted about 2,868 physically challenged people with approximately 8,273 Surgical corrections, serving aids & appliances during the year.

- Providing IT education to physically & visually challenged students through the ICT Centre established at Devi Ahilya Vishwa Vidyalaya.
- 'NTPC Utkarsh Scholarship' A flagship program of NTPC Foundation in education which provides scholarships to encourage and motivate the students who are pursuing secondary, high school, ITIs, Diploma/Degree in Engineering & also medical science studies.
- Promotion of Archery sport in collaboration with Ministry of Youth Affairs and Sports (NSDF), Sports Authority of India (SAI) and Archery Association of India (AAI)
- Empowerment of women by providing Apparel Madeups & Home furnishing Skill Training & livelihood generation programme through AMHSSC with assistance from NSDC at various locations under Mission India Skill programme.

2. The composition of the CSR Committee. The Composition of the CSR Committee

As on date, the Board Level Corporate Social Responsibility & Sustainability Committee comprises.

Two functional Directors

1. Shri Dillip Kumar Patel, Director (HR), Chairman of the Committee
2. Shri Ramesh Babu V., Director (Operations), Member

Three Independent Director

1. Smt. Sangitha Varier, Independent Director, Member
2. Shri Jitendra Tanna, Independent Director, Member
3. Shri Vivek Gupta, Independent Director, Member

Sl. No.	Name of Director	Designation / Nature of Directorship	Number of meetings of CSR Committee held during the year Number of meetings of CSR Committee attended during the year	Amount required to be set-off for the financial year, if any (in ₹)/crore
1.	Shri Dillip Kumar Patel [1]	Director (HR) and Chairman of the Committee	4	4
2.	Shri Ramesh Babu V. [2]	Director (Operations), Member	4	4
3.	Shri Vivek Gupta [3]	Independent Director, Member	4	4
4.	Shri Jitendra Jayantilal Tanna [4]	Independent Director, Member	4	4
5.	Smt. Sangitha Varier [5]	Independent Director, Member	4	4

1. Appointment as Chairman of the Committee w.e.f. 23rd October, 2020.
2. Appointment as Member of the Committee w.e.f. 23rd October, 2020.
3. Appointment as Member w.e.f. 30th December, 2021.
4. Appointment as Member w.e.f. 30th December, 2021.
5. Appointment as Member w.e.f. 30th December, 2021.

The committee recommends to the Board for approval, the amount of expenditure anticipated on the CSR activities and monitors from time to time the Policy for CSR and the proposals approved by the Board.

3. Provide the web-link where Composition of CSR committee, CSR Policy and CSR projects approved by the board are disclosed on the website of the company.

Web Link to the CSR Policy & Projects or programs

http://www.ntpc.co.in/en/corporate-citizenship/corporate-social-responsibility

4. Provide the details of impact assessment of CSR projects carried out in pursuance of sub-rule (3) of rule 8 of the Companies (Corporate Social responsibility Policy) Rules, 2014, if applicable (attach the report): Nil

5. Details of the amount available for set off in pursuance of sub-rule (3) of rule 7 of the Companies (Corporate Social responsibility Policy) Rules, 2014 and amount required for set off for the financial year, if any-

Sl. No.	Financial Year	Amount available for set-off from preceding financial years (in ₹)/crore	Amount required to be set-off for the financial year, if any (in ₹)/crore*
1	2020-21	NIL	141.28
2	2021-22	141.28	78.59
3	2022-23	219.87	5.32
	Total amount available for set off		**225.19**

** No amount have been considered for set off.*

6. Average net profit of the company for last three financial years (as per Section 198): ₹ 15,500.18 crore

7.

(a)	Two percent of average net profit of the company as per section 135(5)	₹ 310.00 crore
(b)	Surplus arising out of the CSR projects or programmes or activities of the previous financial years.	Nil
(c)	Amount required to be set off for the financial year, if any	Nil
(d)	Total CSR obligation for the financial year (7a+7b-7c).	₹ 310.00 crore
(e)	CSR amount spent for the financial year:	₹ 315.32 crore

8. (a) Details of CSR spent during the financial year.

Total Amount Spent for the Financial Year (in ₹)/crore	Amount Unspent (in ₹)/crore				
	Total Amount Transferred to Unspent CSR Account as per section 135 (6)		Amount transferred to any fund specified under Schedule VII as per second proviso to section 135 (5)		
	Amount	Date of Transfer	Name of the Fund	Amount	Date of Transfer
315.32	NIL	NA	NA	NA	NA

8. (b) Details of CSR amount spent against ongoing projects for the financial year:

(1)	(2)	(3)	(4)	(5)		(6)	(7)	(8)	(9)	(10)	(11)	
Sl. No.	Name of the Project	Item from the list of activities in Schedule VII to the Act.	Local area (Yes/ No)	Local area/ Location of the project.		Project duration	Amount allocated for the project (in ₹)	Amount spent in the current financial Year (in ₹)	Amount transferred to Unspent CSR Account for the project as per Section 135(6) (in ₹)	Mode of Implementation - Direct (Yes/No)	Mode of Implementation - Through Implementing Agency	
				State	District.	(in Yrs)					Name	CSR Registration number
1.	Construction & Equipment for 3rd Floor and diagnostic lab at National Cancer Institute, Nagpur	i	Yes	Maharashtra	Nagpur	6	30000000	30000000	-	No	Dr. Abaji Thatte Seva Aur Anusandhan	CSR00012471
2.	Infrastructure facilities at Sewa Kunj Ashram	ii	Yes	Uttar Pradesh	Sonbhadra	6	4647031	4647031	-	Yes	NA	NA
3	Setting up burn Unit at AIIMS Patna	i	Yes	Bihar	Patna	5	56700000	56700000	-	Yes	NA	NA
4	Support to AAI for Archery Sports	vii	No	Multiple States	Multiple Districts	5	21000000	21000000	-	Yes	NA	NA

(1)	(2)	(3)	(4)	(5)		(6)	(7)	(8)	(9)	(10)	(11)	
Sl. No.	Name of the Project	Item from the list of activities in Schedule VII to the Act.	Local area (Yes/ No)	Local area/ Location of the project.		Project duration	Amount allocated for the project (in ₹)	Amount spent in the current financial Year (in ₹)	Amount transferred to Unspent CSR Account for the project as per Section 135(6) (in ₹)	Mode of Implementation - Direct (Yes/No)	Mode of Implementation - Through Implementing Agency	
				State	District.	(in Yrs)					Name	CSR Registration number
5	Setting up of Burn Unit at AIIMS	i	Yes	Odisha	Bhubaneshwar	5	10157400	10157400	-	Yes	NA	NA
6	Revival of MSW Plant at Karsada, Varanasi	i	No	Uttar Pradesh	Varanasi	5	144920554	144920554	-	Yes	NA	NA
7.	Installation of Energy Efficient Pumps at various districts of UP	x	No	Uttar Pradesh	Multiple Districts**	5	9520000	9520000	-	Yes	NA	NA
8	Setting up Burn Unit at KGMU Lucknow	i	Yes	Uttar Pradesh	Lucknow	5	6738180	6738180	-	Yes	NA	NA
9.	Redevelopment of Kedarnath town	xii	No	Uttarakhand	Rudraprayag	4	150000000	150000000	-	No	Shri Kedarnath Utthan Charitable Trust	CSR00009855
10	Development, renovation, and advancement project of GHSS Munderi, Kannur	ii	Yes	Kerala	Alappuzha	3	1957200	1957200	-	Yes	NA	NA
11	Financial assistance towards Badrinath	x	Yes	Uttarakhand	Chamoli	3	28100000	28100000	-	No	Shri Kedarnath Utthan Charitable Trust	CSR00009855
12	Restoration-Ramna Maidan at ARA	x	No	Bihar	Bhojpur	2	3190538	3190538	-	Yes	NA	NA
13.	Construct of Auditorium at Sewa Bharathi, Rajkot	ii	Yes	Maharashtra	Mumbai	2	9360000	9360000	-	No	Sewa Bharati Gujarat	CSR00021398
14	Support to SAI promoting Archery Sports	vii	No	Multiple States	Multiple Districts	2	75000000	75000000	-	No	NTPC Foundation	CSR00013044
15	Women empowerment by providing Aparel Madeups & Home furnishing Skill Training & livelihood generation Programme	iii	Yes	Uttar Pradesh	Lucknow	2	1400000	1400000	-	No	NTPC Foundation	CSR00013044
							552690904	**552690904**				

** Districts: Baghpat, Varanasi, Ghazipur, Noida, Ambedkar Nagar, Raebareli, Sonebhadra, Auraiya, Kanpur Dehat, Jalaun, Sultanpur, Mirzapur, Bulendshahr, Barabanki, Sitapur, Chanduali, Mau, Lalitpur and Jhansi)

8. (c) Details of CSR amount spent against ongoing projects for the financial year:

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Sl. No.	Name of the Project	From the list of activities in Schedule VII to the ACT	Local area (Yes/No)	Location of the Project (State & District)	Amount spent for the project (in ₹ Crore)	Mode of implementation – Direct / Implementing Agency	
1.	Eradicating Hunger and Poverty, Health Care and Sanitation	(i)	CSR initiatives during the Financial Year 2022-23 have been taken up on PAN India basis around NTPC operations primarily in 22 states & UT mentioned below: Andhra Pradesh, Assam Bihar, Chhattisgarh, Delhi, Gujarat, Haryana, Himachal Pradesh, Jharkhand, J&K, Karnataka, Kerala, Ladakh, Madhya Pradesh, Maharashtra, Mizoram, Odisha, Rajasthan, Telangana, Uttar Pradesh, Uttarakhand, West Bengal		90.76	Through Implementing / Contracting Agency/NTPC Foundation/ Trusts/ societies	
2.	Education and Skill Development	(ii)			25.14		
3	Empowerment of Women and other Economically Backward Sections	(iii)			5.35		
4	Environmental Sustainability	(iv)			38.14		
5	Art & Culture	(v)			1.90		
6	Sports	(vii)			2.80		
7.	PMCARES Fund	(viii)			80.00		
8	Rural Development	(x)			15.76		
9.	Disaster management, including relief, rehabilitation, and reconstruction activities	(xii)			0.20		
	Total				**260.05**		

Note: The detailed table is provided in Annexure-I

8. (d) Amount spent in Administrative Overheads : NIL

8. (e) Amount spent on Impact Assessment, if applicable : NA

8. (f) Total amount spent for the Financial Year (8b+8c+8d+8e) : ₹ 315.32 Crore

8. (g) Excess amount for set off, if any : ₹ 5.32 Crore

Sl. No.	Particular	Amount (in ₹)/crore
(i)	Two percent of average net profit of the company as per Section 135 (5)	310.00
(ii)	Total amount spent for the Financial Year	315.32
(iii)	Excess amount spent for the financial year p(ii)-(i)	5.32
(iv)	Surplus arising out of the CSR projects or programmes or activities of the previous financial years, if any	NIL
(v)	Amount available for set off in succeeding financial years [(iii)- (iv)]	5.32

9. (a) Details of Unspent CSR amount for the preceding three financial years: NIL

9. (b) Details of CSR amount spent in the financial year for ongoing projects of the preceding financial year(s):

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Sl. No.	Project ID	Name of the Project	Financial Year in which The Project was Commenced	Project Duration	Total amount allocated for the project (in ₹)	Amount spent on the project in the reporting Financial Year (in ₹)	Cumulative amount spent at the end of reporting Financial Year. (in ₹)	Status of the project - Completed/ Ongoing.
1.	CR-2017.1001.HNS.INF.19	Construction & Equipment for 3rd Floor and diagnostic lab at National Cancer Institute, Nagpur	2017-18	6	500000000	30000000	449400000	Ongoing
2.	CR-2017.1005.EDN.INF.64	Infrastructure facilities at Sewa Kunj Ashram	2017-18	5	165100000	4647031	100927234	Ongoing

(1) Sl. No.	(2) Project ID	(3) Name of the Project	(4) Financial Year in which The Project was Commenced	(5) Project Duration	(6) Total amount allocated for the project (in ₹)	(7) Amount spent on the project in the reporting Financial Year (in ₹)	(8) Cumulative amount spent at the end of reporting Financial Year. (in ₹)	(9) Status of the project - Completed/ Ongoing.
3.	CR-2018.1001.HNS.INF.15	Setting up burn Unit at AIIMS Patna	2018-19	6	185050000	56700000	121500000	Ongoing
4.	CR-2018.1001.SPT.OTH.15	Support to AAI for Archery Sports	2018-19	6	137500000	21000000	76500000	Ongoing
5.	CR-2018.1001.HNS.INF.16	Setting up of Burn Unit at AIIMS Bhubaneshwar	2018-19	5	198700000	10157400	183157400	Ongoing
6.	CR-2018.1003.HNS.OTH.61	Revival of MSW Plant at Varanasi, Karsada	2018-19	7	714223000	144920554	459508445	Ongoing
7.	CR-2018.1001.INF.REG.28	Installation of Energy Efficient Pumps at various districts	2018-19	4	400000000	9520000	278280000	Ongoing
8.	CR-2018.1001.HNS.INF.17	Setting up Burn Unit at KGMU Lucknow	2018-19	5	112850000	6738180	44660926	Ongoing
9.	CR-2019.1001.OTH.CAL.19	Redevelopment of Kedarnath town	2019-20	3	250000000	150000000	225000000	Ongoing
10.	CR-2020.1034.INF.OTH.61	Development, renovation, and advancement project of GHSS Munderi, Kannur	2020-21	3	25000000	1957200	24457200	Ongoing
11.	CR-2021.1001.INF.OTH.17	Financial assistance towards Badrinath	2021-22	3	56200000	28100000	28100000	Ongoing

10. In case of creation or acquisition of capital asset, furnish the details relating to the asset so created or acquired through CSR spent in the financial year (asset-wise details).

(a) Date of creation or acquisition of the capital asset(s). : Nil

(b) Amount of CSR spent for creation or acquisition of capital asset : Nil

(c) Details of the entity or public authority or beneficiary under whose name such capital asset is registered, their address etc. : Not Applicable

(d) Provide details of the capital asset(s) created or acquired (including complete address and location of the capital asset). : Not Applicable

11. Specify the reason(s), if the company has failed to spend the two percent of the average net profit as per section 135(5) : Not Applicable

By spending ₹ 315.32 Crore during the financial year, the company has surpassed the prescribed two percent amount of ₹ 310.00 crore thus achieving a CSR spent of 2.03%.

SD/- (Chief Executive Officer or Managing Director or Director) Gurdeep Singh	SD/- (Chairman CSR Committee) D. K. Patel	Not Applicable (Person specified under clause (d) of sub-section (1) of section 380 of the Act)

Place : New Delhi
Date : 29th July, 2023

Details of CSR amount spent against other than ongoing projects for the financial year

(1) Sl. No.	(2) Name of the Project	(3) Item from the list of activities in Schedule VII to the Act.	(4) Local area (Yes/ No)	(5) Location of the project.		(6) Amount spent for the project (in ₹)	(7) Mode of Implementation - Direct (Yes/No)	(8) Mode of Implementation - Through Implementing Agency	
				State	District.			Name	CSR Registration number
1	Plantation and Maintenance of 40000 sapl	iv	Yes	Andhra Pradesh	Anakapalle	29321475	Yes	NA	NA
2	Bio Diversity conservation	iv	Yes	Andhra Pradesh	Anakapalle	22000000	Yes	NA	NA
3	Const of School Toilets	i	Yes	Andhra Pradesh	Anakapalle	10442002	Yes	NA	NA
4	infra - Repair of bathrooms/ toilets of	ii	Yes	Andhra Pradesh	Anakapalle	3821650	Yes	NA	NA
5	Providing Yoga Training and Self Defence	ii	Yes	Andhra Pradesh	Anakapalle	3518447	Yes	NA	NA
6	Providing Potable Drinking Water	i	Yes	Andhra Pradesh	Anakapalle	3055525	Yes	NA	NA
7	Const of toilets & oth infra at communit	i	Yes	Andhra Pradesh	Anakapalle	2650000	No	Executive Engineer, PRI	CSR00031393
8	Repair & Maintenance of toilets SVA	i	Yes	Andhra Pradesh	Anakapalle	2578252	Yes	NA	NA
9	Making primary health care accessible	i	Yes	Andhra Pradesh	Anakapalle	2560600	No	HELPAGE INDIA	CSR00000901
10	Providing Solar LED Street Lights	x	Yes	Andhra Pradesh	Anakapalle	2289218	Yes	NA	NA
11	Vocational training to youth, women.	iii	Yes	Andhra Pradesh	Anakapalle	1989540	Yes	NA	NA
12	Community Shed for storage fishing nets	x	Yes	Andhra Pradesh	Anakapalle	1530000	No	Executive Engineer, PRI	CSR00031393
13	Augmenting and strengthening rural infra	x	Yes	Andhra Pradesh	Anakapalle	1501375	No	Executive Engineer, PRI	CSR00031393
14	Piped Water Supply System in nearby vill	i	Yes	Andhra Pradesh	Anakapalle	1500000	No	Executive Engineer, PRI	CSR00031393
15	Construction/Repair of Drains	i	Yes	Andhra Pradesh	Anakapalle	1432056	Yes	NA	NA
16	Organising Health camps / Specialized	i	Yes	Andhra Pradesh	Anakapalle	1040347	No	SANKAR FOUNDATION	CSR00006331
17	Construction of community Toilets with a	i	Yes	Andhra Pradesh	Anakapalle	1036200	Yes	NA	NA
18	Maint of public toilets	i	Yes	Andhra Pradesh	Anakapalle	855339	Yes	NA	NA
19	Const of community hall	x	Yes	Andhra Pradesh	Anakapalle	850000	No	Executive Engineer, PRI	CSR00031393
20	Providing open gym/ gym eqp in villages	i	Yes	Andhra Pradesh	Anakapalle	834450	Yes	NA	NA
21	Construction of Dining Hall in ZPHS	ii	Yes	Andhra Pradesh	Anakapalle	760220	Yes	NA	NA
22	Payment to WELCOMHOTEL IPSCPSU Volleybal	iv	Yes	Andhra Pradesh	Anakapalle	654192	Yes	NA	NA
23	construction Toilets in Govt. School/ Jr	ii	Yes	Andhra Pradesh	Anakapalle	641900	Yes	NA	NA
24	Promoting rural art and culture	v	Yes	Andhra Pradesh	Anakapalle	543500	Yes	NA	NA
25	Project Vidya for providing education	ii	Yes	Andhra Pradesh	Anakapalle	527026	No	RURAL DEVELOPMENT SERVIC	CSR00040320
26	Organising Health camps / Specialized	i	Yes	Andhra Pradesh	Anakapalle	320000	No	HELPAGE INDIA	CSR00000901
27	Providing coaching competitive exams	ii	Yes	Andhra Pradesh	Anakapalle	309000	Yes	NA	NA
28	DOCUMENTATION & COMMUNICATION	x	Yes	Andhra Pradesh	Anakapalle	305227	Yes	NA	NA

(1)	(2)	(3)	(4)	(5)		(6)	(7)	(8)	
Sl. No.	Name of the Project	Item from the list of activities in Schedule VII to the Act.	Local area (Yes/No)	Location of the project.		Amount spent for the project (in ₹)	Mode of Implementation - Direct (Yes/No)	Mode of Implementation - Through Implementing Agency	
				State	District.			Name	CSR Registration number
29	Plantation Through DFO (Govt.Org)	iv	Yes	Assam	Kokrajhar	4601774	Yes	NA	NA
30	CSR project at Nagaland through IDAN	i	No	Nagaland	Tuensang	4047000	Yes	NA	NA
31	Const of SchoolToilets	i	Yes	Assam	Kokrajhar	918000	Yes	NA	NA
32	R&M of Toilets Under SVA.	i	Yes	Bihar	Aurangabad	49924485	Yes	NA	NA
33	R&M of Toilets Under SVA.	i	No	Bihar	Banka	42301177	Yes	NA	NA
34	R&M of Toilets Under SVA.	i	No	Bihar	Bhojpur	33352858	Yes	NA	NA
35	R&M of Toilets Under SVA.	i	No	Bihar	Khagaria	30766874	Yes	NA	NA
36	R&M of Toilets Under SVA.	i	Yes	Bihar	Bhagalpur	29967694	Yes	NA	NA
37	R&M of Toilets Under SVA.	ii	No	Bihar	Multiple Districts	19535527	Yes	NA	NA
38	R&M of Toilet Under SVA-ER-I HQ	i	No	Bihar	Saran	16580828	Yes	NA	NA
39	Maintenance work of assets created under	x	Yes	Bihar	Bhagalpur	12207278	Yes	NA	NA
40	R&M of Toilets Under SVA.	i	Yes	Bihar	Patna	7630563	Yes	NA	NA
41	Centralised Oxygen pipeline arrangement	i	Yes	Bihar	Aurangabad	7400000	Yes	NA	NA
42	R&M of Toilets Under SVA.	i	No	Bihar	Multiple Districts	6880576	Yes	NA	NA
43	Const of School Toilets	i	No	Bihar	Multiple Districts	5631479	Yes	NA	NA
44	R&M of Toilets Under SVA.	i	No	Bihar	Buxar	5081783	Yes	NA	NA
45	Bio Diversity conservation	iv	Yes	Bihar	Bhagalpur	4525598	Yes	NA	NA
46	Construction of RCC, PCC & bitumin road	x	Yes	Bihar	Bhagalpur	4369977	Yes	NA	NA
47	Construction/ repair of Roads	x	Yes	Bihar	Bhagalpur	3723293	Yes	NA	NA
48	MOBILE HEALTH CLINICS	i	Yes	Bihar	Bhagalpur	3513831	Yes	NA	NA
49	Others	iv	Yes	Bihar	Bhagalpur	3409263	Yes	NA	NA
50	High Mast Light in Collectorate Chhath	x	Yes	Bihar	Patna	2620707	Yes	NA	NA
51	beautification & re-development of Ramna	x	No	Bihar	Bhojpur	2531124	Yes	NA	NA
52	Inst-Missing part of Gym Equipmt-Bhojpur	x	Yes	Bihar	Aurangabad	2301110	Yes	NA	NA
53	Inaugural ceremony of CSR projects-MOP	x	Yes	Bihar	Patna	2295319	Yes	NA	NA
54	Cataract operation, snake bite anti-veno	i	Yes	Bihar	Bhagalpur	2220441	Yes	NA	NA
55	Conducting health camps in nearby villag	i	Yes	Bihar	Bhagalpur	2074792	Yes	NA	NA
56	Distribution of blankets to old aged	i	Yes	Bihar	Bhagalpur	1399500	Yes	NA	NA
57	Repair and Maintenance of assets created	x	Yes	Bihar	Bhagalpur	1373567	Yes	NA	NA
58	DSR HORTICULTURE ITEM	iv	Yes	Bihar	Begusarai	1295237	Yes	NA	NA
59	Mid Day Meal and other facilities Vidya	ii	Yes	Bihar	Bhagalpur	1273610	Yes	NA	NA
60	3rd party audit of toilets const und SVA	i	Yes	Bihar	Patna	1230625	Yes	NA	NA

(1) Sl. No.	(2) Name of the Project	(3) Item from the list of activities in Schedule VII to the Act.	(4) Local area (Yes/ No)	(5) Location of the project.		(6) Amount spent for the project (in ₹)	(7) Mode of Implementation - Direct (Yes/No)	(8) Mode of Implementation - Through Implementing Agency	
				State	District.			Name	CSR Registration number
61	Construction Ghat Stairs, oth infra	x	Yes	Bihar	Bhagalpur	1211863	Yes	NA	NA
62	Inaugural ceremony of CSR projects MOP	x	Yes	Bihar	Patna	912275	Yes	NA	NA
63	Mediacal camps in villages/schools	i	Yes	Bihar	Bhagalpur	851000	Yes	NA	NA
64	Promoting Rural Art and Culture	v	Yes	Bihar	Bhagalpur	697031	Yes	NA	NA
65	Community Development Expenses	x	Yes	Bihar	Muzaffarpur	589072	Yes	NA	NA
66	National Flags "Har Ghar Tiranga" campai	v	Yes	Bihar	Bhagalpur	500000	Yes	NA	NA
67	Construction of Toilets	i	Yes	Bihar	Bhagalpur	448441	Yes	NA	NA
68	Providing lab equipment, teaching aids	ii	Yes	Bihar	Bhagalpur	430650	Yes	NA	NA
69	IMPROVING LEARNING LEVELS IN SCHOOLS	ii	Yes	Bihar	Bhagalpur	420700	Yes	NA	NA
70	Support for rural and national sports	vii	Yes	Bihar	Bhagalpur	398788	Yes	NA	NA
71	Cleaning of drains at Kahalgaon	i	Yes	Bihar	Bhagalpur	344028	Yes	NA	NA
72	High light mast at pandit deen dayal upa	x	Yes	Bihar	Aurangabad	343982	Yes	NA	NA
73	Distribution of ration kits, tarpaulins,	i	Yes	Bihar	Bhagalpur	295247	Yes	NA	NA
74	Tree Plantation by MIYAWAKI Method	iv	Yes	Chhattisgarh	Bilaspur	64192912	Yes	NA	NA
75	R&M of Toilets Under SVA.	i	Yes	Chhattisgarh	Raigarh	56028188	Yes	NA	NA
76	Tree Plantation along MGR Track	iv	Yes	Chhattisgarh	Bilaspur	42231762	Yes	NA	NA
77	R&M of Toilets Under SVA.	i	Yes	Chhattisgarh	Korba	26113741	Yes	NA	NA
78	Bio Diversity conservation	iv	Yes	Chhattisgarh	Korba	14031361	Yes	NA	NA
79	Infrastructure & initiatives education	ii	Yes	Chhattisgarh	Bilaspur	8046394	Yes	NA	NA
80	Infra -Govt English Medium Model College	ii	Yes	Chhattisgarh	Raipur	7200000	Yes	NA	NA
81	Tree Plantation (50000 nos) FY 2021-22,	iv	Yes	Chhattisgarh	Korba	6153731	Yes	NA	NA
82	Construction & Maintenance rural roads	x	Yes	Chhattisgarh	Bilaspur	5254451	Yes	NA	NA
83	Tree Plantation in goverment Land	iv	Yes	Chhattisgarh	Korba	5242000	Yes	NA	NA
84	Scientific Temperament Development Prog	ii	Yes	Chhattisgarh	Bilaspur	5145247	Yes	NA	NA
85	Rural Electrification work	x	Yes	Chhattisgarh	Raipur	5000000	Yes	NA	NA
86	MOBILE HEALTH CLINICS	i	Yes	Chhattisgarh	Korba	4466396	Yes	NA	NA
87	MOBILE HEALTH CLINICS	i	Yes	Chhattisgarh	Bilaspur	4394612	Yes	NA	NA
88	Solar Powered 2 No's Water ATM along wit	i	Yes	Chhattisgarh	Bilaspur	3416931	Yes	NA	NA
89	Construction of Community Hall at Jamnip	x	Yes	Chhattisgarh	Korba	3414213	Yes	NA	NA
90	Integerated Livestock Development Center	iv	Yes	Chhattisgarh	Bilaspur	2550000	Yes	NA	NA

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				State	District.			Name	CSR Registration number
91	Setting of Disaster Management control	xii	Yes	Chhattisgarh	Bilaspur	2500000	Yes	NA	NA
92	IMPROVING LEARNING LEVELS IN SCHOOLS	ii	Yes	Chhattisgarh	Bilaspur	2242659	Yes	NA	NA
93	Support for rural and national sports	vii	Yes	Chhattisgarh	Korba	2175237	Yes	NA	NA
94	Constru of rural roads	x	Yes	Chhattisgarh	Bilaspur	2138202	Yes	NA	NA
95	Promoting "Aadivasi Nritya Mahotsav-2022	v	Yes	Chhattisgarh	Raipur	2000000	Yes	NA	NA
96	Augmentation of educational infrastructu	ii	Yes	Chhattisgarh	Bilaspur	1700000	Yes	NA	NA
97	Repair & Maintenance of toilets SVA	i	Yes	Chhattisgarh	Bilaspur	1690619	Yes	NA	NA
98	Promotion of State level foot ball train	vii	Yes	Chhattisgarh	Bilaspur	1504105	Yes	NA	NA
99	Energy Manag&Promot of Renewable Energy	iv	Yes	Chhattisgarh	Korba	1499812	Yes	NA	NA
100	ConstrPublic Toilet Heritage Site Ratanp	i	Yes	Chhattisgarh	Bilaspur	1356952	Yes	NA	NA
101	Drinking Water Through tankers	i	Yes	Chhattisgarh	Korba	1351958	Yes	NA	NA
102	Support for educational Backward Tribe	ii	Yes	Chhattisgarh	Korba	1351105	Yes	NA	NA
103	Installation of Solar Plant	x	Yes	Chhattisgarh	Bilaspur	1246366	Yes	NA	NA
104	NTPC Jal Jyoti Mission in nearby target	i	Yes	Chhattisgarh	Bilaspur	1198312	Yes	NA	NA
105	Promoting rural art and culture - rural	v	Yes	Chhattisgarh	Bilaspur	1008812	Yes	NA	NA
106	construction boundary wall Krishna Kunj	x	Yes	Chhattisgarh	Korba	1000000	Yes	NA	NA
107	National Flags "Har Ghar Tiranga" campai	v	Yes	Chhattisgarh	Korba	1000000	Yes	NA	NA
108	provid potable drinking water to communi	i	Yes	Chhattisgarh	Korba	900455	Yes	NA	NA
109	Add. Fund for Setting up of ITI Baloda	ii	Yes	Chhattisgarh	Bilaspur	806799	Yes	NA	NA
110	Add. Fund for Setting up of ITI Baloda	iii	Yes	Chhattisgarh	Bilaspur	806799	Yes	NA	NA
111	Support for rural and national sports	vii	Yes	Chhattisgarh	Bilaspur	769483	Yes	NA	NA
112	organizing Pali Mahotsav 2023	v	Yes	Chhattisgarh	Korba	750000	Yes	NA	NA
113	Vocational training to youth to make the	ii	Yes	Chhattisgarh	Korba	738975	No	CEDMAP RTC BILASPUR	CSR00014988
114	Vocational training to youth to make the	iii	Yes	Chhattisgarh	Korba	738975	No	CEDMAP RTC BILASPUR	CSR00014988
115	Promotion of State level foot ball train	vii	Yes	Chhattisgarh	Bilaspur	733368	No	CHHATTISGARH FOOTBALL ASSOCIATION	CSR00018175
116	Vocational Training Programs	ii	Yes	Chhattisgarh	Bilaspur	730960	Yes	NA	NA
117	Vocational Training Programs	iii	Yes	Chhattisgarh	Bilaspur	730960	Yes	NA	NA
118	Const of School Toilets	i	Yes	Chhattisgarh	Bilaspur	693158	Yes	NA	NA
119	Vocational Training including Computer c	ii	Yes	Chhattisgarh	Bilaspur	662510	Yes	NA	NA
120	Vocational Training including Computer c	iii	Yes	Chhattisgarh	Bilaspur	662510	Yes	NA	NA
121	Deepening/ beautification etc of pond	iv	Yes	Chhattisgarh	Korba	596795	Yes	NA	NA

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				State	District.			Name	CSR Registration number
122	Provid skill development trg to youth	ii	Yes	Chhattisgarh	Korba	572400	No	CIPET	CSR00008481
123	Provid skill development trg to youth	iii	Yes	Chhattisgarh	Korba	572400	No	CIPET	CSR00008481
124	Assistance to students of Baiga Tribe	ii	Yes	Chhattisgarh	Bilaspur	510000	Yes	NA	NA
125	NEED ASSESSMENT SURVEYS	x	Yes	Chhattisgarh	Bilaspur	486308	Yes	NA	NA
126	Support for URS program 2022 in Village	v	Yes	Chhattisgarh	Bilaspur	466613	Yes	NA	NA
127	NEED ASSESSMENT SURVEYS	x	Yes	Chhattisgarh	Korba	460200	Yes	NA	NA
128	PROVIDING CLOTH MASKS TO PREVENT SPREAD	i	Yes	Chhattisgarh	Bilaspur	459237	Yes	NA	NA
129	Making primary healthcare accessible	i	Yes	Chhattisgarh	Korba	403590	Yes	NA	NA
130	Repair and maintenances of Assets Create	x	Yes	Chhattisgarh	Bilaspur	361079	Yes	NA	NA
131	Provid skill development trg to youth	ii	Yes	Chhattisgarh	Korba	267347	Yes	NA	NA
132	Provid skill development trg to youth	iii	Yes	Chhattisgarh	Korba	267347	Yes	NA	NA
133	Trf to CSR-GAD-School (Badarpur)	ii	Yes	Delhi	New Delhi	64811134	Yes	NA	NA
134	Sup for TeleRecording Room AIIMS Delhi	i	No	Delhi	Central Delhi	20000000	Yes	NA	NA
135	Repair & Maintenance of toilets SVA	i	No	Gujarat	Multiple Districts	4996927	Yes	NA	NA
136	Augmenting educational infrastructure	ii	Yes	Gujarat	Bharuch	4394227	Yes	NA	NA
137	Installation of LED street lights	x	Yes	Gujarat	Surat	3585397	Yes	NA	NA
138	Providing outreach service	i	Yes	Gujarat	Surat	3487526	Yes	NA	NA
139	Construction of Toilets in Schools	ii	Yes	Gujarat	Bharuch	2842411	Yes	NA	NA
140	Cost of Miyawaki plantation at Smriti	iv	Yes	Gujarat	Surat	2640000	Yes	NA	NA
141	Improving Learning levels in Govt school	ii	Yes	Gujarat	Bharuch	1884633	Yes	NA	NA
142	Construction of Protection wall Shindhot	x	Yes	Gujarat	Bharuch	1764244	Yes	NA	NA
143	0-Year- Current Year 2016-17	iv	Yes	Gujarat	Bharuch	1687947	Yes	NA	NA
144	Repair & Maintenance of toilets SVA	i	No	Gujarat	Rajkot	1052963	Yes	NA	NA
145	Improvement of learning levels	ii	Yes	Gujarat	Surat	859999	Yes	NA	NA
146	COMMUNITY TOILETS	i	Yes	Gujarat	Bharuch	825988	Yes	NA	NA
147	Providing school uniforms to Govt School	ii	Yes	Gujarat	Surat	659569	Yes	NA	NA
148	provid potable drinking water to communi	i	Yes	Gujarat	Surat	636366	Yes	NA	NA

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				State	District.			Name	CSR Registration number
149	Repair & Maintenance of toilets SVA	i	Yes	Gujarat	Surat	632011	Yes	NA	NA
150	Cost of Plantation & Maint. Year 2022-23	iv	Yes	Gujarat	Surat	556042	Yes	NA	NA
151	Improving Learning levels in Govt school	ii	Yes	Gujarat	Surat	553114	Yes	NA	NA
152	Support for Govt. Mid-day-meal system	ii	Yes	Gujarat	Surat	534382	Yes	NA	NA
153	0th year Bharthana	iv	Yes	Gujarat	Bharuch	517850	Yes	NA	NA
154	Installation of Borewells in prim school	i	Yes	Gujarat	Bharuch	507400	Yes	NA	NA
155	0th YEAR MANGLESHWER II YEAR 2021-22	iv	Yes	Gujarat	Bharuch	481826	Yes	NA	NA
156	Providing over the ground water tank	i	Yes	Gujarat	Surat	460960	Yes	NA	NA
157	0th Year Dharamshala village	iv	Yes	Gujarat	Bharuch	428979	Yes	NA	NA
158	MOBILE HEALTH CLINICS	i	Yes	Gujarat	Surat	388898	Yes	NA	NA
159	0th Year Mangleshwer 2020 21	iv	Yes	Gujarat	Bharuch	296497	Yes	NA	NA
160	DOCUMENTATION & COMMUNICATION	x	Yes	Gujarat	Surat	293653	Yes	NA	NA
161	Conducting health cmps in villages	i	Yes	Haryana	Faridabad	3337307	Yes	NA	NA
162	Rejuvenation of Pond at village Tigaon	i	Yes	Haryana	Faridabad	2194798	Yes	NA	NA
163	financial aid to Bisnouli Sarvodaya Gram	i	Yes	Haryana	Faridabad	2110800	Yes	NA	NA
164	Sup to BSJSS-Jan Arogyam Pgr in Nuh Dist	i	No	Haryana	Nuh	1908800	Yes	NA	NA
165	Vocational Training Courses	ii	Yes	Haryana	Faridabad	941383	Yes	NA	NA
166	Vocational Training Courses	iii	Yes	Haryana	Faridabad	941383	Yes	NA	NA
167	Installation of Water Coolers & Purifier	ii	Yes	Haryana	Faridabad	451810	Yes	NA	NA
168	Const/ reno for school Infrastructure	ii	Yes	Haryana	Faridabad	330000	Yes	NA	NA
169	Medical Health Camps in Govt. Schools	i	Yes	Haryana	Faridabad	290863	Yes	NA	NA
170	Muscular dystrophy centre	i	Yes	Himachal Pradesh	Bilaspur	7053015	Yes	NA	NA
171	Augmenting and strengthening rural infra	x	Yes	Himachal Pradesh	Bilaspur	2461546	Yes	NA	NA
172	Mobile Clinic Van for DMCH Ludhiana	i	Yes	Himachal Pradesh	Bilaspur	1750000	No	DAYANAND MEDICAL COLLEGE	CSR00000453
173	R&M of Toilets Under SVA.	i	No	Himachal Pradesh	Mandi	990000	Yes	NA	NA
174	Support for rural and national sports	vii	Yes	Himachal Pradesh	Bilaspur	955910	Yes	NA	NA
175	MMU to Manav Sewa trust	i	Yes	Himachal Pradesh	Bilaspur	642248	No	MANAV SEWA TRUST	CSR00048705
176	Organising medical camps	i	Yes	Himachal Pradesh	Bilaspur	593847	Yes	NA	NA
177	Promoting Rural Art and Culture	v	Yes	Himachal Pradesh	Bilaspur	526367	Yes	NA	NA
178	Works of Auditorium at imdrc solan	i	Yes	Himachal Pradesh	Bilaspur	493464	Yes	NA	NA

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179	Distribution of Note books/Bags/statione	ii	Yes	Himachal Pradesh	Bilaspur	342687	Yes	NA	NA
180	R&M of Toilets Under SVA.	i	Yes	Jharkhand	Godda	40697537	Yes	NA	NA
181	R&M of Toilets Under SVA.	i	Yes	Jharkhand	Hazaribagh	14615284	Yes	NA	NA
182	R&M of Toilets Under SVA.	i	Yes	Jharkhand	Sahibganj	3951559	Yes	NA	NA
183	R&M of Toilets Under SVA.	i	Yes	Jharkhand	Chatra	3412864	Yes	NA	NA
184	Skill Development courses from CIPET	ii	Yes	Jharkhand	Ranchi	3319680	Yes	NA	NA
185	Skill Development courses from CIPET	iii	Yes	Jharkhand	Ranchi	3319680	Yes	NA	NA
186	Blanket: Woolen: Double-Standard	i	Yes	Jharkhand	Ranchi	1209600	Yes	NA	NA
187	Distribution of relief packets	i	Yes	Jharkhand	Sahibganj	1067499	Yes	NA	NA
188	Const of School Toilets	i	Yes	Jharkhand	Hazaribagh	1045014	Yes	NA	NA
189	Exp Oxygen Gen Plt- Covid Cnt Nr karanpur	i	Yes	Jharkhand	Chatra	862260	Yes	NA	NA
190	sports-Jharkhand Chess Festival	vii	Yes	Jharkhand	Ranchi	847600	Yes	NA	NA
191	RURAL SPORTS	vii	Yes	Jharkhand	Sahibganj	549836	Yes	NA	NA
192	Promoting Rural Art and Culture	v	Yes	Jharkhand	Sahibganj	299100	Yes	NA	NA
193	capacity building of SHGs	ii	Yes	Jharkhand	Sahibganj	286920	Yes	NA	NA
194	capacity building of SHGs	iii	Yes	Jharkhand	Sahibganj	286920	Yes	NA	NA
195	const of wall, gate-godda dist	ii	Yes	Jharkhand	Godda	266077	Yes	NA	NA
196	Raisng Monsoon Plntn during FY2022-23	iv	Yes	karnataka	Vijayapura	29894125	Yes	NA	NA
197	BEE State Level Painting Competition	ii	No	kerala	Multiple Districts	1566182	Yes	NA	NA
198	BEE State Level Painting Competition A&N	ii	No	kerala	Multiple Districts	834808	Yes	NA	NA
199	Solar street lights to 5 panchayats	x	Yes	kerala	Alappuzha	428430	Yes	NA	NA
200	Providing misc items near annathpur sola	i	Yes	kerala	Alappuzha	297779	Yes	NA	NA
201	R&M of Toilets Under SVA.	i	Yes	Madhya Pradesh	Singrauli	21443703	Yes	NA	NA
202	R&M of Toilets Under SVA Barethi	i	No	Madhya Pradesh	Chhatarpur	8925978	Yes	NA	NA
203	R&M of Toilets Under SVA Barethi	i	No	Madhya Pradesh	Tikamgarh	6619875	Yes	NA	NA
204	Support to RMA-Digital classroom-Gwalior	ii	No	Madhya Pradesh	Gwalior	5000000	Yes	NA	NA
205	Tree Plantation at VSTPS -Yr 2021-25	iv	Yes	Madhya Pradesh	Singrauli	4985400	Yes	NA	NA
206	Providing furniture in Govt. schools	ii	Yes	Madhya Pradesh	Singrauli	2567320	Yes	NA	NA
207	SSL AND SHML in Satna-II	x	Yes	Madhya Pradesh	Narsinghpur	2538180	Yes	NA	NA
208	MOBILE HEALTH CLINICS	i	Yes	Madhya Pradesh	Singrauli	2300936	Yes	NA	NA
209	PLANTATION WORK for year 2018-19	iv	Yes	Madhya Pradesh	Khargone	2251026	Yes	NA	NA
210	IMPROVING LEARNING LEVELS IN SCHOOLS	ii	Yes	Madhya Pradesh	Singrauli	2204368	Yes	NA	NA

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				State	District.			Name	CSR Registration number
211	Tree Plantation	iv	Yes	Madhya Pradesh	Singrauli	2113900	Yes	NA	NA
212	support to District Education Proj Udaan	ii	Yes	Madhya Pradesh	Singrauli	2109050	Yes	NA	NA
213	Miiyawaki Plantation L1	iv	Yes	Madhya Pradesh	Khargone	1918624	Yes	NA	NA
214	R&M of Sulabh Comm Toilets in villages	i	Yes	Madhya Pradesh	Singrauli	1777248	No	Sulabh International Society	CSR00000185
215	Augmenting and strengthening basic infra	x	Yes	Madhya Pradesh	Singrauli	1647699	Yes	NA	NA
216	Installation and O&M of water ATMs/ RO P	i	Yes	Madhya Pradesh	Singrauli	1612497	Yes	NA	NA
217	Support for rural and national sports	vii	Yes	Madhya Pradesh	Singrauli	1599985	Yes	NA	NA
218	Support for Organizing Singrauli Mahasto	v	Yes	Madhya Pradesh	Singrauli	1500000	Yes	NA	NA
219	Support for operation of Blood Bank	i	Yes	Madhya Pradesh	Singrauli	1300000	Yes	NA	NA
220	NEED ASSESSMENT SURVEYS	x	Yes	Madhya Pradesh	Singrauli	1169484	Yes	NA	NA
221	Renovation of Pond at Mauhaar	iv	Yes	Madhya Pradesh	Singrauli	1145133	Yes	NA	NA
222	Tree Plantation Outside Plant Township	iv	Yes	Madhya Pradesh	Singrauli	1108200	Yes	NA	NA
223	Others	iv	Yes	Madhya Pradesh	Singrauli	1097400	Yes	NA	NA
224	Financial support for Suhasini School	ii	Yes	Madhya Pradesh	Singrauli	1085020	No	Navodaya Mission Trust	CSR00027926
225	OTHER CSR ACTIVITIES	x	Yes	Madhya Pradesh	Singrauli	1012540	Yes	NA	NA
226	Support to BBSLN for Dev. of school	ii	No	Madhya Pradesh	Narmadapuram	993000	No	Bhau Saheb Bhuskute Smriti Lok Nyas Trust	
227	Asst to Oldage Homes	x	Yes	Madhya Pradesh	Singrauli	947686	Yes	NA	NA
228	Installation Hand Pumps nearby villages	i	Yes	Madhya Pradesh	Singrauli	888893	Yes	NA	NA
229	Tree Plantation for the year 2020	iv	Yes	Madhya Pradesh	Singrauli	816000	Yes	NA	NA
230	Conducting health camps in villages	i	Yes	Madhya Pradesh	Singrauli	796018	Yes	NA	NA
231	Consultancy for Biodiversity Mapping	iv	Yes	Madhya Pradesh	Singrauli	767000	Yes	NA	NA
232	Ist Yr Plantn & Maint. work in 2019-20	iv	Yes	Madhya Pradesh	Khargone	698924	Yes	NA	NA
233	Supply of Pure Drinking Water thr tanker	i	Yes	Madhya Pradesh	Singrauli	698622	Yes	NA	NA
234	Provid skill development trg to youths	ii	Yes	Madhya Pradesh	Singrauli	678500	No	CEDMAP RTC BILASPUR	CSR00014988
235	Provid skill development trg to youths	iii	Yes	Madhya Pradesh	Singrauli	678500	No	CEDMAP RTC BILASPUR	CSR00014988
236	Operation of Blood Bank	i	Yes	Madhya Pradesh	Singrauli	666285	Yes	NA	NA
237	Construction/ Renovation/ Services of Su	i	Yes	Madhya Pradesh	Singrauli	549220	No	Sulabh International Society	CSR00000185
238	PLANTATION WORK at OMKAR PARVAT	iv	Yes	Madhya Pradesh	Khargone	487836	Yes	NA	NA

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				State	District.			Name	CSR Registration number
239	MORTURY VANS PURCHASED UNDER CSR PLAN	i	Yes	Madhya Pradesh	Singrauli	455160	Yes	NA	NA
240	Cultural events Career Counselling	ii	Yes	Madhya Pradesh	Singrauli	434750	Yes	NA	NA
241	Conducting Health camps	i	Yes	Madhya Pradesh	Singrauli	433700	Yes	NA	NA
242	Const of School Toilets	i	Yes	Madhya Pradesh	Singrauli	413849	Yes	NA	NA
243	Tree Plantation at VSTPS for Yr 2020-25	iv	Yes	Madhya Pradesh	Singrauli	400300	Yes	NA	NA
244	Capacity Building / Communication	x	Yes	Madhya Pradesh	Singrauli	370177	Yes	NA	NA
245	Mainstreaming of physically challenged	i	Yes	Madhya Pradesh	Singrauli	367522	Yes	NA	NA
246	Creating awareness about sanitation	i	Yes	Madhya Pradesh	Singrauli	311760	Yes	NA	NA
247	Personality Development for rural studen	ii	Yes	Madhya Pradesh	Singrauli	294687	Yes	NA	NA
248	blankets distributed among needy people	i	Yes	Madhya Pradesh	Singrauli	291900	Yes	NA	NA
249	Community Development Expenses	x	Yes	Madhya Pradesh	Khargone	288296	Yes	NA	NA
250	"Har Ghar Tiranga" campaign	v	Yes	Madhya Pradesh	Singrauli	288000	Yes	NA	NA
251	Awareness creation on Women Safety	iii	Yes	Madhya Pradesh	Singrauli	282677	Yes	NA	NA
252	Preparatory work for plantation	iv	Yes	Maharashtra	Solapur	8908576	Yes	NA	NA
253	Plantation of 50000 trees 21-22	iv	Yes	Maharashtra	Solapur	7498872	Yes	NA	NA
254	Water Management	iv	Yes	Maharashtra	Solapur	6632189	Yes	NA	NA
255	Plantation of 50000 trees 20-21	iv	Yes	Maharashtra	Solapur	3549635	Yes	NA	NA
256	Support to TATA Memorial Hospital Mumbai	i	Yes	Maharashtra	Mumbai	3360000	No	TATA MEMORIAL HOSPITAL	CSR00001287
257	Sustainable Livelihoods - NIRMAN	ii	Yes	Maharashtra	Mumbai	1983000	No	NIRMAN BAHUUDHESHIYA	
SAN	CSR00001988								
258	Sustainable Livelihoods - NIRMAN	iii	Yes	Maharashtra	Mumbai	1983000	No	NIRMAN BAHUUDHESHIYA	
SAN	CSR00001988								
259	CSR Support to Balaji Hospital Mumbai	i	Yes	Maharashtra	Mumbai	1888280	Yes	NA	NA
260	construction of shade for cattle	iv	Yes	Maharashtra	Mumbai	1279139	Yes	NA	NA
261	Support to Swami Vivekanand Bahuuddeshiy	i	Yes	Maharashtra	Mumbai	672000	No	Swami Vivekanand Bahudde	CSR00008995
262	Sustainable livelihood generation SHGs	iii	Yes	Maharashtra	Nagpur	664300	Yes	NA	NA
263	restoration electricity TAUKTAE" cyclone	xii	Yes	Maharashtra	Mumbai	474928	Yes	NA	NA
264	Need Assessment Survey for Kawas	x	Yes	Maharashtra	Mumbai	430842	Yes	NA	NA
265	construction of shade for cattle	iv	Yes	Maharashtra	Mumbai	419730	No	Samatol Foundation	CSR00020639
266	prov 2 nos buses to football club aizwal	vii	No	Mizoram	Aizawl	400000	No	Aizawl Football Club	CSR00016246

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				State	District.			Name	CSR Registration number
267	SUPT. TO PM-CARE FUND FOR COVID 2022-23	viii	No	Multiple States	Multiple Districts	800000000	Yes	NA	NA
268	Providing skill training to 25000 youths	ii	No	Multiple States	Multiple Districts	22500000	No	National Skill Development Fund	CSR00005903
269	Providing skill training to 25000 youths	iii	No	Multiple States	Multiple Districts	22500000	No	National Skill Development Fund	CSR00005903
270	Directly Observed Treatment	i	No	Multiple States	Multiple Districts	7765688	No	NTPC FOUNDATION	CSR00013044
271	DISABILITY REHABILITATION CENTERS	i	No	Multiple States	Multiple Districts	7371206	No	NTPC FOUNDATION	CSR00013044
272	Disability Rehabilitation Center	i	No	Multiple States	Multiple Districts	915613	No	NTPC FOUNDATION	CSR00013044
273	Utkarsh Scholarship	ii	No	Multiple States	Multiple Districts	265000	No	NTPC FOUNDATION	CSR00013044
274	R&M of Toilets Under SVA.	i	Yes	Odisha	Angul	47801443	Yes	NA	NA
275	R&M of Toilets Under SVA.	i	Yes	Odisha	Sundergarh	41304881	Yes	NA	NA
276	Implementation of Piped Water Scheme	i	Yes	Odisha	Angul	24200000	Yes	NA	NA
277	Support to DM MO School Abhyaan	ii	Yes	Odisha	Angul	7400000	No	MO SCHOOL ABHIYAN PARICH	CSR00009574
278	Augmenting and strengthening rural infra	x	Yes	Odisha	Angul	6756128	Yes	NA	NA
279	Plantation	iv	Yes	Odisha	Angul	6677152	Yes	NA	NA
280	Supp to LVPEI for cons. Of opn room	i	Yes	Odisha	Bubaneshwar	6000000	No	HYDERABAD EYE INSTITUTE	CSR00001698
281	MOBILE HEALTH CLINICS	i	Yes	Odisha	Angul	4608383	Yes	NA	NA
282	Construction of toilets under ODF	i	Yes	Odisha	Angul	3401095	Yes	NA	NA
283	Construction & repair of roads in nearby	x	Yes	Odisha	Angul	3210015	Yes	NA	NA
284	Mobile Health Services for ER-II	i	Yes	Odisha	Bubaneshwar	2297187	Yes	NA	NA
285	Support for rural and national sports	vii	Yes	Odisha	Angul	2141415	Yes	NA	NA
286	Cultural programmes/ meets	v	Yes	Odisha	Angul	2040439	Yes	NA	NA
287	exposure training sustainable livestock	ii	Yes	Odisha	Angul	1852800	No	CIPET	CSR00008481
288	exposure training sustainable livestock	iii	Yes	Odisha	Angul	1852800	No	CIPET	CSR00008481
289	Ash Bricks for development works	x	Yes	Odisha	Angul	1835969	Yes	NA	NA
290	Construction of additional class room,to	ii	Yes	Odisha	Angul	1754485	Yes	NA	NA
291	R&M of Toilets Under SVA Gajmara.	i	No	Odisha	Khurda	1753021	Yes	NA	NA
292	Augmenting and strengthening educational	ii	Yes	Odisha	Angul	1719921	Yes	NA	NA
293	R&M of Toilets Under SVA Gajmara.	i	No	Odisha	cuttack	1712814	Yes	NA	NA
294	Infrastructure Development for education	ii	Yes	Odisha	Angul	1649780	Yes	NA	NA
295	Educational exposure training	ii	Yes	Odisha	Angul	1433700	Yes	NA	NA

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				State	District.			Name	CSR Registration number
296	const Road safety training centre hall	x	Yes	Odisha	Angul	1095877	Yes	NA	NA
297	Const/ repairs of roads in villages	x	Yes	Odisha	Angul	1016510	Yes	NA	NA
298	Financial support fo ₹ 10 lacs	v	Yes	Odisha	Angul	1000000	Yes	NA	NA
299	Mainstreaming of specially abled persons	i	Yes	Odisha	Angul	977011	Yes	NA	NA
300	RURAL SPORTS	vii	Yes	Odisha	Angul	975748	Yes	NA	NA
301	NEED ASSESSMENT SURVEYS	x	Yes	Odisha	Angul	964107	Yes	NA	NA
302	Construction of Toilets under Open De	i	Yes	Odisha	Angul	853532	No	Sulabh International Society	CSR00000185
303	Social Infrastructure viz.,Solar lights	x	Yes	Odisha	Angul	833701	Yes	NA	NA
304	Drinking Water Bottles for Rath Yatra	i	No	Odisha	Puri	799872	Yes	NA	NA
305	Infra Dev in Community Health Centre & P	i	Yes	Odisha	Angul	776729	Yes	NA	NA
306	Procur 8000 RAT kits	i	Yes	Odisha	Angul	767000	Yes	NA	NA
307	Toilet for boys and girls in schools	ii	Yes	Odisha	Angul	722898	Yes	NA	NA
308	Construction of Toilets under Open De	i	Yes	Odisha	Angul	711789	Yes	NA	NA
309	Installation of solar street lights	x	Yes	Odisha	Angul	698880	Yes	NA	NA
310	Cleaning of Anand Bazar area	i	Yes	Odisha	Angul	693786	Yes	NA	NA
311	deploying Mobile Health Clinic with MCH	i	Yes	Odisha	Angul	657685	Yes	NA	NA
312	Introducing Rashtriya Avishkar Abhiyan	ii	Yes	Odisha	Angul	567500	Yes	NA	NA
313	construction of boundary wall at Takua	x	Yes	Odisha	Angul	564374	Yes	NA	NA
314	Construction of Boundry wall and Room in	x	Yes	Odisha	Angul	486137	Yes	NA	NA
315	National Flags "Har Ghar Tiranga" campai	v	Yes	Odisha	Angul	475000	Yes	NA	NA
316	DOCUMENTATION & COMMUNICATION	x	Yes	Odisha	Angul	411680	Yes	NA	NA
317	Block Plantation & Avenue-PRE-GST	iv	Yes	Odisha	Angul	398712	Yes	NA	NA
318	Distribution of Educational Aids/equip	ii	Yes	Odisha	Angul	385606	Yes	NA	NA
319	Reno of ponds in villages	iv	Yes	Odisha	Angul	358845	Yes	NA	NA
320	Energy Manag&Promot of Renewable Energy	iv	Yes	Odisha	Angul	349440	Yes	NA	NA
321	Supply of Piped drinking water scheme sc	i	Yes	Odisha	Angul	324158	Yes	NA	NA
322	promoting learning by doing activities i	ii	Yes	Odisha	Angul	320000	Yes	NA	NA
323	Const & Renovation of School Buildings &	ii	Yes	Odisha	Angul	308996	Yes	NA	NA
324	Supply of water through tankers	i	Yes	Odisha	Angul	296180	Yes	NA	NA
325	Cleaning of Ponds	iv	Yes	Odisha	Sundergarh	287944	Yes	NA	NA
326	Skill Development of youths	ii	Yes	Odisha	Angul	262186	Yes	NA	NA

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				State	District.			Name	CSR Registration number
327	Skill Development of youths	iii	Yes	Odisha	Angul	262186	Yes	NA	NA
328	Repair & Maintenance of toilets SVA	i	No	Rajasthan	Multiple Districts	7821537	Yes	NA	NA
329	SOCIAL IMPACT EVALUATION SURVEY	x	Yes	Rajasthan	Baran	1256138	Yes	NA	NA
330	Making primary healthcare accessible	i	Yes	Rajasthan	Baran	904163	Yes	NA	NA
331	Support for rural and national sports	vii	Yes	Rajasthan	Baran	714689	Yes	NA	NA
332	Providing basic educational supplies	ii	Yes	Rajasthan	Baran	504588	Yes	NA	NA
333	provid potable drinking water to communi	i	Yes	Rajasthan	Baran	431105	Yes	NA	NA
334	R&M of assembly hall at Govt School	ii	Yes	Rajasthan	Baran	427062	Yes	NA	NA
335	Constr of additional toilet in Govtschoo	ii	Yes	Rajasthan	Baran	310695	Yes	NA	NA
336	Others	iv	Yes	Telangana	Peddapally	33368489	Yes	NA	NA
337	R&M of Toilets Under SVA.	i	No	Telangana	Karimnagar	12300165	Yes	NA	NA
338	Const/ ren of school infra	ii	Yes	Telangana	Peddapally	4375000	Yes	NA	NA
339	R&M of Toilets Under SVA.	i	No	Telangana	Warangal	3688337	Yes	NA	NA
340	Distribution of Bicycles	ii	Yes	Telangana	Peddapally	2528002	Yes	NA	NA
341	Procurement of Cots/ Mattress/Bedsheet	ii	Yes	Telangana	Peddapally	2079012	Yes	NA	NA
342	Providing vocational training to youth	ii	Yes	Telangana	Peddapally	2070558	Yes	NA	NA
343	Providing vocational training to youth	iii	Yes	Telangana	Peddapally	2070558	Yes	NA	NA
344	Providing Note books to Govt. Schools	ii	Yes	Telangana	Peddapally	1592288	Yes	NA	NA
345	Educational infrastructure KGBV, Kundanp	ii	Yes	Telangana	Peddapally	1515468	Yes	NA	NA
346	Distribution of Aids and Appliances	i	Yes	Telangana	Peddapally	1499063	Yes	NA	NA
347	Capacity building of farmers	ii	Yes	Telangana	Peddapally	1395954	Yes	NA	NA
348	Capacity building of farmers	iii	Yes	Telangana	Peddapally	1395954	Yes	NA	NA
349	Const of additional classrooms	ii	Yes	Telangana	Peddapally	1385161	Yes	NA	NA
350	Installation of solar street lights	x	Yes	Telangana	Peddapally	1161888	Yes	NA	NA
351	R&M of Toilets Under SVA.	i	No	Telangana	Nalgonda	1070117	Yes	NA	NA
352	MOBILE HEALTH CLINICS	i	Yes	Telangana	Peddapally	1027801	Yes	NA	NA
353	Support for adolescent girls skill devel	iii	Yes	Telangana	Hyderabad	861392	Yes	NA	NA
354	Support for rural and national sports	vii	Yes	Telangana	Peddapally	763760	Yes	NA	NA
355	Integrated livestock management: Improvi	ii	Yes	Telangana	Peddapally	757500	Yes	NA	NA
356	Integrated livestock management: Improvi	iii	Yes	Telangana	Peddapally	757500	Yes	NA	NA
357	State Level Painting Competition-BEE	ii	No	Telangana	Multiple Districts	698274	Yes	NA	NA

(1)	(2)	(3)	(4)	(5)		(6)	(7)	(8)	
Sl. No.	Name of the Project	Item from the list of activities in Schedule VII to the Act.	Local area (Yes/ No)	Location of the project.		Amount spent for the project (in ₹)	Mode of Implementation - Direct (Yes/No)	Mode of Implementation - Through Implementing Agency	
				State	District.			Name	CSR Registration number
358	Capacity Building Workshop on CSR, ESG	x	Yes	Telangana	Hyderabad	617584	Yes	NA	NA
359	DOCUMENTATION & COMMUNICATION	x	Yes	Telangana	Peddapally	588840	Yes	NA	NA
360	Community centers/ Shed/ grave etc.	x	Yes	Telangana	Peddapally	569823	Yes	NA	NA
361	Promoting Rural Art and Culture	v	Yes	Telangana	Peddapally	408521	Yes	NA	NA
362	PROVIDING CLOTH MASKS TO PREVENT SPREAD	i	Yes	Telangana	Hyderabad	388850	Yes	NA	NA
363	IMPROVING LEARNING LEVELS IN SCHOOLS	ii	Yes	Telangana	Peddapally	353660	Yes	NA	NA
364	National Flags "Har Ghar Tiranga" campai	v	Yes	Telangana	Peddapally	340000	Yes	NA	NA
365	PAINTING COMPETITION FOR STUDENTS	ii	Yes	Telangana	Hyderabad	300650	Yes	NA	NA
366	Providing Blankets to Old-Aged and Needy	i	Yes	Telangana	Hyderabad	296400	Yes	NA	NA
367	Inauguration for readiness of ZPHS Girls	iii	Yes	Telangana	Peddapally	296173	Yes	NA	NA
368	Funding suport for payment toIIFM Bhopal	iv	Yes	Uttar Pradesh	Gautam Buddh Nagar	20993855	Yes	NA	NA
369	Others(Tree Planation-Revised)	iv	Yes	Uttar Pradesh	Gautam Buddh Nagar	10790417	Yes	NA	NA
370	Installation of solar street lights	x	Yes	Uttar Pradesh	Ambedkar Nagar	9979716	Yes	NA	CSR00023463
371	Construction of roads in nearby villages	x	Yes	Uttar Pradesh	Gautam Buddh Nagar	8530705	Yes	NA	NA
372	Providing Piped Drinking Water to Pancha	i	Yes	Uttar Pradesh	Raebareli	8410680	Yes	NA	NA
373	Construction of Library building, Toilet	i	Yes	Uttar Pradesh	Gautam Buddh Nagar	6473251	Yes	NA	NA
374	Providing roof top solar PV panel distri	x	Yes	Uttar Pradesh	Gautam Buddh Nagar	6164898	Yes	NA	NA
375	Constr. of shed & seating arrang. at Sha	x	Yes	Uttar Pradesh	Gautam Buddh Nagar	4501990	Yes	NA	NA
376	Dev of play ground in villages	vii	Yes	Uttar Pradesh	Gautam Buddh Nagar	4447689	Yes	NA	NA
377	MOBILE HEALTH CLINICS	i	Yes	Uttar Pradesh	Ambedkar Nagar	3939194	Yes	NA	NA
378	IMPROVING LEARNING LEVELS IN SCHOOLS	ii	Yes	Uttar Pradesh	Sonbhadra	3597641	Yes	NA	NA
379	IMPROVING LEARNING LEVELS IN SCHOOLS	ii	Yes	Uttar Pradesh	Raebareli	3457841	Yes	NA	NA
380	MOBILE HEALTH CLINICS-MP	i	Yes	Uttar Pradesh	Sonbhadra	3455865	Yes	NA	NA
381	MOBILE HEALTH CLINICS-UP	i	Yes	Uttar Pradesh	Sonbhadra	3455865	Yes	NA	NA
382	Integrated water supply with overhead ta	i	Yes	Uttar Pradesh	Auraiya	3425252	Yes	NA	NA
383	EXP.FOR COVID HOSPITAL-YUGANTAR-BADARPUR	i	Yes	Uttar Pradesh	Gautam Buddh Nagar	3413204	Yes	NA	NA
384	Arrangements for Janjati Utsav 2023	v	Yes	Uttar Pradesh	Sonbhadra	3227004	Yes	NA	NA
385	Solar Tree& Solar CarPort Material Suply	iv	Yes	Uttar Pradesh	Gautam Buddh Nagar	3153471	Yes	NA	NA
386	Bio Diversity conservation	iv	Yes	Uttar Pradesh	Sonbhadra	3140700	Yes	NA	NA

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				State	District.			Name	CSR Registration number
387	Installation and O&M of Drinking Water f	i	Yes	Uttar Pradesh	Raebareli	3080468	Yes	NA	NA
388	MOBILE HEALTH CLINICS	i	Yes	Uttar Pradesh	Sonbhadra	2907994	Yes	NA	NA
389	Renovation of Panchwati Park, lucknow	x	Yes	Uttar Pradesh	Lucknow	2868222	Yes	NA	NA
390	Providing Int & Indian bows for Chapki	vii	Yes	Uttar Pradesh	Sonbhadra	2861740	Yes	NA	NA
391	Build, deepen and rejuvenate ponds	i	Yes	Uttar Pradesh	Gautam Buddh Nagar	2817895	Yes	NA	NA
392	Construction of class room and toilets	ii	Yes	Uttar Pradesh	Gautam Buddh Nagar	2800462	Yes	NA	NA
393	Development of play ground	vii	Yes	Uttar Pradesh	Gautam Buddh Nagar	2780417	Yes	NA	NA
394	Afforestation for the FY 2022-23 along w	iv	Yes	Uttar Pradesh	Sonbhadra	2696686	Yes	NA	NA
395	Fee & Expense related to SD Reporting	iv	Yes	Uttar Pradesh	Gautam Buddh Nagar	2432751	Yes	NA	NA
396	Construction of Toilets in Panchayat in	i	Yes	Uttar Pradesh	Raebareli	2330763	Yes	NA	NA
397	Infrastructure for CHC Dadri	i	Yes	Uttar Pradesh	Gautam Buddh Nagar	2274493	Yes	NA	NA
398	CONSTRUCTION/ REPAIR OF ROAD	x	Yes	Uttar Pradesh	Gautam Buddh Nagar	2202682	Yes	NA	NA
399	Const & Ren of school/ agganwadi infrast	ii	Yes	Uttar Pradesh	Gautam Buddh Nagar	2015254	Yes	NA	NA
400	Providing various assets in schools	ii	Yes	Uttar Pradesh	Ambedkar Nagar	1985649	Yes	NA	NA
401	Afforestation for the FY 2021-22 along w	iv	Yes	Uttar Pradesh	Sonbhadra	1980163	Yes	NA	NA
402	Wiring of collector building	x	Yes	Uttar Pradesh	Gautam Buddh Nagar	1965132	Yes	NA	NA
403	Support for operation of Blood Bank	i	Yes	Uttar Pradesh	Sonbhadra	1896144	Yes	NA	NA
404	Construction of Marriage Hall/ Place wit	x	Yes	Uttar Pradesh	Sonbhadra	1891147	Yes	NA	NA
405	provid potable drinking water to communi	i	Yes	Uttar Pradesh	Ambedkar Nagar	1806880	Yes	NA	NA
406	Outreach service Mobile Health clinic	i	Yes	Uttar Pradesh	Raebareli	1797438	Yes	NA	NA
407	17500 nos. of tree plantation - Miyawaki	iv	Yes	Uttar Pradesh	Sonbhadra	1736875	Yes	NA	NA
408	construction of school rooms	ii	Yes	Uttar Pradesh	Auraiya	1692127	Yes	NA	NA
409	Installation of solar street lights	x	Yes	Uttar Pradesh	Raebareli	1613644	Yes	NA	NA
410	MOBILE HEALTH CLINICS	i	Yes	Uttar Pradesh	Raebareli	1564387	Yes	NA	NA
411	Construction of Road works in villages.	x	Yes	Uttar Pradesh	Sonbhadra	1537415	Yes	NA	NA
412	Providing vocational training to youth	ii	Yes	Uttar Pradesh	Gautam Buddh Nagar	1508157	Yes	NA	NA
413	Providing vocational training to youth	iii	Yes	Uttar Pradesh	Gautam Buddh Nagar	1508157	Yes	NA	NA
414	Activity for Maternal and Child Health	i	Yes	Uttar Pradesh	Ambedkar Nagar	1466349	Yes	NA	NA
415	IMPROVING LEARNING LEVELS IN SCHOOLS	ii	Yes	Uttar Pradesh	Auraiya	1451661	Yes	NA	NA
416	Improving Learning Level for students	ii	Yes	Uttar Pradesh	Gautam Buddh Nagar	1444077	Yes	NA	NA

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				State	District.			Name	CSR Registration number
417	Construction of community center at vill	x	Yes	Uttar Pradesh	Gautam Buddh Nagar	1292856	Yes	NA	NA
418	financial assist District Admin Raebaire	x	Yes	Uttar Pradesh	Raebareli	1268550	Yes	NA	NA
419	Build, deepen and rejuvenate village wel	i	Yes	Uttar Pradesh	Sonbhadra	1202500	Yes	NA	NA
420	Setting up of Atal Tinkering Lab (ATL)	ii	Yes	Uttar Pradesh	Sonbhadra	1178115	Yes	NA	NA
421	50 Led solar lights in Shravasti	x	No	Uttar Pradesh	Shrawasti	1159200	Yes	NA	NA
422	Conducting health camps in villages	i	Yes	Uttar Pradesh	Auraiya	1136752	Yes	NA	NA
423	Provid skill development trg to youth	ii	Yes	Uttar Pradesh	Sonbhadra	1113373	Yes	NA	NA
424	Provid skill development trg to youth	iii	Yes	Uttar Pradesh	Sonbhadra	1113373	Yes	NA	NA
425	CSR Nodal Officer's Workshop at Varanasi	ii	No	Uttar Pradesh	Varanasi	1109051	Yes	NA	NA
426	CSR Nodal Officer's Workshop at Varanasi	iii	No	Uttar Pradesh	Varanasi	1109051	Yes	NA	NA
427	Bio Diversity conservation	iv	Yes	Uttar Pradesh	Ambedkar Nagar	1080147	Yes	NA	NA
428	Monitoring of Afforestation Programme	iv	Yes	Uttar Pradesh	Gautam Buddh Nagar	1030365	Yes	NA	NA
429	Health Camp & Mega Health Camp	i	Yes	Uttar Pradesh	Sonbhadra	1008751	Yes	NA	NA
430	Rain Water Harvesing Scheme at NCPS Dadr	iv	Yes	Uttar Pradesh	Gautam Buddh Nagar	1008554	Yes	NA	NA
431	IMPROVING LEARNING LEVELS IN SCHOOLS	ii	Yes	Uttar Pradesh	Ambedkar Nagar	1002500	Yes	NA	NA
432	water sypply through tanker in villages	i	Yes	Uttar Pradesh	Sonbhadra	963600	Yes	NA	NA
433	Annual membership fees for UNGC 2022	iv	Yes	Uttar Pradesh	Gautam Buddh Nagar	952732	Yes	NA	NA
434	Providing various assets in govt schools	ii	Yes	Uttar Pradesh	Ambedkar Nagar	931129	Yes	NA	NA
435	Making primary health care accessible	i	Yes	Uttar Pradesh	Gautam Buddh Nagar	901344	Yes	NA	NA
436	DOCUMENTATION & COMMUNICATION	x	Yes	Uttar Pradesh	Sonbhadra	895214	Yes	NA	NA
437	Construction of community toilet/ SBA	i	Yes	Uttar Pradesh	Auraiya	825556	Yes	NA	NA
438	Pest Control work in villages	i	Yes	Uttar Pradesh	Sonbhadra	817818	Yes	NA	NA
439	Eqp & aids to PCPs	i	Yes	Uttar Pradesh	Raebareli	775719	Yes	NA	NA
440	R&M of 06 nos. RO plants	i	Yes	Uttar Pradesh	Sonbhadra	747028	Yes	NA	NA
441	Activity for improving learning levels	ii	Yes	Uttar Pradesh	Sonbhadra	741183	Yes	NA	NA
442	blankets for distribution to PAVs	i	Yes	Uttar Pradesh	Auraiya	723187	Yes	NA	NA
443	Construction of Rooms/ Lab/ Library etc.	ii	Yes	Uttar Pradesh	Auraiya	696233	Yes	NA	NA
444	Drinking water supply by tanker in Parsa	i	Yes	Uttar Pradesh	Sonbhadra	650367	Yes	NA	NA
445	Bus facilities for Girls Students	ii	Yes	Uttar Pradesh	Sonbhadra	613886	Yes	NA	NA
446	Constr of community toilets in villages	i	No	Uttar Pradesh	Kanpur Dehat	612261	Yes	NA	NA

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				State	District.			Name	CSR Registration number
447	BEE National Level Painting Competition	ii	No	Uttar Pradesh	Multiple Districts	600481	Yes	NA	NA
448	Setting up of open gym in villages	i	Yes	Uttar Pradesh	Gautam Buddh Nagar	598945	Yes	NA	NA
449	Development of playgrounds	vii	Yes	Uttar Pradesh	Raebareli	594590	Yes	NA	NA
450	Making primary health care accessible	i	Yes	Uttar Pradesh	Ambedkar Nagar	592507	Yes	NA	NA
451	Construction of Roads in villages	x	Yes	Uttar Pradesh	Raebareli	585802	Yes	NA	NA
452	National Flags "Har Ghar Tiranga" campai	v	Yes	Uttar Pradesh	Ambedkar Nagar	575000	Yes	NA	NA
453	R&M of assets created	x	Yes	Uttar Pradesh	Raebareli	561819	Yes	NA	NA
454	RCC Roads in nearby villages	x	Yes	Uttar Pradesh	Sonbhadra	553024	Yes	NA	NA
455	Construction of CC Road Kota to Khadia	x	Yes	Uttar Pradesh	Sonbhadra	540683	Yes	NA	NA
456	Support for rural and national sports	vii	Yes	Uttar Pradesh	Ambedkar Nagar	523325	Yes	NA	NA
457	CSR Activitie E-voices Navodaya/Mahamana	x	Yes	Uttar Pradesh	Sonbhadra	515608	Yes	NA	NA
458	Support to ITI for raw material and tool	ii	Yes	Uttar Pradesh	Gautam Buddh Nagar	487799	Yes	NA	NA
459	Support to ITI for raw material and tool	iii	Yes	Uttar Pradesh	Gautam Buddh Nagar	487799	Yes	NA	NA
460	installation of hand pumps in PAVs	i	Yes	Uttar Pradesh	Auraiya	470516	Yes	NA	NA
461	Afforestation for the year 2020-21	iv	Yes	Uttar Pradesh	Sonbhadra	432285	Yes	NA	NA
462	Providing vocational training youth	ii	Yes	Uttar Pradesh	Raebareli	420927	Yes	NA	NA
463	Providing vocational training youth	iii	Yes	Uttar Pradesh	Raebareli	420927	Yes	NA	NA
464	E rickshaw/E- cart/E-bicycle:Purchase	iv	Yes	Uttar Pradesh	Sonbhadra	414750	Yes	NA	NA
465	DOCUMENTATION & COMMUNICATION	x	Yes	Uttar Pradesh	Ambedkar Nagar	400000	Yes	NA	NA
466	Maintenance of lawn at varanasi airport	x	No	Uttar Pradesh	Varanasi	389335	Yes	NA	NA
467	Mainstreaming of specially abled persons	i	Yes	Uttar Pradesh	Ambedkar Nagar	389059	Yes	NA	NA
468	Hi-tech community toilet	i	Yes	Uttar Pradesh	Raebareli	377569	Yes	NA	NA
469	Distribution of Edu Kits in anganwadi	ii	Yes	Uttar Pradesh	Sonbhadra	369921	Yes	NA	NA
470	Const ceiling & floor ITI Uncha Amipur	x	Yes	Uttar Pradesh	Gautam Buddh Nagar	367397	Yes	NA	NA
471	Making primary health care accessible	i	Yes	Uttar Pradesh	Sonbhadra	359765	Yes	NA	NA
472	Balance Tools & Machine for ITI	ii	Yes	Uttar Pradesh	Gautam Buddh Nagar	349200	Yes	NA	NA
473	Balance Tools & Machine for ITI	iii	Yes	Uttar Pradesh	Gautam Buddh Nagar	349200	Yes	NA	NA
474	BEE State Level Painting Competition	ii	No	Uttar Pradesh	Multiple Districts	345281	Yes	NA	NA
475	Improvement in learning level activity	ii	Yes	Uttar Pradesh	Ambedkar Nagar	332999	Yes	NA	NA
476	installation of hand pumps in villages	i	Yes	Uttar Pradesh	Auraiya	324254	Yes	NA	NA
477	providing items in Anganwaadi kendra	i	Yes	Uttar Pradesh	Sonbhadra	322214	Yes	NA	NA

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				State	District.			Name	CSR Registration number
478	Augmenting AND Strengthing basic infra	x	Yes	Uttar Pradesh	Raebareli	311600	Yes	NA	NA
479	Water supply through tanker	i	Yes	Uttar Pradesh	Sonbhadra	307450	Yes	NA	NA
480	DOCUMENTATION & COMMUNICATION	x	Yes	Uttar Pradesh	Gautam Buddh Nagar	295400	Yes	NA	NA
481	Conducting health camps in nearby villag	i	Yes	Uttar Pradesh	Sonbhadra	277920	Yes	NA	NA
482	Waste Management	iv	Yes	Uttar Pradesh	Raebareli	267388	Yes	NA	NA
483	SOCIAL IMPACT EVALUATION	x	Yes	Uttar Pradesh	Ambedkar Nagar	265179	Yes	NA	NA
484	R&M of Toilets Under SVA.	i	Yes	West Bengal	Murshidabad	28352107	Yes	NA	NA
485	R&M of Toilets Under SVA Katwa.	i	No	West Bengal	Purba Bardhaman	21328529	Yes	NA	NA
486	R&M of Toilets Under SVA.	i	No	West Bengal	Malda	13177041	Yes	NA	NA
487	construction of a new building for PHC	i	Yes	West Bengal	Murshidabad	10000000	Yes	NA	NA
488	electricity supply to Andua village	x	Yes	West Bengal	Murshidabad	5000000	Yes	NA	NA
489	Const of School Toilets	i	Yes	West Bengal	Murshidabad	4924222	Yes	NA	NA
490	Medical Camp -Eye Camp-Surgical Camp	i	Yes	West Bengal	Murshidabad	3629067	No	HELPAGE INDIA	CSR00000901
491	Inst of solar street/ high mast lights	x	Yes	West Bengal	Murshidabad	3302989	Yes	NA	NA
492	R&M of Toilets Under SVA.	i	No	West Bengal	Bankura	3134643	Yes	NA	NA
493	Running of MCH in Jharkhand	i	Yes	West Bengal	Murshidabad	2665505	Yes	NA	NA
494	Const of Sch Toilets-NSPCL Durgapur	ii	No	West Bengal	Burdwan	2531064	Yes	NA	NA
495	Imparting Knowledge on Fish Breeding	iv	Yes	West Bengal	Murshidabad	1865382	Yes	NA	NA
496	R&M of Toilets Under SVA Katwa.	i	No	West Bengal	Birbhum	1410161	Yes	NA	NA
497	Conducting Health camps	i	Yes	West Bengal	Murshidabad	1376911	Yes	NA	NA
498	Eqp & aids to PCPs	i	Yes	West Bengal	Murshidabad	1304999	Yes	NA	NA
499	Construction of Village Market and Ghat.	x	Yes	West Bengal	Murshidabad	576968	Yes	NA	NA
500	Pond related activity	iv	Yes	West Bengal	Murshidabad	436821	Yes	NA	NA
501	Skill Development of youths	ii	Yes	West Bengal	Murshidabad	415000	No	CIPET	CSR00008481
502	Skill Development of youths	iii	Yes	West Bengal	Murshidabad	415000	No	CIPET	CSR00008481
503	National Flags "Har Ghar Tiranga" campai	v	Yes	West Bengal	Murshidabad	364610	Yes	NA	NA
504	Distribution of utility kit and ration	i	Yes	West Bengal	Murshidabad	285976	Yes	NA	NA
	Grand Total					**2600549956**			

Project-wise ash produced and utilised

The quantity of ash produced, ash utilized and percentage of such utilization during 2022-23 from your Company Stations is as under:

Sl. No.	Projects	Ash Produced	Ash Utilization	% Utilization
	Lakh MTs	Lakh MTs	Lakh MTs	%
1.	BARAUNI	10.77	10.17	94.45
2.	BARH SUPER	32.56	52.46	161.13
3.	BONGAIGAON	10.25	5.77	56.31
4.	DADRI	22.90	22.90	100.02
5.	Gadarwara	19.59	14.30	73.01
6.	KANTI TPS	7.55	7.82	103.55
7.	Khargone	13.21	13.44	101.70
8.	Kudgi	22.26	17.76	79.79
9.	MOUDA	34.05	34.37	100.94
10.	NPGC NABINAGAR	25.75	19.97	77.58
11.	SIMHADRI	35.23	61.02	173.20
12.	SOLAPUR	13.40	14.90	111.20
13.	TANDA	26.01	30.65	117.86
14.	UNCHACHAR	20.19	20.86	103.30
15.	Darlipalli	39.18	10.25	26.15
16.	FARAKKA	25.22	52.09	206.52
17.	KAHALGAON	35.47	53.05	149.54
18.	KORBA	54.57	22.18	40.65
19.	Lara	36.04	13.71	38.03
20.	RAMAGUNDAM	43.25	40.63	93.94
21.	RIHAND	40.37	21.36	52.90
22.	SINGRAULI	30.09	12.07	40.11
23.	SIPAT	48.40	31.15	64.36
24.	TALCHER-KANIHA	64.84	32.31	49.83
25.	VINDHYACHAL	76.64	28.60	37.31
	Total	**787.80**	**643.79**	**81.72**

For and on behalf of the Board of Directors

Sd/-
(Gurdeep Singh)
Chairman & Managing Director

Place: New Delhi
Date: 29th July, 2023

Annexure - VIII to Directors' Report

Form No. AOC-2

(Pursuant to clause (h) of sub-section (3) of section 134 of the Act and Rule 8(2) of the Companies (Accounts) Rules, 2014

Form for disclosure of particulars of contracts/arrangements entered into by the company with related parties referred to in sub-section (1) of section 188 of the Companies Act, 2013 including certain arm's length transactions under third proviso thereto

1. Details of contracts or arrangements or transactions not at Arm's length basis.

SL. No.	Particulars	Details
a)	Name (s) of the related party & nature of relationship	Utility Powertech Limited (UPL) (a 50:50 Joint Venture between NTPC and Reliance Infrastructure Limited)
b)	Nature of contracts /arrangements / transaction	Your company is assigning Jobs on contract basis, for sundry works in Plants/Station/office of your company.
c)	Duration of the contracts /arrangements / transaction	Five years
d)	Salient terms of the contracts or arrangements or transaction including the value, if any	UPL inter-alia undertakes jobs such as overhauling, repair, refurbishment of various mechanical and electrical equipment of power stations.
e)	Justification for entering into such contracts or arrangements or transactions'	Your company has entered into Power station Maintenance Agreement with UPL from time to time. The rates are fixed on cost plus basis after mutual discussion and after taking into account the prevailing market conditions.
f)	Date of approval by the Board	27th March, 2021
g)	Amount paid as advances, if any	NA
h)	Date on which the special resolution was passed in General meeting as required under first proviso to section 188	NA

2. Details of contracts or arrangements or transactions at Arm's length basis

There was no material contract or arrangement or transaction at arm's length basis during the period under review

SL. No.	Particulars	Details
a)	Name (s) of the related party & nature of relationship	NA
b)	Nature of contracts/arrangements/transaction	NA
c)	Duration of the contracts/arrangements/transaction	NA
d)	Salient terms of the contracts or arrangements or transaction including the value, if any	NA
e)	Date of approval by the Board	NA
f)	Amount paid as advances, if any	NA

For and on behalf of the Board of Directors

Sd/-
(Gurdeep Singh)
Chairman & Managing Director

Place: New Delhi
Date: 29th July, 2023

Annexure - IX to Directors' Report

Business Responsibility & Sustainability Reporting Format

Section A: General Disclosures

I. Details of the listed entity

1.	Corporate Identity Number (CIN) of the Listed Entity:	L40101DL1975GOI007966
2.	Name of the Listed Entity:	NTPC LIMITED
3.	Year of incorporation:	1975
4.	Registered office address:	NTPC Bhawan, SCOPE Complex, 7, Institutional Area, Lodhi Road, New Delhit-110 003
5.	Corporate address:	NTPC Bhawan, SCOPE Complex, 7, Institutional Area, Lodhi Road, New Delhi-110 003
6.	E-mail:	csntpc@ntpc.co.in
7.	Telephone:	011-24367333
8.	Website:	https://www.ntpc.co.in/
9.	Financial year for which reporting is being done:	2022-23
10.	Name of the Stock Exchange(s) where shares are listed:	NSE and BSE
11.	Paid-up Capital:	₹9,696.67 Crore
12.	Name and contact details (telephone, email address) of the person who may be contacted in case of any queries on the BRSR report:	Shri Arun Kumar (Company Secretary & compliance officer). Phone: 011-24367431 Email: arunkumar10@ntpc.co.in
13.	Reporting boundary - Are the disclosures under this report made on a standalone basis (i.e. only for the entity) or on a consolidated basis (i.e. for the entity and all the entities which form a part of its consolidated financial statements, taken together):	Consolidated

II. Products/services

14. Details of business activities (accounting for 90% of the turnover):

S. No.	Description of Main Activity	Description of Business Activity	% of Turnover of the entity
1	Generation of Electricity	Power Generation	95.25%

15. Products/Services sold by the entity (accounting for 90% of the entity's Turnover):

S. No.	Product/Service	NIC Code	% of total Turnover contributed
1	Power Generation from - Coal	35102	85.91%
2	Power Generation from – Gas	35103	5.30%
3	Power Generation from – Hydro	35101	3.11%
4	Power Generation from – Solar	35105	0.85%
5	Power Generation from – Wind	35106	0.08%

III. Operations

16. Number of locations where plants and/or operations/offices of the entity are situated:

Location	Number of plants	Number of offices	Total
National	89	11	100
International	1	2	3

17. Markets served by the entity:

a. Number of locations

Locations	Number
National (No. of States)	28 States
International (No. of Countries)	2 Countries (Nepal and Bangladesh)

b. What is the contribution of exports as a percentage of the total turnover of the entity?

0.72%

c. A brief on types of customers:

NTPC supplies electricity to various bulk customers located throughout the country. Our customer's include:

- State-owned Electricity Utilities like State Electricity Distribution Companies, SEB Holding Companies, State Power Departments
- Indian Railways
- Private distribution companies in Delhi
- Bangladesh Power Development Board (BPDB) and
- Nepal Electricity Authority (NEA)

IV. Employees

18. Details as at the end of Financial Year:

a. Employees and workers (including differently abled):

S. No.	Particulars	Total (A)	Male		Female	
			No. (B)	% (B / A)	No. (C)	% (C / A)
			Employees			
1	Permanent (D)	12,997	12074	92.90%	923	7.10%
2	Other than Permanent Employees (E)	1,493	1,350	90.42%	143	9.58%
3	Total employees (D + E)	14,490	13,424	92.64%	1066	7.36%
			Workers			
4	Permanent (F)	7,255	6,549	90.27%	706	9.73%
5	Other than Permanent Workers (E)	1,13,355	1,11,457	98.33%	1,898	1.67%
6	Total workers (F + G)	1,20,610	1,18,006	97.84%	2,604	2.16%

b. Differently abled Employees and workers:

S. No.	Particulars	Total (A)	Male		Female	
			No. (B)	% (B / A)	No. (C)	% (C / A)
	Differently Abled Employees					
1	Permanent (D)	222	205	92.34%	17	7.66%
2	Other than Permanent (E)	9	9	100.00%	0	0.00%
3	Total differently abled employees (D + E)	231	214	92.64%	17	7.36%
	Differently Abled Workers					
4	Permanent (F)	344	296	86.05%	48	13.95%
5	Other than permanent (G)	0	0	0.00%	0	0.00%
6	Total differently bled workers (F + G)	344	296	86.05%	48	13.95%

19. Participation/Inclusion/Representation of women

Particulars	Total (A)	No. and percentage of Females	
		No. (B)	% (B / A)
Board of Directors	12	1	8.3%
Key Management Personnel	1	0	0%

20. Turnover rate for permanent employees and workers

(Disclose trends for the past 3 years)

	FY 2022-23 (Turnover rate in current FY)			FY 2021-22 (Turnover rate in previous FY)			FY 2020-21 (Turnover rate in the year prior to the previous FY)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Permanent Employees	7.59%	7.67%	6.44%	7.73%	5.48%	7.57%	0.35 %	1.04 %	0.39 %
Permanent Workers	8.82%	9.09%	6.41%	10%	4%	9%	0.13 %	0.00 %	0.12 %

V. Holding, Subsidiary and Associate Companies (including joint ventures)

21. (a) Names of holding / subsidiary / associate companies / joint ventures

S. No.	Name of the holding / subsidiary / associate companies / joint ventures (A)	Indicate whether holding/ Subsidiary/ Associate/ Joint Venture	% of shares held by listed entity	Does the entity indicated at column A, participate in the Business Responsibility initiatives of the listed entity? (Yes/No)
1	NGEL (NTPC Green Energy Ltd.)	Subsidiary	100%	YES
2	NEEPCO (North Eastern Electric Power Corporation Limited)	Subsidiary	100%	YES
3	NVVN (NTPC Vidyut Vyapar Nigam Limited)	Subsidiary	100%	YES

S. No.	Name of the holding / subsidiary / associate companies / joint ventures (A)	Indicate whether holding/ Subsidiary/ Associate/ Joint Venture	% of shares held by listed entity	Does the entity indicated at column A, participate in the Business Responsibility initiatives of the listed entity? (Yes/No)
4	NESCL (NTPC Electric Supply Company Limited)	Subsidiary	100%	YES
5	NML (NTPC Mining Limited)	Subsidiary	100%	YES
6	RGPPL (Ratnagiri Gas and Power Pvt. Ltd.)	Subsidiary	86.49%	YES
7	THDC India Ltd.	Subsidiary	74.496%	YES
8	PVUNL (Patratu Vidyut Utpadan Nigam Limited)	Subsidiary	74%	YES
9	NEWS (NTPC EDMC Waste Solutions Private Limited)	Subsidiary	74%	YES
10	BRBCL (Bhartiya Rail Bijlee Company Ltd.)	Subsidiary	74%	YES
11	NSPCL (NTPC-SAIL Power Co. Ltd.)	Joint Venture	50%	YES
12	NTECL (NTPC Tamil Nadu Energy Co. Ltd.)	Joint Venture	50%	YES
13	APCPL (Aravali Power Company Pvt. Ltd.)	Joint Venture	50%	YES
14	MUNPL (Meja Urja Nigam Pvt. Ltd.)	Joint Venture	50%	YES
15	UPL (Utility Powertech Ltd.)	Joint Venture	50%	YES
16	NGSL (NTPC GE Power Services Private Limited),	Joint Venture	50%	YES
17	NBPPL (NTPC-BHEL Power Projects Pvt. Limited)	Joint Venture	50%	YES
18	CNUPL (CIL NTPC Urja Private Limited	Joint Venture	50%	YES
19	Jhabua Power Limited	Joint Venture	50%	YES
20	Trincomalee Power Company Ltd	Joint Venture	50%	YES
21	Bangladesh-India Friendship Power Company Private Ltd.	Joint Venture	50%	YES
22	BF-NTPC (BF-NTPC Energy Systems Limited)	Joint Venture	49%	YES
23	ASHVINI (Anushakti Vidhyut Nigam Ltd.)	Joint Venture	49%	YES
24	TELK (Transformers and Electricals Kerala Limited)	Joint Venture	44.6%	YES
25	EESL (Energy Efficiency Services Ltd.)	Joint Venture	33.33%	YES
26	HURL (Hindustan Urvarak & Rasayan Limited	Joint Venture	33.33%	YES
27	NHPTL (National High Power Test Laboratory Pvt. Ltd.)	Joint Venture	20%	YES
28	ICVPL (International Coal Ventures Private Limited)	Joint Venture	0.11%	YES

VI. CSR Details

22. (i) Whether CSR is applicable as per section 135 of Companies Act, 2013: YES

(ii) Turnover (₹) 1,67,724.41 crore (NTPC Standalone)

(iii) Net worth (₹) 1,38,889.88 crore (NTPC standalone)

VII. Transparency and Disclosures Compliances

23. Complaints/Grievances on any of the principles (Principles 1 to 9) under the National Guidelines on Responsible Business Conduct:

Stakeholder group from whom complaint is received	Grievance Redressal Mechanism in Place (Yes/No)	FY 2022-23 Current Financial Year			FY 2021-22 Previous Financial Year		
	(If Yes, then provide web-link for grievance redress policy)	Number of complaints filed during the year	Number of complaints pending resolution at close of the year	Remarks	Number of complaints filed during the year	Number of complaints pending resolution at close of the year	Remarks
Communities	Yes	347	53		340	51	
Investors (other than shareholders)	Yes	621	0	Complaints relate to non-receipt, and revalidation of warrants. Some cases wrt transmission and transfer of securities were also put up. No issues were raised in case of privately placed Bonds.	1,090		Complaints relate to non-receipt, and revalidation of warrants. Some cases wrt transmission and transfer of securities were also put up. No issues were raised in case of privately placed Bonds.
Shareholders	Yes	1,011	0	Complaints relate to non-receipt of warrants, revalidation of warrants. Non receipt of annual Report, ECS intimation and other miscellaneous queries.	1,235	0	Complaints relate to non-receipt, and revalidation of warrants. Some cases wrt transmission and transfer of securities were also put up. No issues were raised in case of privately placed Bonds.

Stakeholder group from whom complaint is received	Grievance Redressal Mechanism in Place (Yes/No)	FY 2022-23 Current Financial Year			FY 2021-22 Previous Financial Year		
	(If Yes, then provide web-link for grievance redress policy)	Number of complaints filed during the year	Number of complaints pending resolution at close of the year	Remarks	Number of complaints filed during the year	Number of complaints pending resolution at close of the year	Remarks
Employees and workers	Yes	05	00	-	05	00	-
Customers	Yes	19	19	NA	18	18	NA
Value Chain Partners	Yes	0	0	NA	0	0	NA
Other (please specify)							

24. Overview of the entity's material responsible business conduct issues

Please indicate material responsible business conduct and sustainability issues pertaining to environmental and social matters that present a risk or an opportunity to your business, rationale for identifying the same, approach to adapt or mitigate the risk along-with its financial implications, as per the following format

S. No.	Material issue identified	Indicate whether risk or opportunity (R/O)	Rationale for identifying the risk / opportunity	In case of risk, approach to adapt or mitigate	Financial implications of the risk or opportunity (Indicate positive or negative implications)
1	Energy Transition	Opportunity	Increased focus on energy transition associated with climate change has opened many avenues for energy sector players. Influx of more variable renewable energy in the grid would require greater support of flexible operation of coal stations, energy storage and ancillary services.		Positive
2	Digitalization	Opportunity	The dynamic business landscape is being driven through Digitalization. In this highly competitive era, digitalization is enabling faster decision making, reducing costs through automation and rendering long term competitive advantage.		Positive
3	Climate Change	Risk	Climate change is posing both physical and transition risks to all business entities including NTPC. The risks associated with the increase in sea levels, water stress situations, increased heat waves, erratic rainfall and frequent natural disasters may impact the business. Rising climate change concerns and threats may bring future policy and regulatory risks in terms of carbon tax and cess.	As part of NTPC's preparedness against climate change related situations our power plants and infrastructure are designed to withstand cyclones and floods while our cooling systems are designed to withstand the increase in temperatures brought forth by climate change. To de-risk its business from transition risk, NTPC is making substantial progress towards decarbonization of energy through increasing penetration of renewables in its portfolio.	Negative

S. No.	Material issue identified	Indicate whether risk or opportunity (R/O)	Rationale for identifying the risk / opportunity	In case of risk, approach to adapt or mitigate	Financial implications of the risk or opportunity (Indicate positive or negative implications)
4	Water Security	Risk	Water is an essential resource for the NTPC, and hence water scarcity can significantly impact the operations of NTPC.	The proactive measures for water conservation include process improvements and technology adoption in all possible manners in line with our policy of Reduce, Reuse and Recycle (3Rs) for the water being consumed in its station and projects.	Negative
5	Fuel Security	Risk	It has become an area of concern owing to reduction in coal supplies and gradual increase in our fleet size.	NTPC is ensuring fuel security through long-term coal supply agreements. Production has started from captive mines i.e. Pakri-Barwadih, Dulanga, Talaipalli and Chatti-Bariatu. Production from these mines is being ramped up to enhance fuel security. Other Mines are in various stages of development. Further NTPC is also importing coal as per requirement and in alignment with guidelines issued by Government.	Negative
6	Safety or Hazard Risk	Risk	With a large workforce involved in both operating stations as well as projects under construction, safety of people and property remains a potential risk.	To embed safety in all systems and processes, Safety policy has been revised and "SAP integrated Safety Framework" has been implemented across the organization to mitigate risks and eliminate hazards.	Negative

Section B: Management and Process Disclosures

This section is aimed at helping businesses demonstrate the structures, policies and processes put in place towards adopting the NGRBC Principles and Core Elements.

Disclosure Questions	P1	P2	P3	P4	P5	P6	P7	P8	P9
Policy and management processes									
1. a. Whether your entity's policy/policies cover each principle and its core elements of the NGRBCs. (Yes/No)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b. Has the policy been approved by the Board? (Yes/No)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c. Web Link of the Policies, if available	Refer A, B, C, D, E, F, G & H	Refer I, J, K & L	M, N, O, P, I,	J, N, R, S,	N	J, K, L, T, U, V, W, X, Y	A, B, C, E	L, R, S	A, H, X
	All policies relevant to external stakeholders are available on NTPC's website Policies specific to principals are. A. CDA rules: B. Code of Conduct: C. ABAC policy: D. Fraud Prevention Policy: E. Related Party Transaction: F. Whistle Blower Policy: G. Training Policy for Directors: H. Complaint Handling Policy: I. Safety Policy: J. NTPC Policy for CSR: K. Ash Policy: L. Sustainable Supply Chain Policy: M. Placement and Transfer Policy: N. Human Rights Policy O. Equal Opportunity Policy P. Career development & Succession planning policy Q. Recruitment Policy R. R&R Policy S. ICD policy T. Environmental Policy U. Biodiversity Policy V. E-Waste Policy W. Water Policy X. Integrate Plastic Management Policy Y. Waste Management Policy Our policies are available at https://www.ntpc.co.in/sustainability/policies								
2. Whether the entity has translated the policy into procedures. (Yes / No)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3. Do the enlisted policies extend to your value chain partners? (Yes/No)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

	Disclosure Questions	P1	P2	P3	P4	P5	P6	P7	P8	P9
4.	Name of the national and international codes/certifications/labels/ standards (e.g. Forest Stewardship Council, Fairtrade, Rainforest Alliance, Trustea) standards (e.g. SA 8000, OHSAS, ISO, BIS) adopted by your entity and mapped to each principle.	SEBI LODR requirement	ISO 9001 OSHAS 18001	ISO 45001 OSHAS 18001	Schedule II part D SEBI regulation 2015	Companies Act 2013, Schedule II part D SEBI regulation 2015	ISO 14001, ISO 50001 OHSAS 18001	SEBI LODR requirement	Companies Act 2013	SDGs
5.	Specific commitments, goals and targets set by the entity with defined timelines, if any.	Zero cases of adverse business ethics	At NTPC we are trying to reduce our fatality rate to zero by 2032	At NTPC we are trying to reduce our fatality rate to zero by 2032		We are committed to ensuring No human rights violation throughout our supply chain	We are committed to reduce our Net energy intensity by 12% by 2032, as well as reduce our specific water consumption by 34% by 2032. We are also planning to plant 47 million tree sapling by 2032 from 2012 baseline			We are targeting to increase the Number of cumulative beneficiaries of our community development projects to 18 million people by 2023
6.	Performance of the entity against the specific commitments, goals and targets along-with reasons in case the same are not met.	9 adverse cases in FY 22-23	5 fatality reporter in FY 22-23	5 fatality reporter in FY 22-23			5% reductio in Net energy intensity; 29%; reduction in specific water consumption and 38 million trees planted			9 million people reached so far

Governance, leadership and oversight

7. Statement by director responsible for the business responsibility report, highlighting ESG related challenges, targets and achievements (listed entity has flexibility regarding the placement of this disclosure)

The statement of CMD can be found at the page no. 7 of our Intergated Annual Report 2022-23

8. Details of the highest authority responsible for implementation and oversight of the

Business Responsibility policy (ies).

DIN Number	00307037
Name	Gurdeep Singh
Designatino	Chairman & Managing director
Telephone No	011-24360044
Email ID	cmd@ntpc.co.in

9. Does the entity have a specified Committee of the Board/ Director responsible for decision making on sustainability related issues? (Yes / No). If yes, provide details.

Yes, We have CSR and Sustainability Development committee along with risk management committee. Also, Sustainability Vertical directly reports to Director (operations).

The detailed structure can be found at https://www.ntpc.co.in/sustainability/governance

10. Details of Review of NGRBCs by the Company:

Subject for Review	Indicate whether review was undertaken by Director / Committee of the Board/ Any other Committee									Frequency (Annually/ Half yearly/ Quarterly/ Any other – please specify)								
	P1	P2	P3	P4	P5	P6	P7	P8	P9	P1	P2	P3	P4	P5	P6	P7	P8	P9
Performance against Above policies and follow up action	Yes									Quaterly and as required.								
Compliance with statutory requirements of relevance to the principles, and, rectification of any non-compliances	Yes																	

	P 1	P 2	P 3	P 4	P5	P 6	P 7	P8	P 9
11. Has the entity carried out independent assessment/ evaluation of the working of its policies by an external agency? (Yes/No). If yes, provide name of the agency.	Yes, NTPC has undertaken Reasonable assurance of it Integrated Annual Report as per the GRI standards by KPMG. The Details of the same can be found at page no. 659								

12. If answer to question (1) above is "No" i.e. not all Principles are covered by a policy, reasons to be stated:

<the question is not applicable to the NTPC as all the NGRBC principles are covered under our policies>

Section C: Principle Wise Performance Disclosure

This section is aimed at helping entities demonstrate their performance in integrating the Principles and Core Elements with key processes and decisions. The information sought is categorized as "Essential" and "Leadership". While the essential indicators are expected to be disclosed by every entity that is mandated to file this report, the leadership indicators may be voluntarily disclosed by entities which aspire to progress to a higher level in their quest to be socially, environmentally, and ethically responsible.

Principle 1: Businesses should conduct and govern themselves with integrity, and in a manner that is Ethical, Transparent and Accountable

Essential Indicators

1. Percentage coverage by training and awareness programs on any of the principles during the financial year:

Segment	Total number of training and awareness programmes held	Topics / principles covered under the training and its impact	% age of persons in respective category covered by the awareness programmes
Board of Directors	1	P1 & P7	8%
Key Managerial Personnel	0	-	0%
Employees other than BoD and KMPs	1,589	P1 to P9	87%
Workers	813	P2 to P9	64%

*NTPC standalone data

2. **Details of fines / penalties /punishment/ award/ compounding fees/ settlement amount paid in proceedings (by the entity or by directors / KMPs) with regulators/ law enforcement agencies/ judicial institutions, in the financial year, in the following format (Note: the entity shall make disclosures on the basis of materiality as specified in Regulation 30 of SEBI (Listing Obligations and Disclosure Obligations) Regulations, 2015 and as disclosed on the entity's website):**

	NGRBC Principle	Name of the regulatory/ enforcement agencies/judicial institutions	Amount (in INR)	Brief of the Case	Has an appeal been preferred? (Yes/No)
			Monetary		
Penalty/Fine	NIL	NIL	NIL	NIL	NIL
Settlement	NIL	NIL	NIL	NIL	NIL
Compounding Fee	NIL	NIL	NIL	NIL	NIL
			Non-Monetary		
Imprisonment	NIL	NIL	NIL	NIL	NIL
Punishment	NIL	NIL	NIL	NIL	NIL

3. **Of the instances disclosed in Question 2 above, details of the Appeal/ Revision preferred in cases where monetary or non-monetary action has been appealed.**

   No instances were reported in question 2 above, hence not applicable

4. **Does the entity have an anti-corruption or anti-bribery policy? If yes, provide details in brief and if available, provide a web-link to the policy.**

   Yes, NTPC has a Anti Bribery and Anti-Corruption (ABAC) policy in place to ensure its business is conducted in accordance with the highest ethical standards. The same can be accessed through

   https://www.ntpc.co.in/sites/default/files/policy-documents/NTPC-ABAC-Policy-2023_0.pdf

5. **Number of Directors/KMPs/employees/workers against whom disciplinary action was taken by any law enforcement agency for the charges of bribery/ corruption:**

	FY 2022-23 (Current Financial Year)	FY 2021-22 (Previous Financial Year)
Directors	0	0
KMPs	0	0
Employees	0	0
Workers	0	0

6. **Details of complaints with regard to conflict of interest:**

	FY 2022-23 (Current Financial Year)		FY 2021-22 (Previous Financial Year)	
	Number	Remarks	Number	Remarks
Number of complaints received in relation to issues of Conflict of Interest of the Directors	0	NA	0	NA
Number of complaints received in relation to issues of Conflict of Interest of the KMP's	0	NA	0	NA

7. **Provide details of any corrective action taken or underway on issues related to fines / penalties / action taken by regulators/ law enforcement agencies/ judicial institutions, on cases of corruption and conflicts of interest.**

   No corrective action taken as no such issues were identified.

Leadership Indicators

1. **Awareness programmes conducted for value chain partners on any of the principles during the financial year:**

   We are in process of developing mechanism to collect data as required by BRSR format, during FY 22-23, We conducted capacity building workshops on ESG for around 150 suppliers through various Vendor Development Programs.

2. **Does the entity have processes in place to avoid/ manage conflict of interests involving members of the Board? (Yes/No) If yes, provide details of the same.**

   Yes, NTPC has a robust system in place to avoid/ manage conflict of interests involving members of the Board

Principle 2: Businesses should provide goods and services in a manner that is sustainable and safe.

Essential Indicators

1. **Percentage of R&D and capital expenditure (capex) investments in specific technologies to improve the environmental and social impacts of product and processes to total R&D and capex investments made by the entity, respectively.**

	FY 2022-23 (Current Financial Year)	FY 2021-22 (Previous Financial Year)	Details of Improvements in environmental and social impacts
R&D	100%	100%	Biofuels, Green Hydrogen, waste to energy
Capex	21%	24%	Green Energy, Air Pollution reduction, Afforestation

2. **a. Does the entity have procedures in place for sustainable sourcing?** Yes

   b. If yes, what percentage of inputs were sourced sustainably? 100%

3. **Describe the processes in place to safely reclaim your products for reusing, recycling and disposing at the end of life, for (a) Plastics (including packaging) (b) E-waste (c) Hazardous waste and (d) other waste.**

   There is no scope of reclaiming the products packaging/ E-waste in case of Electricity and Coal. For Coal being used as fuel with in the NTPC, we have placed a detailed ash management program for reclaiming the ash and recycling it into new products.

4. **Whether Extended Producer Responsibility (EPR) is applicable to the entity's activities (Yes / No). If yes, whether the waste collection plan is in line with the Extended Producer Responsibility (EPR) plan submitted to Pollution Control Boards? If not, provide steps taken to address the same.**

EPR is not applicable to NTPC as our product "Electricity" is exhausted once consumed.

Leadership Indicators

1. **Has the entity conducted Life Cycle Perspective / Assessments (LCA) for any of its products (for manufacturing industry) or for its services (for service industry)? If yes, provide details in the following format?**

Presently, NTPC is in process of undertaking the LCA of its product

2. **If there are any significant social or environmental concerns and/or risks arising from production or disposal of your products / services, as identified in the Life Cycle Perspective / Assessments (LCA) or through any other means, briefly describe the same along-with action taken to mitigate the same.**

Presently, NTPC is in process of undertaking the LCA of its product

3. **Percentage of recycled or reused input material to total material (by value) used in production (for manufacturing industry) or providing services (for service industry).**

Indicate input material	Recycled or re-used input material to total material	
	FY 2022-23 (Current Financial Year)	FY 2021-22 (Previous Financial Year)
Water	Less than 1%	Less than 1%

4. **Of the products and packaging reclaimed at end of life of products, amount (in metric tonnes) reused, recycled, and safely disposed, as per the following format:**

	FY 2022-23 (Current Financial Year)			FY 2021-22 (Previous Financial Year)		
	Re-used	Recycled	Safely Disposed	Re-used	Recycled	Safely Disposed
Plastics (including packaging)	0	53.15	164.96	0	120.77	79.47
E-Waste	0	83.14	2.92	1	109.45	0
Hazardous waste	340.30	1,705.45	1,778.74	0.30	1,572.95	365.70
Other Waste	13,091.34	39,619.07	51,092.23	1,906.01	51,124.51	5,791.70

5. **Reclaimed products and their packaging materials (as percentage of products sold) for each product category.**

There is no scope for reclaiming packaging materials in Energy generation and transmission business.

Principle 3: Businesses should respect and promote the well-being of all employees, including those in their value chains

Essential Indicators

1. a. Details of measures for the well-being of employees:

	Total (A)	% of employees covered by									
		Health Insurance		Accident Insurance		Maternity Benefits		Paternity Benefits		Day care facilities	
		Number (B)	% (C/A)	Number (C)	% (C/A)	Number (D)	% (D/A)	Number (E)	% (E/A)	Number (F)	% (F/A)
Permanent Employees											
Male	12,074	12,074	100	12,074	100	0	0	12,074	100	12,074	100
Female	923	923	100	923	100	923	100	0	0	923	100
Total	12,997	12,997	100	12,997	100	923	7.10	12,074	92.90	12,997	100
Other than Permanent Employees											
Male	1,350	1,350	100	1,350	100	0	0	0	0	1,350	100
Female	143	143	100	143	100	0	0	0	0	143	100
Total	1,493	1,493	100	1,493	100	0	0	0	0	1,493	100

b. Details of measures for the well-being of workers:

	Total (A)	% of workers covered by									
		Health Insurance		Accident Insurance		Maternity Benefits		Paternity Benefits		Day care facilities	
		Number (B)	% (C/A)	Number (C)	% (C/A)	Number (D)	% (D/A)	Number (E)	% (E/A)	Number (F)	% (F/A)
Permanent Workers											
Male	6,549	6,549	100	6,549	100	0	0	6,549	100	6,549	100
Female	706	706	100	706	100	706	100	0	100	706	100
Total	7,255	7,255	100	7,255	100	706	9.73	0	90.27	7,255	100
Other than Permanent Workers											
Male	1,11,457	1,11,457	100	1,11,457	0	0	0	0	0	0	0
Female	1,898	1,898	100	1,898	0	0	0	0	0	0	0
Total	1,13,355	1,13,355	100	1,13,355	0	0	0	0	0	0	0

2. **Details of retirement benefits, for Current FY and Previous Financial Year.**

Benefits	FY 2022-23 (Current Financial Year)			FY 2021-22 (Previous Financial Year)		
	No. of employees covered as a % of total employees	No. of workers covered as a % of total workers	Deducted and deposited with the authority (Y/N/N.A/)	No. of employees covered as a % of total employees	No. of workers covered as a % of total workers	Deducted and deposited with the authority (Y/N/N.A.)
PF	100%	100%	Y	100%	100%	Y
Gratuity	100%	100%	Y	100%	100%	Y
ESI	100%	100%	Y	100%	100%	Y
Others-please specify	0	0	NA	0	0	NA

3. **Accessibility of workplaces**

Are the premises / offices of the entity accessible to differently abled employees and workers, as per the requirements of the Rights of Persons with Disabilities Act, 2016? If not, whether any steps are being taken by the entity in this regard.

YES, all our offices are accessible to differently abled employees and workers, as per the requirements of the Rights of Persons with Disabilities Act, 2016

4. **Does the entity have an equal opportunity policy as per the Rights of Persons with Disabilities Act, 2016? If so, provide a web-link to the policy.**

YES, our equal opportunity policy can be found at https://www.ntpc.co.in/sites/default/files/policy-documents/Equal_Opportunity_Policy%202019.pdf

5. **Return to work and Retention rates of permanent employees and workers that took parental leave.**

	Permanent employees		Permanent workers	
Gender	Return to work rate	Retention rate	Return to work rate	Retention rate
Male	100%	100%	100%	100%
Female	100%	100%	100%	100%
Total	100%	100%	100%	100%

6. **Is there a mechanism available to receive and redress grievances for the following categories of employees and worker? If yes, give details of the mechanism in brief.**

	Yes/No (If yes, then give details of the mechanism in brief)
Permanent Workers	Yes, for addressing the grievances of employees, NTPC has a time bound Grievance Redressal Mechanism for all employees at each project. The employee grievances are also captured through different forums like participative forums, communication meetings, employee organizational climate survey etc.
Other than Permanent Workers Permanent	
Employees	
Other than Permanent Employees	

7. **Membership of employees and worker in association(s) or Unions recognised by the listed entity:**

Category	FY 2022-23 (Current Financial Year)			FY 2021-22 (Previous Financial Year)		
	Total employees/ workers in respective category (A)	No. of employees/ workers in respective category, who are part of associations(s) or Union (B)	% (B/A)	Total employees/ workers in respective category ©	No. of employees/ workers in respective category, who are part of associations(s) or Union (D)	% (D/C)
Total Permanent Employees	12,997	6,905	53.12%	13,071	6,036	46.18%
Male	12,074	6,539	54.15%	12,177	5,713	46.92%
Female	923	366	39.6%	894	323	36.13%
Total Permanent Workers	7,255	7,255	100%	7,700	7,700	100%
Male	6,549	6,549	100%	6,961	6,961	100%
Female	706	706	100%	739	739	100%

8. **Details of training given to employees and workers:**

Category	FY 2022-23 Current Financial Year					FY 2021-22 Previous Financial Year				
	Total (A)	On Health and safety measures		On Skill upgradation		Total (D)	On Health and safety measures		On Skill upgradation	
		No. (B)	% (B/A)	No. (C)	% (C / A)		No. (E)	% (E / D)	No. (F)	% (F / D)
Employees										
Male	12,074	4,648	38.50%	9,661	80.01%	12,177	5,114	42%	9,146	75%
Female	923	318	34.45%	687	74.43%	894	399	45%	673	75%
Total	12,997	4,966	38.21%	10,348	79.62%	13,071	5,513	42%	9,819	75%
Workers										
Male	6,549	1,471	22.46%	3,744	57.17%	6,961	1,605	23%	4,044	58%
Female	706	137	19.41%	298	42.21%	739	148	20%	280	38%
Total	7,255	1,608	22.16%	4,042	55.71%	7,700	1,753	23%	4,324	56%

9. **Details of performance and career development reviews of employees and worker:**

Category	FY 22-23 Current Financial Year			FY 21-22 Previous Financial Year		
	Total (A)	No. (B)	% (B / A)	Total (C)	No. (D)	% (D / C)
Employees						
Male	12,074	12,074	100%	12,177	12,177	100%
Female	923	923	100%	894	894	100%
Total	12,997	12,997	100%	13,071	13,071	100%
Workers						
Male	6,549	6,549	100%	7,700	7,700	100%
Female	706	706	100%	6.961	6,961	100%
Total	7,255	7,255	100%	739	739	100%

10. Health and safety management system:

a) Whether an occupational health and safety management system has been implemented by the entity? (Yes/ No). If yes, the coverage such system?

YES, we have implemented a detailed occupation health and safety management system in line with NTPC safety framework. Our aim is to reach the target of zero injuries and incidents across all our operating stations. We have a formal process for investigation of all accidents to examine each case in detail

b) What are the processes used to identify work-related hazards and assess risks on a routine and non-routine basis by the entity?

In accordance with our safety principles, we have developed a comprehensive and centralized Hazard Identification, Risk Assessment and Control (HIRAC) document for our Coal, Gas, and Hydro stations. The hierarchy of controls of hazards followed in preparing this document is elimination of hazard, substitution of hazard, engineering controls, administrative controls, and PPEs in respective order.

c) Whether you have processes for workers to report the work-related hazards and to remove themselves from such risks.

Yes

d) Do the employees/ worker of the entity have access to non-occupational medical and healthcare services?

Yes

11. Details of safety related incidents, in the following format:

Safety Incident/Number	Category	FY 2022-23 (Current Financial Year)	FY 2021-22 (Previous Financial Year)
Lost Time Injury Frequency Rate (LTIFR) (per one million-person hours worked)	Employees	0.141	0.084
	Workers	0.067	0.083
Total recordable work-related injuries	Employees	11	7
	Workers	30	60
No. of fatalities	Employees	1	1
	Workers	4	4
High consequence work-related injury or ill-health (excluding fatalities)	Employees	0	1
	Workers	1	1

12. Describe the measures taken by the entity to ensure a safe and healthy workplace.

The safety of our operations is regularly assessed through internal and external safety audits. Every year, internal safety audits are conducted by inter station team of Safety Officers and External safety audits are carried out by reputed organizations as per statutory requirement for each Project/ Station. Apart from that, special audits are conducted from time to time to assess adherence to laid out procedures and rules. NTPC has developed a pool of NOSA certified auditors, certified lead / internal auditors as per ISO 45001 for ensuring quality audit. During FY 22-23 an additional expert safety audit is initiated for all NTPC stations for internal benchmarking purpose.

13. Number of Complaints on the following made by employees and workers:

	FY 2022-23 (Current Financial Year)			FY 2021-22 (Previous Financial Year)		
	Filed during the year	Pending resolution at the end of year	Remarks	Filed during the year	Pending resolution at the end of year	Remarks
Working Conditions	0	0	NA	0	0	NA
Health & Safety	0	0	NA	0	0	NA

14. Assessments for the year:

	% Of your plants and offices that were assessed (by entity or statutory authorities or third parties)
Health and safety practices	100%
Working Conditions	100%

*All our offices are OHSHA/ ISO certified

15. Provide details of any corrective action taken or underway to address safety-related incidents (if any) and on significant risks / concerns arising from assessments of health & safety practices and working conditions.

While no significant risk/ concern was identified, NTPC regularly monitor and engage to improve its working condition, and has developed centralized Hazard Identification, Risk Assessment, and Control (HIRAC) documents for its stations.

Leadership Indicators

1. Does the entity extend any life insurance or any compensatory package in the event of death of

(A) Employees: Yes

(B) Workers: Yes

2. Provide the measures undertaken by the entity to ensure that statutory dues have been deducted and deposited by the value chain partners.

We collect TDS from all our vendors to ensure the submission of the applicable taxes. In addition to this we also have Clauses in our GCC to ensure that all the statutory dues and fines are collected as applicable

3. Provide the number of employees / workers having suffered high consequence work- related injury / ill-health / fatalities (as reported in Q11 of Essential Indicators above), who have been rehabilitated and placed in suitable employment or whose family members have been placed in suitable employment:

	Total no. of affected employees/ workers		No. of employees/workers that are rehabilitated and placed in suitable employment or whose family members have been placed in suitable employment	
	FY 2022-23 (Current Financial Year)	FY 2021-22 (Previous Financial Year)	FY 2022-23 (Current Financial Year)	FY 2021-22 (Previous Financial Year)
Employees	1	2	0	1
Workers	5	6	5	6

4. Does the entity provide transition assistance programs to facilitate continued employability and the management of career endings resulting from retirement or termination of employment? (Yes/ No)

Yes

5. Details on assessment of value chain partners:

	% Of value chain partners (by value of business done with such partners) that were assessed
Health and safety practices	100%
Working Conditions	100%

* We have sustainability sourcing policies as well as sections in our GCC to ensure all our suppliers have relevant ISO and OHSAS certification

6. Provide details of any corrective actions taken or underway to address significant risks / concerns arising from assessments of health and safety practices and working conditions of value chain partners.

No action has been taken since no significant risk/ concern was identified.

Principle 4: Businesses should respect the interests of and be responsive to all its stakeholders

Essential Indicators

1. Describe the processes for identifying key stakeholder groups of the entity.

Stakeholder engagement is a continuous process, encompassing interactions at various management levels and through diverse communication channels. to ensure the identification of key stakeholders, the NTPC has devised a detailed stakeholder engagement framework, as well as undertake stakeholder and materiality assessment exercise at a regular frequency. Our detailed methodology for stakeholder identification can be found at https://www.ntpc.co.in/sustainability/stakeholder-management.

2. List stakeholder groups identified as key for your entity and the frequency of engagement with each stakeholder group.

Stakeholder group	Whether identified as Vulnerable & Marginalized Group (Yes/no)	Channel of Communication (Email, SMS, Newspaper, Pamphlets, Advertisement, Community meetings, Notice board, website, others)	Frequency of engagement (Annually/ Half yearly/ Quarterly/ other-please specify)	Purpose and scope of engagement including key topics and concerns raised during such engagement
Government of India	No	• Secretary level review • Meeting with MoP, MoEFCC, MoC, DPE, Parliamentary committees, CEA, NITI AAYOG etc.	• Quarterly • Need based	• 24x7 affordable power to all • Maximizing infrastructure utilization • Social development • Climate Change & Environment conservation • Promote Govt. schemes (viz. Make in India, Skill India, Swachh Bharat Mission, etc.)
Regulators	No	• Public hearing • Statutory audits & inspection, Meeting for clearances, Consents and compliances	• Need based • As per statutory provisions	• Optimum electricity tariff • Compliance with changing business environment
Communities & NGO	Yes	• Public hearings • Village Development Advisory Committee (VDAC) • Public information centers • Project-based stakeholder meets	• Need based • Annually	• Infrastructure development • Quality of life • Employment opportunities • Land acquisition and R&R issues • Increased community involvement
Investors & Lenders	No	• Analyst and investors meeting • Annual general meeting • Review meets with bankers (Domestic and Foreign	• Quarterly • Annual • Regular	• Improving RoI • Climate change & Business sustainability • Risk and governance compliance • Increased disclosure on Environment, Social and Governance (ESG) aspects

Stakeholder group	Whether identified as Vulnerable & Marginalized Group (Yes/no)	Channel of Communication (Email, SMS, Newspaper, Pamphlets, Advertisement, Community meetings, Notice board,website, others)	Frequency of engagement (Annualy/ Half yearly/ Quarterly/ other-please specify	Purpose and scope of engagement including key topics and concerns raised during such engagement
Employees	No	• Participative forums • Communication meetings • Employee surveys • Intranet and website • Trainings and workshops Internal magazines	• Defined frequency of concerned Fora • Need based	• Professional growth • Work life balance • Health, safety and security • Timely resolution of grievances • Transparent appraisal and promotion cycle
Customers	No	• Regional customer meets • Regional power committees (RPCs) • Commercial meetings/interactions • Technical coordination committee • Operation coordination committee • Business partner meet • Customer support services	• Quarterly • Monthly • Yearly • Need Based	• Resolving commercial issues • Resolving technical issues
Suppliers	Yes, some of company's suppliers belong to marginalized group	• Pre-bid conference • Suppliers meet, Vendor enlisting • NTPC website	• Before tendering • Need based	• Transparent dealings • Timely payments • Fair opportunities • Sustainable Supply Chain
Media	No	• Press releases • Press conferences	• Need based • Event based	• Information sharing • Increased transparency

Leadership Indicators

1. **Provide the processes for consultation between stakeholders and the Board on economic, environmental, and social topics or if consultation is delegated, how is feedback from such consultations provided to the Board.**

   NTPC has a dedicated stakeholder's relationship committee along with the stakeholder management framework the details of which can be found at https://www.ntpc.co.in/corporate-governance/Committees-of-the-Board

2. **Whether stakeholder consultation is used to support the identification and management of environmental, and social topics (Yes / No). If so, provide details of instances as to how the inputs received from stakeholders on these topics were incorporated into policies and activities of the entity.**

   NTPC regularly undertake Stakeholder consultation to identify the important ESG topics as part of it Materiality Assessment exercise. The detailed of the same can be found on our website at https://www.ntpc.co.in/sustainability/stakeholder-management.

3. **Provide details of instances of engagement with, and actions taken to, address the concerns of vulnerable/ marginalized stakeholder groups.**

   The details can be found on our website at https://www.ntpc.co.in/sustainability/stakeholder-management.

Principle 5: Businesses should respect and promote human rights

Essential Indicators

1. Employees and workers who have been provided training on human rights issues and policy(ies) of the entity, in the following format:

Category	FY 2022-23 (Current Financial Year)			FY 2021-22 (Previous Financial Year)		
	Total (A)	No. of employees/workers covered (B)	% (B/A)	Total (C)	No. of employees/ workers covered (D)	% (D/C)
Employees						
Permanent	12,997	283	2.17%	12,177	1,515	12.44%
Other than Permanent	1,493	40	2.68%	894	35	3.91%
Total Employees	14,490	323	2.23%	13,071	1,550	11.86%
Workers						
Permanent	7,255	298	4.11%	7,700	539	0.07
Other than Permanent	1,13,355	0	0.00%	1,06,662	0	0.00
Total Workers	1,20,610	298	0.25%	1,14,362	9	0.00

2. Details of minimum wages paid to employees and workers, in the following format

Category	FY 2022-23 (Current Financial Year)					FY 2021-22 (Previous Financial Year)				
	Total (A)	Equal to Minimum Wage		More than Minimum Wage		Total (D)	Equal to Minimum Wage		More than Minimum Wage	
		No. (B)	% (B/A)	No. (C)	% (C/A)		No. (E)	% (E/D)	No. (F)	% (F/D)
Employees										
Permanent	12,997	0	0%	12,997	100%	13,071	0	0%	13,071	100%
Male	12,074	0	0%	12,074	100%	12,177	0	0%	12,177	100%
Female	923	0	0%	923	100%	894	0	0%	894	100%
Other than Permanent	1,493	0	0%	1,493	100%	1,041	0	0%	1,041	100%
Male	1,350	0	0%	1,350	100%	911	0	0%	911	100%
Female	143	0	0%	143	100%	130	0	0%	130	100%
Workers										
Permanent	7,255	0	0%	7,255	100%	7,700	0	0%	7,700	100%
Male	6,549	0	0%	6,549	100%	6,961	0	0%	6,961	100%
Female	706	0	0%	702	100%	739	0	0%	739	100%
Other than Permanent	1,13,355	0	0%	1,13,355	100%	1,06,662	0	0%	1,06,662	100%
Male	1,11,457	0	0%	1 11,457	100%	1,05,063	0	0%	1,05,063	100%
Female	1,898	0	0%	1,898	100%	1,599	0	0%	1,599	100%

3. Details of remuneration/salary/wages, in the following format:

	Male		Female	
	Number	Median Remuneration/salary/ wages of respective category	Number	Mediam Remuneration/salary/ wages of respective category
Board of Directors (BoD)	5*	1,03,36,749	-	-
Key Managerial Personnel	1	56,34,384	-	-
Employees other than BoD and KMP	12,070	38,21,259	922	32,95,704
Workers	6,549	20,16,940	706	24,20,217

* only functional Directors

4. Do you have a focal point (Individual/ Committee) responsible for addressing human rights impacts or issues caused or contributed to by the business?

Yes

5. Describe the internal mechanisms in place to redress grievances related to human rights issues.

We have established institutional mechanisms for grievance redressal, demonstrating our commitment to resolving stakeholder concerns in a timely and fair manner. To safeguard human rights, all significant investment agreements and contracts include clauses that minimize the risk of violations. We conduct regular monitoring to ensure compliance with regulations and internal policies.

6. Number of Complaints on the following made by employees and workers:

	FY 2022-23 (Current Financial Year)			FY 2021-22 (Previous Financial Year)		
	Filed during the year	Pending resolution at the end of year	Remarks	Filed during the year	Pending resolution at the end of year	Remarks
Sexual Harassment	6	1	-	2	0	-
Discrimination at workplace	0	0	-	0	0	-
Child Labor	0	0	-	0	0	-
Forced Labor/Involuntary Labor	0	0	-	0	0	-
Wages	0	0	-	0	0	-
Other human rights related issues	-	-	-	-	-	-

7. Mechanisms to prevent adverse consequences to the complainant in discrimination and harassment cases.

NTPC has formed the Internal Complaints Committees at our operational locations where complaints against sexual harassment can be registered, furthermore we have a dedicated complaint handling policy to safeguard the complainant. The link to our policy can be found at https://www.ntpc.co.in/sites/default/files/policy-documents/Complaint-Handling-Policy.pdf

8. Do human rights requirements form part of your business agreements and contracts?

Yes, human rights requirements form part of all our business agreements and contracts

9. Assessments for the year:

	% Of your plants and offices that were assessed (by entity or statutory authorities or third parties)
Child Labor	100%
Forced/Involuntary Labor	100%
Sexual Harassment	100%
Discrimination at workplace	100%
Wages	100%
Other-Please specify	100%

10. **Provide details of any corrective actions taken or underway to address significant risks / concerns arising from the assessments at Question 9 above.**

    No corrective action taken since no significant risk was identified.

Leadership Indicators

1. **Details of a business process being modified / introduced as a result of addressing human rights grievances/ complaints.**

   Business model has not been modified

2. **Details of the scope and coverage of any Human rights due diligence conducted.**

   100%

3. **Is the premise/office of the entity accessible to differently abled visitors, as per the requirements of the Rights of Persons with Disabilities Act, 2016?**

   Yes

4. **Details on assessment of value chain partners:**

	% of value chain partners (by value of buisness done with such partners) that were assessments
Child Labor	100%
Forced/Involuntary Labor	100%
Sexual Harassment	100%
Discrimination at workplace	100%
Wages	100%
Other-Please specify	100%

** All the NTPC's vendor adheres to the Human rights policy which is covered under its GCC*

5. **Provide details of any corrective actions taken or underway to address significant risks / concerns arising from the assessments at Question 4 above.**

   No action was taken since no significant risk/ concern was identified.

Principle 6: Businesses should respect and make efforts to protect and restore the environment

Essential Indicators

1. **Details of total energy consumption (in Joules or multiples) and energy intensity, in the following format:**

Parameter	FY 2022-23 (Current Financial Year)	FY 2021-22 (Previous Financial Year)
Total electricity consumption (A)	352.11	74.73
Total fuel consumption (B)	37,42,695.46	33,85,762.61
Energy consumption through other sources (C)	-	-
Total energy consumption (A+B+C)	37,43,047.57	33,85,837.35
Energy intensity per rupee of turnover (Total energy consumption/turnover in rupees)	21.03	25.08
Energy intensity (optional) – the relevant metric may be selected by the entity	10.01	10.08

Note: Indicate if any independent assessment/ evaluation/assurance has been carried out by an external agency? (Y/N) If yes, name of the external agency.

Yes, assurance has been conducted by KPMG

2. Does the entity have any sites / facilities identified as designated consumers (DCs) under the Performance, Achieve and Trade (PAT) Scheme of the Government of India? (Y/N) If yes, disclose whether targets set under the PAT scheme have been achieved. In case targets have not been achieved, provide the remedial action taken, if any.

Yes, all 4 NTPC stations covered under PAT cycles have exceeded their targets and earned EScerts, however notification for the same is awaited.

3. Provide details of the following disclosures related to water, in the following format:

Parameter	FY 2022-23 (Current Financial Year)	FY 2021-22 (Previous Financial Year)
Water withdrawal by source (in kiloliters)		
(i) Surface water	5,482.35 MCM	5,274.70 MCM
(ii) Groundwater	0 MCM	0 MCM
(iii) Third party water	0.55 MCM	0.150 MCM
(iv) Seawater / desalinated water	179.10 MCM	157.60 MCM
(v) Others	0	0
Total volume of water withdrawal (in kiloliters) (i + ii + iii + iv + v)	5,662 MCM	5,432.45 MCM
Total volume of water consumption (in kiloliters)	1,135.55 MCM	1,069.87 MCM
Water intensity per rupee of turnover (Water consumed / turnover)	0.006 MCM/ (₹) Crore	0.008 MCM/ (₹) Crore
Water intensity per rupee of turnover (Water consumed / turnover)	2.69 l/kWh	2.76 l/kWh

Note: Indicate if any independent assessment/ evaluation/assurance has been carried out by an external agency? (Y/N) If yes, name of the external agency.

Yes, assurance has been conducted by KPMG

4. Has the entity implemented a mechanism for Zero Liquid Discharge? If yes, provide details of its coverage and implementation.

Yes, we are in process of implementing Zero Liquid Discharge (ZLD) at all of our station, 19 of our stations have already implemented the ZLD, while the rest are in advanced stages of implementing the ZLD.

5. Please provide details of air emissions (other than GHG emissions) by the entity, in the following format:

Parameter	Please specify unit	FY 2022-23 (Current Financial Year)	FY 2021-22 (Previous Financial Year)
NO_x	Metric tonnes	6,57,376.38	6,40,419
		17,67,822	16,21,349
SO_x	Metric tonnes	17,67,481.60	91,115
		0	0
Particulate matter (PM)	Metric tonnes	9,294.96	91,115
Persistent organic pollutants (POP)	Metric tonnes	0	0
Volatile organic compounds (VOC)	Metric tonnes	0	0
Hazardous air pollutants (HAP) (Mercury)	Metric tonnes	7.00	7.23
Others –	Metric tonnes		

Note: Indicate if any independent assessment/ evaluation/assurance has been carried out by an external agency? (Y/N) If yes, name of the external agency.

Yes, assurance has been conducted by KPMG

6. **Provide details of greenhouse gas emissions (Scope 1 and Scope 2 emissions) & its intensity, in the following format:**

Parameter	Unit	FY 2022-23 (Current Financial Year)	FY 2021-22 (Previous Financial Year)
Total Scope 1 emissions (Break-up of the GHG into CO_2, CH_4, N_2O, HFCs, PFCs, SF_6, NF_3, if available)	Million Metric tonnes of CO_2 equivalent	335.72	303.34
Total Scope 2 emissions (Break-up of the GHG into CO_2, CH_4, N_2O, HFCs, PFCs, SF_6, NF_3, if available)	Million Metric tonnes of CO_2 equivalent	0.07	0.01
Total Scope 1 and Scope 2 emissions per rupee of turnover	Million Metric tonnes of CO_2 / (₹) Crore	0.001	0.002
Total Scope 1 and Scope 2 emission intensity (optional) – the relevant metric may be selected by the entity	gCO_2/Kwh	840.75	843.64

Note: Indicate if any independent assessment/ evaluation/assurance has been carried out by an external agency? (Y/N) If yes, name of the external agency.

Yes, assurance has been conducted by KPMG

7. **Does the entity have any project related to reducing Green House Gas emission? If Yes, then provide details.**

Yes, we embrace our ethical duty to support the country's endeavors in reducing GHG emissions and mitigating climate change. We have adopted cleaner, more energy-efficient technologies to reduce GHG emissions per unit of electricity. We're transitioning from sub-critical to supercritical and ultra-supercritical technology. NTPC is an early adopter of supercritical and ultra-supercritical boilers in India, saving ~2% fuel per unit of power and reducing emission intensity by 8% compared to conventional subcritical plants. It also increases efficiency by around 8%.

In addition to this, we are also exploring cleaner energy avenues and are looking to increase the over RE percentage in our energy mix. We are also working carbon sink development, and has planted 38 million trees so far, with the target of planting at least 1 million tree sapling annually.

8. **Provide details related to waste management by the entity, in the following format:**

Parameter	FY 2022-23 (Current Financial Year)	FY 2021-22 (Previous Financial Year)
Total Waste generated (in metric tonnes)		
Plastic waste (A)	353.43	264.26
E-waste (B)	84.88	139.83
Bio-medical waste (C)	138.44	23.8
Construction and demolition waste (D)	61,052.50	2,665.74
Battery waste (E)	887.28	440.95
Radioactive waste (F)	0	0
Other Hazardous waste. Please specify, if any (spent resin, used lube oil, containers of hazardous waste, insulation waste, FO sludge). (G)	4,832.24	3,137.14

Parameter	FY 2022-23 (Current Financial Year)	FY 2021-22 (Previous Financial Year)
Other Non-hazardous waste generated (H). Please specify, if any. (ferrous, non-ferrous, municipal solid waste-biodegradable, municipal solid waste – non degradable) (Break-up by composition i.e., by materials relevant to the sector)	42,029.83	60,858.08
Total (A+B + C + D + E + F + G + H)	1,09,378.60	67,529.80
For each category of waste generated, total waste recovered through recycling, re-using or other recovery operations (in metric tonnes)		
Category of waste		
(i) Recycled	41,455.18	52,799.37
(ii) Re-used	13,431.64	2,067.02
(iii) Other recovery operations	514.95	180.73
Total	55,401.76	55,047.12
For each category of waste generated, total waste disposed by nature of disposal method (in metric tonnes)		
Category of waste		
(i) Incineration	598.623	160.20
(ii) Landfilling	52,236.23	1,624.13
(iii) Other disposal operations	203.72	89.17
Total	53,038.5	1,873.50

Note: Indicate if any independent assessment/ evaluation/assurance has been carried out by an external agency? (Y/N) If yes, name of the external agency.

Yes, assurance has been conducted by KPMG.

9. **Briefly describe the waste management practices adopted in your establishments. Describe the strategy adopted by your company to reduce usage of hazardous and toxic chemicals in your products and processes and the practices adopted to manage such wastes.**

   We are dedicated to handling and disposing of all waste generated on our premises in an environmentally friendly, socially responsible, and commercially viable manner. Our comprehensive waste management approach includes collection, segregation, transportation, processing, recycling, and disposal of different types of waste. Our primary goal is to maximize resource utilization, minimizing the waste that must be disposed of. However, when disposal is necessary, we ensure full compliance with rules and regulatory requirements. Managing hazardous and non-hazardous waste generated by our power plants is governed by regulations and NTPC Waste Management Guideline. Furthermore, we have successfully eliminated Polychlorinated Biphenyl (PCBs) from our operation in an effort to reduce hazardous waste generation.

10. If the entity has operations/offices in/around ecologically sensitive areas (such as national parks, wildlife sanctuaries, biosphere reserves, wetlands, biodiversity hotspots, forests, coastal regulation zones etc.) where environmental approvals / clearances are required, please specify details in the following format:

S. No.	Location of operations/offices	Type of operations	Whether the conditions of environmental approval / clearance are being complied with? (Y/N) If no, the reasons thereof and corrective action taken, if any.
1	Bongaigaon	Power Generation	No, Wildlife Clearance under approval stage in Parivesh.nic.in portal- File with Chief Wildlife Warden)
2	Kahalgaon	Power Generation	Yes
3	TVHPP	Power Generation	Yes

11. Details of environmental impact assessments of projects undertaken by the entity based on applicable laws, in the current financial year:

No EIA assessment was conducted during Financial Year 2022-23 as no new plant construction was undertaken.

12. Is the entity compliant with the applicable environmental law/ regulations/ guidelines in India, such as the Water (Prevention and Control of Pollution) Act, Air (Prevention and Control of Pollution) Act, Environment protection act and rules thereunder (Y/N). If not, provide details of all such non-compliances, in the following format:

Yes, NTPC is compliant with the applicable environmental law/ regulations/ guidelines in India

S. No.	Specify the law / regulation/guidelines which was not complied with	Provide details of the non-compliance	Any fines / penalties / action taken by regulatory agencies such as pollution control boards or by courts	Corrective action taken if any
Nil	Nil	Nil	Nil	Nil
Nil	Nil	Nil	Nil	Nil

Leadership Indicators

1. Provide break-up of the total energy consumed (in Joules or multiples) from renewable and non-renewable sources, in the following format:

Parameter	FY 2022-23 (Current Financial Year)	FY 2021-22 (Previous Financial Year)
From renewable sources		
Total electricity consumption (A)	0	0
Total fuel consumption (B)	246.70 TJ	497.29 TJ
Energy consumption through other sources (C)	-	-

Parameter	FY 2022-23 (Current Financial Year)	FY 2021-22 (Previous Financial Year)
Total energy consumed from renewable sources (A+B+C)	246.70 TJ	497.29 TJ
From non-renewable sources		
Total electricity consumption (D) (TJ)	74.73	352.11
Total fuel consumption (E)	37,42,448.77 TJ	33,85,265.32 TJ
Energy consumption through other sources (F)	-	-
Total energy consumed from non-renewable sources (D+E+F)	37,43,523.5	33,85,617.43

Note: Indicate if any independent assessment/ evaluation/assurance has been carried out by an external agency? (Y/N) If yes, name of the external agency.
Yes, assurance has been conducted by KPMG.

2. Provide the following details related to water discharged:

Parameter	FY 2022-23 (Current Financial Year)	FY 2021-22 (Previous Financial Year)
Water discharge by destination and level of treatment (in kiloliters)		
(i) To Surface water	0	0
- No treatment	4,409.98 MCM	4,287.25 MCM
- With treatment – please specify level of treatment		
(ii) To Groundwater	0	0
- No treatment	0	0
- With treatment – please specify level of treatment		
(iii) To Seawater	0	0
- No treatment	117.30 MCM	85.09 MCM
- With treatment – please specify level of treatment		
(iv) Sent to third parties	0.99 MCM	0
- No treatment	0	0
- With treatment – please specify level of treatment		
(v) Others	0	0
- No treatment	0	0
- With treatment – please specify level of treatment	0	0
Total water discharged (in kiloliters)	4,528.31 MCM	4,287.25 MCM

Note: Indicate if any independent assessment/ evaluation/assurance has been carried out by an external agency? (Y/N) If yes, name of the external agency.
Yes, assurance is being carried out by KPMG.

3. Water withdrawal, consumption, and discharge in areas of water stress (in kiloliters):

For each facility / plant located in areas of water stress, provide the following information:

(i) Name of the area: **Barh**

(ii) Nature of operations: **Power Generation**

(iii) Water withdrawal, consumption, and discharge in the following format:

Parameter	FY 2022-23 (Current Financial Year)	FY 2021-22 (Previous Financial Year)
Water withdrawal by source (in kiloliters)		
(i) Surface water	36.33 MCM	-
(ii) Groundwater	0	-
(iii) Third party water	0	-
(iv) Seawater / desalinated water	0	-
(v) Others	0	-
Total volume of water withdrawal (in kiloliters)	36.33 MCM	-
Total volume of water consumption (in kiloliters)	36.32 MCM	-
Water intensity per rupee of turnover (Water consumed / turnover)	-	-
Water intensity (optional) – the relevant metric may be selected by the entity	-	-
Water discharge by destination and level of treatment (in kiloliters)		
(i) Into Surface water		
- No treatment	0	-
- With treatment – Primary & secondary treatment	0	-
(ii) Into Groundwater		
- No treatment	0	-
- With treatment – please specify level of treatment	0	-
(iii) Into Seawater		
- No treatment	0	-
- With treatment – please specify level of treatment	0	-
(iv) Sent to third parties		
- No treatment	0	-
- With treatment – please specify level of treatment	0	-
(v) Others		
- No treatment	0	-
- With treatment – please specify level of treatment	0	-
Total water discharged (in kiloliters)	0	-

For each facility / plant located in areas of water stress, provide the following information:

(iv) Name of the area: **Farakka**

(v) Nature of operations: **Power Generation**

(vi) Water withdrawal, consumption, and discharge in the following format:

Parameter	FY 2022-23 (Current Financial Year)	FY 2021-22 (Previous Financial Year)
Water withdrawal by source (in kiloliters)		
(i) Surface water	1,410.03 MCM	-
(ii) Groundwater	0	-
(iii) Third party water	0	-
(iv) Seawater / desalinated water	0	-
(v) Others	0	-
Total volume of water withdrawal (in kiloliters)	1,410.03 MCM	-
Total volume of water consumption (in kiloliters)	59.34 MCM	-
Water intensity per rupee of turnover (Water consumed / turnover)	-	-
Water intensity (optional) – the relevant metric may be selected by the entity	-	-
Water discharge by destination and level of treatment (in kiloliters)		
(i) Into Surface water		
- No treatment	0	-
- With treatment – Primary & secondary treatment	1,350.63 MCM	-
(ii) Into Groundwater		
- No treatment	0	-
- With treatment – please specify level of treatment	0	-
(iii) Into Seawater		
- No treatment	0	-
- With treatment – please specify level of treatment	0	-
(iv) Sent to third parties		
- No treatment	0	-
- With treatment – please specify level of treatment	0	-
(v) Others		
- No treatment	0	-
- With treatment – please specify level of treatment	0	-
Total water discharged (in kiloliters)	1,350.63 MCM	

For each facility / plant located in areas of water stress, provide the following information:

(vii) Name of the area: **Rihand**

(viii) Nature of operations: **Power Generation**

(ix) Water withdrawal, consumption, and discharge in the following format:

Parameter	FY 2022-23 (Current Financial Year)	FY 2021-22 (Previous Financial Year)
Water withdrawal by source (in kiloliters)		
(i) Surface water	919.26 MCM	-
(ii) Groundwater	0	-
(iii) Third party water	0	-
(iv) Seawater / desalinated water	0	-
(v) Others	0	-
Total volume of water withdrawal (in kiloliters)	919.26 MCM	-
Total volume of water consumption (in kiloliters)	64.95 MCM	-
Water intensity per rupee of turnover (Water consumed / turnover)	-	-
Water intensity (optional) – the relevant metric may be selected by the entity	-	-
Water discharge by destination and level of treatment (in kiloliters)		
(i) Into Surface water		
- No treatment	0	-
- With treatment – Primary & secondary treatment	854.38 MCM	-
(ii) Into Groundwater		
- No treatment	0	-
- With treatment – please specify level of treatment	0	-
(iii) Into Seawater		
- No treatment	0	-
- With treatment – please specify level of treatment	0	-
(iv) Sent to third parties		
- No treatment	0	-
- With treatment – please specify level of treatment	0	-
(v) Others		
- No treatment	0	-
- With treatment – please specify level of treatment	0	-
Total water discharged (in kiloliters)	854.38 MCM	-

For each facility / plant located in areas of water stress, provide the following information:

(x) Name of the area: **RGPPL**

(xi) Nature of operations: **Power Generation**

(xii) Water withdrawal, consumption, and discharge in the following format:

Parameter	FY 2022-23 (Current Financial Year)	FY 2021-22 (Previous Financial Year)
Water withdrawal by source (in kiloliters)		
(i) Surface water	0	-
(ii) Groundwater	0	-
(iii) Third party water	0	-
(iv) Seawater / desalinated water	0	-
(v) Others	0	-
Total volume of water withdrawal (in kiloliters)	0	-
Total volume of water consumption (in kiloliters)	0.25 MCM	-
Water intensity per rupee of turnover (Water consumed / turnover)	-	-
Water intensity (optional) – the relevant metric may be selected by the entity	-	-
Water discharge by destination and level of treatment (in kiloliters)		
(i) Into Surface water		
- No treatment	0	-
- With treatment – Primary & secondary treatment	0	-
(ii) Into Groundwater		
- No treatment	0	-
- With treatment – please specify level of treatment	0	-
(iii) Into Seawater		
- No treatment	0	-
- With treatment – please specify level of treatment	0	-
(iv) Sent to third parties		
- No treatment	0	-
- With treatment – please specify level of treatment	0	-
(v) Others		
- No treatment	0	-
- With treatment – please specify level of treatment	0	-
Total water discharged (in kiloliters)	0	

Note: Indicate if any independent assessment/ evaluation/assurance has been carried out by an external agency? (Y/N) If yes, name of the external agency.

Yes, assurance has been conducted by KPMG

4. Please provide details of total Scope 3 emissions & its intensity, in the following format:

Parameter	Unit	FY 2022-23 (Current Financial Year)	FY 2021-22 (Previous Financial Year)
Total Scope 3 emissions (Break-up of the GHG into CO_2, CH_4, N_2O, HFCs, PFCs, SF_6, NF_3, if available)	Metric tonnes of CO_2 equivalent	43,59,388.78	11,01,885.05
Total Scope 3 emissions per rupee of turnover	Metric tonnes of CO_2 / (₹) Crore	24.49	8.16
Total Scope 3 emission intensity (optional) – the relevant metric may be selected by the entity	gCO_2/kWh	10.97	3.06

Note: Indicate if any independent assessment/ evaluation/assurance has been carried out by an external agency? (Y/N) If yes, name of the external agency.
Yes, assurance has been conducted by KPMG

5. With respect to the ecologically sensitive areas reported at Question 10 of Essential Indicators above, provide details of significant direct & indirect impact of the entity on biodiversity in such areas along-with prevention and remediation activities.

Not applicable.

6. If the entity has undertaken any specific initiatives or used innovative technology or solutions to improve resource efficiency, or reduce impact due to emissions / effluent discharge / waste generated, please provide details of the same as well as outcome of such initiatives, as per the following format:

Information on this topic can be found in the Integrated Annual Report under Natural Capital, or on the NTPC website.

7. Does the entity have a business continuity and disaster management plan? Give details in 100 words/ web link.

The plan is currently in development.

8. Disclose any significant adverse impact to the environment, arising from the value chain of the entity. What mitigation or adaptation measures have been taken by the entity in this regard.

Not applicable.

9. Percentage of value chain partners (by value of business done with such partners) that were assessed for environmental impacts.

0.58%.

Principle 7: Businesses, when engaging in influencing public and regulatory policy, should do so in a manner that is responsible and transparent

Essential Indicators

1. a. Number of affiliations with trade and industry chambers/ associations.

32

b.List the top 10 trade and industry chambers/ associations (determined based on the total members of such body) the entity is a member of/ affiliated to .

S. No.	Name of the trade and industry chambers/associations	Reach of trade and industry chambers/associations (State/National)
1	British Safety Council	National
2	National Safety Council	National
3	Federation of Indian Chambers of Commerce & Industry (FICCI)	National
4	Delhi Productivity Council (DPC)	National
5	Power HR Forum	National
6	Central Board of Irrigation & Power (CBIP)	National
7	Electric Power Research Institute (EPRI), USA	National
8	World Energy Council (WEC)	National
9	Council of Power Utilities	National
10	Excellence Enhancement Centre, EEC	National

2. Provide details of corrective action taken or underway on any issues related to anti- competitive conduct by the entity, based on adverse orders from regulatory authorities.

No action taken as there was no case of issues related to anti- competitive during the Financial Year 2022-23

Leadership Indicators

1. Details of public policy positions advocated by the entity:

Not applicable.

Principle 8: Businesses should promote inclusive growth and equitable development.

Essential Indicators

1. **Details of Social Impact Assessments (SIA) of projects undertaken by the entity based on applicable laws, in the current financial year.**

   No SIA done during 2022-2023 Final Year, as there is land acquisition done by District administration for NTPC project.

2. **Provide information on project(s) for which ongoing Rehabilitation and Resettlement (R&R) is being undertaken by your entity, in the following format:**

S. No.	Name of Project for which R&R is ongoing	State	District	No. of Project Affected Families (PAFs)	% of PAFs covered by R&R	Amounts No. paid to PAFs in the FY (In INR)
1	NTPC Lara, Raigarh, Chhattisgarh	Chhatisgarh	Raigarh	2,466	100%	24,29,846
2	NTPC North Karanpura	Jharkaand	Chatra	2,963	100%	3,50,00,000
3	Nabinagar STPP	Bihar	Aurngabad	3,000	100%	2,44,00,000
4	Rammam Hydro Power Project	West Bengal	Darjeeling	363	100%	4,00,00,000
5	Tanda STTPP	Uttar Pradesh	Ambedkar Nagar	2,381	100%	5,25,00,000
6	Khargone	Madhya pradesh	Khargone	1,575	100%	
7	Kanti	Bihar	Mujaffarpur	462	100%	
8	Darlipali STPP	Odisha	Sundargarh	397	100%	4,95,00,000
9	Kerandari Coal mining Project, Hazariagh	Jharkhand	Hazaribagh	2,640	100%	2,92,95,000
10	Chatti Bariatu Coal Mining Project	Jharkhand	Hazaribag	3,900	100%	1,48,73,750
11	Dulanga Coal Mining Project	Odisha	Sundergarh	693	100%	18,01,47,400
12	Pakri Barwadih Coal Mining Project	Jharkhand	Hazaribag	8,339	100%	66,72,75,000
13	Talaipalli Coal Mining Project	Chhattisgarh	Raigarh	1,329	100%	20,33,71,360

3. **Describe the mechanisms to receive and redress grievances of the community.**

   In order to facilitate resolution of grievances in transparent and time bound manner NTPC has developed an interactive grievance redressal mechanism which can be accessed through our website at https://www.ntpc.co.in/grievance

   In addition to this, a Grievance Redressal Officer is also nominated for at all Projects/ stations/ Regions, Further grievances are also received through RTI, which are answered in a time-bound manner.

4. **Percentage of input material (inputs to total inputs by value) sourced from suppliers:**

Parameter	FY 2022-23 (Current Financial Year)	FY 2021-22 (Previous Financial Year)
Directly sourced from MSMEs/ small producers	40.06%	42.95%
Sourced directly from within the district and neighboring districts	<1%	<1%

Leadership Indicators

1. **Provide details of actions taken to mitigate any negative social impacts identified in the Social Impact Assessments (Reference: Question 1 of Essential Indicators above):**

   No SIA done during 2022-2023 Final Year, as there are land acquisition done by District administration for NTPC project.

2. **Provide the following information on CSR projects undertaken by your entity in designated aspirational districts as identified by government bodies:**

S. No.	State	Aspirational District	Amount spent (In INR)
1	Bihar	Aurangabad	5,99,69,577
2	Bihar	Begusarai	12,95,237
3	Bihar	Buxar	50,81,783
4	Bihar	Khagaria	3,07,66,874
5	Chhattisgarh	Korba	7,56,99,748
6	Jharkhand	Chatra	39,47,424
7	Jharkhand	Godda	4,11,86,186
8	Jharkhand	Hazaribagh	1,56,60,298
9	Jharkhand	Ranchi	92,94,590
10	Jharkhand	Sahibganj	69,37,369
11	Madhya Pradesh	Chhatarpur	89,25,978
12	Madhya Pradesh	Singrauli	6,62,92,351
13	Rajasthan	Baran	56,19,987
14	Uttar Pradesh	Shrawasti	11,59,200
15	Uttar Pradesh	Sonbhadra	5,67,07,765

3. **(a) Do you have a preferential procurement policy where you give preference to purchase from suppliers comprising marginalized /vulnerable groups? (Yes/No)**

Yes, NTPC is governed by The Government of India's Public Procurement

Policy for Micro and Small Enterprises (MSEs) Order, 2012. Which mandates 40% minimum procurement from MSE vendors, with sub targets for marginalized communities of 4% from MSEs owned by Scheduled Castes or the Scheduled Tribes and 3% owned by Women entrepreneurs for the Goods and Services procured.

(b) From which marginalized /vulnerable groups do you procure?

NTPC has procurement targets for marginalized communities of 4% from MSEs owned by Scheduled Castes or the Scheduled Tribes and 3% owned by Women entrepreneurs for the Goods and Services procured.

(c) What percentage of total procurement (by value) does it constitute?

MSME: 40.06 %, SC/ST: 0.17 %, Women entrepreneurs: 0.4 %

4. **Details of the benefits derived and shared from the intellectual properties owned or acquired by your entity (in the current financial year), based on traditional knowledge:**

Data consolidation is still in progress.

5. **Details of corrective actions taken or underway, based on any adverse order in intellectual property related disputes wherein usage of traditional knowledge is involved.**

No action was taken since there was no adverse order in intellectual property related disputes wherein usage of traditional knowledge is involved

6. **Details of beneficiaries of CSR Projects:**

S. No.	CSR Project	No. of persons beefitted from CSR Projects	% of beneficiaries from vulnerableand marginalized groups
1	Health	4,21,339	~ 63.38%
2	Education	1,32,332	~ 100.00%
3	Sanitation	4,37,594	~ 74.56%
4	Water	1,76,205	~ 63.38%
5	Rural Development	4,97,759	~ 63.38%
6	Vocational Training & Women Empowerment	77,651	~ 71.72%
7	PCP, Art & Culture, Sports & Others	3,19,823	~ 63.92%

** NTPC CSR interventions are taken primarily in the vicinity of its Stations/Projects with an objective to improve the quality of life of the community as a whole. Majority of the beneficiaries includes the under privileged, marginalized, vulnerable and backward section of the society. The above figures are based on the CSR activities undertaken for which either the beneficiary categorization is available or from other secondary sources viz. information available in public domain.*

Principle 9: Businesses should engage with and provide value to their consumers in a responsible manner

Essential Indicators

1. **Describe the mechanisms in place to receive and respond to consumer complaints and feedback.**

   We have an elaborate system of Customer Relationship Management (CRM), through which we reach out to our customers to collect their valuable feedback/ experiences/ expectations using regular structured interactions including support services and trainings. In addition to this, we also have a grievance portal on our website, through which customers can share their grievances. The link for the same is https://www.ntpc.co.in/grievance

2. **Turnover of products and/ services as a percentage of turnover from all products/service that carry information about:**

	As a percentage to total turnover
Environmental and social parameters relevant to the product Safe and responsible usage	0
Recycling and/or safe disposal	0

3. **Number of consumer complaints in respect of the following:**

	FY 2022-23 (Current Financial Year)		Remarks	FY 2021-22 (Previous Financial Year)		Remarks
	Received during the year	Pending resolution at end of year		Received during the year	Pending resolution at end of year	
Data privacy	NIL	NIL	NIL	NIL	NIL	NIL
Advertising	NIL	NIL	NIL	NIL	NIL	NIL
Cyber-security	NIL	NIL	NIL	NIL	NIL	NIL
Delivery of essential services	NIL	NIL	NIL	NIL	NIL	NIL
Restrictive Trade Practices	NIL	NIL	NIL	NIL	NIL	NIL
Unfair Trade Practices	NIL	NIL	NIL	NIL	NIL	NIL
Other	NIL	NIL	NIL	NIL	NIL	NIL

4. **Details of instances of product recalls on account of safety issues:**

	Number	Reasons for recall
Voluntary recalls	NA	NA
Forced recalls	NA	NA

5. **Does the entity have a framework/ policy on cyber security and risks related to data privacy? (Yes/No) If available, provide a web-link of the policy.**

   YES, our cyber security policy is available at https://www.ntpc.co.in/sites/default/files/policy-documents/CCIT-IMS-PLCY-CSP.pdf

6. **Provide details of any corrective actions taken or underway on issues relating to advertising, and delivery of essential services; cyber security and data privacy of customers; re-occurrence of instances of product recalls; penalty / action taken by regulatory authorities on safety of products / services.**

   No action was taken since no significant issues relating to advertising, and delivery of essential services; cyber security and data privacy of customers; re-occurrence of instances of product recalls; penalty / action taken by regulatory authorities on safety of products / services was identified

Leadership Indicators

1. **Channels / platforms where information on products and services of the entity can be accessed (provide web link, if available).**

   The information of our products and services can be found at our website https://www.ntpc.co.in/about-us

2. **Steps taken to inform and educate consumers about safe and responsible usage of products and/or services.**

   We offer customer support in various areas, including health and safety through workshops and seminars, with safety instructions displayed in local languages

3. **Mechanisms in place to inform consumers of any risk of disruption/discontinuation of essential services.**

   NTPC has The Regional Power Committee (RPC) and Load Dispatch Centers (NLDC, RLDCs, and SLDCs) which ensure coordination within their respective regions.

4. **Does the entity display product information on the product over and above what is mandated as per local laws? (Yes/No/Not Applicable) If yes, provide details in brief. Did your entity carry out any survey with regard to consumer satisfaction relating to the major products / services of the entity, significant locations of operation of the entity or the entity as a whole? (Yes/No)**

   Not Applicable

5. **Provide the following information relating to data breaches:**

(a) Number of instances of data breaches along-with impact: Zero

(b) Percentage of data breaches involving personally identifiable information of customers: Zero

For and on behalf of the Board of Directors

Sd/-
(Gurdeep Singh)
Chairman & Managing Director

Place: New Delhi
Date: 29th July, 2023

Annexure - X to Directors' Report

SECRETARIAL AUDIT REPORT

Form No. MR-3

FOR THE FINANCIAL YEAR ENDED MARCH 31, 2023

[Pursuant to Section 204(1) of the Companies Act, 2013 and Rule No.9 of the Companies (Appointment and Remuneration Personnel) Rules, 2014]

To,
The Members,
NTPC Limited
NTPC Bhawan, Scope Complex, 7, Institutional Area
Lodhi Road, New Delhi -110003
CIN: L40101DL1975GOI007966

We have conducted the secretarial audit of the compliance of applicable statutory provisions and the adherence to good corporate practices by NTPC Limited (hereinafter referred to as "the Company") having its registered office at NTPC Bhawan, Scope Complex, 7, Institutional Area, Lodhi Road, New Delhi -110003. The Secretarial Audit was conducted in a manner that provided us a reasonable basis for evaluating the corporate conducts/statutory compliances and expressing my opinion thereon.

Based on our verification of the books, papers, minute books, forms and returns filed and other records maintained by the Company and also the information provided by the Company, its officers, agents and authorized representatives during the conduct of secretarial audit, we hereby report that in our opinion, the Company has, during the audit period covering the financial year ended on March 31, 2023, complied with the statutory provisions listed hereunder and also that the Company has proper Board-processes and compliance mechanism in place to the extent, in the manner and subject to the reporting made hereinafter:

We have examined the books, papers, minute books, forms and returns filed and other records maintained by NTPC Limited for the financial year ended on March 31, 2023 according to the provisions of:

(i) The Companies Act, 2013 (the Act) and the rules made thereunder;

(ii) The Securities Contracts (Regulation) Act, 1956 ('SCRA') and the rules made thereunder;

(iii) The Depositories Act, 1996 and the Regulations and Bye-laws framed thereunder;

(iv) Foreign Exchange Management Act, 1999 and the rules and regulations made thereunder to the extent of Foreign Direct Investment, Overseas Direct Investment and External Commercial Borrowings.

(v) The following Regulations and Guidelines prescribed under the Securities and Exchange Board of India Act, 1992 ('SEBI Act'):-

(a) The Securities and Exchange Board of India (Substantial Acquisition of Shares and Takeovers) Regulations, 2011;

(b) The Securities and Exchange Board of India (Prohibition of Insider Trading) Regulations, 2015;

(c) The Securities and Exchange Board of India (Issue of Capital and Disclosure Requirements) Regulations, 2018;

(d) Securities and Exchange Board of India (Share Based Employee Benefits) Regulations, 2014 and Securities and Exchange Board of India (Share Based Employee Benefits and Sweat Equity) Regulations, 2021; [Not applicable during the Review Period];

(e) The Securities and Exchange Board of India (Issue and Listing of Debt Securities) Regulations, 2008 Securities and Exchange Board of India (Issue and Listing of Non-Convertible Securities) Regulations, 2021;

(f) The Securities and Exchange Board of India (Registrars to an Issue and Share Transfer Agents) Regulations, 1993 regarding the Companies Act and dealing with client to the extent of Securities issued;

(g) The Securities and Exchange Board of India (Delisting of Equity Shares) Regulations, 2009;

[Not applicable during the Audit Period];

(h) The Securities and Exchange Board of India (Buyback of Securities) Regulations, 2018; [Not applicable during the Audit Period]

(i) The Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015

(vi) Other laws:

1. Labour Laws:

(Central Act):

a. ESI Act

b. EPF Act

2. Industry Specific Laws:

a. Electricity Act, 2003.

b. Explosives Act, 1884.

c. Mines Act, 1952

d. Mines and Mineral (Regulation and Development) Act, 1957

We have also examined compliance with the applicable clauses of the following:

(i) Secretarial Standards issued by The Institute of Company Secretaries of India.

(ii) The Listing Agreements entered into by the Company with the National Stock Exchange Limited and BSE Limited in accordance with SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015.

During the period under review the Company has complied with the provisions of the Act, Rules, Regulations, Guidelines, Standards, etc. except the following observations:

a. The Company was not in compliance with the provisions of Section 149 of the Act read with Regulation 17 and 25(6) of SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015 regarding the requirements of having at least half of the Board of Directors as the Independent Directors and filing the vacancy of the Independent Directors within Specified Period. Further half of the Board of the Company was not "non-executive" for a certain period.

b. The Company was not in compliance with the Regulation 17(10) of the SEBI (LODR) Regulations, 2015 related to the evaluation of the Independent Directors of the Company by the entire Board of Directors of the Company.

c. The Company has not complied with the proviso to Regulation 19(4) read with Schedule II Part D, of the SEBI (LODR), Regulations, 2015 related to formulation of policy/criteria for the Board of Directors.

d. The Audit committee has not accorded its post facto approval for the related party transaction happened during the year.

We further report that:

In the absence of requisite number of Independent Directors, the Company has not complied with the requirement pertaining to the composition and Constitution of the Board and Committees thereof to be constituted as per the DPE Guidelines and SEBI (Listing Obligations & Disclosure Requirements) Regulations, 2015. The Changes in the composition of the Board of Directors that took place during the period were carried out in compliance with the provisions of the Act.

Adequate notice is given to all Directors to schedule the Board Meetings, agenda and detailed notes on agenda were sent at least seven days in advance, and a system exists for seeking and obtaining further information and clarifications on the agenda items before the meeting and for meaningful participation at the meeting except in some cases.

Majority decision is carried through while the dissenting members' views are captured and recorded as part of the minutes.

We further report that there are adequate systems and processes in the Company commensurate with the size and operations of the Company to monitor and ensure compliance with applicable laws, rules, regulations and guidelines.

We further report that during the audit period, the following specific events/actions took place in the Company having a major bearing on the Company's Affairs in pursuance of the above referred laws, rules, regulations, guidelines, standards, etc.:

a. The Company has issued 5.78% NTPC Series-77 Non-Convertible Debenture on Private Placement basis, aggregating to ₹ 15,00,00,00,000, pursuant to which allotment of 15,000 Non-Convertible Debentures having Face value of ₹ 10,00,000 each is made on 29.04.2022;

b. The Company has issued 7.44% NTPC Series-78 Non-Convertible Debentures on Private Placement basis, aggregating to ₹ 20,00,00,00,000, pursuant to which allotment of 20,000 Non-Convertible Debentures having Face value of ₹ 10,00,000 each is made on 25.08.2022;

c. The Company has issued 7.44% NTPC Series-79 Non-Convertible Debentures on Private Placement basis, aggregating to ₹ 5,00,00,00,000, pursuant to which allotment of 5000 Non-Convertible Debentures having Face value of ₹ 10,00,000 each is made on 16.12.2022;

For Amit Agrawal & Associates
(Company Secretaries)

CS Amit Agrawal
(Partner)
M. No. F5311, C.P. No. : 3647
UDIN: F005311E000538571

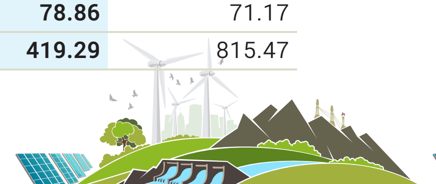
Place : Delhi
Date: 03.07.2023

This report is to be read with our letter of even date which is annexed herewith and marked as "Annexure A" and forms an integral part of this report.

STANDALONE BALANCE SHEET AS AT 31 MARCH 2023

₹ Crore

Particulars	Note No.	As at 31 March 2023	As at 31 March 2022
ASSETS			
Non-current assets			
Property, plant and equipment	2	**1,96,441.71**	1,95,084.07
Capital work-in-progress	3	**61,743.88**	73,519.11
Investment property	4	**465.18**	-
Intangible assets	5	**454.17**	486.47
Intangible assets under development	6	**44.92**	98.47
Financial assets			
Equity investments in subsidiary and joint venture companies	7	**29,088.67**	23,146.89
Other investments	8	**631.08**	102.48
Loans	9	**1,233.47**	1,288.50
Trade receivables	10	**2,399.78**	-
Other financial assets	11	**922.93**	1,017.98
Other non-current assets	12	**12,353.64**	12,355.11
Total non-current assets		**3,05,779.43**	3,07,099.08
Current assets			
Inventories	13	**13,679.75**	9,691.00
Financial assets			
Investments	14	**50.00**	-
Trade receivables	15	**24,741.45**	24,747.45
Cash and cash equivalents	16	**3.13**	117.48
Bank balances other than cash and cash equivalents	17	**3,738.60**	2,629.70
Loans	18	**312.45**	313.45
Other financial assets	19	**11,273.81**	4,599.61
Other current assets	20	**10,726.15**	9,101.70
Total current assets		**64,525.34**	51,200.39
Assets held for sale	21	**120.52**	18.09
Regulatory deferral account debit balances	22	**11,961.97**	12,822.88
TOTAL ASSETS		**3,82,387.26**	3,71,140.44
EQUITY AND LIABILITIES			
Equity			
Equity share capital	23	**9,696.67**	9,696.67
Other equity	24	**1,29,193.21**	1,18,970.85
Total equity		**1,38,889.88**	1,28,667.52
Liabilities			
Non-current liabilities			
Financial liabilities			
Borrowings	25	**1,56,315.69**	1,60,122.17
Lease liabilities	26	**815.44**	815.07
Trade payables	27		
Total outstanding dues of micro and small enterprises		**7.66**	13.45
Total outstanding dues of creditors other than micro and small enterprises		**78.86**	71.17
Other financial liabilities	28	**419.29**	815.47



STANDALONE BALANCE SHEET AS AT 31 MARCH 2023

₹ Crore

Particulars	Note No.	As at 31 March 2023	As at 31 March 2022
Provisions	29	**1,727.78**	1,446.48
Deferred tax liabilities (net)	30	**10,614.07**	10,184.39
Other non-current liabilities	31	**70.64**	1,081.61
Total non-current liabilities		**1,70,049.43**	1,74,549.81
Current liabilities			
Financial liabilities			
Borrowings	32	**28,681.96**	24,472.43
Lease liabilities	33	**170.79**	168.01
Trade payables	34		
Total outstanding dues of micro and small enterprises		**425.46**	479.30
Total outstanding dues of creditors other than micro and small enterprises		**11,581.88**	9,255.05
Other financial liabilities	35	**21,224.80**	23,169.61
Other current liabilities	36	**1,212.97**	1,099.84
Provisions	37	**7,470.25**	7,171.31
Current tax liabilities (net)	38	**62.97**	134.17
Total current liabilities		**70,831.08**	65,949.72
Deferred revenue	39	**2,616.87**	1,973.39
TOTAL EQUITY AND LIABILITIES		**3,82,387.26**	3,71,140.44

Significant accounting policies 1

The accompanying notes 1 to 78 form an integral part of these financial statements.

For and on behalf of the Board of Directors

(Arun Kumar)
Company Secretary

(Jaikumar Srinivasan)
Director (Finance)
DIN: 01220828

(Gurdeep Singh)
Chairman & Managing Director
DIN: 00307037

This is the Balance Sheet referred to in our report of even date

For S.K. Mehta & Co.
Chartered Accountants
Firm Reg. No.000478N

(Rohit Mehta)
Partner
M No.091382

For Varma & Varma
Chartered Accountants
Firm Reg. No. 004532S

(K P Srinivas)
Partner
M No. 208520

For Parakh & Co.
Chartered Accountants
Firm Reg. No. 001475C

(Thalendra Sharma)
Partner
M No.079236

For C.K. Prusty & Associates
Chartered Accountants
Firm Reg. No. 323220E

(C.K.Prusty)
Partner
M No. 057318

For B.C. Jain & Co.
Chartered Accountants
Firm Reg. No. 001099C

(Rishabh Jain)
Partner
M.No.400912

For V.K. Jindal & Co.
Chartered Accountants
Firm Reg. No. 001468C

(Suresh Agarwal)
Partner
M.No.072534

Place : New Delhi
Dated : 19 May 2023

Digitally signed by signatories

STANDALONE STATEMENT OF PROFIT AND LOSS FOR THE YEAR ENDED 31 MARCH 2023

₹ Crore

Particulars	Note No.	For the year ended 31 March 2023	For the year ended 31 March 2022
Income			
Revenue from operations	40	**1,63,769.77**	1,21,174.55
Other income	41	**3,954.64**	3,575.11
Total income		**1,67,724.41**	1,24,749.66
Expenses			
Fuel cost	42	**96,851.50**	66,570.07
Electricity purchased for trading		**3,656.26**	3,450.22
Employee benefits expense	43	**5,559.03**	5,412.07
Finance costs	44	**9,979.23**	8,216.54
Depreciation, amortization and impairment expenses	45	**13,136.71**	12,058.24
Other expenses	46	**14,474.59**	9,717.19
Total expenses		**1,43,657.32**	1,05,424.33
Profit before tax and regulatory deferral account balances		**24,067.09**	19,325.33
Tax expense	55		
Current tax			
Current year		**4,293.56**	3,398.47
Earlier years		**206.35**	(0.94)
Deferred tax		**1,779.36**	1,060.24
Total tax expense		**6,279.27**	4,457.77
Profit before regulatory deferral account balances		**17,787.82**	14,867.56
Net movement in regulatory deferral account balances (net of tax)	71	**(591.09)**	1,414.43
Profit for the year		**17,196.73**	16,281.99
Other comprehensive income			
Items that will not be reclassified to profit or loss			
Net actuarial gains/(losses) on defined benefit plans		**(96.09)**	(112.74)
Net gains/(losses) on fair value of equity instruments		**3.60**	5.40
		(92.49)	(107.34)
Income tax on items that will not be reclassified to profit or loss	55		
Net actuarial gains/(losses) on defined benefit plans		**16.79**	19.69
Other comprehensive income for the year, net of tax		**(75.70)**	(87.65)
Total comprehensive income for the year		**17,121.03**	16,194.34

STANDALONE STATEMENT OF PROFIT AND LOSS FOR THE YEAR ENDED 31 MARCH 2023

₹ Crore

Particulars	Note No.	For the year ended 31 March 2023	For the year ended 31 March 2022
Earnings per equity share (Par value ₹ 10/- each)	61		
Basic & Diluted (₹) (including net movement in regulatory deferral account balances)		**17.73**	16.79
Basic & Diluted (₹) (excluding net movement in regulatory deferral account balances)		**18.34**	15.33
Significant accounting policies	1		
The accompanying notes 1 to 78 form an integral part of these financial statements.			

For and on behalf of the Board of Directors

(Arun Kumar) Company Secretary	(Jaikumar Srinivasan) Director (Finance) DIN: 01220828	(Gurdeep Singh) Chairman & Managing Director DIN: 00307037

This is the Statement of Profit and Loss referred to in our report of even date

For S.K. Mehta & Co. Chartered Accountants Firm Reg. No.000478N	For Varma & Varma Chartered Accountants Firm Reg. No. 004532S	For Parakh & Co. Chartered Accountants Firm Reg. No. 001475C
(Rohit Mehta) Partner M No.091382	(K P Srinivas) Partner M No. 208520	(Thalendra Sharma) Partner M No.079236
For C.K. Prusty & Associates Chartered Accountants Firm Reg. No. 323220E	For B.C. Jain & Co. Chartered Accountants Firm Reg. No. 001099C	For V.K. Jindal & Co. Chartered Accountants Firm Reg. No. 001468C
(C.K.Prusty) Partner M No. 057318	(Rishabh Jain) Partner M.No.400912	(Suresh Agarwal) Partner M.No.072534

Place : New Delhi
Dated : 19 May 2023

Digitally signed by signatories

STANDALONE STATEMENT OF CHANGES IN EQUITY FOR THE YEAR ENDED 31 MARCH 2023

(A) Equity share capital

For the year ended 31 March 2023 — **₹ Crore**

Particulars	Amount
Balance as at 1 April 2022	**9,696.67**
Changes in equity share capital due to prior period errors	-
Restated balance as at 1 April 2022	**9,696.67**
Changes in equity share capital during the year	-
Balance as at 31 March 2023	**9,696.67**

For the year ended 31 March 2022 — ₹ Crore

Particulars	Amount
Balance as at 1 April 2021	9,696.67
Changes in equity share capital due to prior period errors	-
Restated balance as at 1 April 2021	9,696.67
Changes in equity share capital during the year	-
Balance as at 31 March 2022	9,696.67

(B) Other equity

For the year ended 31 March 2023 — ₹ Crore

Particulars	Reserves & surplus						Equity instruments through OCI	Total
	Capital reserve	Capital redemption reserve	Bonds/ Debentures redemption reserve	Fly ash utilisation reserve fund	General reserve	Retained earnings		
Balance as at 1 April 2022- As restated	50.08	197.89	5,643.18	598.41	96,147.17	16,247.42	86.70	**1,18,970.85**
Profit for the year						17,196.73		**17,196.73**
Other comprehensive income						(79.30)	3.60	**(75.70)**
Total comprehensive income	-	-	-	-	-	**17,117.43**	**3.60**	**17,121.03**
Transfer to retained earnings			(628.57)			628.57		-
Accretion / (utilisation) in fly ash utilisation fund (net) (Note 24)				131.41				**131.41**
Final dividend paid for FY 2021-22 (Note 24)						(2,909.00)		**(2,909.00)**
Interim dividend paid for FY 2022-23 (Note 24)						(4,121.08)		**(4,121.08)**
Balance as at 31 March 2023	**50.08**	**197.89**	**5,014.61**	**729.82**	**96,147.17**	**26,963.34**	**90.30**	**1,29,193.21**

STANDALONE STATEMENT OF CHANGES IN EQUITY FOR THE YEAR ENDED 31 MARCH 2023

For the year ended 31 March 2022

₹ Crore

Particulars	Reserves & surplus						Equity instruments through OCI	Total
	Capital reserve	Capital redemption reserve	Bonds/ Debentures redemption reserve	Fly ash utilisation reserve fund	General reserve	Retained earnings		
Balance as at 1 April 2021 - before restatement	50.08	197.89	6,240.43	598.08	96,147.17	5,973.87	81.30	1,09,288.82
Restatement of balances due to business combination -Refer Note 65	-	-	-	13.19	-	420.48	-	433.67
Balance as at 1 April 2021 - after restatement	50.08	197.89	6,240.43	611.27	96,147.17	6,394.35	81.30	1,09,722.49
Profit for the year	-	-	-	-	-	16,281.99	-	16,281.99
Other comprehensive income	-	-	-	-	-	(93.05)	5.40	(87.65)
Total comprehensive income	-	-	-	-	-	16,188.94	5.40	16,194.34
Transfer to retained earnings	-	-	(597.25)	-	-	597.25	-	-
Accretion / (utilisation) in fly ash utilisation fund (net) (Note 24)	-	-	-	(12.86)	-	-	-	(12.86)
Final dividend paid for FY 2020-21 (Note 24)	-	-	-	-	-	(3,054.45)	-	(3,054.45)
Interim dividend paid for FY 2021-22 (Note 24)	-	-	-	-	-	(3,878.67)	-	(3,878.67)
Balance as at 31 March 2022	50.08	197.89	5,643.18	598.41	96,147.17	16,247.42	86.70	1,18,970.85

Note: Other comprehensive income adjusted in retained earnings amounting to ₹ **79.30 crore** (31 March 2022: ₹ 93.05 crore) represents remeasurement of defined benefit plans.

For and on behalf of the Board of Directors

(Arun Kumar)
Company Secretary

(Jaikumar Srinivasan)
Director (Finance)
DIN: 01220828

(Gurdeep Singh)
Chairman & Managing Director
DIN: 00307037

This is the Statement of Changes in Equity referred to in our report of even date

For S.K. Mehta & Co.
Chartered Accountants
Firm Reg. No.000478N

(Rohit Mehta)
Partner
M No.091382

For Varma & Varma
Chartered Accountants
Firm Reg. No. 004532S

(K P Srinivas)
Partner
M No. 208520

For Parakh & Co.
Chartered Accountants
Firm Reg. No. 001475C

(Thalendra Sharma)
Partner
M No.079236

For C.K. Prusty & Associates
Chartered Accountants
Firm Reg. No. 323220E

(C.K.Prusty)
Partner
M No. 057318

For B.C. Jain & Co.
Chartered Accountants
Firm Reg. No. 001099C

(Rishabh Jain)
Partner
M.No.400912

For V.K. Jindal & Co.
Chartered Accountants
Firm Reg. No. 001468C

(Suresh Agarwal)
Partner
M.No.072534

Place : New Delhi
Dated : 19 May 2023
Digitally signed by signatories

STANDALONE STATEMENT OF CASH FLOWS FOR THE YEAR ENDED 31 MARCH 2023

₹ Crore

	Particulars	For the year ended 31 March 2023		For the year ended 31 March 2022
A.	**CASH FLOW FROM OPERATING ACTIVITIES**			
	Profit before exceptional items, tax and regulatory deferral account balances		**24,067.09**	19,325.33
	Add: Net movements in regulatory deferral account balances (net of tax)		**(591.09)**	1,414.43
	Add: Tax on net movements in regulatory deferral account balances		**(125.14)**	284.69
	Profit before tax including movements in regulatory deferral account balances		**23,350.86**	21,024.45
	Adjustment for:			
	Depreciation, amortisation and impairment expense	**13,136.71**		12,058.24
	Provisions	**621.64**		338.49
	Impairment on investments	**14.24**		16.30
	On account of government grants	**234.28**		(117.10)
	Deferred foreign currency fluctuation asset	**(84.69)**		408.83
	Deferred income from foreign currency fluctuation	**915.67**		222.14
	Regulatory deferral account debit balances	**716.23**		(1,699.12)
	Fly ash utilisation reserve fund	**131.41**		(12.86)
	Finance costs	**9,915.66**		8,148.47
	Unwinding of discount on vendor liabilities / discounting of trade receivable	**63.57**		68.07
	Interest income/Late payment Surcharge/Income on investments	**(757.70)**		(973.59)
	Dividend income	**(2,342.54)**		(1,745.08)
	Provisions written back	**(367.04)**		(303.35)
	Profit on de-recognition of property, plant and equipment	**(31.73)**		(6.21)
	Loss on de-recognition of property, plant and equipment	**165.36**		106.12
			22,331.07	16,509.35
	Operating profit before working capital changes		**45,681.93**	37,533.80
	Adjustment for:			
	Trade receivables	**(2,450.76)**		(294.00)
	Inventories	**(2,921.65)**		559.91
	Trade payables, provisions, other financial liabilities and other liabilities	**3,875.07**		3,302.73
	Loans, other financial assets and other assets	**(5,049.74)**		(1,505.40)
			(6,547.08)	2,063.24
	Cash generated from operations		**39,134.85**	39,597.04
	Income taxes (paid) / refunded		**(3,736.28)**	(1,698.83)
	Net cash from/(used in) operating activities - A		**35,398.57**	37,898.21
B.	**CASH FLOW FROM INVESTING ACTIVITIES**			
	Purchase of property, plant and equipment, intangible assets and investment property	**(17,320.53)**		(19,267.79)
	Proceeds of property, plant and equipment, intangible assets and investment property	**97.01**		92.74
	Proceeds / Investment in mutual funds	**-**		499.99
	Sale of investment in Subsidiaries companies	**1,094.46**		-
	Investment in subsidiaries and joint venture companies	**(7,725.48)**		(1,396.32)
	Loans and advances to subsidiaries	**(3,106.13)**		70.31

STANDALONE STATEMENT OF CASH FLOWS FOR THE YEAR ENDED 31 MARCH 2023

₹ Crore

	Particulars		For the year ended 31 March 2023	For the year ended 31 March 2022
	Interest income/Late payment Surcharge/Income on investments received	**369.06**		975.35
	Dividend received	**1,992.54**		1,745.08
	Income tax paid on income from investing activities	**(388.54)**		(528.36)
	Bank balances other than cash and cash equivalents	**(1,085.70)**		(271.05)
	Proceeds from sale of assets to Subsidiary	**12,010.55**		
	Net cash from/(used in) investing activities - B		**(14,062.76)**	(18,080.05)
C.	**CASH FLOW FROM FINANCING ACTIVITIES**			
	Proceeds from non-current borrowings	**16,257.48**		19,911.50
	Repayment of non-current borrowings	**(22,371.86)**		(15,680.33)
	Proceeds/repayments of current borrowings	**4,403.56**		(6,189.43)
	Payment of lease obligations	**(151.68)**		(35.60)
	Interest paid	**(12,557.58)**		(10,950.39)
	Dividend paid	**(7,030.08)**		(6,933.12)
	Net cash from/(used in) financing activities - C		**(21,450.16)**	(19,877.37)
	Net increase/(decrease) in cash and cash equivalents (A+B+C)		**(114.35)**	(59.21)
	Cash and cash equivalents at the beginning of the year (see Note 1 and 2 below)		**117.48**	176.69
	Cash and cash equivalents at the end of the year (see Note 1 and 2 below)		**3.13**	117.48
Notes:				
1.	Cash and cash equivalents consist of cheques, drafts, stamps in hand, balances with banks and deposits with original maturity of upto three months.			
2.	Reconciliation of cash and cash equivalents:			
	Cash and cash equivalents as per Note 16		**3.13**	117.48

3. Refer Note 68 for details of undrawn borrowing facilities that may be available for future operating activities and to settle capital commitments.
4. Refer Note 78 w.r.t. amount spent on CSR activities.
5. Reconciliation between the opening and closing balances in the balance sheet for liabilities arising from financing activities:

For the year ended 31 March 2023 ₹ Crore

Particulars	Non-current borrowings*	Finance lease obligations	Current borrowings
Opening balance as at 1 April 2022	1,79,853.77	983.08	7,106.17
Cash flows during the year	(18,671.96)	(151.68)	4,403.56
Non-cash changes due to:			
- Acquisitions under finance lease	-	154.83	-
- Interest on borrowings	12,679.18	-	-
- Variation in exchange rates	2,155.14	-	-
- Transaction costs on borrowings	(41.27)	-	-
Closing balance as at 31 March 2023	**1,75,974.86**	**986.23**	**11,509.73**

STANDALONE STATEMENT OF CASH FLOWS FOR THE YEAR ENDED 31 MARCH 2023

For the year ended 31 March 2022 ₹ Crore

Particulars	Non-current borrowings*	Finance lease obligations	Current borrowings
Opening balance as at 1 April 2021	1,75,664.99	872.42	13,295.60
Cash flows during the year	(6,719.22)	(35.60)	(6,189.43)
Non-cash changes due to:			
- Acquisitions under finance lease	-	146.26	-
- Interest on borrowings	11,338.06	-	-
- Variation in exchange rates	(427.35)	-	-
- Transaction costs on borrowings	(2.71)	-	-
Closing balance as at 31 March 2022	1,79,853.77	983.08	7,106.17

* Includes current maturities of non-current borrowings and interest accrued thereon, refer Note 25 and Note 32.

For and on behalf of the Board of Directors

(Arun Kumar) Company Secretary	(Jaikumar Srinivasan) Director (Finance) DIN: 01220828	(Gurdeep Singh) Chairman & Managing Director DIN: 00307037

This is the Standalone statement of cash flows referred to in our report of even date

For S.K. Mehta & Co. Chartered Accountants Firm Reg. No.000478N	For Varma & Varma Chartered Accountants Firm Reg. No. 004532S	For Parakh & Co. Chartered Accountants Firm Reg. No. 001475C
(Rohit Mehta) Partner M No.091382	(K P Srinivas) Partner M No. 208520	(Thalendra Sharma) Partner M No.079236
For C.K. Prusty & Associates Chartered Accountants Firm Reg. No. 323220E	For B.C. Jain & Co. Chartered Accountants Firm Reg. No. 001099C	For V.K. Jindal & Co. Chartered Accountants Firm Reg. No. 001468C
(C.K.Prusty) Partner M No. 057318	(Rishabh Jain) Partner M.No.400912	(Suresh Agarwal) Partner M.No.072534

Place : New Delhi
Dated : 19 May 2023

Digitally signed by signatories

Notes forming part of Standalone Financial Statements

Note 1. Company Information and Significant Accounting Policies

A. Reporting entity

NTPC Limited (the "Company") is a Company domiciled in India and limited by shares (CIN: L40101DL1975GOI007966). The shares of the Company are listed and traded on the National Stock Exchange of India Limited (NSE) and BSE Limited in India. The address of the Company's registered office is NTPC Bhawan, SCOPE Complex, 7 Institutional Area, Lodhi Road, New Delhi - 110003. The Company is primarily involved in the generation and sale of bulk power to State Power Utilities. Other business of the Company includes providing consultancy, project management & supervision, energy trading, oil & gas exploration and coal mining.

B. Basis of preparation

1. Statement of Compliance

These standalone financial statements are prepared on going concern basis following accrual system of accounting and comply with the Indian Accounting Standards (Ind AS) prescribed under Section 133 of the Companies Act, 2013 read with the Companies (Indian Accounting Standards) Rules, 2015 as amended, and other relevant provisions of the Companies Act, 2013 and the provisions of the Electricity Act, 2003 to the extent applicable.

These financial statements were approved for issue by the Board of Directors in its meeting held on 19 May 2023.

2. Basis of measurement

The financial statements have been prepared on the historical cost basis except for:

- Certain financial assets and liabilities (including derivative instruments) that are measured at fair value (refer serial no. 28 of accounting policy regarding financial instruments); and
- Plan assets in the case of employees defined benefit plans that are measured at fair value.

The methods used to measure fair values are discussed in notes to the financial statements.

Historical cost is the amount of cash or cash equivalents paid or the fair value of the consideration given to acquire assets at the time of their acquisition or the amount of proceeds received in exchange for the obligation, or at the amounts of cash or cash equivalents expected to be paid to satisfy the liability in the normal course of business. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

3. Functional and presentation currency

These financial statements are presented in Indian Rupees (₹) which is the Company's functional currency. All financial information presented in (₹) has been rounded to the nearest crore (up to two decimals), except when indicated otherwise.

4. Current and non-current classification

The Company presents assets and liabilities in the balance sheet based on current/non-current classification.

An asset is classified as current when it is:

- Expected to be realized or intended to be sold or consumed in normal operating cycle;
- Held primarily for the purpose of trading;
- Expected to be realized within twelve months after the reporting period; or
- Cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period.

All other assets are classified as non-current.

A liability is classified as current when:

- It is expected to be settled in normal operating cycle;
- It is held primarily for the purpose of trading;
- It is due to be settled within twelve months after the reporting period; or
- There is no unconditional right to defer settlement of the liability for at least twelve months after the reporting period.

All other liabilities are classified as non-current.

Deferred tax assets/liabilities are classified as non-current.

Assets and liabilities are classified between current and non-current considering 12 months period as normal operating cycle.

C. Significant accounting policies

A summary of the significant accounting policies applied in the preparation of the financial statements are as given below. These accounting policies have been applied consistently to all periods presented in the financial statements.

The Company has elected to utilize the option under Ind AS 101-'First time adoption of Indian Accounting Standards' by not applying the provisions of Ind AS 16-'Property, plant and equipment'& Ind AS 38- 'Intangible assets' retrospectively and continue to use the previous GAAP carrying amount as a deemed cost under Ind AS at the date of transition to Ind AS i.e. 1 April 2015. Therefore, the carrying amount of property, plant and equipment and intangible assets as per the previous GAAP as at 1 April 2015, i.e. the Company's date of transition to Ind AS, were maintained on transition to Ind AS.

1. Property, plant and equipment

1.1. Initial recognition and measurement

An item of property, plant and equipment is recognized as an asset if and only if it is probable that future economic benefits associated with the item will flow to the Company and the cost of the item can be measured reliably.

Items of property, plant and equipment are initially recognized at cost. Cost comprises purchase price including import duties and non-refundable purchase taxes after deducting trade discounts and rebates, any cost directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management and the present value of initial estimate of cost of dismantling, removal and restoration.

Subsequent measurement is done at cost less accumulated depreciation/amortization and accumulated impairment losses.

When parts of an item of property, plant and equipment that are significant in value and have different useful lives as compared to the main asset, they are recognized separately.

Deposits, payments/liabilities made provisionally towards compensation, rehabilitation and other expenses relatable to land in possession are treated as cost of land.

In the case of assets put to use, where final settlement of bills with contractors is yet to be effected, capitalization is done on provisional basis subject to necessary adjustment in the year of final settlement.

Assets and systems common to more than one generating unit are capitalized on the basis of engineering estimates/ assessments.

Items of spare parts, stand-by equipment and servicing equipment which meet the definition of property, plant and equipment are capitalized. Other spare parts are carried as inventory and recognized as expense in the statement of profit and loss on consumption.

The acquisition or construction of some items of property, plant and equipment although not directly increasing the future economic benefits of any particular existing item of property, plant and equipment, may be necessary for the Company to obtain future economic benefits from its other assets. Such items are recognized as property, plant and equipment.

Excess of net sale proceed of items produced while bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management is deducted from the directly attributable cost considered as part of an item of property, plant and equipment.

1.2. Subsequent costs

Subsequent expenditure is recognized in the carrying amount of the asset when it is probable that future economic benefits deriving from the cost incurred will flow to the enterprise and the cost of the item can be measured reliably.

Expenditure on major inspection and overhauls of generating unit is capitalized, when it meets the asset recognition criteria. Any remaining carrying amount of the cost of the previous inspection and overhaul is derecognized.

The cost of replacing major part of an item of property, plant and equipment is recognized in the carrying amount of the item if it is probable that the future economic benefits embodied within the part will flow to the Company and its cost can be measured reliably. The carrying amount of the replaced part is derecognized regardless of whether the replaced part has been depreciated separately. If it is not practicable to determine the carrying amount of the replaced part, the Company uses the cost of the replacement as an indication of what the cost of replaced part was at the time it was acquired or constructed. The costs of the day-to-day servicing of property, plant and equipment are recognized in the statement of profit and loss as and when incurred.

1.3. Decommissioning costs

The present value of the expected cost for the decommissioning of the asset after its use is included in the cost of the respective asset if the recognition criteria for a provision are met.

1.4. De-recognition

Property, plant and equipment is derecognized when no future economic benefits are expected from their use or upon their disposal. Gains and losses on de-recognition of an item of property, plant and equipment are determined as the difference between sale proceeds from disposal, if any, and the carrying amount of property, plant and equipment and are recognized in the statement of profit and loss.

In circumstance, where an item of property, plant and equipment is abandoned, the net carrying cost relating to the property, plant and equipment is written off in the same period.

1.5. Depreciation/amortization

Depreciation/amortization is recognized in statement of profit and loss on a straight-line basis over the estimated useful life of each part of an item of property, plant and equipment.

Depreciation on the assets of the generation of electricity business, integrated coal mining and on the assets of Corporate & other offices of the Company, covered under Part B of Schedule II of the Companies Act, 2013, is charged on straight-line method following the rates and methodology notified by the Central Electricity Regulatory Commission (CERC) Tariff Regulations.

Depreciation on the assets of the oil & gas exploration, power plants not governed by CERC Tariff Regulations, investment properties and consultancy business is charged on straight-line method following the useful life specified in Schedule II of the Companies Act, 2013 except for the assets referred below.

Depreciation on the following assets is provided on their estimated useful lives, which are different from the useful lives as prescribed under Schedule II to the Companies Act, 2013, ascertained on the basis of technical evaluation/assessment:

a)	Kutcha roads	2 years
b)	Enabling works	
	- residential buildings	15 years
	- internal electrification of residential buildings	10 years
	- non-residential buildings including their internal electrification, water supply, sewerage & drainage works, railway sidings, aerodromes, helipads and airstrips.	5 years
c)	Personal computers & laptops including peripherals.	3 years
d)	Photocopiers, fax machines, water coolers and refrigerators.	5 years
e)	Temporary erections including wooden structures.	1 year
f)	Telephone exchange.	15 years
g)	Wireless systems, VSAT equipment, display devices viz. projectors, screens, CCTV, audio video conferencing systems and other communication equipment.	6 years
h)	Energy saving electrical appliances and fittings.	2-7 years
i)	Solar/wind power plants which are not governed by CERC Tariff Regulations.	25 years
j)	Hospital equipment	5-10 years
k)	Furniture and Fixture	5-15 years

Major overhaul and inspection costs which have been capitalized are depreciated over the period until the next scheduled outage or actual major inspection/overhaul, whichever is earlier.

Capital spares are depreciated considering the useful life ranging between 2 to 40 years based on technical assessment.

Right-of-use land and buildings relating to generation of electricity business governed by CERC Tariff Regulations are fully amortized on straight line method over the lease period or life of the related plant whichever is lower following the rates and methodology notified by the CERC Tariff Regulations.

Right-of-use land and buildings relating to generation of electricity business which are not governed by CERC tariff Regulations are fully amortized on straight line method over the lease period or life of the related plant whichever is lower.

Right-of-use land and buildings relating to corporate, and other offices are fully amortized on straight line method over lease period or twenty-five years whichever is lower following the rates and methodology notified by the CERC Tariff Regulations.

Land acquired under Coal Bearing Areas (Acquisition & Development) Act, 1957 and Other right-of-use land acquired for mining business are amortized on straight line method over the right of use period or balance life of the project whichever is lower.

In respect of integrated coal mines, the mines closure, site restoration and decommissioning obligations are amortized on straight line method over the balance life of the mine on commercial declaration.

Depreciation on additions to/deductions from property, plant and equipment during the year is charged on pro-rata basis from/up to the month in which the asset is available for use/sale, disposal or earmarked for disposal.

Where the cost of depreciable assets has undergone a change during the year due to increase/decrease in long-term liabilities (recognized up to 31 March 2016) on account of exchange fluctuation and price adjustment change in duties or similar factors, the unamortized balance of such asset is charged off prospectively over the remaining useful life determined following the applicable accounting policies relating to depreciation/amortization.

Where it is probable that future economic benefits deriving from the expenditure incurred will flow to the Company and the cost of the item can be measured reliably, subsequent expenditure on a property, plant and equipment along-with its unamortized depreciable amount is charged off prospectively over the revised useful life determined by technical assessment.

The residual values, useful lives and method of depreciation of assets other than the assets of generation of electricity business and integrated coal mines governed by CERC Tariff Regulations, are reviewed at each financial year end and adjusted prospectively, wherever required.

Depreciation of an asset ceases at the earlier of the date that the asset is classified as held for sale (or included in a disposal group that is classified as held for sale) in accordance with Ind AS 105 and the date that the asset is derecognised.

Refer policy no. C.19 in respect of depreciation/amortization of right-of-use assets other than land and buildings.

2. Capital work-in-progress

Cost incurred for property, plant and equipment that are not ready for their intended use as on the reporting date, is classified under capital work- in-progress.

The cost of self-constructed assets includes the cost of materials & direct labour, any other costs directly attributable to bringing the assets to the location and condition necessary for it to be capable of operating in the manner intended by management and the borrowing costs attributable to the acquisition or construction of qualifying asset.

Expenses directly attributable to construction of property, plant and equipment incurred till they are ready for their intended use are identified and allocated on a systematic basis on the cost of related assets.

Deposit works/cost plus contracts are accounted for on the basis of statements of account received from the contractors.

Unsettled liabilities for price variation/exchange rate variation in case of contracts are accounted for on estimated basis as per terms of the contracts.

3. Intangible assets and intangible assets under development

3.1. Initial recognition and measurement

An intangible asset is recognized if and only if it is probable that the expected future economic benefits that are attributable to the asset will flow to the Company and the cost of the asset can be measured reliably.

Intangible assets that are acquired by the Company, which have finite useful lives, are recognized at cost. Subsequent measurement is done at cost less accumulated amortization and accumulated impairment losses. Cost comprises purchase price including import duties, non -refundable taxes after deducting trade discounts and rebates and any directly attributable expenses of preparing the asset for its intended use.

Expenditure on development activities is capitalized only if the expenditure can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable and the Company intends to & has sufficient resources to complete development and to use or sell the asset.

Expenditure incurred which are eligible for capitalizations under intangible assets are carried as intangible assets under development till they are ready for their intended use.

3.2. Subsequent costs

Subsequent expenditure is recognized as an increase in the carrying amount of the asset when it is probable that future economic benefits deriving from the cost incurred will flow to the enterprise and the cost of the item can be measured reliably.

3.3. De-recognition

An intangible asset is derecognized when no future economic benefits are expected from their use or upon their disposal. Gain or loss on de-recognition of an intangible asset is determined as the difference between the net disposal proceeds, if any, and the carrying amount of intangible assets and are recognized in the statement of profit and loss.

3.4. Amortization

Cost of software recognized as intangible asset, is amortized on straight-line method over a period of legal right to use or 3 years, whichever is less. Other intangible assets are amortized on straight-line method over the period of legal right to use or life of the related plant, whichever is less.

The amortization period and the amortization method of intangible assets with a finite useful life is reviewed at each financial year end and adjusted prospectively, wherever required.

4. Regulatory deferral account balances

Expense/income recognized in the statement of profit and loss to the extent recoverable from or payable to the beneficiaries in subsequent periods as per CERC Tariff Regulations are recognized as 'Regulatory deferral account balances'.

Regulatory deferral account balances are adjusted in the year in which the same become recoverable from or payable to the beneficiaries.

Regulatory deferral account balances are evaluated at each balance sheet date to ensure that the underlying activities meet the recognition criteria and it is probable that future economic benefits associated with such balances will flow to the entity. If these criteria are not met, the regulatory deferral account balances are derecognized.

5. Exploration for and evaluation of mineral resources

5.1. Oil and gas exploration activities

All exploration costs incurred in drilling and equipping exploratory and appraisal wells, cost of drilling exploratory type stratigraphic test wells are initially capitalized as 'Exploratory wells-in-progress' under 'Intangible assets under development' till the time these are either transferred to oil and gas assets when a well is ready for commercial production or expensed as exploration cost (including allocated depreciation) as and when determined to be dry or of no further use, as the case may be.

Costs of exploratory wells are not carried over unless it could be reasonably demonstrated that there are indications of sufficient quantity of reserves and sufficient progress is being made in assessing the reserves and the economic & operating viability of the project. All such carried over costs are subject to review for impairment.

Cost of surveys and prospecting activities conducted in the search of oil and gas are expensed in the year in which these are incurred.

5.2. Coal mining exploration activities

Exploration and evaluation assets comprise capitalized costs which is generally the expenditure incurred associated with finding the mineral by carrying out topographical, geological, geochemical and geophysical studies, exploratory drilling, trenching, sampling, expenditure for activities in relation to evaluation of technical feasibility and commercial viability, acquisition of rights to explore etc.

Exploration and evaluation expenditure incurred after obtaining the mining right or the legal right to explore are capitalized as exploration and evaluation assets under 'Intangible assets under development' and stated at cost less impairment if any. Exploration and evaluation assets are assessed for impairment indicators at least annually.

Once the proved reserves are determined and development of mine/project is sanctioned, Exploration and evaluation assets are transferred to 'Development of Coal Mines' under 'Capital Work in Progress'. However, if proved reserves are not determined, exploration and evaluation asset is derecognized.

Exploration and evaluation expenditure incurred prior to obtaining the mining right or the legal right to explore are expensed as and when incurred.

6. Development expenditure on coal mines

When proved reserves are determined and development of mines/project is sanctioned, exploration and evaluation assets are transferred to 'Development of coal mines' under 'Capital work-in-progress'.

Subsequent expenditure is capitalized only where it either enhances the economic benefits of the development/producing asset or replaces part of the existing development/producing asset. Any remaining costs associated with the part replaced are expensed.

The development expenditure capitalized is net of value of coal extracted during development phase.

Date of commercial operation of integrated coal mines shall be determined on the occurring of earliest of following milestones as provided in CERC tariff regulations:

1) The first date of the year succeeding the year in which 25 % of the peak rated capacity as per the mining plan is achieved; or

2) The first date of the year succeeding the year in which the value of production exceeds the total expenditure in that year; or

3) The date of two years from the date of commencement of production;

On the date of commercial operation, the assets under capital work-in-progress are classified as a component of property, plant and equipment under 'Mining property'.

Gains and losses on de-recognition of assets referred above, are determined as the difference between the net disposal proceeds, if any, and the carrying amount of respective assets and are recognized in the statement of profit and loss.

6.1. Stripping activity expense/adjustment

Expenditure incurred on removal of mine waste materials (overburden) necessary to extract the coal reserves is referred to as stripping cost. The Company has to incur such expenses over the life of the mine as technically estimated.

Cost of stripping is charged on technically evaluated average stripping ratio at each mine with due adjustment for stripping activity asset and ratio-variance account after the mines are brought to revenue.

Net of the balances of stripping activity asset and ratio variance at the Balance Sheet date is shown as 'Stripping activity adjustment' under the head 'Non-current assets/Non-current provisions' as the case may be, and adjusted as provided in the CERC Tariff Regulations

6.2. Mines closure, site restoration and decommissioning obligations

The Company's obligations for land reclamation and decommissioning of structure consist of spending at mines in accordance with the guidelines from Ministry of Coal, Government of India. The Company estimates its obligations for mine closure, site restoration and decommissioning based on the detailed calculation and technical assessment of the amount and timing of future cash spending for the required work and provided for as per approved mine closure plan. The estimate of expenses is escalated for inflation and then discounted at a pre-tax discount rate that reflects current market assessment of the time value of money and risk, such that the amount of provision reflects the present value of expenditure required to settle the obligation. The Company recognizes a corresponding asset under property, plant and equipment as a separate item for the cost associated with such obligation. Upon commercial declaration of mines, the mine closure, site restoration and decommissioning obligations are amortized on straight line method over the balance life of the mine.

The value of the obligation is progressively increased over time as the effect of discounting unwinds and the same is recognized as finance costs.

Further, a specific escrow account is maintained for this purpose as per approved mine closure plan. The progressive mine closure expenses incurred on year to year basis, forming part of the total mine closure obligation, are initially recognized as receivable from escrow account and thereafter adjusted with the obligation in the year in which the amount is withdrawn from escrow account after concurrence of the certifying agency.

7. Joint operations

The Company has joint arrangements with others for operations in the nature of joint operations. The Company recognizes, on a line-by-line basis its share of the assets, liabilities and expenses of these joint operations as per the arrangement which are accounted based on the respective accounting policies of the Company.

8. Investment Property

Investment properties are properties held to earn rental or for capital appreciation or for both and are not intended to be used in the operations of the Company. Investment properties are measured initially at its cost, including transaction costs. Cost of investment property comprises its purchase price and any directly attributable expenditure. Investment properties are subsequently measured at cost less accumulated depreciation and accumulated impairment losses, if any. Subsequent expenditure is capitalized to the asset's carrying amount only when it is probable that future economic benefits associated with the expenditure will flow to the Company and the cost of the item can be measured reliably. Repairs and maintenance costs are expensed when incurred. Investment properties are depreciated / amortised considering the significant accounting policy no.1.5. Free hold Land and Properties under construction are not depreciated.

A property shall be transferred to or from investment property when, and only when, there is change in use. A change in use occurs when the property meets, or ceases to meet the definition of investment property and there is evidence of the change in use.

An investment property is derecognized upon disposal or when the investment property is permanently withdrawn from use and no future economic benefits are expected from the disposal. Any gain or loss arising on de-recognition of the property (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is included in profit or loss in the period in which the property is derecognized.

9. Borrowing costs

Borrowing costs consist of (a) interest expense calculated using the effective interest method as described in Ind AS 109 – 'Financial Instruments' (b) interest expense on lease liabilities recognized in accordance with Ind AS 116– 'Leases' and (c) exchange differences arising from foreign currency borrowings to the extent that they are regarded as an adjustment to interest costs.

Borrowing costs that are directly attributable to the acquisition, construction/exploration/ development or erection of qualifying assets are capitalized as part of cost of such asset until such time the assets are substantially ready for their intended use. Qualifying assets are assets which necessarily take substantial period of time to get ready for their intended use or sale.

When the Company borrows funds specifically for the purpose of obtaining a qualifying asset, the borrowing costs incurred are capitalized. When Company borrows funds generally and uses them for the purpose of obtaining a qualifying asset, the capitalization of the borrowing costs is computed based on the weighted average cost of all borrowings that are outstanding during the period and used for the acquisition, construction/exploration or erection of the qualifying asset. However, borrowing costs applicable to borrowings made specifically for the purpose of obtaining a qualifying asset, are excluded from this calculation, until substantially all the activities necessary to prepare that asset for its intended use or sale are complete.

Income earned on temporary investment made out of the borrowings pending utilization for expenditure on the qualifying assets is deducted from the borrowing costs eligible for capitalization.

Capitalization of borrowing costs ceases when substantially all the activities necessary to prepare the qualifying assets for their intended use are complete.

Other borrowing costs are recognized as an expense in the year in which they are incurred.

The Company can incur borrowing costs during an extended period in which it suspends the activities necessary to prepare an asset for its intended use or sale. Such costs are costs of holding partially completed assets and is not eligible for capitalisation. However, the Company does not normally suspend capitalising borrowing costs during a period when it carries out substantial technical and administrative work. The Company also does not suspend capitalising borrowing costs when a temporary delay is a necessary part of the process of getting an asset ready for its intended use or sale.

10. Inventories

Inventories are valued at the lower of cost and net realizable value. Cost includes cost of purchase, cost of conversion and other costs incurred in bringing the inventories to their present location and condition. Cost is determined on weighted average basis. Costs of purchased inventory are determined after deducting rebates, trade discounts and other similar items . Net realizable value is the estimated selling price in the ordinary course of business, less estimated costs of completion and the estimated costs necessary to make the sale.

The diminution in the value of obsolete, unserviceable, surplus and non-moving items of stores and spares is ascertained on review and provided for.

Scrap inventory is valued at estimated realizable value.

11. Cash and cash equivalents

Cash and cash equivalents in the balance sheet comprise cash at banks, cash on hand and short-term deposits with an original maturity of three months or less, that are readily convertible to known amount of cash and which are subject to an insignificant risk of changes in value.

12. Government grants

Government grants are recognized when there is reasonable assurance that they will be received and the Company will comply with the conditions associated with the grant. Grants that compensate the Company for the cost of depreciable asset are recognized as income in statement of profit and loss on a systematic basis over the period and in the proportion in which depreciation is charged. Grants that compensate the Company for expenses incurred are recognized over the period in which the related costs are incurred and the same is deducted from the related expenses.

13. Fly ash utilization reserve fund

Proceeds from sale of ash/ash products along-with income on investment of surplus fund are transferred to 'Fly ash utilization reserve fund' in terms of provisions of gazette notification dated 3 November 2009 issued by Ministry of Environment and Forests, Government of India. The fund is utilized towards expenditure on development of infrastructure/ facilities, promotion & facilitation activities for use of fly ash.

14. Provisions, contingent liabilities and contingent assets

A provision is recognized if, as a result of a past event, the Company has a present legal or constructive obligation that can be estimated reliably, and it is probable that an outflow of economic benefits will be required to settle the obligation. If the effect of the time value of money is material, provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognized as a finance cost.

The amount recognized as a provision is the best estimate of the consideration required to settle the present obligation at reporting date, taking into account the risks and uncertainties surrounding the obligation.

When some or all of the economic benefits required to settle a provision are expected to be recovered from a third party, the receivable is recognized as an asset if it is virtually certain that reimbursement will be received and the amount of the receivable can be measured reliably. The expense relating to a provision is presented in the statement of profit and loss net of reimbursement, if any.

Contingent liabilities are possible obligations that arise from past events and whose existence will only be confirmed by the occurrence or non-occurrence of one or more future events not wholly within the control of the Company. Where it is not probable that an outflow of economic benefits will be required, or the amount cannot be estimated reliably, the obligation is disclosed as a contingent liability, unless the probability of outflow of economic benefits is remote. Contingent liabilities are disclosed on the basis of judgment of the management/independent experts. These are reviewed at each balance sheet date and are adjusted to reflect the current management estimate.

Contingent assets are possible assets that arise from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the Company. Contingent assets are disclosed in the financial statements when inflow of economic benefits is probable on the basis of judgment of management. These are assessed continually to ensure that developments are appropriately reflected in the financial statements.

Present obligations arising under onerous contracts are recognised and measured as provisions. An onerous contract is considered to exist where the Company has a contract under which the unavoidable costs of meeting the obligations under the contract exceed the economic benefits expected to be received from the contract.

15. Foreign currency transactions and translation

Transactions in foreign currencies are initially recorded at the functional currency spot exchange rates at the date the transaction first qualifies for recognition.

Monetary assets and liabilities denominated in foreign currencies outstanding at the reporting date are translated at the functional currency spot rates of exchange prevailing on that date. Exchange differences arising on settlement or translation of monetary items are recognized in the statement of profit and loss in the year in which it arises with the exception that exchange differences on long term monetary items related to acquisition of property, plant and equipment recognized up to 31 March 2016 are adjusted to the carrying cost of property, plant and equipment.

Non-monetary items denominated in foreign currency which are measured in terms of historical cost are recorded using the exchange rate at the date of the transaction. In case of advance consideration received or paid in a foreign currency, the date of transaction for the purpose of determining the exchange rate to use on initial recognition of the related asset, expense or income (or part of it), is when the Company initially recognizes the non-monetary asset or non-monetary liability arising from the payment or receipt of advance consideration.

16. Revenue

Company's revenues arise from sale and trading of energy, consultancy, project management & supervision services, income on assets under lease, supply of coal from integrated coal mines and other income. Revenue from other income comprises interest from banks, employees, contractors etc., dividend from investments in joint venture & subsidiary companies, dividend from mutual fund investments, surcharge received from beneficiaries for delayed payments, sale of scrap, other miscellaneous income, etc.

16.1. Revenue from sale of energy

The majority of the Company's operations in India are regulated under the Electricity Act, 2003. Accordingly, the CERC determines the tariff for the Company's power plants based on the norms prescribed in the tariff regulations as applicable from time to time. Tariff is based on the capital cost incurred for a specific power plant and primarily comprises two components: capacity charge i.e. a fixed charge that includes depreciation, return on equity, interest on working capital, operating & maintenance expenses, interest on loan and energy charge i.e. a variable charge primarily based on fuel costs. Tariff for Company's integrated coal mines are also determined by CERC based on the norms prescribed in the CERC Tariff Regulations.

Revenue is measured based on the consideration that is specified in a contract with a customer or is expected to be received in exchange for the products or services and excludes amounts collected on behalf of third parties. The Company recognizes revenue when (or as) the performance obligation is satisfied, which typically occurs when (or as) control over the products or services is transferred to a customer.

Revenue from sale of energy is accounted for based on tariff rates approved by the CERC (except items indicated as provisional) as modified by the orders of Appellate Tribunal for Electricity to the extent applicable. In case of power stations where the tariff rates are yet to be approved/items indicated provisional by the CERC in their orders, provisional rates are adopted considering the applicable CERC Tariff Regulations. Revenue from sale of energy is recognized once the electricity has been delivered to the beneficiary and is measured through a regular review of usage meters. Beneficiaries are billed on a periodic and regular basis. As at each reporting date, revenue from sale of energy includes an accrual for sales delivered to beneficiaries but not yet billed i.e. contract assets/ unbilled revenue.

The incentives/disincentives are accounted for based on the norms notified/approved by the CERC as per principles enunciated in Ind AS 115 – 'Revenue from contracts with customers'. In cases of power stations where the same have not been notified/approved, incentives/disincentives are accounted for on provisional basis.

Part of revenue from energy sale where CERC tariff Regulations are not applicable is recognized based on the rates, terms & conditions mutually agreed with the beneficiaries and trading of power through power exchanges.

Exchange differences arising from settlement/translation of monetary items denominated in foreign currency to the extent recoverable from or payable to the beneficiaries in subsequent periods as per the CERC Tariff Regulations are accounted as 'Regulatory deferred account balances' and such balances are adjusted in the year in which the same becomes recoverable/payable to the beneficiaries.

Exchange differences on account of translation of foreign currency borrowings recognized up to 31 March 2016, to the extent recoverable from or payable to the beneficiaries in subsequent periods as per the CERC Tariff Regulations are accounted as 'Deferred foreign currency fluctuation asset' with corresponding credit to 'Deferred income from foreign currency fluctuation'. Deferred income from foreign currency fluctuation account is amortized in the proportion in which depreciation is charged on such exchange differences and same is adjusted against depreciation expense. Fair value changes in respect of forward exchange contracts for derivatives recoverable from/payable to the beneficiaries as per the CERC Tariff Regulations, are recognized in sales.

Revenue from sale of energy through trading is recognized based on the rates, terms & conditions mutually agreed with the beneficiaries as per the guidelines issued by Ministry of New and Renewable Energy, Government of India.

Rebates allowed to beneficiaries as early payment incentives are deducted from the amount of revenue.

Revenue from sale of energy saving certificates is accounted for as and when sold.

16.2. Revenue from services

Revenue from consultancy, project management and supervision services rendered is measured based on the consideration that is specified in a contract with a customer or is expected to be received in exchange for the services, which is determined on output method and excludes amounts collected on behalf of third parties. The Company recognizes revenue when the performance obligation is satisfied, which typically occurs when control over the services is transferred to a customer.

Reimbursement of expenses is recognized as other income, as per the terms of the service contracts.

Contract modifications are accounted for when additions, deletions or changes are approved either to the contract scope or contract price. The accounting for modifications of contracts involves assessing whether the services added to an existing contract are distinct and whether the pricing is at the standalone selling price. Services added that are not distinct are accounted for on a cumulative catch up basis, while those that are distinct are accounted for prospectively, either as a separate contract, if the additional services are priced at the standalone selling price, or as a termination of the existing contract and creation of a new contract if not priced at the standalone selling price.

16.3. Other income

Interest income is recognized, when no significant uncertainty as to measurability or collectability exist, on a time proportion basis taking into account the amount outstanding and the applicable interest rate, using the effective interest rate method (EIR). For debt instruments measured either at amortized cost or at fair value through other comprehensive income (OCI), interest income is recorded using the EIR. For credit impaired financial assets the EIR is applied to the net carrying amount of the financial asset (after deduction of the loss allowance). EIR is the rate that exactly discounts the estimated future cash payments or receipts over the expected life of the financial instrument or a shorter period, where appropriate, to the gross carrying amount of the financial asset or to the amortized cost of a financial liability. When calculating the EIR, the Company estimates the expected cash flows by considering all the contractual terms of the financial instrument (for example, prepayment, extension, call and similar options) but does not consider the expected credit losses. Interest income is included in other income in the statement of profit and loss.

For purchased or originated credit-impaired (POCI) financial assets interest income is recognized by calculating the credit-adjusted EIR and applying that rate to the amortized cost of the asset. The credit-adjusted EIR is the interest rate that, at original recognition, discounts the estimated future cash flows (including credit losses) to the amortized cost of the POCI assets.

Insurance claims for loss of profit are accounted for in the year of acceptance. Other insurance claims are accounted for based on certainty of realization.

Revenue from rentals and operating leases is recognized on an accrual basis in accordance with the substance of the relevant agreement.

The interest/surcharge on late payment/overdue trade receivables for sale of energy is recognized when no significant uncertainty as to measurability or collectability exists.

Interest/surcharge recoverable on advances to contractors and suppliers as well as warranty claims wherever there is uncertainty of realization/acceptance are not treated as accrued and are therefore, accounted for on receipt/acceptance.

Dividend income is recognized in profit or loss only when the right to receive is established, it is probable that the economic benefits associated with the dividend will flow to the Company, and the amount of the dividend can be measured reliably.

17. Employee benefits

17.1. Defined contribution plans

A defined contribution plan is a post-employment benefit plan under which an entity pays fixed contributions to separate entities and will have no legal or constructive obligation to pay further amounts. Obligations for contributions to defined contribution plans are recognized as an employee benefits expense in statement of profit and loss in the period during which services are rendered by employees. Prepaid contributions are recognized as an asset to the extent that a cash refund or a reduction in future payments is available. Contributions to a defined contribution plan that are due after more than 12 months after the end of the period in which the employees render the service are discounted to their present value.

The Company has a defined contribution pension scheme which is administered through a separate trust. The obligation of the Company is to contribute to the trust to the extent of amount not exceeding 30% of basic pay and dearness allowance less employer's contribution towards provident fund, gratuity, post-retirement medical facility (PRMF) or any other retirement benefits. The Company's contribution towards pension is made to National Pension System Trust (NPS) for the employees opted for the scheme. The contributions to the defined contribution pension scheme of the Company/NPS for the year are recognized as an expense and charged to the statement of profit and loss.

17.2. Defined benefit plans

A defined benefit plan is a post-employment benefit plan other than a defined contribution plan. The Company's liability towards gratuity, pension scheme at two of the stations in respect of taken over employees from the erstwhile state government power utility, post-retirement medical facility(PRMF), baggage allowance for settlement at home town after retirement, farewell gift on retirement and provident fund scheme to the extent of interest liability on provident fund contribution are in the nature of defined benefit plans.

The Company pays fixed contribution to the provident fund at predetermined rates to a separate trust, which invests the funds in permitted securities. The contributions to the fund for the year are recognized as expense and are charged to the statement of profit and loss. The obligation of the Company is to make such fixed contributions and to ensure a minimum rate of return to the members as specified by the Government of India. Shortfall in the fund assets, if any, is made good by the company and charged to the statement of profit and loss.

The gratuity is funded by the Company and is managed by separate trust. The Company has PRMF, under which retired employee and the spouse are provided medical facilities in the Company hospitals/empaneled hospitals. They can also avail treatment as out-patient subject to a ceiling fixed by the Company.

The Company's net obligation in respect of defined benefit plans is calculated separately for each plan by estimating the amount of future benefit that employees have earned in return for their service in the current and prior periods; that benefit is discounted to determine its present value. The fair value of any plan assets is deducted. The discount rate is based on the prevailing market yields of Indian government securities as at the reporting date that have maturity dates approximating the terms of the Company's obligations and that are denominated in the same currency in which the benefits are expected to be paid.

The actuarial calculation is performed annually by a qualified actuary using the projected unit credit method. When the calculation results in a benefit to the Company, the recognized asset is limited to the present value of economic benefits available in the form of any future refunds from the plan or reductions in future contributions to the plan. An economic benefit is available to the Company if it is realizable during the life of the plan, or on settlement of the plan liabilities. Remeasurement comprising of actuarial gain and losses, return on plan assets (excluding the amount included in net interest on the net defined liability) & effect of asset ceiling (excluding the amount included in net interest on the net defined liability) and the same are recognized in the Other Comprehensive Income (OCI) in the period in which they arise.

Past service costs are recognized in statement of profit and loss on the earlier of the date of the plan amendment or curtailment, and the date that the Company recognizes related restructuring costs. If a plan amendment, curtailment or settlement occurs, the current service cost and the net interest for the period after the re-measurement are determined using the assumptions used for the re-measurement.

17.3. Other long-term employee benefits

Benefits under the Company's leave encashment, long-service award and economic rehabilitation scheme constitute other long term employee benefits.

The Company's net obligation in respect of these long-term employee benefits is calculated separately for each plan by estimating the amount of future benefit that employees have earned in return for their service in the current and prior periods; that benefit is discounted to determine its present value and the fair value of any related assets is deducted. The discount rate is based on the prevailing market yields of Indian government securities as at the reporting date that have maturity dates approximating the terms of the Company's obligations and that are denominated in the same currency in which the benefits are expected to be paid.

The actuarial calculation is performed annually by a qualified actuary using the projected unit credit method. Remeasurement comprising actuarial gain and losses, return on plan assets (excluding the amount included in net interest on the net defined liability) & effect of asset ceiling (excluding the amount included in net interest on the net defined liability) and the same are recognized in statement of profit and loss account in the period in which they arise.

The obligations are presented as current liabilities in the balance sheet if the entity does not have an unconditional right to defer settlement for at least twelve months after the reporting period, regardless of when the actual settlement is expected to occur.

17.4. Short-term benefits

Short-term employee benefit obligations are measured on an undiscounted basis and are expensed as the related service is provided.

A liability is recognized for the amount expected to be paid under performance related pay if the Company has a present legal or constructive obligation to pay this amount as a result of past service provided by the employee and the obligation can be estimated reliably.

18. Other expenses

Expenses on ex-gratia payments under voluntary retirement scheme, training & recruitment and voluntary community development are charged to statement of profit and loss in the year incurred.

Expenditure on research is charged to revenue as and when incurred. Expenditure on development is charged to revenue as and when incurred unless it meets the recognition criteria for intangible asset as per Ind AS 38- 'Intangible assets'.

Preliminary expenses on account of new projects incurred prior to approval of feasibility report/techno economic clearance are charged to statement of profit and loss.

Net pre-commissioning income/expenditure is adjusted directly in the cost of related assets and systems.

Transit and handling losses of coal as per Company's norms are included in cost of coal.

19. Income tax

Income tax expense comprises current and deferred tax. Current tax expense is recognized in statement of profit and loss except to the extent that it relates to items recognized directly in OCI or equity, in which case it is recognized in OCI or equity, respectively.

Current tax is the expected tax payable on the taxable income for the year computed as per the provisions of Income Tax Act, 1961, using tax rates enacted or substantively enacted by the end of the reporting period, and any adjustment to tax payable in respect of previous years.

Deferred tax is recognized using the balance sheet method, on temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the tax bases of assets and liabilities. Deferred tax is measured at the tax rates that are expected to be applied to temporary differences when they materialize, based on the laws that have been enacted or substantively enacted by the reporting date. Deferred tax assets and liabilities are offset if there is a legally enforceable right to offset current tax assets against the current tax liabilities, and they relate to income taxes levied by the same tax authority.

Deferred tax is recognized in statement of profit and loss except to the extent that it relates to items recognized directly in OCI or equity, in which case it is recognized in OCI or equity, respectively.

Deferred tax liability is recognized for all taxable temporary differences, except when the deferred tax liability arises from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and, at the time of transaction, affects neither the accounting profit or loss or nor taxable profit or loss.

A deferred tax asset is recognized for all deductible temporary differences to the extent that it is probable that future taxable profits will be available against which the deductible temporary difference can be utilized. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the sufficient taxable profits will be available in future to allow all or part of deferred tax assets to be utilized.

Deferred tax assets include Minimum Alternative Tax (MAT) paid in accordance with the tax laws in India, which is likely to give future economic benefits in the form of availability of set off against future income tax liability. MAT credit is recognized as deferred tax asset in the balance sheet when the asset can be measured reliably and it is probable that the future taxable profit will be available against which MAT credit can be utilized.

When there is uncertainty regarding income tax treatments, the Company assesses whether a tax authority is likely to accept an uncertain tax treatment. If it concludes that the tax authority is unlikely to accept an uncertain tax treatment, the effect of the uncertainty on taxable income, tax bases and unused tax losses and unused tax credits is recognized. The effect of the uncertainty is recognized using the method that, in each case, best reflects the outcome of the uncertainty: the most likely outcome or the expected value. For each case, the Company evaluates whether to consider each uncertain tax treatment separately, or in conjunction with another or several other uncertain tax treatments, based on the approach that best prefixes the resolution of uncertainty.

20. Leases

20.1. As lessee

The Company assesses whether a contract contains a lease, at inception of a contract. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. To assess whether a contract conveys the right to control the use of an identified asset, the Company assesses whether: (1) the contact involves the use of an identified asset (2) the Company has substantially all of the economic benefits from use of the asset through the period of the lease and (3) the Company has the right to direct the use of the asset.

The Company recognizes a right-of-use asset and a corresponding lease liability for all lease arrangements in which it is a lessee, except for leases with a term of twelve months or less (short-term leases) and leases for low value underlying assets. For these short-term and leases for low value underlying assets, the Company recognizes the lease payments as an operating expense on a straight-line basis over the term of the lease.

Certain lease arrangements include the options to extend or terminate the lease before the end of the lease term. Right-of use assets and lease liabilities include these options when it is reasonably certain that the option to extend the lease will be exercised/option to terminate the lease will not be exercised.

The right-of-use assets (other than land and buildings) are initially recognized at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or prior to the commencement date of the lease plus any initial direct costs less any lease incentives. They are subsequently measured at cost less accumulated depreciation/amortization and impairment losses and adjusted for any reassessment of lease liabilities.

Right-of-use assets are depreciated/amortized from the commencement date to the end of the useful life of the underlying asset, if the lease transfers ownership of the underlying asset by the end of lease term or if the cost of right-of-use assets reflects that the purchase option will be exercised. Otherwise, Right-of-use assets are depreciated/ amortized from the commencement date on a straight-line basis over the shorter of the lease term and useful life of the underlying asset.

Right-of-use assets are evaluated for recoverability whenever events or changes in circumstances indicate that their carrying amounts may not be recoverable. For the purpose of impairment testing, the recoverable amount (i.e. the higher of the fair value less costs of disposal and the value-in-use) is determined on an individual asset basis unless the asset does not generate cash flows that are largely independent of those from other assets. In such cases, the recoverable amount is determined for the Cash Generating Unit (CGU) to which the asset belongs.

The lease liability is initially measured at amortized cost at the present value of the future lease payments. In calculating the present value, lease payments are discounted using the interest rate implicit in the lease or, if not readily determinable, using the incremental borrowing rate. Lease liabilities are re-measured with a corresponding adjustment to the related right-of-use asset if the Company changes its assessment whether it will exercise an extension or a termination option.

20.2. As lessor

At the inception of an arrangement, the Company determines whether such an arrangement is or contains a lease. A specific asset is subject of a lease if fulfillment of the arrangement is dependent on the use of that specified asset. An arrangement conveys the right to use the asset if the arrangement conveys to the customer the right to control the use of the underlying asset. Arrangements that do not take the legal form of a lease but convey rights to customers/ suppliers to use an asset in return for a payment or a series of payments are identified as either finance leases or operating leases.

Accounting for finance leases

Where the Company determines a long term Power Purchase Agreement (PPA) to be or to contain a lease and where the off taker has the principal risk and rewards of ownership of the power plant through its contractual arrangements with the Company, the arrangement is considered a finance lease. Capacity payments are apportioned between capital repayments relating to the provision of the plant, finance income and service income. The finance income element of the capacity payment is recognized as revenue, using a rate of return specific to the plant to give a constant periodic rate of return on the net investment in each period. The service income element of the capacity payment is the difference between the total capacity payment and the amount recognized as finance income and capital repayments and recognized as revenue as it is earned.

The amounts due from lessees under finance leases are recorded in the balance sheet as financial assets, classified as 'Finance lease receivables', at the amount equal to the net investment in the lease.

Accounting for operating leases

Where the Company determines a long term PPA to be or to contain a lease and where the Company retains the principal risks and rewards of ownership of the power plant, the arrangement is considered an operating lease.

For operating leases, the power plant is capitalized as property, plant and equipment and depreciated over its economic life. Rental income from operating leases is recognized on a straight line basis over the term of the arrangement.

20.3. Sub-leases

When the Company is an intermediate lessor, it accounts for its interests in the head lease and the sub lease separately. It assesses the lease classification of a sub-lease with reference to the right-of-use assets arising from the head lease, not with reference to the underlying asset.

Rental income from operating leases is recognized on a straight-line basis over the term of the arrangement.

21. Impairment of non-financial assets

The carrying amounts of the Company's non-financial assets are reviewed at each reporting date to determine whether there is any indication of impairment considering the provisions of Ind AS 36 - 'Impairment of Assets'. If any such indication exists, then the asset's recoverable amount is estimated.

The recoverable amount of an asset or cash-generating unit is the higher of its fair value less costs of disposal and its value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. For the purpose of impairment testing, assets that cannot be tested individually are grouped together into the smallest group of assets that generates cash inflows from continuing use that are largely independent of the cash inflows of other assets or groups of assets (the 'cash-generating unit', or "CGU").

An impairment loss is recognized if the carrying amount of an asset or its CGU exceeds its estimated recoverable amount. Impairment losses are recognized in the statement of profit and loss. Impairment losses recognized in respect of CGUs are reduced from the carrying amounts of the assets of the CGU.

Impairment losses recognized in prior periods are assessed at each reporting date for any indications that the loss has decreased or no longer exists. An impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of accumulated depreciation or amortization, if no impairment loss had been recognized.

22. Operating segments

In accordance with Ind AS 108-'Operating segments', the operating segments used to present segment information are identified on the basis of internal reports used by the Company's management to allocate resources to the segments and assess their performance. The Board of Directors is collectively the Company's 'Chief Operating Decision Maker' or 'CODM' within the meaning of Ind AS 108. The indicators used for internal reporting purposes may evolve in connection with performance assessment measures put in place.

Segment results that are reported to the CODM include items directly attributable to a segment as well as those that can be allocated on a reasonable basis. Unallocated items comprise mainly corporate expenses, finance costs, income tax expenses and corporate income that are not directly attributable to segments.

Revenue directly attributable to the segments is considered as segment revenue. Expenses directly attributable to the segments and common expenses allocated on a reasonable basis are considered as segment expenses.

Segment capital expenditure is the total cost incurred during the period to acquire property, plant and equipment, Capital Wok in Progress, intangible assets other than goodwill and intangible assets under development.

Segment assets comprise property, plant and equipment, intangible assets, capital work in progress, intangible assets under development, advances for capital expenditures, trade and other receivables, inventories and other assets that can be directly or reasonably allocated to segments. For the purpose of segment reporting, property, plant and equipment have been allocated to segments based on the extent of usage of assets for operations attributable to the respective segments. Unallocated assets comprise investments, income tax assets, corporate assets and other assets that cannot reasonably be allocated to segments.

Segment liabilities include all operating liabilities in respect of a segment and consist principally of trade payable, payable for capital expenditure and other payables, provision for employee benefits and other provisions. Unallocated liabilities comprise equity, income tax liabilities, loans and borrowings and other liabilities and provisions that cannot reasonably be allocated to segments.

23. Business Combinations

(i) Business combinations are accounted for using the acquisition accounting method as at the date of the acquisition, which is the date at which control is transferred to the Company. The consideration transferred in the acquisition and the identifiable assets acquired and liabilities assumed are recognized at fair values on their acquisition date. Goodwill is initially measured at cost, being the excess of the consideration transferred over the net identifiable assets acquired and liabilities assumed. Where the fair value of net identifiable assets acquired and liabilities assumed exceed the consideration transferred, after reassessing the fair values of the net assets and contingent liabilities, the excess is recognized as capital reserve. Acquisition related costs are expensed as incurred.

(ii) Business combinations involving entities that are controlled by the Company are accounted for using the pooling of interests method wherein the assets and liabilities of the combining entities are reflected at their carrying amounts and no adjustments are made to reflect fair values, or recognise any new assets or liabilities. The only adjustments that are made are to harmonise accounting policies.

The financial information in the financial statements in respect of prior periods is restated as if the business combination had occurred from the beginning of the preceding period in the financial statements, irrespective of the actual date of the combination. However, where the business combination had occurred after that date, the prior period information is restated only from that date.

The balance of the retained earnings appearing in the financial statements of the transferor is aggregated with the corresponding balance appearing in the financial statements of the transferee. The identity of the reserves is preserved and the reserves of the transferor become the reserves of the transferee. The difference, if any, between the amounts recorded as share capital issued plus any additional consideration in the form of cash or other assets and the amount of share capital of the transferor is transferred to capital reserve and is presented separately from other capital reserves.

24. Dividends

Dividends and interim dividends payable to the Company's shareholders are recognized as changes in equity in the period in which they are approved by the shareholders and the Board of Directors respectively.

25. Material prior period errors

Material prior period errors are corrected retrospectively by restating the comparative amounts for the prior periods presented in which the error occurred. If the error occurred before the earliest period presented, the opening balances of assets, liabilities and equity for the earliest period presented, are restated.

26. Earnings per share

Basic earnings per equity share is computed by dividing the net profit or loss attributable to equity shareholders of the Company by the weighted average number of equity shares outstanding during the financial year.

Diluted earnings per equity share is computed by dividing the net profit or loss attributable to equity shareholders of the Company by the weighted average number of equity shares considered for deriving basic earnings per equity share and also the weighted average number of equity shares that could have been issued upon conversion of all dilutive potential equity shares.

The number of equity shares and potentially dilutive equity shares are adjusted retrospectively for all periods presented for any bonus shares issued during the financial year.

Basic and diluted earnings per equity share are also computed using the net profit or loss amounts excluding the net movements in regulatory deferral account balances.

27. Statement of cash flows

Statement of cash flows is prepared in accordance with the indirect method prescribed in Ind AS 7-'Statement of cash flows'.

28. Financial instruments

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity. The Company recognizes a financial asset or a financial liability only when it becomes party to the contractual provisions of the instrument.

28.1. Financial assets

Initial recognition and measurement

All financial assets are recognized at fair value on initial recognition, except for trade receivables which are initially measured at transaction price. Transaction costs that are directly attributable to the acquisition of financial assets, which are not valued at fair value through profit or loss, are added to the fair value on initial recognition.

Subsequent measurement

Debt instruments at amortized cost

A 'debt instrument' is measured at the amortized cost if both the following conditions are met:

(a) The asset is held within a business model whose objective is to hold assets for collecting contractual cash flows, and

(b) Contractual terms of the asset give rise on specified dates to cash flows that are solely payments of principal and interest (SPPI) on the principal amount outstanding.

After initial measurement, such financial assets are subsequently measured at amortized cost using the effective interest rate (EIR) method. Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortization is included in finance income in the statement of profit and loss. The losses arising from impairment are recognized in the statement of profit and loss. This category generally applies to trade and other receivables.

Debt instrument at FVTOCI (Fair value through OCI)

A 'debt instrument' is classified as at the FVTOCI if both of the following criteria are met:

(a) The objective of the business model is achieved both by collecting contractual cash flows and selling the financial assets, and

(b) The asset's contractual cash flows represent SPPI

Debt instruments included within the FVTOCI category are measured initially as well as at each reporting date at fair value. Fair value movements are recognized in the OCI. However, the Company recognizes interest income, impairment losses & reversals and foreign exchange gain or loss in the statement of profit and loss. On de-recognition of the asset, cumulative gain or loss previously recognized in OCI is reclassified from the equity to the statement of profit and loss. Interest earned whilst holding FVTOCI debt instrument is reported as interest income using the EIR method.

Debt instrument at FVTPL (Fair value through profit or loss)

FVTPL is a residual category for debt instruments. Any debt instrument, which does not meet the criteria for categorization as at amortized cost or as FVTOCI, is classified as at FVTPL.

In addition, the Company may elect to classify a debt instrument, which otherwise meets amortized cost or FVTOCI criteria, as at FVTPL. However, such election is allowed only if doing so reduces or eliminates a measurement or recognition inconsistency (referred to as 'accounting mismatch'). Debt instruments included within the FVTPL category are measured at fair value with all changes recognized in the statement of profit and loss. Interest income on such investments is presented under 'Other income'.

Investment in Equity instruments

All equity investments in entities other than subsidiaries and joint venture companies are measured at fair value. Equity instruments which are held for trading are classified as at FVTPL. For all other equity instruments, the Company decides to classify the same either as at FVTOCI or FVTPL. The Company makes such election on an instrument by instrument basis. The classification is made on initial recognition and is irrevocable.

If the Company decides to classify an equity instrument as at FVTOCI, then all fair value changes on the instrument, excluding dividends, are recognized in the OCI. There is no recycling of the amounts from OCI to statement of profit and loss, even on sale/ disposal of investments. However, the Company may transfer the cumulative gain or loss within equity on sale / disposal of the investments.

Equity instruments included within the FVTPL category are measured at fair value with all changes recognized in the statement of profit and loss. Dividend on such investments is presented under 'Other income'.

Equity investments in subsidiaries and joint ventures companies are accounted at cost less impairment, if any.

The Company reviews the carrying value of investments at each reporting date to determine whether there is any indication of impairment. If any such indication exists, then the recoverable amount of the investment is estimated. If the recoverable amount is less than the carrying amount, the impairment loss is recognized in the statement of profit and loss.

De-recognition

A financial asset (or, where applicable, a part of a financial asset or part of a Group of similar financial assets) is primarily de-recognized (i.e. removed from the Company's balance sheet) when:

- The rights to receive cash flows from the asset have expired, or
- The Company has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the Company has transferred substantially all the risks and rewards of the asset, or (b) the Company has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

The difference between the carrying amount and the amount of consideration received/receivable is recognized in the statement of profit and loss except for equity instruments classified as at FVTOCI, where such differences are recorded in OCI.

Impairment of financial assets

In accordance with Ind AS 109-'Financial instruments', the Company applies expected credit loss (ECL) model for measurement and recognition of impairment loss on the following financial assets and credit risk exposure:

(a) Financial assets that are debt instruments, and are measured at amortized cost e.g., loans, debt securities, deposits and bank balance.

(b) Financial assets that are debt instruments and are measured as at FVTOCI.

(c) Lease receivables under Ind AS 116.

(d) Trade receivables, unbilled revenue and contract assets under Ind AS 115.

(e) Loan commitments which are not measured as at FVTPL.

(f) Financial guarantee contracts which are not measured as at FVTPL.

For trade receivables and contract assets/unbilled revenue, the Company applies the simplified approach required by Ind AS 109 Financial Instruments, which requires lifetime expected losses to be recognized from initial recognition.

For recognition of impairment loss on other financial assets and risk exposure (other than purchased or originated credit impaired financial assets), the Company determines that whether there has been a significant increase in the credit risk since initial recognition. If credit risk has not increased significantly, 12-month ECL is used to provide for impairment loss. However, if credit risk has increased significantly, lifetime ECL is used. If, in a subsequent period, credit quality of the instrument improves such that there is no longer a significant increase in credit risk since initial recognition, then the entity reverts to recognizing impairment loss allowance based on 12 month ECL.

For purchased or originated credit impaired financial assets, a loss allowance is recognized for the cumulative changes in lifetime expected credited losses since initial recognition.

28.2. Financial liabilities

Initial recognition and measurement

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through profit or loss and financial liabilities at amortized cost, as appropriate. All financial liabilities are recognized initially at fair value and, in the case of liabilities subsequently measured at amortized cost net of directly attributable transaction cost. The Company's financial liabilities include trade and other payables, borrowings including bank overdrafts, financial guarantee contracts and derivative financial instruments.

Subsequent measurement

The measurement of financial liabilities depends on their classification, as described below:

Financial liabilities at amortized cost

After initial measurement, such financial liabilities are subsequently measured at amortized cost using the EIR method. Gains and losses are recognized in statement of profit and loss when the liabilities are derecognized as well as through the EIR amortization process Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortization is included in finance costs in the statement of profit and loss. This category generally applies to borrowings, trade payables and other contractual liabilities.

Financial liabilities at fair value through profit or loss

Financial liabilities at fair value through profit or loss include financial liabilities held for trading and financial liabilities designated upon initial recognition as at fair value through profit or loss. Financial liabilities are classified as held for trading if they are incurred for the purpose of repurchasing in the near term. This category also includes derivative financial instruments entered into by the Company that are not designated as hedging instruments in hedge relationships as defined by Ind AS 109. Separated embedded derivatives are also classified as held for trading unless they are designated as effective hedging instruments.

Gains or losses on liabilities held for trading are recognized in the statement of profit and loss.

Financial liabilities designated upon initial recognition at fair value through profit or loss are designated at the initial date of recognition, and only if the criteria in Ind AS 109 are satisfied. For liabilities designated as FVTPL, fair value gains/losses attributable to changes in own credit risk is recognized in OCI. These gains/losses are not subsequently transferred to profit and loss. However, the Company may transfer the cumulative gain or loss within equity on disposal. All other changes in fair value of such liability are recognized in the statement of profit and loss. The Company has not designated any financial liability as at fair value through profit and loss.

De-recognition

A financial liability is derecognized when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the de-recognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognized in the statement of profit and loss.

28.3. Interest rate benchmark reform

When the basis for determining the contractual cash flows of a financial asset or financial liability measured at amortised cost is changed as a result of interest rate benchmark reform, the Company updated the effective interest rate of the financial asset or financial liability to reflect the change that is required by the reform. A change in the basis for determining the contractual cash flows is required by interest rate benchmark reform if the following conditions are met:

- the change is necessary as a direct consequence of the reform; and
- the new basis for determining the contractual cash flows is economically equivalent to the previous basis – i.e. the basis immediately before the change.

When changes were made to a financial asset or financial liability in addition to changes to the basis for determining the contractual cash flows required by interest rate benchmark reform, the Company first updates the effective interest rate of the financial asset or financial liability to reflect the change that is required by interest rate benchmark reform and does not recognise a modification gain or loss in the profit & loss statement. After that, the Company applies the policies on accounting for modifications to the additional changes.

28.4. Financial guarantee contracts

Financial guarantee contracts issued by the Company are those contracts that require a payment to be made to reimburse the holder for a loss it incurs because the specified debtor fails to make a payment when due in accordance with the terms of a debt instrument. Financial guarantee contracts are recognized initially as a liability at fair value, adjusted for transaction costs that are directly attributable to the issuance of the guarantee. Subsequently, the liability is measured at the higher of the amount of loss allowance determined as per impairment requirements of Ind AS 109 - 'Financial Instruments' and the amount recognized less the cumulative amount of income recognized in accordance with the principles of Ind AS 115 'Revenue from Contracts with Customers'.

28.5. Derivative financial instruments

Initial recognition and subsequent measurement

The Company uses derivative financial instruments, such as forward currency contracts and interest rate swaps to hedge its foreign currency risks and interest rate risks of foreign currency loans. Such derivative financial instruments are initially recognized at fair value on the date on which a derivative contract is entered into and are subsequently re-measured at fair value. Derivatives are carried as financial assets when the fair value is positive and as financial liabilities when the fair value is negative. Any gains or losses arising from changes in the fair value of derivatives are taken to statement of profit and loss.

28.6. Offsetting of financial assets and financial liabilities

Financial assets and financial liabilities are offset and the net amount is presented in the balance sheet if there is a currently enforceable legal right to offset the recognized amounts and there is an intention to settle on a net basis, to realize the assets and settle the liabilities simultaneously.

29. Non -Current Assets Held for Sale

The Company classifies non-current assets and disposal groups as held for sale if their carrying amounts will be recovered principally through a sale rather than through continuing use and a sale is considered highly probable.

Management must be committed to the sale, which should be expected to qualify for recognition as a completed sale within one year from the date of classification as held for sale, and actions required to complete the plan of sale should indicate that it is unlikely that significant changes to the plan will be made or that the plan will be withdrawn.

Non-Current Assets held for sale and disposal groups are measured at the lower of their carrying amount and the fair value less cost of disposal.

Property ,plant and equipment and intangible assets once classified as held for sale are not depreciated or amortized.

D. Use of estimates and management judgements

The preparation of financial statements requires management to make judgments, estimates and assumptions that may impact the application of accounting policies and the reported value of assets, liabilities, revenue expenses and related disclosures concerning the items involved as well as contingent assets and liabilities at the balance sheet date. The estimates and management's judgments are based on previous experience & other factors considered reasonable and prudent in the circumstances. Actual results may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future periods affected.

In order to enhance understanding of the financial statements, information about significant areas of estimation, uncertainty and critical judgments in applying accounting policies that have the most significant effect on the amounts recognized in the financial statements is as under:

1. Formulation of accounting policies

The accounting policies are formulated in a manner that results in financial statements containing relevant and reliable information about the transactions, other events and conditions to which they apply. Those policies need not be applied when the effect of applying them is immaterial.

2. Useful life of property, plant and equipment and intangible assets

The estimated useful life of property, plant and equipment and intangible assets is based on a number of factors including the effects of obsolescence, demand, competition and other economic factors (such as the stability of the industry and known technological advances) and the level of maintenance expenditures required to obtain the expected future cash flows from the asset.

Useful life of the assets of the generation of electricity business and integrated coal mines (where tariff is regulated) is determined by the CERC Tariff Regulations in accordance with Schedule II of the Companies Act, 2013.

3. **Recoverable amount of property, plant and equipment and intangible assets**

The recoverable amount of property, plant and equipment and intangible assets is based on estimates and assumptions regarding in particular the expected market outlook and future cash flows associated with the power plants. Any changes in these assumptions may have a material impact on the measurement of the recoverable amount and could result in impairment.

4. **Defined benefit plans and long-term employee benefits**

Employee benefit obligations are measured on the basis of actuarial assumptions which include mortality and withdrawal rates as well as assumptions concerning future developments in discount rates, the rate of salary increases and the inflation rate. The Company considers that the assumptions used to measure its obligations are appropriate and documented. However, any changes in these assumptions may have a material impact on the resulting calculations.

5. **Revenues**

The Company records revenue from sale of energy based on tariff rates approved by the CERC as modified by the orders of Appellate Tribunal for Electricity, as per principles enunciated under Ind AS 115. However, in cases where tariff rates are yet to be approved, provisional rates are adopted considering the applicable CERC Tariff Regulations.

6. **Leases not in legal form of lease**

Significant judgment is required to apply lease accounting rules as per Ind AS 116 in determining whether an arrangement contains a lease. In assessing arrangements entered into by the Company, management has exercised judgment to evaluate the right to use the underlying asset, substance of the transactions including legally enforceable agreements and other significant terms and conditions of the arrangements to conclude whether the arrangement meets the criteria as per Ind AS 116.

7. **Assets held for sale**

Significant judgment is required to apply the accounting of non-current assets held for sale under Ind AS 105 - 'Non-current assets held for sale and discontinued operations'. In assessing the applicability, management has exercised judgment to evaluate the availability of the asset for immediate sale, management's commitment for the sale and probability of sale within one year to conclude if their carrying amount will be recovered principally through a sale transaction rather than through continuing use.

8. **Regulatory deferral account balances**

Recognition of regulatory deferral account balances involves significant judgments including about future tariff regulations since these are based on estimation of the amounts expected to be recoverable/payable through tariff in future.

9. **Provisions and contingencies**

The assessments undertaken in recognizing provisions and contingencies have been made in accordance with Ind AS 37-'Provisions, contingent liabilities and contingent assets'. The evaluation of the likelihood of the contingent events require best judgment by management regarding the probability of exposure to potential loss. Should circumstances change following unforeseeable developments, this likelihood could alter.

10. **Impairment test of investments in Subsidiaries and Joint Venture Companies**

The recoverable amount of investment in subsidiaries and joint venture companies is based on estimates and assumptions regarding in particular the future cash flows associated with the operations of the investee Company. Any changes in these assumptions may have a material impact on the measurement of the recoverable amount and could result in impairment.

11. **Income taxes**

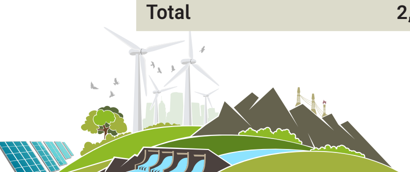
Significant estimates are involved in determining the provision for current and deferred tax, including amount expected to be paid/recovered for uncertain tax positions.

2. Non-current assets - Property, plant and equipment

As at 31 March 2023

₹ Crore

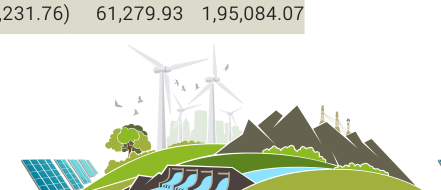
Particulars	Gross block				Depreciation, amortization and impairment				Net block
	As at 1 April 2022	Additions	Deductions/ adjustments	As at 31 March 2023	As at 1 April 2022	For the year	Deductions/ adjustments	Upto 31 March 2023	As at 31 March 2023
Land (including development expenses)									
Freehold	7,707.94	52.70	(708.74)	**7,051.90**	-	-	-	**-**	**7,051.90**
Right of use	2,830.07	170.43	(438.84)	**2,561.66**	499.53	123.10	(214.12)	**408.51**	**2,153.15**
Under submergence (refer footnote (d) below)	806.88	4.78	-	**811.66**	189.31	31.43	-	**220.74**	**590.92**
Right of use - Coal Bearing Area Land	4,022.04	226.76	-	**4,248.80**	330.09	120.99	-	**451.08**	**3,797.72**
Roads, bridges, culverts and helipads	1,884.85	226.17	(27.27)	**2,083.75**	345.02	79.12	(2.70)	**421.44**	**1,662.31**
Building									
Freehold									
Main plant	8,588.86	412.09	(41.12)	**8,959.83**	1,607.62	324.03	(3.72)	**1,927.93**	**7,031.90**
Others	6,415.87	775.89	(88.64)	**7,103.12**	1,214.91	274.59	(25.29)	**1,464.21**	**5,638.91**
Right of use	39.27	2.18	(1.06)	**40.39**	20.31	5.42	(0.87)	**24.86**	**15.53**
Temporary erections	38.55	3.87	(8.36)	**34.06**	36.95	3.39	(7.85)	**32.49**	**1.57**
Water supply, drainage and sewerage system	951.84	145.99	(8.98)	**1,088.85**	232.98	47.96	(0.85)	**280.09**	**808.76**
Hydraulic works, barrages, dams, tunnels and power channel	4,463.93	2.08	22.26	**4,488.27**	1,530.19	245.72	-	**1,775.91**	**2,712.36**
MGR track and signalling system	3,798.47	1,553.54	(0.54)	**5,351.47**	758.90	248.61	(0.09)	**1,007.42**	**4,344.05**
Railway siding	3,687.71	323.81	(0.76)	**4,010.76**	716.09	209.72	(0.12)	**925.69**	**3,085.07**
Earth dam reservoir	545.78	568.70	-	**1,114.48**	143.57	34.44	-	**178.01**	**936.47**
Plant and equipment									
Owned	2,04,396.12	24,541.79	(15,563.41)	**2,13,374.50**	51,899.35	12,324.27	(2,760.32)	**61,463.30**	**1,51,911.20**
Right of use	85.78	-	-	**85.78**	33.13	4.75	-	**37.88**	**47.90**
Mining Properties	1,285.97	79.10	-	**1,365.07**	133.48	70.21	-	**203.69**	**1,161.38**
Site restoration cost	253.46	-	-	**253.46**	15.80	6.81	-	**22.61**	**230.85**
Furniture and fixtures	848.06	77.47	(7.25)	**918.28**	286.61	64.08	(6.04)	**344.65**	**573.63**
Vehicles including speedboats / helicopter									
Owned	14.61	4.15	0.46	**19.22**	7.18	1.34	0.10	**8.62**	**10.60**
Right of use	26.58	49.25	(19.51)	**56.32**	22.23	15.40	(19.15)	**18.48**	**37.84**
Office equipment	424.29	91.70	(14.37)	**501.62**	205.59	55.54	(11.15)	**249.98**	**251.64**
EDP, WP machines and satcom equipment	506.99	90.68	(40.49)	**557.18**	376.81	73.31	(40.07)	**410.05**	**147.13**
Construction equipment	261.77	49.46	(1.55)	**309.68**	106.80	22.58	(1.47)	**127.91**	**181.77**
Electrical installations	2,058.29	282.21	(11.64)	**2,328.86**	416.58	127.31	(4.43)	**539.46**	**1,789.40**
Communication equipment	122.64	17.50	(3.60)	**136.54**	66.73	10.35	(1.84)	**75.24**	**61.30**
Hospital equipment	62.84	4.53	(0.19)	**67.18**	25.71	7.31	(0.16)	**32.86**	**34.32**
Laboratory and workshop equipment	234.54	8.92	(0.10)	**243.36**	58.46	12.81	(0.04)	**71.23**	**172.13**
Assets for ash utilisation	57.84	2.95	-	**60.79**	-	-	-	**-**	**60.79**
Less: Adjusted from fly ash utilisation reserve fund	57.84	2.95	-	**60.79**	-	-	-	**-**	**60.79**
Total	**2,56,364.00**	**29,765.75**	**(16,963.70)**	**2,69,166.05**	**61,279.93**	**14,544.59**	**(3,100.18)**	**72,724.34**	**1,96,441.71**



As at 31 March 2022

₹ Crore

Particulars	Gross block				Depreciation, amortization and impairment				Net block
	As at 1 April 2021	Additions	Deductions/ adjustments	As at 31 March 2022	As at 1 April 2021	For the year	Deductions/ adjustments	Upto 31 March 2022	As at 31 March 2022
Land (including development expenses)									
Freehold	7,632.38	81.51	(5.95)	7,707.94	-	-	-	-	7,707.94
Right of use	3,050.96	508.87	(729.76)	2,830.07	530.02	95.22	(125.71)	499.53	2,330.54
Under submergence (refer footnote (d) below)	751.92	54.96	-	806.88	160.94	28.37	-	189.31	617.57
Right of use - Coal Bearing Area Land	3,666.94	355.10	-	4,022.04	229.92	100.17	-	330.09	3,691.95
Roads, bridges, culverts and helipads	1,749.63	141.25	(6.03)	1,884.85	276.52	69.38	(0.88)	345.02	1,539.83
Building									
Freehold									
Main plant	7,900.08	694.55	(5.77)	8,588.86	1,296.03	311.59	-	1,607.62	6,981.24
Others	5,642.90	786.55	(13.58)	6,415.87	950.48	266.71	(2.28)	1,214.91	5,200.96
Right of use	36.60	5.63	(2.96)	39.27	17.40	5.80	(2.89)	20.31	18.96
Temporary erection	32.39	6.16	-	38.55	29.88	7.07	-	36.95	1.60
Water supply, drainage and sewerage system	856.93	94.91	-	951.84	188.55	44.43	-	232.98	718.86
Hydraulic works, barrages, dams, tunnels and power channel	4,353.88	101.04	9.01	4,463.93	1,297.17	233.02	-	1,530.19	2,933.74
MGR track and signalling system	3,440.65	357.52	0.30	3,798.47	541.98	216.92	-	758.90	3,039.57
Railway siding	3,357.96	305.44	24.31	3,687.71	524.85	191.26	(0.02)	716.09	2,971.62
Earth dam reservoir	536.13	9.65	-	545.78	112.37	31.20	-	143.57	402.21
Plant and equipment									
Owned	1,75,166.24	30,256.05	(1,026.17)	2,04,396.12	41,787.33	11,173.06	(1,061.04)	51,899.35	1,52,496.77
Right of use	85.77	-	0.01	85.78	28.37	4.76	-	33.13	52.65
Mining Properties	1,011.57	274.40	-	1,285.97	78.32	55.16	-	133.48	1,152.49
Site restoration cost	253.46	-	-	253.46	8.99	6.81	-	15.80	237.66
Furniture and fixtures	763.96	91.91	(7.81)	848.06	223.42	68.81	(5.62)	286.61	561.45
Vehicles including speedboats / helicopter									
Owned	14.20	0.47	(0.06)	14.61	6.07	1.15	(0.04)	7.18	7.43
Right of use	26.03	1.12	(0.57)	26.58	13.10	9.39	(0.26)	22.23	4.35
Office equipment	375.02	59.20	(9.93)	424.29	161.78	51.73	(7.92)	205.59	218.70
EDP, WP machines and satcom equipment	469.12	60.73	(22.86)	506.99	319.34	79.89	(22.42)	376.81	130.18
Construction equipment	252.48	10.53	(1.24)	261.77	86.36	21.34	(0.90)	106.80	154.97
Electrical installations	1,892.86	168.25	(2.82)	2,058.29	300.43	117.76	(1.61)	416.58	1,641.71
Communication equipment	111.61	10.97	0.06	122.64	56.71	10.09	(0.07)	66.73	55.91
Hospital equipment	43.36	19.66	(0.18)	62.84	10.52	15.29	(0.10)	25.71	37.13
Laboratory and workshop equipment	226.32	8.26	(0.04)	234.54	45.96	12.50	-	58.46	176.08
Assets for ash utilisation	57.47	0.37	-	57.84	-	-	-	-	57.84
Less: Adjusted from fly ash utilisation reserve fund	57.47	0.37	-	57.84	-	-	-	-	57.84
Total	2,23,701.35	34,464.69	(1,802.04)	2,56,364.00	49,282.81	13,228.88	(1,231.76)	61,279.93	1,95,084.07



a) The conveyancing of the title to **6,951.72 acres** of freehold land of value ₹ **1,022.47 crore** (31 March 2022: 10,288.43 acres of value ₹ 1,587.39 crore), buildings and structures of value ₹ **4.97 crore** (31 March 2022: ₹ 4.97 crore) and also execution of lease agreements for **5645.11 acres** of right of use land of value ₹ **612.67** crore (31 March 2022: 9,349.00 acres of value ₹ 606.89 crore) in favour of the Company are awaiting completion of legal formalities.

b) Land includes **1,295.40 acres** of freehold land of value ₹ **29.56 crore** (31 March 2022: 1,275.84 acres of value ₹ 44.92 crore) and **376.57 acres** of right of use land of value ₹ **3.07 crore** (31 March 2022: 377.11 acres of value ₹ 3.10 crore) not in possession of the Company. The Company is taking appropriate steps for repossession of the same.

c) Land-freehold includes an amount of ₹ **263.92 crore** (31 March 2022: ₹ 263.92 crore) deposited with various authorities in respect of land in possession which is subject to adjustment on final determination of price.

d) Gross block of land under submergence represents ₹ **632.83 crore** (31 March 2022: ₹ 628.05 crore) of freehold land and ₹ **178.83 crore** (31 March 2022: ₹ 178.83 crore) of right of use land. The land has been amortized considering the rate of depreciation provided by the CERC in the tariff regulations and the fact that it will not have any economic value due to deposit of silt and other foreign materials.

e) Possession of land measuring **98 acres** (31 March 2022: 98 acres) consisting of **79 acres** of freehold land (31 March 2022: 79 acres) and **19 acres** of right of use land (31 March 2022: 19 acres) of value ₹ **0.21 crore** (31 March 2022: ₹ 0.21 crore) was transferred to Uttar Pradesh Rajya Vidyut Utpadan Nigam Ltd. (erstwhile UPSEB) for a consideration of ₹ 0.21 crore. Pending approval for transfer of the said land, the area and value of this land has been included in the total land of the Company. The consideration received from erstwhile UPSEB is disclosed under Note 35 - Current liabilities - Other financial liabilities.

f) During the year, the company entered into with a Business Transfer Agreement (BTA) with NTPC Green Energy Ltd, a wholly owned subsidiary of the company, for transfer of fifteen Renewable Energy (RE) assets of the Company. The assets were transferred as at the closing date of transfer being 28 February 2023 at book value pursuant to BTA. Further, free hold land admeasuring **1,202.55 acre** in respect of one of the RE assets was not transferred to the subsidiary which has been let out on lease. Consequently, the freehold land has been classified as 'Investment property' considering the requirements of Ind AS 40-Investment property and disclosed under Note 4. Further, approval for assignment / novation of ROU land pertaining to Rojmal project and Jetsar project are yet to be consented by the lessor. Refer Note 51. Details of Property,plant and equipment transferred to the subsidiary , included in the adjustment column of gross block and depreciation/amortisation during the year, are as under:

₹ Crore

Particulars	Gross block	Depreciation, amortization and impairment
Land-Freehold	238.17	0.00
Land-Right of use	210.48	33.31
Roads, bridges ,culverts and helipads	25.40	1.88
Main plant building	37.48	0.79
Other building	62.00	2.60
Buiding-Right of Use	0.30	0.23
Temporary Erection	4.20	3.80
Water supply, drainage and sewerage system	8.49	0.55
Plant and equipment - Owned	15,053.80	1,580.12
Furniture and fixtures	0.31	0.22
Office equipment	0.24	0.19
EDP, WP machines and satcom equipment	0.46	0.39
Electrical Installation	2.57	0.15
Communication equipment	2.83	1.23
Total	**15,646.73**	**1,625.46**

g) Operations of one of the thermal power station of the Company (460 MW) was discontinued w.e.f. the end of 31 March 2021. Some of the assets have been classified as held for sale considering the requirements of Ind AS 105. Carrying value of remaining assets of the station as at 31 March 2023 is ₹ **120.52 crore** (31 March 2022: ₹ 222.56 crore). It is expected that many of the assets are expected to be used in other power plants of the Company. Notwithstanding the above, the net realisable value of the assets of the station has been assessed which is more than its carrying value.

h) Operations of one of the thermal power station (220 MW) of the Company was discontinued w.e.f. 8 September 2021. Carrying value of remaining assets of the station as at 31 March 2023 is ₹ **97.61 crore** (31 March 2022: ₹ 130.71 crore). The net realisable value of the assets of the station has been assessed which is more than its carrying value.

i) Adjustment to Land-right of use in the previous year included an amount of ₹ 776.05 crore, being the cost de-recognised consequent to order of APIIC for cancellation of 1200 acres of land allotted to the Company in the state of Andra Pradesh. alongwith writing back of accumulated depreciation/ amortisation amounting to ₹ 131.92. The order provided allotment of alternate land in lieu of the same, subject to attached conditions. Consequently, the amount derecognized net of related liabilities, has been included under Capital advances (Note 12). During the year, Government of Andra Pradesh (GoAP) has accorded permission for development of green hydrogen hub on the land and execution of land lease agreement is under discussion with GoAP, pending which the advance paid earlier towards cost of land has been continued to be disclosed under Capital advances (Note-12).

j) Refer Note 73 regarding property, plant and equipment under leases.

k) Spare parts of ₹ 5 lakh and above, stand-by equipment and servicing equipment which meet the definition of property, plant and equipment are capitalized.

l) Property, plant and equipment costing ₹ 5,000/- or less, are depreciated fully in the year of acquisition.

m) Refer Note 25 for information on property, plant and equipment pledged as security by the Company.

n) Refer Note 76 (C) (a) for disclosure of contractual commitments for the acquisition of property, plant and equipment.

o) Deduction/adjustments from gross block and depreciation and amortization for the year includes:

₹ Crore

Particulars	Gross block		Depreciation, amortization and impairment	
	For the year ended		For the year ended	
	31 March 2023	31 March 2022	**31 March 2023**	31 March 2022
Disposal of assets	**(54.54)**	(37.60)	**(51.79)**	(29.84)
Retirement of assets	**(1,151.56)**	(2,045.82)	**(922.99)**	(1,200.25)
Cost adjustments due to exchange differences	**960.14**	237.01	**-**	-
Assets capitalised with retrospective effect/Write back of excess capitalisation	**0.02**	(0.01)	**0.02**	-
Transferred to Investment property-Note 4	**(465.18)**	-	**-**	-
Transferred to Assets held for sale-Note 21	**(401.73)**	-	**(299.30)**	-
Transfer of solar assets to NGEL - Note 51	**(15,646.73)**	-	**(1,625.46)**	-
Others	**(204.12)**	44.38	**(200.66)**	(1.67)
Total	**(16,963.70)**	(1,802.04)	**(3,100.18)**	(1,231.76)

p) Exchange differences capitalized in Capital work-in-progress (CWIP) are allocated to various heads of CWIP in the year of capitalisation. Exchange differences in respect of assets already capitalised are disclosed in the 'Deductions/Adjustments' column of Property, plant and equipment. Asset-wise details of exchange differences and borrowing costs included in the cost of major heads of CWIP and property, plant and equipment through 'Addition' or 'Deductions/Adjustments' column are given below:

₹ Crore

Particulars	For the year ended 31 March 2023		For the year ended 31 March 2022	
	Exchange differences included in PPE/CWIP	Borrowing costs included in PPE/CWIP	Exchange differences included in PPE/CWIP	Borrowing costs included in PPE/CWIP
Building - Freehold				
Main plant	1.80	39.83	(5.76)	38.63
Others	(0.08)	53.61	(0.60)	67.70
Hydraulic works, barrages, dams, tunnels and power channel	22.26	267.53	9.00	219.55
MGR track and signalling system	0.17	3.95	0.31	392.70
Railway siding	-	71.62	24.75	81.10
Plant and equipment	1,020.44	2,057.72	260.75	2,186.26
Others including pending allocation	103.81	291.69	38.18	252.02
Total	1,148.40	2,785.95	326.63	3,237.96

q) **Impairment loss**

Depreciation, amortisation and impairment expense includes impairment loss of one of the stations of the Company for the year **Nil** (31 March 2022: ₹ 21.99 crore) mainly towards plant and equipment.

r) Gross carrying amount of the fully depreciated/amortised property, plant and equipment that are still in use:

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Land-Right of use	14.78	11.42
Roads, bridges ,culverts and helipads	48.27	43.58
Main plant building	176.81	181.55
Other building	374.68	277.73
Water supply, drainage and sewerage system	48.96	49.29
MGR track and signalling system	107.45	101.55
Plant and equipment - Owned	4,068.02	4,391.04
Furniture and fixtures	89.77	102.72
Office equipment	107.97	85.93
EDP, WP machines and satcom equipment	280.13	240.54
Communication equipment	47.43	46.32
Others	170.01	150.95
Total	5,534.28	5,682.62

Others include temporary erections, railway sidings, earth dam reservoirs, construction equipment and electrical installations etc.

s) **Property, plant and equipment subject to operating lease**

The Power Purchase Agreements (PPA) signed in respect of one of the thermal power stations was operative initially for a period of five years with the beneficiaries which are extended, renewed or replaced as the parties mutually agree. The Company has continued to classify this arrangement with its customers as lease based on the practical expedient provided in Ind AS 116. The net carrying value of such leased assets included above are as under:

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Land- Freehold	**51.61**	51.75
Roads, bridges, culverts and helipads	**7.81**	9.40
Main plant building-Freehold	**7.68**	9.51
Other building-Freehold	**19.85**	23.53
Water supply, drainage and sewerage system	**4.58**	5.46
Plant and equipment - Owned	**187.30**	217.51
Railway siding	**0.66**	0.76
Electrical installation	**2.86**	3.14
Others	**2.68**	5.04
Total	**285.03**	326.10

t) **Business Combinations**

Ministry of Corporate Affairs (MCA) vide its order dated 29 July 2022 approved the Scheme of Amalgamation of Nabinagar Power Generating Company Limited (NPGCL) and Kanti Bijlee Utpadan Nigam Limited (KBUNL), wholly owned subsidiaries of NTPC Limited into NTPC Limited, w.e.f. 1 April 2022 being the appointed date. Accordingly, the assets and liabilities of the transferor companies shall vest with transferee company from the appointed date. The transferor companies were dissolved without winding up on the effective date of 26 August 2022 (Refer Note 65).

Being a common control acquisition, the accounting has been done considering the provisions of Appendix C to Ind AS 103 "Business Combination" as per pooling of interest method under which assets and liabilities of the combining entities are reflected at the carrying amounts and no adjustments are made to reflect fair values, or recognize any new assets or liabilities. Further, restatement of previous year figures has been done as if the business combination had occurred from the beginning of preceding period in compliance with the above. Accordingly, gross block and accumulated depreciation / amortisation /impairment presented in the previous year, have been restated. The amount included in the gross block and accumulated depreciation / amortisation/impairment as at 1 April 2021 and 31 March 2022 in respect of these companies are as under:

₹ Crore

Particulars	As at 1 April 2021		As at 31 March 2022	
	Gross block	Depreciation / amortisation/ impairment	Gross block	Depreciation / amortisation/ impairment
Land- Free hold	1201.96	-	1196.01	-
Land- Right of use	116.36	9.04	116.36	11.26
Roads, bridges ,culverts and helipads	106.40	6.65	106.40	10.61
Main plant building-Freehold	296.03	42.42	296.03	53.64
Other building-Freehold	280.52	27.60	341.76	39.53
Temporary Erection	5.97	3.54	5.97	4.58
Water supply, drainage and sewerage system	23.67	0.99	23.67	1.91
MGR track and signalling system	67.60	15.13	67.60	19.43
Railway siding	63.05	5.27	243.61	15.75

Particulars	As at 1 April 2021		As at 31 March 2022	
	Gross block	Depreciation / amortisation/ impairment	Gross block	Depreciation / amortisation/ impairment
Earth dam reservoir	7.35	0.62	7.35	1.01
Plant and equipment - Owned	9,801.65	1,477.83	15,305.55	2,267.20
Furniture and fixtures	23.28	3.78	26.88	5.44
Vehicles-Owned	0.14	0.03	0.15	0.05
Office equipment	6.10	2.03	7.49	2.72
EDP, WP machines and satcom equipment	9.94	5.18	10.62	6.97
Construction equipment	18.62	5.20	20.54	7.14
Electrical installation	101.13	11.02	180.02	20.01
Communication equipment	0.17	0.08	1.23	0.15
Hospital equipment	0.39	0.04	0.51	0.11
Laboratory and workshop equipment	13.65	1.11	15.34	1.88
Total	12,143.98	1,617.56	17,973.09	2,469.39

u) Conveyancing of title to the freehold land of area 3,349.54 acres of value ₹ 1,196.01 crore and right of use land of area 842.25 acres of value ₹116.36 crore, in respect of these two stations upon merger is yet to be transfered in the name of the Company.

3. Non-current assets - Capital work-in-progress

As at 31 March 2023 ₹ Crore

Particulars	As at 1 April 2022	Additions	Deductions/ adjustments	Capitalized	As at 31 March 2023
Development of land	288.66	32.16	(73.52)	6.31	**240.99**
Roads, bridges, culverts and helipads	350.33	127.74	82.58	226.17	**334.48**
Piling and foundation	404.97	19.09	-	-	**424.06**
Buildings					
Freehold					
Main plant	866.44	243.93	122.99	412.09	**821.27**
Others	1,505.27	639.44	(127.37)	775.89	**1,241.45**
Temporary erections	23.30	5.05	(4.47)	3.87	**20.01**
Water supply, drainage and sewerage system	102.94	36.16	(10.37)	100.17	**28.56**
Hydraulic works, barrages, dams, tunnels and power channel	4,740.78	501.60	(2.24)	0.98	**5,239.16**
MGR track and signalling system	69.58	450.19	(472.02)	1.90	**45.85**
Railway siding	1,936.13	480.04	(1,458.89)	323.81	**633.47**
Earth dam reservoir	481.04	193.64	39.97	568.70	**145.95**
Plant and equipment - owned	56,469.10	12,798.47	(2,267.29)	20,171.78	**46,828.50**
Furniture and fixtures	8.46	14.93	3.54	23.75	**3.18**
Vehicles	0.06	0.17	-	0.23	**-**
Office equipment	31.16	8.14	(0.65)	12.35	**26.30**
EDP/WP machines and satcom equipment	3.30	4.62	(0.21)	1.16	**6.55**

As at 31 March 2023 **₹ Crore**

Particulars	As at 1 April 2022	Additions	Deductions/ adjustments	Capitalized	As at 31 March 2023
Construction equipment	0.08	3.09	(1.44)	0.06	**1.67**
Electrical installations	488.99	71.34	(146.26)	182.29	**231.78**
Communication equipment	36.13	12.35	(33.66)	5.45	**9.37**
Hospital equipment	0.20	0.79	-	0.69	**0.30**
Laboratory and workshop equipment	1.98	0.33	(0.08)	1.68	**0.55**
Development of coal mines	1,384.62	368.40	78.42	79.10	**1,752.34**
	69,193.52	16,011.67	(4,270.97)	22,898.43	**58,035.79**
Expenditure pending allocation					
Survey, investigation, consultancy and supervision charges	116.24	(33.00)	(6.05)	-	**77.19**
Difference in exchange on foreign currency loans	715.09	141.25	(110.62)	-	**745.72**
Pre-commissioning expenses (net)	126.71	492.17	(331.72)	-	**287.16**
Expenditure during construction period (net)*	569.48	3,494.69	(312.57)	-	**3,751.60**
Other expenditure directly attributable to project construction	926.54	12.30	(410.00)	-	**528.84**
Less: Allocated to related works	-	3,217.85	-	-	**3,217.85**
	2,454.06	889.56	(1,170.96)	-	**2,172.66**
Sub-total	71,647.58	16,901.23	(5,441.93)	22,898.43	**60,208.45**
Less: Provision for unserviceable works	501.54	15.41	(7.30)	-	**509.65**
Construction stores (net of provisions)	2,373.07	1,019.15	(1,347.14)	-	**2,045.08**
Total	**73,519.11**	**17,904.97**	**(6,781.77)**	**22,898.43**	**61,743.88**

As at 31 March 2022 ₹ Crore

Particulars	As at 1 April 2021	Additions	Deductions/ adjustments	Capitalized	As at 31 March 2022
Development of land	468.83	173.16	(323.85)	29.48	288.66
Roads, bridges, culverts and helipads	519.53	151.35	(260.13)	60.42	350.33
Piling and foundation	746.53	-	(341.56)	-	404.97
Buildings					
Freehold					
Main plant	1,425.39	227.35	(180.92)	605.38	866.44
Others	1,746.40	617.23	(402.94)	455.42	1,505.27
Temporary erections	24.39	11.64	(6.57)	6.16	23.30
Water supply, drainage and sewerage system	105.16	73.10	(19.70)	55.62	102.94
Hydraulic works, barrages, dams, tunnels and power channel	4,320.70	422.03	(1.95)	-	4,740.78
MGR track and signalling system	86.07	179.71	(163.37)	32.83	69.58
Railway siding	1,929.34	514.23	(317.36)	190.08	1,936.13

As at 31 March 2022 ₹ Crore

Particulars	As at 1 April 2021	Additions	Deductions/ adjustments	Capitalized	As at 31 March 2022
Earth dam reservoir	377.33	114.93	(5.51)	5.71	481.04
Plant and equipment - owned	65,656.26	18,209.72	(145.85)	27,251.03	56,469.10
Furniture and fixtures	46.01	8.79	(14.50)	31.84	8.46
Vehicles	0.17	0.06	(0.17)	-	0.06
Office equipment	21.70	18.47	(7.62)	1.39	31.16
EDP/WP machines and satcom equipment	3.01	5.78	(1.81)	3.68	3.30
Construction equipment	0.06	0.08	-	0.06	0.08
Electrical installations	486.46	136.87	(26.48)	107.86	488.99
Communication equipment	20.56	23.23	(0.71)	6.95	36.13
Hospital equipment	0.43	0.20	(0.02)	0.41	0.20
Laboratory and workshop equipment	2.20	0.97	(0.11)	1.08	1.98
Development of coal mines	1,266.82	347.15	39.24	268.59	1,384.62
	79,253.35	21,236.05	(2,181.89)	29,113.99	69,193.52
Expenditure pending allocation					
Survey, investigation, consultancy and supervision charges	187.84	(61.64)	(9.96)	-	116.24
Difference in exchange on foreign currency loans	1,194.94	75.34	(555.19)	-	715.09
Pre-commissioning expenses (net)	398.69	545.26	(817.24)	-	126.71
Expenditure during construction period (net)*	492.41	3,759.78	(145.92)	-	4,106.27
Other expenditure directly attributable to project construction	873.94	52.60	-	-	926.54
Less: Allocated to related works	-	567.58	2,969.21	-	3,536.79
	3,147.82	3,803.76	(4,497.52)	-	2,454.06
Sub-total	82,401.17	25,039.81	(6,679.41)	29,113.99	71,647.58
Less: Provision for unserviceable works	625.32	9.52	(133.30)	-	501.54
Construction stores (net of provisions)	3,150.18	1,062.56	(1,839.67)	-	2,373.07
Total	84,926.03	26,092.85	(8,385.78)	29,113.99	73,519.11

* Brought from expenditure during construction period (net) - Note 47

a) Construction stores includes material lying with contractors for construction works and are net of provision for shortages pending investigation amounting to ₹ **28.54 crore** (31 March 2022: ₹ 28.69 crore).

b) Pre-commissioning expenses for the year amount to ₹ **667.45 crore** (31 March 2022: ₹ 649.56 crore) and after adjustment of pre-commissioning sales of ₹ **175.28 crore** (31 March 2022: ₹ 104.30 crore) resulted in net pre-commissioning expenditure of ₹ **492.17 crore** (31 March 2022: ₹ 545.26 crore).

c) Additions to the development of coal mines include expenditure during construction period (net) of ₹ **651.07 crore** (31 March 2022: ₹ 411.99 crore) - [Ref. Note 48] and after netting off the receipts from coal extracted during the development phase amounting to ₹ **282.67 crore** (31 March 2022: ₹ 64.84 crore).

d) Details of exchange differences and borrowing costs capitalised are disclosed in Note 2 (p).

e) Amount capitalised under development of coal mines is included in assets capitalised under 'Mining properties' and 'Site restoration cost' under Property, plant and equipment.

f) During the year, the company entered into with a Business Transfer Agreement (BTA) with NTPC Green Energy Ltd, a wholly owned subsidiary of the company, for transfer of fifteen Renewable Energy (RE) assets of the Company. The assets were transferred as at the closing date of transfer being 28 February 2023 at book value pursuant to BTA. Refer Note 51. Details of Capital work-in-progress transferred to the subsidiary , included in the adjustment column above, are as under:

	₹ Crore
Plant and equipment - Owned	**895.64**
Construction stores	**2.33**
	897.97

g) Business Combinations

Consequent upon amalgamation of two wholly owned subsidiaries of the Company as common control acquisition, considering the provisions of Appendix C to Ind AS 103 "Business Combination" as per pooling of interest method, restatement of previous year figures has been done as if the business combination had occurred from the beginning of preceding period in compliance with the above. Accordingly, balances of capital work-in progress presented in the previous year, have been restated (Refer Note 65) . The amount included in the balances as at 1 April 2021 and 31 March 2022 in respect of these companies are as under:

₹ Crore

Particulars	As at 1 April 2021	As at 31 March 2022
Development of land	94.77	28.48
Roads, bridges, culverts and helipads	1.37	8.95
Building-Freehold-Main plant	0.00	1.01
Building-Freehold-Others	185.71	224.57
Temporary erections	0.08	1.52
Water supply, drainage and sewerage system	0.15	0.65
MGR track and signalling system	0.00	2.05
Railway siding	191.82	81.67
Earth dam reservoir	6.17	1.51
Plant and equipment - owned	8,601.30	4,155.92
Furniture and fixtures	-	0.01
Office equipment	0.00	0.07
EDP/WP machines and satcom equipment	0.58	1.46
Electrical installations	75.90	33.69
Survey, investigation, consultancy and supervision charges	103.10	36.29
Pre-commissioning expenses (net)	118.35	59.72
Less: Provision for unserviceable works	0.00	1.51
Construction stores (net of provisions)	203.13	284.39
TOTAL	9,582.43	4,920.45

4. Investment property

As at 31 March 2023

₹ Crore

Particulars	Gross carrying amount				Depreciation and amortization				Net carrying amount
	As at 1 April 2022	Additions	Deductions/ adjustments	As at 31 March 2023	As at 1 April 2022	For the year	Deductions/ adjustments	Upto 31 March 2023	As at 31 March 2023
Freehold land	-	465.18	-	**465.18**	-	-	-	**-**	**465.18**

a) Investment property has been valued as per accounting policy no. C.8 (Note 1)

b) As per Business transfer agreement (BTA) entered into between the Company and NTPC Green Energy Ltd. (NGEL), a wholly owned subsidiary of the Company, for transfer of fifteen Renewable Energy (RE) assets of the Company as at 28 February 2023, freehold land pertaining to one of the RE stations admeasuring 1202.55 acres of value ₹ 465.18 crore as at 28 February, 2023 shall remain with the Company and will be leased to NGEL at the mutually agreed terms and conditions. Accordingly, the said freehold land has been classified as Investment property during the year. (Refer Note 51 relating to BTA).

c) The rental income arising out of leasing out of the property amounting to ₹ **0.19 crore** (31 March 2022: Nil) has been included in Note 41 - Other income. Disclosure on future rent receivable is included in Note 73. The direct operating expenses arising from the investment property are insignificant.

d) The company does not have any contractual obligation to purchase , construct or develop investment property or for repairs, maintenance or enhancements.

e) Investment property pledged as security is Nil.

f) The fair value of the investment property is ₹ 472.70 crore which is based on the valuation by a registered valuer as defined under Rule 2 of Companies (Registered valuers and valuation) Rules,2017.

5. Non-current assets - Intangible assets

As at 31 March 2023

₹ Crore

Particulars		Gross block				Amortization				Net block
		As at 1 April 2022	Additions	Deductions/ adjustments	As at 31 March 2023	As at 1 April 2022	For the year	Deductions/ adjustments	Upto 31 March 2023	As at 31 March 2023
Software		119.70	7.83	(1.15)	**126.38**	99.70	15.28	(1.15)	**113.83**	**12.55**
Right to use	- Land	172.30	1.72	-	**174.02**	35.70	7.46	-	**43.16**	**130.86**
	- Others	427.87	-	-	**427.87**	98.00	19.11	-	**117.11**	**310.76**
Total		**719.87**	**9.55**	**(1.15)**	**728.27**	**233.40**	**41.85**	**(1.15)**	**274.10**	**454.17**

As at 31 March 2022

₹ Crore

Particulars		Gross block				Amortization				Net block
		As at 1 April 2021	Additions	Deductions/ djustments	As at 31 March 2022	As at 1 April 2021	For the year	Deductions/ adjustments	Upto 31 March 2022	As at 31 March 2022
Software		116.57	4.84	(1.71)	119.70	81.34	20.07	(1.71)	99.70	20.00
Right to use	- Land	212.67	6.84	(47.21)	172.30	33.87	8.97	(7.14)	35.70	136.60
	- Others	419.59	8.28	-	427.87	76.05	21.95	-	98.00	329.87
Total		748.83	19.96	(48.92)	719.87	191.26	50.99	(8.85)	233.40	486.47

a) The right to use of land and others are amortized over the period of legal right to use or life of the related plant, whichever is less.

b) Cost of acquisition of the right for drawl of water amounting to ₹ **427.87 crore** (31 March 2022: ₹ 427.87 crore) is included under intangible assets – Right to use - Others.

c) Deductions/adjustments from gross block and amortization for the year includes:

Particulars	Gross block		Amortization	
	For the year ended		For the year ended	
	31 March 2023	31 March 2022	31 March 2023	31 March 2022
Retirements and other adjustments	**(1.15)**	(48.92)	**(1.15)**	(8.85)
Total	**(1.15)**	(48.92)	**(1.15)**	(8.85)

d) Gross carrying amount of the fully amortised intangible assets that are still in use :

Particulars	As at 31 March 2023	As at 31 March 2022
Software	**91.16**	75.28
Right to use - land	**0.36**	0.14
Total	**91.52**	75.42

e) Refer Note 76 (C) (a) for disclosure of contractual commitments for the acquisition of intangible assets.

f) **Business Combinations**

Consequent upon amalgamation of two wholly owned subsidiaries of the Company as common control acquisition, considering the provisions of Appendix C to Ind AS 103 "Business Combination" as per pooling of interest method, restatement of previous year figures has been done as if the business combination had occurred from the beginning of preceding period in compliance with the above (Refer Note 65). Accordingly, gross block and accumulated depreciation / amortisation /impairment presented in the previous year, have been restated. The amount included in the gross block and accumulated depreciation / amortisation/impairment as at 1 April 2021 and 31 March 2022 in respect of these companies are as under:

₹ Crore

Particulars	As at 1 April 2021		As at 31 March 2022	
	Gross block	Amortization	Gross block	Amortization
Software	1.74	0.91	1.76	1.47
Right to use - Land	-	-	0.80	0.03
	1.74	0.91	2.56	1.50

6. Non-current assets - Intangible assets under development

As at 31 March 2023 **₹ Crore**

Particulars	As at 1 April 2022	Additions	Deductions/ Adjustments	Capitalized	As at 31 March 2023
Exploration and evaluation assets - coal mines	142.05	8.52	(64.20)	-	**86.37**
Exploratory wells-in-progress	7.64	-	-	-	**7.64**
Software	1.21	2.15	-	0.02	**3.34**
	150.90	10.67	(64.20)	0.02	**97.35**
Less: Provision for unserviceable works	52.43	-	-	-	**52.43**
Total	**98.47**	**10.67**	**(64.20)**	**0.02**	**44.92**

As at 31 March 2022 ₹ Crore

Particulars	As at 1 April 2021	Additions	Deductions/ Adjustments	Capitalized	As at 31 March 2022
Exploration and evaluation assets - coal mines	139.61	2.44	-	-	142.05
Exploratory wells-in-progress	7.64	-	-	-	7.64
Software	0.08	1.35	-	0.22	1.21
	147.33	3.79	-	0.22	150.90
Less: Provision for unserviceable works	52.43	-	-	-	52.43
Total	94.90	3.79	-	0.22	98.47

a) Refer Note 66 d) w.r.t. exploration and evaluation of assets-coal mines.

7. Non-current financial assets -Equity investments in subsidiary and joint venture companies

₹ Crore

Particulars	**Number of shares Current year/ (previous year)**	**Face value per share in ₹ Current year/ (previous year)**		**As at 31 March 2023**	As at 31 March 2022
Equity instruments - Unquoted (fully paid up - unless otherwise stated, at cost)					
Subsidiary companies					
NTPC Electric Supply Company Ltd.	80,910 (80,910)	10 (10)		**0.08**	0.08
NTPC Vidyut Vyapar Nigam Ltd.	3,00,00,000 (3,00,00,000)	10 (10)		**30.00**	30.00
Bhartiya Rail Bijlee Company Ltd.	1,77,41,21,538 (1,77,41,21,538)	10 (10)		**1,774.12**	1,774.12
Patratu Vidyut Utpadan Nigam Ltd.	1,63,76,24,000 (1,23,76,24,000)	10 (10)		**1,637.62**	1,237.62
NTPC Mining Ltd.	50,000 (50,000)	10 (10)		**0.05**	0.05
NTPC EDMC Waste Solutions Private Ltd.	1,48,000 (1,48,000)	10 (10)		**0.15**	0.15
NTPC Renewable Energy Ltd.	- (73,11,70,000)	10 (10)		**-**	731.17
Ratnagiri Gas & Power Private Ltd.	2,83,00,76,305 (2,83,00,76,305)	10 (10)	834.55		834.55
Less: Provision for impairment			834.55		834.55
				-	-
THDC India Limited	2,73,09,412 (2,73,09,412)	1,000 (1,000)		**7,500.00**	7,500.00
North Eastern Electric Power Corporation Limited	3,60,98,10,400 (3,60,98,10,400)	10 (10)		**4,000.00**	4,000.00
NTPC Green Energy Limited	471,96,11,035 (-)	10 (10)		**4,719.61**	-
				19,661.63	15,273.19

Particulars	Number of shares Current year/ (previous year)	Face value per share in ₹ Current year/ (previous year)		As at 31 March 2023	As at 31 March 2022
Joint venture companies					
Utility Powertech Ltd. (includes 10,00,000 bonus shares)	20,00,000 (20,00,000)	10 (10)		**1.00**	1.00
NTPC-GE Power Services Private Ltd.	30,00,000 (30,00,000)	10 (10)		**3.00**	3.00
NTPC-SAIL Power Company Ltd.	49,02,50,050 (49,02,50,050)	10 (10)		**490.25**	490.25
NTPC Tamil Nadu Energy Company Ltd.	1,43,63,96,112 (1,43,63,96,112)	10 (10)		**1,436.40**	1,436.40
Aravali Power Company Private Ltd.	1,43,30,08,200 (1,43,30,08,200)	10 (10)		**1,433.01**	1,433.01
NTPC BHEL Power Projects Private Ltd.	5,00,00,000 (5,00,00,000)	10 (10)	50.00		50.00
Less: Provision for impairment			50.00		50.00
				-	-
Meja Urja Nigam Private Ltd.	1,78,44,09,800 (1,74,99,99,800)	10 (10)		**1,784.41**	1,750.00
Transformers and Electricals Kerala Ltd.	1,91,63,438 (1,91,63,438)	10 (10)		**31.34**	31.34
National High Power Test Laboratory Private Ltd.	3,04,00,000 (3,04,00,000)	10 (10)	30.40		30.40
Less: Provision for impairment			30.40		16.16
				-	14.24
Energy Efficiency Services Ltd.	46,36,10,000 (46,36,10,000)	10 (10)		**463.61**	463.61
CIL NTPC Urja Private Ltd.	76,900 (76,900)	10 (10)		**0.08**	0.08
Anushakti Vidhyut Nigam Ltd.	49,000 (49,000)	10 (10)		**0.05**	0.05
Hindustan Urvarak and Rasayan Ltd.	2,29,59,55,000 (1,62,94,15,000)	10 (10)		**2,295.95**	1,629.42
Jhabua Power Limited	32,50,00,000 (-)	10 (-)		**325.00**	-
Trincomalee Power Company Ltd. (* Srilankan rupees)	32,86,061 (32,86,061)	100* (100)*	15.20		15.20
Less: Provision for impairment			14.28		14.28
				0.92	0.92
Bangladesh-India Friendship Power Company Private Ltd. (** Bangladeshi Taka)	13,92,50,000 (7,42,50,000)	100* (100)*		**1,162.02**	620.38
				9,427.04	7,873.70
Total				**29,088.67**	23,146.89
Aggregate amount of unquoted investments (net of provision for impairment)				**29,088.67**	23,146.89
Aggregate amount of impairment in the value of investments				**929.23**	914.99

a) Investments have been valued as per accounting policy no. C.28.1 (Note 1).

b) NTPC Green Energy Ltd (NGEL) was incorporated on 7 April 2022 for take over of 15 number of RE assets of NTPC and NTPC's stake in NTPC Renewable Energy Limited (NREL). Business Transfer agreement and Share Transfer agreement was signed with NGEL and the 15 number of RE assets of NTPC and entire stake in NREL has been transferred to NGEL as at the closing date of 28 February 2023. Refer Note 51. Corporate action for crediting shares in demat account of NTPC is under process.

c) The Resolution Plan submitted by the company and approved by National Company Law Tribunal (NCLT), Kolkata bench in respect of Jhabua Power Limited (JPL) having installed and commercial capacity of 600 MW thermal power station, was implemented on 5 September 2022 for a total consideration of ₹ 925 crore, out of which ₹ 325 crore was contributed as equity (face value of ₹10 each) and ₹ 600 crore was paid for the allotment of 8.5% Non-Convertible Debentures (NCDs) of face value of ₹ 100 each. Pursuant to above, NTPC has acquired 50 % equity in the Company (JPL). Based on the shareholders agreement which provides for joint control over the company, the investment in the company is considered as joint venture and accounted for accordingly.

d) The Board of NTPC Ltd. in its meeting dated 29 October 2022 has accorded approval to the Supplementary JV Agreement of Anushakti Vidyut Utpadan Nigam Limited, a Joint Venture of the Company, to increase the stake in the company from existing 49% to 50% and to align the document in line with Atomic Energy Act 2016 amendment so that the Joint Venture Company may initiate process for setting up of nuclear power projects.

e) Promoters of National High Power Testing Laboratory Ltd.(NHPTL), a joint venture of the Company, in the meeting held on 15 September 2022, under the chairmanship of Secretary Power, MoP, has accorded approval of restructuring plan of NHPTL. Subsequently, Board of NTPC Limited has accorded approval to the restructuring plan on 11 March 2023. Pending implementation of the revival plan and based on the un-audited reviewed accounts of NHPTL as at 31 March 2023, provision for impairment loss on the entire investment in the joint venture of ₹ **30.40 crore** (upto 31 March 2022: ₹ 16.16 crore) has been made.

f) The Board of Directors of the Company in its meeting held on 28 April 2016 accorded in principle approval for withdrawal from NTPC BHEL Power Projects Private Ltd. (NBPPL), a joint venture of the Company. A meeting was held on 3 October 2022 at MOP to discuss the way forward for NBPPL. In the meeting, it was decided that the process of winding up of NBPPL will be taken up by both the promoters after the completion of balance on going work at one of the projects of the Company. Pending withdrawal, provision for impairment loss on the entire investment in NBPPL of ₹ **50.00 crore** (upto 31 March 2022: ₹ 50.00 crore) has been made based on the un-audited accounts of NBPPL as at 31 March 2023.

g) The Board of Directors of the Company in its meeting held on 28 April 2016 accorded in principle approval for withdrawal from Transformers and Electricals Kerala Ltd. (TELK), a joint venture of the Company. GOI has accorded its approval for exit of NTPC from the joint venture. The decison of the Board of Directors of NTPC Limited and approval of GOI has been conveyed to the Government of Kerala (GoK) (JV Partner) & TELK. GoK has in-principally agreed for the exit of the NTPC Ltd.. and NTPC has written a letter to Chief Secretary, GoK on 17 March 2023 for expediting the process of exit of the Company from TELK.

h) The Board of Directors of the Company in its meeting held on 26 March 2022 accorded in principle approval offering equity stake of the Company in Hindustan Urvarak and Rasayan Ltd.,(HURL) a joint venture of the Company, to Indian Oil Corporation Limited (IOCL) as outright sale which has not been agreed by IOCL. Ministry of Chemical and Fertilizers (MoC&F) vide letter dated 12 October 2022 has communicated the Company and other lead promoters of HURL to explore possibility of disinvestment in HURL in the respective boards. NTPC Board accorded in principle approval for disinvestment of its stake in HURL. MOP vide letter dated 31 January 2023 has accorded approval for the same. MoC&F will take up with Department of Investment and Public Asset Management (DIPAM) of GoI for disinvestment approval once they receive all lead promoter(s) and their administrative ministries consent.

i) NTPC EDMC Waste Solutions Private Limited (NEWS) was incorporated on 1 June 2020 to develop and operate integrated waste management and energy generation facility using municipal solid waste. However, as suitable land & PPA was not available, the project was dropped. NTPC vide letter dated 4 May 2022 to has requested the consent of Municipal Corporation of Delhi (MCD)/East Delhi Municipal Corporation to transfer its 26% stake in NEWS to NTPC or any of its affiliate/associate companies. Decission of MCD is awaited.

j) Restrictions for the disposal of investments held by the Company and commitments towards certain subsidiary & joint venture companies are disclosed in Note 76 (C) (b) and (c).

8. Non-current financial assets - Other investments

₹ Crore

Particulars	Number of instruments Current year/ (previous year)	Face value per instrument in ₹ Current year/ (previous year)	As at 31 March 2023	As at 31 March 2022
Equity instruments (fully paid up - unless otherwise stated)				
Quoted (designated at fair value through other comprehensive income)				
PTC India Ltd.	1,20,00,000 (1,20,00,000)	10 (10)	**102.30**	98.70
			102.30	98.70
Unquoted (measured at fair value through profit or loss)				
International Coal Ventures Private Ltd.	14,00,000 (14,00,000)	10 (10)	**1.40**	1.40
BF-NTPC Energy Systems Ltd.	68,48,681 (68,48,681)	10 (10)	**2.38**	2.38
			3.78	3.78
Co-operative societies			#	#
Debt instruments in Joint Venture Companies (fully paid up)				
Unquoted (measured at amortised cost)				
Jhabua Power Limited-8.5% Non convertible debentures - private placement -Redeemable in forty eight quarterly equal installments (Refer Note 14 for current portion of the instrument and Note 7c) for details of transaction)	5,99,99,994 (-)	100 (-)	**525.00**	-
Total			**631.08**	102.48
Aggregate amount of quoted investments at cost			**12.00**	12.00
Aggregate market value of the quoted investments			**102.30**	98.70
Aggregate amount of unquoted investments at cost			**528.78**	3.78

Equity shares of ₹ **30,200/-** (31 March 2022: ₹ 30,200/-) held in various employee co-operative societies.

a) Investments have been valued as per accounting policy no. C.28.1 (Note 1).

b) The Board of Directors of NTPC Limited in its meeting held on 28 April 2016 accorded in principle approval for withdrawal from PTC India Ltd. (PTC). As the Company was formed by a directive from the GOI, approval of the GOI was required for exit by NTPC. Ministry of Power has accorded permission for NTPC to exit from PTC on 22 February 2022. NTPC is in discussion with other promoters to finalize the modalities of exit from PTC.

c) The Board of Directors of NTPC Limited in its meeting held on 27 January 2012 accorded in principle approval for withdrawal from International Coal Ventures Private Ltd. (ICVPL). NTPC Board has accorded fresh approval for exiting from ICVPL on 20 May 2022. Department of Investment and Public Asset Management (DIPAM) of GoI vide OM dated 1 June 2022 has empowered Board of Directors of Public Sector Undertakings to exit from Joint Ventures and Subsidiaries and send proposal to DIPAM through administrative Ministry for approval. Communication sent to Steel Authority oif India Ltd & ICVPL regarding DIPAM guidelines for consideration. Pending withdrawal, the Company had lost the joint control over the entity and accordingly, has classified the investment in ICVPL as 'Investment in unquoted equity instruments'.

d) The Board of Directors of NTPC Limited in its meeting held on 19 June 2014 accorded in principle approval for withdrawal from BF-NTPC Energy Systems Ltd. (BF-NTPC), a joint venture of the Company. As BF-NTPC was formed by a directive from the GOI, approval of the GOI was sought for exit by the Company. Ministry of Power, GoI conveyed its approval for winding up of BF-NTPC on 8 January 2018. Consequently, liquidator was appointed in the extra-ordinary general meeting of BF-NTPC held on 9 October 2018. The winding up is under process. Pursuant to winding up proceedings, the Company had lost the joint control over the entity and accordingly, has classified the investment in BF NTPC as 'Investment in unquoted equity instruments'. The difference between the cost of investment and the fair value has been provided for in the earlier years.

e) The Company is of the view that provisions of Ind AS 24 'Related Party Disclosures' and Ind AS 111 'Joint Arrangements' are not applicable to the investments made in PTC India Ltd., International Coal Ventures Private Ltd. and BF-NTPC Energy systems Ltd., and the same has been accounted for as per the provisions of Ind AS 109 'Financial Instruments'. Also Refer Note 59 for investments in PTC India Ltd.

f) No strategic investments in equity instruments measured at FVTOCI were disposed during the financial year 2022-23, and there were no transfers of any cumulative gain or loss within equity relating to these investments.

g) **Movement in quoted investments**

₹ **Crore**

Opening balance	**98.70**	93.30
Add / less: Mark to Market gain / loss through FVTOCI	**3.60**	5.40
Closing balance	**102.30**	98.70

9. Non-current financial assets - Loans

₹ **Crore**

Particulars	**As at 31 March 2023**	As at 31 March 2022
Loans (Considered good, unless otherwise stated)		
Related parties		
Secured	**712.43**	765.52
Unsecured	**12.43**	17.23
Considered doubtful	**3.09**	-
Less: Allowance for bad and doubtful loans	**3.09**	-
	724.86	782.75
Employees (including accrued interest)		
Secured	**316.80**	295.27
Unsecured	**174.61**	188.98
Others		
Unsecured	**17.20**	21.50
Total	**1,233.47**	1,288.50
a) Due from directors and officers of the Company		
Directors	**-**	0.07
Officers	**0.20**	-
b) Loans to related parties include:		
Key management personnel	**0.20**	0.07
National High Power Test Laboratory Private Ltd. (Joint venture company) (net of allowance for bad and doubtful loan)	**11.63**	16.56
Ratnagiri Gas & Power Private Ltd. (Subsidiary company)	**712.43**	765.52
NTPC Education and Research Society	**0.60**	0.60

c) Loan to Ratnagiri Gas & Power Company Private Ltd. is secured by first ranking pari passu charge/ mortgage on the assets (moveable and immoveable, tangible and intangible and current assets) of the Subsidiary, both present and future.

d) Loans - Others represent loan of ₹ **17.20 crore** (31 March 2022: ₹ 21.50 crore) given to Andhra Pradesh Industrial Infrastructure Corporation Ltd. (APIIC) which is covered by a guarantee given by the Government of Andhra Pradesh vide GO dated 3 April 2003.

e) Loans to the employees are secured against the mortgage of the house properties and hypothecation of vehicles for which such loans have been given in line with the policies of the Company.

10. Non-current financial assets - Trade receivables

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Trade receivables		
Unsecured, considered good	**2,399.78**	-

a) Electricity (Late Payment Surcharge and Related Matters) Rules, 2022 notified on 3 June 2022, provides that the outstanding dues of the beneficiaries including late payment surcharge (LPSC) upto the date of the said notification shall be rescheduled upto a maximum period of 48 months in the manner prescribed in the said Rules and no LPSC shall be charged on the outstanding dues from the date of notification subject to application to be made by the beneficiaries in this regard. Pursuant to the above, some of the beneficiaries have applied for redetermination of their payment of dues under these Rules. The dues of such beneficiaries have been presented at their fair value under Non- current Trade Receivables considering the requirements of applicable Indian Accounting Standards. Consequently, the fair value difference amounting to ₹ **386.84 crore** (31 March 2022: Nil) has been charged to Statement of Profit and Loss (Refer Note 46). Out of the above, an amount of ₹ **149.88 crore** (31 March 2022: Nil) has been accounted as interest from non current trade receivables (Refer Note 41).

b) No amount is receivable from related party.

11. Non-current assets - Other financial assets

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Share application money pending allotment in		
Subsidiary companies		
Patratu Vidyut Utpadan Nigam Ltd.	**100.00**	-
	100.00	-
Joint venture companies		
Meja Urja Nigam Private Ltd.	**7.49**	-
NTPC Tamil Nadu Energy Company Ltd.	**30.00**	-
Trincomalee Power Company Ltd.	**0.44**	-
	37.93	-
Claims recoverable	**517.28**	696.19
Finance lease receivables (Refer Note 73)	**201.56**	281.93
Mine closure deposit	**66.16**	39.86
Total	**922.93**	1,017.98

a) Claims recoverable represents ₹ **517.28 crore** (31 March 2022: ₹ 696.19 crore) towards the cost incurred upto 31 March 2023 in respect of one of the hydro power projects, the construction of which has been discontinued on the advice of the Ministry of Power (MOP), GOI which includes ₹ **302.16 crore** (31 March 2022: ₹ 456.85 crore) in respect of arbitration awards challenged by the Company before Hon'ble High Court of Delhi. In the event the Hon'ble High Court grants relief to the Company, the amount would be adjusted against Current liabilities - Provisions - Provision for arbitration awards (Note 37). Management expects that the total cost incurred, anticipated expenditure on the safety and stabilisation measures, other recurring site expenses and interest costs as well as claims of contractors/vendors for various packages for this project will be compensated in full by the GOI. Hence, no provision is considered necessary.

b) The Company had ascertained that the Power Purchase Agreement (PPA) entered into for Stage-I of a power station with the beneficiary falls under the definition of finance lease. Accordingly, the written down value of the specified assets was derecognized from PPE and accounted as Finance Lease Receivable (FLR) on transition to Ind AS. The Company has continued to classify this arrangement with its customer as lease based on the practical expedient provided in Ind AS 116. Accordingly, recovery of capacity charges towards depreciation, interest on loan capital & return on equity (pre-tax) components from the beneficiary are continued to be adjusted against FLR. The interest component of the FLR and amount received on account of revision of tariff of previous periods in respect of the above three elements are continued to be recognised as 'Interest income on Assets under finance lease' under 'Revenue from operations' (Note 40).

c) As per the guidelines from Ministry of Coal, Government of India for preparation of Mine Closure Plan, Escrow Accounts have been opened for each captive mine and the balances held in these escrow accounts are presented as 'Mine closure deposit'. Up to 80% of the total deposited amount including interest accrued in the escrow account shall be released after every five years in line with the periodic examination of the closure plan as per the Guidelines. Interest earned on the escrow account is added to mine closure deposit account.

12. Other non- current assets

₹ Crore

Particulars		As at 31 March 2023	As at 31 March 2022
Capital advances			
(Considered good unless otherwise stated)			
Secured		**1.88**	13.99
Unsecured			
Covered by bank guarantees		**2,204.51**	1,795.52
Others		**3,820.30**	3,943.27
Considered doubtful		**67.70**	44.97
Less: Allowance for bad and doubtful advances		**67.70**	44.97
		6,026.69	5,752.78
Advances other than capital advances			
(Considered good unless otherwise stated)			
Security deposits		**306.87**	310.31
Advances to contractors and suppliers			
Unsecured	**1,810.82**		1,989.50
Considered doubtful	**112.57**		112.57
Less: Allowance for bad and doubtful advances	**112.57**		112.57
		1,810.82	1,989.50
Prepaid Expenses		**25.51**	27.69
Advance tax and tax deducted at source	**14,730.96**		11,143.46
Less: Provision for tax	**12,254.94**		8,475.16
		2,476.02	2,668.30
Deferred foreign currency fluctuation asset		**1,565.41**	1,480.72
Deferred payroll expenditure		**103.02**	109.14
Adjustable from Escrow Account towards mine closure expenses		**39.30**	16.67
Total		**12,353.64**	12,355.11

a) In line with accounting policy no. 15 (Note 1), deferred foreign currency fluctuation asset has been accounted and ₹ **830.98 crore** (31 March 2022: ₹ 630.97 crore) being the exchange fluctuations on account of foreign currency loans have been adjusted in 'Energy sales' under 'Revenue from operations' (Note 40).

b) Capital advances include amounts given as advance against works to the following private companies (related parties) in which one or more directors of the Company are directors:

NTPC-GE Power Services Private Ltd.	-	0.06
NTPC BHEL Power Projects Private Ltd.	**274.25**	283.35

c) Capital advances include ₹ **224.29 crore** (31 March 2022: ₹ 224.29 crore), paid to a contractor pending settlement of certain claims which are under litigation. The amount will be adjusted with the cost of related work or recovered from the party, depending upon the outcome of the legal proceedings.

d) Advances to contractors and suppliers include payments to Railways amounting to ₹ **1,708.03 crore** (31 March 2022: ₹ 1,862.94 crore) under customer funding model as per policy on 'Participative model for rail-connectivity and capacity augmentation projects' issued by the Ministry of Railways, GOI. As per this policy, an agreement has been signed between the Company and the Ministry of Railways, GOI on 6 June 2016. As per the agreement, railway projects agreed between the Company and Railways will be constructed, maintained and operated by Railways and ownership of the line and its operations and maintenance will always remain with them. Railways will pay upto 7% of the amount invested through freight rebate on freight volumes every year till the funds provided by the Company are fully recovered along-with interest (equal to the prevailing rate of dividend payable by Railways at the time of signing of respective agreements), subject to the rebate not exceeding the freight amount in the accounting year, after commercial operation date (COD) of the railway projects. The advance is adjusted at projects which have achieved COD based on confirmation from Railways towards freight rebate in consonance with the agreement terms and the interest portion is recognised in Note-41-'Other income'.

e) Secured capital advances are secured against the hypothecation of the construction equipment/material supplied by the contractors/suppliers.

f) Loans given to employees are measured at amortized cost. The deferred payroll expenditure represents the benefits on account of interest rate on loans being lower than the market rate of interest. The same is amortized on a straight-line basis over the remaining period of the loan.

13. Current assets - Inventories

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Coal	**5,064.63**	2,876.49
Fuel oil	**892.97**	707.91
Naphtha	**85.05**	56.74
Stores and spares	**6,231.13**	5,062.92
Chemicals and consumables	**236.60**	194.96
Loose tools	**14.38**	13.30
Scrap	**27.55**	18.30
Others	**1,329.78**	980.48
	13,882.09	9,911.10
Less: Provision for shortages	**15.99**	58.17
Provision for obsolete/unserviceable items/ diminution in value of surplus inventory	**186.35**	161.93
Total	**13,679.75**	9,691.00

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Inventories include material-in-transit		
Coal	**426.44**	316.03
Stores and spares	**19.40**	20.38
Chemicals and consumables	**2.20**	2.74
Loose tools	**0.04**	0.04
Others	**6.68**	2.92

a) Inventory items have been valued as per accounting policy no. C.10 (Note 1).

b) Inventories - Others includes steel, cement, ash bricks etc.

c) Refer Note 53 (a) for information on inventories consumed and recognised as expense during the year.

d) Refer Note 53 (b) for information on inventories pledged as security by the Company.

e) Paragraph 32 of Ind AS 2 'Inventories' provides that materials and other supplies held for use in the production of inventories are not written down below cost if the finished products in which they will be incorporated are expected to be sold at or above cost. The Company is operating in the regulatory environment and as per CERC Tariff Regulations, cost of fuel and other inventory items are recovered as per extant tariff regulations. Accordingly, the realizable value of the inventories is not lower than the cost.

14. Current financial assets - Investments

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Current maturity of non current investments		
Investment in debt instruments in Joint venture companies (measured at amortised cost)		
Jhabua Power Limited-8.5% Non convertible debentures - private placement (Refer Note 8)	**50.00**	-
Total	**50.00**	-

a) Investments have been valued as per accounting policy no. C.28 (Note 1)

15. Current financial assets - Trade receivables

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Trade receivables		
Unsecured, considered good	**24,741.45**	24,747.45
Credit impaired	**0.20**	0.20
	24,741.65	24,747.65
Less: Allowance for credit impaired trade receivables	**0.20**	0.20
Total	**24,741.45**	24,747.45

a) Based on arrangements between Company, banks and beneficiaries, the bills of the beneficiaries have been discounted. Accordingly, trade receivables have been disclosed net of bills discounted amounting to ₹ **1,287.19 crore** (31 March 2022: ₹ 8,202.03 crore). Also refer Note 76 A(c).

b) Amounts receivable from related parties are disclosed in Note 59.

c) Trade receivables include unbilled revenue for the month of March amounting to ₹ **11,176.95 crore** (31 March 2022: ₹ 9,987.46 crore) billed, net of advance, to the beneficiaries after 31 March.

d) Trade Receivables ageing schedule

As at 31 March 2023

₹ Crore

Particulars	Unbilled	Not Due	Outstanding for following periods from due date of payment					Total
			Less than 6 months	6 Months -1 year	1-2 years	2-3 years	More than 3 years	
(i) Undisputed Trade receivables – considered good	12,447.25	8,489.62	1,059.91	1,219.55	62.65	2.49	54.58	**23,336.05**
(ii) Undisputed Trade Receivables – which have significant increase in credit risk	-	-	-	-	-	-	-	**-**
(iii) Undisputed Trade Receivables – credit impaired	-	-	-	-	-	-	-	**-**
(iv) Disputed Trade Receivables– considered good	-	25.56	78.49	130.12	677.94	151.36	341.93	**1,405.40**
(v) Disputed Trade Receivables – which have significant increase in credit risk	-	-	-	-	-	-	-	**-**
(vi) Disputed Trade Receivables – credit impaired	-	-	-	-	-	-	0.20	**0.20**
Sub-total	**12,447.25**	**8,515.18**	**1,138.40**	**1,349.67**	**740.59**	**153.85**	**396.71**	**24,741.65**
Less: Allowance for credit impaired trade receivables	-	-	-	-	-	-	0.20	**0.20**
Total	**12,447.25**	**8,515.18**	**1,138.40**	**1,349.67**	**740.59**	**153.85**	**396.51**	**24,741.45**

As at 31 March 2022

₹ Crore

Particulars	Unbilled	Not Due	Outstanding for following periods from due date of payment					Total
			Less than 6 months	6 Months -1 year	1-2 years	2-3 years	More than 3 years	
(i) Undisputed Trade receivables – considered good	10,616.26	7,918.53	1,745.78	1,184.85	1,997.24	392.82	147.92	24,003.40
(ii) Undisputed Trade Receivables – which have significant increase in credit risk	-	-	-	-	-	-	-	-
(iii) Undisputed Trade Receivables – credit impaired	-	-	-	-	-	-	0.20	0.20
(iv) Disputed Trade Receivables– considered good	-	26.76	18.27	283.64	210.64	119.39	85.35	744.05

Particulars	Unbilled	Not Due	Outstanding for following periods from due date of payment					Total
			Less than 6 months	6 Months -1 year	1-2 years	2-3 years	More than 3 years	
(v) Disputed Trade Receivables – which have significant increase in credit risk	-	-	-	-	-	-	-	-
(vi) Disputed Trade Receivables – credit impaired	-	-	-	-	-	-	-	-
Sub-total	10,616.26	7,945.29	1,764.05	1,468.49	2,207.88	512.21	233.47	24,747.65
Less: Allowance for credit impaired trade receivables	-	-	-	-	-	-	0.20	0.20
Total	10,616.26	7,945.29	1,764.05	1,468.49	2,207.88	512.21	233.27	24,747.45

16. Current financial assets - Cash and cash equivalents

₹ Crore

Particulars	**As at 31 March 2023**	As at 31 March 2022
Balances with banks in current accounts	**2.18**	82.94
Deposits with original maturity upto three months (including interest accrued)	**-**	34.49
Cheques and drafts on hand	**0.91**	0.01
Others (stamps on hand)	**0.04**	0.04
Total	**3.13**	117.48

17. Current financial assets - Bank balances other than cash and cash equivalents

₹ Crore

Particulars	**As at 31 March 2023**	As at 31 March 2022
Deposits with original maturity of more than three months and maturing within one year (including interest accrued)	**1,588.60**	1,377.82
Earmarked balances with banks #	**2,150.00**	1,251.88
Total	**3,738.60**	2,629.70
# Earmarked balances with banks towards:		
Redemption of bonds due for repayment within one year	**1,033.00**	-
Fly ash utilization reserve fund*	**729.82**	598.41
DDUGJY Scheme of the GOI**	**283.26**	536.49
Unpaid dividend account balance	**19.07**	17.99
Amount deposited as per court orders	**37.28**	37.28
Unpaid interest/refund account balance - Bonds	**9.04**	6.81
Payment Security Fund - MNRE	**37.97**	27.30
Unpaid interest on public deposit	**0.03**	0.03
Amount received under PM-Kusum Scheme	**-**	4.86
Margin money	**-**	22.71
Amount deposited-arbitration cases	**0.53**	-
Total	**2,150.00**	1,251.88

* Refer Note 24 (e) regarding fly ash utilization reserve fund.

** Out of advance for DDUGJY Scheme of the GOI. Refer Note 35(b) and 36(a).

a) In line with the guidelines issued by Ministry of New and Renewable Energy (MNRE), GOI under National Solar Mission-II, a Payment Security Fund/Working Capital Fund will be set up/created by the MNRE. Upon creation of the said fund, amounts accrued from encashment of bank guarantee, penalties/liquidated damages on developers deducted by the Company from the Solar Power Developers (SPDs) as per the guidelines of MNRE shall be transferred to this fund. The said fund is yet to be created by MNRE. Pending creation of the fund, amount deducted by the Company on account of liquidated damages/penalties from the SPDs is earmarked for the said fund and is not available for use by the Company.

18. Current financial assets - Loans

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Loans (including interest accrued)		
(Considered good unless otherwise stated)		
Related parties		
Secured	**53.10**	53.10
Unsecured	**1.64**	3.30
Considered doubtful	**3.68**	-
Less: Allowance for bad and doubtful loans	**3.68**	-
	54.74	56.40
Employees		
Secured	**77.77**	75.43
Unsecured	**175.64**	180.73
Others		
Unsecured	**4.30**	0.89
Total	**312.45**	313.45
a) Due from Directors and Officers of the Company		
Directors	**0.16**	0.08
Officers	**0.10**	-
b) Loans to related parties include:		
Key management personnel	**0.26**	0.08
Ratnagiri Gas & Power Private Ltd. (Subsidiary company) [Refer Note 9 c)]	**53.10**	53.10
National High Power Test Laboratory Private Ltd. (Joint venture company) (net of allowance for bad and doubtful loan)	**1.38**	3.22

c) Other loans represent interest on loan of ₹ **4.30 crore** (31 March 2022: loan of ₹ 0.89 crore) given to APIIC which is covered by a guarantee given by the Government of Andhra Pradesh vide GO dated 3 April 2003.

d) Loans to the employees are secured against the mortgage of the house properties and hypothecation of vehicles for which such loans have been given in line with the policies of the Company.

19. Current assets - Other financial assets

₹ Crore

Particulars		As at 31 March 2023	As at 31 March 2022
Advances			
(Considered good unless otherwise stated)			
Related parties			
Unsecured		**3,345.64**	126.70
Employees			
Unsecured	**12.79**		18.76
Considered doubtful	**0.03**		0.03
Less: Allowance for bad and doubtful advances	**0.03**		0.03
		12.79	18.76
Others			
Unsecured		**1.33**	0.14
Claims recoverable			
Unsecured, considered good	**280.35**		183.23
Considered doubtful	**349.32**		346.78
Less: Allowance for doubtful claims	**349.32**		346.78
		280.35	183.23
Contract assets		**7,096.08**	4,100.75
Finance lease receivables		**83.63**	73.56
Mine closure deposit		**37.31**	42.56
Dividend receivable		**350.00**	-
Others		**66.68**	53.91
Total		**11,273.81**	4,599.61

a) Contract Assets represent Company's right to consideration in exchange for goods and services that the Company has transferred / provided to customers when that right is conditioned on matters, other than passage of time, like receipt of income tax assessment orders, trueing up orders from CERC,etc. and are net of credits to be passed to customers.

b) Advances to related parties include:

Key Managerial Personnel	**-**	-
Subsidiary companies#	**3,180.76**	25.53
Joint venture companies	**76.77**	40.30
Post employment benefits Trusts	**88.11**	60.87

Includes balance amounts recoverable in terms of BTA for transfer of RE assets after adjustment of subsequent transactions. Refer Note 51.

c) Advances include amounts due from the following private companies (related parties) in which one or more directors of the Company are directors:

NTPC-GE Power Services Private Ltd.	**3.30**	2.24
Aravali Power Company Private Ltd.	**15.64**	0.62
NTPC BHEL Power Projects Private Ltd.	**1.20**	0.73
Meja Urja Nigam Private Ltd.	**7.34**	14.43

d) Other financial assets - Others include amount recoverable from contractors and other parties towards hire charges, rent/ electricity etc.

e) Dividend receivable represents interim dividend declared by the Board of NEEPCO Ltd. (Subsidiary of the Company) on 16 March 2023, which has since been received.

20. Current assets - Other current assets

₹ Crore

Particulars		As at 31 March 2023	As at 31 March 2022
Security deposits (unsecured)		**2322.88**	1,996.85
Advances			
(Considered good unless otherwise stated)			
Related parties			
Unsecured		**0.31**	0.29
Employees			
Unsecured		**5.90**	3.51
Contractors and suppliers			
Unsecured	**4,376.18**		2,950.23
Considered doubtful	**3.93**		3.41
Less: Allowance for bad and doubtful advances	**3.93**		3.41
		4,376.18	2,950.23
Others			
Unsecured		**43.87**	49.54
		4,426.26	3,003.57
Interest accrued on			
Advance to contractors		**68.45**	43.93
Claims recoverable			
Unsecured, considered good	**3,852.26**		3,975.89
Considered doubtful	**125.84**		125.84
Less: Allowance for doubtful claims	**125.84**		125.84
		3,852.26	3,975.89
Deferred payroll expenditure		**20.07**	21.67
Adjustable from Escrow Account for mine closure expenses		**28.15**	37.71
Others		**8.08**	22.08
Total		**10,726.15**	9,101.70

a) Security deposits (unsecured) include ₹ **54.20 crore** (31 March 2022: ₹ 29.55 crore) towards sales tax/GST deposited with sales/commercial tax authorities, ₹ **1,458.49 crore** (31 March 2022: ₹ 1,138.11 crore) deposited with Courts, ₹ **218.83 crore** (31 March 2022: ₹ 225.00 crore) deposited with LIC for making annuity payments to the land oustees and ₹ **500.00 crore** (31 March 2022: ₹ 500.00 crore) deposited against bank guarantee with one of the party as per the direction of the Hon'ble Supreme Court of India, refer Note 63 (iii).

b) Advances - Others include prepaid expenses amounting to ₹ **42.58 crore** (31 March 2022: ₹ 44.98 crore).

c) Advances - Related parties include amounts due from the following private companies in which one or more directors of the Company are directors:

NTPC-GE Power Services Private Ltd.	**0.02**	0.01
NTPC BHEL Power Projects Private Ltd.	**19.27**	-

d) Loans given to employees are measured at amortized cost. The deferred payroll expenditure represents the benefits on account of interest rate on loans being lower than the market rate of interest. The same is amortized on a straight-line basis over the remaining period of the loan.

e) Advances to contractors and suppliers mainly include payment made to coal companies amounting to ₹ **3,143.51 crore** (31 March 2022: ₹ 1,993.63 crore) for supply of coal to various stations of the Company.

f) Claims recoverable includes claims against Railways amounting to ₹ **2,023.76 crore** (31 March 2022: ₹ 2,006.86 crore) mainly towards diversion of coal rakes. These are regularly reviewed and reconciled with the Indian Railways periodically. Claims recoverable also includes claims amounting to ₹ **1,615.66 crore** (31 March 2022: ₹ 1,893.68 crore) made against coal companies towards various issues eg. credit notes to be received as per referee results for grade slippages, supply of stones, claims under settlement through AMRCD, surface transportation charges,etc.

21. Assets held for sale

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Land	**4.21**	-
Building	**21.46**	14.99
Plant and equipment	**92.90**	2.02
Other assets	**1.95**	1.08
Total	**120.52**	18.09

a) The Company has surplus land of 20.87 acres which is under process of disposal. The Company expects that the fair value (estimated based on market values) less costs to sell is higher than their carrying values and hence no impairment is considered necessary.

b) Plant and equipment and Other assets (Office equipment, vehicles,furniture and fixtures,etc.) have been identified for disposal due to replacement/ obsolescence of assets which happens in the normal course of operations. On account of classification of these assets from Property,plant and equipment , the loss recognised in the statement of profit and loss is not material.

c) These assets are expected to be disposed off within the next twelve months.

d) The Company has not reclassified any of the assets classified as held for sale as Property,plant and equipment during the year as well as in the previous year.

22. Regulatory deferral account debit balances

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
On account of		
Exchange differences	**1,034.34**	125.60
Employee benefits expense	**177.75**	272.80
Deferred tax	**10,676.77**	9,170.77
Ash transportation cost	**73.11**	3,253.71
Total	**11,961.97**	12,822.88

a) Regulatory deferral account balances have been accounted in line with Accounting policy no. C.4 (Note 1). Refer Note 71 for detailed disclosures.

b) CERC Tariff Regulations, 2019 provide for recovery of deferred tax liability (DTL) as at 31 March 2009 from the beneficiaries. Accordingly, DTL as at 31 March 2009 is recoverable on materialisation from the beneficiaries. Regulations, 2014 and Regulations, 2019 provide for grossing-up the rate of return on equity based on effective tax rate for the financial year based on the actual tax paid during the year on the generation income. Accordingly, deferred tax liability for the period from 1 April 2014 will be reversed in future years when the related DTL forms part of current tax. Keeping in view the above, the Company has recognized such deferred tax as regulatory deferral account debit balances, since the amounts are recoverable in future years.

23. Equity share capital

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Equity share capital		
Authorized		
16,60,00,00,000 shares of par value ₹10/- each (10,00,00,00,000 shares of par value ₹10/- each as at 31 March 2022)	**16,600.00**	10,000.00
Issued, subscribed and fully paid up		
9,69,66,66,134 shares of par value ₹ 10/- each (9,69,66,66,134 shares of par value ₹10/- each as at 31 March 2022)	**9,696.67**	9,696.67

a) Reconciliation of the shares outstanding at the beginning and at the end of the year:

₹ Crore

Particulars	Number of shares	
	31 March 2023	31 March 2022
At the beginning of the year	**9,69,66,66,134**	9,69,66,66,134
Outstanding at the end of the year	**9,69,66,66,134**	9,69,66,66,134

b) Terms and rights attached to equity shares:

The Company has only one class of equity shares having a par value ₹10/- per share. The holders of the equity shares are entitled to receive dividends as declared from time to time and are entitled to voting rights proportionate to their share holding at the meetings of shareholders.

c) Dividends:

₹ Crore

Particulars	Paid during the year ended	
	31 March 2023	31 March 2022
(i) Dividends paid and recognised during the year		
Final dividend for the year ended 31 March 2022 of ₹ **3.00** (31 March 2021: ₹ 3.15) per equity share	**2,909.00**	3,054.45
Interim dividend for the year ended 31 March 2023 of ₹ **4.25** (31 March 2022: ₹ 4.00) per equity share	**4,121.08**	3,878.67

₹ Crore

(ii) Dividends not recognised at the end of the reporting period	31 March 2023	31 March 2022
In addition to the above dividends, since year end the directors have recommended the payment of a final dividend of ₹ 3.00 (31 March 2022: ₹ 3.00) per equity share. This proposed dividend is subject to the approval of shareholders in the ensuing Annual General Meeting.	**2,909.00**	2,909.00

d) Details of shareholders holding more than 5% shares in the Company:

Particulars	As at 31 March 2023		As at 31 March 2022	
	No. of shares	%age holding	No. of shares	%age holding
- President of India	**4,95,53,46,251**	**51.10**	4,95,53,46,251	51.10
- Life Insurance Corporation of India (including shares held in various Funds/Schemes)	**57,41,73,389**	**5.92**	1,00,42,47,653	10.36
- ICICI Prudential Mutual Fund	**55,60,01,423**	**5.73**	53,69,26,248	5.54

e) Increase in the authorised share capital

The authorised share capital of the Company has increased from ₹10,000 crore to ₹ 16,600 crore pursuant to scheme of amalgamation of two subsidiaries of the Company, vide order dated 26 August 2022 of Ministry of Corporate Affairs, GOI. Refer Note 65.

f) For the period of preceeding five years as on the Balance sheet date:

(i) Shares bought back:

The Company has bought back 19,78,91,146 equity shares of the Company for an aggregate amount of ₹ 2,275.75 crore being 2% of the total paid up equity share capital at ₹ 115.00 per equity share , during the financial year 2020-21.

(ii) Shares allotted as fully paid up by way of bonus shares:

The Company had issued 164,90,92,880 equity shares of ₹ 10/- each as fully paid bonus shares in the financial year 2018-19 in the ratio of one equity share of ₹ 10/- each for every five equity shares held.

g) Details of shareholding of promoters:

Shares held by promoters as at 31 March 2023

Sl. No.	Promoter name	No. of shares	%age of total shares	%age changes during the year
1.	**President of India**	**4,95,53,46,251**	**51.10**	**-**

Shares held by promoters as at 31 March 2022

Sl. No.	Promoter name	No. of shares	%age of total shares	%age changes during the year
1.	President of India	4,95,53,46,251	51.10	-

24. Other equity

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Capital reserve	**50.08**	50.08
Capital redemption reserve	**197.89**	197.89
Bonds/debentures redemption reserve	**5,014.61**	5,643.18
Fly ash utilization reserve fund	**729.82**	598.41
General reserve	**96,147.17**	96,147.17
Retained earnings	**26,963.34**	16,247.42
Reserve for equity instruments through OCI	**90.30**	86.70
Total	**1,29,193.21**	1,18,970.85

(a) Capital reserve **₹ Crore**

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Opening balance and closing balance	**50.08**	50.08

Capital reserve represents amount received by the Company during 2001-02 as consideration under settlement for withdrawal from an erstwhile JV project. There is no movement in the capital reserve balance during the year. This amount will be utilised as per the provisions of the Companies Act, 2013.

(b) Capital redemption reserve

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Opening balance	**197.89**	197.89
Add: Transfer from General Reserve	**-**	-
Closing balance	**197.89**	197.89

Capital redemption reserve is created when company purchases its own shares out of free reserves or securities premium, as required by Companies Act, 2013. A sum equal to the nominal value of the shares so purchased is transferred to capital redemption reserve. This reserve will be utilised in accordance with the provisions of the Companies Act, 2013. Also refer Note 23 (f)(i).

(c) Bonds/Debentures redemption reserve

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Opening balance	**5,643.18**	6,240.43
Less: Transfer to retained earnings	**628.57**	597.25
Closing balance	**5,014.61**	5,643.18

Ministry of Corporate Affairs notified Companies (Share Capital and Debentures) Amendment Rules, 2019 on 16 August 2019. As per the amendment, Debenture Redemption Reserve (DRR) is not required to be created in case of Companies whose securities are listed. Accordingly, the Company has not created any further Bonds/Debenture Redemption Reserve from the financial year 2019-20 onwards. Further, the outstanding balance of Bonds / Debenture Redemption Reserve created up to 31 March 2019 shall be written back as and when the respective bonds / debentures are redeemed.

(d) Fly ash utilization reserve fund

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Opening balance	**598.41**	611.27
Add: Transferred during the year:		
Revenue from operations	**396.51**	240.89
Other income	**29.15**	19.61
Less: Utilised during the year:		
Capital expenditure	**2.95**	0.37
Other expenses including tax expense	**291.30**	272.99
Closing balance	**729.82**	598.41

Pursuant to Gazette Notification dated 3 November 2009, issued by the Ministry of Environment and Forest (MOEF), Government of India (GOI), the amount collected from sale of fly ash and fly ash based products should be kept in a separate account head and shall be utilized only for the development of infrastructure or facility, promotion & facilitation activities for use of fly ash until 100 percent fly ash utilization level is achieved.

The principal Gazette Notification dated 14th September 1999, has been superseded by Gazette Notification dated 31st December 2021, of Ministry of Environment and Forest and Climate Change (MOEF&CC), GOI which is applicable from 1st April 2022. The notification dated 31 December 2021 does not mention any requirement of keeping the amount thus collected in a separate account. However, the Company continues to spend the amounts collected after 25.01.2016, from sale of fly ash and fly ash-based products for offsetting it against the expenditure incurred for transportation of ash to various road construction projects by respective Station

The fund balance has been kept in 'Bank balances other than cash & cash equivalents' (Note 17). Also refer Note 22 & 71 for ash transportation cost.

(e) General reserve **₹ Crore**

Particulars	**For the year ended 31 March 2023**	For the year ended 31 March 2022
Opening balance	**96,147.17**	96,147.17
Add : Transfer from retained earnings	**-**	-
Closing balance	**96,147.17**	96,147.17

General reserve is used from time to time to transfer profits from retained earnings for appropriation purposes. The same will be utilised as per the provisions of the Companies Act, 2013.

(f) Retained earnings

Particulars	**For the year ended 31 March 2023**	For the year ended 31 March 2022
Opening balance	**16,247.42**	6,394.35
Add: Profit for the year as per statement of profit and loss	**17,196.73**	16,281.99
Transfer from bonds/debentures redemption reserve	**628.57**	597.25
Less: Transfer to general reserve		
Final dividend paid (2021-22)	**2,909.00**	3,054.45
Interim dividend paid (2022-23)	**4,121.08**	3,878.67
	27,042.64	16,340.47
Items of other comprehensive income recognized directly in retained earnings:		
- Net actuarial gains/(losses) on defined benefit plans (net of tax)	**(79.30)**	(93.05)
Closing balance	**26,963.34**	16,247.42

Retained Earnings are the profits of the Company earned till date net of appropriations. The same will be utilised for the purposes as per the provisions of the Companies Act, 2013.

(g) Reserve for equity instruments through OCI

Particulars	**For the year ended 31 March 2023**	For the year ended 31 March 2022
Opening balance	**86.70**	81.30
Add: Fair value gains/(losses) on equity instruments for the year	**3.60**	5.40
Closing balance	**90.30**	86.70

The Company has elected to recognize changes in the fair value of certain investments in equity instruments in other comprehensive income. These changes are accumulated in reserve for equity instruments through OCI within equity. The Company transfers amounts from this reserve to retained earnings when the relevant equity instruments are derecognized.

25. Non-current financial liabilities -Borrowings

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Bonds/debentures		
Secured		
7.37% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2035 (Fifty Sixth Issue - Public Issue - Series 3A)[IX]	**188.95**	188.97
7.62% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2035 (Fifty Sixth Issue - Public Issue - Series 3B)[IX]	**171.71**	171.74
8.61% Tax free secured non-cumulative non-convertible redeemable bonds of ₹ 10,00,000/- each redeemable at par in full on 4 March 2034 (Fifty First Issue C - Private Placement) [III]	**322.11**	322.11
8.66% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2033 (Fiftieth Issue - Public Issue - Series 3A)[VI]	**319.87**	319.87
8.91% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2033 (Fiftieth Issue - Public Issue - Series 3B)[VI]	**410.32**	410.32
7.37% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 14 December 2031 (Sixty Sixth Issue - Private Placement)[II]	**4,010.41**	4,010.40
7.49% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 7 November 2031 (Sixty Fourth Issue - Private Placement)[IV]	**720.65**	720.49
7.28% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2030 (Fifty Sixth Issue - Public Issue - Series 2A)[IX]	**133.48**	133.49
7.53% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2030 (Fifty Sixth Issue - Public Issue - Series 2B)[IX]	**49.93**	49.93
7.32% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 17 July 2029 (Sixty Ninth Issue - Private Placement)[IV]	**4,522.31**	4,522.29
8.63% Tax free secured non-cumulative non-convertible redeemable bonds of ₹ 10,00,000/- each redeemable at par in full on 4 March 2029 (Fifty First Issue B - Private Placement)[III]	**105.70**	105.70
8.30% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 15 January 2029 (Sixty Seventh Issue - Private Placement)[V]	**4,068.96**	4,068.94
8.48% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2028 (Fiftieth Issue - Public Issue - Series 2A)[VI]	**256.10**	256.10
8.73% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2028 (Fiftieth Issue - Public Issue - Series 2B)[VI]	**93.71**	93.71

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
7.47% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 16 September 2026 (Sixty Third Issue - Private Placement)[IV]	**696.90**	696.88
7.58% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 23 August 2026 (Sixty Second Issue - Private Placement)[IV]	**836.61**	836.58
8.05% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 5 May 2026 (Sixtieth Issue - Private Placement)[IV]	**1,072.90**	1,072.87
8.19% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 15 December 2025 (Fifty Seventh Issue - Private Placement)[IV]	**511.91**	511.89
7.11% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2025 (Fifty Sixth Issue - Public Issue - Series 1A)[IX]	**112.06**	112.05
7.36% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2025 (Fifty Sixth Issue - Public Issue - Series 1B)[IX]	**68.26**	68.25
7.15% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 10,00,000/- each redeemable at par in full on 21 August 2025 (Fifty Fifth Issue - Private Placement)[VII]	**313.05**	313.10
9.17% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 22 September 2024 (Fifty Third Issue - Private Placement)[VII]	**1,047.99**	1,047.99
9.34% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 24 March 2024 (Fifty Second Issue - Private Placement)[III]	**751.53**	751.54
8.19% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 10,00,000/- each redeemable at par in full on 4 March 2024 (Fifty First Issue A - Private Placement)[III]	**75.47**	75.47
8.41% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2023 (Fiftieth Issue - Public Issue - Series 1A)[VI]	**499.95**	499.95
8.66% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2023 (Fiftieth Issue - Public Issue - Series 1B)[VI]	**213.89**	213.89
9.25% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each with five equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 11th year and in annual installments thereafter upto the end of 15th year respectively commencing from 04 May 2023 and ending on 04 May 2027 (Forty Fourth Issue - Private Placement)[VI]	**542.07**	542.07
8.48% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 1 May 2023 (Seventeenth Issue - Private Placement)[I]	**50.01**	50.01
8.80% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 4 April 2023 (Forty Ninth Issue - Private Placement)[VI]	**217.46**	217.50

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
8.49% Secured non-cumulative non-convertible redeemable taxable fully paid-up bonus debentures of ₹ 12.50 each redeemable at par in three annual installments of ₹ 2.50, ₹ 5.00 and ₹ 5.00 at the end of 8th year, 9th year and 10th year on 25 March 2023, 25 March 2024 and 25 March 2025 respectively (Fifty Fourth Issue -Bonus Debentures)[VIII]	**8,260.81**	10,323.61
8.73% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 7 March 2023 (Forty Eighth Issue - Private Placement)[VI]	**-**	301.79
9.00% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each with five equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 11th year and in annual installments thereafter upto the end of 15th year respectively commencing from 25 January 2023 and ending on 25 January 2027 (Forty Second Issue - Private Placement)[III]	**406.51**	508.14
8.84% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 4 October 2022 (Forty Seventh Issue - Private Placement)[VI]	**-**	406.91
7.93% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 3 May 2022 (Sixty Eighth Issue - Private Placement)[IV]	**-**	3,277.62
8.10% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 30,00,000/- each redeemable at par in three equal separately transferable redeemable principal parts (STRPP) at the end of 5th year, 10th year & 15th year on 27 May 2021, 27 May 2026 and 27 May 2031 respectively (Sixty first issue - Private Placement)[IX]	**763.99**	763.98
11.25% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in five equal annual installments commencing from 6 November 2019 and ending on 6 November 2023 (Twenty Seventh Issue - Private Placement)[III]	**73.62**	147.29
9.3473% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 20 July 2018 and ending on 20 July 2032 (Forty Sixth Issue - Private Placement)[VI]	**53.38**	58.70
9.4376% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 16 May 2018 and ending on 16 May 2032 (Forty Fifth Issue - Private Placement)[VI]	**53.45**	58.78
9.2573% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 2 March 2018 and ending on 2 March 2032 (Forty Third Issue - Private Placement)[III]	**48.01**	53.34
9.6713% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 23 December 2017 and ending on 23 December 2031 (Forty First Issue - Private Placement)[III]	**48.18**	53.52

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
9.558% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 29 July 2017 and ending on 29 July 2031 (Fortieth Issue - Private Placement)[III]	**48.11**	53.44
9.3896% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 9 June 2017 and ending on 9 June 2031 (Thirty Ninth Issue - Private Placement)[III]	**67.28**	74.74
9.17% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 22 March 2017 and ending on 22 March 2031 (Thirty Eighth Issue - Private Placement)[III]	**42.65**	47.97
8.8086% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 15 December 2016 and ending on 15 December 2030 (Thirty Sixth Issue - Private Placement)[III]	**42.55**	47.86
8.785% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 15 September 2016 and ending on 15 September 2030 (Thirty Fifth Issue - Private Placement)[III]	**68.07**	76.56
8.71% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 10 June 2016 and ending on 10 June 2030 (Thirty Fourth Issue - Private Placement)[III]	**85.04**	95.65
8.8493% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 25 March 2016 and ending on 25 March 2030 (Thirty Second Issue - Private Placement)[III]	**52.14**	59.57
	32,498.06	38,793.57
Bonds/debentures		
Unsecured		
6.55% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 17 April 2023 (Seventy Issue - Private Placement)	**4,648.83**	4,648.74
5.78% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 29 April 2024 (Seventy Sevent Issue - Private Placement)	**1,580.00**	-
5.45% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 15 October 2025 (Seventy Second Issue - Private Placement)	**4,100.21**	4,100.18

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
6.43% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 27 January 2031 (Seventy Third Issue - Private Placement)	**2,528.08**	2,528.07
6.29% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 11 April 2031 (Seventy First Issue - Private Placement)	**1,042.00**	1,042.00
6.69% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 13 September 2031 (Seventy Fifth Issue - Private Placement)	**3,109.83**	3,109.82
6.74% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 14 April 2032 (Seventy Sixth Issue - Private Placement)	**1,197.02**	1,197.01
7.44% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 25 August 2032 (Seventy Eighth Issue - Private Placement)	**2,089.18**	-
7.44% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 15 April 2033 (Seventy Ninth Issue - Private Placement)	**510.77**	-
6.87% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 21 April 2036 (Seventy Fourth Issue - Private Placement)	**4,256.04**	4,256.03
	57,560.02	59,675.42
Foreign currency notes		
Unsecured		
4.500 % Fixed rate notes due for repayment on 19 March 2028	**3,302.14**	3,042.30
2.750 % Fixed rate notes due for repayment on 1 February 2027	**4,554.79**	4,294.61
4.250 % Fixed rate notes due for repayment on 26 February 2026	**4,145.67**	3,820.37
4.375 % Fixed rate notes due for repayment on 26 November 2024	**4,199.85**	3,874.48
3.750 % Fixed rate notes due for repayment on 3 April 2024	**3,721.68**	3,431.34
4.750 % Fixed rate notes due for repayment on 3 October 2022	**-**	3,816.50
7.250 % Fixed global INR denominated bonds due for repayment on 3 May 2022	**-**	2,033.92
	19,924.13	24,313.52
Term loans		
From Banks		
Secured		
Rupee term loans[x]	**7,647.61**	8,218.02
Unsecured		
Foreign currency loans	**19,828.94**	13,277.71
Rupee term loans	**61,229.80**	64,340.13
From Others		
Secured		
Rupee term loans[x]	**4,972.04**	5,254.60
Unsecured		

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Foreign currency loans (guaranteed by GOI)	**1,133.60**	1,321.12
Other foreign currency loans	**3,661.88**	3,402.52
Rupee term loans	**16.84**	50.73
	1,75,974.86	1,79,853.77
Less: Current maturities of		
Bonds-secured	**6,231.40**	6,044.87
Bonds-Unsecured	**4,374.10**	-
Foreign currency notes - Unsecured	**-**	5,724.50
Foreign currency loans from banks - unsecured	**425.05**	301.01
Rupee term loans from banks - secured	**634.11**	442.62
Rupee term loans from banks - unsecured	**4,375.04**	3,962.80
Rupee term loans from others - secured	**367.07**	282.57
Foreign currency loans from others - unsecured (guaranteed by GOI)	**183.61**	184.11
Other foreign currency loans from others - unsecured	**565.28**	390.44
Rupee term loans from others - unsecured	**16.57**	33.34
Interest accrued but not due on secured borrowings	**853.42**	1,104.37
Interest accrued but not due on unsecured borrowings	**1,633.52**	1,260.97
Total	**1,56,315.69**	1,60,122.17

a) **Details of terms of repayment and rate of interest**

i) Unsecured foreign currency loans (guaranteed by GOI) - Others carry fixed rate of interest ranging from 1.80% p.a. to 2.30% p.a. and are repayable in 7 to 16 semi annual installments.

ii) Unsecured foreign currency loans – Banks include loans of ₹ **67.13 crore** (31 March 2022: ₹ 84.14 crore) which carry fixed rate of interest of 1.88% and loans of ₹ **19,761.81 crore** (31 March 2022: ₹ 13,193.57 crore) which carry floating rate of interest linked to 6M USD LIBOR/6M SOFR/6M EURIBOR/3M TONA/6M TONA . These loans are repayable in 1 to 25 semi annual/annual installments as of 31 March 2023, commencing after moratorium period if any, as per the terms of the respective loan agreements.

iii) Unsecured foreign currency loans – Others include loans of ₹ **1,568.31 crore** (31 March 2022: ₹1,862.96 crore) which carry fixed rate of interest ranging from 1.88% p.a. to 4.13% p.a and loans of ₹ **2,093.57 crore** (31 March 2022: ₹ 1,539.56 crore) which carry floating rate of interest linked to 3M TONA/6M TONA . These loans are repayable in 03 to 25 semi annual instalments as of 31 March 2023, commencing after moratorium period if any, as per the terms of the respective loan agreements.

iv) Unsecured rupee term loans from banks and others carry interest rate ranging from 6.57% p.a. to 8.30% p.a. with monthly/half-yearly rests. These loans are repayable in half-yearly/yearly instalments as per the terms of the respective loan agreements. The repayment period extends from a period of 9 to 15 years after a moratorium period of 3 to 6 years.

v) Secured rupee term loans from banks and others carry interest rate ranging from 7.85% p.a. to 8.50% p.a. with monthly/quarterly rests. These loans are repayable in quarterly/yearly instalments as per the terms of the respective loan agreements. The repayment period extends from a period of 11 to 15 years after a moratorium period of 6 months to 5 years.

b) There has been no default in repayment of any of the loans or interest thereon as at the end of the year.

c) The company has used the borrowings from banks and financial institutions for the purposes for which they were taken.

Details of securities

I Secured by (I) English mortgage, on first pari-passu charge basis, of the office premises of the Company at Mumbai and (II) Equitable mortgage, by way of first charge, by deposit of title deeds of the immovable properties pertaining to National Capital Power Station.

II Secured by Equitable mortgage of the immovable properties pertaining to Vindhyachal Super Thermal Power Station on first charge basis.

III Secured by (I) English mortgage, on first pari-passu charge basis, of the office premises of the Company at Mumbai and (II) Equitable mortgage of the immovable properties, on first pari-passu charge basis, pertaining to Sipat Super Thermal Power Project by extension of charge already created.

IV Secured by Equitable mortgage, on pari-passu charge basis, of the immovable properties pertaining to Barh Super Thermal Power Project.

V Secured by Equitable mortgage, on pari-passu charge basis, of the immovable properties pertaining to Vindhyachal Super Thermal Power Station.

VI Secured by (I) English mortgage, on first pari-passu charge basis, of the office premises of the Company at Mumbai and (II) Equitable mortgage of the immovable properties, on first pari-passu charge basis, pertaining to National Capital Power Station by extension of charge already created.

VII Secured by English mortgage of the immovable properties pertaining to Solapur Super Thermal Power Project on first charge basis.

VIII Secured by Equitable mortgage of the immovable properties pertaining to Barh Super Thermal Power Project on first charge basis.

IX Secured by English mortgage, on pari-passu charge basis, of the immovable properties pertaining to Solapur Super Thermal Power Project.

X (i) Secured by a first priority charge on all assets, present & future, movable & immovable and land of 975.05 acres and second charge on all inventories and receivables, in respect of loan from consortium led by SBI for Muzzafarpur Thermal Power Station (Kanti Bijlee Utpadan Nigam Ltd., erstwhile Subsidiary of the Company) expansion project. The security will rank pari-pasu with all term lenders of the project. The charge has been created in favor of SBI Cap Trustee Co. Ltd. and Canara Bank. Legal mortgage of land in favour of security trustee has been executed for 877.18 acres out of 975.05 acres of land.

(ii) Secured by a first pari passu charge on entire current assets and fixed assets of Nabinagar Thermal Power Station (Nabinagar Power Generating Company Limited, erstwhile subsidiary of the Company).

Secured by a first pari passu charge on all assets, present and future, movable and immovable through a deed of hypothecation and simple mortgage of 2500 acres of land of Nabinagar Thermal Power Station (Nabinagar Power Generating Company Limited, erstwhile subsidiary of the Company).

XI Security cover mentioned at Sl. No. I to X is above 100% of the debt securities outstanding.

26. Non-current financial liabilities - Lease liabilities

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Lease liabilities	**986.23**	983.08
Less: current maturities of lease liabilities	**170.79**	168.01
Total	**815.44**	815.07

a) The lease liabilities are repayable in instalments as per the terms of the respective lease agreements generally over a period of more than 1 year and upto 99 years.

27. Non-current financial liabilities - Trade payables

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Trade payable for goods and services		
Total outstanding dues of		
- micro and small enterprises	**7.66**	13.45
- creditors other than micro and small enterprises	**78.86**	71.17
Total	**86.52**	84.62

a) Disclosures as required under Companies Act, 2013 / Micro, Small and Medium Enterprises Development Act, 2006 (MSMED) are provided in Note 74.

b) Amounts payable to related parties are disclosed in Note 59.

c) The above balances are due for payment after 12 months from the balance sheet date.

28. Non-current liabilities - Other financial liabilities

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Payable for capital expenditure		
- micro and small enterprises	**4.16**	17.59
- other than micro and small enterprises	**413.41**	794.90
Deposits from contractors and others	**1.62**	1.64
Others	**0.10**	1.34
Total	**419.29**	815.47

a) Disclosures as required under Companies Act, 2013 / MSMED Act, 2006 are provided in Note 70.

b) Amounts payable to related parties are disclosed in Note 59.

29. Non-current liabilities - Provisions

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Provision for		
Employee benefits	**792.10**	830.26
Mine Closure	**323.80**	304.24
Stripping Activity Adjustments	**611.88**	311.98
Total	**1,727.78**	1,446.48

a) Disclosures as per Ind AS 19 'Employee benefits' are provided in Note 56.

b) Disclosures required by Ind AS 37 'Provisions, Contingent Liabilities and Contingent Assets' are provided in Note 63.

30. Non-current liabilities - Deferred tax liabilities (net)

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Deferred tax liability		
Difference in book depreciation and tax depreciation	**31,449.40**	28,945.71
Less: Deferred tax assets		
Provisions	**1,062.02**	879.39
Statutory dues	**259.00**	291.32
Leave encashment	**497.29**	472.44
Unabsorbed depreciation	**-**	847.80
MAT credit entitlement	**19,016.68**	16,263.41
Others	**0.34**	6.96
Total	**10,614.07**	10,184.39

a) Deferred tax assets and deferred tax liabilities have been offset as they relate to the same governing laws.

b) The Company has been recognising MAT credit entitlement available to the Company as the same is likely to give future economic benefits in the form of availability of set off against future income tax liability.

c) Disclosures as per Ind AS 12 - 'Income Taxes' are provided in Note 55.

d) Others mainly include deferred tax assets on account of payments related to voluntary retirement schemes.

Movement in deferred tax balances

As at 31 March 2023 ₹ Crore

Particulars	As at 1 April 2022	Recognised in statement of profit and loss	Recognised in OCI	Others	As at 31 March 2023
Deferred tax liability					
Difference in book depreciation and tax depreciation	28,945.71	3,853.37	-	(1,349.68)*	**31,449.40**
Less: Deferred tax assets					
Provisions	879.39	182.63	-	-	**1,062.02**
Statutory dues	291.32	(32.32)	-	-	**259.00**
Leave encashment	472.44	24.85	-	-	**497.29**
Unabsorbed depreciation	847.80	(847.80)	-	-	**-**
MAT credit entitlement		2,753.27	-	-	**19,016.68**
Others	6.96	(6.62)	-	-	**0.34**
Net deferred tax (assets)/liabilities	**10,184.39**	**1,779.36**	**-**	**(1,349.68)**	**10,614.07**

* includes amount of ₹1,205.18 crore transferred to NGEL-Refer note 51.

As at 31 March 2022

₹ Crore

Particulars	As at 1 April 2021	Recognised in statement of profit and loss	Recognised in OCI	Others	As at 31 March 2022
Deferred tax liability					
Difference in book depreciation and tax depreciation	24,302.72	4,787.62	-	(144.63)	28,945.71
Less: Deferred tax assets					
Provisions	827.20	52.23	-	(0.04)	879.39
Statutory dues	330.50	(39.18)	-	-	291.32
Leave encashment	438.62	33.82	-	-	472.44
Unabsorbed depreciation	719.03	128.77	-	-	847.80
MAT credit entitlement	12,705.04	3,558.37		-	16,263.41
Others	13.60	(6.64)	-	-	6.96
Net deferred tax (assets)/liabilities	9,268.73	1,060.25	-	(144.59)	10,184.39

31. Other non-current liabilities

₹ Crore

Particulars	**As at 31 March 2023**	As at 31 March 2022
Government grants	**70.64**	1,081.61

a) Government grants include grant received in advance amounting to ₹ **8.47 crore** (31 March 2022: ₹ 522.31 crore) for which attached conditions are to be fulfilled / works to be completed relating to various solar power plants. This amount will be recognized as revenue corresponding to the depreciation charge in future years on completion of related projects.

b) Balance Government grants represent unamortised portion of grant received. This includes ₹ **39.64 crore** (31 March 2022: ₹ 534.94 crore) received from Solar Energy Corporation of India under MNRE Scheme for setting up Solar PV power projects. This amount will be recognized as revenue corresponding to the depreciation charge in future years. Refer Note 36 w.r.t. current portion of Government grants.

32. Current financial liabilities - Borrowings

₹ Crore

Particulars	**As at 31 March 2023**	As at 31 March 2022
Current borrowings		
Loans repayable on demand		
From banks		
Secured		
Cash credit	**-**	474.91
Other Loans		
Unsecured		
Cash Credit /Short term working capital loan from Banks	**9,550.00**	-
Commercial paper	**1,959.73**	6,631.26
	11,509.73	7,106.17
Current maturities of non-current borrowings		
Bonds - Secured	**6,231.40**	6,044.87

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Bonds - Unsecured	**4,374.10**	-
Foreign currency notes - Unsecured	**-**	5,724.50
From Banks		
Secured		
Rupee term loans	**634.11**	442.62
Unsecured		
Foreign currency loans	**425.05**	301.01
Rupee term loans	**4,375.04**	3,962.80
From Others		
Secured		
Rupee term loans	**367.07**	282.57
Unsecured		
Foreign currency loans (guaranteed by GOI)	**183.61**	184.11
Other foreign currency loans	**565.28**	390.44
Rupee term loans	**16.57**	33.34
	17,172.23	17,366.26
Total	**28,681.96**	24,472.43

a) Borrowings under Commercial paper are net of unamortised discount as at 31 March 2023 amounting to ₹ **40.27 crore** (31 March 2022: ₹ 43.74 crore)

b) Details in respect of rate of interest and terms of repayment of current maturities of secured and unsecured non-current borrowings indicated above are disclosed in Note 25.

c) There has been no default in repayment of any of the loans or interest thereon as at the end of the year.

33. Current financial liabilities - Lease liabilities

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Current maturities of lease liabilities	**170.79**	168.01

a) Refer Note 26 for details in respect of non-current lease labilities.

34. Current financial liabilities - Trade payables

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Trade payables for goods and services		
Total outstanding dues of		
- micro and small enterprises	**425.46**	479.30
- creditors other than micro and small enterprises	**11,581.88**	9,255.05
Total	**12,007.34**	9,734.35

a) Disclosures as required under Companies Act, 2013 / MSMED Act, 2006 are provided in Note 74.

b) Amounts payable to related parties are disclosed in Note 59.

c) **Trade payables ageing schedule**

As at 31 March 2023 **₹ Crore**

Particulars	Unbilled Dues	Not Due	Outstanding for following periods from due date of payment				Total
			Less than 1 year	1-2 years	2-3 years	More than 3 years	
(i) MSME	178.62	167.31	79.46	0.01	-	0.06	**425.46**
(ii) Others	2,065.81	2,298.77	4,978.07	343.81	189.27	1,705.94	**11,581.67**
(iii) Disputed dues – MSME	-	-	-	-	-	-	**-**
(iv) Disputed dues – Others	-	-	-	-	-	0.21	**0.21**
Total	**2,244.43**	**2,466.08**	**5,057.53**	**343.82**	**189.27**	**1,706.21**	**12,007.34**

As at 31 March 2022 ₹ Crore

Particulars	Unbilled Dues	Not Due	Outstanding for following periods from due date of payment				Total
			Less than 1 year	1-2 years	2-3 years	More than 3 years	
(i) MSME	186.01	225.27	67.49	0.04	0.28	0.21	479.30
(ii) Others	1,865.99	1,063.03	3,501.56	422.25	796.96	1,605.05	9,254.84
(iii) Disputed dues – MSME	-	-	-	-	-	-	-
(iv) Disputed dues – Others	-	-	-	-	0.14	0.07	0.21
Total	2,052.00	1,288.30	3,569.05	422.29	797.38	1,605.33	9,734.35

(d) The amounts payable to MSME vendors beyond the statutory period represents security deposit, retention money and other payments which are to be paid after such period as per respective contract conditions and bills which are pending for completion of documentation by the vendors.

35. Current liabilities - Other financial liabilities

₹ Crore

Particulars	**As at 31 March 2023**	As at 31 March 2022
Interest accrued but not due on unsecured short term borrowing	**36.84**	-
Interest accrued but not due on secured non current borrowings	**853.42**	1,104.37
Interest accrued but not due on unsecured non current borrowings	**1,633.52**	1,260.97
Unpaid dividends	**19.07**	17.99
Unpaid matured deposits and interest accrued thereon	**0.19**	0.19
Unpaid matured bonds and interest accrued thereon	**9.62**	7.20
Unpaid bond refund money-tax free bonds	**-**	0.19
Book overdraft	**168.70**	18.59
Payable to customers	**1,289.39**	1,137.47
Payable for capital expenditure		
- micro and small enterprises	**127.23**	246.04
- other than micro and small enterprises	**15,248.60**	17,022.57
Other payables		
Deposits from contractors and others	**195.41**	220.55
Payable to employees	**1,099.50**	1,036.05
Payable to solar payment security fund	**37.97**	27.30
Others	**505.34**	1,070.13
Total	**21,224.80**	**23,169.61**

a) Unpaid dividends, matured deposits, bonds and interest include the amounts which have either not been claimed by the investors/holders of the equity shares/bonds/fixed deposits or are on hold pending legal formalities etc. Out of the above, the amount required to be transferred to Investor Education and Protection Fund (IEPF) has been transferred except for the interim dividend for the year 2015-16 amounting to ₹ 0.66 crore. The transfer of dividend to IEPF is dependent upon transfer of shares pertaining to these dividends for which reconciliation with banks and Registrar and Transfer Agents (RTA) and consequential transfer to IEPF are under process.

b) Other payables - Others' mainly includes ₹ **63.68 crore** (31 March 2022: ₹ 250.39 crore) towards the implementation of Deen Dayal Upadhyay Gram Jyoti Yojana (DDUGJY) Scheme of the GOI being carried out by the Company. The funds for the implementation of these schemes are provided by the agencies nominated by the GOI in this regard. Further, 'Other payables - Others' also include **Nil** (31 March 2022: ₹ 380.48 crore) payable to the Department of Water Resource, Government of Odisha and ₹ **251.53 crore** (31 March 2022: ₹ 251.53 crore) in respect of an amount payable under a contract which is under dispute and balance towards amount payable to hospitals, etc.

c) The Company had obtained exemption from the Ministry of Corporate Affairs (MCA), GOI in respect of applicability of Section 58A from the erstwhile Companies Act, 1956 in respect of deposits held from the dependants of employees who die or suffer permanent total disability under the 'Employees Rehabilitation Scheme' (said amount is included in "Other payables - Others"). Consequent upon enactment of the Companies Act, 2013, the Company has written to the MCA for clarification on continuation of above exemption granted earlier, which is still awaited. Based on an expert opinion, the amount accepted under the Scheme is not considered as a deposit under the Companies Act, 2013.

d) Disclosures as required under the Companies Act, 2013 / MSMED Act, 2006 are provided in Note 74.

e) Amounts payable to related parties are disclosed in Note 59.

36. Current liabilities - Other current

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Advances from customers and others	**419.00**	437.38
Government grants	**3.53**	74.56
Other payables		
Statutory dues	**789.72**	587.18
Others	**0.72**	0.72
Total	**1,212.97**	1,099.84

a) Advance received for the DDUGJY of ₹ **282.22 crore** (31 March 2022: ₹ 309.13 crore) is included in 'Advance from customers and others'. Refer Note 35 (b). Tax deducted at source on the interest is included in 'Advance tax and tax deducted at source' - Note 12.

b) Also refer Note 31 w.r.t. accounting of Government grants.

37. Current liabilities - Provisions

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Provision for		
Employee benefits	**1,597.14**	1,540.03
Obligations incidental to land acquisition	**2,295.07**	2,726.80
Tariff adjustments	**817.61**	482.28
Arbitration awards	**2,646.94**	2,274.72
Others	**113.49**	147.48
Total	**7,470.25**	7,171.31

a) Disclosures required by Ind AS 19 'Employee Benefits' are provided in Note 56.

b) Disclosures required by Ind AS 37 'Provisions, Contingent Liabilities and Contingent Assets' are provided in Note 63.

c) Provision for others mainly comprise ₹ **90.79 crore** (31 March 2022: ₹ 111.96 crore) towards cost of unfinished minimum work programme demanded by the Ministry of Petroleum and Natural Gas (MoP&NG) including interest thereon in relation to Block AA-ONN-2003/2 (Refer Note 66) and ₹ **5.97 crore** (31 March 2022: ₹ 7.36 crore) towards provision for shortage in property, plant and equipment on physical verification pending investigation and ₹ **12.81 crore** (31 March 2022: ₹ 17.86 crore) towards expected loss on investments of Provident Fund Trust.

38. Current liabilities - Current tax liabilities (net)

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Current tax	**4,188.03**	3,630.21
Less: Advance tax paid	**4,125.06**	3,496.04
Total	**62.97**	134.17

39. Deferred revenue

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
On account of		
Income from foreign currency fluctuation	**2,616.87**	1,973.39

a) Foreign exchange rate variation (FERV) on foreign currency loans and interest thereon is recoverable from/payable to the customers in line with the Tariff Regulations. Keeping in view the opinion of the EAC of ICAI, the Company is recognizing deferred foreign currency fluctuation asset by corresponding credit to deferred income from foreign currency fluctuation in respect of the FERV on foreign currency loans adjusted in the cost of property, plant and equipment, which is recoverable from the customers in future years as provided in accounting policy no. C.15 (Note 1). This amount will be recognized as revenue corresponding to the depreciation charge in future years. The amount does not constitute a liability to be discharged in future periods and hence, it has been disclosed separately from equity and liabilities.

40. Revenue from operations

₹ Crore

Particulars		For the year ended 31 March 2023	For the year ended 31 March 2022
Energy sales (including electricity duty)		**1,57,762.43**	1,16,169.60
Sale of energy through trading		**3,753.48**	3,549.65
Consultancy, project management and supervision fee		**154.08**	168.18
Lease rentals on assets on operating lease		**19.58**	19.59
		1,61,689.57	1,19,907.02
Sale of fly ash/ash products	**396.51**		240.89
Less: Transferred to fly ash utilization reserve fund	**396.51**		240.89
		-	-
Other operating revenues			
Interest from beneficiaries		**1,609.33**	917.69
Energy internally consumed		**92.04**	65.17
Interest income on assets under finance lease		**32.53**	45.07
Recognized from Government grants		**94.88**	117.10
Provision written back-others		**242.98**	122.50
Income form Trading of ESCerts		**8.44**	-
		2,080.20	1,267.53
Total		**1,63,769.77**	1,21,174.55

a) (i) CERC notified the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 vide Order dated 7 March 2019 (Regulations, 2019} for determination of tariff for the tariff period 2019-2024. CERC has issued provisional tariff orders in respect of twenty four stations for the tariff period 2019-24. Pending issue of provisional tariff orders in respect of balance stations, capacity charges are billed to beneficiaries in accordance with the tariff approved and applicable as on 31 March 2019, as provided in Regulations, 2019. In case of new stations, which got commercialised from 1 April 2019 and stations where tariff approved and applicable as on 31 March 2019 is pending from CERC, billing is done based on capacity charges as filed with CERC in tariff petition. Accordingly, capacity charges provisionally billed for the year ended 31 March 2023 is ₹ **47,631.73 crore** (31 March 2022: ₹ 46,278.65 crore). Energy and other charges are billed as per the operational norms specified in the Regulations 2019. Accordingly, energy charges billed for year ended 31 March 2023 is ₹ **97,042.05 crore** (31 March 2022: ₹66,047.20 crore).

(ii) Capacity charges for the year ended 31 March 2023 have been provisionally recognized considering the provisions of CERC Tariff Regulations amounting to ₹ **49,832.28 crore** (31 March 2022: ₹ 46,036.00 crore). Energy and Other charges for the year ended 31 March 2023 have been recognized at ₹ **1,00,306.61 crore** (31 March 2022: ₹ 66,352.35 crore) as per the operational norms specified in the Regulations 2019.

b) Capacity charges for the year ended 31 March 2023 include ₹ **1,829.50 crore** (31 March 2022: ₹ 1,286.51 crore) pertaining to earlier years is on account of impact of CERC orders and other adjustments. Energy and other charges for the year ended 31 March 2023 include ₹ **3,206.12 crore** (31 March 2022: ₹ 604.36 crore) pertaining to earlier years on account of revision of energy charges due to grade slippages and other adjustments. Other adjustments include an amount of ₹ 3097.04 crore on account of adjustment of 'Net movement in regulatory deferral account balances (net of taxes)' relating to reimbursement of ash transportation cost for the period from 1 April 2019 to 31 March 2022 pursuant to Order of CERC dated 28 October 2022.

c) Sales for the year ended 31 March 2023 include ₹ **262.97 crore** (31 March 2022: Nil) on account of income tax receivable from the beneficiaries as per Regulations, 2004. Sales for the year ended 31 March 2023 also include ₹ **87.51 crore** (31 March 2022: ₹ 87.60 crore) on account of deferred tax materialized which is recoverable from beneficiaries as per Regulations, 2019.

d) Energy sales include electricity duty amounting to ₹ **1,516.71 crore** (31 March 2022: ₹ 1,352.73 crore).

e) Revenue from operations for the year ended 31 March 2023 include ₹ **3,759.32 crore** (31 March 2022: ₹ 3,551.54 crore) on account of sale of energy through trading (gross).

f) Other operating revenue includes ₹ **92.04 crore** (31 March 2022: ₹ 65.17 crore) towards energy internally consumed, valued at variable cost of generation and the corresponding amount is included in power charges in Note 46.

g) CERC Regulations provides that where after the truing-up, the tariff recovered is less/more than the tariff approved by the Commission, the generating Company shall recover from /pay to the beneficiaries the under/over recovered amount along-with simple interest. Based on the above, the interest recoverable from the beneficiaries amounting to ₹ **1,609.33 crore** (31 March 2022: ₹ 917.69 crore) has been accounted as 'Interest from beneficiaries'. Further, the amount payable to the beneficiaries has been accounted as 'Interest to beneficiaries' in Note 46.

h) Provision written back-others represents write back of provision towards water conservation fund at few projects of the Company (31 March 2022: towards water charges at one of the projects of the Company), which is no longer required.

i) The Power Purchase Agreements (PPA) signed in respect of a power station was operative initially for a period of five years with the beneficiary which may be extended, renewed or replaced as the parties mutually agree. The Company has continued to classify these arrangement with its customers as lease based on the practical expedient provided in Appendix C of Ind AS 116. Accordingly, recovery of capacity charges towards depreciation, interest on loan capital & return on equity (pre-tax) components from the beneficiary are considered as lease rentals on the assets which are on operating lease.

j) The Company had ascertained that the PPA entered into for Stage-I of a power station with the beneficiary falls under the definition of finance lease. Accordingly, the written down value of the specified assets was derecognized from PPE and accounted as Finance Lease Receivable (FLR) on transition date to Ind AS. The Company has continued to classify this arrangement with its customer as lease based on the practical expedient provided in Appendix C of Ind AS 116. Accordingly, recovery of capacity charges towards depreciation (including AAD), interest on loan capital & return on equity (pre-tax) components from the beneficiary are continued to be adjusted against FLR. The interest component of the FLR and amount received on account of revision of tariff of previous periods in respect of the above three elements are continued to be recognised as 'Interest income on Assets under finance lease'.

k) CERC vide notification dated 19 February 2021, notified the Second amendment to Tariff Regulations 2019, which inter alia includes mechanism for determination of transfer price of coal from integrated coal mines to generating stations and are effective for the period 2019-24. Coal extracted from Company's captive mines and supplied to generating stations have been accounted considering these Regulations.

41. Other income

₹ Crore

Particulars		For the year ended 31 March 2023	For the year ended 31 March 2022
Interest from			
Financial assets at amortized cost			
Non-current trade receivables		**149.88**	-
Loan to subsidiary companies		**81.45**	85.17
Loan to employees		**61.92**	65.00
Deposits with banks		**67.76**	54.80
Deposits with banks out of fly ash utilization reserve fund	**29.15**		19.61
Less : Transferred to fly ash utilization reserve fund	**29.15**		19.61
		-	-
Deposits with banks - DDUGJY funds	**13.81**		13.83
Less : Transferred to DDUGJY advance from customers	**13.81**		13.83
		-	-
Other investments in Joint venture companies		**28.79**	-
Advance to contractors and suppliers		**166.02**	120.98
Income tax refunds		**1.13**	147.99
Others		**65.82**	20.98
Dividend from			
Non-current investments in			
Subsidiary companies		**1,050.25**	624.39
Joint venture companies		**1,285.33**	1,111.69
Equity instruments designated at fair value through OCI		**6.96**	9.00
Other non-operating income			
Late payment surcharge from beneficiaries		**429.82**	822.81
Hire charges for equipment		**1.33**	5.89
Sale of scrap		**148.67**	161.68
Gain on sale of current investments measured at fair value through profit or loss		**-**	10.81
Gain on Option Contract		**5.90**	15.43
Miscellaneous income		**303.90**	187.10
Profit on de-recognition of property, plant and equipment		**31.73**	6.21
Lease rent from investment property		**0.19**	-
Provisions written back			
Doubtful loans, advances and claims		**0.17**	0.05
Shortage in inventories		**52.93**	18.29
Obsolescence in inventories		**28.05**	13.54
Arbitration cases		**33.92**	10.04
Unserviceable capital works		**3.84**	134.81
Others		**5.15**	4.12
		4,010.91	3,630.78
Less: Transferred to expenditure during construction period (net) - Note 47		**55.42**	54.78
Transferred to expenditure during development of coal mines (net) - Note 48		**0.85**	0.89
Total		**3,954.64**	3,575.11

a) Interest from others' includes interest on outstanding balances as per BTA (Refer Note 51) , interest on advance to APIIC for drawl of water and deposits with LIC towards annuity to the land oustees.

b) Miscellaneous income includes income from township recoveries and receipts towards insurance claims.

c) Provision written back-Unserviceable CWIP includes ₹ **Nil** (31 March 2022: ₹ 134.11 crore) pertaining to cancellation of allotment of land in the previous year and consequential write back of of depreciation/amortisation and other expenses capitalised in the earlier years.

d) 'Provisions written back - Others' include provision for shortage in construction stores, shortage in property, plant and equipment and other provisions no longer required..

42. Fuel cost

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Coal	**92,081.38**	63,773.80
Gas	**3,052.30**	1,682.71
Naptha	**158.43**	63.41
Oil	**1,495.00**	1,015.59
Biomass pellets and other chemicals	**64.39**	34.56
Total	**96,851.50**	66,570.07

43. Employee benefits expense

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Salaries and wages	**5,146.38**	4,951.52
Contribution to provident and other funds	**777.57**	755.50
Staff welfare expenses	**626.40**	650.30
	6,550.35	6,357.32
Less: Allocated to fuel inventory	**319.11**	298.17
Transferred to expenditure during construction period (net)- Note 47	**506.73**	498.71
Transferred to expenditure during development of coal mines (net) - Note 48	**65.95**	56.16
Reimbursements for employees on deputation/secondment	**99.53**	92.21
Total	**5,559.03**	5,412.07

a) Disclosures as per Ind AS 19 - 'Employee Benefits' in respect of provision made towards various employee benefits are provided in Note 56.

44. Finance costs

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Finance costs on financial liabilities measured at amortized cost		
Bonds	**4,271.35**	4,204.36
Foreign currency term loans	**472.66**	261.95
Rupee term loans	**5,812.67**	5,378.53

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Foreign currency bonds/notes	**933.64**	1,191.96
Cash credit	**256.48**	55.62
Unwinding of discount on vendor liabilities/provisions	**127.27**	119.15
Commercial papers	**396.93**	281.82
	12,271.00	11,493.39
Interest on non financial items	**11.11**	5.36
Exchange differences regarded as an adjustment to borrowing costs	**457.54**	(74.88)
Other borrowing costs		
Guarantee fee	**15.83**	19.33
Others	**9.70**	11.30
	25.53	30.63
Sub-total	**12,765.18**	11,454.50
Less: Transferred to expenditure during construction period (net) - Note 47	**2,589.03**	3,022.36
Transferred to expenditure during development of coal mines (net) - Note 48	**196.92**	215.60
Total	**9,979.23**	8,216.54

a) 'Other borrowing costs - Others' include bond issue and service expenses, commitment charges, exposure premium and insurance premium & other expenses on foreign currency loans / bonds/ notes.

b) Interest on non financial items above includes interest on shortfall in payment of advance income-tax amounting **₹ 7.95 crore** (31 March 2022: ₹ 2.49 crore)

c) Refer Note 73 w.r.t. Interest expense relating to lease obligations.

45. Depreciation, amortization and impairment expense

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
On property, plant and equipment - Note 2	**14,544.59**	13,228.88
On intangible assets - Note 5	**41.85**	50.99
	14,586.44	13,279.87
Less: Allocated to fuel inventory	**1,059.25**	879.71
Transferred to expenditure during construction period (net) - Note 47	**65.11**	66.21
Transferred to expenditure during development of coal mines (net) - Note 48	**53.18**	32.55
Adjustment with deferred revenue from deferred foreign currency fluctuation	**272.19**	243.16
Total	**13,136.71**	12,058.24

a) Refer Note 73 w.r.t. Depreciation expense of right of use assets.

46. Other expenses

₹ Crore

Particulars		For the year ended 31 March 2023	For the year ended 31 March 2022
Power charges	363.47		219.67
Less: Recovered from contractors and employees	65.17		47.15
		298.30	172.52
Water charges		923.16	702.50
Cost of captive coal produced		3,102.15	1,876.41
Stores consumed		248.60	149.51
Rent		43.36	5.16
Repairs and maintenance			
Buildings	386.36		307.94
Plant and equipment	4,097.50		3,300.38
Others	413.63		398.12
		4,897.49	4,006.44
Load dispatch centre charges		38.79	39.62
Insurance		333.60	256.12
Interest to beneficiaries		285.85	48.91
Loss on fair valuation of non-current trade receivables at amortised cost		386.84	-
Rates and taxes		159.06	146.82
Water cess and environment protection cess		0.47	0.47
Training and recruitment expenses	49.94		27.63
Less: Receipts	0.51		0.39
		49.43	27.24
Communication expenses		76.45	74.45
Travelling expenses		250.22	219.06
Tender expenses	1.67		2.37
Less: Receipt from sale of tenders	0.32		1.07
		1.35	1.30
Remuneration to auditors		6.44	5.46
Advertisement and publicity		39.85	23.50
Electricity duty		1,430.32	1,279.88
Security expenses		1,141.81	1,098.94
Entertainment expenses		70.93	63.52
Expenses for guest house	73.09		65.92
Less: Recoveries	5.14		3.72
		67.95	62.20
Education expenses		76.80	67.18
Donation/Grants		0.03	12.54
Ash utilization and marketing expenses		2,650.93	1,760.75

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Directors sitting fee	**0.71**	0.30
Professional charges and consultancy fee	**138.35**	96.56
Legal expenses	**77.84**	72.97
EDP hire and other charges	**68.26**	62.92
Printing and stationery	**6.12**	4.94
Oil and gas exploration expenses	**0.06**	0.07
Hiring of vehicles	**118.52**	101.11
Net loss/(gain) in foreign currency transactions and translations	**706.49**	(616.34)
Horticulture expenses	**75.98**	65.73
Hire charges of helicopter/aircraft	**4.08**	8.27
Hire charges of construction equipment	**5.55**	5.93
Transport vehicle running expenses	**8.72**	8.63
Demurrage charges	**-**	0.03
Loss on de-recognition of property, plant and equipment	**165.36**	106.12
Miscellaneous expenses	**213.76**	197.18
	18,169.98	12,214.92
Less: Allocated to fuel inventory	**3,647.69**	2,554.09
Transferred to expenditure during construction period (net) - Note 47	**390.78**	225.80
Transferred to expenditure during development of coal mines (net) - Note 48	**335.60**	108.40
Transferred to fly ash utilization reserve fund	**262.85**	278.22
Transferred to corporate social responsibility expenses	**9.67**	51.15
	13,523.39	8,997.26
Corporate Social Responsibility (CSR) expenses (Refer Note 78)	**315.32**	365.14
Provisions for		
Tariff adjustments	**335.33**	122.00
Impairment of investments	**14.24**	16.30
Obsolescence in inventories	**52.58**	31.01
Shortages in inventories	**8.77**	29.33
Unserviceable capital works	**18.12**	11.03
Unfinished minimum work programme for oil and gas exploration	**11.01**	8.08
Arbitration cases	**155.40**	105.25
Shortages in construction stores	**2.35**	2.00
Doubtful loans, advances and claims	**32.73**	3.72
Others	**5.35**	26.07
	635.88	354.79
Total	**14,474.59**	9,717.19

a) During the development stage of mine, transfer price of coal extracted from Company's captive mine has been determined considering the CERC Regulations. The same has been netted from the cost of captive coal and carried to 'Development of coal mines' (Note 3) through 'Transferred to expenditure during development of coal mines' (Note 48).

b) Details of remuneration to auditors:		
As auditor		
Audit fee	**2.54**	2.44
Tax audit fee	**0.89**	0.83
Limited review fees	**1.40**	1.42
In other capacity		
Other services (certification fee)	**0.69**	0.64
Reimbursement of expenses	**0.92**	0.13
Total	**6.44**	5.46

Remuneration to auditors includes ₹ **0.38 crore** (31 March 2022: ₹ 0.32 crore) relating to earlier year.

c) CERC Regulations provides that where after the truing-up, the tariff recovered is more than the tariff approved by the Commission, the generating Company shall pay to the beneficiaries the over recovered amount along-with simple interest. Accordingly, the interest payable to the beneficiaries amounting to ₹ **285.85 crore** (31 March 2022: ₹ 48.91 crore) has been accounted and disclosed as 'Interest to beneficiaries'.

d) Miscellaneous expenses include expenditure on books & periodicals, workshops, operating expenses of DG sets, brokerage and commission, bank charges, furnishing expenses, etc.

e) Provisions - Others include provision for doubtful debts, shortages in property, plant and equipment and other losses.

47. Expenditure during construction period (net) *

₹ Crore

Particulars		For the year ended 31 March 2023	For the year ended 31 March 2022
A. Employee benefits expense			
Salaries and wages		**418.17**	407.85
Contribution to provident and other funds		**49.83**	51.83
Staff welfare expenses		**38.73**	39.03
Total (A)		**506.73**	498.71
B. Finance costs			
Finance costs on financial liabilities measured at amortized Cost			
Bonds		**878.87**	1,011.71
Foreign currency term loans		**177.60**	52.86
Rupee term loans		**1,065.02**	1,628.82
Foreign currency bonds/notes		**205.82**	245.43
Unwinding of discount on vendor liabilities		**54.90**	42.10
Exchange differences regarded as an adjustment to borrowing costs		**174.90**	15.61
Other borrowing costs		**31.92**	25.83
Total (B)		**2,589.03**	3,022.36
C. Depreciation and amortization expense		**65.11**	66.21
D. Other expenses			
Power charges	**115.65**		15.32
Less: Recovered from contractors and employees	**6.67**		6.12
		108.98	9.20

₹ Crore

Particulars		For the year ended 31 March 2023	For the year ended 31 March 2022
Water charges		**100.04**	4.73
Rent		**1.08**	0.56
Repairs and maintenance			
Buildings	**2.82**		1.43
Plant and equipment	**0.69**		0.11
Others	**31.10**		35.76
		34.61	37.30
Insurance		**-**	-
Rates and taxes		**3.72**	11.90
Communication expenses		**4.81**	5.61
Travelling expenses		**20.33**	20.19
Tender expenses		**0.01**	0.35
Advertisement and publicity		**0.21**	0.28
Security expenses		**63.73**	75.36
Entertainment expenses		**3.69**	3.52
Expenses for guest house		**3.59**	3.92
Professional charges and consultancy fee		**14.27**	11.54
Legal expenses		**8.15**	12.85
EDP hire and other charges		**0.91**	0.65
Printing and stationery		**0.35**	0.24
Miscellaneous expenses		**22.30**	27.60
Total (D)		**390.78**	225.80
E. Less: Other income			
Interest from advances to contractors and suppliers		**37.16**	33.37
Interest others		**12.81**	17.81
Hire charges for equipment		**0.32**	0.06
Sale of scrap		**0.42**	0.32
Miscellaneous income		**4.71**	3.22
Total (E)		**55.42**	54.78
F. Net actuarial losses on defined benefit plans		**(1.54)**	1.48
Grand total (A+B+C+D-E+F) **		**3,494.69**	3,759.78

* Other than for expenditure during development of coal mines- (Note 48)

** Carried to capital work-in-progress - (Note 3)

48. Expenditure during development of coal mines (net)

₹ Crore

Particulars		For the year ended 31 March 2023	For the year ended 31 March 2022
A. Employee benefits expense			
Salaries and wages		**52.07**	46.16
Contribution to provident and other funds		**6.19**	5.32
Staff welfare expenses		**7.69**	4.68
Total (A)		**65.95**	56.16
B. Finance costs			
Finance costs on financial liabilities measured at amortized cost			
Bonds		**68.38**	87.70
Foreign currency term loans		**12.08**	0.71
Rupee term loans		**100.70**	117.64
Unwinding of discount on vendor liabilities		**8.80**	8.98
Other borrowing costs		**6.96**	0.57
Total (B)		**196.92**	215.60
C. Depreciation and amortization expense		**53.18**	32.55
D. Other expenses			
Power charges		**3.21**	1.59
Water charges		**-**	0.06
Rent		**0.23**	0.56
Repairs and maintenance			
Buildings	**0.03**		0.04
Others	**4.78**		1.76
		4.81	1.80
Cost of captive coal produced		**273.73**	64.04
Insurance		**-**	-
Rates and taxes		**7.59**	0.86
Communication expenses		**0.99**	0.91
Travelling expenses		**2.87**	2.34
Advertisement and publicity		**0.20**	0.14
Security expenses		**15.55**	17.07
Entertainment expenses		**0.43**	0.45
Expenses for guest house		**1.47**	1.34
Professional charges and consultancy fee		**9.98**	8.34
Legal expenses		**5.19**	2.56
EDP hire and other charges		**0.37**	0.08
Printing and stationery		**0.12**	0.11
Miscellaneous expenses		**8.86**	6.15
Total (D)		**335.60**	108.40

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
E. Less: Other income		
Interest from advances to contractors and suppliers	**0.64**	0.71
Miscellaneous income	**0.21**	0.18
Total (E)	**0.85**	0.89
F. Net actuarial losses on defined benefit plans	**0.29**	0.17
Grand total (A+B+C+D-E+F) *	**651.09**	411.99

* Carried to capital work-in-progress - (Note 3)

49 a) The Company has a system of obtaining periodic confirmation of balances from banks and other parties. There are no unconfirmed balances in respect of bank accounts and borrowings from banks & financial institutions. With regard to receivables for energy sales, the Company sends demand intimations to the beneficiaries with details of amount paid and balance outstanding which can be said to be automatically confirmed on receipt of subsequent payment from such beneficiaries. In addition, reconciliation with beneficiaries and other customers is generally done on quarterly basis. So far as trade/other payables and loans and advances are concerned, the balance confirmation letters/emails with the negative assertion as referred in the Standard on Auditing (SA) 505 (Revised) 'External Confirmations', were sent to the parties. Some of such balances are subject to confirmation/reconciliation. Adjustments, if any will be accounted for on confirmation/reconciliation of the same, which in the opinion of the management will not have a material impact.

b) In the opinion of the management, the value of assets, other than property, plant and equipment and non-current investments, on realisation in the ordinary course of business, will not be less than the value at which these are stated in the Balance Sheet.

c) The levy of transit fee/entry tax on supplies of fuel to some of the power stations has been paid under protest as the matters are sub-judice at various courts. In case the Company gets refund/demand from fuel suppliers/tax authorities on settlement of these cases, the same will be passed on to respective beneficiaries.

50 a) The environmental clearance (EC) granted by the Ministry of Environment and Forest, Government of India (MoEF), based on the recommendations of Expert Appraisal Committee (EAC), for one of the Company's project consisting of three units of 800 MW each whose carrying cost as at 31 March 2023 is ₹ **14,586.51 crore** (31 March 2022: ₹ 14,874.47 crore), was challenged before the National Green Tribunal (NGT) vide appeal no.12/2012. The NGT disposed off the appeal vide Order dated March 13, 2014, inter alia, directing that the order of clearance be remanded to the MoEF to pass an order granting or declining clearance to the project proponent afresh in accordance with the law and the judgement of the NGT and also directed that the EC shall be kept in abeyance and the Company shall maintain status quo in relation to the project during the period of review by the Committee or till fresh order is passed by the MoEF, whichever is earlier.

The Company filed an appeal challenging the NGT order before the Hon'ble Supreme Court of India which stayed the order of the NGT and the matter is sub-judice and pending for listing in the Court. The Company has been complying with various conditions stipulated in the EC and reporting to the appropriate environment authorities periodically. The EAC has been accepting the amendments sought by the Company in the EC.

Based on a legal opinion, the Company does not envisage any threat to the continuance to the project. All the units of the project have been declared commercial in the earlier years and are fully operational since September 2018.

b) The Company is executing a hydro power project in the state of Uttarakhand, where all the clearances were accorded. A case was filed in Hon'ble Supreme Court of India after the natural disaster in Uttarakhand in June 2013 to review whether the various existing and ongoing hydro projects have contributed to environmental degradation. Hon'ble Supreme Court of India on 7 May 2014, ordered that no further construction shall be undertaken in the projects under consideration until further orders, which included the said hydro project of the Company. In the proceedings, Hon'ble Supreme Court is examining to allow few projects which have all clearances which includes the project of the Company where the work has been stopped. Aggregate cost incurred on the project up to 31 March 2023 is ₹ **147.90 crore** (31 March 2022: ₹ 163.57 crore). Management is confident that the approval for proceeding with the project shall be granted, hence no adjustment is considered necessary in respect of the carrying value of the project.

c) The Company is executing a 4 X 130 MW Hydro Electric Project in the state of Uttarakhand. After the reports of recent land subsidence in Joshimath Town, Additional District Magistrate, Chamoli has issued order on 5 January 2023 to stop all the construction activities till further orders. Hon'ble High Court of Uttarakhand on hearing a public interest litigation on 12 January 2023, has directed the State to strictly enforce the ban on construction in Joshimath area and scheduled next hearing on 24 May 2023. As per Company's understanding, the land subsidence in Joshimath does not have any link with the Project. The developments are closely being monitored by the Company. Aggregate cost incurred on the project up to 31 March 2023 is ₹ **6,252.31 crore** (31 March 2022: ₹ 5,745.28 crore). Technical and administrative works related to the project are going on. Management does not envisage any threat to the continuance of the project and is confident that a viable solution in connection with the project shall be arrived in due course.

51. Transfer of Renewable Energy (RE) assets to NGEL, a wholly owned subsidiary of the Company

The Company has incorporated a wholly owned subsidiary, in the name of 'NTPC Green Energy Limited' (NGEL) on 7 April 2022, for reorganisation of its renewable energy business. Pursuant to the issuance of National Monetisation Pipeline ("NMP") by the Ministry of Finance on August 23, 2021, and in consultation with the Ministry of Power, the Renewable Energy Assets ("RE Assets") of NTPC Limited ("the Company") were identified for the purpose of monetisation under the NMP and accordingly The Board of Directors of the Company has approved the transfer of fifteen renewable energy assets ("RE Assets") of the Company to NGEL at book value, through a business transfer agreement dated 8 July 2022. Further, the Company will also transfer its 100% equity shareholding held in NTPC Renewable Energy Limited ("NREL") at cost, a wholly owned subsidiary of the Company, to NGEL through a share purchase agreement dated 8 July, 2022. The transfer of the RE assets and 100% equity shareholding in NREL, were completed on 28 February 2023.

The statements of assets and liabilities of the RE assets of capacity 2861 MW, including under construction, that were transferred to NGEL are as under:

₹ Crore

Particulars	As at 28 February 2023
ASSETS	
Non-current assets	
Property, plant and equipment	**14,021.27**
Capital work-in-progress	**897.97**
Other non-current assets	**161.98**
Total non-current assets	**15,081.22**
Current assets	
Inventories	**11.78**
Financial assets	
Trade receivables	**393.63**
Other financial assets	**367.21**
Other current assets	**6.66**
Total current assets	**779.28**
TOTAL ASSETS (A)	**15,860.50**
EQUITY AND LIABILITIES	
Liabilities	
Non-current liabilities	
Financial liabilities	
Lease liabilities	**72.73**
Deferred tax liabilities (net)	**1,205.18**
Other non-current liabilities	**1,316.28**
Total non-current liabilities	**2,594.19**

₹ Crore

Particulars	As at 28 February 2023
Current liabilities	
Financial liabilities	
Lease liabilities	**16.03**
Trade payables	**88.06**
Other financial liabilities	**1,092.67**
Other current liabilities	**59.00**
Total current liabilities	**1,255.76**
Total Liabilites (B)	**3,849.95**
Value of consideration as per BTA (A-B)	**12,010.55**

Note:

1. As per the terms of BTA, free hold land pertaining to Bilhaur Solar Project shall remain with the Company. A lease agreement is being signed between the two companies providing right to use of land in favour of NGEL till the end of Power Purchase Agreement of the Bilhaur project. Accordingly, the Company has classified the said freehold land as investment property in line with the requirements of Ind AS 40. Refer Note 4.

2. Approval for assignment/novation of ROU land pertaining to Rojmal project and Jetsar project is yet to be consented by the lessor. Agreements have been entered to provide right to use ROU land pertaining to Rojmal project and Jetsar project by NTPC to NGEL (sub-lease) for a period of 6 months for carrying out necessary activities, as required to be carried out under BTA pending transfer of leasehold rights etc. These lands are included as part of purchase consideration in BTA, though the asset is retained in NTPC till receipt of consent for transfer. Accordingly, the ROU land admeasuring 863.27 acres of value ₹ 19.51 crore as at 28 February, 2023 along with corresponding lease liabilities pertaining to Rojmal project and Jetsar project have been retained in NTPC, which shall be suitably adjusted once the transfer of leasehold rights as stated above is effected. The net amount received in this regard is included in other current liabilities of the Company (Note 36).

3. As per the BTA, freehold land and right-of-use land pertaining to other RE stations, except above stated lands, has been transferred to NGEL from NTPC. Accordingly, Freehold land admeasuring 5,384.13 acres of value ₹ 238.17 crore and right-of-use land admeasuring 6,943.75 acres of value ₹ 177.17 crore as at 28 February, 2023 along with corresponding lease liabilities pertaining to the RE assets (except as above stated) have been transferred to NGEL. The execution of conveyance deed for transfer of title deeds of freehold lands and execution of transfer deed/assignment agreement for transfer of lease lands will be completed in due course as part of post-closing obligations as per BTA.

4. Settlement of transactions:

   a) The purchase consideration has been settled during the year by payment / allotment of equity except for an amount of ₹ 3,407.38 crore which has been paid by NGEL on 27 April 2023 alongwith interest @ 7.26 % per annum being the interest cost applicable for the relevant period on the borrowings of NTPC for the RE assets, as per the terms and conditions of BTA.

   b) Further 100% equity share holding in NREL as per the share purchase agreement, as amended, has been transferred to NGEL for ₹ 1,094.46 crore and equivalent equity shares of value of ₹ 1,094.46 crore were alloted to NTPC by NGEL.

   c) The total investment of the Company in NGEL is ₹ 4,719.61 crore (Refer Note 7) which includes equity shares allotted against purchase consideration and equity share capital alloted as stated at b) above, which are fully paid-up.

52 Disclosure as per Ind AS 1 'Presentation of financial statements

a) Changes in significant accounting policies:

During the year, following changes to the accounting policies have been made:

i) Steel scrap is being accounted on accrual basis. During the year , the accounting of scrap has been modified to include other than steel scrap also in the valuation on accrual basis. Consequently, significant accounting policies 10 and 16.3 have been modified. Impact on profit due to the above change is not material.

ii) Certain other changes have also been made in the policies nos. C.1.1, C.1.5, C.9, C.14, C.15, C.19, C.20.3, C.23, C.26, and C.29 for improved disclosures. There is no impact on the financial statements due to these changes.

b) **Reclassifications and comparative figures**

The Company has made certain reclassifications to the comparative period's financial statements to enhance comparability with the current year's financial statements. As a result, certain line items have been reclassified in the balance sheet the details of which are as under:

Items of balance sheet before and after reclassification as at 31 March 2022 **₹ Crore**

Sl. No.	Particulars	Restated Amount before reclassification	Reclassification	Restated Amount after reclassification
1	Trade receivables-Current (Note-15)	24,118.66	628.79	24,747.45
	Other financial assets-Current (Note-19)	5,148.72	(549.11)	4,599.61
	Other non current assets (Note-12)	12,351.95	3.16	12,355.11
	Other current assets (Note-20)	9,122.95	(21.25)	9,101.70
	Assets held for sale (Note-21)	-	18.09	18.09
2	Other financial liabilities-Current (Note-35)	23,089.93	79.68	23,169.61

Note:-

1. There are no changes in the cash flows from operating, investing and financing activites on account of the above reclassification.
2. The balances as on 31 March 2022 have been restated consequent to the merger of two subsidiaries during the year. Refer note 65.

53. Disclosure as per Ind AS 2 'Inventories'

a) Amount of inventories consumed and recognized as expense during the year is as under:

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Fuel cost (Note 42) - Domestic	**72,228.16**	63,540.21
- Imported	**24,623.34**	3,029.86
Others (included in Note 46 - Other expenses) - Domestic	**1,780.23**	1,274.32
- Imported	**77.07**	62.96
Total	**98,708.80**	67,907.35

b) Carrying amount of inventories pledged as security for borrowings as at 31 March 2023 is **Nil** (31 March 2022: ₹ 203.79 crore).

54. Disclosure as per Ind AS 8 - 'Accounting Policies, Changes in Accounting Estimates and Errors'

Recent accounting pronouncements

Standards / amendments issued but not yet effective:

The Ministry of Corporate Affairs ,vide notification dated 31 March 2023, has notified Companies (Indian Accounting Standards) Amendment Rules, 2023 which amends certain Indian Accounting Standards which are effective 1 April 2023. Below is a summary of such amendments:

1. Ind AS 1 - Presentation of Financial Statements - This amendment requires the entities to disclose their material accounting policies rather than their significant accounting policies.
2. Ind AS 8 - Accounting Policies, Changes in Accounting Estimates and Errors - This amendment has introduced a definition of 'accounting estimates' and included amendments to Ind AS 8 to help entities distinguish changes in accounting policies from changes in accounting estimates.
3. Ind AS 12 - Income Taxes - This amendment has narrowed the scope of the initial recognition exemption so that it does not apply to transactions that give rise to equal and offsetting temporary differences.

The Company has evaluated the above amendments and the impact of the same on the standalone financial statements is not material.

55. Income taxes related disclosures

(I) Disclosure as per Ind AS 12 'Income taxes'

(a) Income tax expense

i) Income tax recognised in the statement of profit and loss

₹ Crore

Particulars	For the year ended	
	31 March 2023	31 March 2022
Current tax expense		
Current year	**4,293.56**	3,398.47
Taxes for earlier years	**206.35**	(0.94)
Pertaining to regulatory deferral account balances (A)	**(125.14)**	284.69
Total current tax expense (B)	**4,374.77**	3,682.22
Deferred tax expense		
Origination and reversal of temporary differences	**4,532.62**	4,618.61
Less: MAT credit entitlement	**2,753.26**	3,558.37
Total deferred tax expense (C)	**1,779.36**	1,060.24
Income tax expense (D=B+C-A)	**6,279.27**	4,457.77
Pertaining to regulatory deferral account balances	**(125.14)**	284.69
Total tax expense including tax on movement in regulatory deferral account balances	**6,154.13**	4,742.46

ii) Income tax recognised in other comprehensive income

₹ Crore

Particulars	For the year ended					
	31 March 2023			31 March 2022		
	Before tax	Tax expense/ (benefit)	Net of tax	Before tax	Tax expense/ (benefit)	Net of tax
- Net actuarial losses on defined benefit plans	**(96.09)**	**(16.79)**	**(79.30)**	(112.74)	(19.69)	(93.05)
- Net gains/(losses) on fair value of equity instruments	**3.60**	**-**	**3.60**	5.40	-	5.40
	(92.49)	**(16.79)**	**(75.70)**	(107.34)	(19.69)	(87.65)

iii) Reconciliation of tax expense and the accounting profit multiplied by India's domestic tax rate

₹ Crore

Particulars	For the year ended	
	31 March 2023	31 March 2022
Profit before tax including movement in regulatory deferral account balances	**23,350.86**	21,024.45
Tax using the Company's domestic tax rate of 34.944 % (31 March 2022 - 34.944%)	**8,159.72**	7,346.78
Tax effect of:		
Non-deductible tax expenses	**88.55**	27.30
Deferred tax expenses	**1,779.36**	1,060.24
Previous year tax liability	**206.35**	(0.94)
Minimum alternate tax adjustments	**(4,079.85)**	(3,654.33)
Others	**-**	(36.59)
Total tax expense recognized in the statement of profit and loss	**6,154.13**	4,742.46

(b) Tax losses carried forward

₹ Crore

Particulars	31 March 2023	Expiry date	31 March 2022	Expiry date
Long-term capital loss for which no deferred tax asset has been recognised due to uncertainty involved	**2,105.19**	**31-03-2029**	2,105.19	31-03-2029

(c) Deferred tax benefits out of merger of KBUNL and NPGCL with NTPC

i) Unrecognised MAT credit

Deferred tax benefit in the form of MAT credit, of ₹ **118.02 crore**, is acquired in a business combination (merger) of a subsidairy with the Company (Refer Note 65). The same was not recognised by the subsidiary in their financial statements in the previous financial year. The same has now been recognised in the current financial year as it is probable that the same will be utilised by the company in future years. Accordingly, regulatory deferral liability attributable to the said MAT credit entitlement has also been recognised.

ii) Unabsorbed depreciation

Deferred tax asset on account of Unabsorbed depreciation that existed in the books of the two subsidiaries merged with the Company during the year as on 31 March 2022 has been recognised at ₹ **847.80 crore**. The same will be fully utilised against current year's taxable income. (Refer Note 30 and Note 65).

56. Disclosure as per Ind AS 19 'Employee benefits

(i) Defined contribution plans:

Pension

The defined contribution pension scheme of the Company for its employees which is effective from 1 January 2007, is administered through a separate trust. The obligation of the Company is to contribute to the trust to the extent of amount not exceeding 30% of basic pay and dearness allowance less employer's contribution towards provident fund, gratuity, post retirement medical facility (PRMF) or any other retirement benefits. The Company's contribution towards pension is made to National Pension System Trust (NPS) for the employees opted for the scheme. An amount of ₹ **273.29 crore** (31 March 2022: ₹ 250.00 crore) for the year is recognized as expense towards contributions to the defined contribution pension scheme of the Company/NPS for the year and charged to the statement of profit and loss.

(ii) Defined benefit plans:

A. Provident fund

The Company pays fixed contribution to provident fund at predetermined rates to a separate trust, which invests the funds in permitted securities. The Company has an obligation to ensure minimum rate of return to the members as specified by GOI. Accordingly, the Company has obtained report of the actuary, based on which overall interest earnings and cumulative surplus is more than the statutory interest payment requirement for all the periods presented. Further, contribution to employees pension scheme is paid to the appropriate authorities.

Based on the actuarial valuation obtained in this respect, the following table sets out the status of the provident fund plan as at balance sheet date:

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Net defined benefit (asset)/liability - Current	**(56.88)**	(58.39)

Movement in net defined benefit (asset)/liability

₹ Crore

Particulars	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset) liability	
	For the year ended		For the year ended		For the year ended	
	31 March 2023	31 March 2022	**31 March 2023**	31 March 2022	**31 March 2023**	31 March 2022
Opening balance	**11,134.77**	10,566.97	**11,193.16**	10,661.38	**(58.39)**	(94.41)
Current service cost recognised in statement of profit and loss	**326.73**	316.94		-	**326.73**	316.94
Interest cost/(income)	**890.85**	868.88	**(890.85)**	(868.88)	**-**	-
Total	**1,217.58**	1,185.82	**(890.85)**	(868.88)	**326.73**	316.94
Remeasurement loss (gain):						
Actuarial loss (gain) arising from:						
Demographic assumptions	**-**		**-**	-	**-**	-
Financial assumptions	**(0.79)**	(1.21)	**-**	-	**(0.79)**	(1.21)
Experience adjustment	**3.74**	1.78	**-**	-	**3.74**	1.78
Return on plan assets excluding interest income		-	**16.74**	35.44	**16.74**	35.44
Total	**2.95**	0.57	**16.74**	35.44	**19.69**	36.01
Other						
Contribution by participants	**676.37**	690.56	**676.37**	690.56	**-**	-
Contribution by employer	**-**	-	**344.91**	316.93	**(344.91)**	(316.93)
Benefits paid	**1,320.30**	1,309.15	**1,320.30**	1,309.15	**-**	-
Closing balance	**11,711.37**	11,134.77	**11,768.25**	11,193.16	**(56.88)**	(58.39)

Pursuant to paragraph 57 of Ind AS 19, accounting by an entity for defined benefit plans, inter-alia, involves determining the amount of the net defined benefit liability (asset) which shall be adjusted for any effect of limiting a net defined benefit asset to the asset ceiling prescribed in paragraph 64. As per Para 64 of Ind AS 19, in case of surplus in a defined benefit plan, an entity shall measure the net defined benefit asset at the lower of actual surplus or the value of the assets ceiling determined using the discount rate. The asset ceiling is the present value of any economic benefits available in the form of refunds from the plan or reductions in future contributions to the plan. Further, paragraph 65 provides that a net defined benefit asset may arise where a defined benefit plan has been overfunded or where actuarial gains have arisen.

As per the provisions of the Employees' Provident Funds and Miscellaneous Provisions Act, 1952, the Company has no right to the benefits either in the form of refund from the plan or lower future contribution to the plan towards the net surplus of **₹ 56.88 crore** (31 March 2022: ₹ 58.39 crore) determined through actuarial valuation. Accordingly, Company has not recognised the surplus as an asset, and the remeasurement loss /gains in 'Other Comprehensive Income', as these pertain to the Provident Fund Trust and not to the Company.

As per the provisions of Employee's Provident Funds Scheme 1952, the employer shall be liable to make good the loss to the Trust in the event of any loss as a result of any fraud, defalcation, wrong investment decisions etc. to the Trust. Keeping inview the above, a cummulative provision of **₹ 12.81 crore** (31 March 2022: ₹ 17.86 crore) has been recognized in the Statement of Profit and Loss, towards such loss to the trust.

B Gratuity and pension

a) The Company has a defined benefit gratuity plan. Every employee who has rendered continuous service of five years or more is entitled to gratuity at 15 days salary (15/26 X last drawn basic salary plus dearness allowance) for each completed year of service subject to a maximum of ₹ 0.20 crore on superannuation, resignation, termination, disablement or on death, considering the provisions of the Payment of Gratuity Act, 1972, as amended. The gratuity scheme is funded by the Company and is managed by separate trust. The liability for gratuity scheme is recognised on the basis of actuarial valuation.

b) The Company has pension schemes at two of its stations in respect of employees taken over from erstwhile state government power utilities. These pension schemes are unfunded. The liability for the pension schemes is recognised on the basis of actuarial valuation.

Based on the actuarial valuation obtained in this respect, the following table sets out the status of the gratuity and pension plan and the amounts recognised in the Company's financial statements as at balance sheet date:

₹ Crore

Net defined benefit (asset)/liability:	As at 31 March 2023	As at 31 March 2022
Gratuity (funded)	**(23.18)**	77.59
Gratuity (non-funded)	**-**	0.37
Pension (non-funded)	**532.75**	560.57
Total	**509.57**	638.53
Break-up		
Non-current	**498.02**	526.39
Current	**11.55**	112.14

Movement in net defined benefit (asset)/liability

₹ Crore

Particulars	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset) liability	
	For the year ended		For the year ended		For the year ended	
	31 March 2023	31 March 2022	31 March 2023	31 March 2022	31 March 2023	31 March 2022
Opening balance	**2,609.16**	2,632.66	**1,970.63**	1,950.22	**638.53**	682.44
Included in profit or loss for the year:						
Current service cost	**97.55**	102.13	**-**	-	**97.55**	102.13
Past service cost	**-**	-	**-**	-	**-**	-
Interest cost (income)	**182.61**	177.70	**(143.37)**	(139.26)	**39.24**	38.44
Total amount recognised in profit or loss for the year	**280.16**	279.83	**(143.37)**	(139.26)	**136.79**	140.57
Included in other comprehensive income:						
Remeasurement loss (gain):						
Actuarial loss (gain) arising from:						
Demographic assumptions	**-**	-	**-**	-	**-**	-
Financial assumptions	**(78.32)**	(48.67)	**-**	-	**(78.32)**	(48.67)
Experience adjustment	**(41.38)**	40.85	**-**	-	**(41.38)**	40.85
Return on plan assets excluding interest income	**-**	-	**(30.39)**	(26.26)	**(30.39)**	(26.26)
Total amount recognised in other comprehensive income	**(119.70)**	(7.82)	**(30.39)**	(26.26)	**(150.09)**	(34.08)
Out of the above an amount of ₹ **(6.44) crore** (31 March 2022: ₹ (1.33 crore) has been transferred to expenditure during construction period / development of coal mines.						
Other						
Contribution by employer	**-**	-	**77.59**	112.82	**(77.59)**	(112.82)
Benefits paid	**287.19**	295.51	**249.12**	257.93	**38.07**	37.58
Closing balance	**2,482.43**	2,609.16	**1,972.86**	1,970.63	**509.57**	638.53

Out of the above net liability , an amount of ₹ **Nil** (31 March 2022: ₹ 77.59 crore) has been adjusted with the amount recoverable from the trust.

C. Post-Retirement Medical Facility (PRMF)

The Company has Post-Retirement Medical Facility (PRMF), under which the retired employees and their spouses are provided medical facilities in the Company hospitals/empanelled hospitals. They can also avail treatment as out-patient subject to a ceiling fixed by the Company. The liability for the same is recognised annually on the basis of actuarial valuation. A trust has been constituted for its employees superannuated on or after 1 January 2007, for the sole purpose of providing post retirement medical facility to them.

Based on the actuarial valuation obtained in this respect, the following table sets out the status of the PRMF and the amounts recognised in the Company's financial statements as at balance sheet date:

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Net defined benefit (asset)/liability - Current (funded)	**278.43**	178.55
Net defined benefit (asset)/liability - Current (unfunded)	**-**	0.08

Movement in net defined benefit (asset)/liability

₹ Crore

Particulars	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset) liability	
	For the year ended		For the year ended		For the year ended	
	31 March 2023	31 March 2022	31 March 2023	31 March 2022	31 March 2023	31 March 2022
Opening balance	**2,415.95**	2,189.36	**2,237.32**	2,019.32	**178.63**	170.04
Included in profit or loss:						
Current service cost	**43.86**	42.52	**-**	-	**43.86**	42.52
Past service cost	**-**	-	**-**	-	**-**	-
Interest cost (income)	**169.11**	147.78	**(169.11)**	(147.78)	**-**	-
Total amount recognised in profit or loss	**212.97**	190.30	**(169.11)**	(147.78)	**43.86**	42.52
Included in other comprehensive income:						
Remeasurement loss (gain):						
Actuarial loss (gain) arising from:						
Demographic assumptions	**-**	-	**-**	-	**-**	-
Financial assumptions	**(106.06)**	(45.74)	**-**	-	**(106.06)**	(45.74)
Experience adjustment	**383.56**	226.06	**-**	-	**383.56**	226.06
Return on plan assets excluding interest income	**-**	-	**(27.87)**	(24.89)	**(27.87)**	(24.89)
Total amount recognised in other comprehensive income	**277.50**	180.32	**(27.87)**	(24.89)	**249.63**	155.43
Out of the above an amount of ₹ **6.14 crore** (31 March 2022: ₹ 3.00 crore) has been transferred to expenditure during construction period / development of coal mines.						
Other						
Contribution by participants	**-**	-	**15.15**	19.32	**(15.15)**	(19.32)
Contribution by employer	**-**	-	**178.54**	170.04	**(178.54)**	(170.04)
Benefits paid	**163.74**	144.03	**163.74**	144.03	**-**	-
Closing balance	**2,742.68**	2,415.95	**2,464.25**	2,237.32	**278.43**	178.63

Out of the above net liability, an amount of ₹ **220.65 crore** (31 March 2022: ₹ 42.26 crore) has been adjusted with the amount recoverable from the trust.

D. Other retirement benefit plans

Other retirement benefit plans include baggage allowance for settlement at home town for employees and dependents and farewell gift to the superannuating employees. The scheme above is unfunded and liability for the same is recognised on the basis of actuarial valuation.

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Net defined benefit (asset)/liability (non-funded) :	**201.17**	206.53
Non-current	**174.17**	178.96
Current	**27.00**	27.57

Movement in net defined benefit (asset)/liability ₹ Crore

Particulars	Defined benefit obligation	
	As at 31 March 2023	As at 31 March 2022
Opening balance	**206.53**	200.73
Included in profit or loss:		
Current service cost	**9.91**	10.47
Past service cost	**-**	-
Interest cost (income)	**14.70**	13.54
Total amount recognised in profit or loss	**24.61**	24.01
Included in other comprehensive income:		
Remeasurement loss (gain):		
Actuarial loss (gain) arising from:		
Demographic assumptions	**-**	-
Financial assumptions	**(6.64)**	(3.69)
Experience adjustment	**(5.17)**	(3.27)
Return on plan assets excluding interest income	**-**	-
Total amount recognised in other comprehensive income	**(11.81)**	(6.96)
Other		
Contributions paid by the employer		-
Benefits paid	**18.16**	11.25
Closing balance	**201.17**	206.53

E. Plan assets

Plan assets comprise the following: ₹ Crore

Particulars	As at 31 March 2023			As at 31 March 2022		
	Quoted	Unquoted	Total	Quoted	Unquoted	Total
State government securities	**6,832.81**	**-**	**6,832.81**	6,101.32	-	6,101.32
Central government securities	**1,647.90**	**-**	**1,647.90**	1,714.00	-	1,714.00
Corporate bonds, term deposits and bank balance	**3,992.01**	**47.93**	**4,039.94**	4,094.87	86.84	4,181.71
Money market instruments/liquid mutual fund// REITs/InvITs	**-**	**10.62**	**10.62**	-	75.64	75.64
Equity and equity linked investments	**184.09**	**-**	**184.09**	149.40	-	149.40
Investments with insurance companies	**-**	**3,517.41**	**3,517.41**	-	3,254.86	3,254.86
Total (excluding accrued interest)	**12,656.81**	**3,575.96**	**16,232.77**	12,059.59	3,417.34	15,476.93

As at 31 March 2023, an amount of ₹ **70.00 crore** (31 March 2022: ₹ 140.00 crore) is included in the value of plan assets in respect of the reporting enterprise's own financial instruments (Corporate bonds).

Actual return on plan assets is ₹ **1,244.85 crore** (31 March 2022: ₹ 1,171.63 crore).

F. Defined benefit obligations

i. Actuarial assumptions

The following were the principal actuarial assumptions at the reporting date:

Particulars	As at 31 March 2023	As at 31 March2022
Discount rate	**7.40%**	7.00%
Expected return on plan assets		
Gratuity	**7.40%**	7.00%
Pension	**7.40%**	7.00%
PRMF	**7.40%**	7.00%
Annual increase in costs	**6.50%**	6.50%
Salary escalation rate	**6.50%**	6.50%

The estimates of future salary increases considered in actuarial valuation, take account of inflation, seniority, promotion and other relevant factors, such as supply and demand in the employment market. Further, the expected return on plan assets is determined considering several applicable factors mainly the composition of plan assets held, assessed risk of asset management and historical returns from plan assets.

ii. Sensitivity analysis

Reasonably possible changes at the reporting date to one of the relevant actuarial assumptions, holding other assumptions constant, would have affected the defined benefit obligation by the amounts shown below.

₹ Crore

Particulars	As at 31 March 2023		As at 31 March 2022	
	Increase	Decrease	Increase	Decrease
Discount rate (0.5% movement)	**(197.68)**	**209.18**	(182.37)	191.01
Annual increase in costs (0.5% movement)	**106.35**	**(103.83)**	88.24	(86.23)
Salary escalation rate (0.5% movement)	**99.56**	**(93.90)**	99.96	(95.54)

Although the analysis does not take account of the full distribution of cash flows expected under the plan, it does provide an approximation of the sensitivity of the assumptions shown.

The sensitivity analysis above have been determined based on a method that extrapolates the impact on defined benefit obligation as a result of reasonable changes in key assumptions occurring at the end of the reporting period. This analysis may not be representative of the actual change in the defined benefit obligations as it is unlikely that the change in assumptions would occur in isolation of one another as some of the assumptions may be correlated.

G. Risk exposure

Through its defined benefit plans, the Company is exposed to a number of risks, the most significant of which are detailed below:

a) Asset volatility

The plan liabilities are calculated using a discount rate set with reference to government bond yields; if plan assets underperform this yield, this will create a deficit. Most of the plan asset investments are in fixed income securities with high grades and in government securities. These are subject to interest rate risk and the fund manages interest rate risk with derivatives to minimise risk to an acceptable level. A portion of the funds are invested in equity securities and in alternative investments which have low correlation with equity securities. The Company has a risk management strategy where the aggregate amount of risk exposure on a portfolio level is maintained at a fixed range. Any deviations from the range are corrected by rebalancing the portfolio. The Company intends to maintain the above investment mix in the continuing years.

b) Changes in discount rate

A decrease in discount rate will increase plan liabilities, although this will be partially offset by an increase in the value of the plans' assets holdings.

c) Inflation risks

In the pension plans, the pension payments are not linked to inflation, so this is a less material risk.

d) Life expectancy

The pension plan obligations are to provide benefits for the life of the member, so increases in life expectancy will result in an increase in the plans' liabilities. This is particularly significant where inflationary increases result in higher sensitivity to changes in life expectancy.

The Company ensures that the investment positions are managed within an asset-liability matching (ALM) framework that has been developed to achieve long-term investments that are in line with the obligations under the employee benefit plans. Within this framework, the Company's ALM objective is to match assets to the pension obligations by investing in long-term fixed interest securities with maturities that match the benefit payments as they fall due and in the appropriate currency.

The Company actively monitors how the duration and the expected yield of the investments are matching the expected cash outflows arising from the employee benefit obligations. The Company has not changed the processes used to manage its risks from previous periods. The Company uses derivatives to manage some of its risk. Investments are well diversified, such that the failure of any single investment would not have a material impact on the overall level of assets.

A large portion of assets consist of government and corporate bonds. The plan asset mix is in compliance with the requirements of the respective local regulations.

H. Expected maturity analysis of the defined benefit plans in future years

₹ Crore

Particulars	Less than 1 year	Between 1-2 years	Between 2-5 years	Over 5 years	Total
31 March 2023					
Gratuity and pension	289.51	248.74	543.21	1,400.97	**2,482.43**
Post-retirement medical facility (PRMF)	178.88	187.88	651.37	1,724.55	**2,742.68**
Provident fund	2,522.95	1,152.54	2,382.70	5,653.18	**11,711.37**
Other post-employment benefit plans	27.01	22.63	47.91	103.62	**201.17**
Total	**3,018.35**	**1,611.79**	**3,625.19**	**8,882.32**	**17,137.65**
31 March 2022					
Gratuity and pension	300.42	277.65	609.09	1,421.64	2,608.80
Post-retirement medical facility (PRMF)	144.88	179.03	639.89	1,452.52	2,416.32
Provident fund	1,947.57	989.17	2,058.92	6,139.11	11,134.77
Other post-employment benefit plans	27.57	24.23	52.18	102.54	206.52
Total	2,420.44	1,470.08	3,360.08	9,115.81	16,366.41

Expected contributions to post-employment benefit plans for the year ending 31 March 2024 are ₹ **527.88 crore**.

The weighted average duration of the defined benefit plan obligation at the end of the reporting period is **16.01 years** (31 March 2022: 15.78 years).

(iii) Other long term employee benefit plans

A. Leave

The Company provides for earned leave benefit (including compensated absences) and half-pay leave to the employees of the Company which accrue annually at 30 days and 20 days respectively. Earned leave (EL) is en-cashable while in service. Half-pay leaves (HPL) are en-cashable only on separation beyond the age of 50 years up to the maximum of 300 days.

However, total number of leave (i.e. EL & HPL combined) that can be encashed on superannuation shall be restricted to 300 days and no commutation of half-pay leave shall be permissible. The scheme is unfunded and liability for the same is recognised on the basis of actuarial valuation. During the year, provision amounting to ₹ **71.11 crore** has been made on the basis of actuarial valuation at the year end and debited to statement of profit and loss (31 March 2022: ₹ 97.09 crore)

B Other employee benefits

Provision for long service award and family economic rehabilitation scheme amounting to ₹ **(6.72) crore** (31 March 2022: ₹ 14.52 crore) for the year have been made on the basis of actuarial valuation at the year end and (credited)/debited to the statement of profit and loss.

57 "Disclosure as per Ind AS 21 'The Effects of Changes in Foreign Exchange Rates'

The amount of exchange differences (net) debited to the statement of profit and loss, net of movement in regulatory deferral account balances, is ₹ **35.76 crore** (31 March 2022: debited to Statement of profit and loss ₹ 22.88 crore).

58 Disclosure as per Ind AS 23 'Borrowing Costs'

Borrowing costs capitalised during the year is ₹ **2,785.95 crore** (31 March 2022: ₹ 3,237.96 crore).

59 Disclosure as per Ind AS 24 'Related Party Disclosures'

a) List of related parties:

i) Subsidiary companies:

1. NTPC Vidyut Vyapar Nigam Ltd.
2. NTPC Electric Supply Company Ltd.
3. Bhartiya Rail Bijlee Company Ltd.
4. Patratu Vidyut Utpadan Nigam Ltd.
5. North Eastern Electric Power Corporation Ltd. (NEEPCO)
6. THDC India Ltd. (THDCIL)
7. NTPC Mining Ltd.
8. NTPC EDMC Waste Solutions Private Ltd.
9. Ratnagiri Gas & Power Private Ltd.
10. NTPC Green Energy Limited (W.e.f 7 April 2022)

Subsidiary company of NTPC Green Energy Limited

1. NTPC Renewable Energy Ltd. (subsidiary of NTPC Limited upto 28 Februrary 2023)

Subsidiary company of NTPC Renewable Energy Limited

1. Green Valley Renewable Energy Limited (W.e.f 25 August 2022)

Subsidiary company of THDCIL

1. TUSCO Limited
2. TREDCO Rajasthan Limited

ii) Joint ventures companies:

1. Utility Powertech Ltd.
2. NTPC-GE Power Services Private Ltd.
3. NTPC-SAIL Power Company Ltd.
4. NTPC Tamil Nadu Energy Company Ltd.
5. Aravali Power Company Private Ltd.
6. Meja Urja Nigam Private Ltd.
7. NTPC BHEL Power Projects Private Ltd.

8. National High Power Test Laboratory Private Ltd.
9. Transformers and Electricals Kerala Ltd.
10. Energy Efficiency Services Ltd.
11. CIL NTPC Urja Private Ltd.
12. Anushakti Vidhyut Nigam Ltd.
13. Hindustan Urvarak & Rasayan Ltd.
14. Jhabua Power Limited.
15. Trincomalee Power Company Ltd.
16. Bangladesh-India Friendship Power Company Private Ltd.

Joint venture company of NEEPCO

1. KSK Dibbin Hydro Power Private Ltd.

iii) **Key Management Personnel (KMP):**

Whole Time Directors		
Mr. Gurdeep Singh	Chairman and Managing Director	
Mr. Jaikumar Srinivasan	Director (Finance)	W.e.f. 21 July 2022
Mr. A.K.Gautam	Director (Finance)	Upto 31 May 2022
Mr. Dillip Kumar Patel	Director (HR)	
Mr. Ramesh Babu V.	Director (Operations)	
Mr. Chandan Kumar Mondol	Director (Commercial)	Upto 31 January 2023
Mr. Ujjwal Kanti Bhattacharya	Director (Projects)	
Independent Directors		
Mr. Jitendra Jayantilal Tanna	Non-executive Director	W.e.f. 30 November 2021
Mr. Vivek Gupta	Non-executive Director	W.e.f. 30 November 2021
Mr. Vidyadhar Vaishampayan	Non-executive Director	W.e.f. 30 November 2021
Ms. Sangitha Varier	Non-executive Director	W.e.f. 7 December 2021
Dr. K.P.K.Pillay	Non-executive Director	Upto 16 July 2021
Dr. Bhim Singh	Non-executive Director	Upto 16 July 2021
Government Nominee Directors		
Mr. Ashish Upadhyaya	Non-executive Director	
Mr. Piyush Singh	Non-executive Director	W.e.f 31 May 2022
Mr. Vivek Kumar Dewangan	Non-executive Director	Upto 30 May 2022
Chief Financial Officer and Company Secretary		
Ms. Renu Narang	Chief Financial Officer	W.e.f. 01 June 2022 upto 20 July 2022
Mr. Arun Kumar	Company Secretary	W.e.f. 29 October 2022
Ms. Nandini Sarkar	Company Secretary	Upto 30 September 2022

iv) **Post employment benefit plans:**

1. NTPC Limited Employees Provident Fund
2. NTPC Employees Gratuity Fund
3. NTPC Post Retirement Employees Medical Benefit Fund
4. NTPC Limited Defined Contribution Pension Trust

v) Entities under the control of the same government:

The Company is a Central Public Sector Undertaking (CPSU) controlled by Central Government by holding 51.10% of paid up share capital (31 March 2022- 51.10%) and is under Ministry of Power. The Company has transactions with other Government related entities, which significantly includes but not limited to purchase of fuel (coal, gas)/oil products, purchase of equipment, spares, receipt of erection, maintenance and other services, rendering consultancy and other services. Transactions with these parties are carried out at market terms and on terms comparable to those with other entities that are not Government-related generally through a transparent price discovery process against open tenders. In few cases of procurement of spares/services from Original Equipment Manufacturer (OEM) for proprietary items/or on single tender basis are resorted to due to urgency, compatibility and similar reasons which are also carried out through a process of negotiation with prices benchmarked against available price data of such items.

vi) Others:

1. NTPC Education and Research Society
2. NTPC Foundation

Transactions with the related parties are as follows:

₹ Crore

Particulars	Subsidiary Companies		Joint venture Companies	
	For the year ended		For the year ended	
	31 March 2023	31 March 2022	**31 March 2023**	31 March 2022
i) Sales/purchase of goods and services				
- Contracts for works/services for services received by the Company	**2.66**	7.70	**1,711.50**	1,600.87
- Contracts for works/services for services provided by the Company	**48.00**	62.91	**24.77**	24.22
- Sale/purchase of goods	**2,567.08**	1,973.73	**16.65**	21.18
ii) Sales/purchase of assets	**2.56**	-	**2.90**	17.55
iii) Secondment of employees	**39.20**	32.37	**55.59**	53.42
iv) Dividend received	**1,050.25**	624.39	**1,285.33**	1,111.69
v) Equity contributions made	**5,582.90**	786.12	**1,605.52**	610.19
vi) Equity transferred	**1,094.46**	-	**-**	-
vii) Loans granted	**100.00**	0.70	**-**	-
viii) Investments in Debentures	**-**	-	**600.00**	-
ix) Investments redeemed	**-**	-	**25.00**	-
x) Interest on loan	**81.45**	85.17	**-**	0.19
xi) Income on Investments (Debentures)	**-**	-	**28.79**	-
xii) Loans repaid	**153.10**	53.80	**-**	-
xiii) Guarantees received	**-**	-	**5.66**	45.87
xiv) Income on investment property	**0.19**	-	**-**	-
xv) Transfer of RE assets (Note 51)	**12,010.55**	-	**-**	-
xvi) Interest income- Transfer of assets (Note 51)	**49.35**	-	**-**	-

Note: Refer Note 76 C(b) and (c) for other commitments with subsidiary and joint venture companies

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Transactions with post employment benefit plans		
- Contributions made during the year	**855.35**	823.27
Compensation to Key management personnel		
- Short term employee benefits	**6.96**	5.65
- Post employment benefits	**0.54**	0.13
- Other long term benefits	**0.34**	0.31
- Termination benefits	**1.44**	-
- Sitting fee	**0.71**	0.30
Total compensation to key management personnel	**9.99**	**6.39**

₹ Crore

Transactions with others listed at (a)(vi) above	For the year ended 31 March 2023	For the year ended 31 March 2022
- Contracts for works/services for services received by the Company	**40.43**	20.34
- Contracts for works/services for services provided by the Company	**0.35**	-

Outstanding balances with related parties are as follows:

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Amount recoverable towards loans from		
- Subsidiary companies	**765.53**	818.63
- Joint venture companies	**19.78**	19.78
- Key management personnel	**0.47**	0.15
- Others	**0.60**	0.60
Amount recoverable other than loans from		
- Subsidiary companies	**3,664.36**	312.84
- Joint venture companies	**216.04**	113.57
- Post employment benefit plans	**88.09**	60.87
- Others	**0.42**	0.49
Others		
- Joint venture companies - Non convertible debentures	**575.00**	-
Amount payable to		
- Joint venture companies	**312.00**	258.65
- Post employment benefit plans	**78.99**	52.23
- Others	**0.30**	-
Guarantee received Outstanding		
- Joint venture companies	**48.14**	45.87

d. **Individually significant transactions**

₹ Crore

Particulars	Nature of relationship	For the year ended 31 March 2023	For the year ended 31 March 2022
Contracts for works/services for services received by the Company			
Utility Powertech Ltd.	Joint Venture Company	**1,662.35**	1,569.58
NTPC BHEL Power Projects Private Ltd.	Joint Venture Company	**24.65**	11.59
NTPC-GE Power Services Private Ltd.	Joint Venture Company	**22.17**	16.53
Contracts for works/services for services provided by the Company			
Patratu Vidyut Utpadan Nigam Ltd.	Subsidiary Company	**22.89**	24.37
NTPC Vidyut Vyapar Nigam Ltd.	Subsidiary Company	**3.44**	7.69
THDC India Ltd.	Subsidiary Company	**17.73**	27.04
Bhartiya Rail Bijlee Company Ltd.	Subsidiary Company	**3.75**	2.74
NTPC SAIL Power Company Ltd	Joint Venture Company	**2.65**	3.00
Utility Powertech Ltd.	Joint Venture Company	**4.21**	4.37
Meja Urja Nigam Private Limited	Joint Venture Company	**3.84**	3.24
Aravali Power Company Private Ltd.	Joint Venture Company	**3.71**	2.65
NTPC Tamil Nadu Energy Company Ltd.	Joint Venture Company	**3.90**	3.29
Energy Efficiency Services Ltd.	Joint Venture Company	**5.63**	7.08
Sale of goods			
NTPC Vidyut Vyapar Nigam Ltd.	Subsidiary Company	**2,566.80**	1,973.73
Purchase of goods			
Energy Efficiency Services Ltd.	Joint Venture Company	**8.59**	13.76
NTPC Tamil Nadu Energy Company Ltd.	Joint Venture Company	**-**	4.91
NTPC BHEL Power Projects Private Ltd.	Joint Venture Company	**7.31**	0.50
Transformers and Electricals Kerala Ltd.	Joint Venture Company	**0.18**	0.64
Sale of assets			
Bhartiya Rail Bijlee Company Ltd.	Subsidiary Company	**2.56**	-
Purchase of assets			
NTPC BHEL Power Projects Private Ltd.	Joint Venture Company	**1.98**	8.30
Transformers and Electricals Kerala Ltd.	Joint Venture Company	**0.89**	6.09
Dividend received			
NTPC-SAIL Power Company Ltd.	Joint Venture Company	**325.00**	100.00
Aravali Power Company Private Ltd.	Joint Venture Company	**475.00**	750.00
NTPC Tamil Nadu Energy Company Ltd.	Joint Venture Company	**375.33**	244.19
Utility Powertech Ltd.	Joint Venture Company	**10.00**	17.50
Jhabua Power Limited.	Joint Venture Company	**100.00**	-
NTPC Vidyut Vyapar Nigam Ltd.	Subsidiary Company	**19.50**	30.00
North Eastern Electric Power Corporation Ltd.	Subsidiary Company	**365.00**	90.00
NTPC Electric Supply Company Ltd.	Subsidiary Company	**35.56**	-

₹ Crore

Particulars	Nature of relationship	For the year ended 31 March 2023	For the year ended 31 March 2022
Bhartiya Rail Bijlee Company Ltd.	Subsidiary Company	**222.00**	125.80
THDC India Ltd.	Subsidiary Company	**408.19**	378.59
Equity contributions made			
Patratu Vidyut Utpadan Nigam Ltd.	Subsidiary Company	**500.00**	350.00
NTPC Renewable Energy Ltd.	Subsidiary Company	**363.29**	436.12
NTPC Green Energy Limited	Subsidiary Company	**4,719.61**	-
Trincomalee Power Company Ltd.	Joint Venture Company	**0.44**	-
Meja Urja Nigam Private Ltd.	Joint Venture Company	**41.90**	25.76
Bangladesh-India Friendship Power Company Pvt.Ltd.	Joint Venture Company	**541.64**	86.78
NTPC Tamil Nadu Energy Company Ltd.	Joint Venture Company	**30.00**	-
Jhabua Power Limited.	Joint Venture Company	**325.00**	-
Hindustan Urvarak & Rasayan Ltd.	Joint Venture Company	**666.54**	497.65
Loans granted			
Ratnagiri Gas & Power Private Ltd.	Subsidiary Company	**100.00**	-
NTPC Renewable Energy Ltd.	Subsidiary Company	**-**	0.70
Investments in Debentures			
Jhabua Power Limited.	Joint Venture Company	**600.00**	-
Transfer of Assets (Refer Note 51)			
NTPC Green Energy Limited*	Subsidiary Company	**12,010.55**	-
Interest income - Transfer of Assets (Refer Note 51)			
NTPC Green Energy Limited	Subsidiary Company	**49.35**	-
Interest on Loan			
Ratnagiri Gas & Power Private Ltd.	Subsidiary Company	**81.45**	85.17
National High Power Test Laboratory Private Ltd.	Joint Venture Company	**-**	0.19
Income on Investments (Debentures)			
Jhabua Power Limited.	Joint Venture Company	**28.79**	-
Equity in NTPC Renewable energy Ltd. transferred			
NTPC Green energy Ltd.	Subsidiary Company	**1,094.46**	-
Income on Investment Property			
NTPC Green Energy Limited	Subsidiary Company	**0.19**	-
Secondment of employees			
Patratu Vidyut Utpadan Nigam Ltd.	Subsidiary Company	**11.19**	10.18
Bhartiya Rail Bijlee Company Ltd.	Subsidiary Company	**15.71**	15.64
NTPC Renewable Energy Ltd.	Subsidiary Company	**6.01**	0.88
Meja Urja Nigam Private Ltd.	Joint Venture Company	**16.11**	15.92
NTPC Tamil Nadu Energy Company Ltd.	Joint Venture Company	**14.49**	15.65
NTPC-SAIL Power Company Ltd.	Joint Venture Company	**6.76**	6.31
Aravali Power Company Private Ltd.	Joint Venture Company	**10.24**	8.84

₹ Crore

Particulars	Nature of relationship	For the year ended 31 March 2023	For the year ended 31 March 2022
Transactions with post employment benefit plans - Contribution			
NTPC Limited Employees Provident Fund	Post employment benefit plans	**326.80**	317.13
NTPC Limited Defined Contribution Pension Trust	Post employment benefit plans	**273.29**	250.00
NTPC Post Retirement Employees Medical Benefit Fund	Post employment benefit plans	**278.44**	178.55
NTPC Employees Gratuity Fund	Post employment benefit plans	**(23.18)**	77.59
Transactions with others			
NTPC Foundation	Others	**20.02**	0.64
NTPC Education and Research Society	Others	**13.41**	14.40
NTPC School of Business (under NTPC Education and Research Society)	Others	**7.00**	5.30
Guarantees received			
Utility Powertech Ltd.	Joint Venture Company	**3.00**	23.59
NTPC-GE Power Services Private Ltd.	Joint Venture Company	**2.66**	22.28
Loans repaid			
Ratnagiri Gas & Power Private Ltd.	Subsidiary Company	**153.10**	53.10

* Includes equity contribution

e. Individually significant balances

₹ Crore

Particulars	Nature of relationship	As at 31 March 2023	As at 31 March 2022
Amount recoverable towards loans from			
Ratnagiri Gas & Power Private Ltd.	Subsidiary Company	**765.53**	818.63
National High Power Test Laboratory Private Ltd.	Joint Venture Company	**19.78**	19.78
Mr. Ujjwal Kanti Bhattacharya	Key Management Personnel	**0.05**	0.12
Mr. Ramesh Babu V.	Key Management Personnel	**0.11**	0.02
Mr. Arun Kumar	Key Management Personnel	**0.31**	-
NTPC Education and Research Society	Others	**0.60**	0.60
Amount recoverable other than loans from			
NTPC Green Energy Limited	Subsidiary Company	**3,207.91**	-
NTPC Vidyut Vyapar Nigam Ltd.	Subsidiary Company	**96.26**	260.51
North Eastern Electric Power Corporation Ltd.	Subsidiary Company	**349.89**	(0.11)
NTPC BHEL Power Projects Private Ltd.	Joint Venture Company	**112.37**	58.59
NTPC SAIL Power Company Ltd	Joint Venture Company	**75.53**	3.99

₹ Crore

Particulars	Nature of relationship	As at 31 March 2023	As at 31 March 2022
Aravali Power Company Private Ltd.	Joint Venture Company	**16.71**	(0.88)
NTPC Employees Gratuity Fund	Post employment benefit plans	**88.09**	60.87
NTPC Foundation	Others	**0.42**	0.49
Amount recoverable - others			
Jhabua Power Limited - Debentures	Joint Venture Company	**575.00**	-
Amount payable to			
Utility Powertech Ltd.	Joint Venture Company	**212.43**	181.79
NTPC Tamil Nadu Energy Company Ltd.	Joint Venture Company	**87.89**	4.80
NTPC-GE Power Services Private Ltd.	Joint Venture Company	**10.15**	36.85
NTPC Limited Employees Provident Fund	Post employment benefit plans	**0.89**	0.72
NTPC Limited Defined Contribution Pension Trust	Post employment benefit plans	**20.32**	45.23
NTPC Post Retirement Employees Medical Benefit Fund	Post employment benefit plans	**57.78**	6.28
NTPC Education and Research Society	Others	**0.30**	-
Guarantees received outstanding			
Utility Powertech Ltd.	Joint Venture Company	**26.54**	23.59
NTPC-GE Power Services Private Ltd.	Joint Venture Company	**21.60**	22.28

f) Terms and conditions of transactions with the related parties

i) The Company is assigning jobs on contract basis, for sundry works in plants/stations/offices to Utility Powertech Ltd. (UPL), a joint venture of the Company. UPL inter-alia undertakes jobs such as overhauling, repair, refurbishment of various mechanical and electrical equipment of power stations. The Company has entered into Power Station Maintenance Agreement with UPL from time to time. The rates are fixed on cost plus basis after mutual discussion and after taking into account the prevailing market conditions.

ii) Other transactions with related parties are made on normal commercial terms and conditions and at arm length price.

iii) The Company is seconding its personnel to subsidiary and joint venture companies as per the terms and conditions agreed between the companies, which are similar to those applicable for secondment of employees to other companies and institutions. The cost incurred by the Company towards superannuation and employee benefits are recovered from these companies.

iv) In respect of transactions entered into with Utility Powertech Ltd. (UPL), a joint venture of the Company, the management had till the previous year taken a view that a fresh approval of Shareholders may not be warranted as the company had taken approval from the Shareholders of the Company in the Annual General Meeting held in August 2015 for an amount upto 2% of annual turnover of the preceding FY or ₹ 1000 crore, whichever is higher and approval for extension of the arrangement by the board of directors of the company as on 1st April 2021 for five years. Also, though the contracts awarded during the year were ₹ 2,041.26 crore, works amounting to ₹ 647.62 crore only have been executed during the year against these contracts. The company had sought post facto approval of the same which has not been granted by the Audit Committee of the Board. Further, the company has sought expert guidance in respect of its present position in this regard which is awaited as of date. The management is of the opinion that the same will not have any material impact on the financial statements as these are transactions being routinely carried out by the Company over the years, in the normal course of business.

v) Further, specific approval of the Audit Committee of the Board under section 177 of the Act has also not been accorded in respect of certain other significant related party transactions such as investments in subsidiaries/ joint venture companies aggregating to ₹ 1,783.44 crore, and sale to wholly owned subsidiaries, contribution to Trust for employee benefits, etc. aggregating to ₹ 3,575.78 crore. In this regard, since these transactions have either been approved by the Board/ specific sub-committee of the Board or are in the nature of transactions with wholly owned subsidiary in the ordinary course of business or mandated by specific requirements of the extant labour laws in the case of the contributions to employee benefit trust, the management is of the opinion that non-approval as above will not have material impact on the financial statements.

vi) Loans granted to subsidiaries and joint venture companies are detailed below:

Sl. No.	Name of the subsidiary (S)/ joint venture (JV) company	Loan granted (Amount in ₹ crore)	Rate of interest (p.a.)	Repayment schedule	Purpose	Year of grant of loan
1	National High Power Test Laboratory Private Ltd. (JV)	18.40	10% (quarterly rest)	Principal repayable in twenty semi-annual installments from 30 September 2022 . Interest payable half yearly.	For repayment of loans / contractual obligations	2019-20#
2	Ratnagiri Gas and Power Pvt Ltd. (S)	885.00	10% p.a. (quarterly rest) which will be reviewed and mutually decided at the beginning of each financial year i.e., 1st April of each year and shall be applicable for the entire financial year.	Loan shall be repaid in 53 quarterly instalments as per the loan agreement starting from 31.03.2021 and Last Instalment shall be paid on 31.03.2034.	For debt settlement with Lenders	2020-21
		570.18	Interest shall be payable w.e.f. 01.04.2034 or after full repayment of Inter-Corporate Loan of ₹ 885 crore whichever is earlier as per mutually agreed terms & Conditions.	Principal Repayment shall start from FY 2034-35 or after full repayment of Inter-Corporate Loan of ₹ 885 crore whichever is earlier as per mutually decided Schedule.	Novation of residual debt by existing lenders in favor of NTPC .	2020-21*
		150.00	8.2% ((SBI 1-year MCLR + 100 bps on quarterly rests as on the date of drawl of loan)	Out of the loan granted, an amount of ₹100 crore was drawn which has been fully repaid / adjusted during the year.	For meeting cost of procurement of gas	2022-23
		400.00	9.5% (SBI 1-year MCLR + 100 bps on quarterly rests as on the date of drawl of loan)	To be repaid in four installments of ₹50 crore, ₹100 crore, ₹100 crore and ₹150 crore). Out of the loan granted, no drawl has taken place during the year.	For meeting cost of procurement of gas	2022-23

Note: Under the Restructuring Scheme approved by promoters in a meeting held at MOP on 15 September 2022, it was agreed that all promoters will convert the loan into equity under the restructuring plan. Board of Directors of NTPC in its meeting held on 11 March 2023 has approved the restructuring scheme for NHPTL for conversion of loan to equity. Restructuring plan is under implementation.

*Note: The loan of ₹ 570.18 crore to RGPPL has not been recognized in the books due to uncertainty involved therein.

vii) Consultancy services provided by the Company to subsidiary and joint venture companies are generally on nomination basis at the terms, conditions and principles applicable for consultancy services provided to other parties.

viii) Outstanding balances of subsidiary and joint venture companies at the year-end are unsecured, except in respect of loan to RGPPL which is secured (Refer Note 11 c) and settlement occurs through banking transaction. These balances other than loans, investments in debentures and amount recoverable pursuant to business transfer agreement are interest free. The Company has not recorded any impairment of receivables relating to amounts owed by related parties. This assessment is undertaken in each financial year through examining the financial position of the related party and the market in which the related party operates.

ix) Refer Note 62 (b), (c), (d) and (e) in respect of impairment loss on investment in certain subsidiaries and joint venture companies.

x) Refer Note 76 (C) towards restrictions on disposal of investment and commitment towards further investments in the subsidiary and joint venture companies.

g) Others

The Company has investment of 1.20 crore equity shares of ₹10 each in PTC India Ltd, as disclosed in Note 8- 'Other investments' and is one of the promoters of the Company having 4.05% holding. The Company is of the view that provisions of Ind AS 24 'Related Party Disclosures' are not applicable to the investments made in PTC India Ltd. and the same has been accounted for as per the provisions of Ind AS 109 'Financial Instruments'. Based on a review during the year with regard appropriateness of accounting of the same under Ind AS 109, a reference has been made to Expert Advisory Committee of Institute of Chartered Accountants of India , awaiting receipt of opinion. During the year, the Company has transactions towards receipt of dividend of ₹ **6.96 crore** (31 March 2022: ₹ 9.00 crore) and receipt of sitting fees for the nominee director amounting to ₹ **0.03 crore** (31 March 2022: ₹ 0.10 crore) from PTC India Ltd..

60. Disclosure as per Ind AS 27 'Separate financial statements'

a) Investment in subsidiary companies:*

Sl. no.	Company name	Country of incorporation	Proportion of ownership interest	
			As at 31 March 2023	As at 31 March 2022
1	NTPC Electric Supply Company Ltd.	India	**100.00**	100.00
2	NTPC Vidyut Vyapar Nigam Ltd.	India	**100.00**	100.00
3	Bhartiya Rail Bijlee Company Ltd.	India	**74.00**	74.00
4	Patratu Vidyut Utpadan Nigam Ltd.	India	**74.00**	74.00
5	NTPC Mining Ltd.	India	**100.00**	100.00
6	THDC India Ltd.	India	**74.496**	74.496
7	North Eastern Electric Power Corporation Ltd.	India	**100.00**	100.00
8	NTPC EDMC Waste Solutions Private Ltd.	India	**74.00**	74.00
9	NTPC Renewable Energy Ltd.*	India	**-**	100.00
10	Ratnagiri Gas & Power Private Ltd.	India	**86.49**	86.49
11	NTPC Green Energy Ltd.* (w.e.f.7 April 2022)	India	**100.00**	-

* Refer Note 51

b) Investment in joint venture companies:*

Sl. no.	Company name	Country of incorporation	Proportion of ownership interest As at 31 March 2023	Proportion of ownership interest As at 31 March 2022
1	Utility Powertech Ltd.	India	**50.00**	50.00
2	NTPC-GE Power Services Private Ltd.	India	**50.00**	50.00
3	NTPC-SAIL Power Company Ltd.	India	**50.00**	50.00
4	NTPC Tamil Nadu Energy Company Ltd.	India	**50.00**	50.00
5	Aravali Power Company Private Ltd.	India	**50.00**	50.00
6	NTPC BHEL Power Projects Private Ltd.	India	**50.00**	50.00
7	Meja Urja Nigam Private Ltd.	India	**50.00**	50.00
8	Transformers and Electricals Kerala Ltd.	India	**44.60**	44.60
9	National High Power Test Laboratory Private Ltd.	India	**20.00**	20.00
10	Energy Efficiency Services Ltd.	India	**33.334**	33.334
11	CIL NTPC Urja Private Ltd.	India	**50.00**	50.00
12	Anushakti Vidhyut Nigam Ltd.	India	**49.00**	49.00
13	Hindustan Urvarak and Rasayan Ltd.	India	**29.67**	29.67
14	Jhabua Power Ltd. (w.e.f. 5 September 2022)	India	**50.00**	-
15	Trincomalee Power Company Ltd.	Srilanka	**50.00**	50.00
16	Bangladesh-India Friendship Power Company Private Ltd.	Bangladesh	**50.00**	50.00

* Equity investments in subsidiary and joint venture companies are measured at cost as per the provisions of Ind AS 27 on 'Separate Financial Statements'.

61. Disclosure as per Ind AS 33 'Earnings per share'

(i) Basic and diluted earnings per share (in ₹)

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
From operations including net movement in regulatory deferral account balances (a) **[A/D]**	**17.73**	16.79
From regulatory deferral account balances (b) **[B/D]**	**(0.60)**	1.46
From operations excluding net movement in regulatory deferral account balances (a)-(b) **[C/D]**	**18.33**	15.33
Nominal value per share	**10.00**	10.00

(ii) Profit attributable to equity shareholders (used as numerator) (₹ Crore)

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
From operations including net movement in regulatory deferral account balances (a) **[A]**	**17,196.73**	16,281.99
From regulatory deferral account balances (b) **[B]**	**(591.09)**	1,414.43
From operations excluding net movement in regulatory deferral account balances (a)-(b) **[C]**	**17,787.82**	14,867.56

(iii) Weighted average number of equity shares (used as denominator) (Nos.)

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Opening balance of issued equity shares	**9,69,66,66,134**	9,69,66,66,134
Closing balance of issued equity shares	**9,69,66,66,134**	9,69,66,66,134
Weighted average number of equity shares for Basic and Diluted EPS [D]	**9,69,66,66,134**	9,69,66,66,134

62. Disclosure as per Ind AS 36 'Impairment of Assets'

As required by Ind AS 36, an assessment of impairment of assets was carried out and based on such assessment, the Company has accounted impairment losses as under:

a) For the Company, the recoverable amount of the property, plant and equipment & intangible assets of the Cash Generating Units (CGU) is value in use and amounts to ₹ **2,87,698.56 crore** (31 March 2022: ₹ 2,67,954.01 crore). The net realisable value of the assets of the station has been assessed which is more than its carrying value. The discount rate used for the computation of value in use for the generating plant (thermal, gas and hydro) and coal mining is **7.27 %** (31 March 2022: 7.07%) and for solar plant is **6.42 %** (31 March 2022: 6.20%).

b) In respect of investment in Ratnagiri Gas & Power Pvt. Ltd., provision for impairment on investments has been recognised at ₹ **834.55 crore** (31 March 2022: ₹ 834.55 crore).

c) In respect of investment in NTPC BHEL Power Project Pvt. Ltd., provision for impairment on investments has been recognised at ₹ **50.00 crore** (31 March 2022: ₹ 50.00 crore). Also refer Note 7 f).

d) In respect of investment in National High Power Test Laboratory Private Ltd., provision for impairment on investments has been recognised at ₹ **30.40 crore** (31 March 2022: ₹ 16.16 crore).

e) In respect of investment in Trincomalee Power Company Limited, provision for impairment on investments has been recognised at ₹ **14.28 crore** (31 March 2022: ₹ 14.28 crore).

63. Disclosure as per Ind AS 37 'Provisions, Contingent Liabilities and Contingent Assets'

₹ Crore

Particulars	Provision for obligations incidental to land acquisition		Provision for tariff adjustment		Arbitration awards and others		Mine closure and Stripping activity adjustments		Total	
	For the year ended		For the year ended		For the year ended		For the year ended		For the year ended	
	31 March 2023	31 March 2022	31 March 2023	31 March 2022	31 March 2023	31 March 2022	31 March 2023	31 March 2022	31 March 2023	31 March 2022
Carrying amount at the beginning of the year	**2,726.80**	3,079.92	**482.28**	360.28	**2,422.20**	2,136.45	**616.22**	347.96	**6,247.50**	5,924.61
Additions during the year	**219.90**	167.63	**335.33**	122.00	**389.93**	353.69	**339.02**	287.15	**1,284.18**	930.47
Amounts used during the year	**(573.67)**	(502.89)	**-**	-	**(8.45)**	(2.32)	**-**	-	**(582.12)**	(505.21)
Reversal/adjustments during the year	**(77.96)**	(17.86)	**-**	-	**(43.25)**	(65.62)	**-**	-	**(121.21)**	(83.48)
Unwinding of provision charged during the year	**-**	-	**-**	-	**-**	-	**(19.56)**	(18.89)	**(19.56)**	(18.89)
Carrying amount at the end of the year	**2,295.07**	2,726.80	**817.61**	482.28	**2,760.43**	2,422.20	**935.68**	616.22	**6,808.79**	6,247.50

i) Provision for obligations incidental to land acquisition

Provision for obligations incidental to land acquisition includes expenditure on rehabilitation & resettlement (R&R) including the amounts payable to the project affected persons (PAPs) towards land, expenditure for providing community facilities and expenditure in connection with environmental aspects of the project. The Company has estimated the provision based on the Rehabilitation Action Plan (RAP) approved by the board/competent authority or agreements/directions/demand letters of the local/government authorities. The outflow of said provision is expected to be incurred immediately on fulfilment of conditions by the land oustees/receipts of directions of the local/government authorities.

ii) Provision for tariff adjustment

Billing to beneficiaries is being done based on tariff orders issued under Regulation 2014 except few stations where billing is done on provisional basis due to non-receipt of tariff orders. In such cases, accounting is done based on trued up cash expenditure as per Regulation 2019. Provision for tariff adjustment of ₹ **335.33 crore** (31 March 2022: ₹ 122.00 crore) is mainly towards the estimated interest payable to beneficiaries at the time of issue of tariff orders.

iii) Provision - Arbitration awards and Others

(a) (i) Provision for arbitration awards represents provision created (net) based on awards pronounced by the arbitrator in respect of various litigation cases amounting to ₹ **2,646.94 crore** (31 March 2022: ₹ 2,274.72 crore). These awards have been challenged before various appellate authorities / Courts.

(ii) Provision for others includes ₹ **90.79 crore** (31 March 2022: ₹ 111.96 crore) towards cost of unfinished minimum work programme demanded by the Ministry of Petroleum and Natural Gas (MoP&NG) including interest thereon in relation to Block AA-ONN-2003/2, ₹ **5.96 crore** (31 March 2022: ₹ 7.36 crore) towards provision for shortage in property, plant and equipment on physical verification pending investigation and ₹ **12.81 crore** (31 March 2022: ₹ 17.86 crore) towards expected loss on investments of Provident Fund Trust.

(b) The Company had entered into an agreement for movement of coal through inland waterways for one of its stations. As per the agreement, the operator was to design, finance, build, operate and maintain the unloading and material handling infrastructure for 7 years, after which it was to be transferred to the Company at ₹ 1/-. After commencement of the operations, the operator had raised several disputes, invoked arbitration and raised substantial claims on the Company. Based on the interim arbitral award and subsequent directions of the Hon'ble Supreme Court of India, an amount of ₹ 356.31 crore was paid upto 31 March 2019.

Further, the Arbitral Tribunal had awarded a claim of ₹ 1,891.09 crore plus applicable interest in favour of the operator, during the financial year 2018-19. The Company aggrieved by the arbitral award and considering legal opinion obtained, had filed an appeal before the Hon'ble High Court of Delhi (Hon'ble High Court) against the said arbitral award in its entirety.

In the financial year 2019-20, against the appeal of the Company, Hon'ble High Court directed the Company to deposit ₹ 500.00 crore with the Registrar General of the Court. The said amount was deposited with the Hon'ble High Court on 5 November 2019. Hon'ble High Court vide its order dated 8 January 2020 directed the parties to commence formal handing over of the infrastructure in the presence of appointed Local Commissioner and also directed release of ₹ 500.00 crore to the operator by the Registrar General subject to verification of bank guarantee and outcome of the application of the Company for formal handing over of the infrastructure. On 17 January 2020 unconditional BG was submitted by the operator to Registrar General and ₹500.00 crore was released to the operator by the Hon'ble High Court. As per order of Hon'ble High Court, formal handing over of the infrastructure started on 20 January 2020 at the project site. However, due to certain local administrative issues initially and further due to Covid-19 pandemic, Local Commissioner's visit was deferred.

In view of delay in the handover exercise, the Company had filed an Application in Hon'ble High Court praying to pass further directions to operator in this regard. Hon'ble High Court on 11 November 2020 disposed off the application requesting the Ld. Local Commissioner appointed by the Court, to visit the project site expeditiously preferably within 2 weeks and carry out the commission. The handing over exercise has been delayed due to operator's issues with local labours at the site and Covid situation. Date of hearing at Hon'ble High Court of Delhi has been adjourned several times and listed for hearing on 23 May 2023.

Pending final disposal of the appeal by the Hon'ble High Court, considering the provisions of Ind AS 37 'Provisions, Contingent Liabilities and Contingent Assets' and Significant Accounting Policies of the Company, provision has been updated by interest to ₹ **38.42 crore** (31 March 2022: ₹ 38.26 crore) (included at (a)(i) above) and the balance amount of ₹ **2,431.04 crore** (31 March 2022: ₹ 2,292.30 crore) has been considered as contingent liability.

Also Refer Note 73 and 76.

(iv) (a) Provision for Mine closure obligation represents Company's obligations for land reclamation and decommissioning of structure consist of spending at mines in accordance with the guidelines from Ministry of Coal, Government of India. The Company estimates its obligations for mine closure, site restoration and decommissioning based on the detailed calculation and technical assessment of the amount and timing of future cash spending for the required work and provided for as per approved mine closure plan. Accordingly, a provision amounting to ₹ **323.80 crore** (31 March 2022: ₹ 304.24 crore) has since been provided for. (Refer Significant accounting policy C.6.2)

(b) Provision for Expenditure incurred on removal of mine waste materials (overburden) necessary to extract the coal reserves is referred to as stripping cost. The Company has to incur such expenses over the life of the mine as technically estimated. Cost of stripping is charged on technically evaluated average stripping ratio at each mine with due adjustment for stripping activity asset and ratio-variance account after the mines are brought to revenue. Net of the balances of stripping activity asset and ratio variance at the Balance Sheet date is shown as 'Stripping activity adjustment' under the head 'Non-current assets/Non-current provisions' as the case may be, and adjusted as provided in the CERC Tariff Regulations. Accordingly, a provision amounting to ₹ **611.88 crore** (31 March 2022: ₹ 311.98 crore) has since been provided for. (Refer Significant accounting policy C.6.1)

v) In respect of provision for cases under litigation, outflow of economic benefits is dependent upon the final outcome of such cases.

vi) In all these cases, outflow of economic benefits is expected within next one year.

vii) Sensitivity of estimates on provisions:

The assumptions made for provisions relating to current period are consistent with those in the earlier years. The assumptions and estimates used for recognition of such provisions are qualitative in nature and their likelihood could alter in next financial year. It is impracticable for the Company to compute the possible effect of changes in assumptions and estimates used in recognizing these provisions.

viii) Contingent liabilities and contingent assets

Disclosure with respect to claims against the Company not acknowledged as debts and contingent assets are made in Note 76.

64. Disclosure as per Ind AS 38 'Intangible Assets'

Research expenditure recognised as expense in the Statement of Profit and Loss during the year is ₹ **233.48 crore** (31 March 2022: ₹ 195.82 crore).

65. Disclosure as per Ind AS 103, Merger of Nabinagar Power Generating Company Limited (NPGCL) and Kanti Bijlee Utpadan Nigam Limited (KBUNL) with NTPC Limited, (the "Company")

Ministry of Corporate Affairs (MCA) vide its order dated 29 July 2022 approved the Scheme of Amalgamation of Nabinagar Power Generating Company Limited (NPGCL) and Kanti Bijlee Utpadan Nigam Limited (KBUNL), wholly owned subsidiaries of NTPC Limited into NTPC Limited, w.e.f. 1 April 2022 being the appointed date. Accordingly, the assets and liabilities of the transferor companies shall vest with transferee company from the appointed date. The transferor companies were dissolved without winding up on the effective date of 26 August 2022.

Being a common control acquisition, the accounting has been done considering the provisions of Appendix C to lnd AS 103 "Business Combination" as per pooling of interest method under which assets and liabilities of the combining entities are reflected at the carrying amounts and no adjustments are made to reflect fair values, or recognize any new assets or liabilities. Further, restatement of previous year figures shall be done as if the business combination had occurred from the beginning of preceding period in compliance with the above. Accordingly, the figures in the balance sheet for the year ended 31 March 2022 have beed restated as if business combination had occurred from 01 April 2021.

Accordingly the merger has resulted in transfer of assets & liabilities at the following summarized values:

₹ Crore

Particulars	As at 31 March 2022	As at 1 April 2021
ASSETS		
Non-current assets		
Property, plant and equipment	**15,503.70**	10,526.42
Capital work-in-progress	**4,920.45**	9,582.43
Intangible assets	**1.06**	0.83
Financial assets		
Loans	**0.10**	-
Other non-current assets	**268.73**	281.65
Total non-current assets	**20,694.04**	20,391.33
Current assets		
Inventories	**203.79**	220.77
Financial assets		
Investments		
Trade receivables	**1,828.48**	1,475.99
Cash and cash equivalents	**100.44**	86.64
Bank balances other than cash and cash equivalents	**191.15**	115.61
Loans	**0.08**	-
Other financial assets	**0.64**	4.89
Other current assets	**253.65**	137.13
Total current assets	**2,578.23**	2,041.03
Regulatory deferral account debit balances	**233.91**	124.62
TOTAL ASSETS (A)	**23,506.18**	22,556.98

₹ Crore

Particulars	As at 31 March 2022	As at 1 April 2021
EQUITY AND LIABILITIES		
Liabilities		
Non-current liabilities		
Financial liabilities		
Borrowings	**12,747.42**	12,310.85
Trade payables		
Total outstanding dues of creditors other than micro and small enterprises	**-**	-
Other financial liabilities	**10.00**	168.64
Provisions	**0.46**	0.25
Deferred tax liabilities (net)	**178.10**	107.74
Other non-current liabilities	**-**	44.85
Total non-current liabilities	**12,935.98**	12,632.33
Current liabilities		
Financial liabilities		
Borrowings	**1,364.43**	1,334.55
Trade payables		
Total outstanding dues of micro and small enterprises	**38.48**	10.91
Total outstanding dues of creditors other than micro and small enterprises	**371.50**	276.64
Other financial liabilities	**1,399.25**	1,318.71
Other current liabilities	**72.84**	103.13
Provisions	**75.55**	89.34
Current tax liabilities (net)	**-**	-
Total current liabilities	**3,322.05**	3,133.28
Total Liabilites (B)	**16,258.03**	15,765.61
Total Net Identifiable Assets acquired (C=A-B)	**7,248.15**	6,791.37
Cost of Investment in NPGCL & KBUNL	**6,631.70**	6,261.70
Other equity of NPGCL & KBUNL merged as per pooling of interest method	**616.45**	529.67
Total (C)	**7,248.15**	6,791.37
Elimination (D)		
Investment - Non current and Equity share capital	**6,631.70**	6,261.70
Financial assets-Loans - Non current and Non current borrowings	**-**	164.34
Other Financial assets- Non current and Other equity (share application money pending allotment)	**-**	96.00
Trade receivable-Current and Trade payables - Current	**1.94**	1.94
Trade receivable - Current and Other financial liabilities - Current	**1.20**	0.47
Financial Assets-loans-Current and Current borrowings	**164.33**	114.33
Other financial assets-Current and Other financial liabilities- Current	**143.05**	119.52
Total (D)	**6,942.22**	6,758.30

The Company has applied for adjudication and grant of exemption from Stamp duty under Indian Stamps Act, 1899 with the appropriate authorities and the Company is expecting that exemption from stamp duty will be granted.

66. Disclosure as per Ind AS 106 'Exploration for and Evaluation of Mineral Resources'

a) The Company along-with some public sector undertakings had entered into Production Sharing Contracts (PSCs) with GOI for three oil exploration blocks namely KG-OSN-2009/1, KG-OSN-2009/4 and AN-DWN-2009/13 under VIII round of New Exploration Licensing Policy (NELP VIII) with 10% participating interest (PI) in each of the blocks.

In the case of Block AN-DWN-2009/13 and KG-OSN-2009/1, Oil and Natural Gas Corporation Ltd. (ONGC) was the operator and the Company along-with the consortium partners have relinquished both the blocks to Directorate General of Hydrocarbons (DGH).

Based on the un-audited statement of the accounts for the above blocks forwarded by ONGC, the operator, the Company's share in the assets and liabilities and expenses is as under:

₹ Crore

Particulars	As at 31 March 2023 (Unaudited)	As at 31 March 2022 (Unaudited)
Assets	**0.01**	0.01
Liabilities	**0.49**	0.49

For the year ended 31 March 2023 and 31 March 2022, there are no income / expense and operating/investing cash flow from exploration activities.

For exploration activities in block KG-OSN-2009/4 DGH has agreed for drilling of one well and have instructed to carry out airborne Full Tensor Gravity Gradiometer (FTG) survey in conditionally & partial cleared area. ONGC has completed drilling of one well. Airborne Full Tensor Gravity Gradiometer (FTG) survey work is also completed. The Company along-with the consortium partners has decided to relinquish the block and Oil and Natural Gas Corporation Ltd. (ONGC), the operator, has submitted an application to Directorate General of Hydrocarbons (DGH) in this regard, in the earlier years.

b) Exploration activities in the block AA-ONN-2003/2 were abandoned in January 2011 due to unforeseen geological conditions and withdrawal of the operator. Attempts to reconstitute the consortium to accomplish the residual exploratory activities did not yield result. In the meanwhile, Ministry of Petroleum & Natural Gas, GoI demanded in January 2011 the cost of unfinished minimum work programme from the consortium with NTPC's share being USD 7.516 million. During the year, provision in this respect has been updated to ₹ 90.79 crore from ₹ 111.96 crore along-with interest. The Company has sought waiver of the claim citing force majeure conditions at site leading to discontinuation of exploratory activities.

The Company has accounted for expenditure of ₹ **(21.37) crore** (31 March 2022: ₹ 21.58 crore) towards updation of liabilities relating to MWP and other liabilities of M/s Geopetrol International, the operator to complete the winding up activities of the Block. The Company's share in the assets and liabilities are as under:

₹ Crore

Particulars	As at 31 March 2023 (Unaudited)	As at 31 March 2022 (Unaudited)
Assets	**9.19**	9.19
Liabilities (including unfinished MWP)	**106.44**	127.81

Provision of ₹ **8.96 crore** as at 31 March 2023 (31 March 2022: ₹ 8.26 crore) has been made towards the assets under exploration and estimated obsolescence in the inventory. Further, a provision of ₹ **0.23 crore** (31 March 2022: ₹ 13.42 crore) has been made towards NTPC's share as per arbitration decision given in favor of a contractor of the block. Aginst this, an amount of ₹ 13.65 crore has been deposited in honourable Delhi high court during the year. NTPC filed a writ petition under section 34 in this matter before Hon'ble Delhi High Court which is yet to be disposed.

For the year ended 31 March 2023 and 31 March 2022, there are no income and operating/investing cash flow from exploration activities. The value of assets reported above is based on statement received from the operator in the earlier years.

c) The Company had entered into production sharing contracts (PSC) with GOI for exploration block namely CB-ONN-2009/5 VIII round of New Exploration Licensing Policy (NELP VIII) with 100% participating interest (PI) in the block.

MWP for the block has been completed. No oil or gas of commercial value was observed in any of the wells. Accordingly, the block has been relinquished to DGH, GOI.

Company's share in assets and liabilities is as under:

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Assets	**6.11**	6.11
Liabilities	**0.25**	0.25

Provision of ₹ **6.07 crore** as at 31 March 2023 (31 March 2022: ₹ 6.07 crore) has been made towards estimated obsolescence in the inventory.

For the year ended 31 March 2023 and 31 March 2022, there are no income, expenses, operating and investing cash flows from exploration activities.

d (i) The Company has started coal production from four mines i.e Pakri-Barwadih, Dulanga, Talaipalli & Chatti-Bariatu. Pakri Barwadih was declared commercial w.e.f. 1 April 2019 and about 13.23 MMT coal was extracted during the current year. Dulanga was declared commercial w.e.f. 1 October 2020 and 7.00 MMT coal was extracted during the current year. All other mines are under development stage. In Talaipalli about 2.40 MMT coal was extracted during the year 2022-23. Coal production has started from Chatti-Bariatu since Sep.2022 and about 0.58 MMT coal was extracted during the current year. At Kerandari, coal mine extraction has already started since 5th Apr.2023 and at Chatti-Bariatu coal mining projects land acquisition and other mine development activities are in progress and these are also disclosed in Note 3 - Capital work in progress under 'Development of coal mines'. Due to delay in achievement of required condtions, the Talaipally coal mines is expected to be declared commercial in the year 2023-24.

d (ii) a) Exploration and evaluation activities are taking place at under ground mine area/dip side area (North west quarry) of PB block. An amount of ₹ 64.20 crore has since been incurred at this area towards various exploratory activities and has been transferred to development of coal mines and capitalised during the year upon completion.

d (iii)a)(i) Banai & Bhalumuda

Due to geo-mining constraints and other related issues NTPC surrendered these blocks to MoC on 26.12.2020. The Company expects that whenever these two coal blocks are allotted to any other company, the cost incurred towards exploration and GR at these mines would be reimbursed from the new allocatee through MOC as per past experience of the Company. Keeping in view the above, an amount of ₹ **124.00 crore** (31 March 2022: ₹ 124.00 crore) has been accounted as recoverable and included under Note-19- 'Current assets - Other financial assets'.

a)(ii) Mandakini

Since mine development activities could not be proceeded due to various issues, the Company has approached Ministry of Coal on 26 December 2020 for surrendering these blocks, with a request for consideration of reimbursement of expenses incurred by the Company. The Company expects that whenever these two coal blocks are allotted to any other company, the cost incurred towards exploration and GR would be reimbursed from the new allocatee through MOC as per past experience of the Company. Keeping in view the above, an amount of ₹ **56.47 crore** (31 March 2022: ₹ 53.93 crore) has been accounted as recoverable and included under Note-19 'Current assets -Other financial assets'.

MoC has encashed the BG (Performance Security) of ₹ 168.00 crore on 22 March 2021 citing delay in achieving of the milestones of efficiency parameters which were beyond the control of the Company. The Company approached MoP to take up the matter in Alternate Mechanism for Resolution of CPSE Disputes (AMRCD). Pending resolution of the dispute through AMRCD, the amount of BG encashed by MOC has been disclosed as recoverable from MOC under 'Claims recoverable' in Note-19-'Current assets-Other financial assets'. This issue is regularly being taken up with MoC by the Company and MoP for early settlement.

a) (iii) The Coal Block Development and Production Agreement (CBDPA) signed by the Company with MOC is silent about the recoverability of expenditure incurred in case of termination of the CBDPA. Moreover, the fresh auction / allocation of mines by MOC may also take substantial time and is dependent upon the coal demand-supply scenario of the country in the days to come. Considering the uncertainty involved on the recoverability of the amounts in respect of Banai, Bhalamuda and Mandakini-B coal blocks , the amount disclosed as claims recoverable has since been fully provided for. Further, the balance expenditure incurred at these blocks which may not be recovered has also been provided for fully (Refer Note 6- 'Non-current assets - Intangible assets under development').

b) Badam

In the year 2018-19, the Company took over Barauni Thermal Power Station from Bihar State Power Generation Company Limited (BSPGCL). Ministry of Coal, Government of India has transferred Badam coal mine, the linked coal mine of Barauni TPS. Environment Clearance for the project is available. Stage-I Forest Clearance was transferred to the Company from BSPGCL on 14 January 2020. Application for Stage-II forest clearance is under process with MOEF&CC. Mining lease is pending with Govt. of Jharkhand and tendering process for appointment of MDO is in progress. A cumulative expenditure of ₹ **85.13 crore** (31 March 2022: ₹74.66 crore) has been incurred at this coal block.

d (iv) Assets and liabilities of coal exploration and evaluation activities are as under:

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Assets (Intangible assets under development)	**85.13**	134.04
Liabilities	**0.11**	1.67

For the year ended 31 March 2023 and 31 March 2022, there are no income, expenses and operating cash flows from coal exploration activities. Cash flows from investing activities for the year ended 31 March 2023 is ₹ **(50.47) crore** (31 March 2022: ₹ 28.06 crore)

67. Disclosure as per Ind AS 108 'Operating Segments'

A. General Information

The Company has two reportable segments, as described below, which are the Company's strategic business units. The strategic business units offer different products and services, and are managed separately because they require different technology and marketing strategies. For each of the strategic business units, the Chief Operating Decision Maker (CODM) reviews internal management reports on at least a quarterly basis.

The following summary describes the operations in each of the Company's reportable segments:

Generation of energy : Generation and sale of bulk power to State Power Utilities.

Others : It includes providing consultancy, project management and supervision, energy trading, oil and gas exploration and coal mining.

Information regarding the results of each reportable segment is included below. Performance is measured based on segment profit before income tax, as included in the internal management reports that are reviewed by the Company's Board. Segment profit is used to measure performance as management believes that such information is the most relevant in evaluating the results of certain segments relative to other entities that operate within these industries.

Transfer prices between operating segments are on an arm's length basis in a manner similar to transactions with third parties.

B. Information about reportable segments and reconciliations to amounts reflected in the financial statements:

₹ Crore

Particulars	Generation of energy		Others		Total	
	For the year ended		For the year ended		For the year ended	
	31 March 2023	31 March 2022	31 March 2023	31 March 2022	31 March 2023	31 March 2022
Segment revenue						
Sale of energy/consultancy, project management and supervision fee *	**1,57,782.01**	1,16,189.19	**7,898.43**	6,180.08	**1,65,680.44**	1,22,369.27
Other income	**3,323.99**	2,699.53	**58.30**	61.24	**3,382.29**	2,760.77
	1,61,106.00	1,18,888.72	**7,956.73**	6,241.32	**1,69,062.73**	1,25,130.04
Intersegment elimination					**(3,990.87)**	(2,462.25)

₹ Crore

Particulars	Generation of energy		Others		Total	
	For the year ended		For the year ended		For the year ended	
	31 March 2023	31 March 2022	31 March 2023	31 March 2022	31 March 2023	31 March 2022
Unallocated corporate interest and other income					**2,652.55**	2,081.87
Total	**1,61,106.00**	1,18,888.72	**7,956.73**	6,241.32	**1,67,724.41**	1,24,749.66
Segment result (including net movements in regulatory deferral account balances)**	**30,072.35**	26,894.49	**816.21**	461.21	**30,888.56**	27,355.70
Unallocated corporate interest and other income					**2,652.55**	2,081.87
Unallocated corporate expenses, interest and finance costs					**10,190.25**	8,413.12
Profit before tax					**23,350.86**	21,024.45
Income tax expense (including tax on net movements in regulatory deferral account balances)					**6,154.13**	4,742.46
Profit after tax					**17,196.73**	16,281.99

₹ Crore

Particulars	Generation of energy		Others		Total	
	For the year ended		For the year ended		For the year ended	
	31 March 2023	31 March 2022	31 March 2023	31 March 2022	31 March 2023	31 March 2022
Depreciation and amortisation expense	**12,893.49**	11,873.51	**83.19**	30.18	**12,976.68**	11,903.69
Non-cash expenses other than depreciation and amortisation	**967.55**	290.83	**11.00**	10.58	**978.55**	301.41
Capital expenditure	**16,853.62**	20,514.87	**1,035.62**	1,082.20	**17,889.24**	21,597.07

₹ Crore

Particulars	Generation of energy		Others		Total	
	As at		As at		As at	
	31 March 2023	31 March 2022	31 March 2023	31 March 2022	31 March 2023	31 March 2022
Segment assets	**3,29,205.40**	3,30,884.85	**12,438.42**	11,134.77	**3,41,643.82**	3,42,019.62
Unallocated corporate and other assets					**40,743.44**	29,120.82
Total assets	**3,29,205.40**	3,30,884.85	**12,438.42**	11,134.77	**3,82,387.26**	3,71,140.44
Segment liabilities	**39,507.89**	39,340.76	**4,864.40**	4,706.44	**44,372.29**	44,047.20
Unallocated corporate and other liabilities					**1,99,125.09**	1,98,425.72
Total liabilities	**39,507.89**	39,340.76	**4,864.40**	4,706.44	**2,43,497.38**	2,42,472.92

* Includes ₹ **1,938.58 crore** (31 March 2022: ₹ 1,890.87 crore) for sales related to earlier years excluding other adjustments towards reimbursement of ash transportation cost.(Refer Note 40)

** Generation segment result would have been ₹ **28,133.57 crore** (31 March 2022: ₹ 25,003.62 crore) without including the sales related to earlier years as stated above.

Reconciliation of Assets and Liabilities ₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Segment assets (A)	**3,41,643.82**	3,42,019.62
Unallocated corporate and other assets:		
Non current investments	**29,719.75**	23,249.37
Current investments	**50.00**	-
Cash and cash equivalents and other bank balances	**2,690.24**	1,612.28
Loans	**981.34**	1,047.80
Other current assets	**125.13**	64.14
Advance tax (net of provision)	**2,476.02**	2,668.30
Other unallocable assets*	**4,700.96**	478.93
Total unallocated corporate and other assets (B)	**40,743.44**	29,120.82
Total Assets (A+B)	**3,82,387.26**	3,71,140.44
Segment liabilities(A)	**44,372.29**	44,047.20
Unallocated corporate and other liabilities:		
Non current borrowings	**1,56,315.69**	1,60,122.17
Deferred tax liability	**10,614.07**	10,184.39
Borrowings current	**28,681.96**	24,472.43
Current tax liabilities (net)	**62.97**	134.17
Other unallocable liabilities	**3,450.40**	3,512.56
Total unallocated corporate and other liabilities (B)	**1,99,125.09**	1,98,425.72
Total Liabilities (A+B)	**2,43,497.38**	2,42,472.92

* Amounts as at 31 March 2023 includes investment property amounting to ₹ 465.18 crore (Refer Note 4) and recoverable from NGEL (Refer Note 51) amounting to ₹ 3,196.12 crore.

Reconciliation of profit after tax ₹ Crore

Particluars	For the year ended 31 March 2023	For the year ended 31 March 2022
Segment result (including net movements in regulatory deferral account balances) (A)	**30,888.56**	27,355.70
Unallocated corporate interest and other income (B)		
Dividend from non-current investments	**2,342.54**	1,745.08
Interest income	**236.61**	296.59
Miscellaneous income	**73.40**	40.20
Sub-total (B)	**2,652.55**	2,081.87
Unallocated corporate expenses, interest and finance costs(C)		
Finance costs	**9,979.23**	8,216.54
Other expenses	**211.02**	196.58
Sub total (C)	**10,190.25**	8,413.12
Profit before tax (including net movements in regulatory deferral account balances) (A+B-C)	**23,350.86**	21,024.45
Exceptional items	**-**	-
Income tax expense (including tax on net movements in regulatory deferral account balances)	**6,154.13**	4,742.46
Profit after tax	**17,196.73**	16,281.99

The operations of the Company are mainly carried out within the country and therefore there is no reportable geographical segment.

C. Information about major customers

Revenue from customers under 'Generation of energy' segment which is more than 10% of the Company's total revenues, are as under:

Name of the customer	For the year ended			
	31 March 2023		31 March 2022	
	Amount (₹ Crore)	%age	Amount (₹ Crore)	%age
1. Gujarat Urja Vikas Nigam Ltd.	**18,447.09**	**11.26**	12,179.51	10.05
2. Maharashtra State Electricity Distribution Company Ltd.	**15,999.28**	**9.77**	12,719.82	10.50

68. Financial Risk Management

The Company's principal financial liabilities comprise loans and borrowings in foreign as well as domestic currency, trade payables and other payables. The main purpose of these financial liabilities is to finance the Company's operations. The Company's principal financial assets include loans, trade and other receivables, and cash and short-term deposits that derive directly from its operations. The Company also holds equity investments and enter into derivative contracts such as forward contracts, options and swaps. Derivatives are used exclusively for hedging purposes and not as trading or speculative instruments.

The Company is exposed to the following risks from its use of financial instruments:

- Credit risk

- Liquidity risk

- Market risk

This note presents information about the Company's exposure to each of the above risks, the Company's objectives, policies and processes for measuring and managing risk.

Risk	Exposure arising from	Measurement	Management
Credit Risk	Trade receivables, unbilled revenue, derivative financial instruments, financial assets measured at amortised cost and cash and cash equivalents.	Ageing analysis Credit ratings	Credit limits, letters of credit and diversification of bank deposits.
Liquidity risk	Borrowings and other liabilities	Rolling cash flows forecast	Availability of committed credit lines and borrowing facilities
Market risk – foreign currency risk	- Future commercial transactions - Recognised financial assets and liabilities not denominated in Indian rupee (₹)	Cash flow forecasting	Forward foreign exchange contracts Foreign currency options Currency and interest rate swaps and principal only swaps
Market risk – interest rate risk	Non-current borrowings at variable rates	Sensitivity analysis	Different kinds of loan arrangements with varied terms (e.g. fixed rate loans, floating rate loans, rupee term loans, foreign currency loans, etc.)

Risk management framework

The Company's activities make it susceptible to various risks. The Company has taken adequate measures to address such concerns by developing adequate systems and practices.

In order to institutionalize the risk management in the Company, an elaborate Enterprise Risk Management (ERM) framework has been developed. The Board of Directors has overall responsibility for the establishment and oversight of the Company's risk management framework. As a part of the implementation of ERM framework, a 'Risk Management Committee (RMC)' with functional directors as its members has been entrusted with the responsibility to identify and review the risks, formulate action plans and strategies to mitigate risks on short-term as well as long-term basis.

The RMC meets every quarter to deliberate on strategies. Risks are regularly monitored through reporting of key performance indicators. Outcomes of RMC are submitted for information of the Board of Directors.

Credit risk

Credit risk is the risk of financial loss to the Company if a customer or counterparty to a financial instrument fails to meet its contractual obligations resulting in a financial loss to the Company. Credit risk arises principally from trade receivables, unbilled revenue, loans, cash and cash equivalents and deposits with banks and financial institutions.

Trade receivables & unbilled revenue

The Company primarily sells electricity to bulk customers comprising mainly state utilities owned by State Governments. The Company has a robust payment security mechanism in the form of Letters of Credit (LC) backed by the Tri-Partite Agreement (TPA). The TPAs were signed among the Govt. of India, RBI and the individual State Governments subsequent to the issuance of the One Time Settlement Scheme of SEBs dues during 2001-02 by the GOI, which were valid till October 2016. Govt of India subsequently approved the extension of these TPAs for another period of 10 years. Most of the States have signed these extended TPAs and signing is in progress for the balance states.

CERC Tariff Regulations allow payment against monthly bill towards energy charges within a period of forty five days from the date of bill and levy of surcharge @ 18% p.a. on delayed payment beyond forty five days. GOI has notified Electricity (Late Payment Surcharge) Rules, 2021 on 22 February 2021.These rules envisage that base rate of LPSC to be considered as SBI one year MCLR, as on 1 April of the financial year, plus five percent. The rate of LPSC shall be increased by 0.5 percent for every month of delay, provided that the LPSC shall not be more than 3 percent higher than the base rate at any time.

A default occurs when in the view of management there is no significant possibility of recovery of receivables after considering all available options for recovery.

As per the provisions of the TPA, the customers are required to establish LC covering 105% of the average monthly billing of the Company for last 12 months. The TPA also provided that if there is any default in payment of current dues by any State Utility, the outstanding dues can be deducted from the State's RBI account and paid to the concerned CPSU. There is also provision of regulation of power by the Company in case of non payment of dues and non-establishment of LC.

These payment security mechanisms have served the Company well over the years. The Company has not experienced any significant impairment losses in respect of trade receivables in the past years. Since the Company has its power stations as well as customers spread over various states of India, geographically there is no concentration of credit risk.

Unbilled revenue primarily relates to the Company's right to consideration for sale effected but not billed at the reporting date and have substantially the same risk characteristics as the trade receivables for the same type of contracts.

Investments

The Company limits its exposure to credit risk by investing in only Government of India Securities, State Government Securities and other counterparties have a high credit rating. The management actively monitors the interest rate and maturity period of these investments. The Company does not expect the counterparty to fail to meet its obligations, and has not experienced any significant impairment losses in respect of any of the investments.

Loans

The Company has given loans to employees, subsidiary companies, joint venture companies and other parties. Loans to the employee are secured against the mortgage of the house properties and hypothecation of vehicles for which such loans have been given in line with the policies of the Company. The loan provided to group companies are collectible in full and risk of default is negligible. Loan to APIIC is against a guarantee given by the Government of Andhra Pradesh vide GO dated 3 April 2003.

Cash and cash equivalents

The Company held cash and cash equivalents of ₹ **3.13 crore** (31 March 2022: ₹ 117.48 crore). The cash and cash equivalents are held with banks with high rating.

Balances with banks and financial institutions, other than cash and cash equivalents

The Company held balances with banks and financial institutions, including earmarked balances, of ₹ **3,738.60 crore** (31 March 2022: ₹ 2,629.70 crore). In order to manage the risk, Company places deposits with only high rated banks/ institutions.

(i) Exposure to credit risk

The carrying amount of financial assets represents the maximum credit exposure. The maximum exposure to credit risk at the reporting date was:

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Financial assets for which loss allowance is measured using 12 months Expected Credit Losses (ECL)		
Non-current investments	**29,719.75**	23,249.37
Non-current loans	**1,233.47**	1,288.50
Other non-current financial assets*	**785.00**	1,017.98
Current investments	**50.00**	-
Cash and cash equivalents	**3.13**	117.48
Bank balances other than cash and cash equivalents	**3,738.60**	2,629.70
Current loans	**312.45**	313.45
Other current financial assets**	**4,177.73**	498.86
Total (A)	**40,020.13**	29,115.34
Financial assets for which loss allowance is measured using life-time Expected Credit Losses (ECL) as per simplified approach		
Trade receivables including unbilled revenue	**27,141.23**	24,747.45
Contract assets	**7,096.08**	4,100.75
Total (B)	**34,237.31**	28,848.20
Total (A+B)	**74,257.44**	57,963.54

* Excluding share application money pending allotment (Refer Note 11)

** Excluding contract assets (Refer Note 19)

(ii) Provision for expected credit losses

(a) Financial assets for which loss allowance is measured using 12 month expected credit losses

The Company has assets where the counter-parties have sufficient capacity to meet the obligations and where the risk of default is very low. Accordingly, no loss allowance for impairment has been recognised.

(b) Financial assets for which loss allowance is measured using life-time expected credit losses as per simplified approach

The Company has customers (State government utilities) with capacity to meet the obligations and therefore the risk of default is negligible or nil. Further, management believes that the unimpaired amounts that are past due by more than 30 days are still collectible in full, based on historical payment behaviour and extensive analysis of customer credit risk. Hence, no impairment loss has been recognised during the reporting periods in respect of trade receivables and unbilled revenue.

(iii) Ageing analysis of trade receivables

Refer Note 15(d)

(iv) Reconciliation of impairment loss provisions

The movement in the allowance for impairment in respect of financial assets during the year is as follows:

₹ Crore

Particulars	Investments	Trade receivables	Loans	Advances	Claims recoverable	Total
Balance as at 1 April 2021 (i)	903.17	0.20	-	0.03	343.62	**1,247.02**
Impairment loss recognised (ii)	16.30	-	-	-	3.16	**19.46**
Balance as at 31 March 2022(iii =i+ii)	919.47	0.20	-	0.03	346.78	**1,266.48**
Impairment loss recognised (iv)	14.24	-	6.77	-	2.54	**23.55**
Balance as at 31 March 2023 (v = iii+iv)	**933.71**	**0.20**	**6.77**	**0.03**	**349.32**	**1,290.03**

Based on historic default rates, the Company believes that no impairment allowance is necessary in respect of any other financial assets as the amounts of such allowances are not significant.

Liquidity risk

Liquidity risk is the risk that the Company will encounter difficulty in meeting the obligations associated with its financial liabilities that are settled by delivering cash or another financial asset. The Company's approach to managing liquidity is to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage to the Company's reputation.

The Company has an appropriate liquidity risk management framework for the management of short, medium and long-term funding and liquidity management requirements. The Company manages liquidity risk by maintaining adequate cash reserves, banking facilities and reserve borrowing facilities by continuously monitoring forecast and actual cash flows and matching the maturity profiles of financial assets and liabilities.

The Company's Treasury department is responsible for managing the short-term and long-term liquidity requirements of the Company. Short-term liquidity situation is reviewed daily by the Treasury department. The Board of directors has established policies to manage liquidity risk and the Company's Treasury department operates in line with such policies. Any breaches of these policies are reported to the Board of Directors. Long-term liquidity position is reviewed on a regular basis by the Board of Directors and appropriate decisions are taken according to the situation.

Typically, the Company ensures that it has sufficient cash on demand to meet expected operational expenses for a month, including the servicing of financial obligations, this excludes the potential impact of extreme circumstances that cannot reasonably be predicted, such as natural disasters.

As part of the CERC Regulations, tariff inter-alia includes recovery of capital cost. The tariff regulations also provide for recovery of energy charges, operations and maintenance expenses and interest on normative working capital requirements. Since billing to the customers are generally on a monthly basis, the Company maintains sufficient liquidity to service financial obligations and to meet its operational requirements.

(i) Financing arrangements

The Company had access to the following undrawn borrowing facilities at the end of the reporting period:

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Floating-rate borrowings		
Cash credit	**2,155.00**	2,742.52
Term loans	**6,351.58**	5,254.58
Foreign currency loans	**3,309.60**	6,666.75
Total	**11,816.18**	14,663.85

(ii) Maturities of financial liabilities

The following are the contractual maturities of derivative and non-derivative financial liabilities, based on contractual cash flows:

31 March 2023 **₹ Crore**

Contractual maturities of financial liabilities	Contractual cash flows					
	3 months or less	3-12 months	1-2 years	2-5 years	More than 5 years	Total
Non-derivative financial liabilities						
Secured bonds	553.57	6,531.25	5,389.73	4,502.84	15,522.50	**32,499.89**
Unsecured bonds	4,989.11	402.76	1,500.00	4,000.00	14,171.00	**25,062.87**
Rupee term loans from banks	1,107.88	4,214.34	6,087.82	21,752.19	35,715.18	**68,877.41**
Rupee term loans from others	107.82	276.10	363.84	1,130.06	3,111.06	**4,988.88**
Lease obligations	139.00	62.42	76.73	193.33	2,268.85	**2,740.33**
Foreign currency notes	62.85	42.88	7,860.30	11,990.10	-	**19,956.13**
Unsecured foreign currency loans from banks and financial institutions	339.06	846.00	990.33	8,495.58	13,129.52	**23,800.49**
Unsecured foreign currency loans (guaranteed by GOI)	-	185.54	183.61	485.94	278.52	**1,133.61**
Commercial paper, cash credit and Short term working capital loan	10,586.84	1,000.00	-	-	-	**11,586.84**
Trade and other payables	25,452.22	3,228.76	887.09	1,179.63	719.47	**31,467.17**

31 March 2022 ₹ Crore

Contractual maturities of financial liabilities	Contractual cash flows					
	3 months or less	3-12 months	1-2 years	2-5 years	More than 5 years	Total
Non-derivative financial liabilities						
Secured bonds	3,481.25	3,667.98	6,231.40	9,725.57	15,689.49	38,795.69
Unsecured bonds	534.96	302.68	4,374.10	4,000.00	11,671.00	20,882.74
Rupee term loans from banks	827.21	3,752.64	5,096.94	20,804.48	42,076.88	72,558.15
Rupee term loans from others	27.16	289.56	383.64	1,111.38	3,493.59	5,305.33
Lease obligations	148.08	75.04	58.54	184.51	2,341.87	2,808.04
Foreign currency notes	2,092.01	3,856.50	-	15,355.85	3,053.20	24,357.56
Unsecured foreign currency loans from banks and financial institutions	184.47	554.68	867.30	4,129.55	11,200.31	16,936.31
Unsecured foreign currency loans (guaranteed by GOI)	-	186.38	184.11	550.40	400.24	1,321.12
Commercial paper, cash credit and Short term working capital loan	6,649.91	500.00	-	-	-	7,149.91
Trade and other payables	20,425.18	6,771.09	1,809.32	2,491.33	135.76	31,632.68

Market risk

Market risk is the risk that changes in market prices, such as foreign exchange rates and interest rates will affect the Company's income. The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while optimising the return.

The Board of Directors is responsible for setting up of policies and procedures to manage market risks of the Company. All such transactions are carried out within the guidelines set by the risk management committee.

Currency risk

The Company is exposed to foreign currency risk on certain transactions that are denominated in a currency other than entity's functional currency, hence exposure to exchange rate fluctuations arises. The risk is that the functional currency value of cash flows will vary as a result of movements in exchange rates.

The currency profile of financial assets and financial liabilities as at 31 March 2023 and 31 March 2022 are as below:

As at 31 March 2023 ₹ Crore

Particulars	USD	EURO	JPY	Others	Total
Financial assets					
Trade and other receivables	1.22	-	-	-	**1.22**
Total	**1.22**	**-**	**-**	**-**	**1.22**
Financial liabilities					
Foreign currency bonds	15,391.81	4,564.32	-	-	**19,956.13**
Unsecured foreign currency loans from banks and financial institutions	8,180.71	2,774.16	13,979.22	-	**24,934.09**
Trade payables and other financial liabilities	1,429.26	716.59	34.28	11.73	**2,191.86**
Total	25,001.78	8,055.07	14,013.50	11.73	**47,082.08**

As at 31 March 2022 ₹ Crore

Particulars	USD	EURO	JPY	Others	Total
Financial assets					
Trade and other receivables	0.33	-	-	-	0.33
Cash and cash equivalents	0.01	-	-	0.02	0.03
Other financial assets	-	0.70	-	-	0.70
Total	0.34	0.70	-	0.02	1.06
Financial liabilities					
Foreign currency bonds	18,015.88	4,307.65	-	2,034.03*	24,357.56
Unsecured foreign currency loans from banks and financial institutions	2,088.98	2,853.83	13,314.62	-	18,257.43
Trade payables and other financial liabilities	2,757.32	857.08	151.64	30.38	3,796.42
Total	22,862.18	8,018.56	13,466.26	2,064.41	46,411.41

* ₹1,908.00 crore-Rupee denominated USD settled Masala bonds and interest accrued thereon.

The gain/(loss) on account of exchange rate variations on all foreign currency loans and foreign currency monetary items (up to COD) is recoverable from beneficiaries. Therefore, currency risk in respect of such exposure would not be very significant.

Sensitivity analysis

Since the impact of strengthening or weakening of INR against USD, EURO, JPY and other currencies on the statement of profit and loss would not be very significant; therefore, sensitivity analysis for currency risk is not disclosed.

Embedded derivatives

Certain contracts of the Company for construction of power plants with vendors awarded through International Competitive Bidding are denominated in a third currency i.e. a currency which is not the functional currency of any of the parties to the contract. The Company has awarded the above contracts without any intention to enter into any derivative contract or to leverage/ take position and without any option/intention to net settle at any point of time during the tenure of the contract. The Company has not separately recognised the foreign currency embedded derivative and has not designated the entire hybrid contract at fair value through profit or loss considering the same as not practicable and absence of a reliable valuation model.

Interest rate risk

The Company is exposed to interest rate risk arising mainly from non-current borrowings with floating interest rates. The Company is exposed to interest rate risk because the cash flows associated with floating rate borrowings will fluctuate with changes in interest rates. The Company manages the interest rate risks by entering into different kinds of loan arrangements with varied terms (e.g. fixed rate loans, floating rate loans, rupee term loans, foreign currency loans, etc.).

At the reporting date, the interest rate profile of the Company's interest-bearing financial instruments is as follows:

₹ Crore

Particulars	31 March 2023	31 March 2022
Financial Assets:		
Fixed-rate instruments		
Loans to related parties	**1,354.60**	839.15
Loans to others	**21.50**	22.39
Bank deposits	**3,634.68**	2,512.72
Total	**5,010.78**	3,374.26
Variable-rate instruments		
Loans to related parties	**-**	-
Total	**-**	-
Financial Liabilities:		
Fixed-rate instruments		
Bonds	**57,560.02**	59,675.42
Foreign currency loans/notes*	**22,611.07**	27,581.74
Rupee term loans	**16.84**	50.73
Commercial paper and Short term working capital loan	**11,509.73**	6,631.26
Lease obligations	**986.23**	983.08
	92,683.89	94,922.23
Variable-rate instruments		
Foreign currency loans/notes	**21,976.76**	14,733.13
Rupee term loans	**73,849.45**	77,812.75
Cash credit	**-**	474.91
	95,826.21	93,020.79
Total	**1,88,510.10**	1,87,943.02

* Includes ₹ **Nil** (31 March 2022: includes ₹ 1,908 crore) of Rupee denominated USD settled Masala bonds.

Fair value sensitivity analysis for fixed-rate instruments

The Company's fixed rate instruments are carried at amortised cost. They are therefore not subject to interest rate risk, since neither the carrying amount nor the future cash flows will fluctuate because of a change in market interest rates.

Cash flow sensitivity analysis for variable-rate instruments

A change of 50 basis points in interest rates at the reporting date would have increased (decreased) profit or loss by the amounts shown below. This analysis assumes that all other variables, in particular foreign currency rates, remain constant. The analysis is performed on the same basis for the previous year.

₹ Crore

Particulars	Profit or loss	
	50 bp increase	50 bp decrease
31 March 2023		
Foreign currency loans/notes	**(94.03)**	**94.03**
Rupee term loans	**(393.04)**	**393.04**
Cash credit and Short term working capital loan	**(3.44)**	**3.44**
	(490.51)	**490.51**
31 March 2022		
Foreign currency loans/notes	(66.24)	66.24
Rupee term loans	(393.43)	393.43
Cash credit and Short term working capital loan	(2.47)	2.47
	(462.14)	462.14

Of the above mentioned increase in the interest expense, an amount of ₹ **122.28 crore** (31 March 2022: ₹ 142.26 crore) is expected to be capitalised and recovered from beneficiaries through tariff.

Change in interest benchmarks

As part of the IBOR transition, the Company has replaced the JPY LIBOR with compounded TONA for all financial instruments, requiring the renegotiation of financing contracts. Changes to contractual cash flows as a result of replacing the existing benchmark interest rate on an economically equivalent basis as a direct consequence of the interest rate benchmark reform are accounted for by adjusting the effective interest rate without recognizing any direct modification gains or losses. There is no material impact on the change of the benchmark rate. The Company also plans to replace the USD LIBOR with the Term overnight SOFR before the end of its publication on June 30, 2023.

(Note: IBOR-Inter Bank Offered Rates, LIBOR-London Interbank Offered Rate, TONA-Tokyo Overnight Average Rate, SOFR – Secured Overnight Financing Rate)

69. Fair Value Measurements

a) Financial instruments by category

₹ Crore

Particulars	31 March 2023			31 March 2022		
	FVTPL	FVTOCI	Amortised Cost	FVTPL	FVTOCI	Amortised Cost
Financial assets						
Investments						
- Equity instruments	**3.78**	**102.30**	**29,088.67**	3.78	98.70	23,146.89
- Debentures	**-**	**-**	**575.00**	-	-	-
Trade Receivables	**-**	**-**	**27,141.23**	-	-	24,747.45
Loans	**-**	**-**	**1,545.92**	-	-	1,601.95
Cash and cash equivalents	**-**	**-**	**3.13**	-	-	117.48
Other bank balances	**-**	**-**	**3,738.60**	-	-	2,629.70
Finance lease receivables	**-**	**-**	**285.19**	-	-	355.49
Other financial assets	**-**	**-**	**11,911.55**	-	-	5,262.10
	3.78	**102.30**	**74,289.29**	3.78	98.70	57,861.06

₹ Crore

Particulars	31 March 2023			31 March 2022		
	FVTPL	FVTOCI	Amortised Cost	FVTPL	FVTOCI	Amortised Cost
Financial liabilities						
Borrowings (including interest accrued)	-	-	**1,75,974.86**	-	-	1,79,853.77
Commercial paper and cash credit	-	-	**11,509.73**	-	-	7,106.17
Lease obligations	-	-	**986.23**	-	-	983.08
Trade payables	-	-	**12,093.86**	-	-	9,818.97
Payable for capital expenditure	-	-	**15,793.40**	-	-	18,081.10
Other financial liabilities	-	-	**3,363.75**	-	-	4,643.01
	-	-	**2,19,721.83**	-	-	2,20,486.10

b) Fair value hierarchy

This section explains the judgements and estimates made in determining the fair values of the financial instruments that are (a) recognised and measured at fair value and (b) measured at amortised cost and for which fair values are disclosed in the financial statements. To provide an indication about the reliability of the inputs used in determining fair value, the Company has classified its financial instruments into the three levels prescribed under the Ind AS. An explanation of each level follows underneath the table.

₹ Crore

Financial assets and liabilities measured at fair value- recurring fair value measurement as at 31 March 2023	Level 1	Level 2	Level 3	Total
Financial assets:				
Investments in quoted equity instruments - PTC India Ltd.	**102.30**	-	-	**102.30**
Investments in unquoted equity instruments	-	-	**3.78**	**3.78**
	102.30	-	**3.78**	**106.08**

₹ Crore

Financial assets and liabilities measured at fair value- recurring fair value measurement as at 31 March 2022	Level 1	Level 2	Level 3	Total
Financial assets:				
Investments in quoted equity instruments - PTC India Ltd.	98.70	-	-	98.70
Investments in unquoted equity instruments	-	-	3.78	3.78
	98.70	-	3.78	102.48

The Company has an established control framework with respect to the measurement of fair values. This includes a valuation team that has overall responsibility for overseeing all significant fair value measurements and reports directly to the Director (Finance). The valuation team regularly reviews significant unobservable inputs and valuation adjustments. If third party information, such as broker quotes or pricing services, is used to measure fair values, then the valuation team assesses the evidence obtained from the third parties to support the conclusion that these valuations meet the requirements of Ind AS, including the level in the fair value hierarchy in which the valuations should be classified. Significant valuation issues are reported to the Company's Audit Committee, if any.

Fair values are categorised into different levels in a fair value hierarchy based on the inputs used in the valuation techniques as follows.

Level 1: Level 1 hierarchy includes financial instruments measured using quoted prices. This includes investments in quoted equity instruments. Quoted equity instruments are valued using quoted prices on national stock exchange.

Level 2: The fair value of financial instruments that are not traded in an active market is determined using valuation techniques which maximise the use of observable market data and rely as little as possible on entity specific estimates. If all significant inputs required to fair value an instrument are observable, the instrument is included in level 2. This level includes mutual funds which are valued using the closing NAV.

Level 3: If one or more of the significant inputs is not based on observable market data, the instrument is included in level 3. The fair value of financial assets and liabilities included in Level 3 is determined in accordance with generally accepted pricing models based on discounted cash flow analysis using prices from prevailing market transactions and dealer quotes of similar instruments.

There have been no transfers in either direction for the years ended 31 March 2023 and 31 March 2022.

c) Valuation technique used to determine fair value:

Specific valuation techniques used to fair value of financial instruments include:

i) For financial instruments other than at ii), iii) and iv) - the use of quoted market prices

ii) For investments in mutual funds - Closing NAV is used.

iii) For financial liabilities (vendor liabilities, debentures/bonds, foreign currency notes, domestic/foreign currency loans): Discounted cash flow; appropriate market borrowing rate of the entity as of each balance sheet date used for discounting.

iv) For financial assets (employee loans) - Discounted cash flow; appropriate market rate (SBI lending rate) as of each balance sheet date used for discounting.

d) Fair value of financial assets and liabilities measured at amortised cost

₹ Crore

Particulars	Level	As at 31 March 2023		As at 31 March 2022	
		Carrying amount	Fair value	Carrying amount	Fair value
Financial assets					
Investments in subsidiary and joint venture companies	3	**29,088.67**	**29,088.67**	23,146.89	23,146.89
Other investments	3	**575.00**	**575.00**	-	-
Loans	3	**1,545.92**	**1,504.80**	1,601.95	1,613.82
Finance lease receivables	3	**285.19**	**285.19**	355.49	355.49
Claims recoverable	3	**797.63**	**797.63**	879.42	879.42
Trade receivables	3	**27,141.23**	**27,141.23**	24,747.45	24,747.45
Cash and cash equivalents	1	**3.13**	**3.13**	117.48	117.48
Bank balances other than cash and cash equivalents	1	**3,738.60**	**3,738.60**	2,629.70	2,629.70
Other financial assets	3	**11,113.92**	**11,113.92**	4,382.68	4,382.68
		74,289.29	**74,248.17**	57,861.06	57,872.93
Financial liabilities					
Bonds/Debentures	1	**-**	**-**	8,820.73	9,810.68
	2	**12,357.58**	**13,249.47**	30,220.36	33,011.39
	3	**45,202.44**	**46,398.53**	20,634.33	23,108.14
Foreign currency notes	2	**15,369.34**	**15,247.39**	17,984.99	18,305.90
	3	**4,554.79**	**4,203.16**	6,328.53	6,446.15
Foreign currency loans	3	**24,624.42**	**24,652.28**	18,001.35	18,149.72
Rupee term loans	2	**-**	**-**	1,799.67	1,902.66
Rupee term loans	3	**73,866.29**	**73,866.00**	76,063.81	76,671.54

₹ Crore

Particulars	Level	As at 31 March 2023		As at 31 March 2022	
		Carrying amount	Fair value	Carrying amount	Fair value
Lease obligations	3	**986.23**	**986.23**	983.08	983.08
Borrowings - current	1	**11,509.73**	**11,509.73**	7,106.17	7,106.17
Trade payables and payable for capital expenditure	2	**-**	**-**	3.39	2.83
Trade payables and payable for capital expenditure	3	**27,887.26**	**27,857.85**	27,896.68	27,846.55
Other financial liabilities	3	**3,363.75**	**3,363.75**	3,538.64	3,538.64
		2,19,721.83	**2,21,334.39**	2,19,381.73	2,26,883.45

The carrying amounts of current trade receivables, current trade payables, payable for capital expenditure, investment in subsidiary and joint venture companies, cash and cash equivalents and other financial assets and liabilities are considered to be the same as their fair values, due to their short-term nature.

The carrying values for finance lease receivables approximates the fair value as these are periodically evaluated based on credit worthiness of customer and allowance for estimated losses is recorded based on this evaluation. Also, carrying amount of claims recoverable approximates its fair value as these are recoverable immediately.

The fair values for loans, borrowings, non-current trade payables and payable for capital expenditure were calculated based on cash flows discounted using a current discount rate. They are classified at respective levels based on availability of quoted prices and inclusion of observable/non observable inputs.

70. Capital Management

The Company's objectives when managing capital are to:

- safeguard its ability to continue as a going concern, so that it can continue to provide returns for shareholders and benefits for other stakeholders and
- maintain an appropriate capital structure of debt and equity.

The Board of Directors has the primary responsibility to maintain a strong capital base and reduce the cost of capital through prudent management in deployment of funds and sourcing by leveraging opportunities in domestic and international financial markets so as to maintain investors, creditors & markets' confidence and to sustain future development of the business. The Board of Directors monitors the return on capital, which the Company defines as returns from operating activities divided by total shareholders' equity deployed in operating activities. The Board of Directors also monitors the level of dividends to equity shareholders in line with the dividend distribution policy of the Company.

Under the terms of major borrowing facilities, the Company is required to comply with the following financial covenants:

(i) Total liability to networth ranges between 2:1 to 3:1.

(ii) Ratio of EBITDA to interest expense shall not at any time be less than 1.75 : 1.

(iii) Debt service coverage ratio not less than 1.10:1 (in case of foreign currency borrowings).

There have been no breaches in the financial covenants of any interest bearing borrowings.

The Company monitors capital, using a medium term view of three to five years, on the basis of a number of financial ratios generally used by industry and by the rating agencies. The Company is not subject to externally imposed capital requirements.

The Company monitors capital using gearing ratio which is net debt divided by total equity. Net debt comprises of non-current borrowings (including current maturities and interest accrued there on) and current borrowings less cash and cash equivalents. Equity includes equity share capital and reserves that are managed as capital. The gearing ratio at the end of the reporting period was as follows:

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Borrowings (including interest accrued)	**1,87,484.59**	1,86,959.94
Less: Cash and cash equivalents	**3.13**	117.48
Net Debt	**1,87,481.46**	1,86,842.46
Total Equity	**1,38,889.88**	1,28,667.52
Net Debt to Equity Ratio	**1.35**	1.45

71. Disclosure as per Ind AS 114, 'Regulatory Deferral Accounts'

(i) Nature of rate regulated activities

The Company is mainly engaged in generation and sale of electricity. The price to be charged by the Company for electricity sold to its beneficiaries is determined by the CERC which provides extensive guidance on the principles and methodologies for determination of the tariff for the purpose of sale of electricity. The tariff is based on allowable costs like interest, depreciation, operation & maintenance expenses, etc. with a stipulated return.

This form of rate regulation is known as cost-of-service regulations which provide the Company to recover its costs of providing the goods or services plus a fair return.

(ii) Recognition and measurement

(a) As per the CERC Tariff Regulations, any gain or loss on account of exchange risk variation during the construction period shall form part of the capital cost till the declaration of Commercial Operation Date (COD) to be considered for calculation of tariff. The CERC during the past period in tariff orders for various stations has allowed exchange differences incurred during the construction period in the capital cost. Accordingly, exchange differences arising during the construction period is within the scope of Ind AS 114.

Further, any loss or gain on account of exchange differences towards interest payment and loan repayment in respect of the foreign currency loans taken for construction of projects shall be recoverable from/payable to beneficiaries on actual payment basis, as per the said Regulations. Accordingly, such exchange differences are also within the scope of Ind AS 114.

In view of the above, exchange differences arising from settlement/translation of monetary item denominated in foreign currency to the extent recoverable from or payable to the beneficiaries in subsequent periods as per CERC Tariff Regulations are recognized on an undiscounted basis as 'Regulatory deferral account debit/credit balance' by credit/debit to 'Net Movements in Regulatory deferral account balances' and adjusted from the year in which the same becomes recoverable from or payable to the beneficiaries. Accordingly, an amount of ₹ 960.93 crore for the year ended as at 31 March 2023 has been accounted for as 'Regulatory deferral account debit balance' (31 March 2022: (-) ₹ 730.39 crore accounted as 'Regulatory deferral account debit balance'.). Further, an amount of ₹ **52.01 crore** (31 March 2022: ₹ 35.82 crore) has been realized/recognized during the year.

(b) Revision of pay scales of employees of PSEs w.e.f. 1 January 2017 has been implemented based on the guidelines issued by Department of Public Enterprises (DPE). The guidelines provide payment of superannuation benefits @ 30% of basic + DA to be provided to the employees of CPSEs which includes gratuity at the enhanced ceiling of ₹ 0.20 crore from the existing ceiling of ₹ 0.10 crore. As per Proviso 8(3) of Terms and Conditions of Tariff Regulations 2014 applicable for the period 2014-19, truing up exercise in respect of Change in Law or compliance of existing law will be taken up by CERC. The increase in gratuity limit from ₹ 0.10 crore to ₹ 0.20 crore falls under the category of 'Change in law' and a regulatory asset has been created. The Payment of Gratuity Act, 1972 has since been amended and the ceiling has been increased to ₹ 0.20 crore.

Considering the methodology followed by the CERC for allowing impact of the previous pay revision, various tariff orders issued by the CERC under Regulations, 2014 and the above-mentioned provision related to the change in law of CERC Tariff Regulations, 2014, a regulatory asset has been created upto 31 March 2019 (Regulatory deferral account debit balance) towards the increase in O&M expenditure due to the pay revision. This was taken up with CERC through truing up tariff petition. CERC has been allowing the same progressively and during the year, the expenditure has been allowed in respect of few stations and accordingly an amount of ₹ **94.56** (31 March 2022: ₹ 127.02) has been adjusted and an amount of ₹ **0.49 crore** (31 March 2022: ₹ 359.58 crore) has been reversed. Balance orders are expected in the coming years.

(c) CERC Regulations provide that deferred tax liability upto 31 March 2009 shall be recovered from the beneficiaries as and when the same gets materialized. Further, for the period commencing from 1 April 2014, CERC Tariff Regulations provide for grossing up of the return on equity based on effective tax rate for the financial year based on the actual tax paid during the year on the generation income. The Company has recognised a regulatory deferral account debit balance for such deferred tax liabilities (net) in the financial statements. Regulatory deferral account debit balance for deferred tax liability for the period commencing from 1 April 2014 will be reversed in future years when the related deferred tax liability forms part of current tax. Accordingly, an amount of ₹ **1,650.50 crore** (31 March 2022: ₹ 1,639.68 crore) for the year ended 31 March 2023 has been accounted for as 'Regulatory deferral account debit balance'.

(d) The petition filed by the Company before CERC for reimbursement of the expenditure on transportation of ash, was favourably considered by CERC vide order dated 5 November 2018 and it was allowed to reimburse the actual additional expenditure incurred towards transportation of ash in terms of MOEF notification under change in law, as additional O&M expenses, w.e.f. 25 January 2016 subject to prudence check. Keeping in view the above, regulatory asset was created towards ash transportation expenses in respect of stations where there was shortfall in revenue from sale of ash over and above ash transportation expenses till 2021-22. During the year, CERC vide order dated 28.10.2022 has allowed provisional monthly billing of Ash transportation expenditure from 1 April 2022 onwards and reimbursement of expenditure already incurred from 1 April 2019 till 31 March 2022. Accordingly, an amount of ₹ 3,090.42 crore has been adjusted with revenue from operations pertaining to the period from 1 April 2019. Further, an amount of ₹ 90.18 crore has been adjusted/realised based on orders received from CERC during the year relating to period prior to 1 April 2019. Balance amount of ₹ 73.11 crore shall be reversed / adjusted upon receipt of tariff orders / true-up orders from CERC.

(iii) Risks associated with future recovery/reversal of regulatory deferral account balances:

(i) demand risk due to changes in consumer attitudes, the availability of alternative sources of supply

(ii) regulatory risk on account of changes in regulations and submission or approval of a rate-setting application or the entity's assessment of the expected future regulatory actions

(iii) other risks including currency or other market risks, if any

(iv) Reconciliation of the carrying amounts:

The regulated assets/liability recognized in the books to be recovered from or payable to beneficiaries in future periods are as follows:

a) Regulatory deferral account debit balance - Note 22

The regulatory assets recognized in the books to be recovered from the beneficiaries in future periods are as follows:

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
A. Opening balance	**12,822.88**	11,268.34
B. Additions during the year	**(479.48)**	1,917.54
C. Amount realized/recognized during the year	**(236.75)**	(218.42)
D. Regulatory deferral account balances recognized in the statement of profit and loss (B+C)	**(716.23)**	1,699.12
E. Adjustments during the year	**(144.68)**	(144.58)
F. Closing balance (A+D+E)	**11,961.97**	12,822.88

b) **Net movements in regulatory deferral account balances [I]**

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Exchange differences	**960.93**	(730.39)
Pay Revision	**(0.49)**	(359.58)
Deferred tax	**1,650.50**	1,639.68
Ash transportation cost	**(3,090.42)**	1,478.64
Arbitration cases	**-**	(110.81)
Sub total (i)	**(479.48)**	1,917.54
Amount realized/ recognized during the year (ii)	**(236.75)**	(218.42)
Net movement in regulatory deferral account balances (i)+(ii)	**(716.23)**	1,699.12
c) **Tax on net movements in regulatory deferral account balances [II]**	**(125.14)**	284.69
d) **Total amount recognized in the statement of profit and loss during the year [I-II]**	**(591.09)**	1,414.43

The Company expects to recover the carrying amount of regulatory deferral account debit balance over the life of the projects.

72. Disclosure as per Ind AS 115, 'Revenue from contracts with customers'

I Nature of goods and services

The revenue of the Company comprises of income from energy sales, sale of energy through trading, consultancy and other services. The following is a description of the principal activities:

(a) Revenue from energy sales

The major revenue of the Company comes from energy sales. The Company sells electricity to bulk customers, mainly electricity utilities owned by State Governments as well as private Discoms operating in States. Sale of electricity is generally made pursuant to long-term Power Purchase Agreements (PPAs) entered into with the beneficiaries.

Below are the details of nature, timing of satisfaction of performance obligations and significant payment terms under contracts for energy sales:

Product/ Service	Nature, timing of satisfaction of performance obligations and significant payment terms
Energy sales	The Company recognises revenue from contracts for energy sales over time as the customers simultaneously receive and consume the benefits provided by the Company. The tariff for computing revenue from energy sales is determined in terms of CERC Regulations as notified from time to time. The amount of revenue recognised for energy sales is adjusted for variable consideration, wherever applicable, which are estimated based on the historical data available with the Company. The amounts are billed on a monthly basis and are payable within contractually agreed credit period. In case of power station which are not governed by CERC tariff regulations, revenue is recognized based on agreement entered with beneficieries.

(b) Revenue from energy trading, consultancy and other services

(i) Sale of Energy through trading

The Company is purchasing power from the developers and selling it to the Discoms on principal to principal basis.

Below are the details of nature, timing of satisfaction of performance obligations and significant payment terms under contracts for sale of energy through trading:

Product/ Service	Nature, timing of satisfaction of performance obligations and significant payment terms
Sale of energy through trading	The Company recognises revenue from contracts for sale of energy through trading over time as the customers simultaneously receive and consume the benefits provided by the Company. The tariff for computing revenue from sale of energy through trading is determined as per the terms of the agreements. The amount of revenue recognised is adjusted for variable consideration, wherever applicable, which are estimated based on the historical data available with the Company. The amounts are billed on a monthly basis and are payable within contractually agreed credit period.

(ii) Consultancy and other services

The Company undertakes consultancy and turnkey project contracts for domestic and international clients in the different phases of power plants viz. engineering, project management & supervision, construction management, operation & maintenance of power plants, research & development, management consultancy etc.

Below are the details of nature, timing of satisfaction of performance obligations and significant payment terms under contracts for consultancy and other services:

Product/ Service	Nature, timing of satisfaction of performance obligations and significant payment terms
Consultancy services	The Company recognises revenue from contracts for consultancy services over time as the customers simultaneously receive and consume the benefits provided by the Company. For the assets (e.g. deliverables, reports etc.) transferred under the contracts, the assets do not have alternative use to the Company and the Company has enforceable right to payment for performance completed to date. The revenue from consultancy services is determined as per the terms of the contracts. The amount of revenue recognised is adjusted for variable consideration, wherever applicable, which are estimated based on the historical data available with the Company. The amounts are billed as per the terms of the contracts and are payable within contractually agreed credit period.
Operation and maintenance services	The Company recognises revenue from contracts for operation and maintenance services over time as the customers simultaneously receive and consume the benefits provided by the Company. The revenue from operation and maintenance services is determined as per the terms of the contracts. The amount of revenue recognised is adjusted for variable consideration, wherever applicable, which are estimated based on the historical data available with the Company. The amounts are billed as per the terms of the contracts and are payable within contractually agreed credit period.
Deen Dayal Upadhyay Gramin Jyoti Yojna (DDUGJY Scheme)	The Company recognises revenue from work done under DDUGJY scheme over time as the assets do not have alternative use to the Company and the Company has enforceable right to payment for performance completed to date. The revenue from DDUGJY scheme is determined as per the terms of the contract. There is no component of variable consideration under the contract. The amounts are billed as per the terms of the contracts and are payable within contractually agreed credit period.
Pradhan Mantri Sahaj Bijli Har Ghar Yojna (SAUBHAGYA Scheme)	The Company recognises revenue from work done under SAUBHAGYA scheme at a point in time when the Company transfers control of goods and services under the contract to the customers. The revenue from SAUBHAGYA scheme is determined as per the terms of the contracts. There is no component of variable consideration under the contract. The amounts are billed as per the terms of the contracts and are payable within contractually agreed credit period.

(iii) Sale of captive coal to subsidiary company

The revenue also includes revenue from sale of captive coal to subsidiary.

Below are the details of nature, timing of satisfaction of performance obligations and significant payment terms under contracts for sale of captive coal:

Product/ Service	Nature, timing of satisfaction of performance obligations and significant payment terms
Sale of captive coal to subsidiary company	The Company recognises revenue from contracts for sale of captive coal to subsidiary company when control of the goods is transferred to customers. The tariff for computing revenue from sale of captive coal to subsidiary company is determined in terms of CERC Tariff Regulations applicable for input price of coal from captive mines. The amounts are billed as and when goods are transferred and are payable as per agreed procedures.

II. Disaggregation of revenue

In the following table, revenue is disaggregated by type of product and services, geographical market and timing of revenue recognition:

₹ Crore

Particulars	Generation of energy For the year ended		Others For the year ended		Total For the year ended	
	31 March 2023	31 March 2022	31 March 2023	31 March 2022	31 March 2023	31 March 2022
Geographical markets						
India	**1,57,782.01**	1,16,189.19	**3,906.57**	3,717.45	**1,61,688.58**	1,19,906.64
Outside India		-	**0.99**	0.38	**0.99**	0.38
	1,57,782.01	1,16,189.19	**3,907.56**	3,717.83	**1,61,689.57**	1,19,907.02
Timing of revenue recognition						
Products and services transferred over time	**1,57,782.01**	1,16,189.19	**3,907.56**	3,717.83	**1,61,689.57**	1,19,907.02
	1,57,782.01	1,16,189.19	**3,907.56**	3,717.83	**1,61,689.57**	1,19,907.02

III. Reconciliation of revenue recognised with contract price:

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Contract price	**1,62,486.97**	1,20,449.02
Adjustments for:		
Rebates	**(797.40)**	(542.00)
Revenue recognised	**1,61,689.57**	1,19,907.02

IV. Contract balances

Contract assets are recognised when there is excess of revenue earned over billings on contracts. Contract assets are transferred to trade receivables revenue when there is unconditional right to receive cash, and only passage of time is required, as per contractual terms. The contract liabilities primarily relate to the advance consideration received from the customers which are referred as 'advances from customers / payable to beneficiaries'.

The following table provides information about trade receivables including unbilled revenue, contract assets and advances from customers/payable to beneficiaries:

₹ Crore

Particulars	As at 31 March 2023		As at 31 March 2022	
	Current	Non-current	Current	Non-current
Trade receivables including unbilled revenue	**24,741.45**	2,399.78	**24,747.45**	-
Contract assets	**7,096.08**	-	**4,100.75**	-
Advances from customers/payable to beneficiaries	**1,708.39**	-	**1,574.85**	-

The amount of revenue recognised from performance obligations satisfied (or partially satisfied) in previous periods, due to change in transaction prices and other reasons is ₹ **5,035.62 crore** (31 March 2022 : ₹ 1,890.87 crore).

V. Transaction price allocated to the remaining performance obligations

Performance obligations related to sale of energy:

Revenue from sale of energy is accounted for based on tariff rates approved by the CERC (except items indicated as provisional) as modified by the orders of Appellate Tribunal for Electricity to the extent applicable. In case of power stations, where the tariff rates are yet to be approved/items indicated provisional by the CERC in their orders, provisional rates are adopted considering the applicable CERC Tariff Regulations. Revenue from sale of energy is recognized once the electricity has been delivered to the beneficiary and is measured through a regular review of usage meters. Beneficiaries are billed on a periodic and regular basis. Therefore, transaction price to be allocated to remaining performance obligations cannot be determined reliably for the entire duration of the contract.

Performance obligations related to other contracts:

For rest of the contracts, transaction price for remaining performance obligations amounts to ₹ **1,082.32 crore** (31 March 2022: ₹ 1,037.51 crore) which shall be received over the contract period in proportion of the work performed/services provided by the Company.

VI. Practical expedients applied as per Ind AS 115:

a. The company has not disclosed information about remaining performance obligations that have original expected duration of one year or less and where the revenue recognised corresponds directly with the value to the customer of the entity's performance completed to date.

b. The Company does not expect to have any contracts where the period between the transfer of the promised goods or services to the customer and payment by the customer exceeds one year. As a consequence, the Company has not adjusted any of the transaction prices for the time value of money. The impact of subsequent modifications are duly recognized in the Statement of profit and loss.

VII. The Company has not incurred any incremental costs of obtaining contracts with a customer and therefore, not recognised an asset for such costs.

73. Disclosure as per Ind AS 116 'Leases'

(A) Company as Lessee

(i) The Company's significant leasing arrangements are in respect of the following assets:

(a) Premises for residential use of employees, offices and guest houses/ transit camps on lease which are not non-cancellable and are usually renewable on mutually agreeable terms. The company generally incurs amount on improvements which are significant to the respective lease and hence the cancellable period of the lease during which the company intends to continue considering the past experience / practice, is considered for the purpose of determining the lease period.

(b) The Company has taken electrical vehicles on operating lease for a period of six years, which can be further extended at mutually agreed terms. Lease rentals are subject to escalation of 10% per annum.

(c) A helicopter on wet lease basis.

(d) The Company has taken certain vehicles (other than electrical) on lease for a period of four years, which can be further extended at mutually agreed terms. There are no escalations in the lease rentals as per terms of the agreement. However, the Company has purchase option for such vehicles at the end of the lease term.

(e) The Company had entered into an agreement for movement of coal through inland waterways for one of its stations. As per the agreement, the operator was to design, finance, build, operate and maintain the unloading and material handling infrastructure for 7 years after which it was to be transferred to the Company at ₹ 1/-. Refer Note no. 63 (iii)(b).

(f) The Company acquires land on leasehold basis for a period generally ranging from 25 years to 99 years from the government authorities which can be renewed further based on mutually agreed terms and conditions. The leases are non cancellable. These leases are capitalised at the present value of the total minimum lease payments to be paid over the lease term. Future lease rentals are recognised as 'Lease obligations' at their present values. The Right-of-use land is amortised considering the significant accounting policies of the Company.

(ii) The following are the carrying amounts of lease liabilities recognised and the movements during the year :

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Opening Balance	**983.08**	872.42
- Additions in lease liabilities	**170.97**	85.92
- Interest cost during the year	**72.62**	60.34
- Payment of lease liabilities	**(151.68)**	(35.60)
- Adjustment on account of transfer of RE assets	**(88.76)**	-
Closing Balance	**986.23**	983.08
Current	**170.79**	168.01
Non Current	**815.44**	815.07

(iii) Maturity Analysis of the lease liabilities:

₹ Crore

Contractual undiscounted cash flows	As at 31 March 2023	As at 31 March 2022
3 months or less	**139.00**	148.08
3-12 Months	**62.42**	75.04
1-2 Years	**76.73**	58.54
2-5 Years	**193.33**	184.51
More than 5 Years	**2,268.85**	2,341.87
Total	**2,740.33**	2,808.04

(iv) The following are the amounts recognised in Statement of profit and loss:

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Depreciation and amortisation expense for right-of-use assets	**277.29**	222.97
Interest expense on lease liabilities	**72.62**	60.34
Expense relating to short-term leases	**44.38**	6.43

(v) The following are the amounts disclosed in the cash flow statement:

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Cash Outflow from leases	**196.06**	42.03

(B) Leases as lessor

a) Finance leases

The Company had classified the arrangement with its customer for Stage I of a power station in the nature of lease based on the principles enunciated in Appendix C of Ind AS 17 - 'Leases' and accounted for as finance lease in accordance with those principles. This arrangement continues to be classified as finance lease after transition to Ind AS 116 - 'Leases'.

The power purchase agreement with the beneficiary is for a period of twenty five years from the date of transfer and the agreement may be mutually extended, renewed or replaced by another agreement on such terms and for such further period of time as the parties may mutually agree.

The following are the amounts recognised in Statement of profit and loss:

₹ Crore

	Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
i)	Finance income on the net investment in the lease	**32.53**	45.07
ii)	Income relating to variable lease payments not included in the measurement of the net investment in the lease	**1,159.32**	730.68

Undiscounted lease payments to be received on an annual basis for a minimum of each of the first five years and for the remaining years:

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Less than one year	**108.54**	108.54
Between one and two years	**215.90**	108.54
Between two and three years	**-**	215.32
Between three and four years	**-**	-
Total minimum lease payments	**324.44**	432.40
Less: amounts representing unearned finance income	**39.25**	76.90
Present value of minimum lease payments	**285.19**	355.50

b) Operating leases

1. The Company had classified the arrangement with its customer for one gas power station as lease based on the principles enunciated in Appendix C of Ind AS 17 and accounted for as operating lease in accordance with those principles. These arrangements continue to be classified as operating lease after transition to Ind AS 116 'Leases'.

(i) Gas Power Station

PPA signed with the beneficiary on 6 January 1995 was operative for five years from the date of commercial operation of last unit of the station and may be mutually extended, renewed or replaced by another agreement on such terms and on such further period of time as the parties may mutually agree. As per the supplementary agreement dated 15 February 2013 the validity period is extended for a further period of 12 years from 1 March 2013.

The following are the amounts recognised in Statement of profit and loss in respect of the above stations:

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Lease Income	**19.58**	19.59
Income relating to variable lease payments that do not depend on an index or a rate	**84.80**	84.53

Undiscounted lease payments to be received on an annual basis for a minimum of each of the first five years and for the remaining years:

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Less than one year	**19.58**	19.58
Between one and two years	**3.91**	19.58
Between two and three years	**-**	3.91
Beyond three years	**-**	-
Total	**23.49**	43.07

2. Land given on operating lease

(i) Investment Property

As per Business transfer agreement (BTA) entered into between the Company and NTPC Green Energy Ltd. (NGEL), a wholly owned subsidiary of the Company, freehold land pertaining to one of the RE stations admeasuring 1202.55 acres shall remain with the Company and has been leased to NGEL at the mutually agreed terms and conditions.

The following are the amounts recognised in Statement of profit and loss in respect of the above stations:

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Lease Income	0.19	-
Income relating to variable lease payments that do not depend on an index or a rate	-	-

Undiscounted lease payments to be received on an annual basis for a minimum of each of the first five years and for the remaining years:

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Less than one year	2.25	-
Between one and two years	2.25	-
Between two and three years	2.25	-
Between three and four years	2.25	-
Between four and five years	2.25	-
Beyond five years	40.73	-
Total	**51.98**	-

74. Information in respect of micro and small enterprises as at 31 March 2023 as required by Schedule III to the Companies Act, 2013 and Micro, Small and Medium Enterprises Development Act, 2006 (MSMED Act)

₹ Crore

Particulars		31 March 2023	31 March 2022
a)	Amount remaining unpaid to any supplier:		
	Principal amount	564.51	756.38
	Interest due thereon	-	-
b)	Amount of interest paid in terms of Section 16 of the MSMED Act along-with the amount paid to the suppliers beyond the appointed day.	-	-
c)	Amount of interest due and payable for the period of delay in making payment (which have been paid but beyond the appointed day during the year) but without adding the interest specified under the MSMED Act.	-	-
d)	Amount of interest accrued and remaining unpaid	-	-
e)	Amount of further interest remaining due and payable even in the succeeding years, until such date when the interest dues as above are actually paid to the small enterprises, for the purpose of disallowances as a deductible expenditure under Section 23 of MSMED Act	-	-

The payment to the vendors are made as and when they are due, as per terms and conditions of respective contracts.

75. Disclosure as required by Schedule V of the SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015:

A. Loans and advances in the nature of loans:

1. To Subsidiary companies

₹ Crore

Name of the Company	Outstanding balance as at		Maximum amount outstanding during the year ended	
	31 March 2023	31 March 2022	**31 March 2023**	31 March 2022
Ratnagiri Gas and Power Private Ltd.	**765.53**	818.62	**918.62**	871.73
NTPC Renewable Energy Limited	**-**	-	**-**	0.70

2. To Joint venture companies

₹ Crore

Name of the Company	Outstanding balance as at		Maximum amount outstanding during the year ended	
	31 March 2023	31 March 2022	**31 March 2023**	31 March 2022
National High Power Test Laboratory Private Ltd.	**18.40**	18.40	**18.40**	18.40

3. To Firms/companies in which directors are interested : **Nil**

B. Investment by the loanee (as detailed above) in the shares of NTPC and its subsidiaries : Nil

76. Contingent liabilities, contingent assets and commitments

A. Contingent liabilities

a. Claims against the Company not acknowledged as debts

(i) Capital Works

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Claims by contractors under capital works	**12,883.31**	10,794.18

Some of the contractors for supply and installation of equipment and execution of works at our projects have lodged claims on the Company for the above amounts seeking enhancement of the contract price, revision of work schedule with price escalation, compensation for the extended period of work, idle charges etc. These claims are being contested by the Company as being not admissible in terms of the provisions of the respective contracts.

The Company is pursuing various options under the dispute resolution mechanism available in the contracts for settlement of these claims. It is not practicable to make a realistic estimate of the outflow of resources if any, for settlement of such claims pending resolution.

(ii) Land compensation cases

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Claims by land oustees	**597.02**	624.19

In respect of land acquired for the projects, the erstwhile land owners have claimed higher compensation before various authorities/courts which are yet to be settled. Against such cases, contingent liability of these amounts has been estimated.

(iii) Fuel suppliers

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Claims towards grade slippages	**1,638.71**	2,145.78
Other claims	**2,646.89**	2,561.29

Pending resolution of issues with the coal companies through AMRCD(Alternate Mechanism for Resolution of CPSE Disputes), claims towards grade slippage pertining to period prior to appointment of CIMFR(Central India Mining and Fuel Research) for joint sampling pursuant to tripartite agreement, has been estimated by the Company as contingent liability. Further, other claims represent claims made by fuel companies towards surface transportation charges, custom duty on service margin on imported coal, take or pay claims of gas suppliers, etc. ,estimated by the Company as contingent liability.

The Company is pursuing with the fuel companies, related ministries and other options under the dispute resolution mechanism available for settlement of these claims.

(iv) Others

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Claims by government agencies / others	**847.86**	848.48

In respect of claims made by various State/Central Government departments/Authorities towards building permission fee, penalty on diversion of agricultural land to non-agricultural use, non agricultural land assessment tax, water royalty, other claims, etc. and by others, a contingent liability of the above amounts has been estimated.

(v) Possible reimbursement in respect of (i) to (iii) above

In respect of claims included in (i) and (ii) above, payments, if any, by the Company on settlement of the claims would be eligible for inclusion in the capital cost for the purpose of determination of tariff as per CERC Tariff Regulations subject to prudence check by the CERC. In case of (iii), the estimated possible reimbursement by way of recovery through tariff as per Regulations is ₹ **4,225.77 crore** (31 March 2022: ₹ 4,696.06 crore).

b. Disputed tax matters

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Tax matters before various authorities	**1,304.26**	6,115.62

Disputed income tax/sales tax/excise and other tax matters are pending before various Appellate Authorities. Many of these matters were adjudicated in favour of the Company but are disputed before higher authorities by the concerned departments. In respect of these disputed cases, the Company estimate possible reimbursement of ₹ **142.97 crore** (31 March 2022: ₹ 2,347.59 crore). The amount paid under dispute/adjusted by the authorities in respect of the cases amounts to ₹ **762.45 crore** (31 March 2022: ₹ 2,868.97 crore).

c. Others

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Bills discounted with banks	**1,287.19**	8,202.03
Coal transportation [Refer Note 64(iii)(b)]	**2,431.04**	2,292.30
Others	**719.28**	396.62

Bills discounted with banks against trade receivables has been disclosed under contingent liabilities. (Refer Note-15). In case of any claim on the Company from the banks in this regard, entire amount shall be recoverable from the beneficiaries along with surcharge. Others include contingent liabilities disclosed on an estimated basis relating to likely claims that may arise in connection with abandoned oil exploration activities, land use agreements, service tax reibursements, stamp duty charges arising out of merger, etc .

Some of the beneficiaries have filed appeals against the tariff orders of the CERC. The amount of contingent liability in this regard is not ascertainable.

B. Contingent assets

(i) While determining the tariff for some of the Company's power stations, CERC has disallowed certain capital expenditure incurred by the Company. The Company aggrieved over such issues has filed appeals with the Appellate Tribunal for Electricity (APTEL)/Hon'ble Supreme Court against the tariff orders issued by the CERC. Based on past experience, the

Company believes that a favourable outcome is probable. However, it is impracticable to estimate the financial effect of the same as its receipt is dependent on the outcome of the judgement.

(ii) Coal companies have disputed some of the grade slippages confirmed by CIMFR(third party sampler) in favour of the Company and have approached referee challenging the CIMFR results. The referee results are binding on both the parties. Considering the uncertainty involved in the outcome of refree results, the Company has not recognised claims arising out of favourable CIMFR results pending receipt of referee results challenged by the coal companies, considering the provisions of Ind AS 37. It is impracticable to estimate the financial effect of the same as its receipt is dependent on the outcome of the referee results which is wholly not within the control of the Company. Not withstanding the above, the outcome of the referee results shall be dealt with as per the provisions of CERC Tariff Regulations.

(iii) CERC Tariff Regulations provide for levy of Late Payment Surcharge by generating company in case of delay in payment by beneficiaries beyond specified number of days from the date of presentation of bill. However, in view of significant uncertainties in the ultimate collection of the said surcharge from some of the beneficiaries against partial bills as estimated by the management, an amount of ₹ **534.63 crore** as on 31 March 2023 (31 March 2022: ₹ 692.75 crore) has not been recognised.

C. Commitments

a) Estimated amount of contracts remaining to be executed on capital account is as under:

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Property, plant and equipment	**41,154.11**	40,465.54
Intangible assets	**45.91**	43.65
Total	**41,200.02**	40,509.19

b) In respect of investments in subsidiary companies (including share application money pending allotment), the Company has restrictions for their disposal as at 31 March 2023 as under:

₹ Crore

Name of the Subsidiary	Period of restrictions for disposal of investments as per related agreements	Amount invested as at	
		31 March 2023	31 March 2022
Bhartiya Rail Bijlee Company Ltd.	5 years from the date of commercial operation of the last unit of the project or till further date as may be mutually agreed.	**1,774.12**	1,774.12
Patratu Vidyut Utpadan Nigam Ltd.	5 years from the date of signing of agreement or till the date of commercial operation of the last new unit of Phase-I, whichever is later.	**1,737.62**	1,237.62
THDC India Ltd.	Save and except with prior written consent of GOI, NTPC shall not take any action that may result in shareholding in the subsidiary falling below 51% and shall not take any action that may result in the subsidiary ceasing to be a government company.	**7,500.00**	7,500.00
North Eastern Electric Power Corporation Ltd.	Save and except with prior written consent of GOI, NTPC shall not take any action that may result in shareholding / or total voting power in the subsidiary falling below 51% and shall not take any action that may result in the subsidiary ceasing to be a government company. Further, NTPC shall continue to hold 100% of paid up capital and voting power in the subsidiary till all amounts repayable under the loan agreement executed between the subsidiary and KfW are repaid.	**4,000.00**	4,000.00
NTPC EDMC Waste Solutions Pvt Ltd	5 years from the date of incorporation (i.e. 01 June 2020)	**0.15**	0.15
Total		**15,011.89**	14,511.89

c) In respect of investments in joint venture companies (including share application money pending allotment), the Company has restrictions for their disposal as at 31 March 2023 as under:

₹ Crore

Name of the Joint Venture Company	Period of restrictions for disposal of investments as per related agreements	Amount invested as at	
		31 March 2023	31 March 2022
Transformers and Electricals Kerala Ltd.	3 years from the date of acquisition (i.e.19.06.2009) or upgradation capacity enhancement scheme whichever is later or such later period as may be mutually agreed. Also refer Note 7 (g).	**31.34**	31.34
NTPC BHEL Power Projects Private Ltd.	3 years from the date of completion of first EPC contract of single order value of not less than ₹500 crore or till further such time as mutually agreed. Also refer Note 7 (f).	**50.00**	50.00
National High Power Test Laboratory Private Ltd.	5 years from the date of incorporation (i.e. 22.05.2009) or completion of project whichever is later. Also refer Note 7 (e)	**30.40**	30.40
CIL NTPC Urja Private Ltd.	5 years from the date of incorporation (i.e. 27.04.2010) or commercial operation whichever is later.	**0.08**	0.08
Trincomalee Power Company Ltd.	12 years from the initial operation date.	**15.64**	15.20
Bangladesh-India Friendship Power Company Private Ltd.	15 years from the date of commercial operation date.	**1,162.02**	620.38
Hindustan Urvarak and Rasayan Ltd.	(a) 5 years from the date of incorporation (15.06.2016) or 2 years from commercial operation date of any one of the proposed projects at Sindri, Gorakhpur and Barauni or date of allotment of shares for first time, whichever is later. (b) As per Sponsors Support undertaking , NTPC shall jointly and severally with the other sponsors provide additional funds to meet all cost overrun incurred/to be incurred in relation to the Project. Further, NTPC shall jointly with the other sponsors, retain 51% of total equity share capital of the JV and management control until the final settlement date of the loan facility (door to door tenure of 15 years). (Also refer Note 7(h))	**2,295.95**	1,629.42
Jhabua Power Limited	3 years from the date of transfer (05.09.2022)	**325.00**	-
Total		**3,910.43**	2,376.82

d) In respect of other investments, the Company has restrictions for their disposal as at 31 March 2023 as under:

₹ Crore

Name of the Company	Period of restrictions for disposal of investments as per related agreements	Amount invested as at	
		31 March 2023	31 March 2022
International Coal Ventures Private Ltd.	5 years from the date of incorporation (i.e. 20.05.2009) or till such time an undertaking for non-disposal of such share is given to FI/Banks for their assistance to the Company whichever is later. Also refer Note 8 (c).	**1.40**	1.40
Total		**1.40**	1.40

e) The Company has commitments of ₹ **2,931.63 crore** (31 March 2022: ₹ 7,420.27 crore) towards further investment in the subsidiary companies as at 31 March 2023.

f) The Company has commitments of ₹ **1,143.96 crore** (31 March 2022: ₹ 2,369.13 crore) towards further investment in the joint venture entities as at 31 March 2023.

g) The Company has commitments of bank guarantee of 0.50% of total contract price to be undertaken by NTPC-BHEL Power Projects Private Ltd. (a joint venture company) to a cumulative amount of ₹ **75.00 crore** (31 March 2022: ₹ 75.00 crore).

h) The Company has agreed to provide unconditional and irrevocable financial support to NTPC GE Power Services Ltd. (a joint venture company) for meeting financial qualifying requirement for execution of Flue Gas De-sulfurisation (FGD) projects in India. Such support shall be provided by way of Letter of Undertaking to a cumulative exposure up to the award value of the contract(s) not exceeding ₹ 600.00 Crore and cumulative exposure of the Company, in proportion to shareholding, would not exceed ₹ **300.00 crore** (31 March 2022: ₹ 300.00 crore).

i) The Company has provided corporate guarantee for an amount of ₹ **237.60 crore** (31 March 2022: ₹ 237.60 crore) for Patratu Vidyut Utpadan Nigam Ltd. (PVUNL) (a subsidiary company) in favor of Axis Bank for sanction of bank guarantee issued to Ministry of Coal for performance security against the milestones of Banhardih coal mine development of PVUNL.

j) The Company has agreed to provide borrowing support to NTPC Renewable Energy Limited (an esrtwhile subsidiary/ currently subsidiary of NTPC Green Energy Limited which is a wholly owned subsidiary of the Company) upto ₹ **6,000 crore** (31 March 2022: ₹ 6,000 crore) in the form of long term / short term loan, bank guarantee, corporate guarantee / comfort letter to banks, etc., in case it is required by NTPC Renewable Energy Limited.

k) The Company has agreed to provide sponsor undertaking to lenders for additional term loan upto ₹ **1,908.38 crore** (31 March 2022: ₹ 1,908.38 crore) for implementation of various projects of Hindustan Urvarak and Rasayan Limited, a Joint Venture Company.

l) Company's commitment towards the minimum work programme in respect of oil exploration activities of joint operations has been disclosed in Note 66.

m) Company's commitment in respect of lease agreements has been disclosed in Note 73.

77. Additional Regulatory Information

i) Title deeds of Immovable Properties not held in name of the Company as at 31 March 2023

Item category Balance sheet	Description of Item of Property	Gross Carrying Value (₹ crore)	Title Deeds Held in the name of	Whether title deed holder is a promoter, director or relative# of promoter* /director or employee of promoter/ director	Property held since which date	Reason for not being held in the name of the company
Property, plant and equipment	Land - Freehold	1,196.04	Large number of land oustees and State authorities	No	2022-23	The company is taking appropriate steps for completion of legal formalities.
		7.63			2021-22	
		21.69			2020-21	
		23.43			2019-20	
		123.76			2016-17 to 2018-19	
		674.61			2011-12 to 2015-16	
		171.34			Prior to 2011-12	
	Land - Right of Use	121.04	Large number of land oustees and State authorities		2022-23	
		0.46			2020-21	
		20.83			2019-20	
		168.98			2016-17 to 2018-19	
		173.63			2011-12 to 2015-16	
		244.08			Prior to 2011-12	
	Building	4.97			Prior to 2011-12	

Title deeds of Immovable Properties not held in name of the Company as at 31 March 2022

Item category Balance sheet	Description of Item of Property	Gross Carrying Value (₹ crore)	Title Deeds Held in the name of	Whether title deed holder is a promoter, director or relative# of promoter* / director or employee of promoter/ director	Property held since which date	Reason for not being held in the name of the company
Property, plant and equipment	Land - Freehold	10.34	Large number of land oustees and State authorities	No	2021-22	The Company is taking appropriate steps for completion of legal formalities.
		77.92			2020-21	
		12.52			2019-20	
		174.44			Since 2017-18	
		3.32			2016-17	
		148.77			2016-17 to 2018-19	
		1,163.29			2011-12 to 2015-16	
		174.55			Prior to 2011-12	
	Land - Right of Use	22.45			2021-22	
		20.82			2020-21	
		20.83			2019-20	
		7.13			2018-19	
		115.74			2016-17 to 2018-19	
		177.01			2011-12 to 2015-16	
		250.04			Prior to 2011-12	
	Building	4.97			Prior to 2011-12	

ii) The company has investment property and fair valuation of investment property has been carried out. Refer Note 4.

iii) During the year the company has not revalued any of its Property,plant and equipment.

iv) During the year, the company has not revalued any of its Intangible assets.

v) The company has not granted any loans or advances to promoters, directors, KMP's and the related parties that are repayable on demand or without specifying any terms or period of repayment.

vi) (a) Capital-Work-in Progress (CWIP) - Ageing Schedule as at 31 March 2023

₹ Crore

Capital-Work-in Progress (CWIP)	Amount in CWIP for a period of				Total
	Less than 1 year	1-2 years	2-3 years	More than 3 years	
Projects in progress	13,048.38	11,627.24	8,666.03	28,283.91	**61,625.56**
Projects temporarily suspended	24.09	-	-	94.23	**118.32**

Capital-Work-in Progress (CWIP) - Ageing Schedule as at 31 March 2022

₹ Crore

Capital-Work-in Progress (CWIP)	Amount in CWIP for a period of				Total
	Less than 1 year	1-2 years	2-3 years	More than 3 years	
Projects in progress	19,801.24	14,106.11	12,046.17	27,451.47	73,404.99
Projects temporarily suspended	-	0.72	0.29	113.11	114.12

vi) (b) Capital-Work-in Progress (CWIP) - Completion schedule for projects overdue or cost overruns as compared to original plan as on 31 March 2023

₹ Crore

Name of the project	To be completed in				Total
	Less than 1 year	1-2 years	2-3 years	More than 3 years	
	Upto 31 March 2024	1 April 2024 to 31 March 2025	1April 2025 to 31 March 2026	Beyond 1 April 2026	
North Karanpura TPP	-	7,460.83	-	-	**7,460.83**
Barh-I TPP	-	11,862.70	-	-	**11,862.70**
Tapovan HEP	-	5,817.62	-	-	**5,817.62**
Rammam Hydro Electric	-	-	-	785.14	**785.14**
Telangana-I TPP	11,262.65	-	-	-	**11,262.65**
Talaipalli Coal Mining Project	939.61	-	-	-	**939.61**
Chatti Bariatu Coal Mining Project	-	463.31	-	-	**463.31**
Kerandari Coal Mining Project	-	-	831.16	-	**831.16**
Badam Coal Mining Project	-	-	-	41.58	**41.58**

Capital -Work-in Progress (CWIP) - Completion schedule for projects overdue or cost overruns as compared to original plan as on 31 March 2022

₹ Crore

Name of the project	To be completed in				Total
	Less than 1 year	1-2 years	2-3 years	More than 3 years	
	Upto 31 March 2023	1 April 2023 to 31 March 2024	1April 2024 to 31 March 2025	Beyond 1 April 2025	
North Karanpura	-	13,102.82	-	-	13,102.82
Barh-I	-	10,508.33	-	-	10,508.33
Tavopan Hydro Electric	-	-	5,350.49	-	5,350.49
Rammam	-	-	-	648.31	648.31
Telangana-I	9,987.25	-	-	-	9,987.25
Nabinagar	4,414.98	-	-	-	4,414.98

vii) (a) Intangible assets under development - Ageing Schedule as at 31 March 2023

₹ Crore

Intangible assets under development	Amount in CWIP for a period of				Total
	Less than 1 year	1-2 years	2-3 years	More than 3 years	
Projects in progress	5.85	3.65	5.14	30.28	**44.92**
Projects temporarily suspended	-	-	-	-	**-**

Intangible assets under development - Ageing Schedule as at 31 March 2022

₹ Crore

Intangible assets under development	Amount in CWIP for a period of				Total
	Less than 1 year	1-2 years	2-3 years	More than 3 years	
Projects in progress	3.67	8.64	55.73	30.43	98.47
Projects temporarily suspended	-	-	-	-	-

vii) (b) Intangible assets under development - Completion schedule for projects overdue or cost overruns as compared to original plan as on 31 March 2023 is **Nil** (31 March 2022: Nil)

viii) No proceedings have been initiated or pending against the company under the Benami Transactions (Prohibition) Act,1988.

ix) The quarterly returns / statement of current assets filed by the company with banks / financial institutions are in agreement with the books of accounts.

x) The company has not been declared as a wilful defaulter by any bank or financial institution or any other lender.

xi) Relationship with Struck off Companies

(a) Payables / receivables

Name of struck off Company	Nature of transactions with struck-off Company	Balance outstanding as at 31 March 2023 (₹ Crore)	Balance outstanding as at 31 March 2022 (₹ Crore)	Relationship with the struck off company	CIN	Remarks
Aradhya Construction Private Limited	Receivables	#	#	Contractor	U45200BR2013PTC020295	
Pb Infrastructure & Engineering (P) Ltd	Receivables	-	#	Contractor	U45203OR2006PTC008648	
Shiv Singh Amar Singh And Company Private Limited	Receivables	**1.38**	1.38	Contractor	U70200DL1985PTC022577	Under Litigation
Ganga Mechanical works Pvt Ltd	Receivables	**0.05**	0.05	Contractor	U45201DL2003PTC119275	
Hello Marketing Pvt. Ltd	Receivables	#	#	Contractor	U67190DL1993PTC053859	
S S Builders (India) Pvt Ltd	Receivables	#	#	Contractor	U45201DL1981PTC011552	
Shiva Sakthi Services Pvt. Ltd.	Receivables	#	#	Contractor	U74992DL1995PTC072519	
Brindavan Projects Ltd	Payables	**0.01**	0.01	Contractor	U45200TG1994PLC018506	
Eco E-Waste Recyclers India Private Limited	Payables	#	#	Contractor	U37200KA2010PTC052547	
Go Green Buildtech Pvt. Ltd.	Payables	#	#	Contractor	U45400DL2014PTC264520	
Innutech Web Solutions Pvt Ltd	Payables	#	#	Contractor	U72200DL2010PTC200692	
Leonard Exports Private Limited	Payables	**0.10**	0.10	Contractor	U74900WB2009PTC133430	
Neway Engineers Msw Pvt. Ltd.	Payables	**0.18**	0.18	Contractor	U74900TN2015PTC100484	
Prava Trading Corporation (India) Private Limited	Payables	**0.05**	0.05	Contractor	U51909WB2013PTC197297	
S.V. Network Technologies India Private Limited	Payables	-	0.10	Contractor	U72200TG2006PTC051972	
U K Construction Pvt Ltd	Payables	#	#	Contractor	U00501BR1986PTC002490	
Excellent Technocrate Pvt Ltd	Payables	-	0.01	Contractor	U45200BR2009PTC014723	
Hanothia Industries Ltd.	Payables	#	#	Contractor	U27109TG2005PTC046327	
Hn18 Health Services Pvt Ltd	Payables	#	#	Contractor	U74900KA2015PTC080531	
Kkl Allied Marketing Services Pvt Ltd	Payables	-	0.01	Contractor	U74999TG2008PTC057231	
M M Raj Travels Private Limited	Payables	#	#	Contractor	U34101UP1996PTC020425	

Name of struck off Company	Nature of transactions with struck-off Company	Balance outstanding as at 31 March 2023 (₹ Crore)	Balance outstanding as at 31 March 2022 (₹ Crore)	Relationship with the struck off company	CIN	Remarks
Prime Development Consultants Pvt Ltd	Payables	-	#	Contractor	U00358BR2001PTC009696	
Pumos Lighting Pvt Ltd	Payables	#	#	Contractor	U31503DL2012PTC240358	
S.V. Ready Mix Private Limited	Payables	-	#	Contractor	U74999AP2007PTC055829	
Snr Bricks Private Limited	Payables	-	#	Contractor	U26931AP2008PTC058944	
Timetech Enterprises Pvt Ltd	Payables	0.01	0.01	Contractor	U51109DL1989PTC038628	
Uniteam Pvt Ltd	Payables	#	#	Contractor	U29253WB2011PTC169264	
A.S. Builders Private Limited.	Payables	0.01	-	Contractor	U45201DL1995PTC071401	
Asian Marketing Co Ltd	Payables	#	-	Contractor	U51909WB1951PLC019996	
Burn Standard Co. Ltd.	Payables	0.03	0.05	Contractor	U51909WB1976GOI030797	
Chandel Construction Private Limite	Payables	0.10	-	Contractor	U45202BR2019PTC043334	
Hemantbirla Construction(I)Pvt Ltd	Payables	0.01	-	Contractor	U45309MP2021PTC054984	
Jagrit Care Pvt Ltd	Payables	0.01	0.01	Contractor	U85110BR2008PTC013510	
Rohtas Security & Intelligence	Payables	#	-	Contractor	U74920BR2008PTC013425	
Sankat Mochan Construction Pvt Ltd	Payables	0.01	0.01	Contractor	U45200BR2003PTC010344	
Shree Swami Samarth	Payables	0.01	0.03	Contractor	U93000KA2012PTC066661	
Titan Televentures Pvt. Ltd.	Payables	#	-	Contractor	U51909UP2004PTC029354	

Individual Amount recoverable/payable is less than ₹ 50,000/- and sum of all recoverable cases amounts to ₹ **25,994/-** (31 March 2022- ₹ 80,046) and sum of all payable cases amounts to ₹ **2,95,848/-** (31 March 2022 - ₹ 1,86,253/-)

b) Shares held by struck off companies

Name of struck off Company	Nature of transactions with struck-off Company	Number of equity shares held 31.03.2023	Number of equity shares held 31.03.2022	CIN
Stalag Investments & Management Services Pvt Ltd	Shares held by struck off company	60	60	U67120MH1987PTC042898
Tradeshare Financial Services Pvt Ltd		120	120	U67120KL2008PTC023516
Exponential Financial Services Pvt Ltd		120	120	U74110DL1995PTC064465
Dige And Associates Investment Consultants Pvt Ltd		34	34	U00893PN2006PTC022295
Canny Securities Pvt Ltd		1	1	U67120KA1995PTC018357
Satvik Financial Services Ltd.		24	24	U67100MH2009PLC196964
Vaishak Shares Limited		1	1	U85110KA1994PLC015178
Kothari Intergroup Ltd.		13	13	U51909KA1984PLC005952
Dreams Broking Private Limited		6	6	U67190MH2012PTC226215
Accord Freight Pvt Ltd		125	125	U63090MH1999PTC123401
Ganapati Infin Pvt Ltd		48	48	U70109PB2011PTC034996
Shree Anekant Marketing Pvt Ltd		10	0	U51900WB1995PTC106659

c) **Debentures held by struck off companies**

Name of struck off Company	Nature of transactions with struck-off Company	Number of Debentures held 31.03.2023	Number of Debentures held 31.03.2022	CIN
Stalag Investments & Management Services Pvt Ltd	Debentures held by struck off company	**50**	50	U67120MH1987PTC042898
Tradeshare Financial Services Pvt Ltd		**100**	100	U67120KL2008PTC023516
Exponential Financial Services Pvt Ltd		**100**	100	U74110DL1995PTC064465
Dige And Associates Investment Consultants Pvt Ltd		**29**	29	U00893PN2006PTC022295
Canny Securities Pvt Ltd		**1**	1	U67120KA1995PTC018357
Satvik Financial Services Ltd.		**20**	20	U67100MH2009PLC196964
Vaishak Shares Limited		**1**	1	U85110KA1994PLC015178
Kothari Intergroup Ltd.		**11**	11	U51909KA1984PLC005952
Ganapati Infin Pvt Ltd		**40**	40	U70109PB2011PTC034996

xii) The company has no cases of any charges or satisfaction yet to be registered with ROC beyond the statutory time limits.

xiii) The provisions of clause (87) of section 2 of the Act read with the Companies (Restriction on number of Layers) Rules, 2017 are not applicable to the company as per Section 2(45) of the Companies Act,2013.

xiv) Disclosure of Ratios

Ratio	Numerator	Denominator	FY 2022-23	FY 2021-22	% Variance	Reason for Variance more than 25%
Current ratio	Current Assets	Current Liabilities	**0.91**	0.78	17.34%	
Debt-equity ratio	Paid-up debt capital (Non current borrowings+Current borrowings)	Shareholder's Equity (Total Equity)	**1.33**	1.43	-7.16%	
Debt service coverage ratio	Profit for the year+Finance costs+ Depreciation and amortiation expenses + Exceptional items	Finance Costs + lease payments + Scheduled principal repayments of non current borrowings	**1.29**	1.60	-19.48%	
Return on equity ratio (%)	Profit for the year	Average Shareholder's Equity	**12.85%**	13.15%	-2.24%	
Inventory turnover ratio	Revenue from operations	Average Inventory	**14.01**	12.69	10.40%	
Trade receivables turnover ratio	Revenue from operations	Average trade receivables	**6.31**	4.93	28.14%	Mainly due to increase in revenue from operations
Trade payables turnover ratio	Total Purchases (Fuel Cost + Other Expenses+Closing Inventory-Opening Inventory)	Closing Trade Payables	**9.53**	7.80	22.26%	

Ratio	Numerator	Denominator	FY 2022-23	FY 2021-22	% Variance	Reason for Variance more than 25%
Net capital turnover ratio	Revenue from operations	Working Capital+current maturities of non current borrowings	**15.07**	46.30	-67.45%	Due to increase in denominator partly offset by increase in revenue from operations
Net profit ratio (%)	Profit for the year	Revenue from operations	**10.50%**	13.44%	-21.85%	
Return on capital employed (%)	Earning before interest and taxes	Capital Employed(i)	**9.42%**	8.60%	9.65%	
Return on investment(ii)-Investments in Quoted Equity (%)	{MV(T1) – MV(T0) – Sum [C(t1)]}	{MV(T0) + Sum [W(t) * C(t2)]}	**10.70%**	15.43%	-30.68%	Due to difference in openeing and closing market price of the listed investments in the comparitive periods.
Return on investment(ii)-Investments in Subsidiaries (%)	{MV(T1) – MV(T0) – Sum [C(t1)]}	{MV(T0) + Sum [W(t) * C(t2)]}	**10.72%**	6.76%	58.67%	Due to variation in networth of the subsidiaries in the comparitive periods
Return on investment(ii)-debentures in joint venture (%)	{MV(T1) – MV(T0) – Sum [C(t1)]}	{MV(T0) + Sum [W(t) * C(t2)]}	**8.50%**	0.00%	0.00%	Investments were made in the current year
Return on investment(ii)-Investments in Mutual Fund-Unquoted (%)	{MV(T1) – MV(T0) – Sum [C(t1)]}	{MV(T0) + Sum [W(t) * C(t2)]}	**0.00%**	3.21%	-100%	No investments made in the current year.

(i) Capital Employed= Tangible Net Worth + Total Debt + Deferred Tax Liabilities

(ii) Return on Investment where

T1 = End of time period

T0 = Beginning of time period

t = Specific date falling between T1 and T0

MV(T1) = Market Value at T1

MV(T0) = Market Value at T0

C(t1) = Cash inflow, cash outflow on specific date including dividend received

C(t2) = Cash inflow, cash outflow on specific date excluding dividend received

W(t) = Weight of the net cash flow (i.e. either net inflow or net outflow) on day 't', calculated as [T1 – t] / T1

xv) The scheme of Amalgamation approved by the competent authority during the year in terms of sections 230 to 237 of the Companies Act,2013 has been implemented. Refer note 65.

xvi) The Company has not advanced or loaned or invested any fund to any entity (Intermediaries) with the understanding that the Intermediary shall lend or invest in party identified by or on behalf of the Company (Ultimate Beneficiaries). The Company has not received any fund from any party with the understanding that the Company shall whether, directly or indirectly lend or invest in other entities identified by or on behalf of the Company ("Ultimate Beneficiaries") or provide any guarantee, security or the like on behalf of the Ultimate Beneficiaries.

xvii) The Company has not traded or invested in Crypto currency or Virtual Currency during the financial year.

xviii) The Company does not have any transaction which is not recorded in the books of accounts that has been surrendered or disclosed as income during the year in the tax assessments under the Income Tax Act, 1961.

78. Corporate Social Responsibility Expenses (CSR)

As per Section 135 of the Companies Act, 2013 read with guidelines issued by Department of Public Enterprises, GOI, the Company is required to spend, in every financial year, at least two per cent of the average net profits of the Company made during the three immediately preceding financial years in accordance with its CSR Policy. The details of CSR expenses for the year are as under:

₹ Crore

Particulars		For the year ended 31 March 2023	For the year ended 31 March 2022
A.	Amount required to be spent during the year		
	(i) Gross amount (2% of average net profit as per Section 135 of Companies Act,2013)	**310.00**	286.55
	(ii) Surplus arising out of CSR projects		-
	(iii) Set off available from previous year	**219.87**	141.28
	(iv) Total CSR obligation for the year [(i)+(ii) -(iii)]	**90.13**	145.27
B.	Amount approved by the Board to be spent during the year	**315.32**	365.14
C.	Amount spent during the year on:		
	a) Construction/acquisition of any asset		-
	b) On purposes other than (a) above	**315.32**	365.14
Total		**315.32**	365.14
D.	Set off available for succeeding years	**225.19**	219.87
E.	Amount unspent during the year	**-**	-

Note:- The set off available in the succeeding years is not recognised as an asset as a matter of prudence, considering the uncertainty involved in the adjustment of the same in future years.

i) Amount spent during the year ended 31 March 2023:

₹ Crore

Particulars	In cash	Yet to be paid in cash	Total
a) Construction/acquisition of any asset	**-**	**-**	**-**
b) On purposes other than (a) above	**301.73**	**13.59**	**315.32**

Amount spent during the year ended 31 March 2022:

₹ Crore

Particulars	In cash	Yet to be paid in cash	Total
a) Construction/acquisition of any asset	-	-	-
b) On purposes other than (a) above	347.89	17.25	365.14

ii) Details of contribution to a trust controlled by the company in relation to CSR expenditure:

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Contribution given to NTPC Foundation	**9.45**	0.18

iii) Break-up of the CSR expenses under major heads is as under:

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
1. Eradicating Hunger and Poverty, Health Care and Sanitation	**115.61**	92.68
2. Education and Skill Development	**26.74**	109.55
3. Empowerment of Women and other Economically Backward Sections	**5.49**	7.24
4. Environmental Sustainability	**38.14**	31.08
5. Art & Culture	**1.90**	0.52
6. Sports	**12.40**	4.70
7. Rural Development	**19.84**	23.63
8. Disaster management, including relief, rehabilitation and reconstruction activities	**15.20**	15.74
9. Contribution to PM CARES Fund	**80.00**	80.00
Total	**315.32**	365.14

For and on behalf of the Board of Directors

(Arun Kumar) Company Secretary	(Jaikumar Srinivasan) Director (Finance) DIN: 01220828	(Gurdeep Singh) Chairman & Managing Director DIN: 00307037

These are the notes referred to in our report of even date

For S.K. Mehta & Co. Chartered Accountants Firm Reg. No.000478N	For Varma & Varma Chartered Accountants Firm Reg. No. 004532S	For Parakh & Co. Chartered Accountants Firm Reg. No. 001475C
(Rohit Mehta) Partner M No.091382	(K P Srinivas) Partner M No. 208520	(Thalendra Sharma) Partner M No.079236
For C.K. Prusty & Associates Chartered Accountants Firm Reg. No. 323220E	For B.C. Jain & Co. Chartered Accountants Firm Reg. No. 001099C	For V.K. Jindal & Co. Chartered Accountants Firm Reg. No. 001468C
(C.K.Prusty) Partner M No. 057318	(Rishabh Jain) Partner M.No.400912	(Suresh Agarwal) Partner M.No.072534

Place : New Delhi
Dated : 19 May 2023

Digitally signed by signatories

INDEPENDENT AUDITORS' REPORT

To,

The Members of NTPC Limited

Report on the Audit of the Standalone Financial Statements

Opinion

We have audited the Standalone Financial Statements of NTPC Limited, which comprise the Balance Sheet as at 31 March 2023, the Statement of Profit and Loss (including Other Comprehensive Income), the Statement of Changes in Equity and the Statement of Cash Flows for the year then ended and notes to the financial statements, including a summary of the significant accounting policies and other explanatory information (hereinafter referred to as "Standalone Financial Statements").

In our opinion and to the best of our information and according to the explanations given to us, the aforesaid Standalone Financial Statements give the information required by the Companies Act, 2013 ("the Act") in the manner so required and give a true and fair view in conformity with the accounting principles generally accepted in India, of the state of affairs (financial position) of the Company as at 31 March, 2023, and its profit (financial performance including other comprehensive income), changes in equity and its cash flows for the year ended on that date.

Basis for Opinion

We conducted our audit in accordance with the Standards on Auditing (SAs) specified under section 143(10) of the Act. Our responsibilities under those Standards are further described in the Auditors' Responsibilities for the Audit of the Standalone Financial Statements section of our report. We are independent of the Company in accordance with the Code of Ethics issued by the Institute of Chartered Accountants of India together with the ethical requirements that are relevant to our audit of the Standalone Financial Statements under the provisions of the Act and the Rules thereunder, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the Code of Ethics. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Emphasis of Matter

We draw attention to the following matters in the notes to the Standalone Financial Statements:

(a) Note No. 50 (c) with respect to one of the projects under construction, wherein by the order dated 12 January 2023 of Hon'ble High Court of Uttarakhand, construction activities are banned till further order.

(b) Note No. 63 (iii) (b) with respect to appeal filed by the company with the Hon'ble High Court of Delhi in the matter of Arbitral award pronounced against the company and the related provision made/disclosure of contingent liability as mentioned in the said note.

(c) Note No. 59 (f) (iv & v) which describes the related party transactions entered into by the Company during the year, which are not approved as required under applicable laws and regulations.

Our opinion is not modified in respect of these matters.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the Standalone Financial Statements of the current period. These matters were addressed in the context of our audit of the Standalone Financial Statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. For each matter below, description of how our audit addressed the matter is provided in that context. We have determined the matters described below to be the key audit matters to be communicated in our report.

Sl. No.	Key Audit Matter	How our audit addressed the Key Audit Matter
1.	**Recognition and Measurement of revenue from Sale of Energy** The company records revenue from sale of energy as per the principles enunciated under Ind AS 115, based on tariff approved by the Central Electricity Regulatory Commission (CERC) as modified by the orders of Appellate Authorities. Pending issue of provisional/ final tariff order w.e.f. 01 April 2019 capacity charges has been provisionally recognised considering the applicable CERC Tariff Regulations 2019. This is considered as key audit matter due to the nature and extent of estimates made as per the CERC Tariff Regulations, which leads to recognition and measurement of revenue from sale of energy being complex and judgemental. (Refer Note No. 40 to the Standalone Financial Statements, read with the Significant Accounting Policy No.C.16)	We have obtained an understanding of the CERC Tariff Regulations, orders, circulars, guidelines and the Company's internal circulars and procedures in respect of recognition and measurement of revenue from sale of energy comprising of capacity and energy charges and adopted the following audit procedures: - Evaluated and tested the effectiveness of the Company's design of internal controls relating to recognition and measurement of revenue from sale of energy. - Verified the accounting of revenue from sale of energy based on provisional tariff computed as per the principles of CERC Tariff Regulations 2019. Based on the above procedures performed, the recognition and measurement of revenue from sale of energy are considered to be adequate and reasonable.
2.	**Impairment assessment of Property, Plant and Equipment (PPE)** The Company has a material operational asset base (PPE) relating to generation of electricity and is one of the components for determining the tariff as per the CERC Tariff Regulations, which may be vulnerable to impairment. We considered this as a key audit matter as the carrying value of PPE requires impairment assessment based on the future expected cash flows associated with the power plants (Cash generating units). (Refer Note No. 62(a) to the Standalone Financial Statements, read with the Accounting Policy No. C.21)	We have obtained an understanding and tested the design and operating effectiveness of controls as established by the Company's management for impairment assessment of PPE. We evaluated the Company's process of impairment assessment in assessing the appropriateness of the impairment model including the independent assessment of discount rate, economic growth rate, terminal value etc. We evaluated and checked the calculations of the cash flow forecasts prepared by the Company taking into consideration the CERC (Terms and Conditions of Tariff) Regulations, 2019 (applicable for the tariff period of 5 years from 1 April 2019 to 31 March 2024) along with the aforementioned assumptions. Based on the above procedures performed, we observed that the Company's impairment assessment of the PPE is adequate and reasonable.

Sl. No.	Key Audit Matter	How our audit addressed the Key Audit Matter
3.	**Deferred Tax Asset relating to MAT Credit Entitlement and corresponding Regulatory Deferral Liability** The company has recognised deferred tax asset relating to MAT credit entitlement. Utilisation of MAT credit will result in lower outflow of Income Tax in future years and accordingly Regulatory Deferral Liability attributable to the said MAT credit entitlement has also been recognised, payable to the beneficiaries in subsequent periods as per CERC Tariff Regulations. The recoverability of this deferred tax asset relating to MAT credit entitlement is dependent upon the generation of sufficient future taxable profits to utilise such entitlement within the stipulated period prescribed under the Income Tax Act,1961. We identified this as a key audit matter because of the importance of this matter to the intended users of the Financial Statements and its materiality; and requirement of judgement in forecasting future taxable profits for recognition of MAT credit entitlement considering the recoverability of such tax credits within allowed time frame as per the provisions of the Income Tax Act,1961. (Refer Note No. 22, 30, 55 & 71 to the Standalone Financial Statements, read with the Accounting Policy No. C.4 and C.19)	We have obtained an understanding for recognition of deferred tax asset relating to MAT credit entitlement and corresponding liability of the same in Regulatory Deferral Account including the management's judgement. We further assessed the related forecasts of future taxable profits and evaluated the reasonableness of the considerations / assumptions underlying the preparation of these forecasts. We have also verified the regulatory deferral account balance attributable to the said MAT credit, payable to the beneficiaries in subsequent periods. Based on the above procedures performed, the recognition and measurement of Deferred tax asset relating to MAT credit entitlement and attributable Regulatory Deferral Liability towards beneficiaries, are considered adequate and reasonable.
4.	**Contingent Liabilities** There are a number of litigations pending before various forums against the Company and the management's judgement is required for estimating the amount to be disclosed as contingent liability. We identified this as a key audit matter because the estimates on which these amounts are based involve a significant degree of management judgement in interpreting the cases and it may be subject to management bias. (Refer Note No. 76(A) to the Standalone Financial Statements, read with the Accounting Policy No. C.14)	We have obtained an understanding of the Company's internal instructions and procedures in respect of estimation and disclosure of contingent liabilities and adopted the following audit procedures: - understood and tested the design and operating effectiveness of controls as established by the management for obtaining all relevant information for pending litigation cases; - discussed with the management regarding any material developments thereto and latest status of legal matters; - read various correspondences and related documents pertaining to litigation cases and relevant external legal opinions obtained by the management and performed substantive procedures on calculations supporting the disclosure of contingent liabilities; - examined management's judgements and assessments in respect of whether provisions are required; - considered the management assessments of those matters that are not disclosed as contingent liability since the probability of material outflow is considered to be remote; - reviewed the adequacy and completeness of disclosures; Based on the above procedures performed, the estimation and disclosures of contingent liabilities are considered to be adequate and reasonable.

Information other than the Standalone Financial Statements and Auditors' Report thereon

The Company's Board of Directors is responsible for the preparation of the other information. The other information comprises the Corporate Governance Report, and the information included in the Directors' Report including Annexures, Management Discussion and Analysis, Business Responsibility and Sustainability Report and other company related information (but does not include the Consolidated Financial Statements and Standalone Financial Statements and our auditors' report thereon), which are expected to be made available to us after the date of this auditors' report.

Our opinion on the Standalone Financial Statements does not cover the other information and we do not and will not express any form of assurance conclusion thereon.

In connection with our audit of the Standalone Financial Statements, our responsibility is to read the other information identified above when it becomes available and, in doing so, consider whether the other information is materially inconsistent with the Standalone Financial Statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated.

When we read other information, if we conclude that there is a material misstatement therein, we are required to communicate the matter to those charged with governance and take appropriate actions, if required.

Responsibilities of management and those charged with governance for the Standalone Financial Statements

The Company's Board of Directors is responsible for the matters stated in Section 134(5) of the Act with respect to the preparation of these Standalone Financial Statements that give a true and fair view of the financial position, financial performance, total comprehensive income, changes in equity and cash flows of the Company in accordance with the accounting principles generally accepted in India, including the Indian Accounting Standards (Ind AS) prescribed under Section 133 of the Act read with the Companies (Indian Accounting Standards) Rules, 2015 as amended. This responsibility also includes maintenance of adequate accounting records in accordance with the provisions of the Act for safeguarding the assets of the Company and for preventing and detecting frauds and other irregularities; selection and application of appropriate accounting policies; making judgments and estimates that are reasonable and prudent; and design, implementation and maintenance of adequate internal financial controls, that were operating effectively for ensuring the accuracy and completeness of the accounting records, relevant to the preparation and presentation of the Standalone Financial Statements, that give a true and fair view and are free from material misstatement, whether due to fraud or error.

In preparing the Standalone Financial Statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

The Board of Directors is also responsible for overseeing the Company's financial reporting process.

Auditors' Responsibilities for the Audit of the Standalone Financial Statements

Our objectives are to obtain reasonable assurance about whether the Standalone Financial Statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these Standalone Financial Statements.

As part of an audit in accordance with SAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the Standalone Financial Statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances. Under section 143(3)(i) of the Act, we are also responsible for expressing our opinion on whether the company has adequate Internal Financial Controls system in place and the operating effectiveness of such controls.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the Standalone Financial Statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the Standalone Financial Statements, including the disclosures, and whether the Standalone Financial Statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the Standalone Financial Statements of the current period and are therefore the key audit matters. We describe these matters in our auditors' report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Report on Other Legal and Regulatory Requirements

1. As required by the Companies (Auditor's Report) Order, 2020 ("the Order") issued by the Central Government of India in terms of Section 143(11) of the Act, and on the basis of such checks of the books and records of the Company as we considered appropriate and according to the information and explanations given to us, we give in **"Annexure 1"** a statement on the matters specified in paragraphs 3 and 4 of the said Order, to the extent applicable.
2. We are enclosing our report in terms of Section 143(5) of the Act, on the basis of such checks of the books and records of the Company as we considered appropriate and according to the information and explanations given to us, in the **"Annexure 2"** on the directions issued by the Comptroller and Auditor General of India.
3. As required by Section 143(3) of the Act, we report that:
   (a) We have sought and obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit.
   (b) In our opinion, proper books of account as required by law have been kept by the Company so far as it appears from our examination of those books.
   (c) The Balance Sheet, the Statement of Profit and Loss (including Other Comprehensive Income), the Statement of Changes in Equity and the Statement of Cash Flows dealt with by this Report are in agreement with the books of account.
   (d) In our opinion, the aforesaid Standalone Financial Statements comply with the Indian Accounting Standards prescribed under Section 133 of the Act read with the Companies (Indian Accounting Standards) Rules, 2015 as amended.
   (e) Being a Government Company pursuant to the Notification No. GSR 463(E) dated 5 June 2015 issued by the Ministry of Corporate Affairs, Government of India, provisions of sub-section (2) of Section 164 of the Act, are not applicable to the Company
   (f) With respect to the adequacy of the Internal Financial Controls with reference to the Standalone Financial Statement of the Company and the operating effectiveness of such controls, refer to our separate report in **"Annexure 3"**. Our report expresses a modified opinion on the adequacy and operating effectiveness of the Company's internal financial controls over financial reporting.
   (g) As per Notification No. GSR 463(E) dated 5 June 2015 issued by the Ministry of Corporate Affairs, Government of India, Section 197 of the Act is not applicable to the Government Companies. Accordingly, reporting in accordance with requirement of provisions of section 197(16) of the Act is not applicable on the Company.

(h) With respect to the other matters to be included in the Auditors' Report in accordance with Rule 11 of the Companies (Audit and Auditors) Rules, 2014, as amended, in our opinion and to the best of our information and according to the explanations given to us:

I. The Company has disclosed the impact of pending litigations on its financial position in its Standalone Financial Statements. Refer Note No. 76(A) to the Standalone Financial Statements;

II. The Company has made provision, as required under the applicable law or Indian accounting standards, for material foreseeable losses, if any, on long-term contracts including derivative contracts.

III. Following are the instances of delay in transferring amounts, required to be transferred, to the Investor Education and Protection Fund by the Company:

a) Unclaimed amount of dividend:

Year	Amount (₹ in crore)	Due date of transfer	Date of transfer
2014-15	0.44	30.03.2022	08.06.2022
2014-15	0.76	18.11.2022	06.03.2023
2015-16	0.66	30.03.2023	Not yet transferred

b) Equity shares related to unclaimed dividend:

Year	No. of Shares	Due date of transfer to IEPF	Date of transfer
2013-14	127,339	01/11/2021	08/06/2022
2014-15	77,019	30/03/2022	20/10/2022
2014-15	65767	18/11/2022	24/03/2023
2015-16	74,904*	30/03/2023	Under process

*Tentative number of shares to be transferred to IEPF.

IV. (a) The Management has represented that, to the best of its knowledge and belief, as disclosed in the note no. 77(xvi) to the accounts, no funds have been advanced or loaned or invested (either from borrowed funds or share premium or any other sources or kind of funds) by the Company to or in any other person(s) or entity(ies), including foreign entities ("Intermediaries"), with the understanding, whether recorded in writing or otherwise, that the Intermediary shall, directly or indirectly lend or invest in other persons or entities identified in any manner whatsoever by or on behalf of the Company ("Ultimate Beneficiaries") or provide any guarantee, security or the like on behalf of the Ultimate Beneficiaries.

(b) The Management has represented, that, to the best of its knowledge and belief, as disclosed in the note no. 77(xvi) to the accounts, no funds have been received by the Company from any person(s) or entity(ies), including foreign entities ("Funding Parties"), with the understanding, whether recorded in writing or otherwise, that the Company shall, directly or indirectly, lend or invest in other persons or entities identified in any manner whatsoever by or on behalf of the Funding Party ("Ultimate Beneficiaries") or provide any guarantee, security or the like on behalf of the Ultimate Beneficiaries.

(c) Based on the audit procedures performed that have been considered reasonable and appropriate in the circumstances, nothing has come to our notice that has caused us to believe that the representations under sub-clause (i) and (ii) of Rule 11(e) contain any material misstatement.

V. (a) The final dividend proposed for the previous year, declared and paid by the Company during the year is in accordance with Section 123 of the Act, as applicable.

(b) Interim dividend declared and paid by the Company during the year is in accordance with Section 123 of the Act.

(c) As stated in note no. 23 (c) to the financial statements, the Board of Directors of the Company has proposed final dividend for the year which is subject to the approval of the members at the ensuing Annual General Meeting. The amount of dividend proposed is in accordance with Section 123 of the Act to the extent it applies to declaration of dividend.

VI. Proviso to Rule 3(1) of the Companies (Accounts) Rules, 2014 for maintaining books of account using accounting software which has a feature of recording audit trail (edit log) facility is applicable to the Company with effect from 1 April 2023, and accordingly, reporting under Rule 11(g) of Companies (Audit and Auditors) Rules, 2014 is not applicable for the financial year ended 31 March 2023.

For S.K.Mehta & Co Chartered Accountants FRN 000478N	For Varma & Varma Chartered Accountants FRN 004532S	For V K Jindal & Co Chartered Accountants FRN 001468C
(Rohit Mehta) Partner M. No.091382 UDIN: 23091382BGWXSI4005	(K P Srinivas) Partner M. No.208520 UDIN: 23208520BGUHDS5445	(Suresh Agarwal) Partner M. No.072534 UDIN: 23072534BGUVYV4118
For Parakh & Co. Chartered Accountants FRN 001475C	For C K Prusty & Associates Chartered Accountants FRN 323220E	For B C Jain & Co. Chartered Accountants FRN 001099C
(Thalendra Sharma) Partner M. No.079236 UDIN: 23079236BGYTGP7645	(C.K.Prusty) Partner M. No.057318 UDIN: 23057318BGXQAC3412	(Rishabh Jain) Partner M. No.400912 UDIN: 23400912BHALMY1742

Place: New Delhi
Dated: 19 May, 2023
Digitally signed by signatories

ANNEXURE 1 TO THE INDEPENDENT AUDITORS' REPORT

Referred to in paragraph 1 under 'Report on Other Legal and Regulatory Requirements' section of our report of even date to the members of NTPC LIMITED on the Standalone Financial Statements for the year ended 31 March 2023.

(i) (a) (A) The Company has generally maintained proper records showing full particulars including quantitative details and situation of Property, Plant and Equipment (including Right of Use assets) and non-current assets held for sale.

(B) The Company has generally maintained proper records showing full particulars of Intangible assets.

(b) The Company is having a regular programme of physical verification of all Property, Plant and Equipment (including Right of Use assets) and non-current assets held for sale over a period of three years, which, in our opinion, is reasonable having regard to the size of the Company and the nature of its assets. No material discrepancies were noticed on such verification.

(c) According to the information and explanations given to us, we report that, the title deeds of all the immovable properties which are included under the head of property, plant and equipment (other than properties where the company is the lessee and the lease agreements are duly executed in favour of the lessee) are held in the name of the Company except as follows:

Description of Property	Gross Carrying Value (₹ in crore)	Held in the name of	Whether promoter, director or their relative or employee	Property held-range (Financial Year)	Reason for not being held in the name of company
Land - Freehold	1,196.04	Large number of lands outsees and State authorities	No	2022-23	The company is taking appropriate steps for completion of legal formalities.
	7.63			2021-22	
	21.69			2020-21	
	23.43			2019-20	
	123.76			2016-17 to 2018-19	
	674.61			2011-12 to 2015-16	
	171.34			Prior to 2011-12	
Land - Right of Use	121.04			2022-23	
	0.46			2020-21	
	20.83			2019-20	
	168.98			2016-17 to 2018-19	
	173.63			2011-12 to 2015-16	
	244.08			Prior to 2011-12	
Building & Structures	4.97	Government Authorities	No	Prior to 2011-12	

(d) The Company has not revalued its Property, Plant and Equipment (including Right of Use assets) and intangible assets during the year. Accordingly, the provisions of clause 3(i)(d) of the Order are not applicable.

(e) According to the information and explanations given to us, there are no proceedings which have been initiated or are pending against the Company for holding benami property under the Benami Transactions (Prohibition) Act, 1988 (as amended in 2016) and rules made thereunder.

(ii) (a) In our opinion, the management has conducted physical verification of inventory at reasonable intervals during the year. According to the information and explanations given to us and based on the audit procedures performed by us, we are of the opinion that the coverage and procedure of such verification by the management is appropriate and no material discrepancies of 10% or more in the aggregate for each class of inventory between physical inventory and book records were noticed on physical verification.

(b) In our opinion and according to the information and explanations given to us, the Company has been sanctioned working capital limits in excess of ₹ 5 crore, in aggregate, from a bank on the basis of security of current assets. The quarterly returns or statements filed by the Company with the bank are in agreement with the books of account of the Company. During the year Company has not availed working capital limit from any financial institution.

(iii) The Company has made investments in, given unsecured loan to subsidiaries, Joint Venture companies during the year, in respect of which:

(a) According to the information and explanations given to us, the Company has not provided guarantee, security and not granted loans and advances in the nature of loans, secured and unsecured to subsidiaries, Joint Ventures and other entities during the year, except aggregate amount of unsecured loan of ₹ 100.00 crore during the year given to a subsidiary Company Ratnagiri Gas and Power Pvt. Ltd., who has repaid the amount and there is no balance outstanding in respect of this case, as at the balance sheet date.

(b) According to the information and explanations given to us and based on the audit procedures performed by us, we are of the opinion that the investments made, and the terms and conditions of loans given by the company are, prima facie, not prejudicial to the company's interest.

(c) According to the information and explanations given to us and based on the audit procedures performed by us, we are of the opinion that in respect of loans given, the schedule of repayment of principal and payment of interest has been stipulated and the repayments of principal and receipts of interest are regular, except in a case of, a joint venture of the Company, which has not repaid due amount of principal amount of loan and not paid interest, detail of which is as given hereunder:

Name of the entity	Nature of outstanding	Amount overdue (₹ in crore)	Due period	Extent of delay	Remarks
National High Power Test Laboratory Private Limited (NHPTL)	Principal	1.84	30.09.2022 and 31.03.2023	Ranges from 1 day to 6 months	Loan of ₹18.40 crore was granted on 30.03.2018.
	Interest	4.45	30.09.2020 onwards	Ranges from 6 to 30 months	

(d) According to the information and explanations given to us and based on the audit procedures performed by us, receipt of interest is overdue for a period of more than 90 days in respect of a loan given to NHPTL a joint venture company, detail of which is given hereunder:

No. of cases	Principal overdue (₹ in crore)	Interest overdue (₹ in crore)	Total overdue (₹ in crore)	Remarks
One	0.92	4.45	5.37	Principal and Interest overdue for more than 90 days.

In our opinion, the Company has taken reasonable steps for recovery of above principal and interest.

(e) According to the information and explanations given to us and based on the audit procedures performed by us, we are of the opinion that no loan or advance in the nature of loan granted which has fallen due during the year, has been renewed or extended or fresh loans granted to settle the overdue of existing loans given to the same parties. However as per the information and explanations given by the management company's Board of Directors has approved the restructuring plan for conversion of outstanding amount of loan of ₹ 18.40 crore to NHPTL into equity, which will be implemented in the financial year 2023-24.

(f) According to the information and explanations given to us and based on the audit procedures performed by us, we are of the opinion that the Company has not granted any loans or advances in the nature of loans either repayable on demand or without specifying any terms or period of repayment.

(iv) In our opinion and according to the information and explanations given to us, the Company has complied with the provisions of Section 185 and 186 of the Act, as applicable, in respect of loans advanced to subsidiary companies & joint venture companies and investments made in the subsidiary and joint venture companies and guarantees issued in favor of Banks for subsidiary companies. The Company has not provided any security in respect of which the provisions of section 185 and 186 of the Act are applicable.

(v) In our opinion and according to the information and explanations given to us, the Company has not accepted deposits or amount which are deemed to be deposits. As such, the directives issued by the Reserve Bank of India, the provisions of Sections 73 to 76 or any other relevant provisions of the Act and the rules framed thereunder are not applicable to the Company. The Company has obtained deposits from the dependents of employees pursuant to one of the employee benefit schemes of the company who die or suffer permanent total disability for which the Company has applied to the Ministry of Corporate Affairs, Government of India for continuation of the exemption earlier obtained in respect of applicability of Section 58A of the Companies Act, 1956, which is still awaited (refer Note No. 35(c) of the Standalone Financial Statements). No order has been passed with respect to Section 73 to 76, by the Company Law Board or National Company Law Tribunal or Reserve Bank of India or any Court or any other Tribunal.

(vi) We have broadly reviewed the accounts and records maintained by the Company pursuant to the Rules made by the Central Government for the maintenance of cost records under sub-section (1) of Section 148 of the Act read with Companies (Cost Records & Audit) Rules, 2014, as amended and we are of the opinion that prima facie the prescribed accounts and records have been made and maintained. We have not, however, made detailed examination of the records with a view to determine whether they are accurate and complete.

(vii) (a) According to the information and explanations given to us, the Company is generally regular in depositing undisputed statutory dues including goods and service tax, provident fund, income tax, sales tax, service tax, duty of customs, duty of excise, value added tax, cess and other statutory dues as applicable to the appropriate authorities. We have been informed that employees' state insurance is not applicable to the Company. Further, no undisputed statutory dues is outstanding as on 31 March 2023 for a period of more than six months from the date they became payable.

(b) According to information and explanations given to us, the gross disputed statutory dues of income tax or sales tax or service tax or duty of customs or duty of excise or value added tax or other statutory dues amounts to ₹ 2918.11 crore in aggregate as on 31 March 2023, out of which ₹ 2021.27 crore has been deposited under protest/adjusted by tax authorities and the balance of ₹ 896.84 crore of dues have not been deposited on account of matters pending before appropriate authorities as detailed below:

S No.	Name of Statue	Nature of Dues	Forum where dispute is pending	Period to which the amount relates (Financial Year)	Gross Disputed Amount (₹ crore)	Amount deposited under protest / adjusted by Tax authorities (₹ crore)	Amount Not deposited (₹ crore)
1	Income Tax Act, 1961	Income Tax/ TDS	Assistant Commissioner of Income Tax	2006-07, 2013-14 to 2014-15	1.09	0.90	0.19
			Commissioner of Income Tax (Appeals)	2009-10 to 2018-19	163.13	163.13	-
			Hon'ble High Court	2005-06 to 2007-08, 2009-10 to 2011-12	209.23	209.23	-
			Income Tax Appellate Tribunal #	2001-02, 2005-06, 2009-10 to 2011-12	1589.74	1589.59	0.15
				Sub Total	**1,963.19**	**1,962.85**	**0.34**
2	Finance Act, 1994	Service Tax	CESTAT	2012-13 to 2017-18	265.34	3.87	261.47
			Commissioner (Appeals)	2009-10 to 2017-18	2.66	0.17	2.49

S No.	Name of Statue	Nature of Dues	Forum where dispute is pending	Period to which the amount relates (Financial Year)	Gross Disputed Amount (₹ crore)	Amount deposited under protest / adjusted by Tax authorities (₹ crore)	Amount Not deposited (₹ crore)
			Commissioner of GST & Central Excise	2012-13 to 2017-18	51.49	0.97	50.52
			Hon'ble High Court	2016-17 to 2017-18	8.36	-	8.36
				Sub Total	**327.85**	**5.01**	**322.84**
3	CGST/SGST/ IGST Act 2017	GST	Commissioner (Appeals)	2017-18 to 2020-21	295.95	15.74	280.21
				Sub Total	**295.95**	**15.74**	**280.21**
4	Entry Tax Act of various States	Entry Tax	Additional Commissioner of Sales Tax	2014-15 to 2016-17	0.28	-	0.28
			Appellate Tribunal / Board of Revenue	2001-02, 2006-07 to 2017-18	54.01	14.79	39.23
			Assistant Commissioner of Sales Tax	1985-86, 1986-87, 2003-04, 2005-06	4.44	1.89	2.56
			Commissioner of Sales Tax	2007-08	1.65	-	1.65
			Deputy Commissioner of Sales Tax	1997-98, 2005-06	5.48	0.68	4.80
			Hon'ble High Court	1990-91, 2005-06 to 2012-13, 2017-18	24.25	7.22	17.03
			Joint Commissioner of Sales Tax	2005-06	0.04	-	0.04
			Sales Tax Officer	2017-18	0.30	-	0.30
				Sub Total	**90.45**	**24.58**	**65.89**
5	Sales tax and Value Added Tax Act of Various States	Sales Tax/ Trade Tax/ Value Added Tax	Additional Commissioner of Sales Tax *	2001-02, 2002-03, 2004-05, 2006-07, 2014-15 to 2016-17	21.55	1.86	19.69
			Additional Commissioner of Sales Tax (Appeals)	1988-89 to 1997-98, 2015-16	2.11	0.17	1.94

S No.	Name of Statue	Nature of Dues	Forum where dispute is pending	Period to which the amount relates (Financial Year)	Gross Disputed Amount (₹ crore)	Amount deposited under protest / adjusted by Tax authorities (₹ crore)	Amount Not deposited (₹ crore)
			Appellate Tribunal / Board of Revenue	1985-86, 2000-01 to 2010-11, 2014-15	36.38	7.53	28.85
			Commissioner of Sales Tax (Appeals)	2005-06 to 2008-09	0.29	0.02	0.27
			Deputy Commissioner Sales Tax	2001-02 to 2006-07	11.66	-	11.66
			Hon'ble High Court	2000-01	2.99	0.05	2.94
			Joint Commissioner of Sales Tax **	2000-01, 2004-05, 2005-06	3.95	0.36	3.59
			Joint Commissioner of Sales Tax (Appeals)	2015-16	1.14	0.49	0.65
				Sub Total	**80.07**	**10.48**	**69.59**
6	Jharkhand Forest Produce (Regulation of Transport) Rules 2020	Mineral Transit Fee	Hon'ble High Court	2020-21 to 2022-23	56.72	-	56.72
				Sub Total	**56.72**	**-**	**56.72**
7	Gujarat Green Cess Act, 2011	Green Cess	Commissioner (Appeals)	2012-13 to 2022-23	54.49	-	54.49
				Sub Total	**54.49**	**-**	**54.49**
8	Employees Provident Fund & Miscellaneous Provisions Act 1952	EPS contribution	Hon'ble High Court	2006-07	17.16	1.38	15.78
			PF Commissioner	1996-97 to 2014-15	7.30	0.27	7.02
				Sub Total	**24.46**	**1.65**	**22.80**
9	Employees' State Insurance Act, 1948	ESI contribution	ESI Court	1996-97 to 2002-03	11.65	-	11.65
				Sub Total	**11.65**	**-**	**11.65**
10	Industrial Development Act,1962	Notified Area Tax	Hon'ble Supreme Court	Upto Sept. 2005	5.92	-	5.92
				Sub Total	**5.92**	**-**	**5.92**

S No.	Name of Statue	Nature of Dues	Forum where dispute is pending	Period to which the amount relates (Financial Year)	Gross Disputed Amount (₹ crore)	Amount deposited under protest / adjusted by Tax authorities (₹ crore)	Amount Not deposited (₹ crore)
11	Central Excise Act, 1944	Excise Duty	CESTAT	1999-00, 2010-11	4.50	-	4.50
				Sub Total	**4.50**	**-**	**4.50**
12	Rajasthan Land Tax Act, 1985	Land Development Tax	Rajasthan Revenue Department	2006-07 to 2012-13	2.04	0.60	1.44
				Sub Total	**2.04**	**0.60**	**1.44**
13	Mines and Minerals Development and Regulation Act 1957	Royalty	High Court	2011-12	0.53	0.34	0.19
				Sub Total	**0.53**	**0.34**	**0.19**
14	Customs Act, 1962	Customs Duty	Commissioner of Customs (Appeals)	2005-06 to 2015-16	0.29	0.02	0.26
				Sub Total	**0.29**	**0.02**	**0.26**
	Total				**2,918.11**	**2,021.27**	**896.84**

Remarks:

* includes ₹ 20.59 crore towards demand for VAT and CST raised by Sales Tax authority, which has been stayed by Commissioner/Additional Commissioner of sales tax.

** includes ₹ 3.81 crore towards demand for CST raised by Sales Tax Officer, which has been stayed by the Hon'ble High Court.

Against CIT(A) orders for disputed amount of Income Tax ₹1292.42 crore, company is in the process of filing appeal before ITAT.

Disputed statutory dues include interest and penalty wherever applicable.

(viii) In our opinion and according to the information and explanations given to us, the Company has not surrendered or disclosed as income, any transaction not recorded in the books of account, during the year in the tax assessments under the Income Tax Act, 1961 (43 of 1961). Accordingly, the provisions of clause 3(viii) of the Order are not applicable.

(ix) (a) In our opinion and according to the information and explanations given to us, the Company has not defaulted in repayment of loans or other borrowings or in the payment of interest thereon to any lender.

(b) According to the information and explanations given to us and on the basis of our audit procedures, we report that the Company has not been declared willful defaulter by any bank or financial institution or other lender.

(c) In our opinion and according to the information and explanations given to us, the term loans were applied for the purposes for which the loans were obtained.

(d) According to the information and explanations given to us, and the procedures performed by us, and on an overall examination of the financial statements of the company, we report that no funds raised on short-term basis have been used for long-term purposes by the Company.

(e) According to the information and explanations given to us and on an overall examination of the financial statements of the company, we report that the company has not taken any funds from any entity or person on account of or to meet the obligations of its subsidiaries and joint ventures except that the Company has taken loan from Banks and given loan to one of the subsidiaries, as per details given below:

Nature of fund taken	Name of lender	Amount Involved / outstanding (₹ in Crore)	Name of the subsidiary to whom loan given	Relation	Nature of Transaction for which funds utilized	Remarks, if any
Unsecured Term Loan	HDFC Bank Ltd.	262.90	Ratnagiri Gas and Power Pvt. Ltd.	Subsidiary	Secured loan given on account of Debt Settlement of Subsidiary.	Total loan of ₹ 885 crore was taken and given by the Company in the year 2020-21
	Bank of India Ltd.	515.90				
Total		**778.80**				

(f) According to the information and explanations given to us and procedures performed by us, we report that the Company has not raised loans during the year on the pledge of securities held in its subsidiaries and joint ventures.

(x) (a) In our opinion and according to the information and explanations given to us, the Company did not raise moneys by way of initial public offer or further public offer during the year. Company has raised Privately Placed Non-convertible Debentures during the year and in our opinion and according to the explanations given to us the money raised by way of Privately Placed Non-convertible Debentures were applied for the purposes for which they were raised.

(b) During the year, the Company has not made any preferential allotment or private placement of shares or convertible debentures (fully, partially or optionally). Accordingly, provisions of clause 3(x)(b) of the order are not applicable.

(xi) (a) According to the information and explanations given to us and as represented by the Management and based on our examination of the books and records of the Company and in accordance with generally accepted auditing practices in India, no case of material fraud by the Company or on the Company has been noticed or reported during the year.

(b) We have not submitted any report under subsection (12) of section 143 of the Companies Act, 2013 in Form ADT-4 as prescribed under Rule 13 of Companies (Audit and Auditors) Rules, 2014 with the Central Government, during the year and up to the date of this audit report.

(c) As represented to us by the management, there are no whistle blower complaints received by the company during the year, accordingly, provisions of clause 3(xi)(c) of the order are not applicable.

(xii) The Company is not a Nidhi Company. Accordingly, provisions of clause 3(xii) of the Order are not applicable.

(xiii) In our opinion and according to the information and explanations given to us, all transactions with the related parties are in compliance with Sections 177 and 188 of Act, where applicable except in respect of transactions which are not approved, given below, as disclosed in Note No. 59 (f) (iv & v) to the Standalone Financial Statements:

Nature of the Related Party Relationship	Nature of the Underlying Transaction	Amount involved (₹ in crore)
Transactions covered under Section 177 of the Act		
Joint Venture Company	Contracts for works/services for services received by the Company	647.62*
Joint Venture Company	Contracts for works/services for services received by the Company	2.35
Wholly Owned Subsidiary Company	Contracts for works/services for services received by the Company	2.66
Joint Venture Company	Contracts for works/services for services provided by the Company	10.62
Wholly Owned Subsidiary Company	Contracts for works/services for services provided by the Company	3.44
Subsidiary Company	Contracts for works/services for services provided by the Company	0.3

Nature of the Related Party Relationship	Nature of the Underlying Transaction	Amount involved (₹ in crore)
Joint Venture Company	Sale/ Purchase of goods	1.78
Joint Venture Company	Sale/ Purchase of fixed assets	0.36
Subsidiary Company	Sale of Fixed Assets	2.56
Joint Venture Company	Secondment of Employees	55.59
Wholly Owned Subsidiary Company	Secondment of Employees	9.87
Subsidiary Company	Secondment of Employees	29.33
Other related parties	Contracts for works/services for services received by the Company	37.06
Other related party	Contracts for works/services for services provided by the Company	0.35
Subsidiary Company	Investment in Equity Shares	500
Joint Venture Company	Investment in Equity Shares	1,280.52
Wholly Owned Subsidiary Company	Sale of Goods	2,566.80
Subsidiary Company	Sale of Goods	0.28
Post employment benefit plans - Trust	Contribution to Trust for employee benefits	855.35

* As stated in Note No. 59 (f) (iv) to the Standalone Financial Statements, execution during the year was ₹ 647.62 Crores against aggregate value of contracts ₹ 2,041.26 Crores awarded during the year.

Further, according to the information and explanations given to us and based on our examination of records, in our opinion, the requisite details in respect of all transactions with the related parties have been disclosed in the standalone financial statements, as required by the applicable Indian Accounting Standards.

(xiv) (a) In our opinion and based on our examination, the Company has an internal audit system commensurate with the size and nature of its business.

(b) We have considered the reports of the Internal Auditors for the year under audit, issued to the Company during the year and till date, in determining the nature, timing and extent of our audit procedures.

(xv) In our opinion and according to the information and explanations given to us, the Company has not entered into any non-cash transactions with the directors or persons connected with them covered under Section 192 of the Act. Accordingly, provisions of clause 3(xv) of the Order are not applicable.

(xvi) (a) In our opinion and according to the information and explanations given to us, the Company is not required to be registered under Section 45-IA of the Reserve Bank of India Act, 1934. Accordingly, provisions of clause (xvi)(a) of the Order are not applicable to the Company.

(b) According to the information and explanations provided to us, the Company has not conducted any Non-Banking Financial or Housing Finance activities therefore the Company is not required to be registered under Section 45-IA of the Reserve Bank of India Act, 1934. Accordingly, provisions of clause 3(xvi)(b) of the Order are not applicable

(c) The Company is not a Core Investment Company (CIC) as defined in the regulations made by the Reserve Bank of India. Accordingly, provisions of clause 3(xvi)(c) of the Order are not applicable

(d) In our opinion, there is no core investment company within the Group (as defined in the Core Investment Companies (Reserve Bank) Directions, 2016). Accordingly, provisions of clause 3(xvi)(d) of the Order are not applicable.

(xvii) Based on our examination of the books and records of the Company, the Company has not incurred cash losses in the financial year and in the immediately preceding financial year. Accordingly, provisions of clause 3 (xvii) of the order are not applicable.

(xviii) There has been no resignation of the statutory auditors during the year. Accordingly, provisions of clause 3 (xviii) of the order are not applicable.

(xix) According to the information and explanations given to us and on the basis of the financial ratios, ageing and expected dates of realization of financial assets and payment of financial liabilities, other information accompanying the financial statements, our knowledge of the Board of Directors and management plans and based on our examination of the evidence supporting the assumptions, nothing has come to our attention, which causes us to believe that any material uncertainty exists as on the date of the audit report that Company is not capable of meeting its liabilities existing at the date of balance sheet as and when they fall due within a period of one year from the balance sheet date. We, however, state that this is not an assurance as to the future viability of the Company. We further state that our reporting is based on the facts up to the date of the audit report and we neither give any guarantee nor any assurance that all liabilities falling due within a period of one year from the balance sheet date, will get discharged by the Company as and when they fall due.

(xx) In our opinion and according to the information and explanations given to us, the company has incurred expenditure under Corporate Social Responsibility as required by the provisions of Section 135 of the Act and there are no unspent amounts which are to be transferred pursuant to section 135(5) and 135(6) of the Act.

For S.K.Mehta & Co
Chartered Accountants
FRN 000478N

(Rohit Mehta)
Partner
M. No.091382
UDIN: 23091382BGWXSI4005

For Varma & Varma
Chartered Accountants
FRN 004532S

(K P Srinivas)
Partner
M. No.208520
UDIN: 23208520BGUHDS5445

For V K Jindal & Co
Chartered Accountants
FRN 001468C

(Suresh Agarwal)
Partner
M. No.072534
UDIN: 23072534BGUVYV4118

For Parakh & Co.
Chartered Accountants
FRN 001475C

(Thalendra Sharma)
Partner
M. No.079236
UDIN: 23079236BGYTGP7645

For C K Prusty & Associates
Chartered Accountants
FRN 323220E

(C.K.Prusty)
Partner
M. No.057318
UDIN: 23057318BGXQAC3412

For B C Jain & Co.
Chartered Accountants
FRN 001099C

(Rishabh Jain)
Partner
M. No.400912
UDIN: 23400912BHALMY1742

Place: New Delhi
Dated: 19 May, 2023

Digitally signed by signatories

ANNEXURE 2 TO THE INDEPENDENT AUDITORS' REPORT

Referred to in paragraph 2 under 'Report on Other Legal and Regulatory Requirements' section of our report of even date to the members of NTPC LIMITED on the Standalone Financial Statements for the year ended 31 March 2023

Sl. No.	Directions u/s 143(5) of the Companies Act, 2013	Auditors' reply on action taken on the directions	Impact on financial statement
1.	Whether the Company has system in place to process all the accounting transactions through IT system? If yes, the implications of processing of accounting transactions outside IT system on the integrity of the accounts along with the financial implications, if any, may be stated.	As per the information and explanations given to us, the Company has a system in place to process all the accounting transactions through IT system. SAP-ERP has been implemented for all the processes like Financial Accounting (FI), Controlling (CO), Sales and Distribution (SD), Payroll / Human Capital Management (HCM), Material Management (MM), Commercial billing / Industry Solution Utilities (ISU), etc. Based on the audit procedures carried out and as per the information and explanations given to us, no accounting transactions have been processed /carried outside the IT system. Accordingly, there are no implications on the integrity of the accounts.	Nil
2.	Whether there is any restructuring of an existing loan or cases of waiver/write off of debts/ loans/ interest etc. made by a lender to the company due to the company's inability to repay the loan? If yes, the financial impact may be stated. Whether such cases are properly accounted for?	Based on the audit procedures carried out and as per the information and explanations given to us, there was no restructuring of existing loans or cases of waiver/write off of debts/ loans/ interest etc. made by the lender to the company due to the company's inability to repay the loan.	Nil
3.	Whether funds (grants/subsidy etc.) received / receivable for specific schemes from Central / State Government or its agencies were properly accounted for/ utilized as per its term and conditions? List the cases of deviation.	Based on the audit procedures carried out and as per the information and explanations given to us, the funds (grants/ subsidy etc.) received/receivable for specific schemes from Central/State Government or its agencies were properly accounted for/utilized as per the respective terms and conditions.	Nil

For S.K.Mehta & Co
Chartered Accountants
FRN 000478N

(Rohit Mehta)
Partner
M. No.091382
UDIN: 23091382BGWXSI4005

For Varma & Varma
Chartered Accountants
FRN 004532S

(K P Srinivas)
Partner
M. No.208520
UDIN: 23208520BGUHDS5445

For V K Jindal & Co
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FRN 001468C

(Suresh Agarwal)
Partner
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For Parakh & Co.
Chartered Accountants
FRN 001475C

(Thalendra Sharma)
Partner
M. No.079236
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For C K Prusty & Associates
Chartered Accountants
FRN 323220E

(C.K.Prusty)
Partner
M. No.057318
UDIN: 23057318BGXQAC3412

For B C Jain & Co.
Chartered Accountants
FRN 001099C

(Rishabh Jain)
Partner
M. No.400912
UDIN: 23400912BHALMY1742

Place: New Delhi
Dated: 19 May, 2023

Digitally signed by signatories

ANNEXURE 3 TO THE INDEPENDENT AUDITORS' REPORT

Referred to in paragraph 3 (f) under 'Report on Other Legal and Regulatory Requirements' section of our report of even date to the members of NTPC LIMITED on the Standalone Financial Statements for the year ended 31 March 2023

Report on the Internal Financial Controls with reference to the Standalone Financial Statement under Clause (i) of Sub-section 3 of Section 143 of the Companies Act, 2013 ("the Act").

We have audited the internal financial controls with reference to the Standalone Financial Statements of NTPC Limited ("the Company") as of 31 March 2023 in conjunction with our audit of the Standalone Financial Statements of the Company for the year ended on that date.

Management's Responsibility for Internal Financial Controls

The Company's management is responsible for establishing and maintaining internal financial controls based on the internal controls over financial reporting criteria established by the Company considering the essential components of internal control stated in the Guidance Note on Audit of Internal Financial Controls over Financial Reporting issued by The Institute of Chartered Accountants of India (ICAI). These responsibilities include the design, implementation and maintenance of adequate internal financial controls that were operating effectively for ensuring the orderly and efficient conduct of its business, including adherence to Company's policies, the safeguarding of its assets, the prevention and detection of frauds and errors, the accuracy and completeness of the accounting records, and the timely preparation of reliable financial information, as required under the Act.

Auditors' Responsibility

Our responsibility is to express an opinion on the Company's internal financial controls with reference to the Standalone Financial Statements based on our audit. We conducted our audit in accordance with the Guidance Note on Audit of Internal Financial Controls over Financial Reporting (the "Guidance Note") and the Standards on Auditing, issued by ICAI and deemed to be prescribed under section 143(10) of the Act, to the extent applicable to an audit of internal financial controls, both applicable to an audit of Internal Financial Controls and, both issued by ICAI. Those Standards and the Guidance Note require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether adequate internal financial controls with reference to the Standalone Financial Statements was established and maintained and if such controls operated effectively in all material respects.

Our audit involves performing procedures to obtain audit evidence about the adequacy of the internal financial control with reference to the standalone Financial Statements and their operating effectiveness. Our audit of internal financial control with reference to the Standalone Financial Statements included obtaining an understanding of internal financial control with reference to the Standalone Financial Statements, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. The procedures selected depend on the auditors' judgement, including the assessment of the risks of material misstatement of the Standalone Financial Statements, whether due to fraud or error.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our qualified audit opinion on the Company's internal financial controls system with reference to the Standalone Financial Statements.

Meaning of Internal Financial Controls with reference to the Standalone Financial Statements

A Company's internal financial control with reference to the Standalone Financial Statements is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of Standalone Financial Statements for external purposes in accordance with generally accepted accounting principles. A Company's internal financial control with reference to the Standalone Financial Statements includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of Standalone Financial Statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the Company's assets that could have a material effect on the Standalone Financial Statements.

Inherent Limitations of Internal Financial Controls with reference to the Standalone Financial Statements

Because of the inherent limitations of internal financial controls with reference to the Standalone Financial Statements, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may occur and not be detected. Also, projections of any evaluation of the internal financial controls with reference to the Standalone

Financial Statements to future periods are subject to the risk that the internal financial controls with reference to the Standalone Financial Statements may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Basis for Qualified Opinion

According to the information and explanations given to us and based on our audit, the following material weakness has been identified as at March 31, 2023:

The Company did not have an appropriate internal control system to ensure that related party transactions are undertaken only after approval under the provisions of sections 177 of the Companies Act, 2013 as well as the provisions of Regulation 23 of the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015 by the Audit Committee of Board and Shareholders of the company wherever applicable, as a result material transactions were entered into by the company during the year without approval as required under the said provisions. as detailed in Note No. 59 (f) (iv & v) of the Standalone Financial Statements.

A 'material weakness' is a deficiency, or a combination of deficiencies, in internal financial control over financial reporting, such that there is a reasonable possibility that a material misstatement of the company's annual or interim financial statements will not be prevented or detected on a timely basis.

Qualified Opinion

In our opinion, to the best of our information and according to the explanations given to us, except for the possible effects of the material weakness described in the Basis for Qualified Opinion Paragraph on the achievement of the objectives of the control criteria, the Company has, in all material respects, an adequate internal financial controls with reference to the Standalone Financial Statements in place and such internal financial controls with reference to the Standalone Financial Statements were operating effectively as at 31 March 2023, based on the internal controls over financial reporting criteria established by the Company considering the components of internal controls stated in the Guidance Note on Audit of Internal Financial Controls over Financial Reporting issued by the ICAI.

We have considered the material weakness identified and reported above in determining the nature, timing, and extent of audit tests applied in our audit for the year ended 31 March, 2023 standalone financial statements of the Company, and the material weakness has not affected our opinion on the standalone financial statements of the Company.

For S.K.Mehta & Co
Chartered Accountants
FRN 000478N

(Rohit Mehta)
Partner
M. No.091382
UDIN: 23091382BGWXSI4005

For Varma & Varma
Chartered Accountants
FRN 004532S

(K P Srinivas)
Partner
M. No.208520
UDIN: 23208520BGUHDS5445

For V K Jindal & Co
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For Parakh & Co.
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(Thalendra Sharma)
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For C K Prusty & Associates
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(C.K.Prusty)
Partner
M. No.057318
UDIN: 23057318BGXQAC3412

For B C Jain & Co.
Chartered Accountants
FRN 001099C

(Rishabh Jain)
Partner
M. No.400912
UDIN: 23400912BHALMY1742

Place: New Delhi
Dated: 19 May, 2023

Digitally signed by signatories

COMMENTS OF THE COMPTROLLER AND AUDITOR GENERAL OF INDIA UNDER SECTION 143(6)(b) OF THE COMPANIES ACT, 2013 ON THE STANDALONE FINANCIAL STATEMENTS OF NTPC LIMITED FOR THE YEAR ENDED 31 MARCH 2023 AND MANAGEMENT REPLIES THEREON

Comment	Management Reply
The preparation of financial statements of NTPC Limited for the year ended 31 March 2023 in accordance with the financial reporting framework prescribed under the Companies Act, 2013 (Act) is the responsibility of the management of the company. The Statutory Auditors appointed by the Comptroller and Auditor General of India under Section 139 (5) of the Act are responsible for expressing opinion on the financial statements under Section 143 of the Act based on independent audit in accordance with the Standards on Auditing prescribed under Section 143(10) of the Act. This is stated to have been done by them vide their Audit Report dated 19 May 2023. I, on behalf of the Comptroller and Auditor General of India, have conducted a supplementary audit of the financial statements of NTPC Limited for the year ended 31 March 2023 under Section 143(6) (a) of the Act. This supplementary audit has been carried out independently without access to the working papers of the Statutory Auditors and is limited primarily to inquiries of the Statutory Auditors and Company personnel and a selective examination of some of the accounting records. Based on my supplementary audit, I would like to highlight the following significant matters under Section 143 (6)(b) of the Act which have come to my attention and which in my view are necessary for enabling a better understanding of the financial statements and the related Audit Report: **Comments on Financial Position** **Balance sheet** **Capital work-in-progress (Note 3) ₹ 61,743.88 crore**	
As per Regulation 5.1 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) (Second Amendment) Regulations, 2021, the date of commercial operation in case of integrated mine(s), shall mean the earliest of, a) the first date of the year succeeding the year in which 25 percent of the Peak Rated Capacity as per the Mining Plan is achieved; or b) the first date of the year succeeding the year in which the value of production estimated in accordance with Regulation 7A of these Regulations, exceeds total expenditure in that year; or, c) the date of two years from the date of commencement of production.	The Regulation 5.1 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) (Second Amendment) Regulations, 2021 referred by audit also provides that *'Provided further that in case the integrated mine(s) is ready for commercial operation but is prevented from declaration of the date of commercial operation for reasons not attributable to the generating company or its suppliers or contractors or the Mine Developer and Operator, the Commission, on an application made by the generating company, may approve such other date as the date of commercial operation as may be considered appropriate after considering the relevant reasons that prevented the declaration of the date of commercial operation under any of the sub-clauses of Clause (3) of this Regulation;*

Comment	Management Reply
NTPC in violation of both, CERC regulations and its Significant Accounting Policy No.6 did not declare commercial operation date of Talaipalli Coal Mine, despite commencement of production in 2019 itself, i.e. more than two years from the date of commencement of production. This resulted in overstatement of Capital work-in-progress and understatement of Property, Plant and equipment by ₹ 925.80 crore each. Depreciation was also to be charged off from date of capitalisation.	*Provided also that the generating company seeking the approval of the date of commercial operation under the preceding proviso shall give prior notice of one month to the beneficiaries of the end-use or associated generating station(s) of the integrated mine(s) regarding the date of commercial operation.'* As on date, there is no Mine Development Operator (MDO) for the subject Mine as the earlier appointed agency had left the work and the appointment of new MDO is in progress. The approved Mining Plan was challenged by the then MDO and hence the same was reviewed by Central Mine Planning & Design Institute Limited (CMPDIL) who in their report suggested for changes in original mining plan. The revised mining plan was received from CMPDIL and has been put up for approval of CCO (Coal Controller Organization), in the month of January 2023. Revised mining plan is under final stage of approval with CCO. Beneficiaries have been intimated about the tentative date of declaration of commercial operation as 1 August 2023 as per the Regulations. The application to CERC for approving the date of commercial declaration as per the Regulations will be filed considering the final date of commercial operation. In this context it would be very pertinent to bring forth certain cardinal principles of recognition of Property, plant and equipment as provided in Indian Accounting Standards. Paragraph 7 of Ind AS-16-'Property, plant and equipment' provides the recognition criteria that *the cost of an item of property, plant and equipment shall be recognised as an asset if, and only if it is probable that future economic benefits associated with the item will flow to the entity; and the cost of the item can be measured reliably.* Further, Paragraph 16 of Ind AS 16 provides that *any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management* is included in the cost of assets. Further, Paragraph 20 of Ind AS 16 also provides that *Recognition of costs in the carrying amount of an item of property, plant and equipment ceases when the item is in the location and condition necessary for it to be capable of operating in the manner intended by management.* And paragraph 55 of Ind AS 16 provides that *Depreciation of an asset begins when it is available for use, ie when it is in the location and condition necessary for it to be capable of operating in the manner intended by management.* In the case of Talaipalli coal mine, the intention of the management is to ensure sustainable production, by operating in a manner intended by the management, considering the revised mining plan which is under consideration by the CCO. The commercial non-declaration of the Mine has been disclosed in the Note 66(d)(i) of the Standalone Financial Statements and discussed in the Directors' Report. The commercial declaration of the Mine as at 31 March 2023 would not have been in accordance with the provisions of Ind AS 16 stated above as the asset was not available for its intended use. As the asset was not capitalized, no depreciation has been charged. In view of the above, there is no overstatement of Capital work-in-progress and understatement of Property, plant and equipment.

For and on behalf of the
Comptroller & Auditor General of India

(Sanjay K. Jha)
Director General of Audit (Energy)
New Delhi

Place: New Delhi
Dated: 20 July, 2023

For and on behalf of the
Board of Directors

(Gurdeep Singh)
Chairman and Managing Director

Place: New Delhi
Dated: 29 July, 2023

EMPLOYEE COST SUMMARY

₹ Crore

	Description	2018-19	2019-20	2020-21	2021-22	2022-23
A.	Salary, wages and benefits	5,596.61	5,530.64	5,302.16	5,561.38	**5,923.95**
	(Incl. Provident fund and other contributions)					
B.	Other benefits					
	1. Welfare expenses	302.11	257.12	272.56	337.56	**220.54**
	2. Township	260.94	281.79	288.57	316.73	**357.72**
	3. Educational and school facilities	31.12	31.77	27.67	26.82	**72.35**
	4. Medical facilities	234.82	254.44	249.53	318.44	**316.09**
	5. Subsidised transport	13.32	13.04	2.90	3.88	**3.60**
	6. Social and cultural activities	9.31	9.96	9.08	6.54	**6.25**
	7. Subsidised canteen	76.48	86.85	81.80	95.84	**115.10**
	Total (B)	**928.10**	**934.97**	**932.11**	**1,105.81**	**1,091.65**
	Total (A+B)	**6,524.71**	**6,465.61**	**6,234.27**	**6,667.19**	**7,015.60**
	8. Year end no. of employees	18,359	17,398	16,798	15,794	**15,159**
	9. Average no. of employees	19,049	17,879	17,098	16,296	**15,477**
	10. Average salary, wages and benefits per employee per annum (₹)	29,38,007	30,93,372	31,01,041	34,12,727	**38,27,583**
	11. Average cost of other benefits per employee per annum (₹)	4,87,217	5,22,943	5,45,157	6,78,578	**7,05,337**
	12. Average cost of employees remuneration and benefits per annum (₹)	34,25,224	36,16,315	36,46,198	40,91,305	**45,32,920**

Note: 1. Welfare expenses are net of amounts included in Sl. no. 2 to Sl. no. 7.

Revenue expenditure on Social Overhead for the year ended on 31st March, 2023

₹ Crore

SN	Description	Township	Educational and School facilities	Medical facilities	Subsidized Transport	Social and Cultural Activities	Subsidized Canteen	Total	Previous year
1	Payment to employees	26.44	0.02	161.76	-	-	-	**188.22**	198.72
2	Material consumed	18.76	-	5.89	-	-	-	**24.65**	25.05
3	Rates and taxes	1.18	-	-	-	-	-	**1.18**	1.18
4	Welfare expenses	2.09	70.32	212.86	3.63	6.23	114.36	**409.49**	323.11
5	Others including repairs & maintenance	252.74	0.08	90.34	-	0.02	-	**343.18**	329.11
6	Depreciation	106.44	1.97	8.51	-	-	0.74	**117.66**	114.25
7	**Sub-total (1 to 6)**	**407.65**	**72.39**	**479.36**	**3.63**	**6.25**	**115.10**	**1,084.38**	991.42
8	Less : Recoveries	23.49	0.02	1.51	0.03	-	-	**25.05**	24.45
9	**Net expenditure (7-8)**	**384.16**	**72.37**	**477.85**	**3.60**	**6.25**	**115.10**	**1,059.33**	966.97
10	Previous Year	349.75	26.82	484.14	3.88	6.54	95.84	966.97	-

CONSOLIDATED BALANCE SHEET AS AT 31 MARCH 2023

₹ Crore

Particulars	Note No.	As at 31 March 2023	As at 31 March 2022
ASSETS			
Non-current assets			
Property, plant and equipment	2	**2,39,882.50**	2,24,343.75
Capital work-in-progress	3	**89,133.12**	91,025.21
Intangible assets	4	**541.92**	579.27
Intangible assets under development	5	**45.88**	101.05
Investments accounted for using the equity method	6	**13,252.09**	10,522.14
Financial assets			
Investments	7	**632.70**	104.10
Loans	8	**553.77**	559.81
Trade Receivables	9	**2,638.68**	-
Other financial assets	10	**900.70**	1,017.98
Deferred tax assets (net)	11	**937.85**	995.70
Other non-current assets	12	**16,333.91**	15,877.02
Total non-current assets		**3,64,853.12**	3,45,126.03
Current assets			
Inventories	13	**14,240.37**	10,139.29
Financial assets			
Investments	14	**50.00**	-
Trade receivables	15	**28,825.22**	27,970.87
Cash and cash equivalents	16	**465.65**	675.77
Bank balances other than cash and cash equivalents	17	**4,482.88**	3,782.31
Loans	18	**268.78**	270.37
Other financial assets	19	**8,912.07**	5,826.14
Current tax assets (net)	20	**93.51**	62.64
Other current assets	21	**11,160.27**	9,525.32
Total current assets		**68,498.75**	58,252.71
Assets held for Sale	22	**120.92**	18.50
Regulatory deferral account debit balances	23	**12,548.66**	13,199.17
TOTAL ASSETS		**4,46,021.45**	4,16,596.41
EQUITY AND LIABILITIES			
Equity			
Equity share capital	24	**9,696.67**	9,696.67
Other equity	25	**1,37,326.50**	1,25,677.07
Total equity attributable to owners of the Company		**1,47,023.17**	1,35,373.74
Non-controlling interests	26	**3,930.45**	3,760.41
Total equity		**1,50,953.62**	1,39,134.15
Liabilities			
Non-current liabilities			
Financial liabilities			
Borrowings	27	**1,87,883.57**	1,81,871.19
Lease liabilities	28	**1,604.04**	962.69
Trade payables	29		
Total outstanding dues of micro and small enterprises		**7.66**	13.45
Total outstanding dues of creditors other than micro and small enterprises		**78.86**	71.19
Other financial liabilities	30	**788.41**	1,059.86

CONSOLIDATED BALANCE SHEET AS AT 31 MARCH 2023

₹ Crore

Particulars	Note No.	As at 31 March 2023	As at 31 March 2022
Provisions	31	**1,917.89**	1,655.35
Deferred tax liabilities (net)	32	**12,690.00**	10,951.67
Other non-current liabilities	33	**2,611.95**	1,926.65
Total non-current liabilities		**2,07,582.38**	1,98,512.05
Current liabilities			
Financial liabilities			
Borrowings	34	**31,921.61**	27,684.07
Lease liabilities	35	**216.75**	188.61
Trade payables	36		
Total outstanding dues of micro and small enterprises		**462.43**	496.04
Total outstanding dues of creditors other than micro and small enterprises		**13,359.92**	10,781.28
Other financial liabilities	37	**28,181.98**	27,627.52
Other current liabilities	38	**2,088.55**	1,877.61
Provisions	39	**8,217.26**	7,875.53
Current tax liabilities (net)	40	**86.47**	141.13
Total current liabilities		**84,534.97**	76,671.79
Deferred revenue	41	**2,950.48**	2,278.42
TOTAL EQUITY AND LIABILITIES		**4,46,021.45**	4,16,596.41
Significant accounting policies	1		

The accompanying notes 1 to 79 form an integral part of these financial statements.

For and on behalf of the Board of Directors

(Arun Kumar)
Company Secretary

(Jaikumar Srinivasan)
Director (Finance)
DIN: 01220828

(Gurdeep Singh)
Chairman & Managing Director
DIN: 00307037

This is the Consolidated Balance Sheet referred to in our report of even date

For S.K. Mehta & Co.
Chartered Accountants
Firm Reg. No.000478N

For Varma & Varma
Chartered Accountants
Firm Reg. No. 004532S

For Parakh & Co.
Chartered Accountants
Firm Reg. No. 001475C

(Rohit Mehta)
Partner
M No.091382

(K P Srinivas)
Partner
M No. 208520

(Thalendra Sharma)
Partner
M No.079236

For C.K. Prusty & Associates
Chartered Accountants
Firm Reg. No. 323220E

For B.C. Jain & Co.
Chartered Accountants
Firm Reg. No. 001099C

For V.K. Jindal & Co.
Chartered Accountants
Firm Reg. No. 001468C

(C.K.Prusty)
Partner
M No. 057318

(Rishabh Jain)
Partner
M.No.400912

(Suresh Agarwal)
Partner
M.No.072534

Place : New Delhi
Dated : 19 May 2023

Digitally signed by signatories

CONSOLIDATED STATEMENT OF PROFIT AND LOSS FOR THE YEAR ENDED 31 MARCH 2023

₹ Crore

Particulars	Note No.	For the year ended 31 March 2023	For the year ended 31 March 2022
Income			
Revenue from operations	42	**1,76,206.93**	1,32,669.28
Other income	43	**1,770.24**	2,325.03
Total income		**1,77,977.17**	1,34,994.31
Expenses			
Fuel cost	44	**1,00,655.78**	69,752.97
Electricity purchased for trading		**5,324.95**	5,584.69
Employee benefits expense	45	**6,528.34**	6,310.09
Finance costs	46	**11,156.06**	9,315.98
Depreciation, amortization and impairment expense	47	**14,792.27**	13,787.83
Other expenses	48	**15,968.95**	10,741.97
Total expenses		**1,54,426.35**	1,15,493.53
Profit before share of profits of joint ventures accounted for using equity method, tax and regulatory deferral account balances		**23,550.82**	19,500.78
Add: Share of profits of joint ventures accounted for using equity method		**779.77**	1,020.13
Profit before tax and regulatory deferral account balances		**24,330.59**	20,520.91
Tax expense	57		
Current tax			
Current year		**4,659.84**	3,760.62
Earlier years		**196.27**	(2.69)
Deferred tax		**1,940.01**	1,289.17
Total tax expense		**6,796.12**	5,047.10
Profit before regulatory deferral account balances		**17,534.47**	15,473.81
Net movement in regulatory deferral account balances (net of tax)	72	**(413.12)**	1,486.48
Profit for the year		**17,121.35**	16,960.29
Other comprehensive income			
Items that will not be reclassified to profit or loss			
- Net actuarial gains/(losses) on defined benefit plans		**(104.30)**	(126.98)
- Net gains/(losses) on fair value of equity instruments		**3.60**	5.40
- Share of other comprehensive income of joint ventures accounted for using the equity method		**1.89**	2.16
Income tax on items that will not be classfied to profit or loss			
- Net actuarial gains/(losses) on defined benefit plans		**17.23**	23.01
Items that will be reclassified to profit or loss			
- Exchange differences on translation of foreign operations		**(121.42)**	9.16
Other comprehensive income for the year, net of tax		**(203.00)**	(87.25)
Total comprehensive income for the year		**16,918.35**	16,873.04

CONSOLIDATED STATEMENT OF PROFIT AND LOSS FOR THE YEAR ENDED 31 MARCH 2023

₹ Crore

Particulars	Note No.	For the year ended 31 March 2023	For the year ended 31 March 2022
Profit attributable to:			
Owners of the Parent Company		**16,912.55**	16,675.90
Non-controlling interests		**208.80**	284.39
		17,121.35	16,960.29
Other comprehensive income attributable to:			
Owners of the Parent Company		**(202.36)**	(87.80)
Non-controlling interests		**(0.64)**	0.55
		(203.00)	(87.25)
Total comprehensive income attributable to:			
Owners of the Parent Company		**16,710.19**	16,588.10
Non-controlling interests		**208.16**	284.94
		16,918.35	16,873.04
Earnings per equity share attributable to owners of the parent company (Par value ₹ 10/- each)	62		
Basic & Diluted (₹) (including net movement in regulatory deferral account balances)		**17.44**	17.20
Basic & Diluted (₹) (excluding net movement in regulatory deferral account balances)		**17.87**	15.66
Significant accounting policies	1		

The accompanying notes 1 to 79 form an integral part of these financial statements.

For and on behalf of the Board of Directors

(Arun Kumar) Company Secretary	(Jaikumar Srinivasan) Director (Finance) DIN: 01220828	(Gurdeep Singh) Chairman & Managing Director DIN: 00307037

This is the Consolidated Statement of Profit and Loss referred to in our report of even date

For S.K. Mehta & Co. Chartered Accountants Firm Reg. No.000478N	For Varma & Varma Chartered Accountants Firm Reg. No. 004532S	For Parakh & Co. Chartered Accountants Firm Reg. No. 001475C
(Rohit Mehta) Partner M No.091382	(K P Srinivas) Partner M No. 208520	(Thalendra Sharma) Partner M No.079236
For C.K. Prusty & Associates Chartered Accountants Firm Reg. No. 323220E	For B.C. Jain & Co. Chartered Accountants Firm Reg. No. 001099C	For V.K. Jindal & Co. Chartered Accountants Firm Reg. No. 001468C
(C.K.Prusty) Partner M No. 057318	(Rishabh Jain) Partner M.No.400912	(Suresh Agarwal) Partner M.No.072534

Place : New Delhi
Dated : 19 May 2023

Digitally signed by signatories

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY FOR THE YEAR ENDED 31 MARCH 2023

(A) Equity share capital

For the year ended 31 March 2023

₹ Crore

Particulars	Amount
Balance as at 1 April 2022	9,696.67
Changes in equity share capital due to prior period errors	-
Restated balance as at 1 April 2022	9,696.67
Changes in equity share capital during the year	-
Balance as at 31 March 2023	9,696.67

For the year ended 31 March 2022

₹ Crore

Particulars	Amount
Balance as at 1 April 2021	9,696.67
Changes in equity share capital due to prior period errors	-
Restated balance as at 1 April 2021	9,696.67
Changes in equity share capital during the year	-
Balance as at 31 March 2022	9,696.67

(B) Other equity

For the year ended 31 March 2023

₹ Crore

Particulars	Attributable to owners of the parent company										Other equity attributable to owners of the parent company	Non-controlling interests	Total
	Reserves & surplus								Items of other comprehensive income (OCI)				
	Capital reserve	Other capital reserve - common control	Capital redemption reserve	Bonds/ Debentures redemption reserve	Self insurance reserve	Fly ash utilisation reserve fund	General reserve	Retained earnings	Equity instruments through OCI	Foreign currency translation reserve			
Balance as at 1 April 2022	488.69	(5,159.26)	197.89	6,421.72	200.00	599.89	98,654.79	24,156.11	86.70	30.54	1,25,677.07	3,760.41	**1,29,437.48**
Profit for the year	-	-	-	-	-	-	-	16,912.55	-	-	16,912.55	208.80	**17,121.35**
Other comprehensive income	-	-	-	-	-	-	-	(84.54)	3.60	(121.42)	(202.36)	(0.64)	**(203.00)**
Total comprehensive income	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**16,828.01**	**3.60**	**(121.42)**	**16,710.19**	**208.16**	**16,918.35**
Impact of business combination and additional non-controlling interest arising on acquisition / disposal of interest & other adjustments	1,825.94	-	-	-	-	-	-	-	-	-	1,825.94	179.63	**2,005.57**
Transfer to retained earnings	-	-	-	(628.57)	-	-	-	628.57	-	-	-	-	**-**
Transfer from retained earnings	-	-	-	58.50	-	-	-	(58.50)	-	-	-	-	**-**
Accretion / (utilisation) in fly ash utlisation fund (net) (Note 25)	-	-	-	-	-	143.38	-	-	-	-	143.38	-	**143.38**
Final dividend paid for FY 2021-22 (Note 25)	-	-	-	-	-	-	-	(2,909.00)	-	-	(2,909.00)	-	**(2,909.00)**
Interim dividend paid for FY 2022-23 (Note 25)	-	-	-	-	-	-	-	(4,121.08)	-	-	(4,121.08)	(217.75)	**(4,338.83)**
Balance as at 31 March 2023	**2,314.63**	**(5,159.26)**	**197.89**	**5,851.65**	**200.00**	**743.27**	**98,654.79**	**34,524.11**	**90.30**	**(90.88)**	**1,37,326.50**	**3,930.45**	**1,41,256.95**

For the year ended 31 March 2022

₹ Crore

Particulars	Attributable to owners of the parent company										Other equity attributable to owners of the parent company	Non-controlling interests	Total
	Reserves & surplus								Items of other comprehensive income (OCI)				
	Capital reserve	Other capital reserve - common control	Capital redemption reserve	Bonds/ Debentures redemption reserve	Self insurance reserve	Fly ash utilisation reserve fund	General reserve	Retained earnings	Equity instruments through OCI	Foreign currency translation reserve			
Balance as at 1 April 2021	488.69	(5,159.26)	197.89	6,970.47	200.00	619.60	98,544.79	14,076.94	81.30	21.38	1,16,041.80	3,523.71	1,19,565.51
Profit for the year	-	-	-	-	-	-	-	16,675.90	-	-	16,675.90	284.39	16,960.29
Other comprehensive income	-	-	-	-	-	-	-	(102.36)	5.40	9.16	(87.80)	0.55	(87.25)
Total comprehensive income	-	-	-	-	-	-	-	16,573.54	5.40	9.16	16,588.10	284.94	16,873.04
Impact of business combination and additional non-controlling interest arising on acquisition / disposal of interest & other adjustments	-	-	-	-	-	-	-	-	-	-	-	125.57	125.57
Transfer to retained earnings	-	-	-	(597.25)	-	-	-	597.25	-	-	-	-	-
Transfer from retained earnings	-	-	-	48.50	-	-	110.00	(158.50)	-	-	-	-	-
Accretion / (utilisation) in fly ash utlisation fund (net) (Note 25)	-	-	-	-	-	(19.71)	-	-	-	-	(19.71)	-	(19.71)
Final dividend paid for FY 2020-21 (Note 25)	-	-	-	-	-	-	-	(3,054.45)	-	-	(3,054.45)	(173.81)	(3,228.26)
Interim dividend paid for FY 2021-22 (Note 25)	-	-	-	-	-	-	-	(3,878.67)	-	-	(3,878.67)	-	(3,878.67)
Balance as at 31 March 2022	488.69	(5,159.26)	197.89	6,421.72	200.00	599.89	98,654.79	24,156.11	86.70	30.54	1,25,677.07	3,760.41	1,29,437.48

Note: Other comprehensive income adjusted in retained earnings amounting to ₹ **84.54 crore** (31 March 2022: ₹ 102.36 crore) represents remeasurement of defined benefit plans.

For and on behalf of the Board of Directors

(Arun Kumar)
Company Secretary

(Jaikumar Srinivasan)
Director (Finance)
DIN: 01220828

(Gurdeep Singh)
Chairman & Managing Director
DIN: 00307037

This is the Consolidated Statement of Changes in Equity referred to in our report of even date

For S.K. Mehta & Co.
Chartered Accountants
Firm Reg. No.000478N

(Rohit Mehta)
Partner
M No.091382

For Varma & Varma
Chartered Accountants
Firm Reg. No. 004532S

(K P Srinivas)
Partner
M No. 208520

For Parakh & Co.
Chartered Accountants
Firm Reg. No. 001475C

(Thalendra Sharma)
Partner
M No.079236

For C.K. Prusty & Associates
Chartered Accountants
Firm Reg. No. 323220E

(C.K.Prusty)
Partner
M No. 057318

For B.C. Jain & Co.
Chartered Accountants
Firm Reg. No. 001099C

(Rishabh Jain)
Partner
M.No.400912

For V.K. Jindal & Co.
Chartered Accountants
Firm Reg. No. 001468C

(Suresh Agarwal)
Partner
M.No.072534

Place : New Delhi
Dated : 19 May 2023

Digitally signed by signatories

CONSOLIDATED STATEMENT OF CASH FLOWS FOR THE YEAR ENDED 31 MARCH 2023

₹ Crore

	Particulars	For the year ended 31 March 2023		For the year ended 31 March 2022
A.	**CASH FLOW FROM OPERATING ACTIVITIES**			
	Profit before exceptional items, tax and regulatory deferral account balances		**24,330.59**	20,520.91
	Add: Net movements in regulatory deferral account balances (net of tax)		**(413.12)**	1,486.48
	Add: Tax on net movements in regulatory deferral account balances		**(92.68)**	303.99
	Profit before tax including movement in regulatory deferral account balances		**23,824.79**	22,311.38
	Adjustment for:			
	Depreciation, amortisation and impairment expense	**14,792.27**		13,787.83
	Provisions	**753.86**		407.63
	Share of net profits of joint ventures accounted for using equity method	**(779.77)**		(1,020.13)
	On account of government grants	**668.76**		(109.50)
	Deferred foreign currency fluctuation asset	**(84.69)**		416.75
	Deferred income from foreign currency fluctuation	**948.27**		224.94
	Regulatory deferral account debit balances	**505.80**		(1,790.47)
	Fly ash utilisation reserve fund	**143.38**		(19.71)
	Finance costs	**11,092.08**		9,238.86
	Unwinding of discount on vendor liabilities /discounting of trade Receivable	**63.98**		77.12
	Interest income/Late payment Surcharge/Income on investments	**(918.04)**		(1,292.30)
	Dividend income	**(6.96)**		(9.00)
	Provisions written back	**(368.30)**		(378.01)
	Profit on de-recognition of property, plant and equipment	**(31.80)**		(6.27)
	Loss on de-recognition of property, plant and equipment	**168.55**		108.06
			26,947.39	19,635.80
	Operating profit before working capital changes		**50,772.18**	41,947.18
	Adjustment for:			
	Trade receivables	**(3,256.07)**		199.73
	Inventories	**(3,004.98)**		538.68
	Trade payables, provisions, other financial liabilities and other liabilities	**3,461.28**		3,697.41
	Loans, other financial assets and other assets	**(3,845.21)**		(2,521.72)
			(6,644.98)	1,914.10
	Cash generated from operations		**44,127.20**	43,861.28
	Income taxes (paid) / refunded		**(4,075.65)**	(2,073.05)
	Net cash from/(used in) operating activities - A		**40,051.55**	41,788.23
B.	**CASH FLOW FROM INVESTING ACTIVITIES**			
	Purchase of property, plant and equipment & intangible assets	**(24,818.52)**		(24,444.42)
	Disposal of property, plant and equipment & intangible assets	**98.29**		113.50
	Proceeds / Investment in mutual funds	**-**		499.99
	Investment in joint venture companies (net)	**(857.25)**		499.87

CONSOLIDATED STATEMENT OF CASH FLOWS FOR THE YEAR ENDED 31 MARCH 2023

₹ Crore

	Particulars		For the year ended 31 March 2023	For the year ended 31 March 2022
	Interest income/Late payment Surcharge/Income on investments received	**576.74**		1,325.77
	Dividend received from other investments	**6.96**		9.00
	Income tax paid on income from investing activities	**(434.92)**		(545.86)
	Bank balances other than cash and cash equivalents	**(678.50)**		(348.77)
	Net cash from/(used in) investing activities - B		**(26,107.20)**	(22,890.92)
C.	**CASH FLOW FROM FINANCING ACTIVITIES**			
	Proceeds from non-current borrowings	**28,325.97**		27,237.43
	Repayment of non-current borrowings	**(24,523.66)**		(19,079.93)
	Proceeds /repayments of current borrowings	**4,343.48**		(7,434.15)
	Payment of lease liabilities	**(230.10)**		(55.10)
	Interest paid	**(14,822.25)**		(12,732.88)
	Dividend paid	**(7,247.91)**		(7,106.93)
	Net cash from/(used in) financing activities - C		**(14,154.47)**	(19,171.56)
	Net increase/(decrease) in cash and cash equivalents (A+B+C)		**(210.12)**	(274.25)
	Cash and cash equivalents at the beginning of the year (see Note 1 and 2 below)		**675.77**	950.02
	Cash and cash equivalents at the end of the year (see Note 1 and 2 below)		**465.65**	675.77
Notes:				
1.	Cash and cash equivalents consist of cheques, drafts, stamps in hand, balances with banks and deposits with original maturity of upto three months.			
2.	Reconciliation of cash and cash equivalents:			
	Cash and cash equivalents as per Note 16		**465.65**	675.77

3. Refer Note 68 for details of undrawn borrowing facilities that may be available for future operating activities and to settle capital commitments.

4. Reconciliation between the opening and closing balances in the Balance Sheet for liabilities arising from financing activities:

For the year ended 31 March 2023 ₹ Crore

Particulars	Non-current borrowings*	Finance lease obligations	Current borrowings
Opening balance as at 1 April 2022	2,03,678.06	1,151.30	8,530.47
Cash flows during the year	(11,019.94)	899.59	4,343.48
Non-cash changes due to:			
- Acquisitions under finance lease		(230.10)	-
- Equity shares issued	(150.68)	-	-
- Interest on borrowings	15,006.58	-	-
- Variation in exchange rates	2,295.49	-	-
- Transaction costs on borrowings	(40.68)	-	-
Closing balance as at 31 March 2023	**2,09,768.83**	**1,820.79**	**12,873.95**

CONSOLIDATED STATEMENT OF CASH FLOWS FOR THE YEAR ENDED 31 MARCH 2023

For the year ended 31 March 2022

₹ Crore

Particulars	Non-current borrowings*	Finance lease obligations	Current borrowings
Opening balance as at 1 April 2021	1,95,589.08	897.49	15,964.62
Cash flows during the year	(4,575.38)	(55.10)	(7,434.15)
Non-cash changes due to:			
- Acquisitions under finance lease		308.91	-
- Equity shares issued	(65.85)	-	-
- Interest on borrowings	13,142.83	-	-
- Variation in exchange rates	(410.34)	-	-
- Transaction costs on borrowings	(2.28)	-	-
Closing balance as at 31 March 2022	2,03,678.06	1,151.30	8,530.47

* Includes current maturities of non-current borrowings and interest accrued thereon, refer Note 27 and Note 34.

For and on behalf of the Board of Directors

(Arun Kumar)
Company Secretary

(Jaikumar Srinivasan)
Director (Finance)
DIN: 01220828

(Gurdeep Singh)
Chairman & Managing Director
DIN: 00307037

This is the Consolidated statement of cash flows referred to in our report of even date

For S.K. Mehta & Co.
Chartered Accountants
Firm Reg. No.000478N

For Varma & Varma
Chartered Accountants
Firm Reg. No. 004532S

For Parakh & Co.
Chartered Accountants
Firm Reg. No. 001475C

(Rohit Mehta)
Partner
M No.091382

(K P Srinivas)
Partner
M No. 208520

(Thalendra Sharma)
Partner
M No.079236

For C.K. Prusty & Associates
Chartered Accountants
Firm Reg. No. 323220E

For B.C. Jain & Co.
Chartered Accountants
Firm Reg. No. 001099C

For V.K. Jindal & Co.
Chartered Accountants
Firm Reg. No. 001468C

(C.K.Prusty)
Partner
M No. 057318

(Rishabh Jain)
Partner
M.No.400912

(Suresh Agarwal)
Partner
M.No.072534

Place : New Delhi
Dated : 19 May 2023

Digitally signed by signatories

Notes forming part of Consolidated Financial Statements

Note 1. Group Information and Significant Accounting Policies

A. Reporting entity

NTPC Limited (the 'Company' or 'Parent Company') is a Company domiciled in India and limited by shares (CIN: L40101DL1975GOI007966). The shares of the Company are listed and traded on the National Stock Exchange of India Limited (NSE) and BSE Limited in India. The address of the Company's registered office is NTPC Bhawan, SCOPE Complex, 7 Institutional Area, Lodhi Road, New Delhi - 110003.These consolidated financial statements comprise the financial statements of the Company and its subsidiaries (referred to collectively as the 'Group') and the Group's interest in its joint ventures. The Group is primarily involved in the generation and sale of bulk power to State Power Utilities. Other business of the Group includes providing consultancy, project management & supervision, energy trading, oil & gas exploration and coal mining.

B. Basis of preparation

1. Statement of Compliance

These consolidated financial statements are prepared on going concern basis following accrual system of accounting and comply with the Indian Accounting Standards (Ind AS) prescribed under Section 133 of the Companies Act, 2013 read with the Companies (Indian Accounting Standards) Rules, 2015 as amended, and other relevant provisions of the Companies Act, 2013 and the provisions of the Electricity Act, 2003 to the extent applicable.

These financial statements were approved for issue by the Board of Directors in its meeting held on 19 May 2023.

2. Basis of measurement

The consolidated financial statements have been prepared on the historical cost basis except for:

- Certain financial assets and liabilities (including derivative instruments) that are measured at fair value (refer serial no. 28 of accounting policy regarding financial instruments); and
- Plan assets in the case of employees defined benefit plans that are measured at fair value.

The methods used to measure fair values are discussed in notes to the financial statements.

Historical cost is the amount of cash or cash equivalents paid or the fair value of the consideration given to acquire assets at the time of their acquisition or the amount of proceeds received in exchange for the obligation, or at the amounts of cash or cash equivalents expected to be paid to satisfy the liability in the normal course of business. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

3. Functional and presentation currency

These consolidated financial statements are presented in Indian Rupees (₹) which is the Company's functional currency. All financial information presented in (₹) has been rounded to the nearest crore (up to two decimals), except when indicated otherwise.

4. Current and non-current classification

The Group presents assets and liabilities in the balance sheet based on current/non-current classification.

An asset is classified as current when it is:

- Expected to be realized or intended to be sold or consumed in normal operating cycle;
- Held primarily for the purpose of trading;
- Expected to be realized within twelve months after the reporting period; or
- Cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period.

All other assets are classified as non-current.

A liability is classified as current when:

- It is expected to be settled in normal operating cycle;
- It is held primarily for the purpose of trading;
- It is due to be settled within twelve months after the reporting period; or
- There is no unconditional right to defer settlement of the liability for at least twelve months after the reporting period.

All other liabilities are classified as non-current.

Deferred tax assets/liabilities are classified as non-current.

Assets and liabilities are classified between current and non-current considering 12 months period as normal operating cycle.

C. Significant accounting policies

A summary of the significant accounting policies applied in the preparation of the consolidated financial statements are as given below. These accounting policies have been applied consistently to all periods presented in the consolidated financial statements.

The Group has elected to utilize the option under Ind AS 101 - 'First time adoption of Indian Accounting Standards' by not applying the provisions of Ind AS 16 - 'Property, plant and equipment' & Ind AS 38 - 'Intangible assets' retrospectively and continue to use the previous GAAP carrying amount as a deemed cost under Ind AS at the date of transition to Ind AS i.e. 1 April 2015. Therefore, the carrying amount of property, plant and equipment and intangible assets as per the previous GAAP as at 1 April 2015, i.e. the Group's date of transition to Ind AS, were maintained on transition to Ind AS.

1. Basis of consolidation

The financial statements of subsidiary companies and joint venture companies are drawn up to the same reporting date as of the Company for the purpose of consolidation.

1.1 Subsidiaries

Subsidiaries are all entities over which the Group has control. The Group controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power to direct the relevant activities of the investee. Subsidiaries are fully consolidated from the date on which control is acquired by the Group and are continued to be consolidated until the date that such control ceases.

The Group combines the financial statements of the parent and its subsidiaries line by line adding together like items of assets, liabilities, equity, income and expenses. Intercompany transactions, balances and unrealized gains on transactions between Group companies are eliminated. Unrealized losses are also eliminated unless the transaction provides evidence of an impairment of the transferred asset. When necessary, adjustments are made to the financial statements of subsidiaries to bring their accounting policies in line with Group's accounting policies.

Non-controlling interests (NCI) in the results and equity of subsidiaries are shown separately in the consolidated statement of profit and loss, consolidated statement of changes in equity and consolidated balance sheet respectively.

Changes in the Group's equity interest in a subsidiary that do not result in a loss of control are accounted for as equity transactions.

When the Group loses control over a subsidiary, it derecognizes the assets and liabilities of the subsidiary, and any related NCI and other components of equity. Any interest retained in the former subsidiary is measured at fair value at the date the control is lost. Any resulting gain or loss is recognized in statement of profit and loss. All amounts previously recognized in other comprehensive income in relation to that subsidiary are accounted for as if the Group had directly disposed of the related assets and liabilities of the subsidiary i.e. reclassified to consolidated statement of profit and loss or transferred to equity as specified by applicable Ind AS. This fair value becomes the initial carrying amount for the purposes of subsequently accounting for the retained interest as an associate, joint venture or financial asset.

1.2 Joint ventures

A joint venture is a type of joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the joint venture. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control.

Interests in joint ventures are accounted for using the equity method, after initially being recognized at cost in the consolidated balance sheet.

Under the equity method of accounting, the investments are initially recognized at cost and adjusted thereafter to recognize the Group's share of the post-acquisition profits or losses of the investee in profit and loss, and the Group's share of other comprehensive income (OCI) of the investee in OCI. Dividends received or receivable from joint ventures are recognized as a reduction in the carrying amount of the investment.

When the Group's share of losses in an equity-accounted investment equals or exceeds its interest in the entity, which includes any long term interest that, in substance, form part of Group investment in joint venture, the Group does not recognize further losses, unless it has incurred legal or constructive obligations or made payments on behalf of the joint venture. Losses recognized using the equity method in excess of the entity's investment in ordinary shares are applied to the other components of the entity's interest in an associate or a joint venture in the reverse order of their seniority i.e. priority in liquidation.

The statement of profit and loss reflects the Group' share of results of operations of the joint venture. Any change in the OCI of those investee is presented as presented as part of the Group OCI. Unrealized gains on transactions between the Group and its joint ventures are eliminated to the extent of the Group's interest in these entities. Unrealized losses are also eliminated unless the transaction provides evidence of an impairment of the asset transferred. When necessary, adjustments are made to the financial statements of joint ventures to bring their accounting policies into line with the Group's accounting policies.

The carrying amount of equity accounted as investments are tested for impairment in accordance with the policy described in D.11 below.

When the Group ceases to apply equity method of accounting for an investment because of a loss of joint control, any retained interest in the entity is re-measured to its fair value with the change in carrying amount recognized in statement of profit and loss. This fair value becomes the initial carrying amount for the purposes of subsequently accounting for the retained interest as a financial asset. In addition, any amounts previously recognized in OCI in respect of that entity are accounted for as if the Group had directly disposed of the related assets or liabilities. This may mean that amounts previously recognized in OCI are reclassified to profit or loss.

If the ownership interest in a joint venture is reduced but joint control is retained, only a proportionate share of the amounts previously recognized in OCI are reclassified to profit or loss where appropriate.

2. Property, plant and equipment

2.1. Initial recognition and measurement

An item of property, plant and equipment is recognized as an asset if and only if it is probable that future economic benefits associated with the item will flow to the and the cost of the item can be measured reliably.

Items of property, plant and equipment are initially recognized at cost. Cost comprises purchase price including import duties and non-refundable purchase taxes after deducting trade discounts and rebates, any cost directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management and the present value of initial estimate of cost of dismantling, removal and restoration.

Subsequent measurement is done at cost less accumulated depreciation/amortization and accumulated impairment losses.

When parts of an item of property, plant and equipment that are significant in value and have different useful lives as compared to the main asset, they are recognized separately.

Deposits, payments/liabilities made provisionally towards compensation, rehabilitation and other expenses relatable to land in possession are treated as cost of land.

In the case of assets put to use, where final settlement of bills with contractors is yet to be effected, capitalization is done on provisional basis subject to necessary adjustment in the year of final settlement.

Assets and systems common to more than one generating unit are capitalized on the basis of engineering estimates/ assessments.

Items of spare parts, stand-by equipment and servicing equipment which meet the definition of property, plant and equipment are capitalized. Other spare parts are carried as inventory and recognized as expense in the statement of profit and loss on consumption.

The acquisition or construction of some items of property, plant and equipment although not directly increasing the future economic benefits of any particular existing item of property, plant and equipment, may be necessary for the Group to obtain future economic benefits from its other assets. Such items are recognized as property, plant and equipment.

Excess of net sale proceed of items produced while bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management is deducted from the directly attributable cost considered as part of an item of property, plant and equipment.

2.2. Subsequent costs

Subsequent expenditure is recognized in the carrying amount of the asset when it is probable that future economic benefits deriving from the cost incurred will flow to the enterprise and the cost of the item can be measured reliably.

Expenditure on major inspection and overhauls of generating unit is capitalized, when it meets the asset recognition criteria. Any remaining carrying amount of the cost of the previous inspection and overhaul is derecognized.

The cost of replacing major part of an item of property, plant and equipment is recognized in the carrying amount of the item if it is probable that the future economic benefits embodied within the part will flow to the Group and its cost can be measured reliably. The carrying amount of the replaced part is derecognized regardless of whether the replaced part has been depreciated separately. If it is not practicable to determine the carrying amount of the replaced part, the Group uses the cost of the replacement as an indication of what the cost of replaced part was at the time it was acquired or constructed. The costs of the day-to-day servicing of property, plant and equipment are recognized in the statement of profit and loss as and when incurred.

2.3. Decommissioning costs

The present value of the expected cost for the decommissioning of the asset after its use is included in the cost of the respective asset if the recognition criteria for a provision are met.

2.4. De-recognition

Property, plant and equipment is derecognized when no future economic benefits are expected from their use or upon their disposal. Gains and losses on de-recognition of an item of property, plant and equipment are determined as the difference between sale proceeds from disposal, if any, and the carrying amount of property, plant and equipment and are recognized in the statement of profit and loss.

In circumstance, where an item of property, plant and equipment is abandoned, the net carrying cost relating to the property, plant and equipment is written off in the same period.

2.5. Depreciation/amortization

Depreciation/amortization is recognized in statement of profit and loss on a straight-line basis over the estimated useful life of each part of an item of property, plant and equipment.

Depreciation on the assets of the generation of electricity business, integrated coal mining and on the assets of Corporate & other offices of the Group, covered under Part B of Schedule II of the Companies Act, 2013, is charged on straight-line method following the rates and methodology notified by the Central Electricity Regulatory Commission (CERC) Tariff Regulations.

Depreciation on the assets of the oil & gas exploration, power plants not governed by CERC Tariff Regulations and consultancy business is charged on straight-line method following the useful life specified in Schedule II of the Companies Act, 2013 except for the assets referred below.

Depreciation on the following assets is provided on their estimated useful lives, which are different from the useful lives as prescribed under Schedule II to the Companies Act, 2013, ascertained on the basis of technical evaluation/ assessment:

a)	Kutcha roads	2 years
b)	Enabling works	
	- residential buildings	15 years
	- internal electrification of residential buildings	10 years
	- non-residential buildings including their internal electrification, water supply, sewerage & drainage works, railway sidings, aerodromes, helipads and airstrips	5 years
c)	Personal computers & laptops including peripherals	3 years
d)	Photocopiers, fax machines, water coolers and refrigerators	5 years
e)	Temporary erections including wooden structures	1 year
f)	Telephone exchange	15 years
g)	Wireless systems, VSAT equipment, display devices viz. projectors, screens, CCTV, audio video conferencing systems and other communication equipment	6 years
h)	Energy saving electrical appliances and fittings	2-7 years
i)	Solar/wind power plants which are not governed by CERC Tariff Regulations	25 years
j)	Hospital equipment	5-10 years
k)	Furniture and Fixture	5-15 years

Major overhaul and inspection costs which have been capitalized are depreciated over the period until the next scheduled outage or actual major inspection/overhaul, whichever is earlier.

Capital spares are depreciated considering the useful life ranging between 2 to 40 years based on technical assessment.

Right-of-use land and buildings relating to generation of electricity business governed by CERC Tariff Regulations are fully amortized on straight line method over the lease period or life of the related plant whichever is lower following the rates and methodology notified by the CERC Tariff Regulations.

Right-of-use land and buildings relating to generation of electricity business not governed by CERC tariff Regulations are fully amortized on straight line method over the lease period or life of the related plant whichever is lower.

Right-of-use land and buildings relating to corporate, and other offices are fully amortized on straight line method over lease period or twenty-five years whichever is lower following the rates and methodology notified by the CERC Tariff Regulations.

Land acquired under Coal Bearing Areas (Acquisition & Development) Act, 1957 and Other right-of-use land acquired for mining business are amortized on straight line method over the right of use period or balance life of the project whichever is lower.

In respect of integrated coal mines, the mines closure, site restoration and decommissioning obligations are amortized on straight line method over the balance life of the mine on commercial declaration.

Depreciation on additions to/deductions from property, plant and equipment during the year is charged on pro-rata basis from/up to the month in which the asset is available for use/sale, disposal or earmarked for disposal.

Where the cost of depreciable assets has undergone a change during the year due to increase/decrease in long-term liabilities (recognized up to 31 March 2016) on account of exchange fluctuation and price adjustment change in duties or similar factors, the unamortized balance of such asset is charged off prospectively over the remaining useful life determined following the applicable accounting policies relating to depreciation/amortization.

Where it is probable that future economic benefits deriving from the expenditure incurred will flow to the Group and the cost of the item can be measured reliably, subsequent expenditure on a property, plant and equipment along-with its unamortized depreciable amount is charged off prospectively over the revised useful life determined by technical assessment.

The residual values, useful lives and method of depreciation of assets other than the assets of generation of electricity business and integrated coal mines governed by CERC Tariff Regulations, are reviewed at each financial year end and adjusted prospectively, wherever required.

Depreciation of an asset ceases at the earlier of the date that the asset is classified as held for sale (or included in a disposal group that is classified as held for sale) in accordance with Ind AS 105 and the date that the asset is derecognised.

Refer policy no. C.20 in respect of depreciation/amortization of right-of-use assets other than land and buildings.

3. Capital work-in-progress

Cost incurred for property, plant and equipment that are not ready for their intended use as on the reporting date, is classified under capital work-in-progress.

The cost of self-constructed assets includes the cost of materials & direct labour, any other costs directly attributable to bringing the assets to the location and condition necessary for it to be capable of operating in the manner intended by management and the borrowing costs attributable to the acquisition or construction of qualifying asset.

Expenses directly attributable to construction of property, plant and equipment incurred till they are ready for their intended use are identified and allocated on a systematic basis on the cost of related assets.

Deposit works/cost plus contracts are accounted for on the basis of statements of account received from the contractors.

Unsettled liabilities for price variation/exchange rate variation in case of contracts are accounted for on estimated basis as per terms of the contracts.

4. Intangible assets and intangible assets under development

4.1. Initial recognition and measurement

An intangible asset is recognized if and only if it is probable that the expected future economic benefits that are attributable to the asset will flow to the Group and the cost of the asset can be measured reliably.

Intangible assets that are acquired by the Group, which have finite useful lives, are recognized at cost. Subsequent measurement is done at cost less accumulated amortization and accumulated impairment losses. Cost comprises purchase price including import duties, non-refundable taxes after deducting trade discounts and rebates and any directly attributable expenses of preparing the asset for its intended use.

Expenditure on development activities is capitalized only if the expenditure can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable and the Group intends to & has sufficient resources to complete development and to use or sell the asset.

Expenditure incurred which are eligible for capitalizations under intangible assets are carried as intangible assets under development till they are ready for their intended use.

4.2. Subsequent costs

Subsequent expenditure is recognized as an increase in the carrying amount of the asset when it is probable that future economic benefits deriving from the cost incurred will flow to the enterprise and the cost of the item can be measured reliably.

4.3. De-recognition

An intangible asset is derecognized when no future economic benefits are expected from their use or upon their disposal. Gain or loss on de-recognition of an intangible asset is determined as the difference between the net disposal proceeds, if any, and the carrying amount of intangible assets and are recognized in the statement of profit and loss.

4.4. Amortization

Cost of software recognized as intangible asset, is amortized on straight-line method over a period of legal right to use or 3 years, whichever is less. Other intangible assets are amortized on straight-line method over the period of legal right to use or life of the related plant, whichever is less.

The amortization period and the amortization method of intangible assets with a finite useful life is reviewed at each financial year end and adjusted prospectively, wherever required.

5. Regulatory deferral account balances

Expense/income recognized in the statement of profit and loss to the extent recoverable from or payable to the beneficiaries in subsequent periods as per CERC Tariff Regulations are recognized as 'Regulatory deferral account balances'.

Regulatory deferral account balances are adjusted in the year in which the same become recoverable from or payable to the beneficiaries.

Regulatory deferral account balances are evaluated at each balance sheet date to ensure that the underlying activities meet the recognition criteria and it is probable that future economic benefits associated with such balances will flow to the Group. If these criteria are not met, the regulatory deferral account balances are derecognized.

6. Exploration for and evaluation of mineral resources

6.1. Oil and gas exploration activities

All exploration costs incurred in drilling and equipping exploratory and appraisal wells, cost of drilling exploratory type stratigraphic test wells are initially capitalized as 'Exploratory wells-in-progress' under 'Intangible assets under development' till the time these are either transferred to oil and gas assets when a well is ready for commercial production or expensed as exploration cost (including allocated depreciation) as and when determined to be dry or of no further use, as the case may be.

Costs of exploratory wells are not carried over unless it could be reasonably demonstrated that there are indications of sufficient quantity of reserves and sufficient progress is being made in assessing the reserves and the economic & operating viability of the project. All such carried over costs are subject to review for impairment.

Cost of surveys and prospecting activities conducted in the search of oil and gas are expensed in the year in which these are incurred.

6.2. Coal mining exploration activities

Exploration and evaluation assets comprise capitalized costs which is generally the expenditure incurred associated with finding the mineral by carrying out topographical, geological, geochemical and geophysical studies, exploratory drilling, trenching, sampling, expenditure for activities in relation to evaluation of technical feasibility and commercial viability, acquisition of rights to explore etc.

Exploration and evaluation expenditure incurred after obtaining the mining right or the legal right to explore are capitalized as exploration and evaluation assets under 'Intangible assets under development' and stated at cost less impairment if any. Exploration and evaluation assets are assessed for impairment indicators at least annually.

Once the proved reserves are determined and development of mine/project is sanctioned. Exploration and evaluation assets are transferred to 'Development of Coal Mines' under 'Capital Work in Progress'. However, if proved reserves are not determined, exploration and evaluation asset is derecognized.

Exploration and evaluation expenditure incurred prior to obtaining the mining right or the legal right to explore are expensed as and when incurred.

7. Development expenditure on coal mines

When proved reserves are determined and development of mines/project is sanctioned, exploration and evaluation assets are transferred to 'Development of coal mines' under 'Capital work-in-progress'.

Subsequent expenditure is capitalized only where it either enhances the economic benefits of the development/producing asset or replaces part of the existing development/producing asset. Any remaining costs associated with the part replaced are expensed.

The development expenditure capitalized is net of value of coal extracted during development phase.

Date of commercial operation of integrated coal mines shall be determined on the occurring of earliest of following milestones as provided in CERC tariff regulations:

1) The first date of the year succeeding the year in which 25% of the peak rated capacity as per the mining plan is achieved; or

2) The first date of the year succeeding the year in which the value of production exceeds the total expenditure in that year; or

3) The date of two years from the date of commencement of production;

On the date of commercial operation, the assets under capital work-in-progress are classified as a component of property, plant and equipment under 'Mining property'.

Gains and losses on de-recognition of assets referred above, are determined as the difference between the net disposal proceeds, if any, and the carrying amount of respective assets and are recognized in the statement of profit and loss.

7.1. Stripping activity expense/adjustment

Expenditure incurred on removal of mine waste materials (overburden) necessary to extract the coal reserves is referred to as stripping cost. The Group has to incur such expenses over the life of the mine as technically estimated.

Cost of stripping is charged on technically evaluated average stripping ratio at each mine with due adjustment for stripping activity asset and ratio-variance account after the mines are brought to revenue.

Net of the balances of stripping activity asset and ratio variance at the Balance Sheet date is shown as 'Stripping activity adjustment' under the head 'Non-current assets/Non-current provisions' as the case may be, and adjusted as provided in the CERC Tariff Regulations.

7.2. Mines closure, site restoration and decommissioning obligations

The Group's obligations for land reclamation and decommissioning of structure consist of spending at mines in accordance with the guidelines from Ministry of Coal, Government of India. The Group estimates its obligations for mine closure, site restoration and decommissioning based on the detailed calculation and technical assessment of the amount and timing of future cash spending for the required work and provided for as per approved mine closure plan. The estimate of expenses is escalated for inflation and then discounted at a pre-tax discount rate that reflects current market assessment of the time value of money and risk, such that the amount of provision reflects the present value of expenditure required to settle the obligation. The Group recognizes a corresponding asset under property, plant and equipment as a separate item for the cost associated with such obligation. Upon commercial declaration of mines, the mine closure, site restoration and decommissioning obligations are amortized on straight line method over the balance life of the mine.The value of the obligation is progressively increased over time as the effect of discounting unwinds and the same is recognized as finance costs.

Further, a specific escrow account is maintained for this purpose as per approved mine closure plan. The progressive mine closure expenses incurred on year to year basis, forming part of the total mine closure obligation, are initially recognized as receivable from escrow account and thereafter adjusted with the obligation in the year in which the amount is withdrawn from escrow account after concurrence of the certifying agency.

8. Joint operations

The Group has joint arrangements with others for operations in the nature of joint operations. The Group recognizes, on a line-by-line basis its share of the assets, liabilities and expenses of these joint operations as per the arrangement which are accounted based on the respective accounting policies of the Group.

9. Borrowing costs

Borrowing costs consist of (a) interest expense calculated using the effective interest method as described in Ind AS 109 – 'Financial Instruments' (b) interest expense on lease liabilities recognized in accordance with Ind AS 116– 'Leases' and(c) exchange differences arising from foreign currency borrowings to the extent that they are regarded as an adjustment to interest costs.

Borrowing costs that are directly attributable to the acquisition, construction/exploration/ development or erection of qualifying assets are capitalized as part of cost of such asset until such time the assets are substantially ready for their intended use. Qualifying assets are assets which necessarily take substantial period of time to get ready for their intended use or sale.

When the Group borrows funds specifically for the purpose of obtaining a qualifying asset, the borrowing costs incurred are capitalized. When Group borrows funds generally and uses them for the purpose of obtaining a qualifying asset, the capitalization of the borrowing costs is computed based on the weighted average cost of all borrowings that are outstanding during the period and used for the acquisition, construction/exploration or erection of the qualifying asset. However, borrowing costs applicable to borrowings made specifically for the purpose of obtaining a qualifying asset, are excluded from this calculation, until substantially all the activities necessary to prepare that asset for its intended use or sale are complete.

Income earned on temporary investment made out of the borrowings pending utilization for expenditure on the qualifying assets is deducted from the borrowing costs eligible for capitalization.

Capitalization of borrowing costs ceases when substantially all the activities necessary to prepare the qualifying assets for their intended use are complete.

Other borrowing costs are recognized as an expense in the year in which they are incurred.

The Group can incur borrowing costs during an extended period in which it suspends the activities necessary to prepare an asset for its intended use or sale. Such costs are costs of holding partially completed assets and is not eligible for capitalisation. However, the Group does not normally suspend capitalising borrowing costs during a period when it carries out substantial technical and administrative work. The Group also does not suspend capitalising borrowing costs when a temporary delay is a necessary part of the process of getting an asset ready for its intended use or sale.

10. Inventories

Inventories are valued at the lower of cost and net realizable value. Cost includes cost of purchase, cost of conversion and other costs incurred in bringing the inventories to their present location and condition. Cost is determined on weighted average basis. Costs of purchased inventory are determined after deducting rebates, trade discounts and other similar items. Net realizable value is the estimated selling price in the ordinary course of business, less estimated costs of completion and the estimated costs necessary to make the sale.

The diminution in the value of obsolete, unserviceable, surplus and non-moving items of stores and spares is ascertained on review and provided for.

Scrap inventory is valued at estimated realizable value.

11. Cash and cash equivalents

Cash and cash equivalents in the balance sheet comprise cash at banks, cash on hand and short-term deposits with an original maturity of three months or less, that are readily convertible to known amount of cash and which are subject to an insignificant risk of changes in value.

12. Government grants

Government grants are recognized when there is reasonable assurance that they will be received and the Group will comply with the conditions associated with the grant. Grants that compensate the Group for the cost of depreciable asset are recognized as income in statement of profit and loss on a systematic basis over the period and in the proportion in which depreciation is charged. Grants that compensate the Group for expenses incurred are recognized over the period in which the related costs are incurred and the same is deducted from the related expenses.

13. Fly ash utilization reserve fund

Proceeds from sale of ash/ash products along-with income on investment of surplus fund are transferred to 'Fly ash utilization reserve fund' in terms of provisions of gazette notification dated 3 November 2009 issued by Ministry of Environment and Forests, Government of India. The fund is utilized towards expenditure on development of infrastructure/ facilities, promotion & facilitation activities for use of fly ash.

14. Provisions, contingent liabilities and contingent assets

A provision is recognized if, as a result of a past event, the Group has a present legal or constructive obligation that can be estimated reliably, and it is probable that an outflow of economic benefits will be required to settle the obligation. If the effect of the time value of money is material, provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognized as a finance cost.

The amount recognized as a provision is the best estimate of the consideration required to settle the present obligation at reporting date, taking into account the risks and uncertainties surrounding the obligation.

When some or all of the economic benefits required to settle a provision are expected to be recovered from a third party, the receivable is recognized as an asset if it is virtually certain that reimbursement will be received and the amount of the receivable can be measured reliably. The expense relating to a provision is presented in the statement of profit and loss net of reimbursement, if any.

Contingent liabilities are possible obligations that arise from past events and whose existence will only be confirmed by the occurrence or non-occurrence of one or more future events not wholly within the control of the Group. Where it is not probable that an outflow of economic benefits will be required, or the amount cannot be estimated reliably, the obligation is disclosed as a contingent liability, unless the probability of outflow of economic benefits is remote. Contingent liabilities are disclosed on the basis of judgment of the management/independent experts. These are reviewed at each balance sheet date and are adjusted to reflect the current management estimate.

Contingent assets are possible assets that arise from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the Group. Contingent assets are disclosed in the financial statements when inflow of economic benefits is probable on the basis of judgment of management. These are assessed continually to ensure that developments are appropriately reflected in the financial statements.

Present obligations arising under onerous contracts are recognised and measured as provisions. An onerous contract is considered to exist where the Company has a contract under which the unavoidable costs of meeting the obligations under the contract exceed the economic benefits expected to be received from the contract.

15. Foreign currency transactions and translation

Transactions in foreign currencies are initially recorded at the functional currency spot exchange rates at the date the transaction first qualifies for recognition.

Monetary assets and liabilities denominated in foreign currencies outstanding at the reporting date are translated at the functional currency spot rates of exchange prevailing on that date. Exchange differences arising on settlement or translation of monetary items are recognized in the statement of profit and loss in the year in which it arises with the exception that exchange differences on long term monetary items related to acquisition of property, plant and equipment recognized up to 31 March 2016 are adjusted to the carrying cost of property, plant and equipment.

Non-monetary items denominated in foreign currency which are measured in terms of historical cost are recorded using the exchange rate at the date of the transaction. In case of advance consideration received or paid in a foreign currency, the date of transaction for the purpose of determining the exchange rate to use on initial recognition of the related asset, expense or income (or part of it), is when the Group initially recognizes the non-monetary asset or non-monetary liability arising from the payment or receipt of advance consideration.

The results and financial position of foreign operations (none of which has the currency of a hyperinflationary economy) that have a functional currency different from the presentation currency are translated into the presentation currency as follows:

- Assets and liabilities are translated at the closing rate at the date of that balance sheet
- Income and expenses are translated at average exchange rates (unless this is not a reasonable approximation of the cumulative effect of the rates prevailing on the transaction dates, in which case income and expenses are translated at the dates of the transactions), and
- All resulting exchange differences are recognized in OCI.

On consolidation, exchange differences arising from the translation of any net investment in foreign entities are recognized in OCI. The associated exchange differences are reclassified to profit or loss, as part of the gain or loss on disposal of the net investment.

16. Revenue

Group's revenues arise from sale and trading of energy, consultancy, project management & supervision services, income on assets under lease, supply of coal from integrated coal mines and other income. Revenue from other income comprises interest from banks, employees, contractors etc., dividend from mutual fund investments, surcharge received from beneficiaries for delayed payments, sale of scrap, other miscellaneous income, etc.

16.1. Revenue from sale of energy

The majority of the Group's operations in India are regulated under the Electricity Act, 2003. Accordingly, the CERC determines the tariff for the Group's power plants based on the norms prescribed in the tariff regulations as applicable from time to time. Tariff is based on the capital cost incurred for a specific power plant and primarily comprises two components: capacity charge i.e. a fixed charge that includes depreciation, return on equity, interest on working capital, operating & maintenance expenses, interest on loan and energy charge i.e. a variable charge primarily based on fuel costs. Tariff for Group's integrated coal mines are also determined by CERC based on the norms prescribed in the CERC Tariff Regulations.

Revenue is measured based on the consideration that is specified in a contract with a customer or is expected to be received in exchange for the products or services and excludes amounts collected on behalf of third parties. The Group recognizes revenue when (or as) the performance obligation is satisfied, which typically occurs when (or as) control over the products or services is transferred to a customer.

Revenue from sale of energy is accounted for based on tariff rates approved by the CERC (except items indicated as provisional) as modified by the orders of Appellate Tribunal for Electricity to the extent applicable. In case of power stations where the tariff rates are yet to be approved/items indicated provisional by the CERC in their orders, provisional rates are adopted considering the applicable CERC Tariff Regulations. Revenue from sale of energy is recognized once the electricity has been delivered to the beneficiary and is measured through a regular review of usage meters. Beneficiaries are billed on a periodic and regular basis. As at each reporting date, revenue from sale of energy includes an accrual for sales delivered to beneficiaries but not yet billed i.e. contract assets/ unbilled revenue.

The incentives/disincentives are accounted for based on the norms notified/approved by the CERC as per principles enunciated in Ind AS 115 - 'Revenue from contracts with customers'. In cases of power stations where the same have not been notified/approved, incentives/disincentives are accounted for on provisional basis.

Part of revenue from energy sale where CERC tariff Regulations are not applicable is recognized based on the rates, terms & conditions mutually agreed with the beneficiaries and trading of power through power exchanges.

Exchange differences arising from settlement/translation of monetary items denominated in foreign currency to the extent recoverable from or payable to the beneficiaries in subsequent periods as per the CERC Tariff Regulations are accounted as 'Regulatory deferred account balances' and such balances are adjusted in the year in which the same becomes recoverable/payable to the beneficiaries.

Exchange differences on account of translation of foreign currency borrowings recognized up to 31 March 2016, to the extent recoverable from or payable to the beneficiaries in subsequent periods as per the CERC Tariff Regulations are accounted as 'Deferred foreign currency fluctuation asset' with corresponding credit to 'Deferred income from foreign currency fluctuation'. Deferred income from foreign currency fluctuation account is amortized in the proportion in which depreciation is charged on such exchange differences and same is adjusted against depreciation expense. Fair value changes in respect of forward exchange contracts for derivatives recoverable from/payable to the beneficiaries as per the CERC Tariff Regulations, are recognized in sales.

Revenue from sale of energy through trading is recognized based on the rates, terms & conditions mutually agreed with the beneficiaries as per the guidelines issued by Ministry of New and Renewable Energy, Government of India.

Rebates allowed to beneficiaries as early payment incentives are deducted from the amount of revenue.

Revenue from sale of energy saving certificates is accounted for as and when sold.

16.2. Revenue from services

Revenue from consultancy, project management and supervision services rendered is measured based on the consideration that is specified in a contract with a customer or is expected to be received in exchange for the services, which is determined on output method and excludes amounts collected on behalf of third parties. The Group recognizes revenue when the performance obligation is satisfied, which typically occurs when control over the services is transferred to a customer.

Reimbursement of expenses is recognized as other income, as per the terms of the service contracts.

Contract modifications are accounted for when additions, deletions or changes are approved either to the contract scope or contract price. The accounting for modifications of contracts involves assessing whether the services added to an existing contract are distinct and whether the pricing is at the standalone selling price. Services added that are not distinct are accounted for on a cumulative catch up basis, while those that are distinct are accounted for prospectively, either as a separate contract, if the additional services are priced at the standalone selling price, or as a termination of the existing contract and creation of a new contract if not priced at the standalone selling price.

16.3. Other income

Interest income is recognized, when no significant uncertainty as to measurability or collectability exist, on a time proportion basis taking into account the amount outstanding and the applicable interest rate, using the effective interest rate method (EIR). For debt instruments measured either at amortized cost or at fair value through other comprehensive income (OCI), interest income is recorded using the EIR. For credit impaired financial assets the EIR is applied to the net carrying amount of the financial asset (after deduction of the loss allowance). EIR is the rate that exactly discounts the estimated future cash payments or receipts over the expected life of the financial instrument or a shorter period, where appropriate, to the gross carrying amount of the financial asset or to the amortized cost of a financial liability. When calculating the EIR, the group estimates the expected cash flows by considering all the contractual terms of the financial instrument (for example, prepayment, extension, call and similar options) but does not consider the expected credit losses. Interest income is included in other income in the statement of profit and loss.

For purchased or originated credit-impaired (POCI) financial assets interest income is recognized by calculating the credit-adjusted EIR and applying that rate to the amortized cost of the asset. The credit-adjusted EIR is the interest rate that, at original recognition, discounts the estimated future cash flows (including credit losses) to the amortized cost of the POCI assets.

Insurance claims for loss of profit are accounted for in the year of acceptance. Other insurance claims are accounted for based on certainty of realization.

Revenue from rentals and operating leases is recognized on an accrual basis in accordance with the substance of the relevant agreement.

The interest/surcharge on late payment/overdue trade receivables for sale of energy is recognized when no significant uncertainty as to measurability or collectability exists.

Interest/surcharge recoverable on advances to contractors and suppliers as well as warranty claims wherever there is uncertainty of realization/acceptance are not treated as accrued and are therefore, accounted for on receipt/acceptance.

Dividend income is recognized in profit or loss only when the right to receive is established, it is probable that the economic benefits associated with the dividend will flow to the Group, and the amount of the dividend can be measured reliably.

17. Employee benefits

17.1. Defined contribution plans

A defined contribution plan is a post-employment benefit plan under which an entity pays fixed contributions to separate entities and will have no legal or constructive obligation to pay further amounts. Obligations for contributions to defined contribution plans are recognized as an employee benefits expense in statement of profit and loss in the period during which services are rendered by employees. Prepaid contributions are recognized as an asset to the extent that a cash refund or a reduction in future payments is available. Contributions to a defined contribution plan that are due after more than 12 months after the end of the period in which the employees render the service are discounted to their present value.

The Group has a defined contribution pension scheme which is administered through a separate trust. The obligation of the Group is to contribute to the trust to the extent of amount not exceeding 30% of basic pay and dearness allowance less employer's contribution towards provident fund, gratuity, post-retirement medical facility (PRMF) or any other retirement benefits. The Group's contribution towards pension is made to National Pension System Trust (NPS) for the employees opted for the scheme. The contributions to the defined contribution pension scheme of the Group/NPS for the year are recognized as an expense and charged to the statement of profit and loss.

17.2. Defined benefit plans

A defined benefit plan is a post-employment benefit plan other than a defined contribution plan. The Group's liability towards gratuity, pension scheme at two of the stations in respect of taken over employees from the erstwhile state government power utility, post-retirement medical facility(PRMF), baggage allowance for settlement at home town after retirement, farewell gift on retirement and provident fund scheme to the extent of interest liability on provident fund contribution are in the nature of defined benefit plans.

The Group pays fixed contribution to the provident fund at predetermined rates to a separate trust, which invests the funds in permitted securities. The contributions to the fund for the year are recognized as expense and are charged to the statement of profit and loss. The obligation of the Group is to make such fixed contributions and to ensure a minimum rate of return to the members as specified by the Government of India. Shortfall in the fund assets, if any, is made good by the Group and charged to the statement of profit and loss.

The gratuity is funded by the Group and is managed by separate trust. The Group has PRMF, under which retired employee and the spouse are provided medical facilities in the Group hospitals/empaneled hospitals. They can also avail treatment as out-patient subject to a ceiling fixed by the Group.

The Group's net obligation in respect of defined benefit plans is calculated separately for each plan by estimating the amount of future benefit that employees have earned in return for their service in the current and prior periods; that benefit is discounted to determine its present value. The fair value of any plan assets is deducted. The discount rate is based on the prevailing market yields of Indian government securities as at the reporting date that have maturity dates approximating the terms of the Group's obligations and that are denominated in the same currency in which the benefits are expected to be paid.

The actuarial calculation is performed annually by a qualified actuary using the projected unit credit method. When the calculation results in a benefit to the Group, the recognized asset is limited to the present value of economic benefits available in the form of any future refunds from the plan or reductions in future contributions to the plan. An economic benefit is available to the Group if it is realizable during the life of the plan, or on settlement of the plan liabilities. Remeasurement comprising actuarial gain and losses, return on plan assets (excluding the amount included in net interest on the net defined liability) & effect of asset ceiling (excluding the amount included in net interest on the net defined liability) and the same are recognized in the Other Comprehensive Income (OCI) in the period in which they arise.

Past service costs are recognized in statement of profit and loss on the earlier of the date of the plan amendment or curtailment, and the date that the Group recognizes related restructuring costs. If a plan amendment, curtailment or settlement occurs, the current service cost and the net interest for the period after the re-measurement are determined using the assumptions used for the re-measurement.

17.3. Other long-term employee benefits

Benefits under the Group's leave encashment, long-service award and economic rehabilitation scheme constitute other long term employee benefits.

The Group's net obligation in respect of these long-term employee benefits is calculated separately for each plan by estimating the amount of future benefit that employees have earned in return for their service in the current and prior periods; that benefit is discounted to determine its present value and the fair value of any related assets is deducted. The discount rate is based on the prevailing market yields of Indian government securities as at the reporting date that have maturity dates approximating the terms of the Group's obligations and that are denominated in the same currency in which the benefits are expected to be paid.

The actuarial calculation is performed annually by a qualified actuary using the projected unit credit method. Remeasurement comprising of actuarial gain and losses, return on plan assets (excluding the amount included in net interest on the net defined liability) & effect of asset ceiling (excluding the amount included in net interest on the net defined liability) and the same are recognized in statement of profit and loss account in the period in which they arise.

The obligations are presented as current liabilities in the balance sheet if the Group does not have an unconditional right to defer settlement for at least twelve months after the reporting period, regardless of when the actual settlement is expected to occur.

17.4. Short-term benefits

Short-term employee benefit obligations are measured on an undiscounted basis and are expensed as the related service is provided.

A liability is recognized for the amount expected to be paid under performance related pay if the Group has a present legal or constructive obligation to pay this amount as a result of past service provided by the employee and the obligation can be estimated reliably.

18. Other expenses

Expenses on ex-gratia payments under voluntary retirement scheme, training & recruitment and voluntary community development are charged to statement of profit and loss in the year incurred.

Expenditure on research is charged to revenue as and when incurred. Expenditure on development is charged to revenue as and when incurred unless it meets the recognition criteria for intangible asset as per Ind AS 38- 'Intangible assets'.

Preliminary expenses on account of new projects incurred prior to approval of feasibility report/techno economic clearance are charged to statement of profit and loss.

Net pre-commissioning income/expenditure is adjusted directly in the cost of related assets and systems.

Transit and handling losses of coal as per Group's norms are included in cost of coal.

19. Income tax

Income tax expense comprises current and deferred tax. Current tax expense is recognized in statement of profit and loss except to the extent that it relates to items recognized directly in OCI or equity, in which case it is recognized in OCI or equity, respectively.

Current tax is the expected tax payable on the taxable income for the year computed as per the provisions of Income Tax Act, 1961, using tax rates enacted or substantively enacted by the end of the reporting period, and any adjustment to tax payable in respect of previous years.

Deferred tax is recognized using the balance sheet method, on temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the tax bases of assets and liabilities. Deferred tax is measured at the tax rates that are expected to be applied to temporary differences when they materialize, based on the laws that have been enacted or substantively enacted by the reporting date. Deferred tax assets and liabilities are offset if there is a legally enforceable right to offset current tax assets against the current tax liabilities, and they relate to income taxes levied by the same tax authority.

Deferred tax is recognized in statement of profit and loss except to the extent that it relates to items recognized directly in OCI or equity, in which case it is recognized in OCI or equity, respectively.

Deferred tax liability is recognized for all taxable temporary differences, except when the deferred tax liability arises from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and, at the time of transaction, affects neither the accounting profit or loss or nor taxable profit or loss.

A deferred tax asset is recognized for all deductible temporary differences to the extent that it is probable that future taxable profits will be available against which the deductible temporary difference can be utilized. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the sufficient taxable profits will be available in future to allow all or part of deferred tax assets to be utilized.

Deferred tax liabilities are not recognized for taxable temporary differences between the carrying amount and tax bases of investments in subsidiaries and interests in joint venture where the Group is able to control the timing of the reversal of the temporary differences and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred tax assets are not recognized for deductible temporary differences between the carrying amount and tax bases of investments in subsidiaries and interest in joint arrangements where it is not probable that the differences will reverse in the foreseeable future or taxable profit will not be available against which the temporary difference can be utilized.

Deferred tax assets include Minimum Alternative Tax (MAT) paid in accordance with the tax laws in India, which is likely to give future economic benefits in the form of availability of set off against future income tax liability. MAT credit is recognized as deferred tax asset in the balance sheet when the asset can be measured reliably and it is probable that the future taxable profit will be available against which MAT credit can be utilized.

When there is uncertainty regarding income tax treatments, the Group assesses whether a tax authority is likely to accept an uncertain tax treatment. If it concludes that the tax authority is unlikely to accept an uncertain tax treatment, the effect of the uncertainty on taxable income, tax bases and unused tax losses and unused tax credits is recognized. The effect of the uncertainty is recognized using the method that, in each case, best reflects the outcome of the uncertainty: the most likely outcome or the expected value. For each case, the Group evaluates whether to consider each uncertain tax treatment separately, or in conjunction with another or several other uncertain tax treatments, based on the approach that best prefixes the resolution of uncertainty.

20. Leases

20.1. As lessee

The Group assesses whether a contract contains a lease, at inception of a contract. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. To assess whether a contract conveys the right to control the use of an identified asset, the Group assesses whether: (1) the contact involves the use of an identified asset (2) the Group has substantially all of the economic benefits from use of the asset through the period of the lease and (3) the Group has the right to direct the use of the asset.

The Group recognizes a right-of-use asset and a corresponding lease liability for all lease arrangements in which it is a lessee, except for leases with a term of twelve months or less (short-term leases) and leases for low value underlying assets. For these short-term and leases for low value underlying assets, the Group recognizes the lease payments as an operating expense on a straight-line basis over the term of the lease.

Certain lease arrangements include the options to extend or terminate the lease before the end of the lease term. Right-of use assets and lease liabilities include these options when it is reasonably certain that the option to extend the lease will be exercised/option to terminate the lease will not be exercised.

The right-of-use assets (other than land and buildings) are initially recognized at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or prior to the commencement date of the lease plus any initial direct costs less any lease incentives. They are subsequently measured at cost less accumulated depreciation/ amortization and impairment losses and adjusted for any reassessment of lease liabilities.

Right-of-use assets are depreciated/amortized from the commencement date to the end of the useful life of the underlying asset, if the lease transfers ownership of the underlying asset by the end of lease term or if the cost of right-of-use assets reflects that the purchase option will be exercised. Otherwise, Right-of-use assets are depreciated/amortized from the commencement date on a straight-line basis over the shorter of the lease term and useful life of the underlying asset.

Right-of-use assets are evaluated for recoverability whenever events or changes in circumstances indicate that their carrying amounts may not be recoverable. For the purpose of impairment testing, the recoverable amount (i.e. the higher of the fair value less costs of disposal and the value-in-use) is determined on an individual asset basis unless the asset does not generate cash flows that are largely independent of those from other assets. In such cases, the recoverable amount is determined for the Cash Generating Unit (CGU) to which the asset belongs.

The lease liability is initially measured at amortized cost at the present value of the future lease payments. In calculating the present value, lease payments are discounted using the interest rate implicit in the lease or, if not readily determinable, using the incremental borrowing rate. Lease liabilities are re-measured with a corresponding adjustment to the related right-of-use asset if the Group changes its assessment whether it will exercise an extension or a termination option.

20.2. As lessor

At the inception of an arrangement, the Group determines whether such an arrangement is or contains a lease. A specific asset is subject of a lease if fulfillment of the arrangement is dependent on the use of that specified asset. An arrangement conveys the right to use the asset if the arrangement conveys to the customer the right to control the use of the underlying asset. Arrangements that do not take the legal form of a lease but convey rights to customers/suppliers to use an asset in return for a payment or a series of payments are identified as either finance leases or operating leases.

Accounting for finance leases

Where the Group determines a long term Power Purchase Agreement (PPA) to be or to contain a lease and where the off taker has the principal risk and rewards of ownership of the power plant through its contractual arrangements with the Group, the arrangement is considered a finance lease. Capacity payments are apportioned between capital repayments relating to the provision of the plant, finance income and service income. The finance income element of the capacity payment is recognized as revenue, using a rate of return specific to the plant to give a constant periodic rate of return on the net investment in each period. The service income element of the capacity payment is the difference between the total capacity payment and the amount recognized as finance income and capital repayments and recognized as revenue as it is earned.

The amounts due from lessees under finance leases are recorded in the balance sheet as financial assets, classified as 'Finance lease receivables', at the amount equal to the net investment in the lease.

Accounting for operating leases

Where the Group determines a long term PPA to be or to contain a lease and where the Group retains the principal risks and rewards of ownership of the power plant, the arrangement is considered an operating lease.

For operating leases, the power plant is capitalized as property, plant and equipment and depreciated over its economic life. Rental income from operating leases is recognized on a straight line basis over the term of the arrangement.

20.3. Sub-leases

When the Group is an intermediate lessor, it accounts for its interests in the head lease and the sub lease separately. It assesses the lease classification of a sub-lease with reference to the right-of-use assets arising from the head lease, not with reference to the underlying asset.

Rental income from operating leases is recognized on a straight-line basis over the term of the arrangement.

21. Impairment of non-financial assets

The carrying amounts of the Group's non-financial assets are reviewed at each reporting date to determine whether there is any indication of impairment considering the provisions of Ind AS 36 - 'Impairment of Assets'. If any such indication exists, then the asset's recoverable amount is estimated.

The recoverable amount of an asset or cash-generating unit is the higher of its fair value less costs of disposal and its value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. For the purpose of impairment testing, assets that cannot be tested individually are grouped together into the smallest group of assets that generates cash inflows from continuing use that are largely independent of the cash inflows of other assets or groups of assets (the 'cash-generating unit', or "CGU").

An impairment loss is recognized if the carrying amount of an asset or its CGU exceeds its estimated recoverable amount. Impairment losses are recognized in the statement of profit and loss. Impairment losses recognized in respect of CGUs are reduced from the carrying amounts of the assets of the CGU.

Impairment losses recognized in prior periods are assessed at each reporting date for any indications that the loss has decreased or no longer exists. An impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of accumulated depreciation or amortization, if no impairment loss had been recognized.

22. Operating segments

In accordance with Ind AS 108 – 'Operating segments', the operating segments used to present segment information are identified on the basis of internal reports used by the Group's management to allocate resources to the segments and assess their performance. The Board of Directors is collectively the Group's 'Chief Operating Decision Maker' or 'CODM' within the meaning of Ind AS 108. The indicators used for internal reporting purposes may evolve in connection with performance assessment measures put in place.

Segment results that are reported to the CODM include items directly attributable to a segment as well as those that can be allocated on a reasonable basis. Unallocated items comprise mainly corporate expenses, finance costs, income tax expenses and corporate income that are not directly attributable to segments.

Revenue directly attributable to the segments is considered as segment revenue. Expenses directly attributable to the segments and common expenses allocated on a reasonable basis are considered as segment expenses.

Segment capital expenditure is the total cost incurred during the period to acquire property, plant and equipment, capital work in progress, intangible assets other than goodwill and intangible assets under development.

Segment assets comprise property, plant and equipment, intangible assets, capital work in progress, intangible assets under development, advances for capital expenditures, trade and other receivables, inventories and other assets that can be directly or reasonably allocated to segments. For the purpose of segment reporting, property, plant and equipment have been allocated to segments based on the extent of usage of assets for operations attributable to the respective segments. Unallocated assets comprise investments, income tax assets, corporate assets and other assets that cannot reasonably be allocated to segments.

Segment liabilities include all operating liabilities in respect of a segment and consist principally of trade payable, payable for capital expenditure and other payables, provision for employee benefits and other provisions. Unallocated liabilities comprise equity, income tax liabilities, loans and borrowings and other liabilities and provisions that cannot reasonably be allocated to segments.

23. Business Combinations

Acquisition of subsidiaries and businesses are accounted for using the acquisition method as at the date of the acquisition, which is the date at which control is transferred to the Group. The consideration transferred in each business combination is measured at the aggregate of the acquisition date fair values of assets transferred by the Group, liabilities incurred by the Group to the former owners of the acquiree, equity interests issued by the Group in exchange for control of the acquiree and fair value of any asset or liability resulting from a contingent consideration arrangement. The identifiable assets acquired and liabilities assumed are recognized at fair values on their acquisition date (except certain assets and liabilities which are required to be measured as per the applicable standard) and the non-controlling interest is initially recognized at the non-controlling interest's proportionate share of the acquiree's net identifiable assets.

Acquisition related costs are recognized in the consolidated statement of profit and loss.

Goodwill is initially measured at cost, being the excess of the consideration transferred, amount of any non-controlling interest recognized in the acquired entity and acquisition date fair value of any previous equity interest in the acquired entity over the Group's interest in the net fair value of the identifiable assets acquired, liabilities assumed and contingent liabilities recognized. Where the fair value of the identifiable assets acquired and liabilities assumed exceed the consideration transferred, amount of any non-controlling interest recognized in the acquired entity and acquisition date fair value of any previous equity interest in the acquired entity after reassessing the fair values of the net assets and contingent liabilities, the excess is recognized as capital reserve on consolidation.

Business combinations involving entities that are controlled by the Company are accounted for using the pooling of interests method wherein the assets and liabilities of the combining entities are reflected at their carrying amounts and no adjustments are made to reflect fair values, or recognise any new assets or liabilities. The only adjustments that are made are to harmonise accounting policies.

The financial information in the financial statements in respect of prior periods is restated as if the business combination had occurred from the beginning of the preceding period in the financial statements, irrespective of the actual date of the combination. However, where the business combination had occurred after that date, the prior period information is restated only from that date.

The balance of the retained earnings appearing in the financial statements of the transferor is aggregated with the corresponding balance appearing in the financial statements of the transferee. The identity of the reserves is preserved and the reserves of the transferor become the reserves of the transferee. The difference, if any, between the amounts recorded as share capital issued plus any additional consideration in the form of cash or other assets and the amount of share capital of the transferor is transferred to capital reserve and is presented separately from other capital reserves.

If the business combination is achieved in stages, the acquisition date carrying value of the acquirer's previously held equity interest in the acquiree is re-measured to fair value at the acquisition date. Any gains or losses arising from such re-measurement are recognized in statement of profit and loss or OCI, as appropriate. When the Group obtains control of a business that is a joint operation, then it considers such an acquisition as a business combination achieved in stages.

24. Dividends

Dividends and interim dividends payable to the Group's shareholders are recognized as changes in equity in the period in which they are approved by the shareholders and the Board of Directors respectively.

25. Material prior period errors

Material prior period errors are corrected retrospectively by restating the comparative amounts for the prior periods presented in which the error occurred. If the error occurred before the earliest period presented, the opening balances of assets, liabilities and equity for the earliest period presented, are restated.

26. Earnings per share

Basic earnings per equity share is computed by dividing the net profit or loss attributable to equity shareholders of the Group by the weighted average number of equity shares outstanding during the financial year.

Diluted earnings per equity share is computed by dividing the net profit or loss attributable to equity shareholders of the Group by the weighted average number of equity shares considered for deriving basic earnings per equity share and also the weighted average number of equity shares that could have been issued upon conversion of all dilutive potential equity shares.

The number of equity shares and potentially dilutive equity shares are adjusted retrospectively for all periods presented for any bonus shares issued during the financial year.

Basic and diluted earnings per equity share are also computed using the net profits or loss amounts excluding the movements in regulatory deferral account balances.

27. Statement of cash flows

Statement of cash flows is prepared in accordance with the indirect method prescribed in Ind AS 7 - 'Statement of cash flows'.

28. Financial instruments

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity. The Group recognizes a financial asset or a financial liability only when it becomes party to the contractual provisions of the instrument.

28.1. Financial assets

Initial recognition and measurement

All financial assets are recognized at fair value on initial recognition, except for trade receivables which are initially measured at transaction price. Transaction costs that are directly attributable to the acquisition of financial assets, which are not valued at fair value through profit or loss, are added to the fair value on initial recognition.

Subsequent measurement

Debt instruments at amortized cost

A 'debt instrument' is measured at the amortized cost if both the following conditions are met:

(a) The asset is held within a business model whose objective is to hold assets for collecting contractual cash flows, and

(b) Contractual terms of the asset give rise on specified dates to cash flows that are solely payments of principal and interest (SPPI) on the principal amount outstanding.

After initial measurement, such financial assets are subsequently measured at amortized cost using the effective interest rate (EIR) method. Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortization is included in finance income in the statement of profit and loss. The losses arising from impairment are recognized in the statement of profit and loss. This category generally applies to trade and other receivables.

Debt instrument at FVTOCI (Fair value through OCI)

A 'debt instrument' is classified as at the FVTOCI if both of the following criteria are met:

(a) The objective of the business model is achieved both by collecting contractual cash flows and selling the financial assets, and

(b) The asset's contractual cash flows represent SPPI

Debt instruments included within the FVTOCI category are measured initially as well as at each reporting date at fair value. Fair value movements are recognized in the OCI. However, the Group recognizes interest income, impairment losses & reversals and foreign exchange gain or loss in the statement of profit and loss. On de-recognition of the asset, cumulative gain or loss previously recognized in OCI is reclassified from the equity to the statement of profit and loss. Interest earned whilst holding FVTOCI debt instrument is reported as interest income using the EIR method.

Debt instrument at FVTPL (Fair value through profit or loss)

FVTPL is a residual category for debt instruments. Any debt instrument, which does not meet the criteria for categorization as at amortized cost or as FVTOCI, is classified as at FVTPL.

In addition, the Group may elect to classify a debt instrument, which otherwise meets amortized cost or FVTOCI criteria, as at FVTPL. However, such election is allowed only if doing so reduces or eliminates a measurement or recognition inconsistency (referred to as 'accounting mismatch'). Debt instruments included within the FVTPL category are measured at fair value with all changes recognized in the statement of profit and loss. Interest income on such investments is presented under 'Other income'.

Investment in Equity instruments

All equity investments in entities other than subsidiaries and joint venture companies are measured at fair value. Equity instruments which are held for trading are classified as at FVTPL. For all other equity instruments, the Group decides to classify the same either as at FVTOCI or FVTPL. The Group makes such election on an instrument by instrument basis. The classification is made on initial recognition and is irrevocable.

If the Group decides to classify an equity instrument as at FVTOCI, then all fair value changes on the instrument, excluding dividends, are recognized in the OCI. There is no recycling of the amounts from OCI to statement of profit and loss, even on sale/disposal of investments. However, the Group may transfer the cumulative gain or loss within equity on sale / disposal of the investments.

Equity instruments included within the FVTPL category are measured at fair value with all changes recognized in the statement of profit and loss. Dividend on such investments is presented under 'Other income'.

De-recognition

A financial asset (or, where applicable, a part of a financial asset or part of a Group of similar financial assets) is primarily de-recognized (i.e. removed from the Group's balance sheet) when:

- The rights to receive cash flows from the asset have expired, or
- The Group has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the Group has transferred substantially all the risks and rewards of the asset, or (b) the Group has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

The difference between the carrying amount and the amount of consideration received/receivable is recognized in the statement of profit and loss except for equity instruments classified as at FVOCI, where such differences are recorded in OCI.

Impairment of financial assets

In accordance with Ind AS 109 – 'Financial Instruments', the Group applies expected credit loss (ECL) model for measurement and recognition of impairment loss on the following financial assets and credit risk exposure:

(a) Financial assets that are debt instruments, and are measured at amortized cost e.g., loans, debt securities, deposits and bank balance.

(b) Financial assets that are debt instruments and are measured as at FVTOCI.

(c) Lease receivables under Ind AS 116.

(d) Trade receivables, unbilled revenue and contract assets under Ind AS 115.

(e) Loan commitments which are not measured as at FVTPL.

(f) Financial guarantee contracts which are not measured as at FVTPL.

For trade receivables and contract assets/unbilled revenue, the Group applies the simplified approach required by Ind AS 109 - 'Financial Instruments', which requires lifetime expected losses to be recognized from initial recognition.

For recognition of impairment loss on other financial assets and risk exposure (other than purchased or originated credit impaired financial assets), the Group determines that whether there has been a significant increase in the credit risk since initial recognition. If credit risk has not increased significantly, 12-month ECL is used to provide for impairment loss. However, if credit risk has increased significantly, lifetime ECL is used. If, in a subsequent period, credit quality of the instrument improves such that there is no longer a significant increase in credit risk since initial recognition, then the Group reverts to recognizing impairment loss allowance based on 12-month ECL.

For purchased or originated credit impaired financial assets, a loss allowance is recognized for the cumulative changes in lifetime expected credited losses since initial recognition.

28.2. Financial liabilities

Initial recognition and measurement

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through profit or loss and financial liabilities at amortized cost, as appropriate. All financial liabilities are recognized initially at fair value and, in the case of liabilities subsequently measured at amortized cost net of directly attributable transaction cost. The Group's financial liabilities include trade and other payables, borrowings including bank overdrafts, financial guarantee contracts and derivative financial instruments.

Subsequent measurement

The measurement of financial liabilities depends on their classification, as described below:

Financial liabilities at amortized cost

After initial measurement, such financial liabilities are subsequently measured at amortized cost using the EIR method. Gains and losses are recognized in statement of profit and loss when the liabilities are derecognized as well as through the EIR amortization process Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortization is included in finance costs in the statement of profit and loss. This category generally applies to borrowings, trade payables and other contractual liabilities.

Financial liabilities at fair value through profit or loss

Financial liabilities at fair value through profit or loss include financial liabilities held for trading and financial liabilities designated upon initial recognition as at fair value through profit or loss. Financial liabilities are classified as held for trading if they are incurred for the purpose of repurchasing in the near term. This category also includes derivative financial instruments entered into by the Group that are not designated as hedging instruments in hedge relationships as defined by Ind AS 109. Separated embedded derivatives are also classified as held for trading unless they are designated as effective hedging instruments.

Gains or losses on liabilities held for trading are recognized in the statement of profit and loss.

Financial liabilities designated upon initial recognition at fair value through profit or loss are designated at the initial date of recognition, and only if the criteria in Ind AS 109 are satisfied. For liabilities designated as FVTPL, fair value gains/losses attributable to changes in own credit risk is recognized in OCI. These gains/losses are not subsequently transferred to profit and loss. However, the Group may transfer the cumulative gain or loss within equity on disposal. All other changes in fair value of such liability are recognized in the statement of profit and loss. The Group has not designated any financial liability as at fair value through profit and loss.

De-recognition

A financial liability is derecognized when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the de-recognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognized in the statement of profit and loss.

28.3 Interest rate benchmark reform

When the basis for determining the contractual cash flows of a financial asset or financial liability measured at amortised cost changed as a result of interest rate benchmark reform, the Group updated the effective interest rate of the financial asset or financial liability to reflect the change that is required by the reform. A change in the basis for determining the contractual cash flows is required by interest rate benchmark reform if the following conditions are met:

- the change is necessary as a direct consequence of the reform; and
- the new basis for determining the contractual cash flows is economically equivalent to the previous basis – i.e. the basis immediately before the change.

When changes were made to a financial asset or financial liability in addition to changes to the basis for determining the contractual cash flows required by interest rate benchmark reform, the Group first updated the effective interest rate of the financial asset or financial liability to reflect the change that is required by interest rate benchmark reform. After that, the Group applied the policies on accounting for modifications to the additional changes.

28.4 Financial guarantee contracts

Financial guarantee contracts issued by the Group are those contracts that require a payment to be made to reimburse the holder for a loss it incurs because the specified debtor fails to make a payment when due in accordance with the terms of a debt instrument. Financial guarantee contracts are recognized initially as a liability at fair value, adjusted for transaction costs that are directly attributable to the issuance of the guarantee. Subsequently, the liability is measured at the higher of the amount of loss allowance determined as per impairment requirements of Ind AS 109 - 'Financial Instruments' and the amount recognized less the cumulative amount of income recognized in accordance with the principles of Ind AS 115 'Revenue from Contracts with Customers'.

28.5 Derivative financial instruments

Initial recognition and subsequent measurement

The Group uses derivative financial instruments, such as forward currency contracts and interest rate swaps to hedge its foreign currency risks and interest rate risks of foreign currency loans. Such derivative financial instruments are initially recognized at fair value on the date on which a derivative contract is entered into and are subsequently re-measured at fair value. Derivatives are carried as financial assets when the fair value is positive and as financial liabilities when the fair value is negative. Any gains or losses arising from changes in the fair value of derivatives are taken to statement of profit and loss.

28.6 Offsetting of financial assets and financial liabilities

Financial assets and financial liabilities are offset and the net amount is presented in the balance sheet if there is a currently enforceable legal right to offset the recognized amounts and there is an intention to settle on a net basis, to realize the assets and settle the liabilities simultaneously.

29. Non-current assets held for sale

The Group classifies non-current assets and disposal groups as held for sale if their carrying amounts will be recovered principally through a sale rather than through continuing use and a sale is considered highly probable.

Management must be committed to the sale, which should be expected to qualify for recognition as a completed sale within one year from the date of classification as held for sale, and actions required to complete the plan of sale should indicate that it is unlikely that significant changes to the plan will be made or that the plan will be withdrawn.

Non-current assets held for sale and disposal groups are measured at the lower of their carrying amount and the fair value less costs of disposal.

Property, plant and equipment and intangible assets once classified as held for sale are not depreciated or amortized.

D. Use of estimates and management judgements

The preparation of financial statements requires management to make judgments, estimates and assumptions that may impact the application of accounting policies and the reported value of assets, liabilities, revenue, expenses and related disclosures concerning the items involved as well as contingent assets and liabilities at the balance sheet date. The estimates and management's judgments are based on previous experience & other factors considered reasonable and prudent in the circumstances. Actual results may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future periods affected.

In order to enhance understanding of the financial statements, information about significant areas of estimation, uncertainty and critical judgments in applying accounting policies that have the most significant effect on the amounts recognized in the financial statements is as under:

1. Formulation of accounting policies

The accounting policies are formulated in a manner that results in financial statements containing relevant and reliable information about the transactions, other events and conditions to which they apply. Those policies need not be applied when the effect of applying them is immaterial.

2. Useful life of property, plant and equipment and intangible assets

The estimated useful life of property, plant and equipment and intangible assets is based on a number of factors including the effects of obsolescence, demand, competition and other economic factors (such as the stability of the industry and known technological advances) and the level of maintenance expenditures required to obtain the expected future cash flows from the asset.

Useful life of the assets of the generation of electricity business and integrated coal mines (where tariff is regulated) is determined by the CERC Tariff Regulations in accordance with Schedule II of the Companies Act, 2013.

3. Recoverable amount of property, plant and equipment and intangible assets

The recoverable amount of property, plant and equipment and intangible assets is based on estimates and assumptions regarding in particular the expected market outlook and future cash flows associated with the power plants. Any changes in these assumptions may have a material impact on the measurement of the recoverable amount and could result in impairment.

4. Defined benefit plans and long-term employee benefits

Employee benefit obligations are measured on the basis of actuarial assumptions which include mortality and withdrawal rates as well as assumptions concerning future developments in discount rates, the rate of salary increases and the inflation rate. The Group considers that the assumptions used to measure its obligations are appropriate and documented. However, any changes in these assumptions may have a material impact on the resulting calculations.

5. Revenues

The Group records revenue from sale of energy based on tariff rates approved by the CERC as modified by the orders of Appellate Tribunal for Electricity, as per principles enunciated under Ind AS 115. However, in cases where tariff rates are yet to be approved, provisional rates are adopted considering the applicable CERC Tariff Regulations.

6. Leases not in legal form of lease

Significant judgment is required to apply lease accounting rules as per Ind AS 116 in determining whether an arrangement contains a lease. In assessing arrangements entered into by the Group, management has exercised judgment to evaluate the right to use the underlying asset, substance of the transactions including legally enforceable agreements and other significant terms and conditions of the arrangements to conclude whether the arrangement meets the criteria as per Ind AS 116.

7. Assets held for sale

Significant judgment is required to apply the accounting of non-current assets held for sale under Ind AS 105 - 'Non-current assets held for sale and discontinued operations'. In assessing the applicability, management has exercised judgment to evaluate the availability of the asset for immediate sale, management's commitment for the sale and probability of sale within one year to conclude if their carrying amount will be recovered principally through a sale transaction rather than through continuing use.

8. Regulatory deferral account balances

Recognition of regulatory deferral account balances involves significant judgments including about future tariff regulations since these are based on estimation of the amounts expected to be recoverable/payable through tariff in future.

9. Provisions and contingencies

The assessments undertaken in recognizing provisions and contingencies have been made in accordance with Ind AS 37 - 'Provisions, contingent liabilities and contingent assets'. The evaluation of the likelihood of the contingent events require best judgment by management regarding the probability of exposure to potential loss. Should circumstances change following unforeseeable developments, this likelihood could alter.

10. Classification of joint arrangements

Group's joint arrangements in the nature of joint operations and joint ventures require unanimous consent from all parties sharing control for decisions about the relevant activities. Parties are jointly and severally liable for the liabilities incurred by the joint arrangements. These arrangements are classified and accounted for as either joint operation or joint venture in accordance with the provisions of Ind AS 111 - 'Joint Arrangements'.

11. Impairment test of investments in Joint Venture Companies

The recoverable amount of investment in joint venture companies is based on estimates and assumptions regarding in particular the future cash flows associated with the operations of the investee Company. Any changes in these assumptions may have a material impact on the measurement of the recoverable amount and could result in impairment.

12. Income taxes

Significant estimates are involved in determining the provision for current and deferred tax, including amount expected to be paid/recovered for uncertain tax positions.

2. Non-current assets - Property, plant and equipment

As at 31 March 2023

₹ Crore

Particulars	Gross block				Depreciation, amortisation and impairment				Net block
	As at 1 April 2022	Additions	Deductions/ adjustments	As at 31 March 2023	As at 1 April 2022	For the year	Deductions/ adjustments	Upto 31 March 2023	As at 31 March 2023
Land (including development expenses)									
Freehold	9,141.50	128.23	(5.39)	**9,264.34**	-	-	-	**-**	**9,264.34**
Right of use	3,433.43	856.10	(258.79)	**4,030.74**	582.24	165.34	(181.22)	**566.36**	**3,464.38**
Under submergence (refer footnote (d) below)	2,530.23	68.31	(0.02)	**2,598.52**	937.18	71.49	-	**1,008.67**	**1,589.85**
Right of use - Coal Bearing Area Land	4,082.64	238.17	-	**4,320.81**	331.13	123.58	-	**454.71**	**3,866.10**
Roads, bridges, culverts and helipads	2,230.48	264.53	(1.87)	**2,493.14**	440.91	91.23	0.12	**532.26**	**1,960.88**
Building									
Freehold									
Main plant	12,538.01	457.62	(4.20)	**12,991.43**	2,728.91	443.00	(4.58)	**3,167.33**	**9,824.10**
Others	6,722.92	852.45	(26.64)	**7,548.73**	1,294.52	285.92	(22.69)	**1,557.75**	**5,990.98**
Right of use	55.85	5.89	(2.49)	**59.25**	25.66	9.16	(2.18)	**32.64**	**26.61**
Temporary erection	81.15	5.81	(4.16)	**82.80**	79.12	5.36	(4.05)	**80.43**	**2.37**
Water supply, drainage and sewerage system	1,095.69	150.10	(0.49)	**1,245.30**	325.03	50.82	(0.30)	**375.55**	**869.75**
Hydraulic works, barrages, dams, tunnels and power channel	11,260.77	2.08	21.64	**11,284.49**	5,743.37	359.66	-	**6,103.03**	**5,181.46**
MGR track and signalling system	4,148.27	1,553.54	(0.54)	**5,701.27**	806.95	264.26	(0.09)	**1,071.12**	**4,630.15**
Railway siding	3,688.93	323.81	(0.76)	**4,011.98**	716.75	209.79	(0.12)	**926.42**	**3,085.56**
Earth dam reservoir	545.78	568.70	-	**1,114.48**	143.57	34.44	-	**178.01**	**936.47**
Plant and equipment									
Owned	2,39,449.34	24,928.78	(510.62)	**2,63,867.50**	67,298.67	13,630.98	(1,184.07)	**79,745.58**	**1,84,121.92**
Right of use	85.78	-	-	**85.78**	33.13	4.75	-	**37.88**	**47.90**
Mining Properties	1,285.97	79.10	-	**1,365.07**	133.48	70.21	-	**203.69**	**1,161.38**
Site restoration cost	253.46	-	-	**253.46**	15.80	6.81	-	**22.61**	**230.85**
Furniture and fixtures	940.77	91.77	(8.05)	**1,024.49**	330.23	69.78	(6.49)	**393.52**	**630.97**
Vehicles including speedboats / helicopter									
Owned	183.36	8.92	-	**192.28**	35.03	19.77	(0.27)	**54.53**	**137.75**
Right of use	52.29	55.19	(30.14)	**77.34**	39.69	21.23	(29.75)	**31.17**	**46.17**
Office equipment	585.01	110.91	(18.28)	**677.64**	317.75	65.65	(14.15)	**369.25**	**308.39**
EDP, WP machines and satcom equipment	544.39	97.88	(41.63)	**600.64**	403.25	78.05	(41.09)	**440.21**	**160.43**
Construction equipment	294.34	49.74	(1.55)	**342.53**	128.42	24.27	(1.47)	**151.22**	**191.31**
Electrical installations	2,434.63	285.18	(9.08)	**2,710.73**	708.41	133.14	(4.29)	**837.26**	**1,873.47**
Communication equipment	125.67	18.50	(0.77)	**143.40**	68.85	10.58	(0.61)	**78.82**	**64.58**
Hospital equipment	64.56	4.89	(0.19)	**69.26**	26.11	7.52	(0.16)	**33.47**	**35.79**
Laboratory and workshop equipment	269.96	8.98	(0.10)	**278.84**	87.27	13.02	(0.04)	**100.25**	**178.59**
Assets for ash utilisation	57.84	2.95	-	**60.79**	-			**-**	**60.79**
Less: Adjusted from fly ash utilisation reserve fund	57.84	2.95	-	**60.79**	-			**-**	**60.79**
Total	**3,08,125.18**	**31,215.18**	**(904.12)**	**3,38,436.24**	**83,781.43**	**16,269.81**	**(1,497.50)**	**98,553.74**	**2,39,882.50**

As at 31 March 2022 ₹ Crore

Particulars	Gross block: As at 1 April 2021	Gross block: Additions	Gross block: Deductions/ adjustments	Gross block: As at 31 March 2022	Depreciation, amortisation and impairment: As at 1 April 2021	Depreciation, amortisation and impairment: For the year	Depreciation, amortisation and impairment: Deductions/ adjustments	Depreciation, amortisation and impairment: Upto 31 March 2022	Net block: As at 31 March 2022
Land (including development expenses)									
Freehold	9,008.62	138.83	(5.95)	9,141.50	-	-	-	-	9,141.50
Right of use	3,580.74	631.49	(778.80)	3,433.43	594.48	113.47	(125.71)	582.24	2,851.19
Under submergence (refer footnote (d) below)	2,450.15	80.09	(0.01)	2,530.23	869.42	67.76	-	937.18	1,593.05
Right of use - Coal Bearing Area Land	3,666.94	415.70	-	4,082.64	229.92	101.21	-	331.13	3,751.51
Roads, bridges, culverts and helipads	2,062.96	174.49	(6.97)	2,230.48	361.44	80.93	(1.46)	440.91	1,789.57
Building									
Freehold									
Main plant	11,487.40	1,062.81	(12.20)	12,538.01	2,304.01	428.23	(3.33)	2,728.91	9,809.10
Others	5,925.59	810.88	(13.55)	6,722.92	1,017.65	279.04	(2.17)	1,294.52	5,428.40
Right of use	48.83	16.06	(9.04)	55.85	23.46	8.80	(6.60)	25.66	30.19
Temporary erection	72.61	8.62	(0.08)	81.15	69.29	9.83	-	79.12	2.03
Water supply, drainage and sewerage system	985.76	109.93	-	1,095.69	277.93	47.10	-	325.03	770.66
Hydraulic works, barrages, dams, tunnels and power channel	11,150.71	101.16	8.90	11,260.77	5,375.48	367.89	-	5,743.37	5,517.40
MGR track and signalling system	3,440.65	474.24	233.38	4,148.27	541.98	229.12	35.85	806.95	3,341.32
Railway siding	3,359.18	305.44	24.31	3,688.93	525.44	191.33	(0.02)	716.75	2,972.18
Earth dam reservoir	536.13	9.65	-	545.78	112.37	31.20	-	143.57	402.21
Plant and equipment									
Owned	2,08,588.17	32,228.84	(1,367.67)	2,39,449.34	55,928.82	12,536.76	(1,166.91)	67,298.67	1,72,150.67
Right of use	85.77	-	0.01	85.78	28.37	4.76	-	33.13	52.65
Mining Properties	1,011.57	274.40	-	1,285.97	78.32	55.16	-	133.48	1,152.49
Site restoration cost	253.46	-	-	253.46	8.99	6.81	-	15.80	237.66
Furniture and fixtures	844.04	106.41	(9.68)	940.77	262.70	74.06	(6.53)	330.23	610.54
Vehicles including speedboats									
Owned	92.70	91.98	(1.32)	183.36	24.59	11.29	(0.85)	35.03	148.33
Right of use	49.92	7.38	(5.01)	52.29	26.05	18.25	(4.61)	39.69	12.60
Office equipment	526.58	70.70	(12.27)	585.01	266.92	61.07	(10.24)	317.75	267.26
EDP, WP machines and satcom equipment	501.27	66.70	(23.58)	544.39	341.48	84.78	(23.01)	403.25	141.14
Construction equipment	285.05	10.53	(1.24)	294.34	106.03	23.29	(0.90)	128.42	165.92
Electrical installations	2,258.93	179.96	(4.26)	2,434.63	577.36	132.45	(1.40)	708.41	1,726.22
Communication equipment	114.50	11.11	0.06	125.67	58.61	10.31	(0.07)	68.85	56.82
Hospital Equipment	44.31	20.27	(0.02)	64.56	10.71	15.48	(0.08)	26.11	38.45
Laboratory and workshop equipment	261.16	8.84	(0.04)	269.96	73.83	13.44	-	87.27	182.69
Assets for ash utilisation	57.47	0.37	-	57.84	-	-	-	-	57.84
Less: Adjusted from fly ash utilisation reserve fund	57.47	0.37	-	57.84	-	-	-	-	57.84
Total	2,72,693.70	37,416.51	(1,985.03)	3,08,125.18	70,095.65	15,003.82	(1,318.04)	83,781.43	2,24,343.75

a) The conveyancing of the title to **12,726.50** acres of freehold land of value ₹ **1,375.30 crore** (31 March 2022: 10,638.98 acres of value ₹1,774.39 crore), buildings and structures of value ₹ **4.97 crore** (31 March 2022: ₹4.97 crore) and also execution of lease agreements for 36,549.55 acres of right of use land of value ₹ **1,475.21 crore** (31 March 2022: 9,350.14 acres of value ₹ 614.02 crore) in favour of the Group are awaiting completion of legal formalities.

b) Land includes **1,295.40** acres of freehold land of value ₹ **29.56 crore** (31 March 2022: 1,275.84 acres of value ₹ 44.92 crore) and **376.57 acres** of right of use land of value ₹ **3.07 crore** (31 March 2022: 377.11 acres of value ₹ 3.10 crore) not in possession of the Company. The Company is taking appropriate steps for repossession of the same.

c) Land-freehold includes an amount of ₹ **263.92 crore** (31 March 2022: ₹ 263.92 crore) deposited with various authorities in respect of land in possession which is subject to adjustment on final determination of price.

d) Gross block of land under submergence represents ₹ **2,419.68 crore** (31 March 2022: ₹ 2,351.39 crore) of freehold land and ₹ **178.83 crore** (31 March 2022: ₹ 178.83 crore) of right of use land. The land has been amortized considering the rate of depreciation provided by the CERC in the tariff regulations and the fact that it will not have any economic value due to deposit of silt and other foreign materials.

e) Possession of land measuring **98 acres** (31 March 2022: 98 acres) consisting of **79 acres** of freehold land (31 March 2022: 79 acres) and **19 acres** of right of use land (31 March 2022: 19 acres) of value ₹ **0.21 crore** (31 March 2022: ₹ 0.21 crore) was transferred to Uttar Pradesh Rajya Vidyut Utpadan Nigam Ltd. (erstwhile UPSEB) for a consideration of ₹ 0.21 crore. Pending approval for transfer of the said land, the area and value of this land has been included in the total land of the Company. The consideration received from erstwhile UPSEB is disclosed under Note 37 - Current liabilities - Other financial liabilities.

f) Operations of one of the thermal power stations of the Company (460 MW) was discontinued w.e.f. the end of 31 March 2021. Some of the assets have been classified as held for sale considering the requirements of Ind AS 105. Carrying value of remaining assets of the station as at 31 March 2023 is ₹ **120.52 crore** (31 March 2022: ₹ 222.56 crore). It is expected that many of the assets are expected to be used in other power plants of the Company. Notwithstanding the above, the net realisable value of the assets of the stations has been assessed which is more than its carrying value.

g) Operations of one of the thermal power stations (220 MW) of the Company was discontinued w.e.f. 8 September 2021. Carrying value of remaining assets of the station as at 31 March 2023 is ₹ **97.61 crore** (31 March 2022: ₹ 101.46 crore). The net realisable value of the assets of the stations has been assessed which is more than its carrying value.

h) Adjustment to Land-right of use in the previous year included an amount of ₹ 776.05 crore, being the cost de-recognised consequent to order of APIIC for cancellation of 1200 acres of land allotted to the Company in the state of Andra Pradesh. alongwith writing back of accumulated depreciation/ amortisation amounting to ₹ 131.92. The order provided allotment of alternate land in lieu of the same, subject to attached conditions. Consequently, the amount derecognized net of related liabilities, has been included under Capital advances (Note 12). During the year, Government of Andra Pradesh (GoAP) has accorded permission for development of green hydrogen hub on the land and execution of land lease agreement is under discussion with GoAP, pending which the advance paid earlier towards cost of land has been continued to be disclosed under Capital advances (Note-12).

i) Refer Note 74 regarding property, plant and equipment under lease.

j) Spare parts of ₹ 5 lakh and above, stand-by equipment and servicing equipment which meet the definition of property, plant and equipment are capitalized.

k) Property, plant and equipment costing ₹ 5,000/- or less, are depreciated fully in the year of acquisition.

l) Refer Note 27 and Note 34 for information on property, plant and equipment pledged as security by the Group.

m) Refer Note 76(C)(a) for disclosure of contractual commitments for the acquisition of property, plant and equipment.

n) Deduction/adjustments from gross block and depreciation, amortisation and impairment for the year includes:

₹ Crore

Particulars	Gross block		Depreciation, amortization and impairment	
	For the year ended		For the year ended	
	31 March 2023	31 March 2022	**31 March 2023**	31 March 2022
Disposal of assets	**(60.76)**	(46.00)	**(56.02)**	(37.35)
Retirement of assets	**(1,158.92)**	(2,132.26)	**(928.62)**	(1,270.89)
Cost adjustments due to exchange differences	**985.46**	237.88		-
Assets capitalised with retrospective effect/ Write back of excess capitalisation	**(6.43)**	(0.75)	**(3.73)**	(0.05)
Transferred to Assets held for sale-Note 22	**(401.73)**	-	**(299.30)**	-
Others	**(261.74)**	(43.90)	**(209.83)**	(9.75)
Total	**(904.12)**	(1,985.03)	**(1,497.50)**	(1,318.04)

o) Exchange differences capitalized in Capital work-in-progress (CWIP) are allocated to various heads of CWIP in the year of capitalisation. Exchange differences in respect of assets already capitalised are disclosed in the 'Deductions/Adjustments' column of Property, plant and equipment. Asset-wise details of exchange differences and borrowing costs included in the cost of major heads of CWIP and property, plant and equipment through 'Addition' or 'Deductions/Adjustments' column are given below:

₹ Crore

Particulars	For the year ended 31 March 2023		For the year ended 31 March 2022	
	Exchange Difference included in PPE/ CWIP	**Borrowing costs included in PPE/CWIP**	Exchange Difference included in PPE / CWIP	Borrowing costs included in PPE/CWIP
Building - Freehold				
Main plant	**5.02**	**39.83**	(5.27)	44.15
Others	**(0.08)**	**61.60**	(0.60)	71.76
Hydraulic works, barrages, dams, tunnels and power channel	**32.00**	**267.53**	5.94	219.55
MGR track and signalling system	**0.17**	**4.82**	0.31	396.71
Railway siding	**-**	**71.62**	24.75	81.10
Plant and equipment	**1,034.07**	**2,762.01**	263.81	2,603.22
Others including pending allocation	**103.81**	**764.44**	38.18	622.22
Total	**1,174.99**	**3,971.85**	327.12	4,038.71

p) **Impairment loss**

Depreciation, amortisation and impairment expense for the year includes impairment loss of one of the subsidiaries of the Company, for the year ended 31 March 2023 (31 March 2022: in respect of one of the subsidiary & one of the stations of the company) as detailed below:

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Leasehold land	-	1.46
Roads, bridges, culverts and helipads	**0.05**	0.05
Main plant building-Freehold	-	4.92
Other building-Freehold	-	2.27
Water supply, drainage and sewerage system	-	0.15
Plant and equipment - Owned	**27.26**	212.28
Electrical installation	**0.46**	7.93
Communication equipment	**0.02**	0.04
Others	**0.18**	2.31
	27.97	231.41

q) **Property, plant and equipment subject to operating lease**

(i) The Power Purchase Agreements (PPA) signed in respect of one of the thermal power stations was operative initially for a period of five years with the beneficiaries which are extended, renewed or replaced as the parties mutually agree. The Company has continued to classify this arrangement with its customers as lease based on the practical expedient provided in Ind AS 116. The net carrying value of such leased assets included above are as under:

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Land- Free hold	**51.61**	51.75
Roads, bridges, culverts and helipads	**7.81**	9.40
Main plant building-Freehold	**7.68**	9.51
Other building-Freehold	**19.85**	23.53
Water supply, drainage and sewerage system	**4.58**	5.46
Plant and equipment - Owned	**187.30**	217.51
Railway siding	**0.66**	0.76
Electrical installation	**2.86**	3.14
Others	**2.68**	5.04
	285.03	326.10

(ii) Freehold land includes land measuring **92.23 acres** (31 March 2022: 92.23 acres) of value ₹ **62.23 crore** (31 March 2022: ₹ 62.23 crore) given under operating lease by M/s Patratu Vidyut Utpadan Nigam Ltd., a subsidiary of the Company. Also refer Note 74.

(iii) Vehicles-owned includes electric buses of value ₹ **117.25 crore** (31 March 2022: ₹ 129.58 crore) given under operating lease by M/s NTPC Vidyut Vayapar Nigam Ltd., a subsidiary of the Company. Also refer Note 74.

3. Non current assets - Capital work-in-progress

As at 31 March 2023 ₹ Crore

Particulars	As at 1 April 2022	Additions	Deductions/ adjustments	Capitalised	As at 31 March 2023
Development of land	376.47	106.09	(108.93)	8.73	**364.90**
Roads, bridges, culverts and helipads	581.50	332.57	81.65	246.80	**748.92**
Piling and foundation	404.97	19.09	-	-	**424.06**
Buildings					
Freehold					
Main plant	1,606.81	937.93	121.42	452.83	**2,213.33**
Others	1,786.82	894.68	(127.57)	848.06	**1,705.87**
Temporary erections	26.40	5.58	(6.53)	4.69	**20.76**
Water supply, drainage and sewerage system	126.05	179.11	(10.37)	103.97	**190.82**
Hydraulic works, barrages, dams, tunnels and power channel	6,102.56	1,425.42	(4.69)	0.98	**7,522.31**
MGR track and signalling system	89.57	451.06	(472.02)	1.90	**66.71**
Railway siding	1,989.11	512.05	(1,458.89)	323.81	**718.46**
Earth dam reservoir	481.04	193.64	39.97	568.70	**145.95**
Plant and equipment - owned	67,429.88	21,141.44	(1,364.51)	20,449.69	**66,757.12**
Furniture and fixtures	8.99	15.15	3.54	24.10	**3.58**
Vehicles	3.33	2.98	-	4.52	**1.79**
Office equipment	31.16	8.88	(0.65)	13.07	**26.32**
EDP/WP machines and satcom equipment	3.49	4.91	(0.21)	1.61	**6.58**
Construction equipment	0.08	3.09	(1.44)	0.06	**1.67**
Electrical installations	571.15	136.82	(146.26)	183.72	**377.99**
Communication equipment	36.13	12.40	(33.66)	5.50	**9.37**
Hospital equipment	0.20	0.79	-	0.69	**0.30**
Laboratory and workshop equipment	1.99	0.33	(0.08)	1.68	**0.56**
Development of coal mines	1,896.70	456.41	42.68	79.10	**2,316.69**
	83,554.40	26,840.42	(3,446.55)	23,324.21	**83,624.06**
Expenditure pending allocation					
Survey, investigation, consultancy and supervision charges	383.07	75.78	(7.57)	0.57	**450.71**
Difference in exchange on foreign currency loans	715.09	141.25	(110.62)	-	**745.72**
Pre-commissioning expenses (net)	126.71	492.17	(331.72)	-	**287.16**
Expenditure during construction period (net)*	2,231.72	5,295.66	(311.75)	-	**7,215.63**
Other expenditure directly attributable to project construction	1,237.12	260.58	(410.78)	-	**1,086.92**
Less: Allocated to related works	-	4,174.17	1,950.79		**6,124.96**
	4,693.71	2,091.27	(3,123.23)	0.57	**3,661.18**
Sub-total	88,248.11	28,931.69	(6,569.78)	23,324.78	**87,285.24**
Less: Provision for unserviceable works	539.68	15.41	(9.28)	-	**545.81**
Construction stores (net of provision)	3,316.78	1,029.65	(1,952.74)	-	**2,393.69**
Total	**91,025.21**	**29,945.93**	**(8,513.24)**	**23,324.78**	**89,133.12**

As at 31 March 2022 ₹ Crore

Particulars	As at 1 April 2021	Additions	Deductions/ adjustments	Capitalised	As at 31 March 2022
Development of land	552.55	187.86	(326.98)	36.96	376.47
Roads, bridges, culverts and helipads	564.35	349.55	(266.54)	65.86	581.50
Piling and foundation	746.53	-	(341.56)	-	404.97
Buildings					
Freehold					
Main plant	2,036.60	573.64	(200.14)	803.29	1,606.81
Others	1,880.81	791.83	(424.36)	461.46	1,786.82
Temporary erections	27.03	12.19	(6.57)	6.25	26.40
Water supply, drainage and sewerage system	114.65	94.71	(20.16)	63.15	126.05
Hydraulic works, barrages, dams, tunnels and power channel	5,162.53	942.93	(2.78)	0.12	6,102.56
MGR track and signalling system	183.96	219.54	(164.37)	149.56	89.57
Railway siding	1,931.96	564.59	(317.36)	190.08	1,989.11
Earth dam reservoir	377.33	114.93	(5.51)	5.71	481.04
Plant and equipment-owned	73,732.18	22,831.70	(257.35)	28,876.65	67,429.88
Furniture and fixtures	46.16	9.65	(14.73)	32.09	8.99
Vehicles	1.96	93.80	(0.17)	92.26	3.33
Office equipment	21.71	18.47	(7.63)	1.39	31.16
EDP/WP machines and satcom equipment	3.22	5.95	(1.81)	3.87	3.49
Construction equipment	0.06	0.08	-	0.06	0.08
Electrical installations	543.34	218.53	(82.27)	108.45	571.15
Communication equipment	20.56	23.23	(0.71)	6.95	36.13
Hospital equipment	0.46	0.20	(0.02)	0.44	0.20
Laboratory and workshop equipment	2.21	0.97	(0.11)	1.08	1.99
Development of coal mines	1,580.01	546.04	39.24	268.59	1,896.70
	89,530.17	27,600.39	(2,401.89)	31,174.27	83,554.40
Expenditure pending allocation					
Survey, investigation, consultancy and supervision charges	499.20	(38.51)	(56.54)	21.08	383.07
Difference in exchange on foreign currency loans	1,194.94	75.34	(555.19)	-	715.09
Pre-commissioning expenses (net)	459.19	586.78	(919.26)	-	126.71
Expenditure during construction period (net)*	1,613.30	5,120.95	(159.90)	-	6,574.35
Other expenditure directly attributable to project construction	1,111.48	170.23	(19.30)	25.29	1,237.12
Less: Allocated to related works	-	1,373.42	2,969.21	-	4,342.63
	4,878.11	4,541.37	(4,679.40)	46.37	4,693.71
Sub-total	94,408.28	32,141.76	(7,081.29)	31,220.64	88,248.11
Less: Provision for unserviceable works	721.39	9.90	(191.61)	-	539.68
Construction stores (net of provision)	3,717.27	1,526.98	(1,927.47)	-	3,316.78
Total	97,404.16	33,658.84	(8,817.15)	31,220.64	91,025.21

*Brought from expenditure during construction period (net) - Note 47

a) Construction stores includes material lying with contractors for construction works and are net of provision for shortages pending investigation amounting to ₹ **28.54 crore** (31 March 2022: ₹ 28.69 crore).

b) Pre-commissioning expenses for the year amount to ₹ **667.45 crore** (31 March 2022: ₹ 696.77 crore) and after adjustment of pre-commissioning sales of ₹ **175.28 crore** (31 March 2022: ₹ 109.99 crore) resulted in net pre-commissioning expenditure of ₹ **492.17 crore** (31 March 2022: ₹ 586.78 crore).

c) Additions to the development of coal mines include expenditure during construction period (net) of ₹ **739.08 crore** (31 March 2022: ₹ 610.88 crore) and after netting off the receipts from coal extracted during the development phase amounting to ₹ **282.67 crore** (31 March 2022: ₹ 64.84 crore).

d) Details of exchange differences and borrowing costs capitalised are disclosed in Note 2 (o).

e) Amount capitalised under development of coal mines is included in assets capitalised under 'Mining properties' and 'Site restoration cost' under Property, plant and equipment.

4. Non-current assets - Intangible assets

As at 31 March 2023 **₹ Crore**

Particulars	Gross block				Amortisation				Net block
	As at 1 April 2022	Additions	Deductions/ adjustments	As at 31 March 2023	As at 1 April 2022	For the year	Deductions/ adjustments	Upto 31 March 2023	As at 31 March 2023
Software	150.20	11.73	(1.40)	**160.53**	116.85	22.16	(1.42)	**137.59**	**22.94**
Right to use - Land	256.45	1.72	-	**258.17**	40.40	9.55	-	**49.95**	**208.22**
- Others	427.87	-	-	**427.87**	98.00	19.11	-	**117.11**	**310.76**
Total	**834.52**	**13.45**	**(1.40)**	**846.57**	**255.25**	**50.82**	**(1.42)**	**304.65**	**541.92**

As at 31 March 2022 ₹ Crore

Particulars	Gross block				Amortisation				Net block
	As at 1 April 2021	Additions	Deductions/ adjustments	As at 31 March 2022	As at 1 April 2021	For the year	Deductions/ adjustments	Upto 31 March 2022	As at 31 March 2022
Software	136.78	15.13	(1.71)	150.20	93.54	24.96	(1.65)	116.85	33.35
Right to use - Land	296.82	6.84	(47.21)	256.45	36.47	11.07	(7.14)	40.40	216.05
- Others	419.59	8.28	-	427.87	76.05	21.95	-	98.00	329.87
Total	853.19	30.25	(48.92)	834.52	206.06	57.98	(8.79)	255.25	579.27

(a) The right to use of land and others are amortized over the period of legal right to use or life of the related plant, whichever is less.

(b) Cost of acquisition of the right for drawl of water amounting to ₹ **427.87 crore** (31 March 2022: ₹ 427.87 crore) is included under intangible assets – Right to use - Others.

(c) Deductions/adjustments from gross block and amortisation for the year includes:

₹ Crore

Particulars	Gross block		Amortisation	
	For the year ended		For the year ended	
	31 March 2023	31 March 2022	31 March 2023	31 March 2022
Retirements and other adjustments	**(1.40)**	(48.92)	**(1.42)**	(8.79)
Total	**(1.40)**	(48.92)	**(1.42)**	(8.79)

(d) Refer Note 76 (C)(a) for disclosure of contractual commitments for the acquisition of intangible assets.

5. Non-current assets - Intangible assets under development

As at 31 March 2023 ₹ Crore

Particulars	As at 1 April 2022	Additions	Deductions/ Adjustments	Capitalised	As at 31 March 2023
Exploration and evaluation assets - coal mines	142.05	8.52	(64.20)	-	**86.37**
Exploratory wells-in-progress	7.64	-	-	-	**7.64**
Software	2.83	3.64	(0.52)	2.61	**3.34**
Upfront Fee	100.96	-	-	-	**100.96**
	253.48	12.16	(64.72)	2.61	**198.31**
Less: Provision for unserviceable works	152.43	-	-	-	**152.43**
Total	**101.05**	**12.16**	**(64.72)**	**2.61**	**45.88**

As at 31 March 2022 ₹ Crore

Particulars	As at 1 April 2021	Additions	Deductions/ Adjustments	Capitalised	As at 31 March 2022
Exploration and evaluation assets - coal mines	139.61	2.44	-	-	142.05
Exploratory wells-in-progress	7.64	-	-	-	7.64
Software	6.09	6.43	(0.80)	8.89	2.83
Upfront Fee	100.96	-	-	-	100.96
	254.30	8.87	(0.80)	8.89	253.48
Less: Provision for unserviceable works	152.43	-	-	-	152.43
Total	101.87	8.87	(0.80)	8.89	101.05

a) Refer Note 66(d) w.r.t. exploration and evaluation of assets-coal mines.

6. Non-current assets - Investments accounted for using the equity method

₹ Crore

Particulars	Number of shares Current year/ (previous year)	Face value per share in ₹ Current year/ (previous year)	As at 31 March 2023	As at 31 March 2022
Equity instruments - Unquoted (fully paid up - unless otherwise stated, at cost)				
Joint venture companies				
Utility Powertech Ltd. (includes 10,00,000 bonus shares)	20,00,000 (20,00,000)	10 (10)	**103.03**	94.67
NTPC-GE Power Services Private Ltd.	30,00,000 (30,00,000)	10 (10)	**9.31**	7.42
NTPC-SAIL Power Company Ltd.	49,02,50,050 (49,02,50,050)	10 (10)	**1439.11**	1,528.61
NTPC Tamil Nadu Energy Company Ltd.	1,43,63,96,112 (1,43,63,96,112)	10 (10)	**1898.93**	1,850.14
Aravali Power Company Private Ltd.	1,43,30,08,200 (1,43,30,08,200)	10 (10)	**2447.94**	2,671.51

₹ Crore

Particulars	Number of shares Current year/ (previous year)	Face value per share in ₹ Current year/ (previous year)	As at 31 March 2023	As at 31 March 2022
NTPC BHEL Power Projects Private Ltd.	5,00,00,000 (5,00,00,000)	10 (10)	**-**	-
Meja Urja Nigam Private Ltd.	1,78,44,09,800 (1,74,99,99,800)	10 (10)	**1,707.23**	1,629.89
Transformers and Electricals Kerala Ltd.	1,91,63,438 (1,91,63,438)	10 (10)	**7.41**	23.46
National High Power Test Laboratory Private Ltd.	3,04,00,000 (3,04,00,000)	10 (10)	**-**	14.24
Energy Efficiency Services Ltd.	46,36,10,000 (46,36,10,000)	10 (10)	**292.49**	423.09
CIL NTPC Urja Private Ltd.	76,900 (76,900)	10 (10)	**0.07**	0.01
Anushakti Vidhyut Nigam Ltd.	49,000 (49,000)	10 (10)	**-**	0.01
Hindustan Urvarak and Rasayan Ltd.	2,29,59,55,000 (1,62,94,15,000)	10 (10)	**2,269.89**	1,621.43
Jhabua Power Ltd.	32,50,00,000 (-)	10 (Nil)	**2,021.21**	-
KSK Dibbin Hydro Power Private Ltd. (Joint venture of Subsidiary Company, NEEPCO Ltd.)	2,79,30,000 (2,79,30,000)	10 (10)	**4.43**	4.45
Trincomalee Power Company Ltd. (* Srilankan rupees)	32,86,061 (32,86,061)	100* (100)*	**0.41**	0.55
Bangladesh-India Friendship Power Company Private Ltd. (** Bangladeshi Taka)	13,92,50,000 (7,42,50,000)	100** (100)**	**1050.63**	652.66
Total			**13,252.09**	10,522.14
Aggregate amount of unquoted investments			**13,252.09**	10,522.14

a) Details of interest in joint venture companies, their summarised financial information, restrictions for the disposal of investments held by the Group and commitments towards certain Joint venture companies are disclosed in Note 71.

b) The Resolution Plan submitted by the company and approved by National Company Law Tribunal (NCLT), Kolkata bench in respect of Jhabua Power Limited (JPL) having installed and commercial capacity of 600 MW thermal power station, was implemented on 5 September 2022 for a total consideration of ₹ 925 crore, out of which ₹ 325 crore was contributed as equity (face value of ₹ 10 each) and ₹ 600 crore was paid for the allotment of 8.5% Non-Convertible Debentures (NCDs) of face value of ₹ 100 each. Pursuant to above, NTPC has acquired 50 % equity in the Company (JPL). Based on the shareholders agreement which provides for joint control over the company, the investment in the company is considered as joint venture and accounted for accordingly.

c) The Board of NTPC Ltd. in its meeting dated 29 October 2022 has accorded approval to the Supplementary JV Agreement of Anushakti Vidyut Utpadan Nigam Limited, a Joint Venture of the Company, to increase the stake in the company from existing 49% to 50% and to align the document in line with Atomic Energy Act 2016 amendment so that the Joint Venture Company may initiate process for setting up of nuclear power projects.

d) Promoters of National High Power Testing Laboratory Ltd. (NHPTL), a joint venture of the Company, in the meeting held on 15 September 2022, under the chairmanship of Secretary Power, MoP, has accorded approval of restructuring plan of NHPTL. Subsequently, Board of NTPC Limited has accorded approval to the restructuring plan on 11 March 2023.

e) The Board of Directors of the Company in its meeting held on 28 April 2016 accorded in principle approval for withdrawal from NTPC BHEL Power Projects Private Ltd. (NBPPL), a joint venture of the Company. A meeting was held on 3 October 2022 at MOP to discuss the way forward for NBPPL. In the meeting, it was decided that the process of winding up of NBPPL will be taken up by both the promoters after the completion of balance on going work at one of the projects of the Company.

f) The Board of Directors of the Company in its meeting held on 28 April 2016 accorded in principle approval for withdrawal from Transformers and Electricals Kerala Ltd. (TELK), a joint venture of the Company. GOI has accorded its approval for exit of NTPC from the joint venture. The decison of the Board of Directors of NTPC Limited and approval of GOI has been conveyed to the Government of Kerala (GoK) (JV Partner) & TELK. GoK has in-principally agreed for the exit of the NTPC Ltd.. and NTPC has written a letter to Chief Secretary, GoK on 17 March 2023 for expediting the process of exit of the Company from TELK.

g) The Board of Directors of the Company in its meeting held on 26 March 2022 accorded in principle approval offering equity stake of the Company in Hindustan Urvarak and Rasayan Ltd.,(HURL) a joint venture of the Company, to Indian Oil Corporation Limited (IOCL) as outright sale which has not been agreed by IOCL. Ministry of Chemical and Fertilizers (MoC&F) vide letter dated 12 October 2022 has communicated the Company and other lead promoters of HURL to explore possibility of disinvestment in HURL in the respective boards. NTPC Board accorded in principle approval for disinvestment of its stake in HURL. MOP vide letter dated 31 January 2023 has accorded approval for the same. MoC&F will take up with Department of Investment and Public Asset Management (DIPAM) of GoI for disinvestment approval once they receive all lead promoter(s) and their administrative ministries consent.

7. Non-current financial assets - Investments

₹ Crore

Particulars	Number of instruments Current year/ (previous year)	Face value per instrument in ₹ Current year/ (previous year)	As at 31 March 2023	As at 31 March 2022
Equity instruments (fully paid up - unless otherwise stated)				
Quoted (designated at fair value through other comprehensive income)				
PTC India Ltd.	1,20,00,000 (1,20,00,000)	10 (10)	**102.30**	98.70
			102.30	98.70
Unquoted (measured at fair value through profit or loss)				
International Coal Ventures Private Ltd.	14,00,000 (14,00,000)	10 (10)	**1.40**	1.40
BF-NTPC Energy Systems Ltd.	68,48,681 (68,48,681)	10 (10)	**2.38**	2.38
Unquoted (designated at fair value through other comprehensive income)			**3.78**	3.78
Power Exchange India limited (PXIL)	2923503 (2923503)	10 (10)	**1.62**	1.62
Co-operative societies			**#**	#
Debt instruments in Joint Venture Companies (fully paid up)				
Unquoted (measured at amortised cost)				
Jhabua Power Limited-8.5% Non convertible debentures - private placement - Redeemable in forty eight quarterly equal installments (Refer Note 14 for current portion of the instrument and Note 6b) for details of transaction)	5,99,99,994 (-)	100 (-)	**525.00**	-
Total			**632.70**	104.10
Aggregate amount of quoted investments - at cost			**12.00**	12.00
Aggregate market value of the quoted investments			**102.30**	98.70
Aggregate amount of unquoted investments			**530.40**	5.40

Equity shares of ₹ **30,200 /-** (31 March 2022: ₹ 30,200/-) held in various employee co-operative societies.

a) Investments have been valued as per accounting policy no. C.28.1 (Note 1).

b) The Board of Directors of NTPC Limited in its meeting held on 28 April 2016 accorded in principle approval for withdrawal from PTC India Ltd. (PTC). As the Company was formed by a directive from the GOI, approval of the GOI was required for exit by NTPC. Ministry of Power has accorded permission for NTPC to exit from PTC on 22 February 2022. NTPC is in discussion with other promoters to finalize the modalities of exit from PTC.

c) The Board of Directors of NTPC Limited in its meeting held on 27 January 2012 accorded in principle approval for withdrawal from International Coal Ventures Private Ltd. (ICVPL). NTPC Board has accorded fresh approval for exiting from ICVPL on 20 May 2022. Department of Investment and Public Asset Management (DIPAM) of GoI vide OM dated 1 June 2022 has empowered Board of Directors of Public Sector Undertakings to exit from Joint Ventures and Subsidiaries and send proposal to DIPAM through administrative Ministry for approval. Communication sent to Steel Authority oif India Ltd & ICVPL regarding DIPAM guidelines for consideration. Pending withdrawal, the Company had lost the joint control over the entity and accordingly, has classified the investment in ICVPL as 'Investment in unquoted equity instruments'.

d) The Board of Directors of NTPC Limited in its meeting held on 19 June 2014 accorded in principle approval for withdrawal from BF-NTPC Energy Systems Ltd. (BF-NTPC), a joint venture of the Company. As BF-NTPC was formed by a directive from the GOI, approval of the GOI was sought for exit by the Company. Ministry of Power, GoI conveyed its approval for winding up of BF-NTPC on 8 January 2018. Consequently, liquidator was appointed in the extra-ordinary general meeting of BF-NTPC held on 9 October 2018. The winding up is under process. Pursuant to winding up proceedings, the Company had lost the joint control over the entity and accordingly, has classified the investment in BF NTPC as 'Investment in unquoted equity instruments'. The difference between the cost of investment and the fair value has been provided for in the earlier years.

e) The Group is of the view that provisions of Ind AS 24 'Related Party Disclosures' and Ind AS 111 'Joint Arrangements' are not applicable to the investments made in PTC India Ltd., International Coal Ventures Private Ltd. and BF-NTPC Energy systems Ltd., and the same has been accounted for as per the provisions of Ind AS 109 'Financial Instruments'. Also Refer Note 61 for investments in PTC India Ltd.

f) Investment for 5% equity stake of PXIL acquired by NVVN (a subsidiary of the Company) from NSE Investment Limited, a wholly owned subsidiary of National Stock Exchange of India Limited, to gain exposure of evolving power market, Transactional & Decision-making support, Commercial Discounts and Incentives, Specific Product development in line with Company's requirement, Capacity Building and other business advisory goals.

g) No strategic investments in equity instruments measured at FVTOCI were disposed during the financial year 2022-23, and there were no transfers of any cumulative gain or loss within equity relating to these investments.

h) Movement in quoted investments **₹ Crore**

Opening balance	**98.70**	93.30
Add / less: Mark to Market gain / loss through FVTOCI	**3.60**	5.40
Closing balance	**102.30**	98.70

8. Non-current financial assets - Loans

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Loans (Considered good, unless otherwise stated)		
Related parties		
Secured		
Unsecured	**12.43**	17.23
Considered doubful	**3.09**	-
Less: Allowance for bad and doubtful loans	**3.09**	-
	12.43	17.23
Employees (including accrued interest)		
Secured	**341.09**	323.07
Unsecured	**183.02**	197.96
Others		
Unsecured	**17.23**	21.55
Total	**553.77**	559.81

₹ Crore

Particulars		As at 31 March 2023	As at 31 March 2022
a)	Due from directors and officers of the Group		
	Directors	-	0.07
	Officers	**0.20**	-
b)	Loans to related parties include:		
	Key management personnel	**0.20**	0.07
	National High Power Test Laboratory Private Ltd. (Joint venture company) (net of allowance for bad & doubtful loans)	**11.63**	16.56
	NTPC Education and Research Society	**0.60**	0.60

c) Other loans include loan of ₹ **17.20 crore** (31 March 2022: ₹ 21.50 crore) given to Andhra Pradesh Industrial Infrastructure Corporation Ltd. (APIIC) which is covered by a guarantee given by the Government of Andhra Pradesh vide GO dated 3 April 2003.

d) Loans to the employees are secured against the mortgage of the house properties and hypothecation of vehicles for which such loans have been given in line with the policies of the Group.

9. Non-current financial assets – Trade Receivable

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Trade receivables		
Unsecured, considered good	**2638.68**	-

a) Electricity (Late Payment Surcharge and Related Matters) Rules, 2022 notified on 3 June 2022, provides that the outstanding dues of the beneficiaries including late payment surcharge (LPSC) upto the date of the said notification shall be rescheduled upto a maximum period of 48 months in the manner prescribed in the said Rules and no LPSC shall be charged on the outstanding dues from the date of notification subject to application to be made by the beneficiaries in this regard. Pursuant to the above, some of the beneficiaries have applied for redetermination of their payment of dues under these Rules. The dues of such beneficiaries have been presented at their fair value under Non- current Trade Receivables considering the requirements of applicable Indian Accounting Standards. Consequently, the fair value difference amounting to ₹ **425.61 crore** (31 March 2022: Nil) has been charged to Statement of Profit and Loss (Refer Note 48). Out of the above, an amount of ₹ **163.58 crore** (31 March 2022: Nil) has been accounted as interest from non current trade receivables. Refer Note 43.

b) No amount is receivable from related party.

10. Non-current assets - Other financial assets

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Share application money pending allotment in Joint venture companies		
Meja Urja Nigam Private Limited	**7.49**	-
NTPC Tamil Nadu Energy Company Ltd.	**30.00**	-
Trincomalee Power Company Ltd.	**0.44**	-
	37.93	-
Claims recoverable	**517.28**	696.19
Finance lease receivables (Refer Note 74)	**201.56**	281.93
Mine closure deposit	**66.16**	39.86
Security deposit	**77.77**	-
Total	**900.70**	1,017.98

a) Claims recoverable represents ₹ **517.28 crore** (31 March 2022: ₹ 696.19 crore) towards the cost incurred upto 31 March 2023 in respect of one of the hydro power projects, the construction of which has been discontinued on the advice of the Ministry of Power (MOP), GOI which includes ₹ **302.16 crore** (31 March 2022: ₹ 456.85 crore) in respect of arbitration awards challenged by the Company before Hon'ble High Court of Delhi. In the event the Hon'ble High Court grants relief to the Company, the amount would be adjusted against Current liabilities - Provisions - Provision for arbitration awards (Note 39). Management expects that the total cost incurred, anticipated expenditure on the safety and stabilisation measures, other recurring site expenses and interest costs as well as claims of contractors/vendors for various packages for this project will be compensated in full by the GOI. Hence, no provision is considered necessary.

b) The Company had ascertained that the Power Purchase Agreement (PPA) entered into for Stage-I of a power station with the beneficiary falls under the definition of finance lease. Accordingly, the written down value of the specified assets was derecognized from PPE and accounted as Finance Lease Receivable (FLR) on transition to Ind AS. The Company has continued to classify this arrangement with its customer as lease based on the practical expedient provided in Ind AS 116. Accordingly, recovery of capacity charges towards depreciation, interest on loan capital & return on equity (pre-tax) components from the beneficiary are continued to be adjusted against FLR. The interest component of the FLR and amount received on account of revision of tariff of previous periods in respect of the above three elements are continued to be recognised as 'Interest income on Assets under finance lease' under 'Revenue from operations' (Note 42).

c) As per the guidelines from Ministry of Coal, Government of India for preparation of Mine Closure Plan, Escrow Accounts have been opened for each captive mine and the balances held in these escrow accounts are presented as 'Mine closure deposit'. Up to 80% of the total deposited amount including interest accrued in the escrow account shall be released after every five years in line with the periodic examination of the closure plan as per the Guidelines. Interest earned on the escrow account is added to mine closure deposit account.

11. Non-current assets - Deferred tax assets (net)

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Deferred tax assets		
Provisions	70.27	70.06
Leave encashment	41.52	21.75
Unabsorbed depreciation	962.55	984.66
MAT credit entitlement	211.45	163.55
Others	71.85	72.38
Less: Deferred tax liabilities		
Difference in book depreciation and tax depreciation	419.79	316.70
Total	**937.85**	**995.70**

a) Deferred tax assets and deferred tax liabilities have been offset to the extent they relate to the same governing laws.

b) The Group has been recognising MAT credit available as the same is likely to give future economic benefits in the form of availability of set off against future income tax liability.

c) Disclosures as per Ind AS 12 'Income Taxes' are provided in Note 57.

Movement in deferred tax assets (net) balances

As at 31 March 2023 ₹ Crore

Particulars	As at 1 April 2022	Recognised in statement of profit and loss	Recognised in OCI	Other	As at 31 March 2023
Deferred tax assets					
Provisions	70.06	0.24	(0.03)	-	**70.27**
Leave encashment	21.75	19.77	-	-	**41.52**
Unabsorbed depreciation	984.66	(22.11)	-	-	**962.55**
MAT credit entitlement	163.55	47.90	-	-	**211.45**
Others	72.38	(0.53)	-	-	**71.85**
Less: Deferred tax liabilities					
Difference in book depreciation and tax depreciation	316.70	102.45	-	0.64	**419.79**
Deferred tax assets (net)	**995.70**	**(57.18)**	**(0.03)**	**(0.64)**	**937.85**

As at 31 March 2022

₹ Crore

Particulars	As at 1 April 2021	Recognised in statement of profit and loss	Recognised in OCI	Other	As at 31 March 2022
Deferred tax assets					
Provisions	93.88	(23.82)	-	-	70.06
Leave encashment	7.83	13.38	0.54	-	21.75
Unabsorbed depreciation	942.69	41.97	-	-	984.66
MAT credit entitlement	87.51	76.04	-	-	163.55
Others	71.39	0.99	-	-	72.38
Less: Deferred tax liabilities					
Difference in book depreciation and tax depreciation	127.41	189.29	-	-	316.70
Deferred tax assets (net)	1,075.89	(80.73)	0.54	-	995.70

12. Other non-current assets

₹ Crore

Particulars		**As at 31 March 2023**	As at 31 March 2022
Capital advances			
(Considered good unless otherwise stated)			
Secured		**1.88**	13.99
Unsecured			
Covered by bank guarantee		**4,404.56**	3,692.96
Others		**5,434.08**	5,314.45
Considered doubtful		**192.33**	168.24
Less: Allowance for bad and doubtful advances		**192.33**	168.24
		9,840.52	9,021.40
Advances other than capital advances			
(Considered good unless otherwise stated)			
Security deposits		**309.45**	407.84
Advances to contractors and suppliers			
Unsecured	1,810.82		1,989.50
Considered doubtful	112.57		112.57
Less: Allowances for bad and doubtful advances	112.57		112.57
		1,810.82	1,989.50
Prepaid Expenses		**25.51**	27.69
Advance tax and tax deducted at source	15,184.41		11,682.25
Less: Provision for tax	12,553.28		8,868.40
		2,631.13	2,813.85
Deferred foreign currency fluctuation asset		**1,565.41**	1,480.72
Deferred payroll expenditure		**111.77**	119.35
Adjustable from escrow account towards mine closure expenses		**39.30**	16.67
Total		**16,333.91**	15,877.02

a) In line with accounting policy no. 15 (Note 1), deferred foreign currency fluctuation asset has been accounted and ₹ **830.98 crore** (31 March 2022: ₹ 630.97 crore) being the exchange fluctuations on account of foreign currency loans have been adjusted in 'Energy sales' under 'Revenue from operations' (Note 42).

b) Capital advances include amounts given as advance against works to the following private companies (related parties) in which one or more directors of the Company are directors

NTPC-GE Power Services Private Ltd.	**-**	0.06
NTPC BHEL Power Projects Private Ltd.	**274.25**	283.35

c) Capital advances include ₹ **224.29 crore** (31 March 2022: ₹ 224.29 crore), paid to a contractor pending settlement of certain claims which are under litigation. The amount will be adjusted with the cost of related work or recovered from the party, depending upon the outcome of the legal proceedings.

d) Advances to contractors and suppliers include payments to Railways amounting to ₹ **1,708.03 crore** (31 March 2022: ₹ 1,862.94 crore) under customer funding model as per policy on 'Participative model for rail-connectivity and capacity augmentation projects' issued by the Ministry of Railways, GOI. As per this policy, an agreement has been signed between the Company and the Ministry of Railways, GOI on 6 June 2016. As per the agreement, railway projects agreed between the Company and Railways will be constructed, maintained and operated by Railways and ownership of the line and its operations and maintenance will always remain with them. Railways will pay upto 7% of the amount invested through freight rebate on freight volumes every year till the funds provided by the Company are fully recovered along-with interest (equal to the prevailing rate of dividend payable by Railways at the time of signing of respective agreements), subject to the rebate not exceeding the freight amount in the accounting year, after commercial operation date (COD) of the railway projects. The advance is adjusted at projects which have acheived COD based on confirmation from Railways towards freight rebate in consonance with the agreement terms and the interest portion is recognised in Note-43-'Other income'.

e) Secured capital advances are secured against the hypothecation of the construction equipment/material supplied by the contractors/suppliers.

f) Loans given to employees are measured at amortized cost. The deferred payroll expenditure represents the benefits on account of interest rate on loans being lower than the market rate of interest. The same is amortized on a straight-line basis over the remaining period of the loan.

13. Current assets - Inventories

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Coal	**5167.77**	2,897.22
Fuel oil	**901.76**	715.25
Naphtha	**85.05**	56.74
Stores and spares	**6621.69**	5,445.35
Chemicals and consumables	**252.52**	199.24
Loose tools	**14.59**	13.74
Scrap	**39.09**	27.30
Others	**1371.39**	1,015.16
	14,453.86	10,370.00
Less: Provision for shortages	**17.18**	59.27
Provision for obsolete/unserviceable items/ diminution in value of surplus inventory	**196.31**	171.44
Total	**14,240.37**	**10,139.29**
Inventories include material-in-transit		
Coal	**432.39**	330.91
Stores and spares	**20.54**	23.04
Chemicals and consumables	**2.20**	2.74
Loose tools	**0.04**	0.04
Others	**6.68**	3.02

a) Inventory items have been valued as per accounting policy no. C.10 (Note 1).

b) Inventories - Others includes steel, cement, ash bricks etc.

c) Refer Note 27 and 55(b) for information on inventories pledged as security by the Group.

d) Refer Note 55(a) for information on inventories consumed and recognised as expense during the year.

e) Paragraph 32 of Ind AS 2 - Inventories provides that materials and other supplies held for use in the production of inventories are not written down below cost if the finished products in which they will be incorporated are expected to be sold at or above cost. The Group is mainly operating in the regulatory environment and as per CERC Tariff Regulations, cost of fuel and other inventory items are recovered as per extant tariff regulations. Accordingly, the realizable value of the inventories is not lower than the cost.

14. Current financial assets - Investments

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Current maturity of non current investments		
Investment in debt instruments in Joint venture companies (measured at amortised cost)		
Jhabua Power Limited-8.5% Non convertible debentures - private placement (Refer Note 7)	**50.00**	-
Total	**50.00**	-

a) Investments have been valued as per accounting policy no. C.28 (Note 1)

15. Current financial assets - Trade receivables

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Trade receivables		
Unsecured, considered good	**28,825.22**	27,970.87
Credit impaired	**561.72**	479.45
	29,386.94	28,450.32
Less: Allowance for credit impaired trade receivables	**561.72**	479.45
Total	**28,825.22**	27,970.87

a) Based on arrangements between Group, banks and beneficiaries, the bills of the beneficiaries have been discounted. Accordingly, trade receivables have been disclosed net off bills discounted amounting to ₹ **1,287.19 crore** (31 March 2022: ₹ 8,349.59 crore). Also refer Note 76 A(c).

b) Amounts receivable from related parties are disclosed in Note 61.

c) Trade receivables include unbilled revenue amounting to ₹ **12,689.29 crore** (31 March 2022: ₹ 11,010.63 crore) billed to the beneficiaries after 31 March.

d) The margin and other tariff have been billed to Discoms including Rajasthan as per the guidelines of MNRE for JNNSM-I uniformely by M/s NVVN Ltd., a subsidiary of the Company. However, three Rajasthan Discoms have not paid the bills issued amounting to ₹ **13.13 crore** (31 March 2022: ₹ 163.36 crore). The above cases were filed with Central Electricity Regulatory Commission (CERC) wherein CERC has decided in favour of the subsidiary in all the matters stated above. However, in all the above cases Rajasthan Discoms have filed appeal with Appellate Tribunal for Electricity (ATE) against order of CERC. The case is pending with ATE. Hence, the subsidiary has not considered making provision for these outstanding dues in the Books.

e) Further, in matters related to outstanding dues towards payment of trading margin @1.5 paise/unit instead of 7.0 paise/unit in respect of M/s NVVN Ltd, CERC has advised to decide the matter with mutual consent. However, the subsidiary has filed appeal with Appellate Tribunal for Electricity (ATE) against CERC order and requested ATE to direct Rajasthan Discoms to make payment of differential trading margin and surcharge thereon. The case is pending with ATE. Based on order of CERC a provision for the disputed amount of ₹ 85.15 crore has been recognised during the financial year 2019-20.

f) Credit impaired receivables as at 31 March 2023 also include dues of M/s Ratnagiri Gas & Power Pvt. Ltd, a subsidiary of the Company amounting to ₹ **474.81 crore** (31 March 2022 : ₹ 392.54 crore) towards non payment of dues by its beneficiaries considering the uncertainty involved.

(g) **Trade Receivables ageing schedule**

As at 31 March 2023

₹ Crore

Particulars	Unbilled	Not Due	Outstanding for following periods from due date of payment					Total
			Less than 6 months	6 months -1 year	1-2 years	2-3 years	More than 3 years	
(i) Undisputed Trade receivables – considered good	13,959.59	9,178.09	2,056.89	1,675.52	170.79	17.32	165.59	**27,223.79**
(ii) Undisputed Trade Receivables – which have significant increase in credit risk	-	-	-	-	-	-	-	**-**
(iii) Undisputed Trade Receivables – credit impaired	-	-	-	-	-	-	-	**-**
(iv) Disputed Trade Receivables– considered good	-	25.56	139.95	130.12	677.94	151.36	458.75	**1,583.68**
(v) Disputed Trade Receivables – which have significant increase in credit risk	-	0.28	17.47	-	-	-	85.42	**103.17**
(vi) Disputed Trade Receivables – credit impaired	-	-	-	-	26.66	29.99	419.65	**476.30**
Sub-total	**13,959.59**	**9,203.93**	**2,214.31**	**1,805.64**	**875.39**	**198.67**	**1,129.41**	**29,386.94**
Less: Allowance for credit impaired trade receivables	-	-	-	-	26.66	29.99	505.07	**561.72**
Total	**13,959.59**	**9,203.93**	**2,214.31**	**1,805.64**	**848.73**	**168.68**	**624.34**	**28,825.22**

Trade Receivables ageing schedule

As at 31 March 2022

₹ Crore

Particulars	Unbilled	Not Due	Outstanding for following periods from due date of payment					Total
			Less than 6 months	6 months -1 year	1-2 years	2-3 years	More than 3 years	
(i) Undisputed Trade receivables – considered good	11,639.43	8,444.20	2,604.36	1,355.40	2,178.80	422.40	315.19	26,959.78
(ii) Undisputed Trade Receivables – which have significant increase in credit risk	-	-	-	-	-	-	-	-
(iii) Undisputed Trade Receivables – credit impaired	-	-	-	-	-	-	67.59	67.59

₹ Crore

Particulars	Unbilled	Not Due	Outstanding for following periods from due date of payment					Total
			Less than 6 months	6 months -1 year	1-2 years	2-3 years	More than 3 years	
(iv) Disputed Trade Receivables– considered good	-	26.76	18.27	283.64	210.64	218.75	253.03	1,011.09
(v) Disputed Trade Receivables – which have significant increase in credit risk	-	-	-	-	-	-	85.42	85.42
(vi) Disputed Trade Receivables – credit impaired	-	-	-	-	-	-	393.83	393.83
Sub Total	11,639.43	8,470.96	2,622.63	1,639.04	2,389.44	641.15	1,115.06	28,517.71
Less: Allowance for credit impaired trade receivables	-	-	-	-	-	-	546.84	546.84
Total	11,639.43	8,470.96	2,622.63	1,639.04	2,389.44	641.15	568.22	27,970.87

16. Current financial assets - Cash and cash equivalents

₹ Crore

Particulars	**As at 31 March 2023**	As at 31 March 2022
Current accounts	**372.18**	515.92
Deposits with original maturity upto three months (including interest accrued)	**92.50**	159.79
Cheques and drafts on hand	**0.92**	0.02
Others (stamps on hand)	**0.05**	0.04
Total	**465.65**	675.77

17. Current financial assets - Bank balances other than cash and cash equivalents

₹ Crore

Particulars	**As at 31 March 2023**	As at 31 March 2022
Deposits with original maturity of more than three months and maturing within one year (including interest accrued)	**1,691.53**	1,874.48
Earmarked balances with banks #	**2,791.35**	1,907.83
Total	**4,482.88**	3,782.31
# Earmarked balances with banks towards:		
Redemption of bonds due for repayment within one year	**1,033.00**	-
Fly ash utilisation reserve fund*	**743.27**	599.89
DDUGJY Scheme of the GOI**	**286.13**	546.55
Unpaid dividend account balance	**19.08**	17.99
Amount deposited as per court orders	**57.89**	56.86
Unpaid interest/refund account balance - Bonds	**9.04**	6.81
Payment Security Fund - MNRE[(a)]	**38.01**	27.34
Payment Security Scheme of MNRE[(b)]	**168.02**	203.10

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Unpaid interest on public deposit	**0.03**	0.03
Amount received under PM-Kusum Scheme	**0.01**	4.89
Margin money	**119.76**	140.16
Amount deposited-arbitration cases	**0.53**	-
Amount received on sale of old plant & held on behalf of Government of Jharkhand	**311.07**	302.74
Others	**5.51**	1.47
Total	**2,791.35**	1,907.83

* Refer Note 25 (f) regarding fly ash utilization reserve fund.

** Out of advance for DDUGJY Scheme of the GOI. Refer Note 37(c) and 38(a).

a) In line with the guidelines issued by Ministry of New and Renewable Energy (MNRE), GOI under National Solar Mission-II, a Payment Security Fund/Working Capital Fund will be set up/created by the MNRE. Upon creation of the said fund, amounts accrued from encashment of bank guarantee, penalties/liquidated damages on developers deducted by the Group from the Solar Power Developers (SPDs) as per the guidelines of MNRE shall be transferred to this fund. The said fund is yet to be created by MNRE. Pending creation of the fund, amount deducted by the Group on account of liquidated damages/penalties from the SPDs is earmarked for the said fund and is not available for use by the Group.

b) Funds received from MNRE under payment security scheme. For corresponding liability refer Note 37(g).

18. Current financial assets - Loans

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Loans (including interest accrued)		
(Considered good unless otherwise stated)		
Related parties		
Unsecured	**1.64**	3.30
Considered doubful	**3.68**	-
Less: Allowance for bad and doubtful loans	**3.68**	-
	1.64	3.30
Employees		
Secured	**84.25**	82.37
Unsecured	**178.59**	183.79
Others		
Unsecured	**4.30**	0.91
Total	**268.78**	270.37
a) Due from Directors and Officers of the Group		
Directors	**0.16**	0.08
Officers	**0.10**	-
b) Loans to related parties include:		
Key management personnel	**0.26**	0.08
National High Power Test Laboratory Private Ltd. (Joint venture company) (net of allowance for bad & doubtful loan)	**1.38**	3.22

c) Other loans represent interest on loan of ₹ **4.30 crore** (31 March 2022: loan of ₹ 0.89 crore) given to APIIC which is covered by a guarantee given by the Government of Andhra Pradesh vide GO dated 3 April 2003.

d) Loans to the employees are secured against the mortgage of the house properties and hypothecation of vehicles for which such loans have been given in line with the policies of the Group.

19. Current assets - Other financial assets

₹ Crore

Particulars		As at 31 March 2023	As at 31 March 2022
Advances			
(Considered good unless otherwise stated)			
Related parties			
Unsecured		**129.95**	101.41
Employees			
Unsecured	30.67		39.41
Considered doubtful	0.11		0.11
Less: Allowance for bad and doubtful advances	0.11		0.11
		30.67	39.41
Others			
Unsecured		**2.49**	1.13
		163.11	141.95
Claims recoverable			
Unsecured, considered good	635.76		218.86
Considered doubtful	349.32		346.78
Less: Allowance for doubtful claims	349.32		346.78
		635.76	218.86
Contract assets		**7,306.43**	4,750.11
Finance lease receivables		**83.63**	73.56
Mine closure deposit		**37.31**	42.56
Security deposits		**535.95**	499.70
Others		**149.88**	99.40
Total		**8,912.07**	5,826.14

a) Contract Assets represent Company's right to consideration in exchange for goods and services that the Company has transferred / provided to customers when that right is conditioned on matters, other than passage of time, like receipt of income tax assessment orders, trueing up orders from CERC,etc. and are net of credits to be passed to customers.

b) Advances to related parties include:

Joint venture companies	**76.77**	40.30
Post employment benefits Trusts	**88.11**	60.87

c) Advances include amounts due from the following private companies (related parties) in which one or more directors of the Company are directors:

NTPC-GE Power Services Private Ltd.	**3.30**	2.24
Aravali Power Company Private Ltd.	**15.64**	0.62
NTPC BHEL Power Projects Private Ltd.	**1.20**	0.73
Meja Urja Nigam Private Ltd.	**7.34**	14.43

d) Other financial assets - Others include amount recoverable from contractors and other parties towards hire charges, rent/electricity etc.

20. Current assets - Current tax assets (net)

₹ Crore

Particulars		As at 31 March 2023	As at 31 March 2022
Current tax assets (net)		**93.51**	62.64

21. Current assets - Other current assets

₹ Crore

Particulars		As at 31 March 2023	As at 31 March 2022
Security deposits (unsecured)		**2,349.73**	2,024.59
Advances			
(Considered good unless otherwise stated)			
Related parties			
Unsecured		**0.31**	0.29
Employees			
Unsecured		**5.94**	4.18
Contractors and suppliers			
Unsecured	4,584.47		3,087.24
Considered doubtful	18.87		18.22
Less: Allowance for bad and doubtful advances	18.87		18.22
		4,584.47	3,087.24
Others			
Unsecured		**124.82**	142.29
		4,715.54	3,234.00
Interest accrued on			
Advance to contractors		**68.45**	43.93
Claims recoverable			
Unsecured, considered good	3,968.68		4,139.54
Considered doubtful	136.43		136.43
Less: Allowance for doubtful claims	136.43		136.43
		3,968.68	4,139.54
Deferred payroll expenditure		**21.60**	23.42
Adjustable from Escrow Account for mine closure expenses		**28.15**	37.71
Others		**8.12**	22.13
Total		**11,160.27**	9,525.32

a) Security deposits (unsecured) include ₹ **65.71 crore** (31 March 2022: ₹ 29.55 crore) towards sales tax/GST deposited with sales/commercial tax authorities & others, ₹ **1,458.49 crore** (31 March 2022: ₹ 1,138.11 crore) deposited with Courts, ₹ **218.83 crore** (31 March 2022: ₹ 225.00 crore) deposited with LIC for making annuity payments to the land oustees and ₹ **500.00 crore** (31 March 2022: ₹ 500.00 crore) deposited against bank guarantee with one of the party as per the direction of the Hon'ble Supreme Court of India, refer Note 64(iii).

b) Advances - others include prepaid expenses amounting to ₹ **113.24 crore** (31 March 2022: ₹ 97.42 crore).

c) Advances - Related parties include amounts due from the following private companies in which one or more directors of the Company are directors:

NTPC-GE Power Services Private Ltd.	**0.02**	0.01
NTPC BHEL Power Projects Private Ltd.	**19.27**	-

d) Loans given to employees are measured at amortized cost. The deferred payroll expenditure represents the benefits on account of interest rate on loans being lower than the market rate of interest. The same is amortized on a straight-line basis over the remaining period of the loan.

e) Claims recoverable includes claims against Railways amounting to ₹ **2,080.28 crore** (31 March 2022: ₹ 2,084.83 crore) mainly towards diversion of coal rakes. These are regularly reviewed and reconciled with the Indian Railways periodically. Claims recoverable also includes claims amounting to ₹ **1,615.66 crore** (31 March 2022: ₹ 1,893.68 crore) made against coal companies towards various issues eg. credit notes to be received as per referee results for grade slippages, supply of stones, claims under settlement through AMRCD, surface transportation charges,etc.

22. Assets held for sale

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Land	**4.21**	-
Building	**21.46**	14.99
Plant and equipment	**92.90**	2.02
Other assets	**2.35**	1.49
Total	**120.92**	18.50

a) The company has surplus land of 20.87 acres which is under process of disposal. The Company expects that the fair value (estimated based on market values) less costs to sell is higher than their carrying values and hence no impairment is considered necessary.

b) Plant and equipment and Other assets (Office equipment, vehicles,furniture and fixtures,etc.) have been identified for disposal due to replacement/ obsolescence of assets which happens in the normal course of operations. On account of classification of these assets from Property,plant and equipment , the loss recognised in the statement of profit and loss is not material.

c) These assets are expected to be disposed off within the next twelve months.

d) The Group has not reclassified any of the assets classified as held for sale as Property,plant and equipment during the year as well as in the previous year.

23. Regulatory deferral account debit balances

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
On account of		
Exchange differences	**1,208.25**	194.86
Employee benefits expense	**177.75**	363.00
Deferred tax	**10,843.18**	9,191.46
Ash transportation cost	**97.55**	3,267.54
Others	**221.93**	182.31
	12,548.66	13,199.17

a) Regulatory deferral account balances have been accounted in line with Accounting policy no. C.5 (Note 1). Refer Note 72 for detailed disclosures.

b) CERC Tariff Regulations, 2019 provide for recovery of deferred tax liability (DTL) as at 31 March 2009 from the beneficiaries. Accordingly, DTL as at 31 March 2009 is recoverable on materialisation from the beneficiaries. Regulations, 2014 and Regulations, 2019 provide for grossing-up the rate of return on equity based on effective tax rate for the financial year based on the actual tax paid during the year on the generation income. Accordingly, deferred tax liability for the period from 1 April 2014 will be reversed in future years when the related DTL forms part of current tax. Keeping in view the above, the Group has recognized such deferred tax as regulatory deferral account debit balances, since the amounts are recoverable in future years.

24. Equity share capital

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Equity share capital		
Authorised		
16,60,00,00,000 shares of par value ₹ 10/- each (10,00,00,00,000 shares of par value ₹ 10/- each as at 31 March 2022)	**16,600.00**	10,000.00
Issued, subscribed and fully paid up		
9,69,66,66,134 shares of par value ₹ 10/- each (9,69,66,66,134 shares of par value ₹ 10/- each as at 31 March 2022)	**9,696.67**	9,696.67

a) Reconciliation of the shares outstanding at the beginning and at the end of the year:

Particulars	Number of shares	
	31 March 2023	31 March 2022
At the beginning of the year	**9,69,66,66,134**	9,69,66,66,134
Outstanding at the end of the year	**9,69,66,66,134**	9,69,66,66,134

b) Terms and rights attached to equity shares:

The Company has only one class of equity shares having a par value ₹ 10/- per share. The holders of the equity shares are entitled to receive dividends as declared from time to time and are entitled to voting rights proportionate to their share holding at the meetings of shareholders.

c) Dividends:

₹ Crore

Particulars	Paid during the year ended	
	31 March 2023	31 March 2022
(i) Dividends paid and recognised during the year		
Final dividend for the year ended 31 March 2022 of ₹ **3.00** (31 March 2021: ₹ 3.15) per equity share	**2,909.00**	3,054.45
Interim dividend for the year ended 31 March 2023 of ₹ **4.25** (31 March 2022: ₹ 4.00) per equity share	**4,121.08**	3,878.67
(ii) Dividends not recognised at the end of the reporting period		
In addition to the above dividends, since year end the directors have recommended the payment of a final dividend of ₹ **3.00** (31 March 2022: ₹ 3.00) per fully paid equity share. This proposed dividend is subject to the approval of shareholders in the ensuing Annual General Meeting.	**2,909.00**	2,909.00

d) **Details of shareholders holding more than 5% shares in the Company:**

Particulars	As at 31 March 2023		As at 31 March 2022	
	No. of shares	%age holding	No. of shares	%age holding
- President of India	**4,95,53,46,251**	**51.10**	4,95,53,46,251	51.10
- Life Insurance Corporation of India (including shares held in various Funds/Schemes)	**57,41,73,389**	**5.92**	1,00,42,47,653	10.36
- ICICI Prudential Mutual Fund	**55,60,01,423**	**5.73**	53,69,26,248	5.54

e) **Increase in the authorised share capital**

The authorised share capital of the Company has increased from ₹ 10,000 crore to ₹ 16,600 crore pursuant to scheme of amalgamation of two subsidiaries of the Company vide order dated 26 August 2022 of Ministry of Corporate Affairs, GOI. Refer note 52(d)(i).

f) **For the period of preceeding five years as on the Balance sheet date:**

(i) **Shares bought back:**

The Company has bought back 19,78,91,146 equity shares of the Company for an aggregate amount of ₹ 2,275.75 crore being 2% of the total paid up equity share capital at ₹ 115.00 per equity share , during the financial year 2020-21.

(ii) **Shares allotted as fully paid up by way of bonus shares:**

The Company had issued 164,90,92,880 equity shares of ₹ 10/- each as fully paid bonus shares in the financial year 2018-19 in the ratio of one equity share of ₹ 10/- each for every five equity shares held.

g) **Details of shareholding of promoters:**

Shares held by promoters as at 31 March 2023

Sl. No.	Promoter name	No. of shares	%age of total shares	%age changes during the year
1.	President of India	4,95,53,46,251	51.10	-

Shares held by promoters as at 31 March 2022

Sl. No.	Promoter name	No. of shares	%age of total shares	%age changes during the year
1.	President of India	4,95,53,46,251	51.10	-

25. Other equity

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Capital reserve	**2,314.63**	488.69
Other capital reserve - common control	**(5,159.26)**	(5,159.26)
Capital redemption reserve	**197.89**	197.89
Bonds/debentures redemption reserve	**5,851.65**	6,421.72
Self insurance reserve	**200.00**	200.00
Fly ash utilisation reserve fund	**743.27**	599.89
General reserve	**98,654.79**	98,654.79
Retained earnings	**34,524.11**	24,156.11
Items of other comprehensive income	**(0.58)**	117.24
Total	**1,37,326.50**	1,25,677.07

(a) Capital reserve

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Opening balance	**488.69**	488.69
Add: Addition during the year	**1,825.94**	-
Closing balance	**2,314.63**	488.69

Opening capital reserve represents amount received by the parent company as consideration under settlement for withdrawal from a erstwhile JV project, acquisition of M/s RGPPL, a subsidiary of the Company. Addition during the year represents value of difference between net aseets acquired and consideration paid for acquisiton of 50% stake in Jhabua Power Limited, a joint venture of the company. This amount will be utilised as per the provisions of the Companies Act, 2013.

(b) Other capital reserve - common control

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Opening balance	**(5,159.26)**	(5,159.26)
Closing balance	**(5,159.26)**	(5,159.26)

Consequent to the acquisition of THDC India Ltd. and NEEPCO in the earlier years, the difference between the Company's share in their share capitals and the consideration paid, was recognized as other capital reserve - common control.

(c) Capital redemption reserve

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Opening balance	**197.89**	197.89
Closing balance	**197.89**	197.89

Capital redemption reserve is created when company purchases its own shares out of free reserves or securities premium, as required by Companies Act, 2013. A sum equal to the nominal value of the shares so purchased is transferred to capital redemption reserve. This reserve will be utilised in accordance with the provisions of the Companies Act, 2013. Also refer Note 24 (f)(i).

(d) Bonds/Debentures redemption reserve

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Opening balance	**6,421.72**	6,970.47
Add : Transfer from retained earnings	**58.50**	48.50
Less: Transfer to retained earnings	**628.57**	597.25
Closing balance	**5,851.65**	6,421.72

In accordance with applicable provisions of the Companies Act, 2013 read with Rules, the Group has created Debenture Redemption Reserve out of profits of the Company, considering the Companies (Share Capital and Debentures) Amendment Rules, 2019 notified on 16 August 2019. The outstanding balance of Bonds / Debenture Redemption Reserve will be utlised as and when the respective bonds / debentures are redeemed.

(e) Self insurance reserve

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Opening balance	**200.00**	200.00
Closing balance	**200.00**	200.00

Self Insurance reserve was created by M/s RGPPL (a subsidiary of the Company), to cover machinery break down for which the subsidiary has not entered into any insurance cover agreement with insurance companies.

(f) Fly ash utilisation reserve fund

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Opening balance	**599.89**	619.60
Add: Transferred during the year:		
Revenue from operations	**399.37**	243.20
Other income	**29.15**	19.61
Less: Utilised during the year:		
Capital expenditure	**2.95**	0.37
Other Expenses including Tax expenses	**282.19**	282.15
Closing balance	**743.27**	599.89

Pursuant to Gazette Notification dated 3 November 2009, issued by the Ministry of Environment and Forest (MOEF), Government of India (GOI), the amount collected from sale of fly ash and fly ash based products should be kept in a separate account head and shall be utilized only for the development of infrastructure or facility, promotion & facilitation activities for use of fly ash until 100 percent fly ash utilization level is achieved.

The principal Gazette Notification dated 14th September 1999, has been superseded by Gazette Notification dated 31st December 2021, of Ministry of Environment and Forest and Climate Change (MOEF&CC), GOI which is applicable from 1st April 2022. The notification dated 31 December 2021 does not mention any requirement of keeping the amount thus collected in a separate account. However, the Company continues to spend the amounts collected after 25.01.2016, from sale of fly ash and fly ash-based products for offsetting it against the expenditure incurred for transportation of ash to various road construction projects by respective Station.

The fund balance has been kept in 'Bank balances other than cash & cash equivalents' (Note 17). Also refer Note 23 & 72 for ash transportation cost.

(g) General reserve

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Opening balance	**98,654.79**	98,544.79
Add : Transfer from retained earnings	**-**	110.00
Closing balance	**98,654.79**	98,654.79

General reserve is used from time to time to transfer profits from retained earnings for appropriation purposes. The same will be utilised as per the provisions of the Companies Act, 2013.

(h) Retained earnings

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Opening balance	**24,156.11**	14,076.94
Add: Profit for the year as per statement of profit and loss	**16,912.55**	16,675.90
Transfer from bonds/debentures redemption reserve	**628.57**	597.25
Less: Transfer to bonds/debentures redemption reserve	**58.50**	48.50
Transfer to general reserve	**-**	110.00
Final dividend paid (2021-22)	**2,909.00**	3,054.45
Interim dividend paid (2022-23)	**4,121.08**	3,878.67
	34,608.65	24,258.47
Items of other comprehensive income recognised directly in retained earnings:		
- Net actuarial gains/(losses) on defined benefit plans (net of tax)	**(86.43)**	(104.52)
- Share of other comprehensive income/(expense) of joint ventures accounted for using the equity method (net of tax)	**1.89**	2.16
Closing balance	**34,524.11**	24,156.11

Retained Earnings are the profits of the Company earned till date net of appropriations. The same will be utilised for the purposes as per the provisions of the Companies Act, 2013.

(i) Items of other comprehensive income

(I) Reserve for equity instruments through OCI

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Opening balance	**86.70**	81.30
Add: Fair value gains/(losses) on equity instruments for the year	**3.60**	5.40
Closing balance (I)	**90.30**	86.70

The Group has elected to recognize changes in the fair value of certain investments in equity instruments in other comprehensive income. These changes are accumulated in reserve for equity instruments through OCI within equity. The Group transfers amounts from this reserve to retained earnings when the relevant equity instruments are derecognized.

(II) Foreign currency translation reserve

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Opening balance	**30.54**	21.38
Add: Gain (Loss) on Currency translation of foreign operations	**(121.42)**	9.16
Closing balance (II)	**(90.88)**	30.54
Total (I+II)	**(0.58)**	117.24

Exchange differences arising on translation of the joint ventures are recognised in other comprehensive income as described in accounting policy and accumulated in a separate reserve within equity. The cumulative amount will be reclassified to profit or loss when the net investment is disposed-off.

26. Non-controlling interest

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Opening balance	**3,760.41**	3,523.71
Add: Share of profit for the year	**208.80**	284.39
Share of OCI	**(0.64)**	0.55
Additional non-controlling interest arising on acquisition / disposal of interest & other adjustments	**179.63**	125.57
Less: Dividend paid to NCI	**217.75**	173.81
Closing balance	**3,930.45**	3,760.41

27. Non current financial liabilities - Borrowings

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Bonds/debentures		
Secured		
7.37% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2035 (Fifty Sixth Issue - Public Issue - Series 3A)[IX]	**188.95**	188.97
7.62% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2035 (Fifty Sixth Issue - Public Issue - Series 3B)[IX]	**171.71**	171.74
8.61% Tax free secured non-cumulative non-convertible redeemable bonds of ₹ 10,00,000/- each redeemable at par in full on 4 March 2034 (Fifty First Issue C - Private Placement)[III]	**322.11**	322.11
8.66% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2033 (Fiftieth Issue - Public Issue - Series 3A)[VI]	**319.87**	319.87
8.91% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2033 (Fiftieth Issue - Public Issue - Series 3B)[VI]	**410.32**	410.32
7.37% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 14 December 2031 (Sixty Sixth Issue - Private Placement)[II]	**4,010.41**	4,010.40
7.49% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 7 November 2031 (Sixty Fourth Issue - Private Placement)[IV]	**720.65**	720.49
7.28% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2030 (Fifty Sixth Issue - Public Issue - Series 2A)[IX]	**133.48**	133.49
7.53% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2030 (Fifty Sixth Issue - Public Issue - Series 2B)[IX]	**49.93**	49.93
7.32% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 17 July 2029 (Sixty Ninth Issue - Private Placement)[IV]	**4,522.31**	4,522.29

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
8.63% Tax free secured non-cumulative non-convertible redeemable bonds of ₹ 10,00,000/- each redeemable at par in full on 4 March 2029 (Fifty First Issue B - Private Placement)[III]	**105.70**	105.70
8.30% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 15 January 2029 (Sixty Seventh Issue - Private Placement)[V]	**4,068.96**	4,068.94
8.48% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2028 (Fiftieth Issue - Public Issue - Series 2A)[VI]	**256.10**	256.10
8.73% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2028 (Fiftieth Issue - Public Issue - Series 2B)[VI]	**93.71**	93.71
7.47% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 16 September 2026 (Sixty Third Issue - Private Placement)[IV]	**696.90**	696.88
7.58% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 23 August 2026 (Sixty Second Issue - Private Placement)[IV]	**836.61**	836.58
8.05% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 5 May 2026 (Sixtieth Issue - Private Placement)[IV]	**1,072.90**	1,072.87
8.19% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 15 December 2025 (Fifty Seventh Issue - Private Placement)[IV]	**511.91**	511.89
7.11% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2025 (Fifty Sixth Issue - Public Issue - Series 1A)[IX]	**112.06**	112.05
7.36% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2025 (Fifty Sixth Issue - Public Issue - Series 1B)[IX]	**68.26**	68.25
7.15% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 10,00,000/- each redeemable at par in full on 21 August 2025 (Fifty Fifth Issue - Private Placement)[VII]	**313.05**	313.10
9.17% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 22 September 2024 (Fifty Third Issue - Private Placement)[VII]	**1,047.99**	1,047.99
9.34% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 24 March 2024 (Fifty Second Issue - Private Placement)[III]	**751.53**	751.54
8.19% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 10,00,000/- each redeemable at par in full on 4 March 2024 (Fifty First Issue A - Private Placement)[III]	**75.47**	75.47
8.41% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2023 (Fiftieth Issue - Public Issue - Series 1A)[VI]	**499.95**	499.95
8.66% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2023 (Fiftieth Issue - Public Issue - Series 1B)[VI]	**213.89**	213.89

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
9.25% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each with five equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 11th year and in annual installments thereafter upto the end of 15th year respectively commencing from 04 May 2023 and ending on 04 May 2027 (Forty Fourth Issue - Private Placement)[VI]	**542.07**	542.07
8.48% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 1 May 2023 (Seventeenth Issue - Private Placement)[I]	**50.01**	50.01
8.80% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 4 April 2023 (Forty Ninth Issue - Private Placement)[VI]	**217.46**	217.50
8.49% Secured non-cumulative non-convertible redeemable taxable fully paid-up bonus debentures of ₹ 12.50 each redeemable at par in three annual installments of ₹ 2.50, ₹ 5.00 and ₹ 5.00 at the end of 8th year, 9th year and 10th year on 25 March 2023, 25 March 2024 and 25 March 2025 respectively (Fifty Fourth Issue -Bonus Debentures)[VIII]	**8,260.81**	10,323.61
8.73% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 7 March 2023 (Forty Eighth Issue - Private Placement)[VI]	**-**	301.79
9.00% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each with five equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 11th year and in annual installments thereafter upto the end of 15th year respectively commencing from 25 January 2023 and ending on 25 January 2027 (Forty Second Issue - Private Placement)[III]	**406.51**	508.14
8.84% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 4 October 2022 (Forty Seventh Issue - Private Placement)[VI]	**-**	406.91
7.93% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 3 May 2022 (Sixty Eighth Issue - Private Placement)[IV]	**-**	3,277.62
8.10% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 30,00,000/- each redeemable at par in three equal separately transferable redeemable principal parts (STRPP) at the end of 5th year, 10th year & 15th year on 27 May 2021, 27 May 2026 and 27 May 2031 respectively (Sixty first issue - Private Placement)[IX]	**763.99**	763.98
11.25% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in five equal annual installments commencing from 6 November 2019 and ending on 6 November 2023 (Twenty Seventh Issue - Private Placement)[III]	**73.62**	147.29
9.3473% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 20 July 2018 and ending on 20 July 2032 (Forty Sixth Issue - Private Placement)[VI]	**53.38**	58.70
9.4376% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 16 May 2018 and ending on 16 May 2032 (Forty Fifth Issue - Private Placement)[VI]	**53.45**	58.78

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
9.2573% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 2 March 2018 and ending on 2 March 2032 (Forty Third Issue - Private Placement)[III]	**48.01**	53.34
9.6713% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 23 December 2017 and ending on 23 December 2031 (Forty First Issue - Private Placement)[III]	**48.18**	53.52
9.558% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 29 July 2017 and ending on 29 July 2031 (Fortieth Issue - Private Placement)[III]	**48.11**	53.44
9.3896% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 9 June 2017 and ending on 9 June 2031 (Thirty Ninth Issue - Private Placement)[III]	**67.28**	74.74
9.17% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 22 March 2017 and ending on 22 March 2031 (Thirty Eighth Issue - Private Placement)[III]	**42.65**	47.97
8.8086% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 15 December 2016 and ending on 15 December 2030 (Thirty Sixth Issue - Private Placement)[III]	**42.55**	47.86
8.785% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 15 September 2016 and ending on 15 September 2030 (Thirty Fifth Issue - Private Placement)[III]	**68.07**	76.56
8.71% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 10 June 2016 and ending on 10 June 2030 (Thirty Fourth Issue - Private Placement)[III]	**85.04**	95.65
8.8493% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 25 March 2016 and ending on 25 March 2030 (Thirty Second Issue - Private Placement)[III]	**52.14**	59.57
Bonds issued by NEEPCO, a subsidiary of the Company		
7.55% Secured redeemable non-convertible taxable bonds of ₹ 10,00,000 each redeemable at par in four installments on 10 December 2026, 10 June 2027, 10 December 2027 and 10 June 2028 with call option on 10 June 2025, 10 December 2025, 10 June 2026, 10 December 2026, 10 June 2027 and 10 December 2027. (Twenty Second Issue - Private Placement)[X(i)]	**511.32**	511.28

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
8.68% Secured redeemable non-convertible taxable bonds of ₹ 10,00,000 each redeemable at par in five installments on 30 september 2026, 30 September 2027, 30 September 2028, 30 September 2029 and 30 September 2030 (Sixteenth Issue - Private Placement)[X(iii)]	**922.50**	922.45
8.69% Secured redeemable non-convertible taxable bonds of ₹ 10,00,000 each redeemable at par in two installments on 26 September 2026 and 26 September 2027 with call option on 26 September 2024, 26 March 2025, 26 September 2025, 26 March 2026, 26 September 2026 and 26 March 2027 (Twenty First Issue - Private Placement)[X(i)]	**150.01**	150.01
8.75% Secured redeemable non-convertible taxable bonds of ₹ 10,00,000 each redeemable at par in four installments on 6 September 2026, 6 March 2027, 6 September 2027 and 6 March 2028 with call option on 6 March 2023, 10 August 2023, 10 February 2024, 10 August 2024, 10 February 2025, 10 August 2025, 10 February 2026, 10 August 2026, 10 February 2027, 10 August 2027, 10 February 2028 (Nineteenth Issue - Private Placement)[X(ii)]	**-**	303.39
7.68% Secured redeemable non-convertible taxable bonds of ₹ 10,00,000 each redeemable at par in two installments on 15 May 2025 and 15 November 2025 with call option on 15 November 2022, 15 May 2023, 15 November 2023, 15 May 2024, 15 November 2024, 15 May 2025 (Eighteenth Issue - Private Placement)[X(ii)]	**514.26**	514.21
9.50% Secured redeemable non-convertible taxable bonds of ₹ 10,00,000 each redeemable at par in four installments on 29 May 2024, 29 November 2024, 29 May 2025 & 29 November 2025 with call option on 29 November 2023, 29 May 2024, 29 November 2024, 29 May 2025 (Twentieth Issue - Private Placement)[X(i)]	**309.48**	309.44
9.15% Secured redeemable non-convertible taxable bonds of ₹ 10,00,000 each redeemable at par in five installments on 25 March 2021, 25 March 2022, 25 March 2023, 25 March 2024 and 25 March 2025 (Fifteenth Issue - Private Placement)[X(iv)]	**240.42**	360.63
9.60% Secured redeemable non-convertible taxable bonds of ₹ 10,00,000 each redeemable at par in five installments on 1 October 2020, 1 October 2021, 1 October 2022, 1 October 2023 and 1 October 2024 (Fourteenth Issue - Private Placement)[X(i)]	**1,000.00**	1,500.00
9.00% Secured redeemable non-convertible taxable bonds of ₹ 10,00,000 each redeemable at par in five installments on 15 March 2019, 15 March 2020, 15 March 2021, 15 March 2022 and 15 March 2023 (Thirteenth Issue - Private Placement)[X(v)]	**-**	14.56
9.25% Secured redeemable non-convertible taxable bonds of ₹ 10,00,000 each redeemable at par in five installments on 27 June 2018, 27 June 2019, 27 June 2020, 27 June 2021 and 27 June 2022 (Twelth Issue - Private Placement)[X(vi)]	**-**	24.83
Bonds issued by THDC India Ltd., a subsidiary of the Company		
7.45% Secured redeemable non-convertible bonds of ₹ 10,00,000 each redeemable on 20 Januray 2031 (Series IV)[XI(iv)]	**760.87**	760.87
7.19% Secured redeemable non-convertible bonds of ₹ 10,00,000 each redeemable on 23 July 2030 (Series III)[XI(iii)]	**839.55**	839.55
8.75% Secured redeemable non-convertible bonds of ₹ 10,00,000 each redeemable on 5 September 2029 (Series II)[XI(i)]	**1,574.44**	1,574.44
7.59% Secured redeemable non-convertible bonds of ₹ 10,00,000 each redeemable on 3 October 2025 (Series I)[XI(ii)]	**622.45**	622.33
7.39% Secured redeemable non-convertible bonds of ₹ 10,00,000 each redeemable on 25 August 2031 (Series V)[XI(iv)]	**1,253.21**	1,253.21
7.60% Secured redeemable non-convertible bonds of ₹ 10,00,000 each redeemable on 14 September 2032 (Series VI)[XI(iv)]	**833.15**	-
	42,029.72	48,454.77

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Bonds/debentures		
Unsecured		
6.55% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 17 April 2023 (Seventy Issue - Private Placement)	**4,648.83**	4,648.74
5.78% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 29 April 2024 (Seventy Sevent Issue - Private Placement)	**1,580.00**	-
5.45% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 15 October 2025 (Seventy Second Issue - Private Placement)	**4,100.21**	4,100.18
6.43% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 27 January 2031 (Seventy Third Issue - Private Placement)	**2,528.08**	2,528.07
6.29% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 11 April 2031 (Seventy First Issue - Private Placement)	**1,042.00**	1,042.00
6.69% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 13 September 2031 (Seventy Fifth Issue - Private Placement)	**3,109.83**	3,109.82
6.74% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 14 April 2032 (Seventy Sixth Issue - Private Placement)	**1,197.02**	1,197.01
7.44% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 25 August 2032 (Seventy Eighth Issue - Private Placement)	**2,089.18**	-
7.44% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 15 April 2033 (Seventy Ninth Issue - Private Placement)	**510.77**	-
6.87% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 21 April 2036 (Seventy Fourth Issue - Private Placement)	**4,256.04**	4,256.03
Bonds issued by NEEPCO, a subsidiary of the Company		
7.14% Unsecured redeemable non-covertible taxable bonds of ₹ 10,00,000/- each redeemable at par in four installments on 22 September 2028, 23 March 2029, 24 September 2029 & 22 March 2030 with call option on 24 March 2026, 24 September 2026, 24 march 2027, 24 September 2027, 24 March 2028 (Twenty Third Issue - Private Placement)	**200.27**	200.26
Bonds issued byTHDC, a subsidiary of the Company		
7.88% Unsecured redeemable non-covertible bonds of ₹ 10,00,000/- each redeemable at par in full on 27 December 2032 (Series VII)	**612.31**	-
	67,904.26	69,536.88
Foreign currency notes		
Unsecured		
4.500 % Fixed rate notes due for repayment on 19 March 2028	**3,302.14**	3,042.30
2.750 % Fixed rate notes due for repayment on 1 February 2027	**4,554.79**	4,294.61

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
4.250 % Fixed rate notes due for repayment on 26 February 2026	**4,145.67**	3,820.37
4.375 % Fixed rate notes due for repayment on 26 November 2024	**4,199.85**	3,874.48
3.750 % Fixed rate notes due for repayment on 3 April 2024	**3,721.68**	3,431.34
4.750 % Fixed rate notes due for repayment on 3 October 2022	**-**	3,816.50
7.250 % Fixed global INR denominated bonds due for repayment on 3 May 2022	**-**	2,033.92
	19,924.13	24,313.52
Term loans		
From Banks		
Secured		
Rupee term loans[XII]	**18,083.41**	16,073.96
Foreign currency loans[XIII]	**-**	136.20
Unsecured		
Foreign currency loans	**19,828.94**	13,277.71
Rupee term loans	**66,547.30**	64,340.13
From Others		
Secured		
Rupee term loans[XII]	**10,025.83**	8,803.04
Unsecured		
Foreign currency loans (guaranteed by GOI)	**2,900.72**	2,764.47
Other foreign currency loans	**3,661.88**	3,402.52
Rupee term loans	**601.11**	738.39
Rupee term loans from Government of India	**291.25**	291.24
	2,09,768.83	2,03,678.06
Less: Current maturities of		
Bonds - secured	**6,851.40**	6,703.37
Bonds - Unsecured	**4,374.10**	-
Foreign Currency Fixed Rate Notes	**-**	5,724.50
Foreign currency loans from banks - secured	**-**	77.75
Rupee term loans from banks - secured	**1,519.62**	1,269.99
Foreign currency loans from banks - unsecured	**425.05**	301.01
Rupee term loans from banks - unsecured	**4,557.68**	3,962.80
Rupee term loans from others - secured	**412.21**	390.37
Foreign currency loans from other - unsecured (guaranteed by GOI)	**325.75**	300.03
Other foreign currency loans from others - unsecured	**565.28**	390.44
Rupee term loans from others - unsecured	**16.57**	33.34
Interest accrued but not due on secured borrowings	**1,163.69**	1,385.59
Interest accrued but not due on unsecured borrowings	**1,673.91**	1,267.68
Total	**1,87,883.57**	1,81,871.19

a) **Details of terms of repayment and rate of interest**

i) Secured rupee term loan from banks and financial institutions carry floating rate of interest linked to SBI base rate or Base rate of respective lender or three year AAA bond yield rate plus agreed margin or three year AAA bond yield rate plus agreed margin with reset after three years or one month/three month MCLR or thee month/one year MCLR plus spread or 3 month T-bill rate plus spread or prevalent rate notified by the lender for category 'A' public sector undertakings or fixed interest rate of 9.36% p.a. or RBI's repo rate plus applicable margin or floating interest rates ranging from 7.75% to 7.90%. These loans are repayable in installments as per the terms of the respective loan agreements. The repayment period extends from a period of five to twenty years after 6 months from the date of COD or from the date specified in the loan agreements.

ii) Secured foreign currency loans from banks carry interest rate of 3 months LIBOR plus 2.75% p.a. as margin and is repayable in 39 equal quarterly installments W.e.f. 20.06.2014 for USD ECB Loan in one of the subsidiaries of the company.

iii) Unsecured foreign currency loans (guaranteed by GOI) - Others include loans carrying fixed rate of interest ranging from 0.85% p.a. to 3.46% p.a. and are repayable in 9 to 20 semi annual installments.

Unsecured foreign currency loans (guaranteed by GOI) - Others carry fixed rate of interest ranging from 1.80% p.a. to 2.30% p.a. and are repayable in 7 to 16 semi annual installments.

Unsecured foreign currency loans (guaranteed by GOI) - Others also include loans carrying interest rate linked to SOFR plus variable spread and are repayable in 23 years on half yearly instalment from 15 November 2017 to 15 May 2040.

iv) Unsecured foreign currency loans – Banks include loans of ₹ **67.13 crore** (31 March 2022: ₹ 84.14 crore) which carry fixed rate of interest of 1.88% and loans of ₹ **19,761.81 crore** (31 March 2022: ₹ 13,193.57 crore) which carry floating rate of interest linked to 6M USD LIBOR/6M SOFR/6M EURIBOR/3M TONA/6M TONA. These loans are repayable in 1 to 25 semi annual/annual installments as of 31 March 2023, commencing after moratorium period if any, as per the terms of the respective loan agreements.

v) Unsecured foreign currency loans – Others include loans of ₹ **1,568.31 crore** (31 March 2022: ₹ 1,862.96 crore) which carry fixed rate of interest ranging from 1.88% p.a. to 4.13% p.a and loans of ₹ **2,093.57 crore** (31 March 2022: ₹ 1,539.56 crore) which carry floating rate of interest linked to 3M TONA/6M TONA . These loans are repayable in 03 to 25 semi annual instalments as of 31 March 2023, commencing after moratorium period if any, as per the terms of the respective loan agreements.

vi) Unsecured rupee term loans from banks and others carry interest rate ranging from 6.57% p.a. to 8.30% p.a. with monthly/half-yearly rests. These loans are repayable in half-yearly/yearly instalments as per the terms of the respective loan agreements. The repayment period extends from a period of 9 to 15 years after a moratorium period of 3 to 6 years.

vii) Unsecured rupee term loans include ₹ **584.27 crore** (31 March 2022: ₹ 687.66 crore) from Government of Jharkhand to M/s Patratu Vidyut Utpadan Nigam Ltd., a Subsidiary of the parent company, which carry interest at the rate of 10% p.a. until the date of investment approval and afterwards equivalent to weighted average cost of borrowing subject to ceiling of 10% per annum. The said loan is being utilised towards raising share application money from JBVNL as prescribed in JVA/SJVA. During the year, a sum of ₹ **150.68 crore** (31 March 2022: ₹ 122.97 crore) has been utilised for rasing share application money from JBVNL.

viii) Unsecured rupee term loans from Government of India carry interest rate of 1% p.a.. This loan is repayable in yearly installments as per the terms of the loan agreement. The repayment period is 15 years starting from 30 January 2018.

ix) Secured rupee term loans from banks and others carry interest rate ranging from 7.85% p.a. to 8.50% p.a. with monthly/quarterly rests. These loans are repayable in quarterly/yearly instalments as per the terms of the respective loan agreements. The repayment period extends from a period of 11to 15 years after a moratorium period of 6 months to 5 years.

b) There has been no default in repayment of any of the loans or interest thereon as at the end of the year.

c) The group has used the borrowings from banks and financial institutions for the purposes for which it were taken.

d) M/s Patratu Vidyut Nigam Limited, a subsidiary of the company has created a subservient charge on the movable assets of the company in favour of Axis Bank Limited for obtaining a performance bank guarantee of ₹ 237.60 crore for Banardih coalmine.

27. Details of securities

I Secured by (I) English mortgage, on first pari-passu charge basis, of the office premises of the Company at Mumbai and (II) Equitable mortgage, by way of first charge, by deposit of title deeds of the immovable properties pertaining to National Capital Power Station.

II Secured by Equitable mortgage of the immovable properties pertaining to Vindhyachal Super Thermal Power Station on first charge basis.

III Secured by (I) English mortgage, on first pari-passu charge basis, of the office premises of the Company at Mumbai and (II) Equitable mortgage of the immovable properties, on first pari-passu charge basis, pertaining to Sipat Super Thermal Power Project by extension of charge already created.

IV Secured by Equitable mortgage, on pari-passu charge basis, of the immovable properties pertaining to Barh Super Thermal Power Project.

V Secured by Equitable mortgage, on pari-passu charge basis, of the immovable properties pertaining to Vindhyachal Super Thermal Power Station.

VI Secured by (I) English mortgage, on first pari-passu charge basis, of the office premises of the Company at Mumbai and (II) Equitable mortgage of the immovable properties, on first pari-passu charge basis, pertaining to National Capital Power Station by extension of charge already created.

VII Secured by English mortgage of the immovable properties pertaining to Solapur Super Thermal Power Project on first charge basis.

VIII Secured by Equitable mortgage of the immovable properties pertaining to Barh Super Thermal Power Project on first charge basis.

IX Secured by English mortgage, on pari-passu charge basis, of the immovable properties pertaining to Solapur Super Thermal Power Project.

X (i) Secured by way of mortgage of assets attached to the earth as well as other movable assets of the Kameng Hydro Electric Project, Arunchal Pradesh and the landed property in the District of Mehsana, Gujarat.

(ii) Secured by way of mortgage of the assets attached to the earth as well as other movable assets of the Pare Hydro Electric Project, Arunchal Pradesh and the landed property in the District of Mehsana, Gujarat.

(iii) Secured by way of mortgage of the assets attached to the earth as well as other movable assets of the Tuirial Hydro Electric Project in Mizoram, Kopili Hydro Electric Project in Assam and the landed property in the District of Mehsana, Gujarat.

(iv) Secured by way of mortgage of the assets of the Agartala Gas Turbine Project (original open-cycle plant) in Tripura, assets except the gas turbines & steam turbines in the Assam Gas Based Project, Assam, assets except plant & machinery in the generating station in the Ranganadi Hydro Electric Project, Arunachal Pradesh and the landed property in the District of Mehsana, Gujarat.

(v) Secured by way of mortgage of the steam turbines of the Assam Gas Based Power Plant, Assam and the landed property in the District of Mehsana, Gujarat.

(vi) Secured by way of mortgage of all the plant and machinery in the generating station of the Ranganadi Hydro Electric Project, Arunachal Pradesh and the landed property in the District of Mehsana, Gujarat.

(vii) Secured by way of mortgage of the gas turbines of the Assam Gas Based Power Project, Assam and the landed property in the District of Mehsana, Gujarat.

XI (i) Secured by first charge on paripassu basis on movable assets of Tehri HPP Stage-I including book debts.

(ii) Secured by first charge on paripassu basis on movable assets of Tehri HPP Stage-I.

(iii) Secured by first charge on paripassu basis on movable assets of Koteshwar HEP & Wind Power Projects of Patan & Dwarka.

(iv) Secured by first charge on paripassu basis on the movable CWIP and future movable assets of pump storage plant located at Tehri.

XII (i) Secured by a first priority charge on all assets, present & future, movable & immovable and land of 975.05 acres and second charge on all inventories and receivables, in respect of loan from consortium led by SBI for Muzzafarpur Thermal Power Station (Kanti Bijlee Utpadan Nigam Ltd., erstwhile Subsidiary of the Company) expansion project. The security will rank pari-pasu with all term lenders of the project. The charge has been created in favor of SBI Cap Trustee Co. Ltd. and Canara Bank. Legal mortgage of land in favour of security trustee has been executed for 877.18 acres out of 975.05 acres of land.

(ii) Secured by equitable mortgage/ hypothecation of all present and future fixed and movable assets of Nabinagar TPP (4*250) MW of Bhartiya Rail Bijlee Company Ltd., a subsidiary company, as first charge, ranking pari passu. The term loan is secured on pari passu basis on the project assets (Units - I to IV).

(iii) Secured by all existing and future moveable assets of Patratu Vidyut Utpadan Nigam Ltd, a subsidiary company, including equipment, machinery and other current assets, book debts, receivables and all other moveables.

(iv) Secured by a first pari passu charge on entire current assets and fixed assets of Nabinagar Thermal Power Station (Nabinagar Power Generating Company Limited, erstwhile subsidiary of the Company).

Secured by a first pari passu charge on all assets, present and future, movable and immovable through a deed of hypothecation and simple mortgage of 2500 acres of land of Nabinagar Thermal Power Station (Nabinagar Power Generating Company Limited, erstwhile subsidiary of the Company).

(v) Secured by pari passu charge over assets of the Kameng Hydro Electric Power Project (600 MW) situated at Arunachal Pradesh of NEEPCO, a subsidiary company.

(vi) Secured by first charge on pari passu basis on assets of Tehri stage-I i.e. dam, power house civil construction, power house electrical & mechanical equipments not covered under other borrowings and project township of Tehri dam and HPP together with all rights and interest appertaining there to, of THDC India Ltd., a subsidiary company.

(vii) Secured by first charge on pari passu basis on assets of Koteshwar HEP, of THDC India Ltd., a subsidiary company.

(viii) Secured against first charge on pari passu basis on assets of Tehri PSP of THDC India Ltd., a subsidiary company.

(ix) Secured against first charge on pari passu basis on movable fixed assets (including plant & machinery and cwip) both existing & future of Kasargod Solar Power Plant, Khurja STPP and Amelia coal mine of THDC India Ltd., a subsidiary company.

(x) Secured against first charge on pari-passu basis on all existing and future movable and immovable assets excluding current assets pertaining to five projects viz, Bhainsara 320MW, Chattargarh 150MW, Amreshwar 200MW ,GUVNL 150MW & Shajapur U-2 of NTPC Renewable Energy Limited, subsidiary of NTPC Green Energy Ltd., a subsidiary company.

XIII Secured by hypothecation of all movable & immovable assets (including plant, machinery) created / to be created in respect of Tripura Gas Based Power Plant, Agartala and Agartala Gas Turbine Projects –Extension, Agartala of NEEPCO, a sucbsidiary of the Company.

XIV Security cover mentioned at Sl. No. I to XIII is above 100% of the secured debt outstanding.

28. Non-current financial liabilities - Lease liabilities

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Lease liabilities	**1,820.79**	1,151.30
Less: current maturities of lease liabilities	**216.75**	188.61
Total	**1,604.04**	962.69

a) The lease liabilities are repayable in installments as per the terms of the respective lease agreements generally over a period of more than 1 year and upto 99 years.

29. Non-current financial liabilities - Trade payables

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Trade payables for goods and services		
Total outstanding dues of		
- micro and small enterprises	**7.66**	13.45
- creditors other than micro and small enterprises	**78.86**	71.19
Total	**86.52**	84.64

a) Disclosures as required under Companies Act, 2013 / Micro, Small and Medium Enterprises Development Act, 2006 (MSMED) are provided in Note 78.

b) Amounts payable to related parties are disclosed in Note 61.

c) The above balances are due for payment after 12 months from the balance sheet date.

30. Non-current liabilities - Other financial liabilities

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Payable for capital expenditure		
- micro and small enterprises	**4.16**	17.59
- other than micro and small enterprises	**417.04**	876.89
Deposits from contractors and others	**367.11**	164.04
Others	**0.10**	1.34
Total	**788.41**	1,059.86

a) Disclosures as required under Companies Act, 2013 / MSMED Act, 2006 are provided in Note 78.

b) Amounts payable to related parties are disclosed in Note 61.

31. Non-current liabilities - Provisions

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Provision for		
Employee benefits	**963.99**	1,023.15
Mine Closure	**323.80**	304.24
Stripping Activity Adjustments	**611.88**	311.98
Others	**18.22**	15.98
Total	**1,917.89**	1,655.35

a) Disclosures as per Ind AS 19 'Employee benefits' are provided in Note 58.

b) Disclosures required by Ind AS 37 'Provisions, Contingent Liabilities and Contingent Assets' are provided in Note 64.

32. Non-current liabilities - Deferred tax liabilities (net)

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Deferred tax liability		
Difference in book depreciation and tax depreciation	**34,433.23**	30,288.21
Less: Deferred tax assets		
Provisions	**1,164.77**	968.99
Statutory dues	**259.00**	294.97
Leave encashment	**554.58**	520.86
Unabsorbed depreciation	**738.96**	1,273.21
MAT credit entitlement	**19,016.68**	16,263.41
Others	**9.24**	15.10
Total	**12,690.00**	10,951.67

a) Deferred tax assets and deferred tax liabilities have been offset to the extent they relate to the same governing laws.

b) The Group has been recognising MAT credit available as the same is likely to give future economic benefits in the form of availability of set off against future income tax liability.

c) Disclosures as per Ind AS 12 'Income Taxes' are provided in Note 57.

d) Others include deferred tax assets on account of payments related to voluntary retirement schemes and other deferred tax adjustments.

Movement in deferred tax balances

As at 31 March 2023 **₹ Crore**

Particulars	As at 1 April 2022	Recognised in statement of profit and loss	Recognised in OCI	Other	As at 31 March 2023
Deferred tax liability					
Difference in book depreciation and tax depreciation	30,288.21	4,289.52	-	(144.50)	**34,433.23**
Less: Deferred tax assets					
Provisions	968.99	195.78	-	-	**1,164.77**
Statutory dues	294.97	(35.97)	-	-	**259.00**
Leave encashment	520.86	33.72	-	-	**554.58**
Unabsorbed depreciation	1,273.21	(534.25)	-	-	**738.96**
MAT credit entitlement	16,263.41	2,753.27	-	-	**19,016.68**
Others	15.10	(5.86)	-	-	**9.24**
Deferred tax liability (net)	**10,951.67**	**1,882.83**	**-**	**(144.50)**	**12,690.00**

As at 31 March 2022 ₹ Crore

Particulars	As at 1 April 2021	Recognised in statement of profit and loss	Recognised in OCI	Other	As at 31 March 2022
Deferred tax liability					
Difference in book depreciation and tax depreciation	25,387.36	5,045.48	-	(144.63)	30,288.21
Less: Deferred tax assets					

As at 31 March 2022 ₹ Crore

Particulars	As at 1 April 2021	Recognised in statement of profit and loss	Recognised in OCI	Other	As at 31 March 2022
Provisions	925.01	44.02	-	(0.04)	968.99
Statutory dues	363.67	(47.17)	-	(21.53)	294.97
Leave encashment	468.67	30.66	-	21.53	520.86
Unabsorbed depreciation	1,024.49	248.72	-	-	1,273.21
MAT credit entitlement	12,705.04	3,558.37	-	-	16,263.41
Others	12.66	2.44	-	-	15.10
Deferred tax liability (net)	9,887.82	1,208.44	-	(144.59)	10,951.67

33. Other non-current liabilities

₹ Crore

Particulars	**As at 31 March 2023**	As at 31 March 2022
Government grants	**2,611.95**	1,926.65

a) Government grants include grant received in advance amounting to ₹ **8.47 crore** (31 March 2022: ₹ 522.31 crore) for which attached conditions are to be fulfilled / works to be completed relating to various solar power plants. This amount will be recognized as revenue corresponding to the depreciation charge in future years on completion of related projects.

b) Government grants also include:

(i) Grant received from Govt. of Uttar Pradesh towards irrigation sector by THDC India Ltd. (a subsidiary of the Company) amounting to ₹ **577.49 crore** (31 March 2022: ₹ 582.20 crore). This amount will be recognized as revenue corresponding to the depreciation charge in future years.

(ii) Grant received from Ministry of Development of North Eastern Region by NEEPCO (a subsidiary of the Company) amounting to ₹ **212.09 crore** (31 March 2022: ₹ 227.98 crore). As per the Investment Approval sanctioned vide the Ministry of Power's letter no.7/7/2009-H-I dated 14 January 2011, an amount of ₹ 300.00 crores has been sanctioned by the Ministry of Development of North Eastern Region (MDONER) as a part of the approved funding pattern for the Tuirial Hydro Electric Project, Mizoram. The grant is being amortised during normative useful life of the project since its commissioning.

(iii) Grant received by NGEL (a subsidiary of the Company) amounting to ₹ **87.50 crore** (31 March 2022: ₹ Nil) relating to various solar power plants and ₹ **359.76 crore** (31 March 2022: ₹ Nil) in respect of Khavda Solar Park of its subsidiary NTPC Renewable Energy Limited for which works are to be completed.These amounts will be recognised as revenue corresponding to the depreciation charge in future years after the completion of related projects.

(iv) Unamortised grant also includes amount ₹ **32.64 crore** (31 March 2022: ₹ 34.36 crore) received/ receivable from Bangalore Metropolitan Transport Corporation (BMTC) for supply of e-Buses by NVVN (a subsidiary of the Company). This amount will be recognised as revenue corresponding to depreciation charge in future years.

(v) Balance Government grants mainly represent unamortised portion of grant received. This includes ₹ **1,286.97 crore** (31 March 2022: ₹ 534.94 crore) received from Solar Energy Corporation of India under MNRE Scheme for setting up Solar PV power projects. This amount will be recognized as revenue corresponding to the depreciation charge in future years.

Refer Note 38 w.r.t. current portion of Government grants.

34. Current financial liabilities - Borrowings

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Current borrowings		
Loans repayable on demand		
From banks		
Secured		
Cash Credit /Short term working capital loan	**1,189.11**	1,731.09
Unsecured		
Cash Credit /Short term working capital loan	**175.11**	168.12
Other Loans		
Unsecured		
Cash Credit /Short term working capital loan from Bank	**9,550.00**	
Commercial paper	**1,959.73**	6,631.26
	12,873.95	8,530.47
Current maturities of non-current borrowings		
Bonds - secured	**6,851.40**	6,703.37
Bonds - Unsecured	**4,374.10**	
Foreign currency notes - unsecured	**-**	5,724.50
From Banks		
Secured		
Foreign currency loans	**-**	77.75
Rupee term loans	**1,519.62**	1,269.99
Unsecured		
Foreign currency loans	**425.05**	301.01
Rupee term loans	**4,557.68**	3,962.80
From Others		
Secured		
Rupee term loans	**412.21**	390.37
Unsecured		
Foreign currency loans (guaranteed by GOI)	**325.75**	300.03
Other foreign currency loans	**565.28**	390.44
Rupee term loans	**16.57**	33.34
	19,047.66	19,153.60
Total	**31,921.61**	27,684.07

(a) Secured cash credit/Short term working capital loan includes:

(i) Secured against hypothecation of the stocks of stores and spares and book debt, both present and future, of the NEEPCO, a subsidiary of the Company.

(ii) Secured against secured by way of second charge on block of assets of Tehri Stage-1 and Koteshwar HEP including machinery spares, tools & accsesories, fuel stock, spares & material at project site and by way of exclusive charge on debtors of Patan Wind Power Project,Dev Bhoomi dwarka wind power project, Dhukuwan project and Solar power plant Kerala, trade receivables of Koteshwar HEP of THDC India Ltd., a subsidiary of the Company.

(iii) Secured by a first pari passu charge on entire current assets (both present and future) and second pari passu charge on fixed assets of the of Bhartiya Rail Bijlee Company Limited, a subsidiary of the Company.

(iv) Secured by a first hypothecation charge on stores/spares, book debts and entire current assets both present and furute of the of NTPC Vidhyut Vyapar Nigam Limited, a subsidiary of the Company.

(b) Borrowings under Commercial paper are net of unamortised discount as at 31 March 2023 amounting to ₹ **40.27 crore** (31 March 2022: ₹ 43.74 crore)

(c) Details in respect of rate of interest and terms of repayment of current maturities of secured and unsecured non-current borrowings indicated above are disclosed in Note 27.

(d) There has been no default in repayment of any of the loans or interest thereon as at the end of the year.

35. Current financial liabilities - Lease liabilities

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Current maturities of lease liabilities	**216.75**	188.61

a) Refer Note 28 for details in respect of non-current lease libilities.

36. Current financial liabilities - Trade payables

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Trade payables for goods and services		
Total outstanding dues of		
- micro and small enterprises	**462.43**	496.04
- creditors other than micro and small enterprises	**13,359.92**	10,781.28
Total	**13,822.35**	11,277.32

a) Disclosures as required under Companies Act, 2013 / MSMED Act, 2006 are provided in Note 78.

b) Amounts payable to related parties are disclosed in Note 61.

c) Trade payables ageing schedule

As at 31 March 2023

₹ Crore

Particulars	Unbilled Dues	Not Due	Outstanding for following periods from due date of payment				Total
			Less than 1 year	1-2 years	2-3 years	More than 3 years	
(i) MSME	188.37	188.97	85.02	0.01	-	0.06	**462.43**
(ii) Others	2,499.84	2,512.94	5,739.77	420.48	218.72	1,782.05	**13,173.80**
(iii) Disputed dues – MSME	-	-	-	-	-	-	**-**
(iv) Disputed dues – Others	-	-	-	-	-	186.12	**186.12**
Total	**2,688.21**	**2,701.91**	**5,824.79**	**420.49**	**218.72**	**1,968.23**	**13,822.35**

At 31 March 2022

₹ Crore

Particulars	Unbilled Dues	Not Due	Outstanding for following periods from due date of payment				Total
			Less than 1 year	1-2 years	2-3 years	More than 3 years	
(i) MSME	193.96	226.30	75.25	0.04	0.26	0.23	496.04
(ii) Others	2,117.87	1,254.69	4,260.35	451.55	818.39	1,661.77	10,564.62
(iii) Disputed dues – MSME	-	-	-	-	-	-	-
(iv) Disputed dues – Others	-	-	-	-	0.14	216.52	216.66
Total	2,311.83	1,480.99	4,335.60	451.59	818.79	1,878.52	11,277.32

(d) The amounts payable to MSME vendors beyond the statutory period represents security deposit, retention money and other payments which are to be paid after such period as per respective contract conditions and bills which are pending for completion of documentation by the vendors.

37. Current liabilities - Other financial liabilities

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Interest accrued but not due on Secured Short Term Borrowing	**0.23**	-
Interest accrued but not due on Unsecured Short Term Borrowing	**36.84**	-
Interest accrued but not due on secured non current borrowings	**1,163.69**	1,385.59
Interest accrued but not due on unsecured non current borrowings	**1,673.91**	1,267.68
Unpaid dividends	**19.07**	17.99
Unpaid matured deposits and interest accrued thereon	**0.19**	0.19
Unpaid matured bonds and interest accrued thereon	**9.62**	7.20
Unpaid bond refund money-Tax free bonds	**-**	0.19
Book overdraft	**307.57**	33.19
Payable to customers	**1,289.39**	1,137.47
Payable for capital expenditure		
- micro and small enterprises	**140.46**	264.93
- other than micro and small enterprises	**20,643.14**	20,200.91
Other payables		
Deposits from contractors and others	**533.28**	551.52
Payable to employees	**1,212.45**	1,087.41
Retention on account of encashment of bank guarantee (solar)	**284.78**	285.67
Payable to Solar Payment Security account	**344.62**	313.26
Others	**522.74**	1,074.32
Total	**28,181.98**	27,627.52

a) Unpaid dividends, matured deposits, bonds and interest include the amounts which have either not been claimed by the investors/holders of the equity shares/bonds/fixed deposits or are on hold pending legal formalities etc. Out of the above, the amount required to be transferred to Investor Education and Protection Fund (IEPF) has been transferred except for the interim dividend for the year 2015-16 amounting to ₹ 0.66 crore. The transfer of dividend to IEPF is dependent upon transfer of shares pertaining to these dividends for which reconciliation with banks and Registrar and Transfer Agents (RTA) and consequential transfer to IEPF are under process.

b) 'Other payables - Others' mainly includes ₹ **63.68 crore** (31 March 2022: ₹ 250.39 crore) towards the implementation of Deen Dayal Upadhyay Gram Jyoti Yojana (DDUGJY) Scheme of the GOI being carried out by the Company. The funds for the implementation of these schemes are provided by the agencies nominated by the GOI in this regard. Further, 'Other payables - Others' also include ₹ **Nil** (31 March 2022: ₹ 380.48 crore) payable to the Department of Water Resource, Government of Odisha and ₹ **251.53 crore** (31 March 2022: ₹ 251.53 crore) in respect of an amount payable under a contract which is under dispute and balance towards amount payable to hospitals, etc.

c) The Company had obtained exemption from the Ministry of Corporate Affairs (MCA), GOI in respect of applicability of Section 58A from the erstwhile Companies Act, 1956 in respect of deposits held from the dependants of employees who die or suffer permanent total disability under the 'Employees Rehabilitation Scheme' (said amount is included in "Other payables - Others"). Consequent upon enactment of the Companies Act, 2013, the Company has written to the MCA for clarification on continuation of above exemption granted earlier, which is still awaited. Based on an expert opinion, the amount accepted under the Scheme is not considered as a deposit under the Companies Act, 2013.

d) Retention on account of encashment of bank guarantee (solar) represents amounts retained by M/s NVVN Ltd., a wholly owned subsidiary, pursuant to directions received from the Ministry of New and Renewable Energy vide letter ref. no. 29/5/2010-11/JNNSM(ST) dated 29 June 2012 and clarifications thereafter. The comapny has utilised ₹ **284.74 crore** (31 March 2022 : ₹ 286.63 crore) from "Retention on account of encashment of bank guarantee (solar)" for non-payment of dues by its customers under Jawahar Lal Nehru National Solar Mission, Phase-I (JNNSM-I).

e) Disclosures as required under the Companies Act, 2013 / MSMED Act, 2006 are provided in Note 78.

f) Amounts payable to related parties are disclosed in Note 61.

g) Solar Payment Security Account was created by MNRE, Government of India vide OM No. 29/5/2010-11/JNNSM(ST) dated 30 June 2011 as Gross Budgetary Support (GBS) by Ministry of New and Renewable Energy (MNRE), Government of India for ensuring timely payment to Solar Power Developers (SPDs) in the event of default by State Utilities/Discoms. This fund is to be recouped after receipt of payment from State Utilities/Discoms against these bills. This fund was incorporated in the books of accounts of NVVN with effect from 01 Jan 2019 for better monitoring and control of the fund. The funds not withdrawn are invested in Term deposits and balance amount is kept in Current account (refer Note 16).

38. Current liabilities - Other current liabilities

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Advances from customers and others	**754.71**	757.89
Government Grants	**95.30**	111.84
Other payables		
Statutory dues	**842.29**	634.45
Others	**396.25**	373.43
Total	**2,088.55**	1,877.61

(a) Advance received for the DDUGJY (including interest thereon) of ₹ **282.22 crore** (31 March 2022: ₹ 309.13 crore) is included in 'Advance from customers and others'. Refer Note 37(b). Tax deducted at source on the interest is included in 'Advance tax and tax deducted at source' - Note 12.

(b) Refer Note 33 w.r.t. accounting of Government grants.

(c) Others include an amount ₹ **311.07 crore** (31 March 2022: ₹ 302.74 crore) payable to Government of Jharkand on disposal of the assets held for sale. These assets were initially transferred to the subsidiary by the Scheme notified by the Government of Jharkhand (GoJ) vide notification No. 888 dated 1 April 2016 of Patratu Thermal Power Station, for generation of the electricity under power supply arrangement to Jharkhand Bijli Vitran Nigam Limited (JBVNL), an enterprise of Government of Jharkand (GoJ). However due to heavy cost of generation, JBVNL / GoJ proposed to shut down the plant and scrap all the existing units and accordingly plant has been shut down on 24 Jan 2017. It has been further agreed that consideration of these assets shall be the amount realised from sale of scrap, net of cost. The proceeds realised during the year from dismantling of the existing units, current assets & Scrap less administrative expenses towards the sale, land lease and any other incidental expenses has been credited to GoJ in lieu of the Specified Assets Transfer consideration as per the agreement.. The corresponding provisional liability on account of these assets has been adjusted and disclosed above.

39. Current liabilities - Provisions

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Provision for		
Employee benefits	**2,082.27**	2,010.50
Obligations incidental to land acquisition	**2,456.35**	2,879.76
Tariff adjustment	**817.61**	482.28
Arbitration awards	**2,687.95**	2,302.18
Others	**173.08**	200.81
Total	**8,217.26**	7,875.53

a) Disclosures required by Ind AS 19 'Employee Benefits' are provided in Note 58.

b) Disclosures required by Ind AS 37 'Provisions, Contingent Liabilities and Contingent Assets' are provided in Note 64.

c) Provision for others mainly comprise ₹ **90.79 crore** (31 March 2022: ₹ 111.96 crore) towards cost of unfinished minimum work programme demanded by the Ministry of Petroleum and Natural Gas (MoP&NG) including interest thereon in relation to Block AA-ONN-2003/2 (Refer Note 66) and ₹ **6.18 crore** (31 March 2022: ₹ 7.55 crore) towards provision for shortage in property, plant and equipment on physical verification pending investigation and ₹ **12.81 crore** (31 March 2022: ₹ 17.86) towards expected loss on investments of Provident Fund Trust.

40. Current liabilities - Current tax liabilities (net)

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Current tax liabilities (net)	**86.47**	141.13

41. Deferred revenue

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
On account of		
Advance against depreciation	**189.92**	197.51
Income from foreign currency fluctuation	**2,712.87**	2,036.79
Deferred fair valuation gain	**47.69**	44.12
Total	**2,950.48**	2,278.42

a) Advance against depreciation (AAD) was an element of tariff provided under the Tariff Regulations for 2001-04 and 2004-09 to facilitate debt servicing by the generators since it was considered that depreciation recovered in the tariff considering a useful life of 25 years is not adequate for debt servicing. Though this amount is not repayable to the beneficiaries, keeping in view the matching principle, and in line with the opinion of the Expert Advisory Committee (EAC) of the Institute of Chartered Accountants of India (ICAI), this was treated as deferred revenue to the extent depreciation chargeable in the accounts is considered to be higher than the depreciation recoverable in tariff in future years. Since AAD is in the nature of deferred revenue and does not constitute a liability, it has been disclosed in this note separately from equity and liabilities.

b) Foreign exchange rate variation (FERV) on foreign currency loans and interest thereon is recoverable from/payable to the customers in line with the Tariff Regulations. Keeping in view the opinion of the EAC of ICAI, the Company is recognizing deferred foreign currency fluctuation asset by corresponding credit to deferred income from foreign currency fluctuation in respect of the FERV on foreign currency loans adjusted in the cost of property, plant and equipment, which is recoverable from the customers in future years as provided in accounting policy no. C.16 (Note 1). This amount will be recognized as revenue corresponding to the depreciation charge in future years. The amount does not constitute a liability to be discharged in future periods and hence, it has been disclosed separately from equity and liabilities.

42. Revenue from operations

₹ Crore

Particulars		For the year ended 31 March 2023	For the year ended 31 March 2022
Energy sales (including electricity duty)		**1,65,695.01**	1,23,683.94
Sale of energy through trading		**8,143.02**	7,428.04
Consultancy, project management and supervision fee		**118.80**	128.14
Lease rentals on assets on operating lease		**19.58**	19.59
Commission - energy trading business		**9.20**	4.43
		1,73,985.61	1,31,264.14
Sale of fly ash/ash products	399.37		243.20
Less: Transferred to fly ash utilisation reserve fund	399.37		243.20
		-	-
Other operating revenues			
Interest from beneficiaries		**1,676.95**	1,014.22
Energy internally consumed		**92.04**	65.17
Interest income on assets under finance lease		**32.53**	45.07
Recognised from government grants		**131.90**	150.40
Provision written back-others		**242.98**	122.50
Income form Trading of ESCerts		**8.44**	-
Leasing of E- vehicles		**36.48**	7.78
		2,221.32	1,405.14
Total		**1,76,206.93**	1,32,669.28

a) (i) CERC notified The Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 vide Order dated 7 March 2019 (Regulations, 2019) for determination of tariff for the tariff period 2019-2024. CERC has issued provisional tariff orders in respect of twenty four stations of the company for the tariff period 2019-24.. Pending issue of provisional tariff orders in respect of balance stations, capacity charges are billed to beneficiaries in accordance with the tariff approved and applicable as on 31 March 2019, as provided in Regulations, 2019. In case of new stations, which got commercialised from 1 April 2019 and stations where tariff approved and applicable as on 31 March 2019 is pending from CERC, billing is done based on capacity charges as filed with CERC in tariff petition. Accordingly, capacity charges provisionally billed for the year ended 31 March 2023 is ₹ **50,307.67 crore** (31 March 2022: ₹ 49,642.62 crore). Energy and other charges are billed as per the operational norms specified in the Regulations 2019. Accordingly, energy charged billed for the year ended 31 March 2023 is ₹ **1,01,654.44 crore** (31 March 2022: ₹ 68,129.97 crore).

(ii) Capacity charges for the year ended 31 March 2023 have been provisionally recognized considering the provisions of CERC Tariff Regulations amounting to ₹ **52,588.57 crore** (31 March 2022: ₹ 48,515.28 crore). Energy and Other charges for the year ended 31 March 2023 have been recognized at ₹ **1,05,303.42 crore** (31 March 2022: ₹ 71,281.16 crore) as per the operational norms specified in the Regulations 2019.

b) Capacity charges for the year ended 31 March 2023 include ₹ **1,813.68 crore** (31 March 2022: ₹ 1,236.04 crore) pertaining to earlier years on account of impact of CERC orders and other adjustments. Energy and other charges for the year ended 31 March 2023 include ₹ **3,279.26 crore** (31 March 2022: ₹ 775.69 crore) pertaining to earlier years on account of revision of energy charges due to grade slippages and other adjustments. Other adjustments include an amount of ₹ 3,097.04 crore on account of adjustment of 'Net movement in regulatory deferral account balances (net of taxes)' relating to reimbursement of ash transportation cost for the period from 1 April 2019 to 31 March 2022 pursuant to Order of CERC dated 28 October 2022.

c) Sales for the year ended 31 March 2023 include ₹ **262.97 crore** (31 March 2022: Nil) on account of income tax receivable from the beneficiaries as per Regulations, 2004. Sales for the year ended 31 March 2023 include ₹ **102.03 crore**

(31 March 2022: ₹ 99.72 crore) on account of deferred tax materialized which is recoverable from beneficiaries as per Regulations, 2019.

d) Energy sales include electricity duty amounting to ₹ **1,516.71 crore** (31 March 2022: ₹ 1,352.73 crore).

e) Revenue from operations for the year ended 31 March 2023 include ₹ **8,185.67 crore** (31 March 2022: ₹ 7,471.99 crore) on account of sale of energy through trading. Sale of energy through trading includes export sales amounting to ₹ **1,275.80 crore** (31 March 2022: ₹ 1,241.71 crore) to Nepal and Bangladesh by M/s NVVN Ltd., a subsidiary of the Company.

f) Other operating revenue includes ₹ **92.04 crore** (31 March 2022: ₹ 65.17 crore) towards energy internally consumed, valued at variable cost of generation and the corresponding amount is included in power charges in Note 48.

g) CERC Regulations provides that where after the truing-up, the tariff recovered is less/more than the tariff approved by the Commission, the generating Company shall recover from /pay to the beneficiaries the under/over recovered amount along-with simple interest. Based on the above, the interest recoverable from the beneficiaries amounting to ₹ **1,676.95 crore** (31 March 2022: ₹ 1,014.22 crore) has been accounted as 'Interest from beneficiaries'. Further, the amount payable to the beneficiaries has been accounted as 'Interest to beneficiaries' in Note 48.

h) Provision written back-others represents write back of provision towards water conservation fund at few projects of the Company (31 March 2022: towards water charges at one of the projects of the Company), which is no longer required.

i) The Power Purchase Agreements (PPA) signed in respect of a power station was operative initially for a period of five years with the beneficiary which may be extended, renewed or replaced as the parties mutually agree. The Company has continued to classify these arrangement with its customers as lease based on the practical expedient provided in Appendix C of Ind AS 116. Accordingly, recovery of capacity charges towards depreciation, interest on loan capital & return on equity (pre-tax) components from the beneficiary are considered as lease rentals on the assets which are on operating lease.

j) The Company had ascertained that the PPA entered into for Stage-I of a power station with the beneficiary falls under the definition of finance lease. Accordingly, the written down value of the specified assets was derecognized from PPE and accounted as Finance Lease Receivable (FLR) on transition date to Ind AS. The Company has continued to classify this arrangement with its customer as lease based on the practical expedient provided in Appendix C of Ind AS 116. Accordingly, recovery of capacity charges towards depreciation (including AAD), interest on loan capital & return on equity (pre-tax) components from the beneficiary are continued to be adjusted against FLR. The interest component of the FLR and amount received on account of revision of tariff of previous periods in respect of the above three elements are continued to be recognised as 'Interest income on Assets under finance lease'.

k) CERC vide notification dated 19 February 2021, notified the Second amendment to Tariff Regulations 2019, which inter alia includes mechanism for determination of transfer price of coal from integrated coal mines to generating stations and are effective for the period 2019-24. Coal extracted from Company's captive mines and supplied to generating stations have been accounted considering these Regulations.

43. Other income

₹ **Crore**

Particulars		**For the year ended 31 March 2023**	For the year ended 31 March 2022
Interest from			
Financial assets at amortized cost			
Non-current trade receivables		**163.58**	-
Loan to employees		**69.11**	69.00
Deposits with banks		**103.65**	87.92
Deposits with banks out of fly ash utilisation reserve fund	29.15		19.61
Less: Transferred to fly ash utilisation reserve fund	29.15		19.61
		-	-
Deposits with banks - DDUGJY funds	13.81		13.83
Less: Transferred to DDUGJY advance from customers	13.81		13.83
		-	-

₹ Crore

Particulars		For the year ended 31 March 2023	For the year ended 31 March 2022
Deposits with banks - Solar payment security account	0.94		2.86
Less: Transferred to Solar payment security account	0.94		2.86
		-	-
Other investments in Joint venture companies		**28.79**	-
Advance to contractors and suppliers		**167.15**	120.99
Income Tax refunds		**1.73**	148.08
Others		**17.27**	23.08
Dividend from			
Non-current investment in equity instruments designated at fair value through OCI		**6.96**	9.00
Other non-operating income			
Late payment surcharge from beneficiaries		**622.02**	1,193.57
Hire charges for equipment		**1.37**	5.95
Sale of scrap		**150.00**	164.54
Gain on sale of current investments measured at fair value through profit or loss		**-**	10.81
Gain on Option Contract		**5.90**	15.43
Miscellaneous income		**424.30**	294.01
Profit on de-recognition of property, plant and equipment		**31.80**	6.27
Provisions written back			
Doubtful loans, advances and claims		**0.17**	0.05
Shortage in inventories		**52.93**	18.75
Obsolescence in inventories		**28.05**	13.54
Arbitration cases		**33.92**	10.04
Unserviceable capital works		**3.84**	134.81
Others		**6.41**	78.32
		1,918.95	2,404.16
Less: Transferred to expenditure during construction period (net) - Note 49		**133.67**	70.56
Transferred to expenditure during development of coal mines (net) - Note 50		**0.85**	0.89
Transferred to payable to Govt. of Jharkhand-Note 38		**14.19**	7.68
Total		**1,770.24**	2,325.03

a) 'Interest from others' includes interest on advance to APIIC for drawal of water and deposits with LIC towards annuity to the land losers.

b) Miscellaneous income includes income from township recoveries and receipts towards insurance claims.

c) Provision written back-Unserviceable CWIP includes ₹ **Nil** (31 March 2022: ₹ 134.11 crore) pertaining to cancellation of allotment of land during the year and consequential write back of depreciation/amortisation and other expenses capitalised in the earlier years.

d) 'Provisions written back - Others' include provision for shortage in construction stores, shortage in property, plant and equipment and other provisions no longer required.

44. Fuel cost

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Coal	93,975.55	64,981.62
Gas	4,908.66	3,629.93
Naptha	158.43	63.41
Oil	1,548.75	1,043.45
Biomass pellets and other chemicals	64.39	34.56
Total	1,00,655.78	69,752.97

45. Employee benefits expense

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Salaries and wages	6,162.99	5,886.43
Contribution to provident and other funds	935.94	876.45
Staff welfare expenses	742.37	791.75
	7,841.30	7,554.63
Less: Allocated to fuel inventory	320.34	299.27
Transferred to expenditure during construction period (net) - Note 48	861.57	826.97
Transferred to expenditure during development of coal mines (net) - Note 49	68.65	56.16
Reimbursements for employees on deputation/secondment	60.33	59.84
Adjusted with payable to Govt. of Jharkhand - Note 38	2.07	2.30
Total	6,528.34	6,310.09

a) Disclosures as per Ind AS 19 - 'Employee Benefits' in respect of provision made towards various employee benefits are provided in Note 58.

46. Finance costs

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Finance costs on financial liabilities measured at amortised cost		
Bonds	5,084.40	4,990.37
Foreign currency term loans	538.13	289.06
Rupee term loans	6,899.79	6,254.19
Foreign currency bonds/notes	933.64	1,191.96
Cash credit	328.79	87.17
Unwinding of discount on vendor liabilities/provisions	162.01	214.14
Commercial papers	396.93	281.82
	14,343.69	13,308.71
Interest on non financial items	178.70	65.25
Exchange differences regarded as an adjustment to borrowing costs	572.58	(58.74)

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Other borrowing costs		
Guarantee fee	**21.24**	25.66
Others	**11.70**	13.81
	32.94	39.47
Sub-Total	**15,127.91**	13,354.69
Less: Transferred to expenditure during construction period (net) - Note 49	**3,774.91**	3,823.11
Transferred to expenditure during development of coal mines (net) - Note 50	**196.94**	215.60
Total	**11,156.06**	9,315.98

a) 'Other borrowing costs - Others' include bond issue and service expenses, commitment charges, exposure premium and insurance premium & other expenses on foreign currency loans / bonds/ notes.

b) Interest on non financial items above includes interest on shortfall in payment of advance income-tax amounting ₹ **7.95 crore** (31 March 2022: ₹ 2.49 crore)

c) Refer Note 74 w.r.t. Interest expense relating to lease obligations.

47. Depreciation, amortisation and impairment expense

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
On property, plant and equipment - Note 2	**16,269.81**	15,003.82
On intangible assets - Note 4	**50.82**	57.98
	16,320.63	15,061.80
Less: Allocated to fuel inventory	**1,077.05**	896.57
Transferred to expenditure during construction period (net) - Note 49	**125.94**	101.69
Transferred to expenditure during development of coal mines (net) - Note 50	**53.18**	32.55
Adjustment with deferred revenue from deferred foreign currency fluctuation	**272.19**	243.16
Total	**14,792.27**	13,787.83

a) Refer Note 74 w.r.t. depreciation expense of right of use assets.

48. Other expenses

₹ Crore

Particulars		For the year ended 31 March 2023	For the year ended 31 March 2022
Power charges	401.31		253.87
Less: Recovered from contractors and employees	69.05		50.38
		332.26	203.49
Water charges		**1,014.74**	710.15
Cost of captive coal		**3,102.15**	1,876.41
Stores consumed		**251.96**	152.37

₹ Crore

Particulars		For the year ended 31 March 2023	For the year ended 31 March 2022
Rent		**48.10**	7.97
Repairs and maintenance			
Buildings	452.46		376.08
Plant and equipment	4,407.03		3,588.59
Others	489.66		458.98
		5,349.15	4,423.65
Load dispatch centre charges		**47.09**	46.40
Insurance		**472.70**	389.36
Interest to beneficiaries		**291.09**	59.70
Loss on fair valuation of non-current trade receivables at amortized cost		**425.61**	-
Rates and taxes		**210.89**	182.35
Water cess and environment protection cess		**0.47**	0.47
Training and recruitment expenses	52.15		29.53
Less: Receipts	0.51		0.39
		51.64	29.14
Communication expenses		**88.18**	85.24
Travelling expenses		**276.83**	235.62
Tender expenses	10.60		29.79
Less: Receipt from sale of tenders	1.43		1.29
		9.17	28.50
Remuneration to auditors		**7.36**	6.23
Advertisement and publicity		**47.52**	31.89
Electricity duty		**1,434.48**	1,282.07
Security expenses		**1,354.71**	1,291.55
Entertainment expenses		**73.33**	65.88
Expenses for guest house	78.60		70.78
Less: Recoveries	5.44		3.95
		73.16	66.83
Education expenses		**76.80**	67.35
Donation / Grants		**0.03**	12.54
Ash utilisation and marketing expenses		**2,713.37**	1,783.73
Directors sitting fee		**0.71**	0.30
Professional charges and consultancy fee		**154.73**	107.43
Legal expenses		**84.84**	77.55
EDP hire and other charges		**80.81**	70.40
Printing and stationery		**7.12**	5.76
Oil and gas exploration expenses		**0.06**	0.07

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Hiring of vehicles	**144.93**	117.48
Net loss/(gain) in foreign currency transactions and translations	**748.92**	(622.22)
Horticulture expenses	**77.13**	66.27
Hire charges of helicopter/aircraft	**4.08**	8.27
Hire charges of construction equipment	**5.62**	6.11
Transport vehicle running expenses	**23.51**	19.98
Demurrage charges	**-**	0.03
Loss on de-recognition of property, plant and equipment	**168.55**	108.06
Power Charges (e-mobility)	**2.95**	-
Annual Maintainence Expenses - e mobility	**17.56**	2.13
Miscellaneous expenses	**517.16**	382.07
	19,791.47	13,388.58
Less: Allocated to fuel inventory	**3,655.19**	2,564.03
Transferred to expenditure during construction period (net) - Note 49	**668.57**	438.47
Transferred to expenditure during development of coal mines (net) - Note 50	**337.76**	108.40
Transferred to derivative MTM loss/(gain) recoverable/(payable) from/to beneficiaries		-
Transferred to corporate social responsibility expenses	**9.67**	51.15
Adjusted with payable to Govt. of Jharkhand-Note 38	**4.21**	8.72
Transferred to fly ash utilisation reserve fund	**253.74**	287.38
	14,862.33	9,930.43
Corporate Social Responsibility (CSR) expense	**352.76**	403.91
Provisions for		
Tariff adjustments	**335.33**	122.00
Doubtful Trade Receivables	**82.27**	-
Obsolescence in inventories	**52.58**	31.14
Shortages in inventories	**9.35**	29.35
Unserviceable capital works	**18.95**	29.26
Unfinished minimum work programme for oil and gas exploration	**11.01**	8.08
Arbitration cases	**155.40**	105.25
Shortages in construction stores	**2.35**	2.00
Doubtful loans, advances and claims	**71.25**	4.01
Others	**15.37**	76.54
	753.86	407.63
Total	**15,968.95**	10,741.97

a) During the development stage of mine, transfer price of coal extracted from Company's captive mine has been determined considering the CERC Regulations. The same has been netted from the cost of captive coal and carried to 'Development of coal mines' (Note 3) through 'Transferred to expenditure during development of coal mines' (Note 50).

b) Details of remuneration to auditors:

As Auditor		
Audit fee	**3.03**	2.87
Tax audit fee	**0.97**	0.89
Limited review	**1.47**	1.49
In other capacity		
Other services (certification fee)	**0.92**	0.77
Reimbursement of expenses	**0.97**	0.21
Total	**7.36**	**6.23**

Remuneration to the auditors includes ₹ **0.38 crore** (31 March 2022: ₹ 0.33 crore) relating to earlier year.

c) CERC Regulations provides that where after the truing-up, the tariff recovered is more than the tariff approved by the Commission, the generating Company shall pay to the beneficiaries the over recovered amount along-with simple interest. Accordingly, the interest payable to the beneficiaries amounting to ₹ **291.09 crore** (31 March 2022: ₹ 59.70 crore) has been accounted and disclosed as 'Interest to beneficiaries'.

d) Miscellaneous expenses include expenditure on books & periodicals, workshops, operating expenses of DG sets, brokerage and commission, bank charges, furnishing expenses, etc.

e) Provisions - Others include provision for doubtful debts, shortages in property, plant and equipment and other losses.

49. Expenditure during construction period (net)*

₹ Crore

Particulars		For the year ended 31 March 2023	For the year ended 31 March 2022
A. Employee benefits expense			
Salaries and wages		**701.67**	669.36
Contribution to provident and other funds		**100.16**	100.62
Staff welfare expenses		**59.74**	56.99
Total (A)		**861.57**	826.97
B. Finance costs			
Finance costs on financial liabilities measured at amortised cost			
Bonds		**1,504.30**	1,364.37
Foreign currency term loans		**177.60**	52.86
Rupee term loans		**1,464.97**	1,925.86
Foreign currency bonds/notes		**205.82**	245.43
Others		**47.46**	57.14
Unwinding of discount on vendor liabilities		**89.21**	128.04
Exchange differences regarded as an adjustment to borrowing costs		**174.90**	15.61
Other borrowing costs - others		**110.65**	33.80
Total (B)		**3,774.91**	3,823.11
C. Depreciation and amortisation expense		**125.94**	101.69
D. Other expenses			
Power charges	131.39		29.61
Less: Recovered from contractors and employees	10.53		9.33
		120.86	20.28

₹ Crore

Particulars		For the year ended 31 March 2023	For the year ended 31 March 2022
Water charges		**101.69**	4.85
Rent		**3.19**	2.16
Repairs and maintenance			
Buildings	6.36		10.70
Plant and equipment	12.13		7.53
Others	60.14		54.06
		78.63	72.29
Insurance		**8.19**	5.58
Rates and taxes		**49.16**	40.96
Communication expenses		**7.99**	8.35
Travelling expenses		**30.13**	25.54
Tender expenses		**6.63**	26.43
Advertisement and publicity		**0.45**	0.84
Security expenses		**124.15**	120.63
Entertainment expenses		**4.27**	4.09
Expenses for guest house		**5.95**	6.22
Professional charges and consultancy fee		**17.13**	14.09
Legal expenses		**8.54**	13.07
EDP hire and other charges		**1.37**	1.16
Printing and stationery		**0.49**	0.38
Miscellaneous expenses		**99.75**	71.55
Total (D)		**668.57**	438.47
E. Less: Other income			
Interest from advances to contractors and suppliers		**37.40**	33.41
Interest others		**16.20**	22.36
Hire charges for equipment		**0.36**	0.12
Sale of scrap		**0.42**	0.32
Miscellaneous income		**79.29**	14.35
Total (E)		**133.67**	70.56
F. Net actuarial losses on defined benefit plans		**(1.66)**	1.27
Grand total (A+B+C+D-E+F)**		**5,295.66**	5,120.95

* Other than for expenditure during development of coal mines- (Note 50)

** Carried to Capital work-in-progress - (Note 3)

50. Expenditure during development of coal mines (net)

₹ Crore

Particulars		For the year ended 31 March 2023	For the year ended 31 March 2022
A. Employee benefits expense			
Salaries and wages		**54.45**	46.16
Contribution to provident and other funds		**6.25**	5.32
Staff welfare expenses		**7.95**	4.68
Total (A)		**68.65**	56.16
B. Finance costs			
Finance costs on financial liabilities measured at amortised cost			
Bonds		**68.38**	87.70
Foreign currency term loans		**12.08**	0.71
Rupee term loans		**100.70**	117.64
Unwinding of discount on vendor liabilities		**8.82**	8.98
Other borrowing costs - others		**6.96**	0.57
Total (B)		**196.94**	215.60
C. Depreciation and amortisation expense		**53.18**	32.55
D. Other expenses			
Power charges		**3.21**	1.59
Water charges		**-**	0.06
Rent		**0.24**	0.56
Repairs and maintenance			
Buildings	0.03		0.04
Others	4.81		1.76
		4.84	1.80
Cost of captive coal produced		**273.73**	64.04
Rates and taxes		**7.59**	0.86
Communication expenses		**0.99**	0.91
Travelling expenses		**3.09**	2.34
Advertisement and publicity		**0.40**	0.14
Security expenses		**15.55**	17.07
Entertainment expenses		**0.46**	0.45
Expenses for guest house		**1.63**	1.34
Professional charges and consultancy fee		**10.02**	8.34
Legal expenses		**5.20**	2.56
EDP hire and other charges		**0.37**	0.08
Printing and stationery		**0.12**	0.11
Miscellaneous expenses		**10.32**	6.15
Total (D)		**337.76**	108.40

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
E. Less: Other income		
Interest from advances to contractors and suppliers	**0.64**	0.71
Miscellaneous income	**0.21**	0.18
Total (E)	**0.85**	0.89
F. Net actuarial losses on defined benefit plans	**0.29**	0.17
Grand total (A+B+C+D-E+F)*	**655.97**	411.99

* Carried to Capital work-in-progress - (Note 3)

51. a) The Group has a system of obtaining periodic confirmation of balances from banks and other parties. There are no unconfirmed balances in respect of bank accounts and borrowings from banks & financial institutions. With regard to receivables for energy sales, the Group sends demand intimations to the beneficiaries with details of amount paid and balance outstanding which can be said to be automatically confirmed on receipt of subsequent payment from such beneficiaries. In addition, reconciliation with beneficiaries and other customers is generally done on quarterly basis. So far as trade/other payables and loans and advances are concerned, the balance confirmation letters/emails with the negative assertion as referred in the Standard on Auditing (SA) 505 (Revised) 'External Confirmations', were sent to the parties. Some of such balances are subject to confirmation/reconciliation. Adjustments, if any will be accounted for on confirmation/reconciliation of the same, which in the opinion of the management will not have a material impact.

b) In the opinion of the management, the value of assets, other than property, plant and equipment and non-current investments, on realisation in the ordinary course of business, will not be less than the value at which these are stated in the Balance Sheet.

c) The levy of transit fee/entry tax on supplies of fuel to some of the power stations has been paid under protest as the matters are sub-judice at various courts. In case the Company gets refund/demand from fuel suppliers/tax authorities on settlement of these cases, the same will be passed on to respective beneficiaries.

52. a) Penstock I - feeding 02 (two) units (50 MW each) of Kopili Hydro Power Station, Umrongso, Assam of the NEEPCO, a subsidiary of the Company, got ruptured on 7 October 2019 following a load through off and tripping of Unit -I (50 MW). Three other units were in full load during the mishap. Rupture happend at three locations of penstock including at location immediately downstream of valve house. Penstock protection valve closing mechanism was damaged in the incident and therefore, the valve could not be closed to isolate the penstock, consequently thereafter, the power house was flooded upto EOT crane beam level within a very short period. At present, Kopili (4 X 50 MW) system in in shutdown condition. Estimated carrying cost of the assets damaged due to aforesaid mishap amounts to ₹ **103.67 crore** (31 March 2022: ₹ 103.67 crore) as per internal assessment by NEEPCO, has been provided for. The subsidiary has lodged a initial insurance claim for an amount of ₹ 250.00 crore and further action in this matter is in progress.Repair, Renovation and Modernization (RRM) activities of the said generating plant is going on with scheduled commissioning of all the units during the FY 2023-24.

b) M/s Patratu Utpadan Nigam Ltd., a subsidiary of the Company, had signed the deed of adherence with Ministry of Coal (MoC) and Jharkhand Urja Utpadan Nigam Limited (JUUNL) for Banhardih coal mine on 2 June 2017. Subsequently, Deed of assignment between PVUNL and JUUNL was executed on 18 May 2018 after obtaining consent from MoC. Geological Report (GR) for the coal block has been handed over by JUUNL in July 2019, which is a vital input to take up further activities for the development of coal mine. The mining plan has been approved. The Board of Directors has approved the Feasibility Report (FR) of the mine during the year.

A bank guarantee (BG) of' ₹ 237.60 crore has been submitted to MoC, GOI towards performance security for the development of Banhardih coal mine. MoC appropriated 50% of the BG amount of ₹ 118.80 crore in July 2019 for not complying with the efficiency parameters as specified in the allotment agreement. MoC was approached for revision of the efficiency parameters and also refund of the appropriated amount.

A further appropriation of 15% of BG amount of ₹ 35.64 crore was done by MoC in December 2020 for not complying with some more efficiency parameters as specified in the allotment agreement. The Company has decided to exercise remedies available in the allotment agreement both for revision of efficiency parameteres and refund of appropriated value of the BG and accordingly approached MoC which inter alia includes referring the matter to appropriate tribunal for redressal. The cumulative appropriated BG value of ₹ 154.44 crore has been accounted as capital work in progress for the development of the coal mine. A case was filed in Coal Tribunal, Ranchi for revision of efficiency parameters and refund of the appropriated BG amount. The case was admitted on 19 January 2022 and notice was issued to Ministry of Coal (MoC).

Further, the Company has received third show cause notice bearing no. F. No.103/18/2015/NA dated 18 January 2022 from MoC, GoI for appropriating 17% of BG amount of ₹ 4,039.20 lakh for not complying with four efficiency parameters namely land acquistion (CBA Section-11), opening of escrow account, application for opening permission and grant of opening permission, as specified in the allotment agreement. The Company has filed an injuction petition dated 24 February 2022 in Coal Tribunal, Ranchi. Notice to the Nominated Authority of MoC was issued by Hon'ble Judge on 2 March 2022. In the meantime, MoC has convened scrutiny committee meeting on 2 March 2022 wherein it was decided that as the matter is sub-judice, no further action on the matter of BG encashment will be taken till final verdict of the Court. Furthermore, scrutinuy committee on 26 May 2023 reccommended that the decision to be taken on non-achivement of milestone will be reviewed only after the final verdict of the Court. Court hearing proceses is in progress. So far total 13 nos of hearings have been conducted in Coal Tribunl Ranchi. Next hearing is scheduled on 3 June 2023. The company expects that the decision will be in favour of the company.

c) As a consequence of unprecedented dry season flood in Kopili river, the Bundh constructed at the approach channel for taking up planned repair and renovation works overtopped on the 26th March 2022 leading to uncontrollable ingress of water from the Kopili reservoir into Khanding HRT. The discharge gushes down the hill slopes and inundated the Khandong Power House (2 X 25 MW) and Kopili Stage II Power House (1 X 25 MW) of the NEEPCO, a subsidiary of the Company, causing damages to the Power Stations and its Plant & Machineries. Estimated carrying cost of the assets damaged due to aforesaid mishap amounts to ₹ **14.58 crore** (31 March 2022: ₹ 14.58 crore) for the said generating stations, as per internal assessment by NEEPCO, has been provided for.

d) M/s Ratnagiri Gas & Power Private Ltd., a subsidiary of the company, had stated that in view of non-recovery of capacity charges from beneficiaries and under-utilization of power generation capacity, the company has incurred losses amounting to ₹ **3,750.54 crore** up to March 31, 2023 (for the year Loss ₹ 179.60 crore) and the net worth of the company as on March 31, 2023 stands as negative ₹ 59.53 crore. Company has also provided impairment loss of ₹ **2,854.13 crore** (for the year ₹ 28.80 crores) upto March 31, 2023 in the books of accounts. However, the management has prepared and presented financial statements of the company on a going concern basis in view of the following mitigating factors:

Unprecedented increase in price of gas at international level has made the electricity generation uncompetitive at present, however gas price are coming down gradually. Company is hopeful to continue its operations as company is keeping its mahcines in ready to operate mode and carrying out the required overhauling to supply power under RRAS Scheme to GRID or to interested customers as mechant power.

Following additional favourable factors are considered for preparation of accounts on Going Concern Basis:

a. Company is under active consideration for sustained operation with Ministry of Power.

b. Considering the current power/grid scenario company is injecting power in the grid time-to-time to ensure stability of the Grid as per the instruction of WRLDC/NLDC.

c. Company is supplying 12 MW power to Daman and Diu, W.e.f.01.01.2019, under existing PPA for 25 years.

d. Increase in oil and gas prices should be temporary phase arisen due to global political uncertainty and gradually reducing.

53. a) The environmental clearance (EC) granted by the Ministry of Environment and Forest, Government of India (MoEF), based on the recommendations of Expert Appraisal Committee (EAC), for one of the Company's project consisting of three units of 800 MW each whose carrying cost as at 31 March 2023 is ₹ **14,586.51 crore** (31 March 2022: ₹ 14,874.47 crore), was challenged before the National Green Tribunal (NGT) vide appeal no.12/2012. The NGT disposed off the appeal vide Order dated March 13, 2014, inter alia, directing that the order of clearance be remanded to the MoEF to pass an order granting or declining clearance to the project proponent afresh in accordance with the law and the judgement of the NGT and also directed that the EC shall be kept in abeyance and the Company shall maintain status quo in relation to the project during the period of review by the Committee or till fresh order is passed by the MoEF, whichever is earlier.

The Company filed an appeal challenging the NGT order before the Hon'ble Supreme Court of India which stayed the order of the NGT and the matter is sub-judice and pending for listing in the Court. The Company has been complying with various conditions stipulated in the EC and reporting to the appropriate environment authorities periodically. The EAC has been accepting the amendments sought by the Company in the EC.

Based on a legal opinion, the Company does not envisage any threat to the continuance to the project. All the units of the project have been declared commercial in the earlier years and are fully operational since September 2018.

b) The Company is executing a hydro power project in the state of Uttarakhand, where all the clearances were accorded. A case was filed in Hon'ble Supreme Court of India after the natural disaster in Uttarakhand in June 2013 to review whether the various existing and ongoing hydro projects have contributed to environmental degradation. Hon'ble Supreme Court of India on 7 May 2014, ordered that no further construction shall be undertaken in the projects under consideration until further orders, which included the said hydro project of the Company. In the proceedings, Hon'ble Supreme Court is examining to allow few projects which have all clearances which includes the project of the Company where the work has been stopped. Aggregate cost incurred on the project up to 31 March 2023 is ₹ **147.90 crore** (31 March 2022: ₹ 163.57 crore). Management is confident that the approval for proceeding with the project shall be granted, hence no adjustment is considered necessary in respect of the carrying value of the project.

c) The Company is executing a 4 X 130 MW Hydro Electric Project in the state of Uttarakhand. After the reports of recent land subsidence in Joshimath Town, Additional District Magistrate, Chamoli has issued order on 5 January 2023 to stop all the construction activities till further orders. Hon'ble High Court of Uttarakhand on hearing a public interest litigation on 12 January 2023, has directed the State to strictly enforce the ban on construction in Joshimath area and scheduled next hearing on 24 May 2023. As per Company's understanding, the land subsidence in Joshimath does not have any link with the Project. The developments are closely being monitored by the Company. Aggregate cost incurred on the project up to 31 March 2023 is ₹ **6,252.31 crore** (31 March 2022: ₹ 5745.28 crore). Technical and administrative works related to the project are going on. Management does not envisage any threat to the continuance of the project and is confident that a viable solution in connection with the project shall be arrived in due course.

d) (i) Ministry of Corporate Affairs (MCA) vide its order dated 29 July 2022 approved the Scheme of Amalgamation of Nabinagar Power Generating Company Limited (NPGCL) and Kanti Bijlee Utpadan Nigam Limited (KBUNL), wholly owned subsidiaries of NTPC Limited into NTPC Limited, W.e.f. 1 April 2022 being the appointed date. Accordingly, the assets and liabilities of the transferor companies shall vest with transferee company from the appointed date. The transferor companies were dissolved without winding up on the effective date of 26 August 2022.

(ii) The Company has incorporated a wholly owned subsidiary, in the name of 'NTPC Green Energy Limited' (NGEL) on 7 April 2022, for reorganisation of its renewable energy business. The Board of Directors of the Company has approved the transfer of 15 renewable energy assets ("RE Assets") of the Company to NGEL at book value, through a business transfer agreement dated 8 July 2022. Further, the Company will also transfer its 100% equity shareholding held in NTPC Renewable Energy Limited ("NREL") at cost, a wholly owned subsidiary of NTPC, to NGEL through a share purchase agreement dated 8 July, 2022. The transfer of assets alongwith equity holding of NTPC Renewable Energy Limited have taken place with closing date of 28 February 2023.

(iii) In respect of transactions stated at 52 (d)(i) and (ii) above , the Company has applied for adjudication and grant of exemption from Stamp duty under Indian Stamps Act, 1899 with the appropriate authorities.

54. Disclosure as per Ind AS 1 'Presentation of financial statements'

a) Changes in significant accounting policies:

During the year, following changes to the accounting policies have been made:

i) Steel scrap is being accounted on accrual basis. During the year, the accounting of scrap has been modified to include other than steel scrap also in the valuation on accrual basis. Consequently, significant accounting policies 10 and 16.3 have been modified. Impact on profit due to the above change is not material.

ii) Certain other changes have also been made in the policies nos. C.2.1, C.2.5, C.9, C.14, C.15, C.16.1, C.19, C.20.3, C.23, C.26 and C.29 for improved disclosures. There is no impact on the financial statements due to these changes.

b) Reclassifications and comparative figures

Certain reclassifications have been made to the comparative period's financial statements to enhance comparability with the current year's financial statements.As a result, certain line items have been reclassified in the balance sheet the details of which are as under:

Items of balance sheet before and after reclassification as at 31 March 2022

₹ Crore

Sl. No	Particulars	Amount before reclassification	Reclassification	Amount after reclassification
1	Trade receivables-Current (Note-15)	27,342.08	628.79	27,970.87
	Cash and cash equivalents (Note-16)	728.45	(52.68)	675.77
	Bank balances other than cash and cash equivalents (Note-17)	3,729.63	52.68	3,782.31
	Other financial assets-Current (Note-19)	6,375.25	(549.11)	5,826.14
	Other non-current assets (Note-12)	15,873.86	3.16	15,877.02
	Assets held for sale (Note-22)	-	18.50	18.50
	Other current assets (Note-21)	9,546.98	(21.66)	9,525.32
2	Other financial liabilities-Current (Note-37)	27,547.84	79.68	27,627.52
	Provisions - Non current (Note-31)	1,655.19	0.16	1,655.35
	Provisions - current (Note-39)	7,875.69	(0.16)	7,875.53

Items of statement of cash flows before and after reclassification as at 31 March 2022

₹ Crore

Sl. No	Particulars	Amount before reclassification	Reclassification	Amount after reclassification
1	Cash flow from operating activities	41,788.23	-	41,788.23
	Cash flow from investing activities	(22,838.24)	(52.68)	(22,890.92)
	Cash flow from financing activities	(19,171.56)	-	(19,171.56)
	Cash & Cash Equivalent the end of the year	728.45	(52.68)	675.77

55. Disclosure as per Ind AS 2 'Inventories'

(a) Amount of inventories consumed and recognised as expense during the year is as under:

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Fuel Cost (Note 44) - Domestic	**75,599.59**	66,723.11
- Imported	**25,056.19**	3,029.86
Others (included in Note 48 - Other expenses) - Domestic	**1,870.71**	1,367.06
- Imported	**78.01**	65.08
Total	**1,02,604.50**	71,185.11

(a) Carrying amount of inventories pledged as security for borrowings as at 31 March 2023 is ₹ **548.83 crore** (31 March 2022: ₹ 652.08 crore).

56. Disclosure as per Ind AS 8 - 'Accounting Policies, Changes in Accounting Estimates and Errors'

Recent accounting pronouncements

Standards / amendments issued but not yet effective:

The Ministry of Corporate Affairs ,vide notification dated 31 March 2023, has notified Companies (Indian Accounting Standards) Amendment Rules, 2023 which amends certain Indian Accounting Standards which are effective 1 April 2023. Below is a summary of such amendments:

1. Ind AS 1 - Presentation of Financial Statements - This amendment requires the entities to disclose their material accounting policies rather than their significant accounting policies.
2. Ind AS 8 - Accounting Policies, Changes in Accounting Estimates and Errors - This amendment has introduced a definition of 'accounting estimates' and included amendments to Ind AS 8 to help entities distinguish changes in accounting policies from changes in accounting estimates.
3. Ind AS 12 - Income Taxes - This amendment has narrowed the scope of the initial recognition exemption so that it does not apply to transactions that give rise to equal and offsetting temporary differences.

The Company has evaluated the above amendments and the impact of the same on the standalone financial statements is not material.

57. Income taxes related disclosures

Disclosure as per Ind AS 12 'Income taxes'

(a) Income tax expense

i) Income tax recognised in the statement of profit and loss

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Current tax expense		
Current year	**4,659.84**	3,760.62
Taxes for earlier years	**196.27**	(2.69)
Pertaining to regulatory deferral account balances (A)	**(92.68)**	303.99
Total current tax expense (B)	**4,763.43**	4,061.92
Deferred tax expense		
Origination and reversal of temporary differences	**4,741.17**	4,923.57
Less: MAT credit entitlement	**2,801.16**	3,634.40
Total deferred tax expense (C)	**1,940.01**	1,289.17
Income tax expense (D=B+C-A)	**6,796.12**	5,047.10
Pertaining to regulatory deferral account balances	**(92.68)**	303.99
Total tax expense including tax on movement in regulatory deferral account balances	**6,703.44**	5,351.09

ii) Income tax recognised in other comprehensive income

₹ Crore

Particulars	For the year ended 31 March 2023			31 March 2022		
	Before tax	Tax (expense)/ benefit	Net of tax	Before tax	Tax expense/ (benefit)	Net of tax
- Net actuarial gains/(losses) on defined benefit plans	**(104.30)**	**17.23**	**(87.07)**	(126.98)	23.01	(103.97)
- Net gains/(losses) on fair value of equity instruments	**3.60**	**-**	**3.60**	5.40	-	5.40
- Share of other comprehensive income/(expense) of joint ventures accounted for using the equity method	**1.89**	**-**	**1.89**	2.16	-	2.16
- Exchange differences on translation of foreign operations	**(121.42)**	**-**	**(121.42)**	9.16	-	9.16
	(220.23)	**17.23**	**(203.00)**	(110.26)	23.01	(87.25)

(b) Tax losses carried forward

₹ Crore

Particulars	31 March 2023	Expiry date	31 March 2022	Expiry date
Long-term capital loss for which no deferred tax asset has been recognised due to uncertainty involved	**2,105.19**	**31-03-2029**	2,105.19	31-03-2029

58. Disclosure as per Ind AS 19 'Employee benefits'

(i) Defined contribution plans:

Pension

The defined contribution pension scheme of the Group for its employees which is effective from 1 January 2007, is administered through a separate trust. The obligation of the Group is to contribute to the trust to the extent of amount not exceeding 30% of basic pay and dearness allowance less employer's contribution towards provident fund, gratuity, post retirement medical facility (PRMF) or any other retirement benefits. The Group's contribution towards pension is made to National Pension System Trust (NPS) for the employees opted for the scheme. An amount of

(ii) Defined benefit plans:

A. Provident fund

The Group pays fixed contribution to provident fund at predetermined rates to a separate trust, which invests the funds in permitted securities. The Group has an obligation to ensure minimum rate of return to the members as specified by GOI. Accordingly, the Group has obtained report of the actuary, based on which overall interest earnings and cumulative surplus is more than the statutory interest payment requirement for all the periods presented. Further, contribution to employees pension scheme is paid to the appropriate authorities.

Based on the actuarial valuation obtained in this respect, the following table sets out the status of the provident fund plan as at balance sheet date

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Net defined benefit (asset)/liability - Current	**(46.63)**	(32.83)

Movement in net defined benefit (asset)/liability

₹ Crore

Particulars	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset)/liability	
	For the year ended		For the year ended		For the year ended	
	31 March 2023	31 March 2022	31 March 2023	31 March 2022	31 March 2023	31 March 2022
Opening balance	**12,210.96**	11,505.50	**12,243.80**	11,600.12	**(32.83)**	(94.61)
Current service cost recognised in statement of profit and loss	**355.42**	344.38	**-**	-	**355.42**	344.38
Interest cost/(income)	**979.02**	946.89	**(979.02)**	(940.44)	**0.00**	6.45
Total	**1,334.44**	1,291.27	**(979.02)**	(940.44)	**355.42**	350.83
Remeasurement loss (gain):						
Actuarial loss (gain) arising from:						
Demographic assumptions	**-**	-	**-**	-	**-**	-
Financial assumptions	**(0.89)**	-1.39	**-**	-	**(0.89)**	-1.39
Experience adjustment	**(20.03)**	5.13		4.66	**-20.03**	9.79
Return on plan assets excluding interest income	**-**	-	**14.01**	35.44	**14.01**	35.44
Total	**-20.92**	3.74	**14.01**	40.10	**(6.91)**	43.84

₹ Crore

Particulars	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset)/liability	
	For the year ended		For the year ended		For the year ended	
	31 March 2023	31 March 2022	**31 March 2023**	31 March 2022	**31 March 2023**	31 March 2022
Other*	**-**	-		11.49	**-**	(11.49)
Contribution by participants	**748.55**	770.30	**748.55**	770.30	**-**	-
Contribution by employer	**-**	-	**362.30**	344.37	**(362.30)**	(344.37)
Benefits paid	**1,372.14**	1,359.85	**1,372.13**	1,359.84	**0.01**	0.01
Closing balance	**12,900.89**	12,210.96	**12,947.53**	12,243.80	**(46.63)**	(32.83)

* In one of the subsidiaries investment of PF trust fund incurred loss on investment on DHFL amounting to ₹ **Nil** (31 March 2022: ₹ 11.49 crore)

"Pursuant to paragraph 57 of Ind AS 19, accounting by an entity for defined benefit plans, inter-alia, involves determining the amount of the net defined benefit liability (asset) which shall be adjusted for any effect of limiting a net defined benefit asset to the asset ceiling prescribed in paragraph 64. As per Para 64 of Ind AS 19, in case of surplus in a defined benefit plan, an entity shall measure the net defined benefit asset at the lower of actual surplus or the value of the assets ceiling determined using the discount rate. The asset ceiling is the present value of any economic benefits available in the form of refunds from the plan or reductions in future contributions to the plan. Further, paragraph 65 provides that a net defined benefit asset may arise where a defined benefit plan has been overfunded or where actuarial gains have arisen.

As per the provisions of the Employees' Provident Funds and Miscellaneous Provisions Act, 1952, the Group has no right to the benefits either in the form of refund from the plan or lower future contribution to the plan towards the net surplus of ₹ **46.63 crore** (31 March 2022: ₹ 32.83 crore) determined through actuarial valuation. Accordingly, Group has not recognised the surplus as an asset, and the actuarial gains in 'Other Comprehensive Income', as these pertain to the Provident Fund Trust and not to the Group.

As per the provisions of Employee's Provident Funds Scheme 1952, the employer shall be liable to make good the loss to the Trust in the event of any loss as a result of any fraud, defalcation, wrong investment decisions etc. to the Trust. Keeping inview the above, a provision of ₹ **12.81 crore** (31 March 2022 ₹ 17.86 crore) has been recognized in the Statement of Profit and Loss during the year, towards such loss to the trust.

B. Gratuity and pension

a) The Group has a defined benefit gratuity plan. Every employee who has rendered continuous service of five years or more is entitled to gratuity at 15 days salary (15/26 X last drawn basic salary plus dearness allowance) for each completed year of service subject to a maximum of ₹ 0.20 crore on superannuation, resignation, termination, disablement or on death, considering the provisions of the Payment of Gratuity Act,1972, as amended.

b) The Group has pension schemes at two of its stations in respect of employees taken over from erstwhile state government power utilities. These pension schemes are unfunded. The liability for the pension schemes is recognised on the basis of actuarial valuation.

Based on the actuarial valuation obtained in this respect, the following table sets out the status of the gratuity and pension plan and the amounts recognised in the Group's financial statements as at balance sheet date:

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Net defined benefit (asset)/liability :		
Gratuity (funded)	**(24.71)**	88.05
Gratuity (non-funded)	**174.92**	183.91
Pension (non-funded)	**532.75**	560.57
	682.95	832.53

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Breakup		
Non-current	**654.51**	690.28
Current	**28.45**	142.25

Movement in net defined benefit (asset)/liability

₹ Crore

Particulars	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset)/liability	
	For the year ended		For the year ended		For the year ended	
	31 March 2023	31 March 2022	**31 March 2023**	31 March 2022	**31 March 2023**	31 March 2022
Opening balance	**2,989.60**	3,019.76	**2,157.06**	2,131.92	**832.53**	887.83
Included in profit or loss:						
Current service cost	**110.23**	116.41	**-**	-	**110.23**	116.41
Past service cost	**-**	-	**-**	-	**-**	-
Interest cost (income)	**209.24**	203.83	**(156.42)**	(151.52)	**52.82**	52.31
Total amount recognised in profit or loss	**319.47**	320.24	**(156.42)**	(151.52)	**163.05**	168.72
Included in other comprehensive income:						
Remeasurement loss (gain):						
Actuarial loss (gain) arising from:						
Demographic assumptions	**-**	-	**-**	-	**-**	-
Financial assumptions	**-85.87**	-53.84	**-**	-	**(85.87)**	(53.84)
Experience adjustment	**(48.85)**	43.38	**-**	-	**(48.85)**	43.38
Return on plan assets excluding interest income		-	**(31.94)**	(27.36)	**(31.94)**	(27.36)
Total amount recognised in other comprehensive income	**(134.72)**	(10.46)	**(31.94)**	(27.36)	**(166.66)**	(37.82)
Out of the above an amount of (-) ₹ **5.68 crore** (31 March 2022: ₹ 0.94 crore) has been transferred to expenditure during construction period / development of coal mines.						
Other						
Contribution by employer	**-**	-	**88.05**	128.12	**(88.05)**	(128.12)
Benefits paid	**332.31**	339.94	**274.39**	281.86	**57.92**	58.08
Closing balance	**2,842.04**	2,989.60	**2,159.08**	2,157.06	**682.95**	832.53

Out of the above net liability, an amount of ₹ **Nil** (31 March 2022: ₹ 77.59 crore) has been adjusted with the amount recoverable from the trust.

C. Post-Retirement Medical Facility (PRMF)

The Group has Post-Retirement Medical Facility (PRMF), under which the retired employees and their spouses are provided medical facilities in the Group hospitals/empanelled hospitals. They can also avail treatment as out-patient subject to a ceiling fixed by the Group. The liability for the same is recognised annually on the basis of actuarial valuation. A trust has been constituted for its employees superannuated on or after 1 January 2007, for the sole purpose of providing post retirement medical facility to them.

Based on the actuarial valuation obtained in this respect, the following table sets out the status of the PRMF and the amounts recognised in the Group's financial statements as at balance sheet date:

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Net defined benefit (asset)/liability - (funded)	**312.86**	207.47
Net defined benefit (asset)/liability - (non-funded)	**-**	0.08
	312.86	207.55
Non-current	**-**	0.08
Current	**312.86**	207.47

Movement in net defined benefit (asset)/liability

₹ Crore

Particulars	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset) liability	
	For the year ended		For the year ended		For the year ended	
	31 March 2023	31 March 2022	31 March 2023	31 March 2022	31 March 2023	31 March 2022
Opening balance	**2,618.30**	2,362.02	**2,410.75**	2,172.56	**207.55**	189.46
Included in profit or loss:						
Current service cost	**51.65**	50.45	**-**	-	**51.65**	50.45
Past service cost	**-**	-	**-**	-	**-**	-
Interest cost (income)	**183.29**	159.43	**(183.29)**	(158.41)	**-**	1.02
Total amount recognised in profit or loss	**234.94**	209.88	**(183.29)**	(158.41)	**51.65**	51.47
Included in other comprehensive income:						
Remeasurement loss (gain):						
Actuarial loss (gain) arising from:						
Demographic assumptions	**-**	-	**-**	-	**-**	-
Financial assumptions	**(109.53)**	(45.30)	**-**	-	**(109.53)**	(45.30)
Experience adjustment	**414.77**	236.37	**-**	-	**414.77**	236.37
Return on plan assets excluding interest income	**-**	10.20	**(28.98)**	(25.88)	**(28.98)**	(15.68)
Total amount recognised in other comprehensive income	**305.25**	201.27	**(28.98)**	(25.88)	**276.27**	175.39
Out of the above an amount of ₹ **6.84 crore** (31 March 2022: ₹ 3.28 crore) has been transferred to expenditure during construction period / development of coal mines.						
Other						
Contribution by participants	**-**	-	**15.15**	19.32	**(15.15)**	(19.32)
Contribution by employer	**-**	-	**207.46**	189.46	**(207.46)**	(189.46)
Benefits paid	**180.01**	154.87	**180.01**	154.88	**-**	(0.01)
Closing balance	**2,978.48**	2,618.30	**2,665.62**	2,410.75	**312.86**	207.55

Out of the above net liability, an amount of ₹ **220.65 crore** (31 March 2022: ₹ 65.28 crore) has been adjusted with the amount recoverable from the trust.

D. **Other retirement benefit plans**

Other retirement benefit plans include baggage allowance for settlement at home town for employees and dependents and farewell gift to the superannuating employees. The scheme above is unfunded and liability for the same is recognised on the basis of actuarial valuation.

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Net defined benefit (asset)/liability (non-funded) :	**205.82**	211.20
Non-current	**178.40**	183.22
Current	**27.42**	27.98

Movement in net defined benefit (asset)/liability

₹ Crore

Particulars	Defined benefit obligation	
	As at 31 March 2023	As at 31 March 2022
Opening balance	**211.20**	205.40
Included in profit or loss:		
Current service cost	**10.10**	10.66
Past service cost	**-**	-
Interest cost (income)	**15.03**	13.85
Total amount recognised in profit or loss	**25.12**	**24.51**
Included in other comprehensive income:		
Remeasurement loss (gain):		
Actuarial loss (gain) arising from:		
Demographic assumptions	**-**	-
Financial assumptions	**(6.74)**	(3.75)
Experience adjustment	**(5.40)**	(3.49)
Return on plan assets excluding interest income		-
Total amount recognised in other comprehensive income	**(12.14)**	**(7.24)**
Other		
Contributions paid by the employer	**-**	-
Benefits paid	**18.37**	11.47
Closing balance	**205.82**	**211.20**

E. **Plan assets**

Plan assets comprise the following:

₹ Crore

Particulars	As at 31 March 2023			As at 31 March 2022		
	Quoted	Unquoted	Total	Quoted	Unquoted	Total
State government securities	**7,481.48**	**-**	**7,481.48**	6,609.81	-	6,609.81
Central government securities	**1,777.16**	**-**	**1,777.16**	1,863.75	-	1,863.75
Corporate bonds and term deposits	**4,412.93**	**47.93**	**4,460.86**	4,514.61	86.84	4,601.45
Money market instruments/liquid mutual fund	**-**	**10.62**	**10.62**	-	93.82	93.82
Equity and equity linked investments	**216.27**	**-**	**216.27**	171.53	-	171.53
Investments with insurance companies	**-**	**3,808.86**	**3,808.86**	-	3,525.16	3,525.16
Total (excluding accrued interest)	**13,887.84**	**3,867.41**	**17,755.25**	13,159.70	3,705.82	16,865.52

As at 31 March 2023, an amount of ₹ **70.00 crore** (31 March 2022: ₹ 140.00 crore) is included in the value of plan assets (in respect of the reporting enterprise's own financial instruments (Corporate bonds).

Actual return on plan assets is ₹ **1,365.62 crore** (31 March 2022: ₹ 1,269.95 crore).

F. Defined benefit obligations

i. Actuarial assumptions

The following were the principal actuarial assumptions at the reporting date:

Particulars	As at 31 March 2023	As at 31 March 2022
Discount rate	**7.40%**	7.00%
Expected return on plan assets		
Gratuity	**7.40%**	7.00%
Pension	**7.40%**	7.00%
PRMF	**7.40%**	7.00%
Annual increase in costs	**6.50%**	6.50%
Salary escalation rate	**6.50%**	6.50%

The estimates of future salary increases considered in actuarial valuation, take account of inflation, seniority, promotion and other relevant factors, such as supply and demand in the employment market. Further, the expected return on plan assets is determined considering several applicable factors mainly the composition of plan assets held, assessed risk of asset management and historical returns from plan assets.

ii. Sensitivity analysis

Reasonably possible changes at the reporting date to one of the relevant actuarial assumptions, holding other assumptions constant, would have affected the defined benefit obligation by the amounts shown below.

₹ Crore

Particulars	As at 31 March 2023		As at 31 March 2022	
	Increase	Decrease	Increase	Decrease
Discount rate (0.5% movement)	**(227.16)**	**240.79**	(209.62)	219.39
Annual increase in costs (0.5% movement)	**113.20**	**(110.39)**	94.21	(91.99)
Salary escalation rate (0.5% movement)	**115.38**	**(109.12)**	114.25	(109.62)

Although the analysis does not take account of the full distribution of cash flows expected under the plan, it does provide an approximation of the sensitivity of the assumptions shown.

The sensitivity analysis above have been determined based on a method that extrapolates the impact on defined benefit obligation as a result of reasonable changes in key assumptions occurring at the end of the reporting period. This analysis may not be representative of the actual change in the defined benefit obligations as it is unlikely that the change in assumptions would occur in isolation of one another as some of the assumptions may be correlated.

G. Risk exposure

Through its defined benefit plans, the Company is exposed to a number of risks, the most significant of which are detailed below:

a) Asset volatility

The plan liabilities are calculated using a discount rate set with reference to bond yields; if plan assets underperform this yield, this will create a deficit. Most of the plan asset investments are in fixed income securities with high grades and in government securities. These are subject to interest rate risk and the fund manages interest rate risk with derivatives to minimise risk to an acceptable level. A portion of the funds are invested in equity securities and in alternative investments which have low correlation with equity securities. The equity securities are expected to earn a return in excess of the discount rate and contribute to the plan deficit. The Group has a risk management strategy where the aggregate amount of risk exposure on a portfolio level is maintained at a fixed range. Any deviations from the range are corrected by rebalancing the portfolio. The Group intends to maintain the above investment mix in the continuing years.

b) **Changes in discount rate**

A decrease in discount rate will increase plan liabilities, although this will be partially offset by an increase in the value of the plans' assets holdings.

c) **Inflation risks**

In the pension plans, the pensions in payment are not linked to inflation, so this is a less material risk.

d) **Life expectancy**

The pension plan obligations are to provide benefits for the life of the member, so increases in life expectancy will result in an increase in the plans' liabilities. This is particularly significant where inflationary increases result in higher sensitivity to changes in life expectancy.

The Group ensures that the investment positions are managed within an asset-liability matching (ALM) framework that has been developed to achieve long-term investments that are in line with the obligations under the employee benefit plans. Within this framework, the Group's ALM objective is to match assets to the pension obligations by investing in long-term fixed interest securities with maturities that match the benefit payments as they fall due and in the appropriate currency.

The Group actively monitors how the duration and the expected yield of the investments are matching the expected cash outflows arising from the employee benefit obligations. The Group has not changed the processes used to manage its risks from previous periods. The Group uses derivatives to manage some of its risk. Investments are well diversified, such that the failure of any single investment would not have a material impact on the overall level of assets.

A large portion of assets consists of government and corporate bonds. The plan asset mix is in compliance with the requirements of the respective local regulations.

H. Expected maturity analysis of the defined benefit plans in future years

₹ Crore

Particulars	Less than 1 year	Between 1-2 years	Between 2-5 years	Over 5 years	Total
31 March 2023					
Gratuity and pension	326.91	295.50	663.76	1,555.87	**2,842.04**
Post-retirement medical facility (PRMF)	195.60	205.93	711.47	1,865.47	**2,978.48**
Provident fund	2,597.76	1,152.54	2,671.37	6,479.23	**12,900.90**
Other post-employment benefit plans	27.43	23.18	49.57	105.64	**205.82**
Total	**3,147.70**	**1,677.15**	**4,096.17**	**10,006.22**	**18,927.23**
31 March 2022					
Gratuity and pension	343.61	311.92	731.56	1,602.51	2,989.60
Post-retirement medical facility (PRMF)	155.69	191.44	686.77	1,584.40	2,618.30
Provident fund	2,014.97	1,100.49	2,225.90	6,869.61	12,210.97
Other post-employment benefit plans	27.97	24.61	53.71	104.90	211.19
Total	2,542.24	1,628.46	3,697.94	10,161.42	18,030.06

Expected contributions to post-employment benefit plans for the year ending 31 March 2024 are ₹ **590.72 crore**.

The weighted average duration of the defined benefit plan obligation at the end of the reporting period is **15.34 years** (31 March 2022: 15.29 years).

(iii) Other long term employee benefit plans

A. Leave

The Group provides for earned leave benefit (including compensated absences) and half-pay leave to the employees of the Companies which accrue annually at 30 days and 20 days respectively. Earned leave (EL) is en-cashable while in service. Half-pay leaves (HPL) are en-cashable only on separation beyond the age of 50 years up to the maximum of 300 days.

However, total number of leave (i.e. EL & HPL combined) that can be encashed on superannuation shall be restricted to 300 days and no commutation of half-pay leave shall be permissible. The scheme is unfunded and liability for the same is recognised on the basis of actuarial valuation. During the year, provision amounting to ₹ **103.33 crore** has been made on the basis of actuarial valuation at the year end and debited to statement of profit and loss (31 March 2022: ₹ 101.03 crore).

B. Other employee benefits

Provision for long service award and family economic rehabilitation scheme amounting to (-) ₹ **12.44 crore** (31 March 2022: ₹14.49 crore) for the year have been made on the basis of actuarial valuation at the year end and debited to the statement of profit and loss.

59. Disclosure as per Ind AS 21 'The Effects of Changes in Foreign Exchange Rates'

The amount of exchange differences (net) debited to the statement of profit and loss, net of movement in regulatory deferral account balances, is ₹ **39.02 crore** (31 March 2022: debited to the statement of profit and loss ₹ 17.00 crore).

60. Disclosure as per Ind AS 23 'Borrowing Costs'

Borrowing costs capitalised during the year is ₹ **3971.85 crore** (31 March 2022: ₹ 4,038.71 crore).

61. Disclosure as per Ind AS 24 'Related Party Disclosures'

a) List of Related parties:

i) Joint venture companies:

1. Utility Powertech Ltd.
2. NTPC-GE Power Services Private Ltd.
3. NTPC-SAIL Power Company Ltd.
4. NTPC Tamil Nadu Energy Company Ltd.
5. Aravali Power Company Private Ltd.
6. Meja Urja Nigam Private Ltd.
7. NTPC BHEL Power Projects Private Ltd.
8. National High Power Test Laboratory Private Ltd.
9. Transformers and Electricals Kerala Ltd.
10. Energy Efficiency Services Ltd.
11. CIL NTPC Urja Private Ltd.
12. Anushakti Vidhyut Nigam Ltd.
13. Hindustan Urvarak & Rasayan Ltd.
14. Jhabua Power Limited.
15. Trincomalee Power Company Ltd.
16. Bangladesh-India Friendship Power Company Private Ltd.

Joint venture company of NEEPCO (a Subsidiary of the Company)

1. KSK Dibbin Hydro Power Private Ltd

ii) Key Management Personnel (KMP):

Parent Company:

Whole Time Directors

Mr. Gurdeep Singh	Chairman and Managing Director	
Mr. Jaikumar Srinivasan	Director (Finance)	W.e.f. 21 July 2022
Mr. A.K.Gautam	Director (Finance)	Upto 31 May 2022

Mr. Dillip Kumar Patel	Director (HR)	
Mr Ramesh Babu V.	Director (Operations)	
Mr. Chandan Kumar Mondol	Director (Commercial)	Upto 31 January 2023
Mr. Ujjwal Kanti Bhattacharya	Director (Projects)	

Independent Directors

Mr. Jitendra Jayantilal Tanna	Non-executive Director	W.e.f. 30 November 2021
Mr. Vivek Gupta	Non-executive Director	W.e.f. 30 November 2021
Mr. Vidyadhar Vaishampayan	Non-executive Director	W.e.f. 30 November 2021
Ms. Sangitha Varier	Non-executive Director	W.e.f. 7 December 2021
Dr. K.P.K.Pillay	Non-executive Director	Upto 16 July 2021
Dr. Bhim Singh	Non-executive Director	Upto 16 July 2021

Government Nominee Directors

Mr. Ashish Upadhyaya	Non-executive Director	
Mr. Piyush Singh	Non-executive Director	W.e.f 31 May 2022
Mr. Vivek Kumar Dewangan	Non-executive Director	Upto 30 May 2022

Chief Financial Officer and Company Secretary

Ms. Renu Narang	Chief Financial Officer	W.e.f. 01 June 2022 upto 20 July 2022
Mr. Arun Kumar	Company Secretary	W.e.f. 29 October 2022
Ms. Nandini Sarkar	Company Secretary	Upto 30 September 2022

Subsidiary Companies:

1. NTPC Vidyut Vyapar Nigam Ltd.

Mr. Dillip Kumar Patel	Chairman	W.e.f. 3 February 2023
Mr. Ajay Dua	Director	W.e.f. 11 May 2022
Mr. Ratnesh	Director	W.e.f. 8 June 2022
Ms. Shoba Pattabhiraman	Director	W.e.f. 11 October 2022
Mr. A.K. Gautam	Chairman	Upto 31 May 2022
Mr. Chandan Kumar Mondol	Chairman & Director	Chairman W.e.f. 8 June 2022 upto 31 January 2023
Mr. Anil Nautiyal	Director	Upto 30 April 2022
Ms Nandini Sarkar	Director	Upto 30 September 2022
Mr. Ajit Kumar Bishoi	Chief Executive Officer	W.e.f. 29 December 2022
Mr. Praveen Saxena	Chief Executive Officer	W.e.f. 27 November 2021 upto 30 September 2022
Mr. Mohit Bhargava	Chief Executive Officer	upto 15 November 2021
Mr. Kumar sanjay	Chief Financial Officer	
Mr. Nitin Mehra	Company Secretary	

2. NTPC Electric Supply Company Ltd.

Mr. Dillip Kumar Patel	Chairman	
Mr. Praveen Saxena	Director	
Mr. Sandeep Aggarwal	Director	W.e.f. 10 October 2022
Mr. Rajendra Mohan Arya	Director	upto 30 September 2022
Ms. Renu Narang	Chief Executive Officer	
Mr. Amit Prakash	Company Secretary	

3.Bhartiya Rail Bijlee Company Limited

Mr. Ramesh Babu V.	Chairman	
Mr. R.K. Jain	Non-executive Director	
Mr. DGSSS Babji	Additional Director	W.e.f. 30 November 2022
Mr. Sital Kumar Nischal	Additional Director	W.e.f. 14 February 2022 upto 17 November 2022
Mr. Praveen Saxena	Non-executive Director	upto 22 November 2021
Mr. Sudharshan Babu Velivela	Non-executive Director	W.e.f. 06 December 2021 upto 19 January 2022
Ms. Renu Narang	Non-executive Director	
Mr. Ravi Prakash	Chief Executive Officer	W.e.f. 09 May 2022
Mr. P M Jena	Chief Executive Officer	upto 27 April 2022
Mr. N Venkataramana	Chief Financial Officer	W.e.f. 01 January 2022
Mr. Amarendra Kumar	Chief Financial Officer	upto 31 December 2021
Mr. Kamal Nath Thakur	Company Secretary	W.e.f. 18 February 2022
Mr. Vishal Garg	Company Secretary	upto 09 February 2022

4.Patratu Vidyut Utpadan Nigam Ltd.

Mr. Ujjwal Kanti Bhattacharya	Chairman	W.e.f. 14 September 2021
Mr. D K Patel	Chairman	upto 8 September 2021
Mr. Avinash Kumar, IAS	Director	
Mr. Avnish Srivastava	Director	
Ms. Renu Narang	Director	W.e.f. 02 December 2022
Ms. Nandini Sarkar	Director	upto 30 September 2022
Mr. Ravindra Kumar	Chief Executive Officer	W.e.f. 15 February 2023
Mr. Prem Parkash	Chief Executive Officer	W.e.f. 09 July 2021 upto 15 February 2023
Mr. Sital Kumar Nischal	Chief Executive Officer	upto 9 July 2021
Mr. Nagendra Kumar Mishra	Chief Financial Officer	W.e.f. 22 August 2022
Mr. A. K. Acharya	Chief Financial Officer	Upto 31 October 2021
Mr. Sipan K. Garg	Chief Financial Officer* & Company Secretary	*Chief Financial Officer W.e.f. from 2 December 2021 upto 20 July 2022

5. NTPC Mining Ltd.

Mr. Ramesh Babu V.	Chairman	W.e.f. 03 February 2023
Mr. Chandan Kumar Mondol	Chairman	upto 31 January 2023
Mr. Aditya Dar	Non-Executive Director	
Mr. Ashwini Kumar Tripathy	Non-Executive Director	W.e.f. 30 March 2023
Mr. Partha Mazumder*	Chief Executive Officer	

* Non executive director upto 06 March 2023

6. THDC India Ltd.

Mr. R K Vishnoi*	Chairman & Managing Director	W.e.f. 06 August 2021
Mr. D V Singh	Chairman & Managing Director	Upto 30 April 2021
Mr. Vijay Goel	Director (Personnel)	Upto 31 October 2021
Mr. J. Behera**	Director (Finance) & Chief Financial Officer	
Mr. Ujjwal Kanti Bhattacharya	Non-executive Director	
Mr. Jaikumar Srinivasan	Non-executive Director	W.e.f. 17 August 2022
Mr. A.K.Gautam	Non-executive Director	Upto 31 May 2022
Mr. Anil Garg	Non-executive Director	W.e.f. 26 April 2022
Mr. T.Venkatesh	Non-executive Director	Upto 31 January 2022
Mr. Rajpal	Non-executive Director	Upto 30 April 2021
Mr. Jitesh John	Non-executive Director	W.e.f. 21 June 2021
Mr. Kesridevsinh Digvijaysinh Jhala	Independent Director	
Smt. Sajal Jha	Independent Director	W.e.f 10 November 2021
Dr. Bajalakaria JayaPrakash Naik	Independent Director	W.e.f 10 November 2021
Ms. Rashmi Sharma	Company Secretary	

*Holding additional charge of Director (Technical) W.e.f. 06 August 2021

**Holding additional charge of Director (Personnel) W.e.f. 24 March 2023

7. North Eastern Electric Power Corporation Ltd.

Mr. R K Vishnoi	Chairman	Holding additional charge of CMD & D(T) W.e.f. 02 June 2022
Mr. V K Singh*	Chairman & Managing Director	Upto 31 May 2022
Mr. Anil Kumar**	Director (Personnel)	Upto 31 October 2022
Mr. B Maharana***	Director (Finance) & Chief Financial officer	W.e.f. 10 September 2021
Mr. Hemanta Kumar Deka	Director (Technical)	Upto 28 February 2022
Ms. Mala Sinha	Independent Director	Upto 10 July 2022
Dr Viveka Nand Paswan	Independent Director	W.e.f. 10 November 2021
Mr. Bimal Chand Oswal	Independent Director	W.e.f. 10 November 2021
Mr. Jithesh John	Nominee Director GOI	W.e.f. 21 June 2021
Mr. Jaikumar Srinivasan	Nominee Director NTPC LTD	W.e.f. 17 August 2022
Mr. Anil Kumar Gautam	Nominee Director NTPC LTD	Upto 31 May 2022

Mr. Ujjwal Kanti Bhattacharya	Nominee Director NTPC LTD	
Mr. Abinoam Panu Rong	Company Secretary	W.e.f. 1 June 2021
Mr. Chirajeeb Sharma	Company Secretary	Upto 31 May 2021

*Holding additional charge of Director (Technical) W.e.f. 1 March 2022 upto 31 May 2022

**Holding additional charge of Director (Finance) upto 09 September 2021

***Holding additional charge of Director (Personnel) W.e.f. 1 November 2022 upto 31 January 2023

8. NTPC Green Energy Limited

Mr. Gurdeep Singh	Chairman	W.e.f. 9 August 2022
Mr. Jaikumar Srinivasan	Non-executive Director	W.e.f. 9 August 2022
Mr. Ajay Dua	Non-executive Director	W.e.f. 17 February 2023
Mr. Chandan Kumar Mondol	Non-executive Director	W.e.f. 7 April 2022 upto 31 January 2023
Mr. Aditya Dar	Non-executive Director	W.e.f. 7 April 2022 upto 9 August 2022
Mr. Vinay Kumar	Non-executive Director	W.e.f. 7 April 2022 upto 9 August 2022
Mr. Mohit Bhargava	Chief Executive Officer	W.e.f. 5 July 2022
Mr. Manish Kumar	Company Secretary	W.e.f. 21 December 2022

9. NTPC EDMC Waste Solutions Private Ltd.

Mr. Sital Kumar Nischal	Chairman	
Mr. Achal Kumar Arora	Director	Upto 31 March 2023
Mr. Sundeep Kumar Sharma	Director	
Mr. Arun Kumar	Director	W.e.f. 24 March 2022
Mr. Rajesh Kumar Roy	Chief Executive Officer	W.e.f. 25 November 2022
Mr. Amit Kumar Kulshreshtha*	Chief Executive Officer	W.e.f. 14 January 2022 upto 28 October 2022
Mr. Sanjiv Kumar	Chief Executive Officer	upto 1 September 2021
Mr. Manoj Srivastava	Chief Financial Officer	

* Director upto 14 January 2022

10. Ratnagiri Gas & Power Private Ltd.

Mr. Praveen Saxena	Chairman	W.e.f. 19 April 2021
Mr. Sital Kumar Nischal	Chairman	upto 18 April 2021
Ms. Sangeeta Kaushik	Non-executive Director	W.e.f. 26 April 2021
Mr. P: Anbalagan	Non-executive Director	W.e.f. 19 January 2023
Mr. Sanjay Khandare	Non-executive Director	upto 30 September 2022
Mr. Aditya Dar	Non-executive Director	
Mr. Sanjay Agarwal	Chief Executive Officer	W.e.f. 1 March 2023
Mr. Vijay Goel	Chief Executive Officer	W.e.f. 1 January 2023 upto 28 February 2023

Mr. Asim Kumar Samanta**	Chief Executive Officer	W.e.f. 24 April 2021 upto 31 December 2022
Mr. Ajay Sharma	Chief Financial Officer	
Mr. Aditya Agarwal	Company Secretary	Upto 31 October 2021
Mr. Amit Verma	Company Secretary	W.e.f. 23 April 2022

** Managing Director upto 23 April 2021

11. NTPC Renewable Energy Limited - Subsidiary of NTPC Green Energy Limited

Mr. Gurdeep Singh	Chairman	W.e.f. 6 August 2022
Mr. Jaikumar Srinivasan	Direcor	W.e.f. 6 August 2022
Ms. Sangeeta Kaushik	Director	W.e.f. 7 October 2022
Mr. Ajay Dua	Director	W.e.f. 21 February 2023
Mr. C K Mondol	Chairman/Director	Chairman upto 6 August 2022, Director upto 31 January 2023
Mr. Vinay Kumar	Director	Upto 6 August 2022
Mr. Aditya Dar	Director	Upto 6 August 2022
Ms Nandini Sarkar	Director	Upto 30 September 2022
Mr. Mohit Bhargava	Chief Eexcutive Officer	
Mr. Neeraj Sharma	Chief Financial Officer	W.e.f. 25 July 2022
Mr. Semant Juneja	Company Secretary	W.e.f. 14 July 2021 upto 29 September 2021
Ms. Rashmi	Company Secretary	W.e.f. 28 July 2022

12. Green Valley Renewable Energy Limited - subsidiary of NTPC Renewable Energy Limited (Incorporated on 25 August 2022)

Mr. Dillip Kumar Patel	Chairman	W.e.f. 13 February 2023
Mr. Chandan Kumar Mondol	Chairman	w.e.f 25 August 2022 Upto 31 January 2023
Mr. Mohit Bhargava	Director	W.e.f. 25 August 2022
Mr. Rajiv Gupta	Director	W.e.f. 25 August 2022
Mr. Raghu Ram Machiraju	Director	W.e.f. 25 August 2022
Mr. Arup Sarkar	Director	W.e.f. 25 August 2022

13. TUSCO Limited - Subsidiary of THDC

Mr. R K Vishnoi	Chairman	W.e.f.. 06 August 2021
Mr. D V Singh	Chairman	Upto 30 April 2021
Mr. Vijay Goel	Chairman	W.e.f.. 01 May 2021 Upto 05 August 2021
Mr. J. Behera	Nominee Director-THDCIL	
Mr. Anupam Shukla	Nominee Director-UPNEDA	W.e.f.. 12 July 2022
Mr. Bhawani Singh Khangarot	Nominee Director-UPNEDA	Upto 10 June 2022
Mr. Shailendra Singh	Chief Executive Officer	Upto 31 July 2022
Mr. Mridul Dubey	Chief Financial Officer	W.e.f.. 06 January 2023
Mr. K.K.Srivastava	Chief Financial Officer	Upto 29 August 2022

Mr. H.Bajpai	Company Secretary	
14. TREDCO Rajasthan Limited - Subsidiary of THDC		
Mr. R K Vishnoi	Chairman	W.e.f.. 25 March 2023
Mr. Lalit Verma	Nominee Director	W.e.f.. 25 March 2023
Mr. Dinesh Kumar	Nominee Director	W.e.f.. 25 March 2023
Mr. Kumar Sharad	Nominee Director	W.e.f.. 25 March 2023
Mr. Atul Jain	Nominee Director	W.e.f.. 25 March 2023

iii) Post Employment Benefit Plans:

1. NTPC Limited Employees Provident Fund
2. NTPC Employees Gratuity Fund
3. NTPC Post Retirement Employees Medical Benefit Fund
4. NTPC Limited Defined Contribution Pension Trust
5. THDC Employees Provident Fund Trust
6. THDCIL Employees Defined Contribution Superannuation Pension Trust
7. THDCIL Post Retirement Medical Facility Fund Trust
8. NEEPCO Employees Provident Fund Trust
9. NEEPCO Employees Defined Contribution Superannuation Scheme Trust
10. NEEPCO Employees Social Security Scheme Trust
11. NEEPCO Employees Group Gratuity Assurance Fund Trust
12. RGPPL Employees Gratuity Fund Trust

iv) Entities under the control of the same government:

The Parent company is a Central Public Sector Undertaking (CPSU) controlled by Central Government by holding 51.10% of paid up share capital (31 March 2022- 51.10%) and is under Ministry of Power. The Group has transactions with other Government related entities, which significantly includes but not limited to purchase of fuel (coal, gas)/oil products, purchase of equipment, spares, receipt of erection, maintenance and other services, rendering consultancy and other services. Transactions with these parties are carried out at market terms and on terms comparable to those with other entities that are not Government-related generally through a transparent price discovery process against open tenders. In few cases of procurement of spares/services from Original Equipment Manufacturer (OEM) for proprietary items/or on single tender basis are resorted to due to urgency, compatibility and similar reasons which are also carried out through a process of negotiation with prices benchmarked against available price data of such items.

v) Others:

1. NTPC Education and Research Society
2. NTPC Foundation
3. SEWA - THDC

b) **Transactions with the related parties are as follows:**

₹ Crore

Particulars	Joint Venture Companies For the year ended 31 March 2023	Joint Venture Companies For the year ended 31 March 2022
i) Sales/purchase of goods and services during the year		
- Contracts for works/services for services received by the Group	**1,856.36**	1,654.41
- Contracts for works/services for services provided by the Group	**24.77**	24.22
- Sale/Purchase of goods	**16.65**	21.18
ii) Sales/purchase of assets	**2.90**	17.55
iii) Secondment of employees	**55.59**	53.42
iv) Dividend received	**1,285.33**	1,111.69
v) Equity contributions made	**1,605.52**	610.19
vi) Investments in Debentures	**600.00**	-
vii) Investments redeemed	**25.00**	-
viii) Interest on loan	**-**	0.19
ix) Income on Investments (Debentures)	**28.79**	-
viii) Guarantees received	**5.66**	45.87

Note: Refer Note no. 71 for other commitments with Joint Venture Companies.

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Transactions with post employment benefit plans		
- Contributions made during the year	**1,113.49**	1,044.38
Compensation to Key management personnel		
- Short term employee benefits	**31.11**	27.03
- Post employment benefits	**2.95**	2.79
- Other long term benefits	**1.89**	2.10
- Termination benefits	**3.50**	0.38
- Sitting fee	**1.08**	0.35
Total compensation to key management personnel	**40.53**	32.65

Transactions with others listed at (a)(v) above	For the year ended 31 March 2023	For the year ended 31 March 2022
- Contracts for works/services for services received by the Group	**62.54**	20.34
- Contracts for works/services for services provided by the Group	**0.35**	-

c) **Outstanding balances with related parties are as follows:**

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Amount recoverable towards loans from		
- Joint venture companies	**19.78**	19.78
- Key management personnel	**1.68**	1.83
- Others	**0.60**	0.60
Amount recoverable other than loans from		
- Joint venture companies	**216.04**	113.57
- Post employment benefit plans	**89.62**	63.23
- Others	**0.75**	0.49
Others		
- Joint venture companies - Non convertible debentures	**575.00**	-
Amount payable to		
- Joint venture companies	**336.07**	267.27
- Post employment benefit plans	**132.20**	68.23
- Others	**0.30**	-
Guarantee received Outstanding		
- Joint venture companies	**48.14**	45.87

d) **Individually significant transactions**

₹ Crore

Particulars	Nature of relationship	Amount	
		For the year ended 31 March 2023	For the year ended 31 March 2022
Contracts for works/services for services received by the Group			
Utility Powertech Ltd.	Joint venture company	**1,727.38**	1,623.05
NTPC BHEL Power Projects Private Ltd.	Joint venture company	**24.65**	11.59
NTPC-GE Power Services Private Ltd.	Joint venture company	**101.62**	16.53
Contracts for works/services for services provided by the Group			
NTPC SAIL Power Company Ltd	Joint Venture Company	**2.65**	3.00
Utility Powertech Ltd.	Joint Venture Company	**4.21**	4.37
Meja Urja Nigam Private Limited	Joint Venture Company	**3.84**	3.24
Aravali Power Company Private Ltd.	Joint Venture Company	**3.71**	2.65
NTPC Tamil Nadu Energy Company Ltd.	Joint Venture Company	**3.90**	3.29
Energy Efficiency Services Ltd.	Joint Venture Company	**5.63**	7.08
Purchase of goods			
Energy Efficiency Services Ltd.	Joint Venture Company	**8.59**	13.76
NTPC Tamil Nadu Energy Company Ltd.	Joint Venture Company	**-**	4.91
NTPC BHEL Power Projects Private Ltd.	Joint Venture Company	**7.31**	0.50
Transformers and Electricals Kerala Ltd.	Joint Venture Company	**0.18**	0.64

₹ Crore

Particulars	Nature of relationship	Amount	
		For the year ended 31 March 2023	For the year ended 31 March 2022
Purchase of assets			
NTPC BHEL Power Projects Private Ltd.	Joint Venture Company	**1.98**	8.30
Transformers and Electricals Kerala Ltd.	Joint Venture Company	**0.89**	6.09
Dividend received			
NTPC-SAIL Power Company Ltd.	Joint Venture Company	**325.00**	100.00
Aravali Power Company Private Ltd.	Joint Venture Company	**475.00**	750.00
NTPC Tamil Nadu Energy Company Ltd.	Joint Venture Company	**375.33**	244.19
Utility Powertech Ltd.	Joint Venture Company	**10.00**	17.50
Jhabua Power Limited.	Joint Venture Company	**100.00**	-
Equity contributions made			
Trincomalee Power Company Ltd.	Joint Venture Company	**0.44**	-
Meja Urja Nigam Private Ltd.	Joint Venture Company	**41.90**	25.76
Bangladesh-India Friendship Power Company Pvt.Ltd.	Joint Venture Company	**541.64**	86.78
NTPC Tamil Nadu Energy Company Ltd.	Joint Venture Company	**30.00**	-
Jhabua Power Limited.	Joint Venture Company	**325.00**	-
Hindustan Urvarak & Rasayan Ltd.	Joint Venture Company	**666.54**	497.65
Investments in Debentures			
Jhabua Power Limited.	Joint Venture Company	**600.00**	-
Interest on Loan			
National High Power Test Laboratory Private Ltd.	Joint Venture Company	**-**	0.19
Income on Investments (Debentures)			
Jhabua Power Limited.	Joint Venture Company	**28.79**	-
Secondment of employees			
Meja Urja Nigam Private Ltd.	Joint Venture Company	**16.11**	15.92
NTPC Tamil Nadu Energy Company Ltd.	Joint Venture Company	**14.49**	15.65
NTPC-SAIL Power Company Ltd.	Joint Venture Company	**6.76**	6.31
Aravali Power Company Private Ltd.	Joint Venture Company	**10.24**	8.84
Transactions with post employment benefit plans - Contribution			
NTPC Limited Employees Provident Fund	Post employment benefit plans	**326.80**	317.13
NTPC Limited Defined Contribution Pension Trust	Post employment benefit plans	**273.29**	250.00
NTPC Post Retirement Employees Medical Benefit Fund	Post employment benefit plans	**278.44**	178.55
NTPC Employees Gratuity Fund	Post employment benefit plans	**(23.18)**	77.59
THDC Employees Provident Fund Trust	Post employment benefit plans	**46.28**	29.43

₹ Crore

Particulars	Nature of relationship	Amount	
		For the year ended 31 March 2023	For the year ended 31 March 2022
THDCIL Employees Defined Contribution Superannuation Pension Trust	Post employment benefit plans	**40.26**	24.04
NEEPCO Employees' Provident Fund Trust	Post employment benefit plans	**94.20**	95.16
NEEPCO Ltd. Employees' Defined Contribution Superannuation Scheme Trust	Post employment benefit plans	**37.43**	37.13
NEEPCO Employees' Post Retirement Medical Benefit Trust (under NEEPCO Employees' Social Security Scheme Trust)	Post employment benefit plans	**23.01**	15.13
Transactions with others			
NTPC Foundation	Others	**20.02**	0.64
NTPC Education and Research Society	Others	**13.41**	14.40
NTPC School of Business (under NTPC Education and Research Society)	Others	**7.00**	5.30
SEWA - THDC	Others	**22.11**	-
Guarantees received			
Utility Powertech Ltd.	Joint Venture Company	**3.00**	23.59
NTPC-GE Power Services Private Ltd.	Joint Venture Company	**2.66**	22.28

e) **Individually significant balances**

₹ Crore

Particulars	Nature of relationship	As at 31 March 2023	As at 31 March 2022
Amount recoverable towards loans from			
National High Power Test Laboratory Private Ltd.	Joint Venture Company	**19.78**	19.78
Mr. Ujjwal Kanti Bhattacharya	Key Management Personnel	**0.05**	0.12
Mr Ramesh Babu V.	Key Management Personnel	**0.11**	0.02
Mr. Arun Kumar	Key Management Personnel	**0.31**	0.61
NTPC Education and Research Society	Others	**0.60**	0.60
Amount recoverable other than loans from			
NTPC BHEL Power Projects Private Ltd.	Joint Venture Company	**112.37**	58.59
NTPC SAIL Power Company Ltd	Joint Venture Company	**75.53**	3.99
Aravali Power Company Private Ltd.	Joint Venture Company	**16.71**	(0.88)
NTPC Employees Gratuity Fund	Post employment benefit plans	**88.09**	60.87
NTPC Foundation	Others	**0.42**	0.49
SEWA - THDC	Others	**0.33**	-
Amount recoverable - others			
Jhabua Power Limited - Debentures	Joint Venture Company	**575.00**	-
Amount payable to			
Utility Powertech Ltd.	Joint Venture Company	**219.21**	181.79

₹ Crore

Particulars	Nature of relationship	As at 31 March 2023	As at 31 March 2022
NTPC Tamil Nadu Energy Company Ltd.	Joint Venture Company	**87.89**	4.80
NTPC-GE Power Services Private Ltd.	Joint Venture Company	**27.40**	36.85
NTPC Limited Employees Provident Fund	Post employment benefit plans	**0.89**	0.72
NTPC Limited Defined Contribution Pension Trust	Post employment benefit plans	**20.32**	45.23
NTPC Post Retirement Employees Medical Benefit Fund	Post employment benefit plans	**57.78**	6.28
THDC Employees Provident Fund Trust	Post employment benefit plans	**8.10**	1.40
THDCIL Employees Defined Contribution Superannuation Pension Trust	Post employment benefit plans	**2.37**	2.34
THDCIL Post Retirement Medical Benefit Fund Trust	Post employment benefit plans	**9.51**	1.27
NEEPCO Employees' Post Retirement Medical Benefit Trust	Post employment benefit plans	**22.32**	(2.36)
NEEPCO Employees' Provident Fund Trust	Post employment benefit plans	**7.81**	7.89
NEEPCO Ltd. Employees' Defined Contribution Superannuation Scheme Trust	Post employment benefit plans	**3.06**	3.06
NTPC Education and Research Society	Others	**0.30**	-
Guarantees received outstanding			
Utility Powertech Ltd.	Joint Venture Company	**26.54**	23.59
NTPC-GE Power Services Private Ltd.	Joint Venture Company	**21.60**	22.28

f) Terms and conditions of transactions with the related parties

(i) Transactions with the related parties are made on normal commercial terms and conditions and at arm length price.

(ii) The Group is assigning jobs on contract basis, for sundry works in plants/stations/offices to Utility Powertech Ltd (UPL), a joint venture of the Parent Company. UPL inter-alia undertakes jobs such as overhauling, repair, refurbishment of various mechanical and electrical equipment of power stations. The Group has entered into Power Station Maintenance Agreement with UPL from time to time. The rates are fixed on cost plus basis after mutual discussion and after taking into account the prevailing market conditions.

(iii) The Group is seconding its personnel to Joint venture companies as per the terms and conditions agreed between the companies, which are similar to those applicable for secondment of employees to other companies and institutions. The cost incurred by the group towards superannuation and employee benefits are recovered from these companies.

(iv) In respect of transactions entered into with Utility Powertech Ltd. (UPL), a joint venture of the Company, the management had till the previous year taken a view that a fresh approval of Shareholders may not be warranted as the company had taken approval from the Shareholders of the Company in the Annual General Meeting held in August 2015 for an amount upto 2% of annual turnover of the preceding FY or ₹ 1000 crore, whichever is higher and approval for extension of the arrangement by the board of directors of the company as on 1st April 2021 for five years. Also, though the contracts awarded during the year were ₹ 2,041.26 crore, works amounting to ₹ 647.62 crore only have been executed during the year against these contracts. The company had sought post facto approval of the same which has not been granted by the Audit Committee of the Board. Further, the company has sought expert guidance in respect of its present position in this regard which is awaited as of date. The management is of the opinion that the same will not have any material impact on the financial statements as these are transactions being routinely carried out by the Company over the years, in the normal course of business.

(v) Further, specific approval of the Audit Committee of the Board under section 177 of the Act has also not been accorded in respect of certain other significant related party transactions such as investments in subsidiaries/ joint venture companies aggregating to ₹ 1,783.44 crore, and sale to wholly owned subsidiaries, contribution to Trust for employee benefits, etc. aggregating to ₹ 3,575.78 crore. In this regard, since these transactions have either been approved by the Board/ specific sub-committee of the Board or are in the nature of transactions with wholly owned subsidiary in the ordinary course of business or mandated by specific requirements of the extant labour laws in the case of the contributions to employee benefit trust, the management is of the opinion that non-approval as above will not have material impact on the financial statements.

(vi) Loans granted to joint venture companies are detailed below:

Sl. No.	Name of the joint venture company	Loan granted (Amount in ₹ crore)	Rate of interest (p.a.)	Repayment schedule	Purpose	Year of grant of loan
1	National High Power Test Laboratory Private Ltd. (JV)	18.40	10% (quarterly rest)	Principal repayable in twenty semi-annual installments from 30 September 2022 . Interest payable half yearly.	For repayment of loans / contractual obligations	2019-20#

#Note: Under the Restructuring Scheme approved by promoters in a meeting held at MOP on 15 September 2022, it was agreed that all promoters will convert the loan into equity under the restructuring plan. Board of Directors of NTPC in its meeting held on 11 March 2023 has approved the restructuring scheme for NHPTL for conversion of loan to equity. Restructuring plan is under implementation.

(vii) Consultancy services provided by the Group to Joint venture companies are generally on nomination basis at the terms, conditions and principles applicable for consultancy services provided to other parties.

(viii) Outstanding balances of joint venture companies at the year-end are unsecured and settlement occurs through banking transaction. These balances other than loans are interest free. The Group has not recorded any impairment of receivables relating to amounts owed by related parties. This assessment is undertaken in each financial year through examining the financial position of the related party and the market in which the related party operates.

ix) Refer Note 70 towards restrictions on disposal of investment and commitment towards further investments in joint venture companies.

g) Others

The Company has investment of 1.20 crore equity shares of ₹ 10 each in PTC India Ltd, as disclosed in Note 8- 'Other investments' and is one of the promoters of the Company having 4.05% holding. The Company is of the view that provisions of Ind AS 24 'Related Party Disclosures' are not applicable to the investments made in PTC India Ltd. and the same has been accounted for as per the provisions of Ind AS 109 'Financial Instruments'. Based on a review during the year with regard appropriateness of accounting of the same under Ind AS 109, a reference has been made to Expert Advisory Committee of Institute of Chartered Accountants of India , awaiting receipt of opinion. During the year, the Company has transactions towards receipt of dividend of ₹ **6.96 crore** (31 March 2022: ₹ 9.00 crore) and receipt of sitting fees for the nominee director amounting to ₹ **0.03 crore** (31 March 2022: ₹ 0.10 crore) from PTC India Ltd.

62. Disclosure as per Ind AS 33 'Earnings per Share'

Basic and diluted earnings per share attributable to owners of the parent company (in ₹)

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
From operations including net movement in regulatory deferral account balances (a) **[A/D]**	**17.44**	17.20
From regulatory deferral account balances (b) **[B/D]**	**(0.43)**	1.54
From operations excluding net movement in regulatory deferral account balances (a)-(b) **[C/D]**	**17.87**	15.66
Nominal value per share	**10.00**	10.00

(a) Profit attributable to equity shareholders (used as numerator) (₹ crore)

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
From operations including net movement in regulatory deferral account balances (a) **[A]**	**16,912.55**	16,675.90
From regulatory deferral account balances (b) **[B]**	**(413.12)**	1,486.48
From operations excluding net movement in regulatory deferral account balances (a)-(b) **[C]**	**17,325.67**	15,189.42

(b) Weighted average number of equity shares (used as denominator) (in Nos.)

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Opening balance of issued equity shares	**9,69,66,66,134**	9,69,66,66,134
Closing balance of issued equity shares	**9,69,66,66,134**	9,69,66,66,134
Weighted average number of equity shares for Basic and Diluted EPS [D]	**9,69,66,66,134**	9,69,66,66,134

63. Disclosure as per Ind AS 36 'Impairment of Assets'

As required by Ind AS 36, an assessment of impairment of assets was carried out and following has been assessed:

(i) The recoverable amount of the property, plant and equipment & intangible assets of the Cash Generating Units (CGU) of the parent company is value in use and amounts to ₹ **2,87,698.56 crore** (31 March 2022: ₹ 2,67,954.01 crore). The net realisable value of the assets of the station has been assessed which is more than its carrying value. The discount rate used for the computation of value in use for the generating plant (thermal, gas and hydro) and coal mining is **7.27%** (31 March 2022: 7.07%) and for solar plant is **6.42%** (31 March 2022: 6.20%).

(ii) Based on the impairment study of Ratnagiri Gas & Power Pvt Ltd (RGPPL), an impairment loss of ₹ **28.80 crore** (31 March 2022: ₹ 228.16 crore) has been recognised during the year. The impairment study has been done using Recoverable value method rather than Value in Use since in view of prevailing gas scenario in the global market, RGPPL is not able to enter into any PPA. Accordingly, realizable value is considered as Fair value less costs of disposal.

In the previous year, the impairment study was done using the discounted cash flow income approach. The post tax discount rate used for the future cash flows was 18%. The differential discount rate is based on the effective tax rates likely to be applicable during the forecast years. Salvage value of PPE & CWIP and release of net working capital at the end of explicit period has been added to the present value of free cash flows to arrive at the enterprise value. Also refer Note 2.

64. Disclosure as per Ind AS 37 'Provisions, Contingent Liabilities and Contingent Assets'

Movement in provisions: **₹ Crore**

Particulars	Provision for obligations incidental to land acquisition		Provision for tariff adjustment		Arbitration awards and others		Mine closure and Stripping activity adjustments		Total	
	For the year ended		For the year ended		For the year ended		For the year ended		For the year ended	
	31 March 2023	31 March 2022	31 March 2023	31 March 2022	31 March 2023	31 March 2022	31 March 2023	31 March 2022	31 March 2023	31 March 2022
Carrying amount at the beginning of the year	**2,879.76**	3,242.17	**482.28**	360.28	**2,502.99**	2,250.47	**616.22**	347.96	**6,481.25**	6,200.88
Additions during the year	**243.29**	167.63	**335.33**	122.00	**499.17**	387.59	**339.02**	287.15	**1,416.81**	964.37
Amounts used during the year	**(588.74)**	(512.18)	**-**	-	**(36.59)**	(22.16)	**-**	-	**(625.33)**	(534.34)
Reversal / adjustments during the year	**(77.96)**	(17.86)	**-**	-	**(104.54)**	(112.91)	**-**	-	**(182.50)**	(130.77)
Unwinding of Provisions charged during the year	**-**	-	**-**	-	**-**	-	**(19.56)**	(18.89)	**(19.56)**	(18.89)
Carrying amount at the end of the year	**2,456.35**	2,879.76	**817.61**	482.28	**2,861.03**	2,502.99	**935.68**	616.22	**7,070.67**	6,481.25

i) Provision for obligations incidental to land acquisition

Provision for obligations incidental to land acquisition includes expenditure on rehabilitation & resettlement (R&R) including the amounts payable to the project affected persons (PAPs) towards land, expenditure for providing community facilities and expenditure in connection with environmental aspects of the project. The Company has estimated the provision based on the Rehabilitation Action Plan (RAP) approved by the board/competent authority or agreements/directions/demand letters of the local/government authorities. The outflow of said provision is expected to be incurred immediately on fulfilment of conditions by the land oustees/receipts of directions of the local/government authorities.

ii) Provision for tariff adjustment

Billing to beneficiaries is being done based on tariff orders issued under Regulation 2014 except few stations where billing is done on provisional basis due to non-receipt of tariff orders. In such cases, accounting is done based on trued up cash expenditure as per Regulation 2019. Provision for tariff adjustment of ₹ **335.33 crore** (31 March 2022: ₹ 122.00 crore) is mainly towards the estimated interest payable to beneficiaries at the time of issue of tariff orders.

iii) Provision - Arbitration awards and Others

(a) (i) Provision for arbitration awards represents provision created based on awards pronounced by the arbitrator in respect of various litigation cases amounting to ₹ **2,687.95 crore** (31 March 2022: ₹ 2,302.18 crore). These awards have been challenged before various appellate authorities / Courts.

(ii) Provision for others includes ₹ **90.79 crore** (31 March 2022: ₹ 111.96 crore) towards cost of unfinished minimum work programme demanded by the Ministry of Petroleum and Natural Gas (MoP&NG) including interest thereon in relation to block AA-ONN-2003/2, ₹ **6.18 crore** (31 March 2022: ₹ 7.55 crore) towards provision for shortage in property, plant and equipment on physical verification pending investigation and ₹ **12.81 crore** (31 March 2022: ₹ 17.86) towards expected loss on investments of Provident Fund Trust.

(b) The Company had entered into an agreement for movement of coal through inland waterways for one of its stations. As per the agreement, the operator was to design, finance, build, operate and maintain the unloading and material handling infrastructure for 7 years, after which it was to be transferred to the Company at ₹ 1/-. After commencement of the operations, the operator had raised several disputes, invoked arbitration and raised substantial claims on the Company. Based on the interim arbitral award and subsequent directions of the Hon'ble Supreme Court of India, an amount of ₹ 356.31 crore was paid upto 31 March 2019.

Further, the Arbitral Tribunal had awarded a claim of ₹ 1,891.09 crore plus applicable interest in favour of the operator, during the financial year 2018-19. The Company aggrieved by the arbitral award and considering legal opinion obtained, had filed an appeal before the Hon'ble High Court of Delhi (Hon'ble High Court) against the said arbitral award in its entirety.

In the financial year 2019-20, against the appeal of the Company, Hon'ble High Court directed the Company to deposit ₹ 500.00 crore with the Registrar General of the Court. The said amount was deposited with the Hon'ble High Court on 5 November 2019. Hon'ble High Court vide its order dated 8 January 2020 directed the parties to commence formal handing over of the infrastructure in the presence of appointed Local Commissioner and also directed release of ₹ 500.00 crore to the operator by the Registrar General subject to verification of bank guarantee and outcome of the application of the Company for formal handing over of the infrastructure. On 17 January 2020 unconditional BG was submitted by the operator to Registrar General and ₹ 500.00 crore was released to the operator by the Hon'ble High Court. As per order of Hon'ble High Court, formal handing over of the infrastructure started on 20 January 2020 at the project site. However, due to certain local administrative issues initially and further due to Covid-19 pandemic, Local Commissioner's visit was deferred.

In view of delay in the handover exercise, the Company had filed an Application in Hon'ble High Court praying to pass further directions to operator in this regard. Hon'ble High Court on 11 November 2020 disposed off the application requesting the Ld. Local Commissioner appointed by the Court, to visit the project site expeditiously preferably within 2 weeks and carry out the commission. The handing over exercise has been delayed due to operator's issues with local labours at the site and Covid situation. Date of hearing at Hon'ble High Court of Delhi has been adjourned several times and listed for hearing on 23 May 2023.

Pending final disposal of the appeal by the Hon'ble High Court, considering the provisions of Ind AS 37 'Provisions, Contingent Liabilities and Contingent Assets' and Significant Accounting Policies of the Company, provision has been updated by interest to ₹ **38.42 crore** (31 March 2022: ₹ 38.26 crore) (included at (a)(i) above) and the balance amount of ₹ **2,431.04 crore** (31 March 2022: ₹ 2,292.30 crore) has been considered as contingent liability.

Also Refer Note 74 and 76.

(iv) (a) Provision for Mine closure obligation represents Company's obligations for land reclamation and decommissioning of structure consist of spending at mines in accordance with the guidelines from Ministry of Coal, Government of India. The Company estimates its obligations for mine closure, site restoration and decommissioning based on the detailed calculation and technical assessment of the amount and timing of future cash spending for the required work and provided for as per approved mine closure plan. Accordingly, a provision amounting to ₹ **323.80 crore** (31 March 2022: ₹ 304.24 crore) has since been provided for. (Refer Significant accounting policy C.7.2)

(b) Provision for Expenditure incurred on removal of mine waste materials (overburden) necessary to extract the coal reserves is referred to as stripping cost. The Company has to incur such expenses over the life of the mine as technically estimated. Cost of stripping is charged on technically evaluated average stripping ratio at each mine with due adjustment for stripping activity asset and ratio-variance account after the mines are brought to revenue. Net of the balances of stripping activity asset and ratio variance at the Balance Sheet date is shown as 'Stripping activity adjustment' under the head 'Non-current assets/Non-current provisions' as the case may be, and adjusted as provided in the CERC Tariff Regulations. Accordingly, a provision amounting to ₹ **611.88 crore** (31 March 2022: ₹ 311.98 crore) has since been provided for. (Refer Significant accounting policy C.7.1)

v) In respect of provision for cases under litigation, outflow of econmic benefits is dependent upon the final outcome of such cases.

vi) In all these cases, outflow of economic benefits is expected within next one year.

vii) Sensitivity of estimates on provisions

The assumptions made for provisions relating to current period are consistent with those in the earlier years. The assumptions and estimates used for recognition of such provisions are qualitative in nature and their likelihood could alter in next financial year. It is impracticable for the group to compute the possible effect of assumptions and estimates made in recognizing these provisions.

viii) Contingent liabilities and contingent assets

Disclosure with respect to claims against the Group not acknowledged as debts and contingent assets are made in Note 76.

65. Disclosure as per Ind AS 38 'Intangible Assets'

Research expenditure recognised as expense in the Statement of Profit and Loss during the year is ₹ **236.78 crore** (31 March 2022: ₹ 199.43 crore).

66. Disclosure as per Ind AS 106, 'Exploration for and Evaluation of Mineral Resources'

a) The Company along-with some public sector undertakings had entered into Production Sharing Contracts (PSCs) with GOI for three oil exploration blocks namely KG-OSN-2009/1, KG-OSN-2009/4 and AN-DWN-2009/13 under VIII round of New Exploration Licensing Policy (NELP VIII) with 10% participating interest (PI) in each of the blocks.

In the case of Block AN-DWN-2009/13 and KG-OSN-2009/1, Oil and Natural Gas Corporation Ltd. (ONGC) was the operator and the Company along-with the consortium partners have relinquished both the blocks to Directorate General of Hydrocarbons (DGH).

Based on the un-audited statement of the accounts for the above blocks forwarded by ONGC, the operator, the Company's share in the assets and liabilities and expenses is as under:

₹ Crore

Particulars	As at 31 March 2023 (Unaudited)	As at 31 March 2022 (Unaudited)
Assets	**0.01**	0.01
Liabilities	**0.49**	0.49

For the year ended 31 March 2023 and 31 March 2022, there are no income / expense and operating/investing cash flow from exploration activities.

For exploration activities in block KG-OSN-2009/4 DGH has agreed for drilling of one well and have instructed to carry out airborne Full Tensor Gravity Gradiometer (FTG) survey in conditionally & partial cleared area. ONGC has completed drilling of one well. Airborne Full Tensor Gravity Gradiometer (FTG) survey work is also completed. The Company along-with the consortium partners has decided to relinquish the block and Oil and Natural Gas Corporation Ltd. (ONGC), the operator, has submitted an application to Directorate General of Hydrocarbons (DGH) in this regard, in the earlier years.

b) Exploration activities in the block AA-ONN-2003/2 were abandoned in January 2011 due to unforeseen geological conditions and withdrawal of the operator. Attempts to reconstitute the consortium to accomplish the residual exploratory activities did not yield result. In the meanwhile, Ministry of Petroleum & Natural Gas, GoI demanded in January 2011 the cost of unfinished minimum work programme from the consortium with NTPC's share being USD 7.516 million. During the year, provision in this respect has been updated to ₹ **90.79 crore** from ₹ 111.96 crore along-with interest. The Company has sought waiver of the claim citing force majeure conditions at site leading to discontinuation of exploratory activities.

The Company has accounted for expenditure of ₹ **(21.37) crore** (31 March 2022: ₹ 21.58 crore) towards updation of liabilities relating to MWP and other liabilities of M/s Geopetrol International, the operator to complete the winding up activities of the Block. The Company's share in the assets and liabilities are as under:

₹ Crore

Particulars	As at 31 March 2023 (Unaudited)	As at 31 March 2022 (Unaudited)
Assets	**9.19**	9.19
Liabilities (including unfinished MWP)	**106.44**	127.81

Provision of ₹ **8.96 crore** as at 31 March 2023 (31 March 2022: ₹ 8.26 crore) has been made towards the assets under exploration and estimated obsolescence in the inventory. Further, a provision of ₹ **0.23 crore** (31 March 2022: ₹ 13.42 crore) has been made towards NTPC's share as per arbitration decision given in favor of a contractor of the block. Aginst this, an amount of ₹ 13.65 crore has been deposited in honourable Delhi high court during the year. NTPC filed a writ petition under section 34 in this matter before Hon'ble Delhi High Court which is yet to be disposed.

For the year ended 31 March 2023 and 31 March 2022, there are no income and operating/investing cash flow from exploration activities. The value of assets reported above is based on statement received from the operator in the earlier years.

c) The Company had entered into production sharing contracts (PSC) with GOI for exploration block namely CB-ONN-2009/5 VIII round of New Exploration Licensing Policy (NELP VIII) with 100% participating interest (PI) in the block.

MWP for the block has been completed. No oil or gas of commercial value was observed in any of the wells. Accordingly, the block has been relinquished to DGH, GOI.

Company's share in assets and liabilities is as under:

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Assets	**6.11**	6.11
Liabilities	**0.25**	0.25

Provision of ₹ **6.07 crore** as at 31 March 2023 (31 March 2022: ₹ 6.07 crore) has been made towards estimated obsolescence in the inventory.

For the year ended 31 March 2023 and 31 March 2022, there are no income, expenses, operating and investing cash flows from exploration activities.

d (i) The Company has started coal production from four mines i.e Pakri-Barwadih, Dulanga, Talaipalli & Chatti-Bariatu. Pakri Barwadih was declared commercial w.e.f. 1 April 2019 and about 13.23 MMT coal was extracted during the current year. Dulanga was declared commercial w.e.f. 1 October 2020 and 7.00 MMT coal was extracted during the current year. All other mines are under development stage. In Talaipalli about 2.40 MMT coal was extracted during the year 2022-23. Coal production has started from Chatti-Bariatu since Sep.2022 and about 0.58 MMT coal was extracted during the current year. At Kerandari, coal mine extraction has already started since 5th April 2023 and at Chatti-Bariatu coal mining projects land acquisition and other mine development activities are in progress and these are also disclosed in Note 3 - Capital work in progress under 'Development of coal mines'. Due to delay in achievement of required condtions, the Talaipally coal mines is expected to be declared commercial in the year 2023-24.

d (ii) a) Exploration and evaluation activities are taking place at under ground mine area/dip side area (North west quarry) of PB block. An amount of ₹ 64.20 crore has since been incurred at this area towards various exploratory activities and has been transferred to development of coal mines and capitalised during the year upon completion.

d (iii) a)(i) Banai & Bhalumuda

Due to geo-mining constraints and other related issues NTPC surrendered these blocks to MoC on 26.12.2020. The Company expects that whenever these two coal blocks are allotted to any other company, the cost incurred towards exploration and GR at these mines would be reimbursed from the new allocatee through MOC as per past experience of the Company. Keeping in view the above, an amount of ₹ **124.00 crore** (31 March 2022: ₹ 124.00 crore) has been accounted as recoverable and included under Note-19- 'Current assets - Other financial assets'.

a)(ii) Mandakini

Since mine development activities could not be proceeded due to various issues, the Company has approached Ministry of Coal on 26 December 2020 for surrendering these blocks, with a request for consideration of reimbursement of expenses incurred by the Company. The Company expects that whenever these two coal blocks are allotted to any other company, the cost incurred towards exploration and GR would be reimbursed from the new allocatee through MOC as per past experience of the Company. Keeping in view the above, an amount of ₹ **56.47 crore** (31 March 2022: ₹ 53.93 crore) has been accounted as recoverable and included under Note-19 'Current assets -Other financial assets'.

MoC has encashed the BG (Performance Security) of ₹ 168.00 crore on 22 March 2021 citing delay in achieving of the milestones of efficiency parameters which were beyond the control of the Company. The Company approached MoP to take up the matter in Alternate Mechanism for Resolution of CPSE Disputes (AMRCD). Pending resolution of the dispute through AMRCD, the amount of BG encashed by MOC has been disclosed as recoverable from MOC under 'Claims recoverable' in Note-19-'Current assets-Other financial assets'. This issue is regularly being taken up with MoC by the Company and MoP for early settlement.

a) (iii) The Coal Block Development and Production Agreement (CBDPA) signed by the Company with MOC is silent about the recoverability of expenditure incurred in case of termination of the CBDPA. Moreover, the fresh auction / allocation of mines by MOC may also take substantial time and is dependent upon the coal demand-supply scenario of the country in the days to come. Considering the uncertainty involved on the recoverability of the amounts in respect of Banai, Bhalamuda and Mandakini-B coal blocks , the amount disclosed as claims recoverable has since been fully provided for. Further, the balance expenditure incurred at these blocks which may not be recovered has also been provided for fully (Refer Note 5- 'Non-current assets - Intangible assets under development').

b) Badam

In the year 2018-19, the Company took over Barauni Thermal Power Station from Bihar State Power Generation Company Limited (BSPGCL). Ministry of Coal, Government of India has transferred Badam coal mine, the linked coal mine of Barauni TPS. Environment Clearance for the project is available. Stage-I Forest Clearance was transferred to the Company from BSPGCL on 14 January 2020. Application for Stage-II forest clearance is under process with MOEF&CC. Mining lease is pending with Govt. of Jharkhand and tendering process for appointment of MDO is in progress. A cumulative expenditure of ₹ **85.13 crore** (31 March 2022: ₹ 74.66 crore) has been incurred at this coal block.

d(iv) Assets and liabilities of coal exploration and evaluation activities are as under:

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Assets (Intangible assets under development)	**85.13**	134.04
Liabilities	**0.11**	1.67

For the year ended 31 March 2023 and 31 March 2022, there are no income, expenses and operating cash flows from coal exploration activities. Cash flows from investing activities for the year ended 31 March 2023 is ₹ **(50.47) crore** (31 March 2022: ₹ 28.06 crore)

67. Disclosure as per Ind AS 108 'Operating segments'

A. General Information

The Group has two reportable segments, as described below, which are the Group's strategic business units. The strategic business units offer different products and services, and are managed separately because they require different technology and marketing strategies. For each of the strategic business units, the Chief Operating Decision Maker (CODM) reviews internal management reports on at least a quarterly basis.

The following summary describes the operations in each of the Group's reportable segments:

Generation of energy: Generation and sale of bulk power to State Power Utilities.

Others: It includes providing consultancy, project management & supervision, energy trading, oil and gas exploration and coal mining.

Information regarding the results of each reportable segment is included below. Performance is measured based on segment profit before income tax, as included in the internal management reports that are reviewed by the Board of Directors. Segment profit is used to measure performance as management believes that such information is the most relevant in evaluating the results of certain segments relative to other entities that operate within these industries.

Transfer prices between operating segments are on an arm's length basis in a manner similar to transactions with third parties.

B. Information about reportable segments and reconciliations to amounts reflected in the financial statements:

₹ Crore

Particulars	Generation of energy		Others		Inter-segment eliminations		Total	
	For the year ended		For the year ended		For the year ended		For the year ended	
	31 March 2023	31 March 2022	**31 March 2023**	31 March 2022	**31 March 2023**	31 March 2022	**31 March 2023**	31 March 2022
Segment revenue								
Revenue from external customers*	**1,65,709.64**	1,23,694.54	**8,275.97**	7,569.60	**-**	-	**1,73,985.61**	1,31,264.14
Inter-segment revenue	**2,594.92**	2,030.52	**4,035.13**	2,516.52	**(6,630.05)**	(4,547.04)	**-**	-
	1,68,304.56	1,25,725.06	**12,311.10**	10,086.12	**(6,630.05)**	(4,547.04)	**1,73,985.61**	1,31,264.14
Other income	**3,523.56**	3,316.75	**285.54**	160.68	**(3.52)**	(7.88)	**3,805.58**	3,469.55
	1,71,828.12	1,29,041.81	**12,596.64**	10,246.80	**(6,633.57)**	(4,554.92)	**1,77,791.19**	1,34,733.69
Unallocated corporate interest and other income							**185.98**	260.62
Total	**1,71,828.12**	1,29,041.81	**12,596.64**	10,246.80	**(6,633.57)**	(4,554.92)	**1,77,977.17**	1,34,994.31
Segment result (including net movements in regulatory deferral account balances)**	**33,128.18**	29,850.29	**1,097.94**	676.60	**-**	-	**34,226.12**	30,526.89
Unallocated corporate interest and other income							**185.98**	260.62
Unallocated corporate expenses, interest and finance charges							**11,367.08**	9,496.26
Profit before share of net profits of investments accounted for using equity method and tax							**23,045.02**	21,291.25
Add: Share of net profits of joint ventures accounted for using equity method							**779.77**	1,020.13
Profit before tax							**23,824.79**	22,311.38
Income tax expense (including tax on net movements in regulatory deferral account balances)							**6,703.44**	5,351.09
Profit after tax							**17,121.35**	16,960.29

₹ Crore

Particulars	Generation of energy		Others		Total	
	For the year ended		For the year ended		For the year ended	
	31 March 2023	31 March 2022	**31 March 2023**	31 March 2022	**31 March 2023**	31 March 2022
Depreciation, amortisation and impairment expense	**14,531.79**	13,594.96	**100.45**	38.32	**14,632.24**	13,633.28
Non-cash expenses other than depreciation and amortisation	**712.93**	359.97	**11.00**	10.58	**723.93**	370.55
Capital expenditure	**44,680.69**	28,682.77	**1,299.59**	1,195.16	**45,980.28**	29,877.93

₹ Crore

Particulars	Generation of energy		Others		Inter-segment eliminations		Total	
	For the year ended		For the year ended		For the year ended		For the year ended	
	31 March 2023	31 March 2022	**31 March 2023**	31 March 2022	**31 March 2023**	31 March 2022	**31 March 2023**	31 March 2022
Segment assets	**4,08,876.74**	3,85,998.83	**15,641.63**	14,122.60	**(96.21)**	(344.18)	**4,24,422.16**	3,99,777.25
Unallocated corporate and other assets							**21,599.29**	16,819.16
Total assets	**4,08,876.74**	3,85,998.83	**15,641.63**	14,122.60	**(96.21)**	(344.18)	**4,46,021.45**	4,16,596.41
Segment liabilities	**59,675.09**	50,600.83	**6,664.77**	6,579.64	**(96.21)**	(344.18)	**66,243.65**	56,836.29
Unallocated corporate and other liabilities							**2,32,754.63**	2,24,386.38
Total liabilities	**59,675.09**	50,600.83	**6,664.77**	6,579.64	**(96.21)**	(344.18)	**2,98,998.28**	2,81,222.67

* Generation segment includes ₹ **1,995.90 crore** (31 March 2022: ₹ 2,033.82 crore) for sales related to earlier years excluding other adjustments towards reimbursement of ash transportation cost.(Refer Note 42).

** Generation segment result would have been ₹ **35,124.08 crore** (31 March 2022: ₹ 27,820.62 crore) without including the sales related to earlier years as stated above.

Reconciliation of Assets and Liabilities

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Segment assets (A)	**4,24,422.16**	3,99,777.25
Unallocated corporate and other assets:		
Non current investments	**13,884.79**	10,626.24
Current investments	**50.00**	-
Cash and cash equivalents and other bank balances	**2,673.92**	1,302.75
Loans	**215.81**	229.18
Other current assets	**125.13**	64.14
Advance tax (net of provision)	**2,631.13**	2,813.85
Other unallocable assets	**2,018.51**	1,783.00
Total unallocated corporate and other assets (B)	**21,599.29**	16,819.16
Total Assets (A+B)	**4,46,021.45**	4,16,596.41

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Segment liabilities(A)	**66,243.65**	56,836.29
Unallocated corporate and other liabilities:		
Non current borrowings	**1,87,883.57**	1,81,871.19
Deferred tax liability	**12,690.00**	10,951.67
Borrowings current	**31,921.61**	27,684.07
Current tax liabilities (net)	**86.47**	141.13
Other unallocable liabilities	**172.98**	3,738.32
Total unallocated corporate and other liabilities (B)	**2,32,754.63**	2,24,386.38
Total Liabilities (A+B)	**2,98,998.28**	2,81,222.67

Reconciliation of profit after tax

₹ Crore

Particluars	For the year ended 31 March 2023	For the year ended 31 March 2022
Segment result (including net movements in regulatory deferral account balances) (A)	**34,226.12**	30,526.89
Unallocated corporate interest and other income (B)		
Other Income	**185.98**	260.62
Sub-total (B)	**185.98**	260.62
Unallocated corporate expenses, interest and finance costs (C)		
Finance costs	**11,156.06**	9,315.98
Other expenses	**211.02**	180.28
Sub total (C)	**11,367.08**	9,496.26
Profit before tax (including net movements in regulatory deferral account balances) [D=(A+B-C)]	**23,045.02**	21,291.25
Exceptional items	**-**	
Share of net profits of joint ventures accounted for using equity method (E)	**779.77**	1,020.13
Profit before tax (F=D+E)	**23,824.79**	22,311.38
Income tax expense (including tax on net movements in regulatory deferral account balances) (G)	**6,703.44**	5,351.09
Profit after tax (H=F-G)	**17,121.35**	16,960.29

The operations of the Group are mainly carried out within the country and therefore there is no reportable geographical segment.

C. Information about geographical areas

Segment revenue - Others include export sale of energy through trading amounting to ₹ **1,275.80 crore** (31 March 2022: ₹ 1,241.71 crore) to Nepal and Bangladesh by NVVN Ltd., a subsidiary of the Company.

D. Information about major customers

Revenue from customers under 'Generation of energy' segment which is more than 10% of the Group's total revenues, are as under :

Name of the customer	For the year ended			
	31 March 2023		31 March 2022	
	Amount (₹ Crore)	%age	Amount (₹ Crore)	%age
Maharashtra State Electricity Distribution Company Ltd.	**18,543.55**	**10.52**	12,273.45	9.25

68. Financial Risk Management

The Group's principal financial liabilities comprise loans and borrowings in foreign as well as domestic currency, trade payables and other payables. The main purpose of these financial liabilities is to finance the Group's operations. The Group's principal financial assets include loans, trade and other receivables, and cash and short-term deposits that derive directly from its operations. The Group also holds equity investments and enter into derivative contracts such as forward contracts, options and swaps. Derivatives are used exclusively for hedging purposes and not as trading or speculative instruments.

The Group is exposed to the following risks from its use of financial instruments:

- Credit risk
- Liquidity risk
- Market risk

This note presents information about the Group's exposure to each of the above risks, the Group's objectives, policies and processes for measuring and managing risk.

Risk	Exposure arising from	Measurement	Management
Credit Risk	Trade receivables, unbilled revenue, derivative financial instruments, financial assets measured at amortised cost and cash and cash equivalents.	Ageing analysis Credit ratings	Credit limits, letters of credit and diversification of bank deposits.
Liquidity risk	Borrowings and other liabilities	Rolling cash flows forecast	Availability of committed credit lines and borrowing facilities
Market risk – foreign currency risk	- Future commercial transactions - Recognised financial assets and liabilities not denominated in Indian rupee (₹)	Cash flow forecasting	Forward foreign exchange contracts Foreign currency options Currency and interest rate swaps and principal only swaps
Market risk – interest rate risk	Non-current borrowings at variable rates	Sensitivity analysis	Different kinds of loan arrangements with varied terms (e.g. fixed rate loans, floating rate loans, rupee term loans, foreign currency loans, etc.)

Risk management framework

The Group's activities make it susceptible to various risks. The Group has taken adequate measures to address such concerns by developing adequate systems and practices.

In order to institutionalize the risk management in the Group, an elaborate Enterprise Risk Management (ERM) framework has been developed. The Board of Directors has overall responsibility for the establishment and oversight of the parent company's risk management framework. As a part of the implementation of ERM framework, a 'Risk Management Committee (RMC)' with functional directors as its members has been entrusted with the responsibility to identify and review the risks, formulate action plans and strategies to mitigate risks on short-term as well as long-term basis.

The RMC meets every quarter to deliberate on strategies. Risks are regularly monitored through reporting of key performance indicators. Outcomes of RMC are submitted for information of the Board of Directors.

Credit risk

Credit risk is the risk of financial loss to the Group if a customer or counterparty to a financial instrument fails to meet its contractual obligations resulting in a financial loss to the Group. Credit risk arises principally from trade receivables, unbilled revenue, loans, cash and cash equivalents and deposits with banks and financial institutions.

Trade receivables & unbilled revenue

The Group primarily sells electricity to bulk customers comprising mainly state utilities owned by State Governments. The Company has a robust payment security mechanism in the form of Letters of Credit (LC) backed by the Tri-Partite Agreement (TPA). The TPAs were signed among the Govt. of India, RBI and the individual State Governments subsequent to the issuance of the One Time Settlement Scheme of SEBs dues during 2001-02 by the GOI, which were valid till October 2016. Govt of India subsequently approved the extension of these TPAs for another period of 10 years. Most of the States have signed these extended TPAs and signing is in progress for the balance states.

CERC Tariff Regulations allow payment against monthly bill towards energy charges within a period of forty five days from the date of bill and levy of surcharge @ 18% p.a. on delayed payment beyond forty five days. On 22 February 2021, Ministry of power has issued a notification and accordingly Late Payment Surcharge (LPSC) shall be payable on the payment outstanding after the due date at the base rate of LPSC applicable for the period for the first month of default and the rate of LPSC for the successive months of default shall increase by 0.5 percent for every month of delay provided that the LPSC shall not be more than 3 percent higher than the base rate at any time.

A default occurs when in the view of management there is no significant possibility of recovery of receivables after considering all available options for recovery.

As per the provisions of the TPA, the customers are required to establish LC covering 105% of the average monthly billing of the Company for last 12 months. The TPA also provided that if there is any default in payment of current dues by any State Utility the outstanding dues can be deducted from the State's RBI account and paid to the concerned CPSU. There is also provision of regulation of power by the Group in case of non payment of dues and non-establishment of LC.

In addition to above, MoP vide its communications dated 28 June 2019 and subsequent clarifications, further emphasised on ensuring availability of suitable payment security mechanism to be maintained by DISCOMs. Further, to liquidate the outstanding dues of the discoms towards the generating companies, GOI has announced a Scheme for offering ₹ 90,000 crore in soft loans under the Aatmanirbhar Bharat package. The Discoms are expected to take the benefit of the this Scheme and pay their outstanding dues.

These payment security mechanisms have served the Group well over the years. The Group has not experienced any significant impairment losses in respect of trade receivables in the past years. Since the Group has its power stations as well as customers spread over various states of India, geographically there is no concentration of credit risk.

Unbilled revenue primarily relates to the Group's right to consideration for sale effected but not billed at the reporting date and have substantially the same risk characteristics as the trade receivables for the same type of contracts.

Investments

The Group limits its exposure to credit risk by investing in only Government of India Securities, State Government Securities and other counterparties have a high credit rating. The management actively monitors the interest rate and maturity period of these investments. The Group does not expect the counterparty to fail to meet its obligations, and has not experienced any significant impairment losses in respect of any of the investments.

Loans

The Group has given loans to employees, joint venture companies and other parties. Loans to the employee are secured against the mortgage of the house properties and hypothecation of vehicles for which such loans have been given in line with the policies of the Company. The loan provided to group companies are collectible in full and risk of default is negligible. Loan to APIIC is against a guarantee given by the Government of Andhra Pradesh vide GO dated 3 April 2003.

Cash and cash equivalents

The Group held cash and cash equivalents of ₹ **465.65 crore** (31 March 2022: ₹ 675.77 crore). The cash and cash equivalents are held with banks with high rating.

Deposits with banks and financial institutions

The Group held deposits with banks and financial institutions of ₹ **4,482.88 crore** (31 March 2022: ₹ 3,782.31 crore). In order to manage the risk, Group places deposits with only high rated banks/institutions.

(i) Exposure to credit risk

The carrying amount of financial assets represents the maximum credit exposure. The maximum exposure to credit risk at the reporting date was:

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Financial assets for which loss allowance is measured using 12 months Expected Credit Losses (ECL)		
Non-current investments	**632.70**	104.10
Non-current loans	**553.77**	559.81
Other non-current financial assets	**900.70**	1,017.98
Current investments	**50.00**	-
Cash and cash equivalents	**465.65**	675.77
Bank balances other than cash and cash equivalents	**4,482.88**	3,782.31
Current loans	**268.78**	270.37
Other current financial assets*	**1,605.64**	1,076.03
Total (A)	**8,960.12**	7,486.37
Financial assets for which loss allowance is measured using Life time Expected Credit Losses (ECL) as per simplified approach		
Trade receivables including unbilled revenue	**31,463.90**	27,970.87
Contract Assets	**7,306.43**	4,750.11
Total (B)	**38,770.33**	32,720.98
Total (A+B)	**47,730.45**	40,207.35

* Excluding Contract Assets (Refer Note 19)

(ii) Provision for expected credit losses

(a) Financial assets for which loss allowance is measured using 12 month expected credit losses

The Group has assets where the counter-parties have sufficient capacity to meet the obligations and where the risk of default is very low. Accordingly, no loss allowance for impairment has been recognised.

(b) Financial assets for which loss allowance is measured using life time expected credit losses as per simplified approach

The Group has customers (State government utilities) with capacity to meet the obligations and therefore the risk of default is negligible or nil. Further, management believes that the unimpaired amounts that are past due by more than 30 days are still collectible in full, based on historical payment behaviour and extensive analysis of customer credit risk. Hence, no impairment loss has been recognised during the reporting periods in respect of trade receivables and unbilled revenue.

(iii) Ageing analysis of trade receivables

Refer Note 15(g)

(iv) Reconciliation of impairment loss provisions

The movement in the allowance for impairment in respect of financial assets during the year was as follows:

₹ Crore

Particulars	Investments	Trade receivables	Loans	Advances	Claims recoverable	Total
Balance as at 1 April 2021 (i)	4.48	546.84	-	0.11	343.62	895.05
Impairment loss recognised (ii)	-	-	-	-	3.16	3.16
Amounts written off / written back / adjustment during the period (iii)	-	67.39	-	-	-	67.39

₹ Crore

Particulars	Investments	Trade receivables	Loans	Advances	Claims recoverable	Total
Balance as at 31 March 2022 (iv=i+ii-iii)	4.48	479.45	-	0.11	346.78	830.82
Impairment loss recognised (v)	-	82.27	6.77	-	2.54	91.58
Balance as at 31 March 2023 (vi=iv+v)	**4.48**	**561.72**	**6.77**	**0.11**	**349.32**	**922.40**

Based on historic default rates, the Group believes that no impairment allowance is necessary in respect of any other financial assets as the amounts of such allowances are not significant.

Liquidity risk

Liquidity risk is the risk that the Group will encounter difficulty in meeting the obligations associated with its financial liabilities that are settled by delivering cash or another financial asset. The Group's approach to managing liquidity is to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage to the Group's reputation.

The Group has an appropriate liquidity risk management framework for the management of short, medium and long term funding and liquidity management requirements. The Group manages liquidity risk by maintaining adequate cash reserves, banking facilities and reserve borrowing facilities by continuously monitoring forecast and actual cash flows and matching the maturity profiles of financial assets and liabilities.

The Group's treasury department is responsible for managing the short term and long term liquidity requirements of the Group. Short term liquidity situation is reviewed daily by Treasury department. The Board of directors has established policies to manage liquidity risk and the Group's treasury department operates in line with such policies. Any breaches of these policies are reported to the Board of Directors. Long term liquidity position is reviewed on a regular basis by the Board of Directors and appropriate decisions are taken according to the situation.

Typically the Group ensures that it has sufficient cash on demand to meet expected operational expenses for a month, including the servicing of financial obligations, this excludes the potential impact of extreme circumstances that cannot reasonably be predicted, such as natural disasters.

As part of the CERC regulations, tariff inter alia includes recovery of capital cost. The tariff regulations also provide for recovery of energy charges, operations and maintenance expenses and interest on normative working capital requirements. Since billing to the customers are generally on a monthly basis, the Group maintains sufficient liquidity to service financial obligations and to meet its operational requirements.

(i) Financing arrangements

The Group had access to the following undrawn borrowing facilities at the end of the reporting period:

₹ Crore

Particulars	31 March 2023	31 March 2022
Floating-rate borrowings		
Cash credit	**4,758.50**	4,181.62
Term loans	**24,232.99**	18,933.83
Foreign currency loans	**3,309.60**	8,841.01
Total	**32,301.09**	31,956.46

(ii) Maturities of financial liabilities

The following are the contractual maturities of derivative and non-derivative financial liabilities, based on contractual cash flows:

31 March 2023 ₹ Crore

Contractual maturities of financial liabilities	Contractual cash flows					
	3 months or less	3-12 months	1-2 years	2-5 years	More than 5 years	Total
Non-derivative financial liabilities						
Secured bonds	611.56	7,151.25	6,159.73	6,037.84	22,071.19	**42,031.57**
Unsecured bonds	4,989.38	402.76	1,500.00	4,000.00	14,983.31	**25,875.45**
Rupee term loans from banks	1,274.85	4,866.85	7,177.11	25,419.07	45,892.83	**84,630.71**
Rupee term loans from others	107.82	276.10	721.54	2,787.42	7,025.31	**10,918.19**
Lease obligations	150.51	75.45	98.68	236.26	2,590.16	**3,151.06**
Foreign currency notes	67.81	37.92	7,860.30	11,990.10	-	**19,956.13**
Unsecured foreign currency loans from banks and financial institutions	339.06	846.00	990.33	8,495.58	13,129.52	**23,800.49**
Unsecured foreign currency loans (guaranteed by GOI)	36.96	218.40	249.33	683.10	1,712.94	**2,900.73**
Commercial paper, cash credit and Short term working capital loan	11,855.93	1,095.35	-	-	-	**12,951.28**
Trade and other payables	31,577.65	5,888.28	892.34	1,179.63	719.47	**40,257.37**

31 March 2022 ₹ Crore

Contractual maturities of financial liabilities	Contractual cash flows					
	3 months or less	3-12 months	1-2 years	2-5 years	More than 5 years	Total
Non-derivative financial liabilities						
Secured bonds	3,569.09	4,502.88	6,851.40	12,275.57	21,259.49	48,458.43
Unsecured bonds	535.27	302.68	4,374.10	4,000.00	11,871.00	21,083.05
Rupee term loans from banks	1,035.67	4,385.66	5,973.89	23,150.80	45,868.07	80,414.09
Rupee term loans from others	70.00	357.27	428.78	2,526.06	6,451.28	9,833.39
Lease obligations	155.84	91.16	79.63	226.88	2,631.83	3,185.34
Foreign currency notes	2,092.01	3,856.50	-	15,355.85	3,053.20	24,357.56
Secured foreign currency loans from banks	19.55	58.31	58.34	-	-	136.20
Unsecured foreign currency loans from banks and financial institutions	184.47	554.68	867.30	4,129.55	11,200.31	16,936.31
Unsecured foreign currency loans (guaranteed by GOI)	65.77	244.34	300.03	898.16	1,256.17	2,764.47
Commercial paper, cash credit and Short term working capital loan	7,819.80	754.41	-	-	-	8,574.21
Trade and other payables	25,158.80	7,733.04	1,899.37	2,491.33	135.76	37,418.30

Market risk

Market risk is the risk that changes in market prices, such as foreign exchange rates and interest rates will affect the Group's income. The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while optimising the return.

The Board of directors is responsible for setting up of policies and procedures to manage market risks of the Group. All such transactions are carried out within the guidelines set by the risk management committee.

Currency risk

The Group is exposed to foreign currency risk on certain transactions that are denominated in a currency other than entity's functional currency, hence exposure to exchange rate fluctuations arises. The risk is that the functional currency value of cash flows will vary as a result of movements in exchange rates.

The currency profile of financial assets and financial liabilities as at 31 March 2023 and 31 March 2022 are as below:

As at 31 March 2023 ₹ Crore

Particulars	USD	EURO	JPY	Others	Total
Financial assets					
Trade and other receivables	1.22	-	-	-	1.22
Total	1.22	-	-	-	1.22
Financial liabilities					
Foreign currency bonds	15,391.81	4,564.32	-	-	19,956.13
Unsecured foreign currency loans from banks and financial institutions	9,182.35	3,175.56	13,979.22	-	26,337.13
Trade payables and other financial liabilities	1,656.46	1,347.75	34.28	11.73	3,050.22
Total	26,230.62	9,087.63	14,013.50	11.73	49,343.48

As at 31 March 2022 ₹ Crore

Particulars	USD	EURO	JPY	Others	Total
Financial assets					
Trade and other receivables	0.33	-	-	-	0.33
Cash and cash equivalents	0.01	-	-	0.02	0.03
Other financial assets	-	0.70	-	-	0.70
Total	0.34	0.70	-	0.02	1.06
Financial liabilities					
Foreign currency bonds	18,015.88	4,307.65	-	2,034.03 *	24,357.56
Unsecured foreign currency loans from banks and financial institutions	3,528.07	2,853.83	13,314.62	-	19,696.52
Secured foreign currency loans from banks	136.20	-	-	-	136.20
Trade payables and other financial liabilities	2,961.37	1,481.53	151.64	30.38	4,624.92
Total	24,641.52	8,643.01	13,466.26	2,064.41	48,815.20

* ₹ 1,908.00 crore-Rupee denominated USD settled Masala bonds and interest accrued thereon.

The gain/(loss) on account of exchange rate variations on all foreign currency loans and foreign currency monetary items (up to COD) is recoverable from beneficiaries. Therefore, currency risk in respect of such exposure would not be very significant.

Sensitivity analysis

Since the impact of strengthening or weakening of INR against USD, Euro, JPY and other currencies on the statement of profit and loss would not be very significant; therefore, sensitivity analysis for currency risk is not disclosed.

Embedded derivatives

Certain contracts of the Group for construction of power plants with vendors awarded through International Competitive Bidding are denominated in a third currency i.e. a currency which is not the functional currency of any of the parties to the contract. The Group has awarded the above contracts without any intention to enter into any derivative contract or to leverage/ take position and without any option/intention to net settle at any point of time during the tenure of the contract. The Group has not separately recognised the foreign currency embedded derivative and has not designated the entire hybrid contract at fair value through profit or loss considering the same as impracticable and absence of a reliable valuation model.

Interest rate risk

The Group is exposed to interest rate risk arising mainly from non-current borrowings with floating interest rates. The Group is exposed to interest rate risk because the cash flows associated with floating rate borrowings will fluctuate with changes in interest rates. The Group manages the interest rate risks by entering into different kinds of loan arrangements with varied terms (e.g. fixed rate loans, floating rate loans, rupee term loans, foreign currency loans, etc.).

At the reporting date the interest rate profile of the Group's interest-bearing financial instruments is as follows:

₹ Crore

Particulars	31 March 2023	31 March 2022
Financial Assets:		
Fixed-rate instruments		
Loan to related parties	**14.07**	20.53
Loans to others	**21.53**	22.46
Bank deposits	**3,846.43**	3,180.71
Total	**3,882.03**	3,223.70
Financial Liabilities:		
Fixed-rate instruments		
Bonds	**67,904.26**	69,536.88
Foreign currency loans/notes*	**23,012.47**	28,023.45
Rupee term loans	**308.09**	506.30
Commercial paper and Short term working capital loan	**11,509.73**	6,631.26
Lease obligations	**1,820.79**	1,151.30
Total (A)	**1,04,555.34**	1,05,849.19
Variable-rate instruments		
Foreign currency loans/notes	**23,342.48**	15,870.97
Rupee term loans	**95,240.79**	89,904.79
Cash credit and short term loans	**1,364.22**	1,899.21
Total (B)	**1,19,947.49**	1,07,674.97
Total (A+B)	**2,24,502.83**	2,13,524.16

* Includes ₹ **Nil** (31 March 2022: includes ₹ 1,908 crore) of Rupee denominated USD settled Masala bonds.

Fair value sensitivity analysis for fixed-rate instruments

The Group's fixed rate instruments are carried at amortised cost. They are therefore not subject to interest rate risk, since neither the carrying amount nor the future cash flows will fluctuate because of a change in market interest rates.

Cash flow sensitivity analysis for variable-rate instruments

A change of 50 basis points in interest rates at the reporting date would have increased (decreased) profit or loss by the amounts shown below. This analysis assumes that all other variables, in particular foreign currency rates, remain constant. The analysis is performed on the same basis for the previous year.

₹ Crore

Particulars	Profit or loss	
	50 bp increase	50 bp decrease
31 March 2023		
Foreign currency loans/notes	**(96.08)**	**96.08**
Rupee term loans	**(448.09)**	**448.09**
Cash credit and Short term working capital loan	**(3.46)**	**3.46**
	(547.63)	**547.63**
31 March 2022		
Foreign currency loans/notes	(68.98)	68.98
Rupee term loans	(456.46)	456.46
Cash credit and Short term working capital loan	(2.55)	2.55
	(527.99)	527.99

Of the above mentioned increase in the interest expense, an amount of ₹ **125.54 crore** (31 March 2022: ₹ 142.26 crore) is expected to be capitalised and recovered from beneficiaries through tariff.

Change in interest benchmarks

As part of the IBOR transition, the Company has replaced the JPY LIBOR with compounded TONA for all financial instruments, requiring the renegotiation of financing contracts. Changes to contractual cash flows as a result of replacing the existing benchmark interest rate on an economically equivalent basis as a direct consequence of the interest rate benchmark reform are accounted for by adjusting the effective interest rate without recognizing any direct modification gains or losses. There is no material impact on the change of the benchmark rate. The Company also plans to replace the USD LIBOR with the Term overnight SOFR before the end of its publication on June 30, 2023.

(Note: IBOR-Inter Bank Offered Rates, LIBOR-London Interbank Offered Rate, TONA-Tokyo Overnight Average Rate, SOFR – Secured Overnight Financing Rate)

69. Fair Value Measurements

(a) Financial instruments by category

₹ Crore

Particulars	31 March 2023			31 March 2022		
	FVTPL	FVTOCI	Amortised Cost	FVTPL	FVTOCI	Amortised Cost
Financial assets						
Investments						
- Equity instruments	**3.78**	**103.92**	**-**	3.78	100.32	-
- Debentures	**-**	**-**	**575.00**		-	-
Trade Receivables	**-**	**-**	**31,463.90**	-	-	27,970.87
Loans	**-**	**-**	**822.55**	-	-	830.18
Cash and cash equivalents	**-**	**-**	**465.65**	-	-	675.77
Other bank balances	**-**	**-**	**4,482.88**	-	-	3,782.31
Finance lease receivables	**-**	**-**	**285.19**	-	-	355.49
Other financial assets	**-**	**-**	**9,527.58**	-	-	6,488.63
Total	**3.78**	**103.92**	**47,622.75**	3.78	100.32	40,103.25
Financial liabilities						
Borrowings (including interest accrued)	**-**	**-**	**2,09,768.83**	-	-	2,03,678.06

₹ Crore

Particulars	31 March 2023			31 March 2022		
	FVTPL	FVTOCI	Amortised Cost	FVTPL	FVTOCI	Amortised Cost
Commercial paper and cash credit	-	-	12,873.95	-	-	8,530.47
Lease obligations	-	-	1,820.79	-	-	1,151.30
Trade payables	-	-	13,908.87	-	-	11,361.96
Payable for capital expenditure	-	-	21,204.80	-	-	21,360.32
Other financial liabilities	-	-	4,927.99	-	-	4,673.79
Total	-	-	2,64,505.23	-	-	2,50,755.90

(b) Fair value hierarchy

This section explains the judgements and estimates made in determining the fair values of the financial instruments that are (a) recognised and measured at fair value and (b) measured at amortised cost and for which fair values are disclosed in the financial statements. To provide an indication about the reliability of the inputs used in determining fair value, the Group has classified its financial instruments into the three levels prescribed under the accounting standard. An explanation of each level follows underneath the table.

₹ Crore

Financial assets and liabilities measured at fair value- recurring fair value measurement as at 31 March 2023	Level 1	Level 2	Level 3	Total
Financial assets:				
Investments in quoted equity instruments - PTC India Ltd.	102.30	-	-	102.30
Investments in unquoted equity instruments	-	-	5.40	5.40
	102.30	-	5.40	107.70

₹ Crore

Financial assets and liabilities measured at fair value- recurring fair value measurement as at 31 March 2022	Level 1	Level 2	Level 3	Total
Financial assets:				
Investments in quoted equity instruments - PTC India Ltd.	98.70	-	-	98.70
Investments in unquoted equity instruments	-	-	5.40	5.40
	98.70	-	5.40	104.10

The Group has an established control framework with respect to the measurement of fair values. This includes a valuation team that has overall responsibility for overseeing all significant fair value measurements and reports directly to the Director (Finance). The valuation team regularly reviews significant unobservable inputs and valuation adjustments. If third party information, such as broker quotes or pricing services, is used to measure fair values, then the valuation team assesses the evidence obtained from the third parties to support the conclusion that these valuations meet the requirements of Ind AS, including the level in the fair value hierarchy in which the valuations should be classified. Significant valuation issues are reported to the audit committee.

Fair values are categorised into different levels in a fair value hierarchy based on the inputs used in the valuation techniques as follows:

Level 1: Level 1 hierarchy includes financial instruments measured using quoted prices. This includes investments in quoted equity instruments. Quoted equity instruments are valued using quoted prices on national stock exchange.

Level 2: The fair value of financial instruments that are not traded in an active market is determined using valuation techniques which maximise the use of observable market data and rely as little as possible on entity specific estimates. If all significant inputs required to fair value an instrument are observable, the instrument is included in level 2. This level includes mutual funds which are valued using the closing NAV.

Level 3: If one or more of the significant inputs is not based on observable market data, the instrument is included in level 3. The fair value of financial assets and liabilities included in Level 3 is determined in accordance with generally accepted pricing models based on discounted cash flow analysis using prices from prevailing market transactions and dealer quotes of similar instruments.

There have been no transfers in either direction for the years ended 31 March 2023 and 31 March 2022.

(c) Valuation technique used to determine fair value:

Specific valuation techniques used to fair value of financial instruments include:

i) For financial instruments other than at ii), iii) and iv) - the use of quoted market prices.

ii) For investments in mutual funds - Closing NAV is used.

iii) For financial liabilities (vendor liabilities, debentures/bonds, foreign currency notes, domestic/foreign currency loans): Discounted cash flow; appropriate market borrowing rate of the entity as of each balance sheet date used for discounting.

iv) For financial assets (employee loans) - Discounted cash flow; appropriate market rate (SBI lending rate) as of each balance sheet date used for discounting.

(d) Fair value of financial assets and liabilities measured at amortised cost

₹ Crore

Particulars	Level	As at 31 March 2023		As at 31 March 2022	
		Carrying amount	Fair value	Carrying amount	Fair value
Financial assets					
Other investments	3	**575.00**	**575.00**	-	-
Loans	3	**822.55**	**781.43**	830.18	830.18
Finance lease receivables	3	**285.19**	**285.19**	355.49	355.49
Claims recoverable	3	**1,153.04**	**1,153.04**	915.05	915.05
Trade receivables	3	**31,463.90**	**31,463.90**	27,970.87	27,970.87
Cash and cash equivalents	1	**465.65**	**465.65**	675.77	675.77
Bank balances other than cash and cash equivalents	1	**4,482.88**	**4,482.88**	3,782.31	3,782.31
Other financial assets	3	**8,374.54**	**8,374.54**	5,573.58	5,573.58
Total		**47,622.75**	**47,581.63**	40,103.25	40,103.25
Financial liabilities					
Bonds/Debentures	1	**-**	**-**	8,820.73	9,810.68
	2	**12,357.58**	**13,249.47**	30,220.36	33,011.39
	3	**55,546.68**	**56,852.50**	30,495.79	33,220.19
Foreign currency notes	2	**15,369.34**	**15,247.39**	17,984.99	18,305.90
	3	**4,554.79**	**4,203.16**	6,328.53	6,446.15
Foreign currency loans	3	**26,391.54**	**26,408.92**	19,580.90	19,580.90
Rupee term loans	2	**10,467.49**	**10,096.03**	11,037.33	10,748.21
	3	**85,081.41**	**84,900.31**	79,209.43	79,617.56
Lease Obligations	3	**1,820.79**	**1,820.79**	1,151.30	1,151.30
Borrowings - current	1	**12,873.95**	**12,873.95**	8,530.47	8,530.47
Trade payables & payable for capital expenditure	2	**3.63**	**4.35**	8.19	7.89
	3	**35,110.04**	**35,139.45**	32,714.09	32,763.96
Other financial liabilities	3	**4,927.99**	**4,927.99**	4,673.79	4,673.79
Total		**2,64,505.23**	**2,65,724.31**	2,50,755.90	2,57,868.39

The carrying amounts of current trade receivables, current trade payables, payable for capital expenditure, cash and cash equivalents and other financial assets and liabilities are considered to be the same as their fair values, due to their short-term nature.

The carrying values for finance lease receivables approximates the fair value as these are periodically evaluated based on credit worthiness of customer and allowance for estimated losses is recorded based on this evaluation. Also, carrying amount of claims recoverable approximates its fair value as these are recoverable immediately.

The fair values for loans, borrowings, non-current trade payables and payable for capital expenditure were calculated based on cash flows discounted using a current discount rate. They are classified at respective levels based on availability of quoted prices and inclusion of observable/non observable inputs.

70. Capital Management

The Group's objectives when managing capital are to:

- safeguard its ability to continue as a going concern, so that it can continue to provide returns for shareholders and benefits for other stakeholders and
- maintain an appropriate capital structure of debt and equity.

The Board of Directors has the primary responsibility to maintain a strong capital base and reduce the cost of capital through prudent management in deployment of funds and sourcing by leveraging opportunities in domestic and international financial markets so as to maintain investors, creditors & markets' confidence and to sustain future development of the business. The Board of Directors monitors the return on capital, which the Company defines as returns from operating activities divided by total shareholders' equity deployed in operating activities. The Board of Directors also monitors the level of dividends to equity shareholders in line with the dividend distribution policy of the Company.

Under the terms of major borrowing facilities, the Group is required to comply with the following financial covenants:

(i) Total liability to networth ranges between 2:1 to 3:1.

(ii) Ratio of EBITDA to interest expense shall not at any time be less than 1.75 : 1.

(iii) Debt service coverage ratio not less than 1.10:1 (in case of foreign currency borrowings).

There have been no breaches in the financial covenants of any interest bearing borrowings.

The Group monitors capital, using a medium term view of three to five years, on the basis of a number of financial ratios generally used by industry and by the rating agencies. The Group is not subject to externally imposed capital requirements.

The Group monitors capital using gearing ratio which is net debt divided by total equity. Net debt comprises of non-current and current borrowings less cash and cash equivalent. Equity includes equity share capital and reserves that are managed as capital. The gearing ratio at the end of the reporting period was as follows:

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Borrowings (including interest accrued)	**2,22,642.78**	2,12,208.53
Less: Cash and cash equivalent	**465.65**	675.77
Net Debt	**2,22,177.13**	2,11,532.76
Total Equity	**1,50,953.62**	1,39,134.15
Net Debt to Equity ratio	**1.47**	1.52

71. Disclosure as per Ind AS 112 'Disclosure of Interest in Other Entities'

(a) Subsidiary companies

The Group's subsidiaries at 31 March 2023 are set out below. Unless otherwise stated, they have share capital consisting solely of equity shares that are held directly by the group, and the proportion of ownership interests held equals the voting rights held by the group. The country of incorporation or registration is also their principal place of business.

Name of subsidiary company	Place of business/ country of incorporation	Ownership interest held by the group as at		Ownership interest held by non-controlling interests as at		Principal activities
		31 March 2023	31 March 2022	**31 March 2023**	31 March 2022	
NTPC Electric Supply Company Ltd. (NESCL)	India	**100.00**	100.00	**-**	-	Consultancy & Distribution of energy
NTPC Vidyut Vyapar Nigam Ltd. (NVVN)	India	**100.00**	100.00	**-**	-	Trading of energy
Bhartiya Rail Bijlee Company Ltd. (BRBCL)	India	**74.00**	74.00	**26.00**	26.00	Generation of energy
Patratu Vidyut Utpadan Nigam Ltd. (PVUNL)	India	**74.00**	74.00	**26.00**	26.00	Generation of energy
NTPC Mining Ltd. (NML)	India	**100.00**	100.00	**-**	-	Coal mining
THDC India Ltd. (THDCIL)	India	**74.496**	74.496	**25.504**	25.504	Generation of energy
North Eastern Electric Power Corporation Ltd. (NEEPCO)	India	**100.00**	100.00	**-**	-	Generation of energy
NTPC EDMC Waste Solutions Private Ltd. (NTPC EDMC)	India	**74.00**	74.00	**26.00**	26.00	Generation of energy
NTPC Renewable Energy Ltd. (NREL)*	India	**-**	100.00	**-**	-	Generation of energy
Ratnagiri Gas & Power Private Ltd. (RGPPL)	India	**86.49**	86.49	**13.51**	13.51	Generation of energy
NTPC Green Energy Ltd.* (w.e.f.7 April 2022)	India	**100.00**	-	**-**	-	Generation of energy

* Refer Note 53(d)(ii)

(1) The shareholders of the NESCL in its Extra-ordinary General Meeting held on 24 March, 2015, inter alia, approved the proposal for transfer and vesting of all existing operations of NESCL together with all assets and liabilities relating to such operations to NTPC Limited, the Parent Company, with effect from 1 April, 2015. After obtaining the aforesaid approval, an agreement was entered into with the Parent Company to implement such transfer. In pursuance of the above, it does not have any operations w.e.f 1 April 2015.

(2) The Company has incorporated a subsidiary company 'NTPC EDMC Waste Solutions Pvt. Ltd.', in joint venture with East Delhi Municipal Corporation (EDMC) on 1 June 2020, with equity participation of 74:26 respectively to develop and operate state of the art / modern integrated waste management & energy generation facility. The Board of Directors of the Company in its 494th meeting held on 4 February 2021 had accorded approval for transfer of its shareholding in the subsidiary to NVVN Ltd., a wholly owned subsidiary of the Company which is yet to take place.

(3) The Company had an investment of ₹ 834.55 crore as at 1 April 2020 in the equity shares of Ratnagiri Gas and Power Private Ltd. (RGPPL), an erstwhile joint venture of the Company. During the previous year, the Company had entered into a tripartite framework agreement with RGPPL and its lenders on 31 December 2020 for settlement of RGPPL's outstanding debt liabilities as per the Composite Resolution Plan. As per the Resolution Plan, the Company has provided inter corporate loan of ₹ 885 crore to RGPPL for settlement of loan with the lenders. Further, 35.47% of equity held by lenders in RGPPL have been transferred to the Company as a part of the Resolution Plan at nominal value. Consequently, the Company's equity shareholding in RGPPL has increased from 25.51% to 60.98% and RGPPL has become a subsidiary company of the Company with effect from 31 December 2020. Further, the Company had an investment of ₹ 139.75 crore as at 1 April 2020 in the equity shares of Konkan LNG Ltd. (KLL), an erstwhile joint venture of the Company. The Company had executed Share Purchase Agreements with GAIL (India) Ltd. on 23 February 2021, for purchase of GAIL's share (25.51%) in RGPPL and Sale of Company's share (14.82%) (on fully dilutive basis) in KLL, at a nominal vaue of ₹ 1/-. Consequently, the Company had exited from KLL after transfer of shares as per the Share Purchase Agreements and the Company's shareholding in RGPPL has become 86.49% with effect from 23 February 2021.

(b) Non-controlling interests (NCI)

Set out below is summarised financial information for each subsidiary that has non-controlling interest. The amounts disclosed for each subsidiary are before inter-company eliminations.

Summarised balance sheet

₹ Crore

Particulars	Bhartiya Rail Bijlee Company Ltd.		Patratu Vidyut Utpadan Nigam Ltd.		THDC India Ltd.		NTPC EDMC		RGPPL	
	As at 31 March 2023	As at 31 March 2022	As at 31 March 2023	As at 31 March 2022	As at 31 March 2023	As at 31 March 2022	As at 31 March 2023	As at 31 March 2022	As at 31 March 2023	As at 31 March 2022
Current assets	**973.24**	1,043.06	**428.62**	488.69	**1,575.34**	1,824.23	**0.12**	0.25	**449.90**	771.23
Current liabilities	**1,534.48**	1,388.51	**3,733.27**	2,924.71	**2,676.12**	2,441.92	**3.44**	3.12	**474.97**	563.99
Net current assets/ (liabilities)	**(561.24)**	(345.45)	**(3,304.65)**	(2,436.02)	**(1,100.78)**	(617.69)	**(3.32)**	(2.87)	**(25.07)**	207.24
Non-current assets	**7,978.39**	8,152.42	**11,210.64**	8,271.44	**23,682.17**	19,231.59	**-**	0.11	**883.44**	863.31
Non-current liabilities	**4,464.13**	4,764.83	**5,593.25**	4,158.68	**11,781.01**	7,887.34	**-**	-	**927.90**	1,349.14
Net non-current assets	**3,514.26**	3,387.59	**5,617.39**	4,112.76	**11,901.16**	11,344.25	**-**	0.11	**(44.46)**	(485.83)
Regulatory deferral account debit balances	**32.13**	19.92	**32.81**	-	**133.42**	98.70	**-**	-	**-**	-
Regulatory deferral account credit balances	**107.15**	144.23	**-**	6.35	**497.46**	515.20	**-**	-	**-**	-
Net assets	**2,878.00**	2,917.83	**2,345.55**	1,670.39	**10,436.34**	10,310.06	**(3.32)**	(2.76)	**(69.53)**	(278.59)
Accumulated NCI	**744.78**	758.25	**609.85**	434.30	**2,659.47**	2,628.24	**(0.87)**	(0.72)	**(91.54)**	(64.52)

Summarised statement of profit and loss for the year ended

₹ Crore

Particulars	Bhartiya Rail Bijlee Company Ltd.		Patratu Vidyut Utpadan Nigam Ltd.		THDC India Ltd.		NTPC EDMC		RGPPL	
	For the year ended 31 March 2023	For the year ended 31 March 2022	For the year ended 31 March 2023	For the year ended 31 March 2022	For the year ended 31 March 2023	For the year ended 31 March 2022	For the year ended 31 March 2023	For the year ended 31 March 2022	For the year ended 31 March 2023	For the year ended 31 March 2022
Total income	**3,433.84**	2,607.69	**0.16**	0.22	**2,014.52**	2,227.44		0.01	**541.31**	2,012.98
Profit/(loss) for the year	**248.14**	324.55	**(0.51)**	(0.03)	**672.91**	893.75	**(0.56)**	(2.05)	**(199.94)**	(201.23)
Other comprehensive income/(expense)	**0.05**	-		-	**(2.52)**	2.14	**-**	-		-
Total comprehensive income/(expense)	**248.19**	324.55	**(0.51)**	(0.03)	**670.39**	895.89	**(0.56)**	(2.05)	**(199.94)**	(201.23)
Profit/(loss) allocated to NCI	**64.53**	84.38	**(0.13)**	(0.01)	**170.98**	228.49	**(0.15)**	(0.53)	**-**	(27.19)
Dividends paid to NCI	**78.00**	44.20	**-**	-	**139.75**	129.61	**-**	-	**-**	-

Summarised cash flows for the year ended

₹ Crore

Particulars	Bhartiya Rail Bijlee Company Ltd.		Patratu Vidyut Utpadan Nigam Ltd.		THDC India Ltd.		NTPC EDMC		RGPPL	
	For the year ended 31 March 2023	For the year ended 31 March 2022	For the year ended 31 March 2023	For the year ended 31 March 2022	For the year ended 31 March 2023	For the year ended 31 March 2022	For the year ended 31 March 2023	For the year ended 31 March 2022	For the year ended 31 March 2023	For the year ended 31 March 2022
Cash flows from/(used in) operating activities	**1,414.09**	764.44	**76.19**	3.00	**1,881.86**	1,775.68	**(0.22)**	0.01	**37.47**	134.84
Cash flows from/(used in) investing activities	**(271.47)**	(428.90)	**(1,873.08)**	(1,431.99)	**(4,802.45)**	(3,334.70)	**0.06**	(0.01)	**(53.00)**	(74.63)
Cash flows from/(used in) financing activities	**(1,145.23)**	(496.29)	**1,784.35**	1,453.52	**2,901.69**	490.95	**-**	-	**(67.80)**	(130.30)
Net increase/ (decrease) in cash and cash equivalents	**(2.61)**	(160.75)	**(12.54)**	24.53	**(18.90)**	(1,068.07)	**(0.16)**	-	**(83.33)**	(70.09)

(c) Details of significant restrictions

In respect of investments in subsidiary companies, the Group has restrictions for their disposal as under:

₹ Crore

Name of the Subsidiary	Period of restrictions for disposal of investments as per related agreements	Amount invested	
		As at 31 March 2023	As at 31 March 2022
Bhartiya Rail Bijlee Company Ltd.	5 years from the date of commercial operation of the last unit of the project.	**1,774.12**	1,774.12
Patratu Vidyut Utpadan Nigam Ltd.	5 years from the date of signing of agreement or till the date of commercial operation of the last new unit of Phase-I, whichever is later.	**1,737.62**	1,237.62
THDC India Ltd.	Save and except with prior written consent of GOI, NTPC shall not take any action that may result in shareholding in the subsidiary falling below 51% and shall not take any action that may result in the subsidiary ceasing to be a government company.	**7,500.00**	7,500.00
North Eastern Electric Power Corporation Ltd.	Save and except with prior written consent of GOI, NTPC shall not take any action that may result in shareholding / or total voting power in the subsidiary falling below 51% and shall not take any action that may result in the subsidiary ceasing to be a government company. Further, NTPC shall continue to hold 100% of paid up capital and voting power in the subsidiary till all amounts repayable under the loan agreement executed between the subsidiary and KfW are repaid.	**4,000.00**	4,000.00
NTPC EDMC Waste Solutions Pvt Ltd	5 years from the date of incorporation (i.e. 01 June 2020)	**0.15**	0.15
Total		**15,011.89**	14,511.89

(d) Joint operations

The group has entered into production sharing contracts (PSCs) with GoI for some exploration blocks whose principal place of business is in India. For detailed disclosures of these joint operations, refer Note 66.

(e) Interests in joint venture companies

List of joint venture companies as at 31 March 2023 in which the group has interest, is as below. These entities have share capital consisting solely of equity shares, which are held directly by the group. The country of incorporation or registration is also their principal place of business, and the proportion of ownership interest is the same as the proportion of voting rights held.

₹ Crore

Name of joint venture company	Place of business/ country of incorporation	Ownership interest held by the group (in %) as at		Accounting method	Carrying amount as at	
		31 March 2023	31 March 2022		31 March 2023	31 March 2022
Utility Powertech Ltd.	India	**50.00**	50.00	Equity method	**103.03**	94.67
NTPC-GE Power Services Private Ltd. $	India	**50.00**	50.00	Equity method	**9.31**	7.42
NTPC-SAIL Power Company Ltd.	India	**50.00**	50.00	Equity method	**1,439.11**	1,528.61
NTPC Tamil Nadu Energy Company Ltd.	India	**50.00**	50.00	Equity method	**1,898.93**	1,850.14
Aravali Power Company Private Ltd. $	India	**50.00**	50.00	Equity method	**2,447.94**	2,671.51
NTPC BHEL Power Projects Private Ltd. *$	India	**50.00**	50.00	Equity method	**-**	-

₹ Crore

Name of joint venture company	Place of business/ country of incorporation	Ownership interest held by the group (in %) as at		Accounting method	Carrying amount as at	
		31 March 2023	31 March 2022		31 March 2023	31 March 2022
Meja Urja Nigam Private Ltd.	India	**50.00**	50.00	Equity method	**1,707.23**	1,629.89
Transformers and Electricals Kerala Ltd. **$	India	**44.60**	44.60	Equity method	**7.41**	23.46
National High Power Test Laboratory Private Ltd. $	India	**20.00**	20.00	Equity method	**-**	14.24
Energy Efficiency Services Ltd. $	India	**33.334**	47.15	Equity method	**292.49**	423.09
CIL NTPC Urja Private Ltd.	India	**50.00**	50.00	Equity method	**0.07**	0.01
Anushakti Vidhyut Nigam Ltd. $	India	**49.00**	49.00	Equity method	**-**	0.01
Hindustan Urvarak and Rasayan Ltd.	India	**29.67**	29.67	Equity method	**2,269.89**	1,621.43
Jhabua Power Ltd. (w.e.f. 5 September 2022)	India	**50.00**		Equity method	**2,021.21**	-
KSK Dibbin Hydro Power Private Ltd. (Joint venture of Subsidiary Company, NEEPCO Ltd.) $	India	**30.00**	30.00	Equity method	**4.43**	4.45
Trincomalee Power Company Ltd. $	Srilanka	**50.00**	50.00	Equity method	**0.41**	0.55
Bangladesh-India Friendship Power Company Pvt.Ltd. $	Bangladesh	**50.00**	50.00	Equity method	**1,050.63**	652.66

$ The financial statements are un-audited and certified by the management of respective companies and have been considered for Consolidated Financial Statements of the Group. The figures appearing in their respective financial statements may change upon completion of their audit.

*The Board of Directors of the Company in its meeting held on 28 April 2016 accorded in principle approval for withdrawal from NTPC BHEL Power Projects Private Ltd. (NBPPL), a joint venture of the Company. A meeting was held on 3 October 2022 at MOP to discuss the way forward for NBPPL. In the meeting, it was decided that the process of winding up of NBPPL will be taken up by both the promoters after the completion of balance on going work at one of the projects of the Company.

**The Board of Directors of the Company in its meeting held on 28 April 2016 accorded in principle approval for withdrawal from Transformers and Electricals Kerala Ltd. (TELK), a joint venture of the Company. GOI has accorded its approval for exit of NTPC from the joint venture. The decison of the Board of Directors of NTPC Limited and approval of GOI has been conveyed to the Government of Kerala (GoK) (JV Partner) & TELK. The GoK has requested NTPC to review the decision. NTPC again took up the matter with GoK who has now in principally agreed for the exit of NTPC and NTPC has written a letter to Chief Secretary, GoK on 17 March 2023 for expediting the process of exit of the Company from TELK.

(i) NTPC BHEL Power Projects Pvt Ltd (NTPC BHEL) (joint venture company) has accumulated losses due to which the Group has recognised accumulated losses equal to the cost of investments of NTPC BHEL as at 31 March 2023. The Group has unrecognised share of losses in respect of NTPC BHEL amounting to ₹ **91.73 crore** as at 31 March 2023 (31 March 2022: ₹ 99.38 crore) as per their unaudited financial statements for the year ended 31 March 2023.

(ii) National High Power Test Laboratory Private Ltd(NHPTL) (joint venture company) has accumulated losses due to which the Group has recognised accumulated losses equal to the cost of investments of NHPTL as at 31 March 2023. The Group has further unrecognised share of losses in respect of NTPC BHEL amounting to ₹ **8.02 crore** as at 31 March 2023 (31 March 2022: ₹ Nil) as per their unaudited financial statements for the year ended 31 March 2023.

(iii) Summarised financial information of joint venture companies of the group

The tables below provide summarised financial information of joint venture companies of the group. The information disclosed reflects the amounts presented in the financial statements of the relevant joint venture companies and not the group's share of those amounts.

Summarised balance sheet

₹ Crore

Particulars	Utility Powertech Ltd.		NTPC-GE Power Services Pvt. Ltd.		NTPC-SAIL Power Company Ltd.		NTPC Tamil Nadu Energy Company Ltd.	
	As at 31 March 2023	As at 31 March 2022	As at 31 March 2023	As at 31 March 2022	As at 31 March 2023	As at 31 March 2022	As at 31 March 2023	As at 31 March 2022
Current assets								
Cash and cash equivalents	**30.66**	51.27	**31.11**	35.01	**32.80**	45.07	**264.74**	13.72
Other assets	**458.55**	545.72	**172.56**	132.44	**922.20**	630.00	**1,773.09**	2,470.66
Total current assets	**489.21**	596.99	**203.67**	167.45	**955.00**	675.07	**2,037.83**	2,484.38
Total non-current assets	**196.67**	73.25	**24.28**	20.67	**4,621.31**	4,606.97	**7,493.20**	6,570.81
Current liabilities								
Financial liabilities (excluding trade payables and provisions)	**213.82**	183.14	**1.14**	0.80	**1,136.32**	1,089.62	**1,960.91**	1,395.43
Other liabilities	**219.97**	265.75	**193.10**	169.37	**402.65**	263.16	**549.30**	519.49
Total current liabilities	**433.79**	448.89	**194.24**	170.17	**1,538.97**	1,352.78	**2,510.21**	1,914.92
Non-current liabilities								
Financial liabilities (excluding trade payables and provisions)	**14.64**	3.87	**0.15**	0.70	**1,152.93**	865.98	**3,119.56**	3,401.84
Other liabilities	**31.39**	28.14	**14.95**	2.41	**6.20**	6.07	**487.64**	179.51
Total non-current liabilities	**46.03**	32.01	**15.10**	3.11	**1,159.13**	872.05	**3,607.20**	3,581.35
Regulatory deferral account debit balances	**-**	-	**-**	-	**-**	-	**489.50**	187.78
Regulatory deferral account credit balances	**-**	-	**-**	-	**-**	-		-
Share application money pending allotment	**-**	-	**-**	-	**-**	-	**60.00**	30.00
Net assets	**206.06**	189.34	**18.61**	14.84	**2,878.21**	3,057.21	**3,843.12**	3,716.70

Reconciliation to carrying amounts

₹ Crore

Particulars	Utility Powertech Ltd.		NTPC-GE Power Services Pvt. Ltd.		NTPC-SAIL Power Company Ltd.		NTPC Tamil Nadu Energy Company Ltd.	
	As at 31 March 2023	As at 31 March 2022	As at 31 March 2023	As at 31 March 2022	As at 31 March 2023	As at 31 March 2022	As at 31 March 2023	As at 31 March 2022
Opening net assets	**189.34**	178.86	**14.84**	6.14	**3,057.21**	2,899.26	**3,716.70**	3,395.00
Profit/(loss) for the year	**32.61**	40.82	**5.99**	5.99	**470.34**	357.99	**848.21**	798.11
Other comprehensive income/(expense)	**4.11**	4.66	**(0.26)**	(0.02)	**0.66**	(0.04)	**0.03**	0.01
Dividends paid	**(20.00)**	(35.00)	**-**	-	**(650.00)**	(200.00)	**(750.66)**	(488.38)
Other adjustments*	**-**	-	**(1.96)**	2.73			**28.84**	11.96
Closing net assets	**206.06**	189.34	**18.61**	14.84	**2,878.21**	3,057.21	**3,843.12**	3,716.70
Group's share in %	**50.00**	50.00	**50.00**	50.00	**50.00**	50.00	**50.00**	50.00
Group's share in INR	**103.03**	94.67	**9.31**	7.42	**1,439.11**	1,528.61	**1,921.56**	1,858.35
Goodwill/(Restricted reserves)/NCI	**-**	-		-	**-**	-	**(22.63)**	(8.21)
Carrying amount	**103.03**	94.67	**9.31**	7.42	**1,439.11**	1,528.61	**1,898.93**	1,850.14

* Includes adjustments on account of further investment by the joint venture partners and opening net worth changes

Summarised statement of profit and loss for the year ended

₹ Crore

Particulars	Utility Powertech Ltd.		NTPC-GE Power Services Pvt. Ltd.		NTPC-SAIL Power Company Ltd.		NTPC Tamil Nadu Energy Company Ltd.	
	31 March 2023	31 March 2022	31 March 2023	31 March 2022	31 March 2023	31 March 2022	31 March 2023	31 March 2022
Revenue from operations	**1,619.80**	1,593.85	**439.64**	269.84	**3,638.67**	2,938.36	**5,151.89**	4,222.06
Other income	**15.78**	14.53	**0.94**	0.59	**69.07**	16.98	**722.40**	702.94
Depreciation and amortisation	**1.37**	1.38	**11.31**	1.96	**76.05**	138.71	**512.83**	500.81
Interest expense	**6.03**	4.55	**2.61**	2.35	**99.05**	9.10	**279.20**	392.93
Income tax expense/(income)	**11.82**	13.04	**2.79**	(0.47)	**79.25**	13.03	**502.65**	326.05
Profit/(loss) for the year	**32.61**	40.82	**5.99**	5.99	**470.34**	357.99	**848.21**	798.11
Other comprehensive income/(expense)	**4.11**	4.66	**(0.26)**	(0.02)	**0.66**	(0.04)	**0.03**	0.01
Total comprehensive income/(expense)	**36.72**	45.48	**5.73**	5.97	**471.00**	357.95	**848.24**	798.12
Dividends received		-		-	**-**	-		-

Details of Capital Expenditure for the year ended

₹ Crore

Particulars	Utility Powertech Ltd.		NTPC-GE Power Services Pvt. Ltd.		NTPC-SAIL Power Company Ltd.		NTPC Tamil Nadu Energy Company Ltd.	
	31 March 2023	31 March 2022	31 March 2023	31 March 2022	31 March 2023	31 March 2022	31 March 2023	31 March 2022
(a) Addition to Property, Plant & Equipment, Intangible Assets, etc	**0.54**	0.76	**-**	-	**48.32**	30.97	**179.53**	150.51
(b) Changes in Capital work in progress (+/-)	**11.07**	3.85	**-**	-	**(465.14)**	(1,551.57)	**375.71**	96.00
(c) Changes in Capital advance, if shown separately (+/-)	**(0.12)**	1.34	**-**	-	**(3.82)**	(7.08)	**(45.48)**	(21.54)
Total	**11.49**	5.95	**-**	-	**(420.64)**	(1,527.68)	**509.76**	224.97

Summarised balance sheet

₹ Crore

Particulars	Aravali Power Company Private Ltd.		NTPC BHEL Power Projects Private Ltd.		Meja Urja Nigam Private Ltd.		Transformers and Electricals Kerala Ltd.	
	As at 31 March 2023	As at 31 March 2022	As at 31 March 2023	As at 31 March 2022	As at 31 March 2023	As at 31 March 2022	As at 31 March 2023	As at 31 March 2022
Current assets								
Cash and cash equivalents	**8.53**	277.33	**1.42**	1.17	**53.77**	191.59	**2.96**	0.01
Other assets	**2,746.89**	2,847.47	**402.77**	363.59	**1,593.18**	1,274.50	**170.60**	190.95
Total current assets	**2,755.42**	3,124.80	**404.19**	364.76	**1,646.95**	1,466.09	**173.56**	190.96
Total non-current assets	**6,511.71**	6,707.13	**198.89**	205.92	**10,713.66**	10,930.51	**33.40**	33.06
Current liabilities								
Financial liabilities (excluding trade payables and provisions)	**1,195.42**	1,129.56	**24.66**	25.20	**1,974.43**	2,081.45	**93.95**	83.59
Other liabilities	**409.06**	218.04	**677.39**	546.66	**277.28**	129.58	**74.69**	87.83
Total current liabilities	**1,604.48**	1,347.60	**702.05**	571.86	**2,251.71**	2,211.03	**168.64**	171.42
Non-current liabilities								
Financial liabilities (excluding trade payables and provisions)	**2,087.89**	2,491.30	**-**	-	**6,578.75**	6,873.02	**2.60**	-
Other liabilities	**3.42**	10.87	**84.49**	197.57	**0.10**	-	**19.11**	
Total non-current liabilities	**2,091.31**	2,502.17	**84.49**	197.57	**6,578.85**	6,873.02	**21.71**	-
Regulatory deferral account debit balances	**40.97**	56.01	**-**	-	**52.14**	63.23	**-**	-
Regulatory deferral account credit balances	**443.02**	424.96	**-**	-	**132.50**	69.52	**-**	-
Share application money pending allotment	**-**	-	**-**	-	**15.56**	34.41	**-**	-
Net assets	**5,169.29**	5,613.21	**(183.46)**	(198.75)	**3,434.13**	3,271.85	**16.61**	52.60

Reconciliation to carrying amounts

₹ Crore

Particulars	Aravali Power Company Private Ltd.		NTPC BHEL Power Projects Private Ltd.		Meja Urja Nigam Private Ltd.		Transformers and Electricals Kerala Ltd.	
	As at 31 March 2023	As at 31 March 2022	As at 31 March 2023	As at 31 March 2022	As at 31 March 2023	As at 31 March 2022	As at 31 March 2023	As at 31 March 2022
Opening net assets	**5,613.21**	6,234.35	**(198.75)**	(170.08)	**3,271.85**	2,939.70	**52.60**	78.48
Profit/(loss) for the year	**496.47**	823.11	**(5.49)**	(40.52)	**85.87**	278.01	**2.89**	(25.88)
Other comprehensive income/(expense)	**0.29**	0.29	**-**	-	**-**	-	**-**	-
Dividends paid	**(950.00)**	(1,500.00)		-				-
Other adjustments*	**9.32**	55.46	**20.78**	11.85	**76.41**	54.14	**(38.88)**	
Closing net assets	**5,169.29**	5,613.21	**(183.46)**	(198.75)	**3,434.13**	3,271.85	**16.61**	52.60
Group's share in %	**50.00**	50.00	**50.00**	50.00	**50.00**	50.00	**44.60**	44.60
Group's share in INR	**2,584.65**	2,806.61	**-**	-	**1,717.07**	1,635.93	**7.41**	23.46
Goodwill/(Restricted reserves)/NCI	(136.71)	(135.10)	**-**	-	**(9.84)**	(6.04)		-
Carrying amount	**2,447.94**	2,671.51	**-**	-	**1,707.23**	1,629.89	**7.41**	23.46

* Includes adjustments on account of further investment by the joint venture partners and opening net worth changes

Summarised statement of profit and loss for the year ended

₹ Crore

Particulars	Aravali Power Company Private Ltd.		NTPC BHEL Power Projects Private Ltd.		Meja Urja Nigam Private Ltd.		Transformers and Electricals Kerala Ltd.	
	31 March 2023	31 March 2022	31 March 2023	31 March 2022	31 March 2023	31 March 2022	31 March 2023	31 March 2022
Revenue from operations	5,263.56	4,233.53	44.45	24.06	3,809.81	3,470.80	183.10	140.48
Other income	112.92	216.20	2.00	0.28	39.44	53.23	9.08	0.91
Depreciation and amortisation	420.73	422.94	5.79	5.81	525.96	493.50	1.00	1.23
Interest expense	166.53	186.70	0.17	0.94	562.01	594.58	8.22	7.71
Income tax expense/(income)	96.74	96.22	3.69	(13.57)	(75.16)	159.93		-
Profit/(loss) for the year	496.47	823.11	(5.49)	(40.52)	85.87	278.01	2.89	(25.88)
Other comprehensive income/(expense)	0.29	0.29	-	-				
Total comprehensive income/(expense)	496.76	823.40	(5.49)	(40.52)	85.87	278.01	2.89	(25.88)
Dividends received		-	-	-	-	-		-

Details of Capital Expenditure for the year ended

₹ Crore

Particulars	Aravali Power Company Private Ltd.		NTPC BHEL Power Projects Private Ltd.		Meja Urja Nigam Private Ltd.		Transformers and Electricals Kerala Ltd.	
	31 March 2023	31 March 2022	31 March 2023	31 March 2022	31 March 2023	31 March 2022	31 March 2023	31 March 2022
(a) Addition to Property, Plant & Equipment, Intangible Assets, etc	49.79	26.54	-	-	213.89	184.50	-	-
(b) Changes in Capital work in progress (+/-)	104.87	92.70	-	-	55.38	81.83	-	-
(c) Changes in Capital advance, if shown separately (+/-)	(1.16)	(9.77)	-	-	(18.55)	12.45	-	-
Total	153.50	109.47	-	-	250.72	278.78	-	-

Summarised balance sheet

₹ Crore

Particulars	National High Power Test Laboratory Private Ltd.		Energy Efficiency Services Ltd.		CIL NTPC Urja Private Ltd.		Anushakti Vidhyut Nigam Ltd.	
	As at 31 March 2023	As at 31 March 2022	As at 31 March 2023	As at 31 March 2022	As at 31 March 2023	As at 31 March 2022	As at 31 March 2023	As at 31 March 2022
Current assets								
Cash and cash equivalents	7.67	2.58	521.29	724.05	0.08	0.03	0.01	0.02
Other assets	3.41	3.15	4,781.31	4,713.42	0.10	-		-
Total current assets	11.08	5.73	5,302.60	5,437.47	0.18	0.03	0.01	0.02
Total non-current assets	225.13	328.61	5,106.99	4,694.25	-	-		-
Current liabilities								
Financial liabilities (excluding trade payables and provisions)	94.84	65.60	3,606.46	2,997.96	-	-	-	-
Other liabilities	9.06	9.69	1,434.93	1,255.68	0.04	0.01	-	-
Total current liabilities	103.90	75.29	5,041.39	4,253.64	0.04	0.01	-	-
Non-current liabilities								
Financial liabilities (excluding trade payables and provisions)	171.91	187.05	4,310.02	4,484.33	-	-	-	-
Other liabilities	0.50	0.80	135.82	124.52	-	-	-	-
Total non-current liabilities	172.41	187.85	4,445.84	4,608.85	-	-	-	-
Regulatory deferral account debit balances	-	-	-	-	-	-	-	-
Regulatory deferral account credit balances	-	-	-	-	-	-	-	-
Share application money pending allotment	-	-	-	-	-	-	-	-
Net assets	(40.10)	71.20	922.36	1,269.23	0.14	0.02	0.01	0.02

Reconciliation to carrying amounts

₹ Crore

Particulars	National High Power Test Laboratory Private Ltd.		Energy Efficiency Services Ltd.		CIL NTPC Urja Private Ltd.		Anushakti Vidhyut Nigam Ltd.	
	As at 31 March 2023	As at 31 March 2022	As at 31 March 2023	As at 31 March 2022	As at 31 March 2023	As at 31 March 2022	As at 31 March 2023	As at 31 March 2022
Opening net assets	**71.20**	91.08	**1,269.23**	1,133.84	**0.02**	0.03	**0.02**	0.02
Profit/(loss) for the year	**(111.30)**	(20.03)	**(331.74)**	(139.99)	**0.12**	(0.01)	**(0.01)**	-
Other comprehensive income/(expense)	**-**	-	**7.42**	(0.91)	**-**	-	**-**	-
Dividends paid		-		-		-		-
Other adjustments*		0.15	**(22.55)**	276.29		-		-
Closing net assets	**(40.10)**	71.20	**922.36**	1,269.23	**0.14**	0.02	**0.01**	0.02
Group's share in %	**20.00**	20.00	**33.334**	33.33	**50.00**	50.00	**49.00**	49.00
Group's share in INR	**-**	14.24	**307.46**	423.09	**0.07**	0.01	**0.00**	0.01
Goodwill/(Restricted reserves)/NCI	**-**	-	**(14.97)**	-		-		-
Carrying amount	**-**	14.24	**292.49**	423.09	**0.07**	0.01	**-**	0.01

* Includes adjustments on account of further investment by the joint venture partners and opening net worth changes

Summarised statement of profit and loss for the year ended

₹ Crore

Particulars	National High Power Test Laboratory Private Ltd.		Energy Efficiency Services Ltd.		CIL NTPC Urja Private Ltd.		Anushakti Vidhyut Nigam Ltd.	
	31 March 2023	31 March 2022	31 March 2023	31 March 2022	31 March 2023	31 March 2022	31 March 2023	31 March 2022
Revenue from operations	**20.06**	14.65	**2,373.39**	1,506.42	**0.15**	-		-
Other income	**0.12**	0.38	**75.40**	60.70	**-**	-		-
Depreciation and amortisation	**8.61**	8.51	**756.06**	661.78	**-**	-	**0.01**	-
Interest expense	**20.96**	19.17	**462.88**	390.52	**-**	-		-
Income tax expense/(income)		-	**(58.53)**	(64.03)	**-**	-		-
Profit/(loss) for the year	**(111.30)**	(20.03)	**(331.74)**	(139.99)	**0.12**	(0.01)	**(0.01)**	-
Other comprehensive income/(expense)		-	**7.42**	(0.91)		-		-
Total comprehensive income/(expense)	**(111.30)**	(20.03)	**(324.32)**	(140.90)	**0.12**	(0.01)	**(0.01)**	-
Dividends received	**-**	-	**-**	-	**-**	-	**-**	-

Details of Capital Expenditure for the year ended

₹ Crore

Particulars	National High Power Test Laboratory Private Ltd.		Energy Efficiency Services Ltd.		CIL NTPC Urja Private Ltd.		Anushakti Vidhyut Nigam Ltd.	
	31 March 2023	31 March 2022	31 March 2023	31 March 2022	31 March 2023	31 March 2022	31 March 2023	31 March 2022
(a) Addition to Property, Plant & Equipment, Intangible Assets, etc	**-**	-	**615.45**	741.19	**-**	-	**-**	-
(b) Changes in Capital work in progress (+/-)	**-**	-	**154.85**	(123.12)	**-**	-	**-**	-
(c) Changes in Capital advance, if shown separately (+/-)	**-**	-	**(65.98)**	26.84	**-**	-	**-**	-
Total	**-**	-	**704.32**	644.91	**-**	-	**-**	-

Summarised balance sheet

₹ Crore

Particulars	Hindustan Urvarak and Rasayan Ltd.		KSK Dibbin Hydro Power Private Ltd.		Trincomalee Power Company Ltd.		Bangladesh-India Friendship Power Company Pvt. Ltd.		Jhabua Power Ltd.**	
	As at 31 March 2023	As at 31 March 2022	As at 31 March 2023	As at 31 March 2022	As at 31 March 2023	As at 31 March 2022	As at 31 March 2023	As at 31 March 2022	As at 31 March 2023	As at 31 March 2022
Current assets										
Cash and cash equivalents	**171.86**	46.73	**0.01**	0.04	**0.59**	0.04	**303.08**	109.58	**23.16**	-
Other assets	**2,879.98**	50.54	**5.05**	5.74	**0.14**	0.01	**1,086.26**	4.61	**1,509.81**	-
Total current assets	**3,051.84**	97.27	**5.06**	5.78	**0.73**	0.05	**1,389.34**	114.19	**1,532.97**	-
Total non-current assets	**24,708.98**	20,947.44	**120.17**	117.51	**1.26**	1.37	**14,003.81**	11,961.30	**3,729.99**	
Current liabilities										
Financial liabilities (excluding trade payables and provisions)	**4,722.12**	1,781.41	**1.58**	1.59	**0.01**	-	**1,239.83**	652.71	**100.00**	-
Other liabilities	**789.46**	312.55	**0.55**	0.53	**0.05**	0.04	**410.24**	8.95	**53.72**	-
Total current liabilities	**5,511.58**	2,093.96	**2.13**	2.12	**0.06**	0.04	**1,650.07**	661.66	**153.72**	-

Summarised balance sheet ₹ Crore

Particulars	Hindustan Urvarak and Rasayan Ltd.		KSK Dibbin Hydro Power Private Ltd.		Trincomalee Power Company Ltd.		Bangladesh-India Friendship Power Company Pvt. Ltd.		Jhabua Power Ltd.**	
	As at 31 March 2023	As at 31 March 2022	As at 31 March 2023	As at 31 March 2022	As at 31 March 2023	As at 31 March 2022	As at 31 March 2023	As at 31 March 2022	As at 31 March 2023	As at 31 March 2022
Non-current liabilities										
Financial liabilities (excluding trade payables and provisions)	**13,786.79**	12,370.78	**15.19**	13.20	**1.11**	0.29	**11,641.83**	10,108.51	**1,066.83**	-
Other liabilities	**1,167.43**	1,223.63	**0.04**	0.05	**-**	-	**-**	-	**-**	-
Total non-current liabilities	**14,954.22**	13,594.41	**15.23**	13.25	**1.11**	0.29	**11,641.83**	10,108.51	**1,066.83**	-
Regulatory deferral account debit balances		-	**-**	-	**-**	-	**-**	-	**-**	-
Regulatory deferral account credit balances		-	**-**	-	**-**	-	**-**	-	**-**	-
Share application money pending allotment		-	**-**	-	**-**	-	**-**	-	**-**	-
Net assets	**7,295.02**	5,356.34	**107.87**	107.92	**0.82**	1.09	**2,101.25**	1,305.32	**4,042.41**	-

Reconciliation to carrying amounts ₹ Crore

Particulars	Hindustan Urvarak and Rasayan Ltd.		KSK Dibbin Hydro Power Private Ltd.		Trincomalee Power Company Ltd.		Bangladesh-India Friendship Power Company Pvt. Ltd.		Jhabua Power Ltd. **	
	As at 31 March 2023	As at 31 March 2022	As at 31 March 2023	As at 31 March 2022	As at 31 March 2023	As at 31 March 2022	As at 31 March 2023	As at 31 March 2022	As at 31 March 2023	As at 31 March 2022
Opening net assets	**5,356.34**	3,807.42	**107.92**	107.97	**1.09**	2.12	**1,305.32**	1,112.81	**4,225.77**	-
Profit/(loss) for the year	**(61.04)**	(19.84)	**(0.06)**	(0.05)	**(0.27)**	(0.41)	**(40.42)**	0.01	**17.98**	-
Other comprehensive income/(expense)	**0.10**	-	**-**	-	**-**	-	**-**	-	**(1.34)**	-
Dividends paid	**-**	-				-		-	**(200.00)**	-
Other adjustments*	**1,999.62**	1,568.76	**0.01**			(0.62)	**836.35**	192.50		
Closing net assets	**7,295.02**	5,356.34	**107.87**	107.92	**0.82**	1.09	**2,101.25**	1,305.32	**4,042.41**	-
Group's share in %	**29.67**	29.67	**30.00**	30.00	**50.00**	50.00	**50.00**	50.00	**50.00**	-
Group's share in INR	**2,164.43**	1,589.23	**32.36**	32.38	**0.41**	0.55	**1,050.63**	652.66	**2,021.21**	-
Goodwill/(Restricted reserves)/NCI	105.46	32.20	(27.93)	(27.93)		-	**-**	-		-
Carrying amount	**2,269.89**	1,621.43	**4.43**	4.45	**0.41**	0.55	**1,050.63**	652.66	**2,021.21**	-

* Includes adjustments on account of further investment by the joint venture partners and opening net worth changes

Summarised statement of profit and loss for the year ended ₹ Crore

Particulars	Hindustan Urvarak and Rasayan Ltd.		KSK Dibbin Hydro Power Private Ltd.		Trincomalee Power Company Ltd.		Bangladesh-India Friendship Power Company Pvt. Ltd.		Jhabua Power Ltd.**	
	31 March 2023	31 March 2022	31 March 2023	31 March 2022	31 March 2023	31 March 2022	31 March 2023	31 March 2022	31 March 2023	31 March 2022
Revenue from operations	**4,401.20**	-		-		-	**708.12**	-	**886.36**	-
Other income	**48.00**	6.29	**0.25**	0.23	**0.07**	-	**1.88**		**19.24**	-
Depreciation and amortisation	**279.98**	4.06	**0.21**	0.19		-	**160.01**		**102.81**	-
Interest expense	**392.63**	0.55		-		-	**124.70**		**58.06**	-
Income tax expense/(income)	**(31.82)**	1.01	**0.06**	0.06		-	**-**		**-**	-
Profit/(loss) for the year	**(61.04)**	(19.84)	**(0.06)**	(0.05)	**(0.27)**	(0.41)	**(40.42)**	0.01	**17.98**	-
Other comprehensive income/(expense)	**0.10**			-		-		-	**(1.34)**	-
Total comprehensive income/(expense)	**(60.94)**	(19.84)	**(0.06)**	(0.05)	**(0.27)**	(0.41)	**(40.42)**	0.01	**16.64**	-
Dividends received		-	**-**	-		-		-		-

** Opening Net assets as on acqusition date (5 September, 2022) & Statement of profit & loss considered for post acquisition period (05 September 2022 -31 March 2023)

Details of Capital Expenditure for the year ended ₹ Crore

Particulars	Hindustan Urvarak and Rasayan Ltd.		KSK Dibbin Hydro Power Private Ltd.		Trincomalee Power Company Ltd.		Bangladesh-India Friendship Power Company Pvt. Ltd.		Jhabua Power Ltd.	
	31 March 2023	31 March 2022	31 March 2023	31 March 2022	31 March 2023	31 March 2022	31 March 2023	31 March 2022	31 March 2023	31 March 2022
(a) Addition to Property, Plant & Equipment, Intangible Assets, etc	**7,634.06**	22.14	**0.39**	0.08	**-**	-	**8,780.48**	35.77	**5.59**	-
(b) Changes in Capital work in progress (+/-)	**(2,912.63)**	4,217.18	**2.96**	2.68	**-**	-	**(6,513.60)**	2,092.90	**4.91**	-
(c) Changes in Capital advance, if shown separately (+/-)	**(30.23)**	(228.00)	**-**	-	**-**	-	**(195.15)**	(212.55)	**-**	-
Total	**4,691.20**	4,011.32	**3.35**	2.76	**-**	-	**2,071.73**	1,916.12	**10.50**	-

(iv) Commitments and contingent liabilities in respect of joint venture companies

The Group has commitments of ₹ **1,143.96 crore** (31 March 2022: ₹ 2,369.13 crore) towards further investment in the joint venture companies as at 31 March 2023.

The Group has commitments of bank guarantee of 0.50 % of total contract price to be undertaken by NTPC-BHEL Power Projects Private Ltd. limited to a cumulative amount of ₹ **75.00 crore** (31 March 2022: ₹ 75.00 crore).

The Group has agreed to provide unconditional and irrevocable financial support to NTPC GE Power Services Ltd. (a joint venture company) for meeting financial qualifying requirement for execution of Flue Gas De-sulfurisation (FGD) projects in India. Such support shall be provided by way of Letter of Undertaking to a cumulative exposure up to the award value of the contract(s) not exceeding ₹ 600.00 crore and cumulative exposure of the Company, in proportion to shareholding, would not exceed ₹ **300.00 crore** (31 March 2022: ₹300.00 crore).

The Group has agreed to provide sponsor undertaking to lenders for additional term loan upto ₹ **1,908.38 crore** (31 March 2022: ₹ 1,908.38) for implementation of various projects of Hindustan Urvarak and Rasayan Limited, a Joint Venture Company.

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Contingent liabilities		
Share of contingent liabilities incurred jointly with other investors of the joint venture companies	**1,781.82**	2,065.29
Possible reimbursements	**223.34**	383.27
Capital commitments	**2,199.37**	191.64

(v) Details of significant restrictions

In respect of investments in joint venture companies, the Group has restrictions for their disposal as under:

₹ Crore

Name of the joint venture company	Period of restrictions for disposal of investments as per related agreements	Amount invested as at	
		31 March 2023	31 March 2022
Transformers and Electricals Kerala Ltd.	3 years from the date of acquisition (i.e.19.06.2009) or upgradation capacity enhancement scheme whichever is later. Also refer Note 6 (f).	**31.34**	31.34
NTPC BHEL Power Projects Private Ltd.	3 years from the date of completion of first EPC contract of single order value of not less than ₹500 crore or till further such time as mutually agreed. Also refer Note 6 (e).	**50.00**	50.00
National High Power Test Laboratory Private Ltd.	5 years from the date of incorporation (i.e. 22.05.2009) or completion of project whichever is later. Also refer Note 6 (d).	**30.40**	30.40
CIL NTPC Urja Private Ltd.	5 years from the date of incorporation (i.e. 27.04.2010) or commercial operation whichever is later.	**0.08**	0.08
Trincomalee Power Company Ltd.	12 years from the initial operation date.	**15.64**	15.20
Bangladesh-India Friendship Power Company Private Ltd.	15 years from the date of commercial operation date.	**1,162.02**	620.38

₹ Crore

Name of the joint venture company	Period of restrictions for disposal of investments as per related agreements	Amount invested as at 31 March 2023	Amount invested as at 31 March 2022
Hindustan Urvarak & Rasayan Ltd.	(a) 5 years from the date of incorporation (15.06.2016) or 2 years from commercial operation date of any one of the proposed projects at Sindri, Gorakhpur and Barauni or date of allotment of shares for first time, whichever is later. (b) As per Sponsors Support undertaking , NTPC shall jointly and severally with the other sponsors provide additional funds to meet all cost overrun incurred/to be incurred in relation to the Project. Further, NTPC shall jointly with the other sponsors, retain 51% of total equity share capital of the JV and management control until the final settlement date of the loan facility (door to door tenure of 15 years). (Also refer Note 6(g))	**2,295.95**	1,629.42
Jhabua Power Limited	3 years from the date of transfer (05.09.2022)	**325.00**	-
Total		**3,910.43**	2,376.82

72. Disclosure as per Ind AS 114, 'Regulatory Deferral Accounts'

(i) Nature of rate regulated activities

The Group is mainly engaged in generation and sale of electricity. The price to be charged by the Group for electricity sold to its beneficiaries is determined by the CERC which provides extensive guidance on the principles and methodologies for determination of the tariff for the purpose of sale of electricity. The tariff is based on allowable costs like interest, depreciation, operation & maintenance expenses, etc. with a stipulated return.

This form of rate regulation is known as cost-of-service regulations which provide the Group to recover its costs of providing the goods or services plus a fair return.

(ii) Recognition and measurement

(a) As per the CERC Tariff Regulations, any gain or loss on account of exchange risk variation during the construction period shall form part of the capital cost till the declaration of Commercial Operation Date (COD) to be considered for calculation of tariff. The CERC during the past period in tariff orders for various stations has allowed exchange differences incurred during the construction period in the capital cost. Accordingly, exchange differences arising during the construction period is within the scope of Ind AS 114.

Further, any loss or gain on account of exchange differences towards interest payment and loan repayment in respect of the foreign currency loans taken for construction of projects shall be recoverable from/payable to beneficiaries on actual payment basis, as per the said Regulations. Accordingly, such exchange differences are also within the scope of Ind AS 114.

In view of the above, exchange differences arising from settlement/translation of monetary item denominated in foreign currency to the extent recoverable from or payable to the beneficiaries in subsequent periods as per CERC Tariff Regulations are recognized on an undiscounted basis as 'Regulatory deferral account debit/credit balance' by credit/debit to 'Net Movements in Regulatory deferral account balances' and adjusted from the year in which the same becomes recoverable from or payable to the beneficiaries. Accordingly, an amount of ₹ **1,021.81 crore** for the year ended as at 31 March 2023 has been accounted for as 'Regulatory deferral account debit balance' (31 March 2022: (-) ₹ 807.87 crore accounted as 'Regulatory deferral account debit balance'.). Further, an amount of ₹ **52.01 crore** (31 March 2022: ₹ 35.82 crore) has been realized/recognized during the year.

(b) Revision of pay scales of employees of PSEs w.e.f. 1 January 2017 has been implemented based on the guidelines issued by Department of Public Enterprises (DPE). The guidelines provide payment of superannuation benefits @ 30% of basic + DA to be provided to the employees of CPSEs which includes gratuity at the enhanced ceiling of ₹ 0.20 crore from the existing ceiling of ₹ 0.10 crore. As per Proviso 8(3) of Terms and Conditions of Tariff Regulations 2014 applicable for the period 2014-19, truing up exercise in respect of Change in Law or compliance of existing law will be taken up by CERC. The increase in gratuity limit from ₹ 0.10 crore to ₹ 0.20 crore falls under the category of 'Change in law' and a regulatory asset has been created. The Payment of Gratuity Act, 1972 has since been amended and the ceiling has been increased to ₹ 0.20 crore.

Considering the methodology followed by the CERC for allowing impact of the previous pay revision, various tariff orders issued by the CERC under Regulations, 2014 and the above-mentioned provision related to the change in law of CERC Tariff Regulations, 2014, a regulatory asset has been created upto 31 March 2019 (Regulatory deferral account debit balance) towards the increase in O&M expenditure due to the pay revision. This was taken up with CERC through truing up tariff petition. CERC has been allowing the same progressively and during the year, the expenditure has been allowed in respect of few stations and accordingly an amount of ₹ **94.56 crore** (31 March 2022: ₹ 127.02 crore) has been adjusted and an amount of (-) ₹ **48.43 crore** (31 March 2022: ₹ 359.58 crore) has been reversed. Balance orders are expected in the coming years.

(c) CERC Regulations provide that deferred tax liability upto 31 March 2009 shall be recovered from the beneficiaries as and when the same gets materialized. Further, for the period commencing from 1 April 2014, CERC Tariff Regulations provide for grossing up of the return on equity based on effective tax rate for the financial year based on the actual tax paid during the year on the generation income. The Company has recognised a regulatory deferral account debit balance for such deferred tax liabilities (net) in the financial statements. Regulatory deferral account debit balance for deferred tax liability for the period commencing from 1 April 2014 will be reversed in future years when the related deferred tax liability forms part of current tax. Accordingly, an amount of ₹ **1,796.22 crore** (31 March 2022: ₹ 1,753.50 crore) for the year ended 31 March 2023 has been accounted for as 'Regulatory deferral account debit balance'.

(d) The petition filed by the Company before CERC for reimbursement of the expenditure on transportation of ash, was favourably considered by CERC vide order dated 5 November 2018 and it was allowed to reimburse the actual additional expenditure incurred towards transportation of ash in terms of MOEF notification under change in law, as additional O&M expenses, w.e.f. 25 January 2016 subject to prudence check. Keeping in view the above, regulatory asset was created towards ash transportation expenses in respect of stations where there was shortfall in revenue from sale of ash over and above ash transportation expenses till 2021-22. During the year, CERC vide order dated 28.10.2022 has allowed provisional monthly billing of Ash transportation expenditure from 1 April 2022 onwards and reimbursement of expenditure already incurred from 1 April 2019 till 31 March 2022. Accordingly, an amount of ₹ 3,090.42 crore has been adjusted with revenue from operations pertaining to the period from 1 April 2019. Further, an amount of ₹ 90.18 crore has been adjusted/realised based on orders received from CERC during the year relating to period prior to 1 April 2019. Balance amount of ₹ 73.11 crore shall be reversed / adjusted upon receipt of tariff orders / true-up orders from CERC.

(e) CERC while determining the annual fixed cost of the Tuirial Hydro Electric Project (TrHEP) of NEEPCO, a subsidiary of the Company, for the period of 30.10.2017 to 31.03.2019 by CERC, allowed depreciation @2% for the said purposes in line with the decision of the Public Investment Board (PIB) of the Govt. of India. The rates and methodology as per the CERC tariff regulations based on which depreciation for TrHEP has been calculated and charged to the Statement of Profit & Loss vary from that allowed to recover through tariff as per the CERC order. Due to higher rate of depreciation as per the CERC regulations, depreciation charged for the first 12 (twelve) years of operation TrHEP will be more than that of the depreciation recoverable through tariff, which will be reversed in future periods during remaining period of normative life of the generating station. Accordingly, the lower depreciation realized during the earlier period of its operation will be recovered/adjusted during later period. In view of above, an amount of ₹ **41.14 crore** (31 March 2022: ₹ 41.18 crore) being the difference of depreciation to the extent recoverable/adjustable in future period has been recognized as Regulatory deferral account debit balances.

(iii) Risks associated with future recovery/reversal of regulatory deferral account balances:

(a) demand risk due to changes in consumer attitudes, the availability of alternative sources of supply

(b) regulatory risk on account of changes in regulations and submission or approval of a rate-setting application or the entity's assessment of the expected future regulatory actions.

(c) other risks including currency or other market risks, if any.

(iv) Reconciliation of the carrying amounts:

The regulated assets/liability recognized in the books to be recovered from or payable to beneficiaries in future periods are as follows:

a) **Regulatory deferral account debit balance - Note 23**

The regulatory assets recognized in the books to be recovered from the beneficiaries in future periods are as follows:

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
A. Opening balance	**13,199.17**	11,553.28
B. Additions during the year	**(269.07)**	2,008.89
C. Amount realized/recognized during the year	**(236.73)**	(218.42)
D. Regulatory deferral account balances recognized in the statement of profit and loss (B+C)	**(505.80)**	1,790.47
E. Adjustments during the year	**(144.71)**	(144.58)
F. Closing balance (A+D+E)	**12,548.66**	13,199.17

b) **Net movements in regulatory deferral account balances [I]**

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Exchange differences	**1,021.81**	(807.87)
Deferred tax	**1,796.22**	1,753.50
Ash transportation cost	**(3,079.81)**	1,492.47
Pay Revision	**(48.43)**	(359.58)
Arbitration cases	**-**	(110.81)
Others	**41.14**	41.18
Sub total (i)	**(269.07)**	2,008.89
Amount realized/ recognized during the year (ii)	**(236.73)**	(218.42)
Net movement in regulatory deferral account balances (i)-(ii)	**(505.80)**	1,790.47

c) **Tax on net movements in regulatory deferral account balances [II]**	**(92.68)**	303.99
d) **Total amount recognized in the statement of profit and loss during the year [I-II]**	**(413.12)**	1,486.48

The Company expects to recover the carrying amount of regulatory deferral account debit balance over the life of the projects.

73. Disclosure as per Ind AS 115, 'Revenue from contracts with customers'

I. Nature of goods and services

The revenue of the Group comprises of income from energy sales, sale of energy through trading, consultancy and other services. The following is a description of the principal activities:

(A) Revenue from energy sales

The major revenue of the Group comes from energy sales. The Group sells electricity to bulk customers, mainly electricity utilities owned by State Governments as well as private Discoms operating in States. Sale of electricity is generally made pursuant to long-term Power Purchase Agreements (PPAs) entered into with the beneficiaries.

Below are the details of nature, timing of satisfaction of performance obligations and significant payment terms under contracts for energy sales:

Product/ Service	Nature, timing of satisfaction of performance obligations and significant payment terms
Energy sales	The Group recognises revenue from contracts for energy sales over time as the customers simultaneously receive and consume the benefits provided by the Group. The tariff for computing revenue from energy sales is determined in terms of CERC Regulations as notified from time to time. The amount of revenue recognised for energy sales is adjusted for variable consideration, wherever applicable, which are estimated based on the historical data available with the Group. The amounts are billed on a monthly basis and are payable within contractually agreed credit period. In case of power station which are not governed by CERC tariff regulations, revenue is recognized based on agreement entered with beneficieries.

(B) Revenue from energy trading, consultancy and other services

(i) Sale of Energy through trading

(a) The Group is purchasing power from the developers and selling it to the Discoms on principal to principal basis.

Below are the details of nature, timing of satisfaction of performance obligations and significant payment terms under contracts for sale of energy through trading:

Product/ Service	Nature, timing of satisfaction of performance obligations and significant payment terms
Energy trading (principal to principal basis)	The Group recognises revenue from contracts for sale of energy through trading over time as the customers simultaneously receive and consume the benefits provided by the Group. The tariff for computing revenue from sale of energy through trading is determined as per the terms of the agreements. The amount of revenue recognised is adjusted for variable consideration, wherever applicable, which are estimated based on the historical data available with the Group. The amounts are billed on a monthly basis and are payable within contractually agreed credit period.

(b) For some of its revenue arrangements, the Group has determined that it is acting as an agent and has recognized revenue on such contracts net of power purchase cost based on the following factors:

a. Another party is primarily responsible for fulfilling the contract as the Group does not have the ability to direct the use of energy supplied or obtain benefits from supply of power.

b. The Group does not have inventory risk before or after the power has been delivered to customers as the power is directly supplied to customer.

c. The Group has no discretion in establishing the price for supply of power. The Group's consideration in these contracts is only based on the difference between sales price charged to procurer and purchase price given to supplier.

Below are the details of nature, timing of satisfaction of performance obligations and significant payment terms under contracts for sale of energy through trading on agency nature:

Product/ Service	Nature, timing of satisfaction of performance obligations and significant payment terms
Energy trading (agency nature)	The Group recognises revenue from such arrangements over time on net basis when the units of electricity are delivered to power procurers as the procurers simultaneously receive and consume the benefits from the Group's agency services. The amount of revenue recognised is adjusted for variable consideration, wherever applicable, which are estimated based on the historical data available with the Group. The amounts are billed as per the terms of the contracts.

(c) The Group carries out energy trading operations on commission basis. NVVN, a subsidiary of the Parent Company is a "Trader Member" of India Energy Exchange Ltd. (IEX) & Power Exchange India Ltd (PXIL) and undertakes trading of Power and REC on Power Exchange Platform of IEX and PXIL.

Below are the details of nature, timing of satisfaction of performance obligations and significant payment terms under contracts for sale of energy through trading on energy exchange:

Product/ Service	Nature, timing of satisfaction of performance obligations and significant payment terms
Energy trading on energy exchange	The Group recognises revenue from contracts for commission for trading on energy exchange over time as the customers simultaneously receive and consume the benefits provided by the Group's performance. The commission for trading of energy is determined as per the terms of the respective agreement. The amount of revenue recognised is adjusted for variable consideration, wherever applicable, which are estimated based on the historical data available with the Group. The amounts are billed as per the terms of the contracts.

(ii) Consultancy and other services

The Group undertakes consultancy and turnkey project contracts for domestic and international clients in the different phases of power plants viz. engineering, project management & supervision, construction management, operation & maintenance of power plants, research & development, management consultancy etc.

Below are the details of nature, timing of satisfaction of performance obligations and significant payment terms under contracts for consultancy and other services:

Product/ Service	Nature, timing of satisfaction of performance obligations and significant payment terms
Consultancy services	The Group recognises revenue from contracts for consultancy services over time as the customers simultaneously receive and consume the benefits provided by the Group. For the assets (e.g. deliverables, reports etc.) transferred under the contracts, the assets do not have alternative use to the Group and the Group has enforceable right to payment for performance completed to date. The revenue from consultancy services is determined as per the terms of the contracts. The amount of revenue recognised is adjusted for variable consideration, wherever applicable, which are estimated based on the historical data available with the Group. The amounts are billed as per the terms of the contracts and are payable within contractually agreed credit period.
Operation and maintenance services	The Group recognises revenue from contracts for operation and maintenance services over time as the customers simultaneously receive and consume the benefits provided by the Group. The revenue from opertion and maintenance services is determined as per the terms of the contracts. The amount of revenue recognised is adjusted for variable consideration, wherever applicable, which are estimated based on the historical data available with the Group. The amounts are billed as per the terms of the contracts and are payable within contractually agreed credit period.
Deen Dayal Upadhyay Gramin Jyoti Yojna (DDUGJY Scheme)	The Group recognises revenue from work done under DDUGJY scheme over time as the assets do not have alternative use to the Group and the Group has enforceable right to payment for performance completed to date. The revenue from DDUGJY scheme is determined as per the terms of the contract. There is no component of variable consideration under the contract. The amounts are billed as per the terms of the contracts and are payable within contractually agreed credit period.
Pradhan Mantri Sahaj Bijli Har Ghar Vojna (SAUBHAGYA Scheme)	The Group recognises revenue from work done under SAUBHAGYA scheme at a point in time when the Group transfers control of goods and services under the contract to the customers. The revenue from SAUBHAGYA scheme is determined as per the terms of the contracts. There is no component of variable consideration under the contract. The amounts are billed as per the terms of the contracts and are payable within contractually agreed credit period.

II. Disaggregation of revenue

In the following table, revenue is disaggregated by type of product and services, geographical market and timing of revenue recognition:

₹ Crore

Particulars	Generation of energy		Others		Total	
	For the year ended		For the year ended		For the year ended	
	31 March 2023	31 March 2022	**31 March 2023**	31 March 2022	**31 March 2023**	31 March 2022
Geographical markets						
India	**1,65,714.59**	1,23,703.53	**6,994.23**	6,318.52	**1,72,708.82**	1,30,022.05
Outside India	**-**	-	**1,276.79**	1,242.09	**1,276.79**	1,242.09
	1,65,714.59	1,23,703.53	**8,271.02**	7,560.61	**1,73,985.61**	1,31,264.14
Timing of revenue recognition						
Products and services transferred over time	**1,65,714.59**	1,23,703.53	**8,271.02**	7,560.61	**1,73,985.61**	1,31,264.14
	1,65,714.59	1,23,703.53	**8,271.02**	7,560.61	**1,73,985.61**	1,31,264.14

III. Reconciliation of revenue recognised with contract price:

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Contract price	**1,74,876.53**	1,31,874.35
Adjustments for:		
Rebates	**(890.92)**	(610.21)
Revenue recognised	**1,73,985.61**	1,31,264.14

IV. Contract balances

Contract assets are recognised when there is excess of revenue earned over billings on contracts. Contract assets are transferred to trade receivables revenue when there is unconditional right to receive cash, and only passage of time is required, as per contractual terms. The contract liabilities primarily relate to the advance consideration received from the customers which are referred as 'advances from customers / payable to beneficiaries'.

The following table provides information about trade receivables including unbilled revenue, contract assets and advances from customers/payable to beneficiaries:

₹ Crore

Particulars	As at 31 March 2023		As at 31 March 2022	
	Current	Non-current	Current	Non-current
Trade receivables including unbilled revenue	**28,825.22**	**2,638.68**	27,970.87	-
Contract assets	**7,306.43**	**-**	4,750.11	-
Advances from customers/payable to beneficiaries	**2,044.10**	**-**	1,895.36	-

The amount of revenue recognised from performance obligations satisfied (or partially satisfied) in previous periods, mainly due to change in transaction prices is ₹ **5,092.94 crore** (31 March 2022 : ₹ 2033.82 crore).

V. Transaction price allocated to the remaining performance obligations

Performance obligations related to sale of energy:

Revenue from sale of energy is accounted for based on tariff rates approved by the CERC (except items indicated as provisional) as modified by the orders of Appellate Tribunal for Electricity to the extent applicable. In case of power stations, where the tariff rates are yet to be approved/items indicated provisional by the CERC in their orders, provisional rates are adopted considering the applicable CERC Tariff Regulations. Revenue from sale of energy is recognized once the electricity has been delivered to the beneficiary and is measured through a regular review of usage meters. Beneficiaries are billed on a periodic and regular basis. Therefore, transaction price to be allocated to remaining performance obligations cannot be determined reliably for the entire duration of the contract.

Performance obligations related to other contracts:

For rest of the contracts, transaction price for remaining performance obligations amounts to ₹ **1,082.32 crore** (31 March 2022: ₹ 1,037.51 crore) which shall be received over the contract period in proportion of the work performed/services provided by the Group.

VI. Practical expedients applied as per Ind AS 115:

a. The Group has not disclosed information about remaining performance obligations that have original expected duration of one year or less and where the revenue recognised corresponds directly with the value to the customer of the entity's performance completed to date.

b. The Group does not expect to have any contracts where the period between the transfer of the promised goods or services to the customer and payment by the customer exceeds one year. As a consequence, the Group has not adjusted any of the transaction prices for the time value of money. The impact of subsequent modifications are duly recognized in the Statement of profit and loss.

VII. The Group has not incurred any incremental costs of obtaining contracts with a customer and therefore, not recognised an asset for such costs.

74. Disclosure as per Ind AS 116 'Leases

(A) Group as Lessee

(i) The Group's significant leasing arrangements are in respect of the following assets:

(a) Premises for residential use of employees, offices and guest houses/ transit camps on lease which are not non-cancellable and are usually renewable on mutually agreeable terms. The company generally incurs amount on improvements which are significant to the respective lease and hence the cancellable period of the lease during which the company intends to continue considering the past experience / practice, is considered for the purpose of determining the lease period.

(b) The Group has taken electrical vehicles on operating lease for a period of five to six years, which can be further extended at mutually agreed terms. Lease rentals are subject to escalation of 10% per annum.

(c) A helicopter on wet lease basis.

(d) The Group has taken certain vehicles (other than electrical) on lease for a period of more than one year to four years, which can be further extended at mutually agreed terms. There are no escalations in the lease rentals as per terms of the agreement. However, the Group has purchase option for some of such vehicles at the end of the lease term.

(e) The Group had entered into an agreement for movement of coal through inland waterways for one of its stations. As per the agreement, the operator was to design, finance, build, operate and maintain the unloading and material handling infrastructure for 7 years after which it was to be transferred to the Company at ₹ 1/-. Refer Note no. 64(iii)(b).

(f) The Group acquires land on leasehold basis for a period generally ranging from 5 years to 99 years from the government authorities which can be renewed further based on mutually agreed terms and conditions. The leases are non cancellable. These leases are capitalised at the present value of the total minimum lease payments to be paid over the lease term. Future lease rentals are recognised as 'Lease liablities' at their present values. The Right-of-use land is amortised considering the signifcant accounting policies of the Group.

(ii) The following are the carrying amounts of lease liabilities recognised and the movements during the year:

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Opening Balance	1,151.30	897.49
- Additions in lease liabilities	784.66	238.39
- Interest cost during the year	114.93	70.52
- Payment of lease liabilities	(230.10)	(55.10)
Closing Balance	1,820.79	1,151.30
Current	216.75	188.61
Non Current	1,604.04	962.69

(iii) Maturity Analysis of the lease liabilities:

₹ Crore

Contractual undiscounted cash flows	As at 31 March 2023	As at 31 March 2022
3 months or less	150.51	155.84
3-12 Months	75.45	91.16
1-2 Years	98.68	79.63
2-5 Years	236.26	226.88
More than 5 Years	2,590.16	2,631.83
Total Lease liabilities	3,151.06	3,185.34

(iv) The following are the amounts recognised in profit or loss:

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Depreciation and amortisation expense for right-of-use assets	**331.69**	253.33
Interest expense on lease liabilities	**114.93**	70.52
Expense relating to short-term leases	**49.40**	9.24

(v) The following are the amounts disclosed in the cash flow statement:

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Cash Outlow from leases	**279.50**	64.34

(B) Leases as lessor

a) Finance leases

The Company had classified the arrangement with its customer for Stage I of a power station in the nature of lease based on the principles enunciated in Appendix C of Ind AS 17 - 'Leases' and accounted for as finance lease in accordance with those principles. This arrangement continues to be classified as finance lease after transition to Ind AS 116 - 'Leases'.

The power purchase agreement with the beneficiary is for a period of twenty five years from the date of transfer and the agreement may be mutually extended, renewed or replaced by another agreement on such terms and for such further period of time as the parties may mutually agree.

The following are the amounts recognised in profit or loss:

₹ Crore

Partculars		For the year ended 31 March 2023	For the year ended 31 March 2022
i)	Finance income on the net investment in the lease	**32.53**	45.07
ii)	Income relating to variable lease payments not included in the measurement of the net investment in the lease	**1,159.32**	730.68

Undiscounted lease payments to be received on an annual basis for a minimum of each of the first five years and for the remaining years:

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Less than one year	**108.54**	108.54
Between one and two years	**215.90**	108.54
Between two and three years	**-**	215.32
Total minimum lease payments	**324.44**	432.40
Less: amounts representing unearned finance	**39.25**	76.90
Present value of minimum lease payments	**285.19**	355.50

b) Operating leases

The Company had classified the arrangement with its customer for one gas power station as lease based on the principles enunciated in Appendix C of Ind AS 17 and accounted for as operating lease in accordance with those principles. These arrangements continue to be classified as operating lease after transition to Ind AS 116 'Leases'.

(i) Gas Power Station

PPA signed with the beneficiary on 6 January 1995 was operative for five years from the date of commercial operation of last unit of the station and may be mutually extended, renewed or replaced by another agreement on such terms and on such further period of time as the parties may mutually agree. As per the supplementary agreement dated 15 February 2013 the validity period is extended for a further period of 12 years from 1 March 2013.

The following are the amounts recognised in profit or loss:

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Lease Income	**19.58**	19.59
Income relating to variable lease payments that do not depend on an index or a rate	**84.80**	84.53

Undiscounted lease payments to be received on an annual basis for a minimum of each of the first five years and for the remaining years:

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Less than one year	**19.58**	19.58
Between one and two years	**3.91**	19.58
Between two and three years	**-**	3.91
	23.49	43.07

(2) Land given on operating lease

The Group has enetered into two leases agreements with one of the vendor for right to use of freehold land of 24.50 acre and 67.73 acre for the period of two years w.e.f. from 25 January 2021 and 21 August 2021 respectively. The Group continues to classify the same as operating lease.

The following are the amounts recognised in profit or loss:

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Lease Income	**2.20**	2.84
Income relating to variable lease payments that do not depend on an index or a rate	**-**	-

Undiscounted lease payments to be received on an annual basis for a minimum of each of the first five years and for the remaining years:

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Less than one year	**1.28**	2.15
Between one and two years	**0.52**	0.65
	1.80	2.80

(3) Buses given on operating lease

The Group has entered into an agreement with Directorate of Transport (DoT), Andaman and Nicobar administration & Bangalore Metropolitan Transport Corporation (BMTC) to supply (operate and maintain in case of BMTC) the fully built AC electric buses for a period of 10 years on fixed hire charges per Km per bus. In addition, the Group has also install, commissioned and shall maintain necessary charging infrastructure at its depots and identified routes, wherever necessary. The Group has classified these arrangement with customers as operating lease as per Ind AS 116 because it does not transfer substantially all the risk and rewards incidental to the ownership of the assets

The following are the amounts recognised in profit or loss:

₹ Crore

Particulars	For the year ended 31 March 2023	For the year ended 31 March 2022
Lease Income	**36.48**	7.78
Income relating to variable lease payments that do not depend on an index or a rate	**-**	-

Undiscounted lease payments to be received on an annual basis for a minimum of each of the first five years and for the remaining years:

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Less than one year	**42.49**	39.95
Between one and two years	**42.71**	42.49
Between two and three years	**43.01**	42.79
Between three and four years	**43.31**	43.08
Between four and five years	**43.61**	43.37
More than five years	**182.90**	217.72
	398.03	429.40

75. Disclosure as per Schedule III to the Companies Act, 2013

₹ Crore

Name of the entity in the Group	Net Assets, i.e., total assets minus total liabilities as at		Share in profit or loss for the year ended		Share in other comprehensive income for the year ended		Share in total comprehensive income for the year ended	
	As % age of consolidated net assets	Amount	As % age of consolidated profit or loss	Amount	As % age of consolidated other comprehensive income	Amount	As % age of total comprehensive income	Amount
Parent								
NTPC Limited								
31 March 2023	**92.01%**	**1,38,889.88**	**100.44%**	**17,196.73**	**37.29%**	**(75.70)**	**101.20%**	**17,121.03**
31 March 2022	92.48%	1,28,667.52	96.00%	16,281.99	100.46%	(87.65)	95.98%	16,194.34
Subsidiaries (Indian)								
Bhartiya Rail Bijlee Company Ltd.								
31 March 2023	**1.91%**	**2,877.99**	**1.45%**	**248.14**	**-0.02%**	**0.05**	**1.47%**	**248.19**
31 March 2022	2.10%	2,917.83	1.91%	324.55	0.00%	-	1.92%	324.55
NTPC Vidyut Vyapar Nigam Ltd.								
31 March 2023	**0.48%**	**718.96**	**1.03%**	**175.89**	**0.00%**	**-**	**1.04%**	**175.89**
31 March 2022	0.40%	562.57	0.89%	150.26	0.00%	-	0.89%	150.26
NTPC Electric Supply Company Ltd.								
31 March 2023	**0.01%**	**20.27**	**0.00%**	**0.25**	**0.00%**	**-**	**0.00%**	**0.25**
31 March 2022	0.04%	55.58	0.00%	0.30	0.00%	-	0.00%	0.30

₹ Crore

Name of the entity in the Group	Net Assets, i.e., total assets minus total liabilities as at		Share in profit or loss for the year ended		Share in other comprehensive income for the year ended		Share in total comprehensive income for the year ended	
	As % age of consolidated net assets	Amount	As % age of consolidated profit or loss	Amount	As % age of consolidated other comprehensive income	Amount	As % age of total comprehensive income	Amount
Patratu Vidyut Utpadan Nigam Ltd.								
31 March 2023	**1.46%**	**2,210.43**	**0.00%**	**(0.51)**	**0.00%**	**-**	**0.00%**	**(0.51)**
31 March 2022	1.20%	1,670.39	0.00%	(0.03)	0.00%	-	0.00%	(0.03)
NTPC Mining Ltd.								
31 March 2023	**0.00%**	**0.04**	**0.00%**	**(0.01)**	**0.00%**	**-**	**0.00%**	**(0.01)**
31 March 2022	0.00%	0.05	0.00%	-	0.00%	-	0.00%	-
THDC India Ltd.								
31 March 2023	**6.91%**	**10,427.64**	**3.93%**	**672.84**	**1.24%**	**(2.52)**	**3.96%**	**670.32**
31 March 2022	7.41%	10,305.20	5.27%	893.75	-2.45%	2.14	5.31%	895.89
North Eastern Electric Power Corporation Ltd.								
31 March 2023	**4.37%**	**6,589.33**	**2.32%**	**396.91**	**2.61%**	**(5.30)**	**2.31%**	**391.61**
31 March 2022	4.72%	6,562.74	1.25%	212.29	14.97%	(13.06)	1.18%	199.23
NTPC EDMC Waste Solutions Private Ltd.								
31 March 2023	**0.00%**	**(3.32)**	**0.00%**	**(0.56)**	**0.00%**	**-**	**0.00%**	**(0.56)**
31 March 2022	0.00%	(2.76)	-0.01%	(2.05)	0.00%	-	-0.01%	(2.05)
NTPC Renewable Energy Ltd.								
31 March 2023	**0.00%**	**-**	**0.00%**	**-**	**0.00%**	**-**	**0.00%**	**-**
31 March 2022	0.52%	727.77	0.00%	0.11	0.00%	-	0.00%	0.11
Ratnagiri Gas & Power Private Ltd.								
31 March 2023	**-0.05%**	**(69.53)**	**-1.17%**	**(199.94)**	**0.00%**	**-**	**-1.18%**	**(199.94)**
31 March 2022	-0.20%	(278.58)	-1.19%	(201.23)	0.00%	-	-1.19%	(201.23)
NTPC Green Energy Ltd. (w.e.f. 07 April 2022)								
31 March 2023	**3.24%**	**4,889.58**	**1.01%**	**173.37**	**0.00%**	**-**	**1.02%**	**173.37**
31 March 2022	0.00%	-	0.00%	-	0.00%	-	0.00%	-
Non-controlling interests in all subsidiaries								
31 March 2023	**2.60%**	**3,930.45**	**1.22%**	**208.80**	**0.32%**	**(0.64)**	**1.23%**	**208.16**
31 March 2022	2.70%	3,760.41	1.68%	284.39	-0.63%	0.55	1.69%	284.94
Joint ventures (Investment as per equity method)								
Indian								
Utility Powertech Ltd.								
31 March 2023	**0.07%**	**103.03**	**0.10%**	**16.30**	**-1.01%**	**2.06**	**0.11%**	**18.36**
31 March 2022	0.07%	94.67	0.12%	20.40	-2.67%	2.33	0.13%	22.73

₹ Crore

Name of the entity in the Group	Net Assets, i.e., total assets minus total liabilities as at		Share in profit or loss for the year ended		Share in other comprehensive income for the year ended		Share in total comprehensive income for the year ended	
	As % age of consolidated net assets	Amount	As % age of consolidated profit or loss	Amount	As % age of consolidated other comprehensive income	Amount	As % age of total comprehensive income	Amount
NTPC-GE Power Services Private Ltd.								
31 March 2023	**0.01%**	**9.31**	**0.01%**	**2.02**	**0.06%**	**(0.13)**	**0.01%**	**1.89**
31 March 2022	0.01%	7.42	0.03%	4.36	0.01%	(0.01)	0.03%	4.35
NTPC-SAIL Power Company Ltd.								
31 March 2023	**0.95%**	**1,439.11**	**1.37%**	**235.17**	**-0.16%**	**0.33**	**1.39%**	**235.50**
31 March 2022	1.10%	1,528.61	1.06%	179.05	0.02%	(0.02)	1.06%	179.03
NTPC Tamil Nadu Energy Company Ltd.								
31 March 2023	**1.26%**	**1,898.93**	**2.48%**	**424.10**	**-0.01%**	**0.02**	**2.51%**	**424.12**
31 March 2022	1.33%	1,850.14	2.35%	399.05	-0.01%	0.01	2.37%	399.06
Aravali Power Company Private Ltd.								
31 March 2023	**1.62%**	**2,447.94**	**1.47%**	**251.28**	**-0.07%**	**0.15**	**1.49%**	**251.43**
31 March 2022	1.92%	2,671.51	2.44%	414.01	-0.17%	0.15	2.45%	414.16
NTPC BHEL Power Projects Private Ltd.								
31 March 2023	**0.00%**	**-**	**0.00%**	**-**	**0.00%**	**-**	**0.00%**	**-**
31 March 2022	0.00%	-	0.00%	-	0.00%	-	0.00%	-
Meja Urja Nigam Private Ltd.								
31 March 2023	**1.13%**	**1,707.23**	**0.25%**	**42.93**	**0.00%**	**-**	**0.25%**	**42.93**
31 March 2022	1.17%	1,629.89	0.80%	136.11	0.00%	-	0.81%	136.11
Transformers and Electricals Kerala Ltd.								
31 March 2023	**0.00%**	**7.41**	**-0.09%**	**(16.05)**	**0.00%**	**-**	**-0.09%**	**(16.05)**
31 March 2022	0.02%	23.46	-0.07%	(11.54)	0.00%	-	-0.07%	(11.54)
National High Power Test Laboratory Pvt. Ltd.								
31 March 2023	**0.00%**	**-**	**-0.08%**	**(14.24)**	**0.00%**	**-**	**-0.08%**	**(14.24)**
31 March 2022	0.01%	14.24	-0.02%	(3.98)	0.00%	-	-0.02%	(3.98)
Energy Efficiency Services Ltd.								
31 March 2023	**0.19%**	**292.49**	**-0.78%**	**(132.76)**	**-0.05%**	**0.10**	**-0.78%**	**(132.66)**
31 March 2022	0.30%	423.09	-0.66%	(111.22)	0.34%	(0.30)	-0.66%	(111.52)
CIL NTPC Urja Private Ltd.								
31 March 2023	**0.00%**	**0.07**	**0.00%**	**0.06**	**0.00%**	**-**	**0.00%**	**0.06**
31 March 2022	0.00%	0.01	0.00%	(0.01)	0.00%	-	0.00%	(0.01)

₹ Crore

Name of the entity in the Group	Net Assets, i.e., total assets minus total liabilities as at		Share in profit or loss for the year ended		Share in other comprehensive income for the year ended		Share in total comprehensive income for the year ended	
	As % age of consolidated net assets	Amount	As % age of consolidated profit or loss	Amount	As % age of consolidated other comprehensive income	Amount	As % age of total comprehensive income	Amount
Anushakti Vidhyut Nigam Ltd.								
31 March 2023	**0.00%**	**-**	**0.00%**	**(0.01)**	**0.00%**	**-**	**0.00%**	**(0.01)**
31 March 2022	0.00%	0.01	0.00%	-	0.00%	-	0.00%	-
Hindustan Urvarak and Rasayan Ltd.								
31 March 2023	**1.50%**	**2,269.89**	**-0.11%**	**(18.10)**	**-0.01%**	**0.03**	**-0.11%**	**(18.07)**
31 March 2022	1.17%	1,621.43	-0.03%	(5.89)	0.00%	-	-0.03%	(5.89)
Jhabua Power Ltd.								
31 March 2023	**1.34%**	**2,021.21**	**0.06%**	**9.42**	**0.33%**	**(0.67)**	**0.05%**	**8.75**
31 March 2022	0.00%	-	0.00%	-	0.00%	-	0.00%	-
KSK Dibbin Hydro Power Private Ltd.								
31 March 2023	**0.00%**	**4.43**	**0.00%**	**(0.02)**	**0.00%**	**-**	**0.00%**	**(0.02)**
31 March 2022	0.00%	4.45	0.00%	(0.01)	0.00%	-	0.00%	(0.01)
Foreign								
Trincomalee Power Company Ltd.								
31 March 2023	**0.00%**	**0.41**	**0.00%**	**(0.13)**	**0.00%**	**-**	**0.00%**	**(0.13)**
31 March 2022	0.00%	0.55	0.00%	(0.20)	0.00%	-	0.00%	(0.20)
Bangladesh-India Friendship Power Company Private Ltd.								
31 March 2023	**0.70%**	**1,050.63**	**-0.12%**	**(20.20)**	**0.00%**	**-**	**-0.12%**	**(20.20)**
31 March 2022	0.47%	652.66	0.00%	-	0.00%	-	0.00%	-
Intra Group Eliminations								
31 March 2023	**-21.72%**	**(32,780.19)**	**-14.78%**	**(2,530.33)**	**59.50%**	**(120.78)**	**-15.67%**	**(2,651.11)**
31 March 2022	-18.93%	(26,336.71)	-11.82%	(2,004.17)	-9.87%	8.61	-11.83%	(1,995.56)
Total								
31 March 2023	**100.00%**	**1,50,953.62**	**100.00%**	**17,121.35**	**100.00%**	**(203.00)**	**100.00%**	**16,918.35**
31 March 2022	100.00%	1,39,134.15	100.00%	16,960.29	100.00%	(87.25)	100.00%	16,873.04

76. Contingent liabilities and commitments

A. Contingent liabilities

a. Claims against the group not acknowledged as debts

(i) Capital works

₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Claims by contractors under capital works	**17,308.02**	13,642.71

Some of the contractors for supply and installation of equipment and execution of works at our projects have lodged claims on the Group for the above amounts seeking enhancement of the contract price, revision of work schedule with price escalation, compensation for the extended period of work, idle charges etc. These claims are being contested by the Group as being not admissible in terms of the provisions of the respective contracts.

The Group is pursuing various options under the dispute resolution mechanism available in the contracts for settlement of these claims. It is not practicable to make a realistic estimate of the outflow of resources if any, for settlement of such claims pending resolution.

(ii) Land compensation cases ₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Claims by land oustees	**692.05**	720.24

In respect of land acquired for the projects, the erstwhile land owners have claimed higher compensation before various authorities/courts which are yet to be settled. Against such cases, contingent liability of these amounts has been estimated.

(iii) Fuel suppliers ₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Claims towards grade slippages	**1,638.71**	2,145.78
Other claims	**2,674.92**	2,584.04

Pending resolution of issues with the coal companies through AMRCD(Alternate Mechanism for Resolution of CPSE Disputes), claims towards grade slippage pertaining to period prior to appointment of CIMFR (Central India Mining and Fuel Research) for joint sampling pursuant to tripartite agreement, has been estimated by the Company as contingent liability. Further, other claims represent claims made by fuel companies towards surface transportation charges, custom duty on service margin on imported coal, take or pay claims of gas suppliers, etc. ,estimated by the Company as contingent liability.

The Group is pursuing with the fuel companies, related ministries and other options under the dispute resolution mechanism available for settlement of these claims.

(iv) Others ₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Claims by government agencies	**2,355.20**	2,083.95

In respect of claims (including applicable interest) made by various State/Central Government departments/Authorities towards building permission fee, penalty on diversion of agricultural land to non-agricultural use, non agricultural land assessment tax, water royalty, other claims, etc. and by others, contingent liability of the above amounts has been estimated.

(v) Possible reimbursement in respect of (i) to (iii) above

In respect of claims included in (i) and (ii) above, payments, if any, by the Group on settlement of the claims would be eligible for inclusion in the capital cost for the purpose of determination of tariff as per CERC Tariff Regulations subject to prudence check by the CERC. In case of (iii), the estimated possible reimbursement by way of recovery through tariff as per Regulations is ₹ **4,253.80 crore** (31 March 2022: ₹ 4,718.81 crore).

b. Disputed tax matters ₹ Crore

Particulars	As at 31 March 2023	As at 31 March 2022
Tax matters before various authorities	**2,801.47**	7,761.08

Disputed income tax/sales tax/excise and other tax matters are pending before various Appellate Authorities. Many of these matters were adjudicated in favour of the Group but are disputed before higher authorities by the concerned departments. In respect of these disputed cases, the Group estimate possible reimbursement of ₹ **1,233.43 crore** (31 March 2022: ₹ 3,399.78 crore). The amount paid under dispute/adjusted by the authorities in respect of the cases amounts to ₹ **779.21 crore** (31 March 2022: ₹ 3,343.07 crore).

c. **Others** ₹ **Crore**

Particulars	**As at 31 March 2023**	As at 31 March 2022
Bills discounted with banks	**1,287.19**	8,349.59
Coal transportation [Refer Note 64(iii)(b)]	**2,431.04**	2,292.30
Others	**3,856.81**	3,395.97

Bills discounted with banks against trade receivables has been disclosed under contingent liabilities (Refer Note-15). In case of any claim on the Group from the banks in this regard, entire amount shall be recoverable from the beneficiaries along with surcharge. Others include contingent liabilities disclosed on an estimated basis relating to likely claims that may arise in connection with abandoned oil exploration activities, land use agreements, service tax reimbursements,stamp duty arising out of merger etc.

In respect of NTPC Vidyut Vyapar Nigam Ltd., a subsidiary of the Company, electricity supplied by the sellers under SWAP arrangements of **254.30 MUs** (31 March 2022: 133.8166 MUs) are yet to be returned for which the amount is not ascertainable.

Some of the beneficiaries have filed appeals against the tariff orders of the CERC. The amount of contingent liability in this regard is not ascertainable.

d. **Joint venture companies**

Refer Note 71 for contingent liability relating to joint venture companies.

B. **Contingent assets**

(i) While determining the tariff for some of the Parent Company's power stations, CERC has disallowed certain capital expenditure incurred by the Parent Company. The Parent Company aggrieved over such issues has filed appeals with the Appellate Tribunal for Electricity (APTEL)/Hon'ble Supreme Court against the tariff orders issued by the CERC. Based on past experience, the Parent Company believes that a favourable outcome is probable. However, it is impracticable to estimate the financial effect of the same as its receipt is dependent on the outcome of the judgement.

(ii) Coal companies have disputed some of the grade slippages confirmed by CIMFR(third party sampler) in favour of the Company and have approached referee challenging the CIMFR results. The referee results are binding on both the parties. Considering the uncertainty involved in the outcome of refree results, the Company has not recognised claims arising out of favourable CIMFR results pending receipt of referee results challenged by the coal companies, considering the provisions of Ind AS 37. It is impracticable to estimate the financial effect of the same as its receipt is dependent on the outcome of the referee results which is wholly not within the control of the Company. Not withstanding the above, the outcome of the referee results shall be dealt with as per the provisions of CERC Tariff Regulations.

(iii) CERC (Terms & Conditions of Tariff) Regulations 2019-24 provide for levy of Late Payment Surcharge by generating company in case of delay in payment by beneficiaries beyond 45 days from the date of presentation of bill. However, in view of significant uncertainities in the ultimate collection from some of the beneficiaries against partial bills as resolved by the management, an amount of ₹ **754.90 crore** as at 31 March 2023 (31 March 2022: ₹ 1,072.77 crore) has not been recognised.

C. **Commitments**

a) Estimated amount of contracts remaining to be executed on capital account (property, plant & equipment and intangible assets) and not provided for is as under:

₹ **Crore**

Particulars	**As at 31 March 2023**	As at 31 March 2022
Property, plant and equipment	**60,966.62**	58,876.71
Intangible assets	**45.91**	43.65
Total	**61,012.53**	58,920.36

b) In respect the following investments, the Group has restrictions for their disposal as at 31 March 2023 as under:

₹ Crore

Name of the Company	Period of restrictions for disposal of investments as per related agreements	Amount invested as at	
		31 March 2023	31 March 2022
International Coal Ventures Private Ltd.	5 years from the date of incorporation (i.e. 20.05.2009) or till such time an undertaking for non-disposal of such share is given to FI/Banks for their assistance to the Company whichever is later. Also refer Note 7.	**1.40**	1.40
Total		**1.40**	1.40

c) Group's commitment towards the minimum work programme in respect of oil exploration activities of joint operations has been disclosed in Note 66.

d) Group's commitment in respect of lease agreements has been disclosed in Note 74.

e) Refer Note 71 for commitments relating to joint venture companies.

77. Additional Regulatory Information

i) The Group does not hold any Invetsment Property in its books of accounts, so fair valuation of investment property is not applicable.

ii) During the year the Group has not revalued any of its Property,plant and equipment.

iii) During the year, the Group has not revalued any of its Intangible assets.

iv) The Group has not granted any loans or advances to promoters, directors, KMP's and the related parties that are repayable on demand or without specifying any terms or period of repayment.

v) (a) Capital-Work-in Progress (CWIP) - Ageing Schedule as at 31 March 2023

₹ Crore

Capital-Work-in Progress (CWIP)	Amount in CWIP for a period of				Total
	Less than 1 year	1-2 years	2-3 years	More than 3 years	
Projects in progress	23,697.70	18,752.51	11,991.27	34,573.32	**89,014.80**
Projects temporarily suspended	24.09	-	-	94.23	**118.32**

Capital-Work-in Progress (CWIP) - Ageing Schedule as at 31 March 2022

₹ Crore

Capital-Work-in Progress (CWIP)	Amount in CWIP for a period of				Total
	Less than 1 year	1-2 years	2-3 years	More than 3 years	
Projects in progress	26,905.48	17,595.98	14,438.74	31,970.89	90,911.09
Projects temporarily suspended	-	0.72	0.29	113.11	114.12

v) (b) **Capital-Work-in Progress (CWIP) - Completion schedule for projects overdue or cost overruns as compared to original plan as on 31 March 2023**

₹ Crore

Capital-Work-in Progress (CWIP)	To be completed in				Total
	Less than 1 year	1-2 years	2-3 years	More than 3 years	
	Upto 31 March 2024	1 April 2024 to 31 March 2025	1April 2025 to 31 March 2026	Beyond 1 April 2026	
North Karanpura TPP	-	7,460.83	-	-	**7,460.83**
Barh-I TPP	-	11,862.70	-	-	**11,862.70**
Tavopan HEP	-	5,817.62	-	-	**5,817.62**
Rammam Hydro Electric	-	-	-	785.14	**785.14**
Telangana-I TPP	11,262.65	-	-	-	**11,262.65**
PSP (1000 MW)	850.00	298.86	-	-	**1,148.86**
VPHEP (444 MW)	560.00	470.00	316.05	-	**1,346.05**
PVUNL Stage-1	-	9,822.78	-	-	**9,822.78**
BRBCL	540.56	-	-	-	**540.56**
Talaipalli Coal Mining Project	939.61	-	-	-	**939.61**
Chatti Bariatu Coal Mining Project	-	463.31	-	-	**463.31**
Kerandari Coal Mining Project	-	-	831.16	-	**831.16**
Badam Coal Mining Project	-	-	-	41.58	**41.58**
Nokhra Solar PV Project 100MW	682.33	-	-	-	**682.33**
Sambhu Ki Bhurj II Solar PV Project 150 MW	217.11	-	-	-	**217.11**
Chattargarh 150 MW	24,074.26	-	-	-	**24,074.26**
Bhainsara 320 MW	732.86	-	-	-	**732.86**
GUVNL 200 MW	128.77	-	-	-	**128.77**
GUVNL 150 MW	549.68	-	-	-	**549.68**

Capital-Work-in Progress (CWIP) - Completion schedule for projects overdue or cost overruns as compared to original plan as on 31 March 2022

₹ Crore

Capital-Work-in Progress (CWIP)	To be completed in				Total
	Less than 1 year	1-2 years	2-3 years	More than 3 years	
	Upto 31 March 2023	1 April 2023 to 31 March 2024	1 April 2024 to 31 March 2025	Beyond 1 April 2025	
North Karanpura	-	13,102.82	-	-	13,102.82
Barh-I	-	10,508.33	-	-	10,508.33
Tavopan Hydro Electric	-	-	5,350.49	-	5,350.49
Rammam	-	-	-	648.31	648.31
Telangana-I	9,987.25	-	-	-	9,987.25
THPP (1000 MW) [THDC]	569.61	153.20	-	-	722.81
VPHEP (444 MW) [THDC]	500.00	500.00	406.00	-	1,406.00

₹ Crore

Capital-Work-in Progress (CWIP)	To be completed in				Total
	Less than 1 year	1-2 years	2-3 years	More than 3 years	
	Upto 31 March 2023	1 April 2023 to 31 March 2024	1 April 2024 to 31 March 2025	Beyond 1 April 2025	
Patratu Stage-1	-	-	6,926.40	-	6,926.40
BRBCL	335.81	-	-	-	335.81
Nabinagar Thermal Power Project(NPGC)	4,414.98	-	-	-	4,414.98
Assam GBPS (NEEPCO)	14.12	25.22	-	-	39.34
Tuirial HPS (NEEPCO)	0.74	0.11	-	-	0.85

vi) (a) Intangible assets under development - Ageing Schedule as at 31 March 2023

₹ Crore

Intangible assets under development	**Amount in CWIP for a period of**				**Total**
	Less than 1 year	**1-2 years**	**2-3 years**	**More than 3 years**	
Projects in progress	5.98	3.65	5.14	31.11	45.88
Projects temporarily suspended	-	-	-	-	-

Intangible assets under development - Ageing Schedule as at 31 March 2022

₹ Crore

Intangible assets under development	Amount in CWIP for a period of				Total
	Less than 1 year	1-2 years	2-3 years	More than 3 years	
Projects in progress	5.42	8.64	55.73	31.26	101.05
Projects temporarily suspended	-	-	-	-	-

vi) (b) Intangible assets under development - Completion schedule for projects overdue or cost overruns as compared to original plan as on 31 March 2023 - Nil

Intangible assets under development - Completion schedule for projects overdue or cost overruns as compared to original plan as on 31 March 2022:

₹ Crore

Intangible assets under development	To be completed in				Total
	Less than 1 year	1-2 years	2-3 years	More than 3 years	
	Upto 31 March 2023	1 April 2023 to 31 March 2024	1April 2024 to 31 March 2025	Beyond 1 April 2025	
Software	1.62	-	-	-	1.62

vii) No proceedings have been initiated or pending against the Group under the Benami Transactions (Prohibition) Act,1988.

viii) The quarterly returns / statement of current assets filed by the Group with banks / financial institutions are generally in agreement with the books of accounts

ix) None of the entities of the Group have been declared as a wilful defaulter by any bank or financial institution or any other lender.

x) Relationship with Struck off Companies

(a) Payables / receivables

Name of struck off Company	Nature of transactions with struck-off Company	Balance outstanding as at 31 March 2023	Balance outstanding as at 31 March 2022	Relationship with the struck off company	CIN	Remarks
Aradhya Construction Private Limited	Receivables	#	#	Contractor	U45200BR2013PTC020295	
Pb Infrastructure & Engineering (P) Ltd	Receivables	-	#	Contractor	U45203OR2006PTC008648	
Shiv Singh Amar Singh And Company Private Limited	Receivables	**1.38**	1.38	Contractor	U70200DL1985PTC022577	Under Litigation
Ganga Mechanical works Pvt Ltd	Receivables	**0.05**	0.05	Contractor	U45201DL2003PTC119275	
Hello Marketing Pvt. Ltd	Receivables	#	#	Contractor	U67190DL1993PTC053859	
S S Builders (India) Pvt Ltd	Receivables	#	#	Contractor	U45201DL1981PTC011552	
Shiva Sakthi Services Pvt. Ltd.	Receivables	#	#	Contractor	U74992DL1995PTC072519	
Brindavan Projects Ltd	Payables	**0.01**	0.01	Contractor	U45200TG1994PLC018506	
Eco E-Waste Recyclers India Private Limited	Payables	#	#	Contractor	U37200KA2010PTC052547	
Go Green Buildtech Pvt. Ltd.	Payables	#	#	Contractor	U45400DL2014PTC264520	
Innutech Web Solutions Pvt Ltd	Payables	#	#	Contractor	U72200DL2010PTC200692	
Leonard Exports Private Limited	Payables	**0.10**	0.10	Contractor	U74900WB2009PTC133430	
Neway Engineers Msw Pvt. Ltd.	Payables	**0.18**	0.18	Contractor	U74900TN2015PTC100484	
Prava Trading Corporation (India) Private Limited	Payables	**0.05**	0.05	Contractor	U51909WB2013PTC197297	
S.V. Network Technologies India Private Limited	Payables	-	0.10	Contractor	U72200TG2006PTC051972	
U K Construction Pvt Ltd	Payables	#	#	Contractor	U00501BR1986PTC002490	
Excellent Technocrate Pvt Ltd	Payables	-	0.01	Contractor	U45200BR2009PTC014723	
Hanothia Industries Ltd.	Payables	#	#	Contractor	U27109TG2005PTC046327	
Hn18 Health Services Pvt Ltd	Payables	#	#	Contractor	U74900KA2015PTC080531	
Kkl Allied Marketing Services Pvt Ltd	Payables	-	0.01	Contractor	U74999TG2008PTC057231	
M M Raj Travels Private Limited	Payables	#	#	Contractor	U34101UP1996PTC020425	
Prime Development Consultants Pvt Ltd	Payables	-	#	Contractor	U00358BR2001PTC009696	
Pumos Lighting Pvt Ltd	Payables	#	#	Contractor	U31503DL2012PTC240358	
S.V. Ready Mix Private Limited	Payables	-	#	Contractor	U74999AP2007PTC055829	

Name of struck off Company	Nature of transactions with struck-off Company	Balance outstanding as at 31 March 2023	Balance outstanding as at 31 March 2022	Relationship with the struck off company	CIN	Remarks
Snr Bricks Private Limited	Payables	-	#	Contractor	U26931AP2008PTC058944	
Timetech Enterprises Pvt Ltd	Payables	**0.01**	0.01	Contractor	U51109DL1989PTC038628	
Uniteam Pvt Ltd	Payables	**#**	#	Contractor	U29253WB2011PTC169264	
A.S. Builders Private Limited.	Payables	**0.01**	-	Contractor	U45201DL1995PTC071401	
Asian Marketing Co Ltd	Payables	**#**	-	Contractor	U51909WB1951PLC019996	
Burn Standard Co. Ltd.	Payables	**0.03**	0.05	Contractor	U51909WB1976GOI030797	
Chandel Construction Private Limite	Payables	**0.10**	-	Contractor	U45202BR2019PTC043334	
Hemantbirla Construction(I)Pvt Ltd	Payables	**0.01**	-	Contractor	U45309MP2021PTC054984	
Jagrit Care Pvt Ltd	Payables	**0.01**	0.01	Contractor	U85110BR2008PTC013510	
Rohtas Security & Intelligence	Payables	**#**	-	Contractor	U74920BR2008PTC013425	
Sankat Mochan Construction Pvt Ltd	Payables	**0.01**	0.01	Contractor	U45200BR2003PTC010344	
Shree Swami Samarth	Payables	**0.01**	0.03	Contractor	U93000KA2012PTC066661	
Titan Televentures Pvt. Ltd.	Payables	**#**	-	Contractor	U51909UP2004PTC029354	
A.P.Construction Pvt. Ltd	Payable - Contractor	-	0.01	Contractor	U74210WB1979PTC032397	
Hi-Tech Reprographics Pvt Ltd	Payable - Contractor	-	#	Contractor	U22190WB1996PTC079759	
S.K.Engineering and Work Pvt. Ltd	Payable - Contractor	-	#	Contractor	U29253MH2013PTC247348	
Ocean Star Diving Services Ltd	Payable - Contractor	-	0.08	Contractor	U93000AS2012PTC011206	
Elshadai Infratech Pvt Ltd.	Payable - Supplier	-	-	Supplier	U45203AR2013PTC008401	
Oriental Engineering Works Pvt Ltd	Payable - Contractor	-	-	Contractor	U99999DL2000PTC002393	
Globex Steel Pvt. Ltd	Payable - Contractor	-	-	Contractor	U27101DL2011PTC227333	
Destiny Enterprise Pvt. Ltd	Payable - Contractor	-	-	Contractor	U45201KA2007PTC043577	
Galaxy Enterprise Pvt. Ltd	Payable - Contractor	-	-	Contractor	U74999MH2003PTC057452	
Simran Enterprises (I) Ltd	Payable - Contractor	-	-	Contractor	U32109DL1992PLC051206	
Industrial Equipments Pvt. Ltd	Payable - Supplier	-	-	Supplier	U23524WB1957PTC023524	
Electromech Engineering Pvt. Ltd	Payable - Contractor	-	-	Contractor	U74210MH2010PTC206175	
Advance Technologies Application Pvt. Ltd	Payable - Supplier	-	-	Supplier	U72200MH1995PTC092967	

Name of struck off Company	Nature of transactions with struck-off Company	Balance outstanding as at 31 March 2023	Balance outstanding as at 31 March 2022	Relationship with the struck off company	CIN	Remarks
Amar Enterprises Pvt. Ltd	Payable - Contractor	**-**	-	Contractor	U52100GJ1993PTC020364	
Data Sync Solutions Pvt. Ltd	Payable - Supplier	**-**	-	Supplier	U72200TN2008PTC070331	
Emerging Solutions Pvt. Ltd	Payable - Supplier	**-**	-	Supplier	U72200TG1999PTC032018	
B.M. Associates Pvt. Ltd	Payable - Supplier	**-**	-	Supplier	U45200DL2006PTC155219	
D. HARIDAS & COMPANY	Payables	**-**	-	Service Provider	U51909GJ1947PLC000266	
INDIAN HYDRAULIC INDUSTRIES PVT. LTD.	Payables	**-**	-	Service Provider	U29119DL1976PTC008404	
Pixel Webtech Private Limited	Payables	**#**	#	Service Provider	U72100DL2006PTC155887	
Klean Laboratories & Reseacrh Pvt Ltd	Payables	**0.01**	-	Service Provider	U85195MH2005PTC159586	
ANANTSHRI INDUSTRIAL SECURITY (OPC) PRIVATE LIMITED	Payables	**0.02**	0.04	Contractor	U93090MP2017OPC042984	
Naveli Décor Private Limited	Payables	**-**	-	Contractor	U52609UP2017PTC099523	
Shashidhar Construction & Carriers Private Limited	Receivables	**0.72**	0.72	Contractor	U45200JH1994PTC005864	
Swiss Cabs (India) Private Limited	Payables	**0.01**	0.01	Contractor	U60231MH2008PTC178118	
Sankat Mochan Construction Private Limited	Payables	**0.01**	0.01	Contractor	U45200BR2003PTC010344	
Shaba Infra Projects Private Limited	Payables	**0.14**	0.14	Contractor	U45200JH2013PTC001333	
Ebiz Solutions Limited	Payables	**#**	-	Contractor	U72900MH1999PLC123286	

Individual Amount recoverable/payable is less than ₹ 50,000/- and sum of all recoverable cases amounts to ₹ **25,994/-** (31 March 2022- ₹ 80,046) and sum of all payable cases amounts to ₹ **3,16,565/-** (31 March 2022 - ₹ 2,47,773/-)

b) Shares held by struck off companies

Name of struck off Company	Nature of transactions with struck-off Company	Number of equity shares held 31.03.2023	Number of equity shares held 31.03.2022	CIN
Stalag Investments & Management Services Pvt Ltd	Shares held by struck off company	**60**	60	U67120MH1987PTC042898
Tradeshare Financial Services Pvt Ltd		**120**	120	U67120KL2008PTC023516
Exponential Financial Services Pvt Ltd		**120**	120	U74110DL1995PTC064465
Dige And Associates Investment Consultants Pvt Ltd		**34**	34	U00893PN2006PTC022295
Canny Securities Pvt Ltd		**1**	1	U67120KA1995PTC018357
Satvik Financial Services Ltd.		**24**	24	U67100MH2009PLC196964
Vaishak Shares Limited		**1**	1	U85110KA1994PLC015178
Kothari Intergroup Ltd.		**13**	13	U51909KA1984PLC005952
Dreams Broking Private Limited		**6**	6	U67190MH2012PTC226215

Name of struck off Company	Nature of transactions with struck-off Company	Number of equity shares held 31.03.2023	Number of equity shares held 31.03.2022	CIN
Accord Freight Pvt Ltd		**125**	125	U63090MH1999PTC123401
Ganapati Infin Pvt Ltd		**48**	48	U70109PB2011PTC034996
Shree Anekant Marketing Pvt Ltd		**10**	0	U51900WB1995PTC106659

c) Debentures held by struck off companies

Name of struck off Company	Nature of transactions with struck-off Company	Number of Debentures held 31.03.2023	Number of Debentures held 31.03.2022	CIN
Stalag Investments & Management Services Pvt Ltd	Debentures held by struck off company	**50**	50	U67120MH1987PTC042898
Tradeshare Financial Services Pvt Ltd		**100**	100	U67120KL2008PTC023516
Exponential Financial Services Pvt Ltd		**100**	100	U74110DL1995PTC064465
Dige And Associates Investment Consultants Pvt Ltd		**29**	29	U00893PN2006PTC022295
Canny Securities Pvt Ltd		**1**	1	U67120KA1995PTC018357
Satvik Financial Services Ltd.		**20**	20	U67100MH2009PLC196964
Vaishak Shares Limited		**1**	1	U85110KA1994PLC015178
Kothari Intergroup Ltd.		**11**	11	U51909KA1984PLC005952
Ganapati Infin Pvt Ltd		**40**	40	U70109PB2011PTC034996

xi) The provisions of clause (87) of section 2 of the Act read with the Companies (Restriction on number of Layers) Rules, 2017 are not applicable to the group as per Section 2(45) of the Companies Act, 2013.

xii) There were no scheme of Arrangements approved by the competent authority during the year in terms of sections 230 to 237 of the Companies Act,2013.

xiii) The Group has not advanced or loaned or invested any fund to any entity (Intermediaries) with the understanding that the Intermediary shall lend or invest in party identified by or on behalf of the Company (Ultimate Beneficiaries). The Company has not received any fund from any party with the understanding that the Company shall whether, directly or indirectly lend or invest in other entities identified by or on behalf of the Company ("Ultimate Beneficiaries") or provide any guarantee, security or the like on behalf of the Ultimate Beneficiaries.

xiv) The Group has not traded or invested in Crypto currency or Virtual Currency during the financial year.

xv) The Group does not have any transaction which is not recorded in the books of accounts that has been surrendered or disclosed as income during the year in the tax assessments under the Income Tax Act, 1961.

78. Information in respect of micro and small enterprises as at 31 March 2023 as required by Schedule III to the Companies Act, 2013 and Micro, Small and Medium Enterprises Development Act, 2006 (MSMED Act)

₹ Crore

Particulars	31 March 2023	31 March 2022
(a) Amount remaining unpaid to any supplier:		
Principal amount	**614.71**	792.01
Interest due thereon	**-**	-
(b) Amount of interest paid in terms of Section 16 of the MSMED Act along-with the amount paid to the suppliers beyond the appointed day.	**-**	-
(c) Amount of interest due and payable for the period of delay in making payment (which have been paid but beyond the appointed day during the year) but without adding the interest specified under the MSMED Act.	**-**	-
(d) Amount of interest accrued and remaining unpaid	**-**	-

₹ Crore

Particulars		31 March 2023	31 March 2022
(e)	Amount of further interest remaining due and payable even in the succeeding years, until such date when the interest dues as above are actually paid to the small enterprises, for the purpose of disallowances as a deductible expenditure under Section 23 of MSMED Act	-	-

The payment to the vendors are made as and when they are due, as per terms and conditions of respective contracts.

79. Statement containing salient features of the financial statements of Subsidiaries/Joint Ventures of NTPC Ltd. pursuant to first proviso to sub-section (3) of Section 129 read with Rule 5 of Companies (Accounts) Rules, 2014, in form AOC I is attached.

For and on behalf of the Board of Directors

(Arun Kumar) Company Secretary	(Jaikumar Srinivasan) Director (Finance) DIN: 01220828	(Gurdeep Singh) Chairman & Managing Director DIN: 00307037

These are the Notes referred to in our report of even date

For S.K. Mehta & Co. Chartered Accountants Firm Reg. No.000478N	For Varma & Varma Chartered Accountants Firm Reg. No. 004532S	For Parakh & Co. Chartered Accountants Firm Reg. No. 001475C
(Rohit Mehta) Partner M No.091382	(K P Srinivas) Partner M No. 208520	(Thalendra Sharma) Partner M No.079236
For C.K. Prusty & Associates Chartered Accountants Firm Reg. No. 323220E	For B.C. Jain & Co. Chartered Accountants Firm Reg. No. 001099C	For V.K. Jindal & Co. Chartered Accountants Firm Reg. No. 001468C
(C.K.Prusty) Partner M No. 057318	(Rishabh Jain) Partner M.No.400912	(Suresh Agarwal) Partner M.No.072534

Place : New Delhi
Dated : 19 May 2023
Digitally signed by signatories

FORM NO. AOC.1 Statement containing salient features of the financial statements of Subsidiaries/Associate Companies/Joint Ventures of NTPC Ltd.

(Pursuant to first proviso to sub-section (3) of Section 129 read with Rule 5 of Companies (Accounts) Rules, 2014)

Part "A": Subsidiaries

₹ crore

1.	Sl. No.	1	2	3	4	5	6	7	8	9	10
2.	Name of the Subsidiary	NTPC Electric Supply Company Ltd.	NTPC Vidyut Vyapar Nigam Ltd.	Bhartiya Rail Bijlee Company Ltd.	Patratu Vidyut Utpadan Nigam Ltd.	NTPC Mining Ltd.	THDC India Ltd.	North Eastern Electric Power Corporation Ltd.	NTPC EDMC Waste Solutions Private Ltd.	Ratnagiri Gas & Power Private Ltd.	NTPC Green Energy Ltd.
3.	The date since when subsidiary was acquired	21.08.2002	01.11.2002	22.11.2007	15.10.2015	29.08.2019	27.03.2020	27.03.2020	01.06.2020	31.12.2020	07.04.2022
4.	Reporting period for the subsidiary concerned, if different from the holding company's reporting period	Same as that of Holding Company (01.04.2022 -31.03.2023)	Same as that of Holding Company (01.04.2022 -31.03.2023)	Same as that of Holding Company (01.04.2022 -31.03.2023)	Same as that of Holding Company (01.04.2022 -31.03.2023)	Same as that of Holding Company (01.04.2022 -31.03.2023)	Same as that of Holding Company (01.04.2022 -31.03.2023)	Same as that of Holding Company (01.04.2022 -31.03.2023)	Same as that of Holding Company (01.04.2022 -31.03.2023)	Same as that of Holding Company (01.04.2022 -31.03.2023)	Same as that of Holding Company (07.04.2022 -31.03.2023)
5.	Reporting currency and exchange rate as on the last date of the relevant financial year in the case of foreign subsidiaries.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6.	Share capital	0.08	30.00	2,397.46	2,213.01	0.05	3,665.88	3,609.81	0.20	3,272.30	4,719.61
7.	Reserves & surplus	20.19	688.96	480.53	132.55	(0.01)	6,761.76	2,979.52	(3.52)	(3,341.83)	169.97
8.	Total assets	23.46	2,670.13	8,983.75	11,672.08	0.04	25,390.94	16,192.24	0.12	1,333.34	18,433.88
9.	Total liabilities	3.19	1,951.17	6,105.76	9,326.52	-	14,963.30	9,602.91	3.44	1,402.87	13,544.30
10.	Investments	-	1.62	-	-	-	-	4.45	-	-	-
11.	Turnover	-	4,440.17	3,424.74	-	-	1,974.30	4,556.55	-	494.78	169.49
12.	Profit before taxation	0.33	244.41	320.34	(0.51)	0.01	826.36	733.31	(0.56)	(179.60)	55.03
13.	Provision for taxation	0.08	68.52	76.35	-		153.51	336.42	-	-	(118.05)
14.	Profit after taxation	0.25	175.89	243.99	(0.51)	0.01	672.85	396.89	(0.56)	(179.60)	173.08
15.	Proposed dividend	-	-	-	-	-	-	-	-	-	-
16.	% of Shareholding	100.00%	100.00%	74.00%	74.00%	100.00%	74.496%	100.00%	74.00%	86.49%	100.00%

Notes:

1. **Subsidiaries which are yet to commence operations.**
   1. NTPC Mining Limited
   2. NTPC EDMC Waste Solutions Private Ltd.
2. **Subsidiaries which have been liquidated or sold during the year.**
   1. Kanti Bijlee Utpadan Nigam Limited -Merged with NTPC Limited pursuant to Scheme of Amalgamation approved by Ministry of Corporate Affairs (MCA)order dated 29 July 2022 w.e.f 1 April 2022, being the appointed date)
   2. Nabinagar Power Generating Company Limited -Merged with NTPC Limited pursuant to Scheme of Amalgamation approved by Ministry of Corporate Affairs (MCA)order dated 29 July 2022 w.e.f 1 April 2022, being the appointed date)
   3. NTPC Renewable Energy Limited- Equity shareholding in NTPC Renewable Energy Limited has been transferred at cost to NTPC Green Energy Limited as at 28 February 2023 through a share purchase agreement dated 8 July 2022, as amended

Part"B": Associates and Joint Ventures

Statement pursuant to Section 129 (3) of the Companies Act, 2013

₹ crore

Sl. No.	Name of Joint Ventures	Utility Powertech Ltd.	NTPC - GE Power Services Pvt. Ltd.	NTPC-SAIL Power Company Ltd.	NTPC Tamil Nadu Energy Company Ltd.	Aravali Power Company Pvt. Ltd.	NTPC-BHEL Power Projects Pvt. Ltd.	Meja Urja Nigam Pvt. Ltd.	Transformers & Electricals Kerela Ltd.
1.	Latest Audited Balance Sheet Date	31.03.2023	31.03.2022	31.03.2023	31.03.2023	31.03.2022	31.03.2022	31.03.2023	31.03.2021
2.	Date on which the Associate or Joint venture was associated or acquired	23.11.1995	27.09.1999	08.02.1999	23.05.2003	21.12.2006	28.04.2008	02.04.2008	19.06.2009
3.	Shares of Joint Ventures held by the Company on the year end as at 31.03.2023								
	Number	20,00,000	30,00,000	49,02,50,050	1,43,63,96,112	1,43,30,08,200	5,00,00,000	1,78,44,09,800	1,91,63,438
	Amount of Investment in Joint Venture (₹ crore)	1.00	3.00	490.25	1,436.40	1,433.01	50.00	1,784.41	31.34
	Extent of Holding (%)	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	44.60%
4.	Description of how there is significant influence	NA	NA	NA	NA	NA	NA	NA	NA
5.	Reason why the Joint Venture is not consolidated	NA	NA	NA	NA	NA	NA	NA	NA
	Share Capital	2.00	3.00	490.25	1,436.40	1,433.01	50.00	1,784.41	19.16
	Reserve & Surplus	101.03	6.31	948.86	462.54	1,014.93	(141.73)	(77.19)	(11.76)
6.	Networth atributable to Shareholding as per latest audited Balance Sheet (₹ crore)	103.03	9.31	1,439.11	1,898.93	2,447.94	(91.73)	1,707.23	7.41
7.	Profit/ Loss for the year (Total Comprehensive Income)								
i	Considered for Consolidation (₹ crore)	18.36	1.89	235.50	424.12	251.43	-	42.93	(16.05)
ii	Not Considered in Consolidation	NA	NA	NA	NA	NA	(91.73)	NA	NA

₹ crore

Sl. No.	Name of Joint Ventures	National High Power Test Laboratory Pvt. Ltd.	Energy Efficiency Services Ltd.	CIL NTPC Urja Pvt. Ltd.	Anushakti Vidhyut Nigam Ltd.	Hindustan Urvarak & Rasayan Limited	Trincomalee Power Company Ltd.	Bangladesh-India Friendship Power Company Pvt. Ltd.	Jhabua Power Ltd.
1.	Latest Audited Balance Sheet Date	31.03.2022	31.03.2022	31.03.2023	31.03.2022	31.03.2023	31.12.2021	30.06.2022	31.03.2023
2.	Date on which the Associate or Joint venture was associated or acquired	22.05.2009	10.12.2009	27.04.2010	27.01.2011	15.06.2016	26.09.2011	31.10.2012	05.09.2022
3.	Shares of Joint Ventures held by the Company on the year end as at 31.03.2023								
	Number	3,04,00,000	46,36,10,000	76,900	49,000	2,29,59,50,000	32,86,061	13,92,50,000	32,50,00,000
	Amount of Investment in Joint Venture (₹ crore)	30.40	463.61	0.08	0.05	2,295.95	15.20	1,162.02	325.00
	Extent of Holding (%)	20.00%	33.334%	50.00%	49.00%	29.67%	50.00%	50.00%	50.00%
4.	Description of how there is significant influence	NA	NA	NA	NA	NA	NA	NA	NA
5.	Reason why the Joint Venture is not consolidated	NA	NA	NA	NA	NA	NA	NA	NA
	Share Capital	30.40	463.62	0.08	0.05	2,295.96	8.21	1,070.84	325.00
	Reserve & Surplus	(38.42)	(171.13)	(0.01)	(0.04)	(26.07)	(7.80)	(20.21)	1,696.21
6.	Networth atributable to Shareholding as per latest audited Balance Sheet (₹ crore)	(8.02)	292.49	0.07	-	2,269.89	0.41	1,050.63	2,021.21
7.	Profit/ Loss for the year (Total Comprehen-sive Income)								
i	Considered for Consolidation (₹ crore)	(14.24)	(132.66)	0.06	(0.01)	(18.07)	(0.13)	(20.20)	8.75
ii	Not Considered in Consolidation	(8.02)	NA	NA	NA	NA	NA	NA	NA

Notes:

A. Names of Joint Ventures which are yet to commence operations.

1 CIL NTPC Urja Private Ltd.

2 Anushakti Vidyut Nigam Ltd.

3 Trincomalee Power Company Ltd. (incorporated in Srilanka)

B. Names of Associates or Joint Ventures which have been liquidated or sold during the year.

1 BF-NTPC Energy Systems Ltd. is in the process of voluntary winding up.

For and on behalf of the Board of Directors

(Arun Kumar) Company Secretary	(Jaikumar Srinivasan) Director (Finance) DIN: 01220828	(Gurdeep Singh) Chairman & Managing Director DIN: 00307037
For S.K. Mehta & Co. Chartered Accountants Firm Reg. No.000478N	For Varma & Varma Chartered Accountants Firm Reg. No. 004532S	For Parakh & Co. Chartered Accountants Firm Reg. No. 001475C
(Rohit Mehta) Partner M No.091382	(K P Srinivas) Partner M No. 208520	(Thalendra Sharma) Partner M No.079236
For C.K. Prusty & Associates Chartered Accountants Firm Reg. No. 323220E	For B.C. Jain & Co. Chartered Accountants Firm Reg. No. 001099C	For V.K. Jindal & Co. Chartered Accountants Firm Reg. No. 001468C
(C.K.Prusty) Partner M No. 057318	(Rishabh Jain) Partner M.No.400912	(Suresh Agarwal) Partner M.No.072534

Place : New Delhi
Dated : 19 May 2023
Digitally signed by signatories

INDEPENDENT AUDITORS' REPORT

To,

The Members of NTPC Limited

Report on the Audit of the Consolidated Financial Statements

Opinion

We have audited the accompanying Consolidated Financial Statements of NTPC Limited (hereinafter referred to as "the Holding Company") and its subsidiaries (the Holding Company and its subsidiaries together referred to as "the Group"), and its joint ventures, which comprise the Consolidated Balance Sheet as at 31 March 2023, the Consolidated Statement of Profit and Loss (including Other Comprehensive Income), the Consolidated Statement of Changes in Equity and the Consolidated Statement of Cash Flows for the year then ended, and notes to the Consolidated Financial Statements, including a summary of the significant accounting policies and other explanatory information (hereinafter referred to as "Consolidated Financial Statements").

In our opinion and to the best of our information and according to the explanations given to us the aforesaid Consolidated Financial Statements give the information required by the Companies Act, 2013 ('the Act') in the manner so required and give a true and fair view in conformity with the accounting principles generally accepted in India, of the consolidated state of affairs (financial position) of the Group and its joint ventures as at 31 March 2023, and their consolidated net profit (financial performance including other comprehensive income), their consolidated changes in equity and consolidated cash flows for the year ended on that date.

Basis for Opinion

We conducted our audit of the Consolidated Financial Statements in accordance with the Standards on Auditing (SAs) specified under section 143(10) of the Act. Our responsibilities under those Standards are further described in the Auditor's Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Group in accordance with the 'Code of Ethics' issued by the Institute of Chartered Accountants of India (ICAI) together with the ethical requirements that are relevant to our audit of the Consolidated Financial Statements under the provisions of the Act and the Rules made thereunder, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the ICAI's Code of Ethics. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion on the Consolidated Financial Statements.

Emphasis of Matter

Considering the requirement of Standard on Auditing (SA 600) on 'Using the work of Another Auditor' including materiality, we draw attention to the following matters in the notes to the Statements:

(a) Note No. 64(iii)(b) with respect to appeal filed by the Holding Company with the Hon'ble High Court of Delhi in the matter of Arbitral award pronounced against the holding company and the related provision made/disclosure of contingent liability as mentioned in the said note.

(b) Note No. 53(c) with respect to one of the projects under construction of Holding Company, wherein by the order dated 12 January 2023 of Hon'ble High Court of Uttarakhand, construction activities are banned till further order.

(c) Note No. 61(f)(iv & v) which describes the related party transactions entered into by the Holding Company during the year, which are not approved as required under applicable laws and regulations.

Our opinion is not modified in respect of these matters.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the Consolidated Financial Statements of the current period. These matters were addressed in the context of our audit of the Consolidated Financial Statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. For each matter below, description of how our audit addressed the matter is provided in that context. Considering the requirement of Standard on Auditing (SA 600) on 'Using the work of Another Auditor' including materiality, below Key Audit Matters have been reproduced from the Independent Auditors' report on the audit of Standalone Financial Statements of the Holding Company.

Sl. No.	Key Audit Matter	How our audit addressed the Key Audit Matter
1.	**Recognition and Measurement of revenue from Sale of Energy** The company records revenue from sale of energy as per the principles enunciated under Ind AS 115, based on tariff approved by the Central Electricity Regulatory Commission (CERC) as modified by the orders of Appellate Authorities. Pending issue of provisional/final tariff order w.e.f. 01 April, 2019 capacity charges has been provisionally recognised considering the applicable CERC Tariff Regulations 2019. This is considered as key audit matter due to the nature and extent of estimates made as per the CERC Tariff Regulations, which leads to recognition and measurement of revenue from sale of energy being complex and judgmental. (Refer Note No. 42 to the Consolidated Financial Statements, read with the Significant Accounting Policy No. C.16)	We have obtained an understanding of the CERC Tariff Regulations, orders, circulars, guidelines and the Company's internal circulars and procedures in respect of recognition and measurement of revenue from sale of energy comprising of capacity and energy charges and adopted the following audit procedures: - Evaluated and tested the effectiveness of the Company's design of internal controls relating to recognition and measurement of revenue from sale of energy. - Verified the accounting of revenue from sale of energy based on provisional tariff computed as per the principles of CERC Tariff Regulations 2019. Based on the above procedure performed, the recognition and measurement of revenue from sale of energy is considered to be adequate and reasonable.
2.	**Impairment assessment of Property, Plant and Equipment (PPE)** The Company has a material operational asset base (PPE) relating to generation of electricity and is one of the components for determining the tariff as per the CERC Tariff Regulations, which may be vulnerable to impairment. We considered this as a key audit matter as the carrying value of PPE requires impairment assessment based on the future expected cash flows associated with the power plants (Cash generating units). (Refer Note No. 63 to the Consolidated Financial Statements, read with the Accounting Policy No. C.21)	We have obtained an understanding and tested the design and operating effectiveness of controls as established by the Company's management for impairment assessment of PPE. We evaluated the Company's process of impairment assessment in assessing the appropriateness of the impairment model including the independent assessment of discount rate, economic growth rate, terminal value etc. We evaluated and checked the calculations of the cash flow forecasts prepared by the Company taking into consideration the CERC (Terms and Conditions of Tariff) Regulations, 2019 (applicable for the tariff period of 5 years from 1 April 2019 to 31 March 2024) along with the aforementioned assumptions. Based on the above procedures performed, we observed that the Company's impairment assessment of the PPE is adequate and reasonable.

Sl. No.	Key Audit Matter	How our audit addressed the Key Audit Matter
3.	**Deferred Tax Asset relating to MAT Credit Entitlement and corresponding Regulatory Deferral Liability** The company has recognised deferred tax asset relating to MAT credit entitlement. Utilisation of MAT credit will result in lower outflow of Income Tax in future years and accordingly Regulatory Deferral Liability attributable to the said MAT credit entitlement has also been recognised, payable to the beneficiaries in subsequent periods as per CERC Tariff Regulations. The recoverability of this deferred tax asset relating to MAT credit entitlement is dependent upon the generation of sufficient future taxable profits to utilise such entitlement within the stipulated period prescribed under the Income Tax Act,1961. We identified this as a key audit matter because of the importance of this matter to the intended users of the Financial Statements and its materiality; and requirement of judgement in forecasting future taxable profits for recognition of MAT credit entitlement considering the recoverability of such tax credits within allowed time frame as per the provisions of the Income Tax Act,1961. (Refer Note No. 23,32,57 & 72 to the Consolidated Financial Statements, read with the Accounting Policy No. C.5 and C.19)	We have obtained an understanding for recognition of deferred tax asset relating to MAT credit entitlement and attributable liability of the same in Regulatory Deferral Account including the management's judgement. We further assessed the related forecasts of future taxable profits and evaluated the reasonableness of the considerations/assumptions underlying the preparation of these forecasts. We have also verified the regulatory deferral account balance corresponding to the said MAT credit payable to the beneficiaries in subsequent periods. Based on the above procedures performed, the recognition and measurement of Deferred tax asset relating to MAT credit entitlement and attributable Regulatory Deferral Liability towards beneficiaries, is considered adequate and reasonable.
4.	**Contingent Liabilities** There are a number of litigations pending before various forums against the Company and the management's judgement is required for estimating the amount to be disclosed as contingent liability. We identified this as a key audit matter because the estimates on which these amounts are based involve a significant degree of management judgement in interpreting the cases and it may be subject to management bias. (Refer Note No. 76(A) to the Consolidated Financial Statements, read with the Accounting Policy No. C.14)	We have obtained an understanding of the Company's internal instructions and procedures in respect of estimation and disclosure of contingent liabilities and adopted the following audit procedures: - understood and tested the design and operating effectiveness of controls as established by the management for obtaining all relevant information for pending litigation cases; - discussed with the management regarding any material developments thereto and latest status of legal matters; - read various correspondences and related documents pertaining to litigation cases and relevant external legal opinions obtained by the management and performed substantive procedures on calculations supporting the disclosure of contingent liabilities; - examined management's judgements and assessments in respect of whether provisions are required;

Sl. No.	Key Audit Matter	How our audit addressed the Key Audit Matter
4.		- considered the management assessments of those matters that are not disclosed as contingent liability since the probability of material outflow is considered to be remote; - reviewed the adequacy and completeness of disclosures; Based on the above procedures performed, the estimation and disclosures of contingent liabilities is considered to be adequate and reasonable.

Information other than the Consolidated Financial Statements and Auditors' Report thereon

The Company's Board of Directors is responsible for the preparation of the other information. The other information comprises the Corporate Governance Report, and the information included in the Directors' Report including Annexures, Management Discussion and Analysis, Business Responsibility and Sustainability Report and other company related information (but does not include the Consolidated Financial Statements and Standalone Financial Statements and our auditors' report thereon), which are expected to be made available to us after the date of this auditors' report.

Our opinion on the Consolidated Financial Statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the Consolidated Financial Statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the Consolidated Financial Statements or our knowledge obtained during the course of our audit or otherwise appears to be materially misstated.

When we read the other information, if we conclude that there is a material misstatement therein, we are required to communicate the matter to those charged with governance and take appropriate actions, if required.

Responsibilities of Management and Those Charged with Governance for the Consolidated Financial Statements

The Holding Company's Board of Directors is responsible for the preparation and presentation of these Consolidated Financial Statements in terms of the requirements of the Act, that give a true and fair view of the consolidated financial position, consolidated financial performance including other comprehensive income, consolidated Statement of Changes in Equity and consolidated cash flows of the Group including its joint ventures in accordance with the accounting principles generally accepted in India, including the Ind AS Accounting Standards specified under section 133 of the Act read with the Companies (Indian Accounting Standards) Rules, 2015 as amended. The respective Board of Directors of the companies included in the Group and of its joint ventures are responsible for maintenance of adequate accounting records in accordance with the provisions of the Act for safeguarding the assets of the Group and its joint ventures and for preventing and detecting frauds and other irregularities; the selection and application of appropriate accounting policies; making judgments and estimates that are reasonable and prudent; and the design, implementation and maintenance of adequate internal financial controls, that were operating effectively for ensuring accuracy and completeness of the accounting records, relevant to the preparation and presentation of the Consolidated Financial Statements that give a true and fair view and are free from material misstatement, whether due to fraud or error, which have been used for the purpose of preparation of the Consolidated Financial Statements by the Directors of the Holding Company, as aforesaid.

In preparing the Consolidated Financial Statements, the respective Board of Directors of the companies included in the Group and of its joint ventures are responsible for assessing the ability of the Group and of its joint ventures to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group and its Joint Ventures or to cease operations, or has no realistic alternative but to do so.

The respective Board of Directors of the companies included in the Group and of its joint ventures are responsible for overseeing the financial reporting process of the Group and of its joint ventures.

Auditors' Responsibility for the audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the Consolidated Financial Statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these Consolidated Financial Statements.

As part of an audit in accordance with SAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the Consolidated Financial Statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances. Under section 143(3)(i) of the Act, we are also responsible for expressing our opinion on whether the holding company, its subsidiaries and joint ventures incorporated in India have adequate internal financial controls with reference to Consolidated Financial Statements in place and the operating effectiveness of such controls.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of Holding Company's management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the ability of the Group and its joint ventures to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the Consolidated Financial Statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group and its joint ventures to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the Consolidated Financial Statements, including the disclosures, and whether the Consolidated Financial Statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group and its joint ventures to express an opinion on the Consolidated Financial Statements. We are responsible for the direction, supervision and performance of the audit of the financial statements of such entities included in the Consolidated Financial Statements of which we are the independent auditors. For the other entities included in the Consolidated Financial Statements, which have been audited by other auditors, such other auditors remain responsible for the direction, supervision and performance of the audits carried out by them. We remain solely responsible for our audit opinion.

We communicate with those charged with governance of the Holding Company and such other entities included in the Consolidated Financial Statements of which we are the independent auditors regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the Consolidated Financial Statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Other Matters

a) We did not audit the financial statements/ financial information of Nine subsidiaries included in the Consolidated Financial Statement, whose financial statements reflects total Assets of ₹ 82,732.11 crore and Net Assets ₹ 27,866.05 crore as at 31 March 2023; total Revenues of ₹ 14,820.72 crore and Net Cash Inflows amounting to ₹ (6.13) crore for the year ended on that date, as considered in the Consolidated Financial Statements. The Consolidated Financial Statements also includes the Group's share of net profit using the equity method, of ₹ 709.88 crore and total comprehensive income of ₹ 711.65 crore for the year ended 31 March 2023, as considered in the consolidated financial results, in respect of Seven joint ventures, whose financial statements have not been audited by us. These financial statements have been audited by their respective independent auditors whose reports have been furnished to us by the management upto 17 May, 2023 and our opinion on the Statement, in so far as it relates to the aforesaid subsidiaries and joint ventures is based solely on the reports of the other auditors and the procedures performed by us are as stated Auditor's Responsibility section above after considering the requirement of Standard on Auditing (SA 600) on 'Using the work of Another Auditor' including materiality.

b) The Consolidated Financial Statements also include One subsidiary, whose financial statements / financial information reflect total Assets of ₹ 1333.34 crore and Net Assets of ₹ (69.53) crore as at 31 March 2023; total Revenues of ₹ 541.31 crore for the year ended on that date respectively, and net cash flows amounting to ₹ (83.33) crore for the year ended on that date, as considered in the consolidated financial statements, have not been audited by their auditors. The consolidated financial statements also include the Group's share of net profit/(loss) after tax using the equity method, of ₹ 69.91 crore and total comprehensive income of ₹ 70.03 crore for the year ended 31 March 2023 respectively as considered in the Consolidated Financial Statements in respect of Nine joint ventures whose financial statements/ financial information are unaudited.These financial statements/ financial information have been furnished to us by the Holding Company's Management and our opinion on the Consolidated Financial Statements, in so far as it relates to the Group's share of net profit/(loss) and disclosures included in respect of these joint ventures, and our report in terms of sub-section (3) of Section 143 of the Act, in so far as it relates to the aforesaid subsidiaries and joint ventures, is based solely on such unaudited financial statements/ financial information. Two of the joint ventures as above are located outside India in respect of which the Holding Company's management has provided us the financial statements prepared in accordance with accounting principles generally accepted in India. In our opinion and according to the information and explanations given to us by the Holding Company's Management these financial statements / financial information are not material to the Group.

Our opinion on the Consolidated Financial Statements, and our report on Other Legal and Regulatory Requirements below, is not modified in respect of the matters as stated in para (a) & (b) above, with respect to our reliance on the work done and the reports of the other auditors, the financial statements/financial information certified by the Holding Company's Management.

Report on Other Legal and Regulatory Requirement

1. As required by paragraph 3(xxi) of the Companies (Auditor's Report) Order, 2020 (CARO), issued by the Central Government of India in terms of Section 143(11) of the Act, . We report that there is adverse remark included in the CARO report in respect of the standalone financial statements of the Holding Company which is included in these Consolidated Financial Statements as under:

Sr. No.	Name	CIN	Holding Company / subsidiary/Associate/ Joint Venture	Clause number of the CARO report which is qualified
1.	NTPC Limited	L40101DL1975OI0079966	Holding Company	3(xiii)

In respect of Subsidiaries and Joint Ventures whose accounts are audited, we report that no qualifications or adverse remarks given by the respective auditors in the Companies (Auditor's Report) Order 2020 (CARO) reports of the Companies included in the consolidated financial statements.

In respect of following components included in the consolidated financial statements, respective auditors have not issued their statutory audit report till the cut-off date considered for the independent auditors' report:

Sr. No.	Name of the Company	Subsidiary/ Joint Venture
1.	Ratnagiri Gas & Power Pvt Ltd	Subsidiary
2.	Aravali Power Company Private Ltd.	Joint Venture
3.	National High Power Test Laboratory Pvt. Ltd	Joint Venture
4.	NTPC- GE Power Services Private Ltd.	Joint Venture
5.	NTPC-BHEL Power Project Pvt. Ltd	Joint Venture
6.	Transformers and Electricals Kerala Ltd.	Joint Venture
7.	Energy Efficiency Services Ltd.	Joint Venture
8.	Anushakti Vidyut Nigam Ltd.	Joint Venture
9.	Trincomalee Power Company Ltd	Joint Venture
10.	Bangladesh India Friendship Power Company Pvt. Ltd.	Joint Venture

2. As required by Section 143(3) of the Act, based on our audit and on the consideration of report of the other auditors on separate financial statements and the other financial information of subsidiaries and joint ventures as mentioned in the 'Other Matters' paragraph, we report, to the extent applicable, that:

   a) We have sought and obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit of the aforesaid Consolidated Financial Statements.

   b) In our opinion, proper books of account as required by law relating to preparation of the aforesaid Consolidated Financial Statements have been kept so far as it appears from our examination of those books and the reports of the other auditors.

   c) The Consolidated Balance Sheet, the Consolidated Statement of Profit and Loss (including Other Comprehensive Income), the Consolidated Statement of Changes in Equity and the Consolidated Statement of Cash Flows dealt with by this Report are in agreement with the relevant books of account maintained for the purpose of preparation of the Consolidated Financial Statements.

   d) In our opinion, the aforesaid Consolidated Financial Statements comply with the Indian Accounting Standards specified under Section 133 of the Act read with the Companies (Indian Accounting Standards) Rules, 2015 as amended.

   e) Being a Government Company, pursuant to the Notification No. GSR 463(E) dated 5th June 2015 issued by Ministry of Corporate Affairs, Government of India, provisions of sub-section (2) of Section 164 of the Act, are not applicable to the Holding company and its subsidiaries and three Joint Ventures. Further, on the basis of the reports of the auditors of three joint venture incorporated in India, none of the directors of the joint ventures incorporated in India is disqualified as on 31 March 2023 from being appointed as a director in terms of Section 164 (2) of the Act, wherever applicable.

   f) With respect to the adequacy of the Internal Financial Controls with reference to consolidated financial statements of the Holding Company, its subsidiaries and joint ventures incorporated in India and the operating effectiveness of such controls, refer to our separate report in **Annexure-1**. Our report expresses a modified opinion on the adequacy and operating effectiveness of the Holding Company's internal financial controls over financial reporting.

   g) As per Notification No. GSR 463(E) dated 5 June 2015 issued by the Ministry of Corporate Affairs, Government of India, Section 197 of the Act is not applicable to the Government Companies. Accordingly, reporting in accordance with requirement of provisions of section 197(16) of the Act is not applicable to the Holding company and its subsidiaries and four Joint Ventures. Further, on the basis of the reports of the auditors of three joint ventures incorporated in India, the managerial remuneration paid/provided by such joint ventures to its directors during the year was in accordance with the provisions of section 197 read with Schedule V of the Act, wherever applicable.

   h) With respect to the other matters to be included in the Auditor's Report in accordance with Rule 11 of the Companies (Audit and Auditor's) Rules, 2014, as amended in our opinion and to the best of our information and according to the explanations given to us and based on the consideration of the report of the other auditors on separate financial statements and also the other financial information of the subsidiaries and joint ventures, as mentioned in the 'Other Matters' paragraph:

i. The Consolidated Financial Statements disclose the impact of pending litigations on the consolidated financial position of the Group and its joint ventures. Refer Note No. 76(A) to the Consolidated Financial Statements;

ii. Provision has been made in the Consolidated Financial Statements, as required under the applicable law or Indian Accounting Standards, for material foreseeable losses, on long-term contracts including derivative contracts;

iii. Following are the instances of delay in transferring amounts, required to be transferred, to the

Investor Education and Protection Fund by the Company:

a) Unclaimed amount of dividend:

Year	Amount (₹ in crore)	Due date of transfer	Date of transfer
2014-15	0.44	30.03.2022	08.06.2022
2014-15	0.76	18.11.2022	06.03.2023
2015-16	0.66	30.03.2023	Not yet transferred

b) Equity shares related to unclaimed dividend:

Year	No. of Shares	Due date of transfer to IEPF	Date of transfer
2013-14	127,339	01/11/2021	08/06/2022
2014-15	77,019	30/03/2022	20/10/2022
2014-15	65,767	18/11/2022	24/03/2023
2015-16	74,904*	30/03/2023	Under process

*Tentative number of shares to be transferred to IEPF.

iv. (a) The respective Managements of the Holding Company and its subsidiaries and joint ventures which are companies incorporated in India, whose financial statements have been audited under the Act, have represented to us and the other auditors of such subsidiaries and its joint ventures that, to the best of their knowledge and belief, as disclosed in the note 77(xiii) to the accounts, no funds have been advanced or loaned or invested (either from borrowed funds or share premium or any other sources or kind of funds) by the Holding Company or any such subsidiaries and joint ventures to or in any other person(s) or entity(ies), including foreign entities ("Intermediaries"), with the understanding, whether recorded in writing or otherwise, that the Intermediary shall, directly or indirectly lend or invest in other persons or entities identified in any manner whatsoever by or on behalf of the Holding Company or any of such subsidiaries and joint ventures ("Ultimate Beneficiaries") or provide any guarantee, security or the like on behalf of the Ultimate Beneficiaries.

(b) The respective Managements of the Holding Company and its subsidiaries and joint ventures whose financial statements have been audited under the Act, have represented to us and the other auditors of such subsidiaries and joint ventures that to the best of their knowledge and belief, as disclosed in the note 77(xiii) to the accounts, no funds have been received by the Holding Company or any of such subsidiaries and joint ventures from any person(s) or entity(ies), including foreign entities ("Funding Parties"), with the understanding, whether recorded in writing or otherwise, that the Holding Company or any of such subsidiaries and joint ventures shall directly or indirectly, lend or invest in other persons or entities identified in any manner whatsoever by or on behalf of the Funding Party ("Ultimate Beneficiaries") or provide any guarantee, security or the like on behalf of the Ultimate Beneficiaries.

(c) Based on the audit procedures that have been considered reasonable and appropriate in the circumstances performed by us and that performed by the auditors of the subsidiaries and joint ventures which are companies incorporated in India whose financial statements have been audited under the Act, nothing has come to our or other auditors' notice that has caused us or other auditors to believe that the representations under sub-clause (i) and (ii) of Rule 11(e) contain any material misstatement.

v. The final proposed dividend for the previous year and for the year and interim dividend declared or paid during the year by the Holding Company and its subsidiaries and joint ventures incorporated in India is in compliance with section 123 of the Act.

vi. Proviso to Rule 3(1) of the Companies (Accounts) Rules, 2014 for maintaining books of account using accounting software which has a feature of recording audit trail (edit log) facility is applicable to the Group and Joint Ventures with effect from 1 April 2023, and accordingly, reporting under Rule 11(g) of Companies (Audit and Auditors) Rules, 2014 is not applicable for the financial year ended 31 March 2023.

For S.K.Mehta & Co
Chartered Accountants
FRN 000478N

(Rohit Mehta)
Partner
M. No.091382
UDIN: 23091382BGWXSH7816

For Varma & Varma
Chartered Accountants
FRN 004532S

(K P Srinivas)
Partner
M. No.208520
UDIN: 23208520BGUHDT3029

For V K Jindal & Co
Chartered Accountants
FRN 001468C

(Suresh Agarwal)
Partner
M. No.072534
UDIN: 23072534BGUVYW2161

For Parakh & Co.
Chartered Accountants
FRN 001475C

(Thalendra Sharma)
Partner
M. No.079236
UDIN: 23079236BGYTGQ6051

For C K Prusty & Associates
Chartered Accountants
FRN 323220E

(C.K.Prusty)
Partner
M. No.057318
UDIN: 23057318BGXQAD9651

For B C Jain & Co.
Chartered Accountants
FRN 001099C

(Rishabh Jain)
Partner
M. No.400912
UDIN: 23400912BHALMZ6277

Place: New Delhi
Dated: 19 May, 2023
Digitally signed by signatories

ANNEXURE 1 TO THE INDEPENDENT AUDITORS' REPORT

Referred to in paragraph 2 (f) under 'Report on Other Legal and Regulatory Requirements' section of our report of even date to the members of NTPC LIMITED on the Consolidated Financial Statements for the year ended 31 March 2023

Report on the Internal Financial Controls with reference to Consolidated Financial Statements under Clause (i) of Sub-section 3 of Section 143 of the Companies Act, 2013 ("the Act")

In conjunction with our audit of the Consolidated Financial Statements of the Company as of and for the year ended 31 March 2023, we have audited the internal financial controls with reference to Consolidated Financial Statements of NTPC Limited (hereinafter referred to as "the Holding Company") and its subsidiaries (the Holding Company and its subsidiaries together referred to as "the Group"), and joint ventures, which are companies incorporated in India, as of that date.

Management's Responsibility for Internal Financial Controls

The respective Board of Directors of the Holding Company, its subsidiaries, and joint ventures, which are companies incorporated in India, are responsible for establishing and maintaining internal financial controls based on the internal controls over financial reporting criteria established by the respective companies considering the essential components of internal control stated in the Guidance Note on Audit of Internal Financial Controls over Financial Reporting issued by the Institute of Chartered Accountants of India (ICAI). These responsibilities include the design, implementation and maintenance of adequate internal financial controls that were operating effectively for ensuring the orderly and efficient conduct of its business, including adherence to the respective company's policies, the safeguarding of its assets, the prevention and detection of frauds and errors, the accuracy and completeness of the accounting records, and the timely preparation of reliable financial information, as required under the Act.

Auditors' Responsibility

Our responsibility is to express an opinion on the Company's internal financial controls with reference to Consolidated Financial Statements based on our audit. We conducted our audit in accordance with the Guidance Note on Audit of Internal Financial Controls over Financial Reporting (the "Guidance Note") and the Standards on Auditing prescribed under section 143(10) of the Act, to the extent applicable to an audit of internal financial controls with reference to Consolidated Financial Statements. Those Standards and the Guidance Note require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether adequate internal financial controls with reference to Consolidated Financial Statements was established and maintained and if such controls operated effectively in all material respects.

Our audit involves performing procedures to obtain audit evidence about the adequacy of the internal financial control with reference to Consolidated Financial Statements and their operating effectiveness. Our audit of internal financial controls with reference to Consolidated Financial Statements included obtaining an understanding of internal financial controls with reference to Consolidated Financial Statements, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the Consolidated Financial Statements, whether due to fraud or error.

We believe that the audit evidence we have obtained and the audit evidence obtained by the other auditors of the subsidiaries and joint ventures, incorporated in India, in terms of their reports referred to in the 'Other Matters' paragraph below, is sufficient and appropriate to provide a basis for our qualified audit opinion on the internal financial controls of the Group and its Joint Venture Companies incorporated in India, with reference to Consolidated Financial Statements.

Meaning of Internal Financial Controls with reference to Consolidated Financial Statements

A company's internal financial control with reference to Consolidated Financial Statements is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of Consolidated Financial Statements for external purposes in accordance with generally accepted accounting principles. A company's internal financial control with reference to Consolidated Financial Statements includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of Consolidated Financial Statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the Consolidated Financial Statements.

Inherent Limitations of Internal Financial Controls with reference to Consolidated Financial Statements

Because of the inherent limitations of internal financial controls with reference to Consolidated Financial Statements, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may occur and not be detected. Also, projections of any evaluation of the internal financial controls with reference to Consolidated Financial Statements to future periods are subject to the risk that the internal financial control with reference to Consolidated Financial Statements may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Basis for Qualified Opinion

According to the information and explanations given to us and based on our audit, the following material weakness has been identified as at March 31, 2023:

The Holding Company did not have an appropriate internal control system to ensure that related party transactions are undertaken only after approval under the provisions of sections 177 of the Companies Act, 2013 as well as the provisions of Regulation 23 of the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015 by the Audit Committee of Board and Shareholders of the Holding company wherever applicable, as a result material transactions were entered into by the Holding company during the year without approval as required under the said provisions, as detailed in Note No. 61(f)(iv & v) of the Consolidated Financial Statements.

A 'material weakness' is a deficiency, or a combination of deficiencies, in internal financial control over financial reporting, such that there is a reasonable possibility that a material misstatement of the company's annual or interim financial statements will not be prevented or detected on a timely basis.

Qualified Opinion

In our opinion and to the best of our information and according to the explanations given to us, except for the possible effects of the material weakness described in the Basis for Qualified Opinion Paragraph on the achievement of the objectives of the control criteria, the Holding Company, its subsidiaries and joint ventures, which are companies incorporated in India, have, in all material respects, an adequate internal financial controls with reference to Consolidated Financial Statements in place and such internal financial controls with reference to Consolidated Financial Statements were operating effectively as at 31 March 2023, based on the internal controls over financial reporting criteria established by the Group and its Joint Venture Companies incorporated in India considering the essential components of internal control stated in the Guidance Note on Audit of Internal Financial Controls Over Financial Reporting issued by ICAI.

We have considered the material weakness identified and reported above in determining the nature, timing, and extent of audit tests applied in our audit of the March 31, 2023 consolidated financial statements of the Company, and the material weakness has not affected our opinion on the consolidated financial statements of the Company.

Other Matters

Our aforesaid report under Section 143(3)(i) of the Act on the adequacy and operating effectiveness of the internal financial controls with reference to Consolidated Financial Statements of the Holding Company, in so far as it relates to nine subsidiaries and seven joint ventures incorporated in India, is based on the corresponding reports of the auditors of such companies incorporated in India.

Our aforesaid report under Section 143(3)(i) of the Act on the adequacy and operating effectiveness of the internal financial controls with reference to Consolidated Financial Statements in so far as it relates to one subsidiaries and nine joint ventures incorporated in India, whose financial statements / financial information are unaudited and our opinion on the adequacy and operating effectiveness of the internal financial controls with reference to Consolidated Financial Statements of the Group is not affected as the Group's share of net profit/loss (including Other Comprehensive Income) and disclosures included in respect of these joint ventures in these Consolidated Financial Statements are not material to the Group.

Our report is not modified in respect of the above matters.

For S.K.Mehta & Co
Chartered Accountants
FRN 000478N

(Rohit Mehta)
Partner
M. No.091382
UDIN: 23091382BGWXSH7816

For Varma & Varma
Chartered Accountants
FRN 004532S

(K P Srinivas)
Partner
M. No.208520
UDIN: 23208520BGUHDT3029

For V K Jindal & Co
Chartered Accountants
FRN 001468C

(Suresh Agarwal)
Partner
M. No.072534
UDIN: 23072534BGUVYW2161

For Parakh & Co.
Chartered Accountants
FRN 001475C

(Thalendra Sharma)
Partner
M. No.079236
UDIN: 23079236BGYTGQ6051

For C K Prusty & Associates
Chartered Accountants
FRN 323220E

(C.K.Prusty)
Partner
M. No.057318
UDIN: 23057318BGXQAD9651

For B C Jain & Co.
Chartered Accountants
FRN 001099C

(Rishabh Jain)
Partner
M. No.400912
UDIN: 23400912BHALMZ6277

Place: New Delhi
Dated: 19 May, 2023

Digitally signed by signatories

THE COMPTROLLER AND AUDITOR GENERAL OF INDIA UNDER SECTION 143(6)(b) READ WITH SECTION 129 (4) OF THE COMPANIES ACT, 2013 ON THE CONSOLIDATED FINANCIAL STATEMENTS OF NTPC LIMITED FOR THE YEAR ENDED 31 MARCH 2023 AND MANAGEMENT REPLIES THEREON

Comment	Management Reply
The preparation of consolidated financial statements of NTPC Limited for the year ended 31 March 2023 in accordance with the financial reporting framework prescribed under the Companies Act, 2013 (Act) is the responsibility of the management of the company. The statutory auditors appointed by the Comptroller and Auditor General of India under section 139(5) read with section 129(4) of the Act are responsible for expressing opinion on the financial statements under section 143 read with section 129(4) of the Act based on independent audit in accordance with the standards on auditing prescribed under section 143(10) of the Act. This is stated to have been done by them vide their Audit Report dated 19 May 2023. I, on behalf of the Comptroller and Auditor General of India, have conducted a supplementary audit of the consolidated financial statements of NTPC Limited for the year ended 31 March 2023 under Section 143(6)(a) read with section 129(4) of the Act. We conducted a supplementary audit of financial statements of NTPC Limited, and subsidiaries, associate companies and jointly controlled entities listed in Annexure I but did not conduct supplementary audit of the financial statements of subsidiaries, associate companies and jointly controlled entities listed in Annexure II for the year ended on that date. Further, section 139(5) and 143(6)(a) of the Act are not applicable to Utility Powertech Limited and NTPC - GE Power Services Private Limited being private entities and Tricomalee Power Company Limited and Bangladesh - India Friendship Power Company Private Limited being incorporated in foreign country(ies) under the respective laws, for appointment of their Statutory Auditors and for conduct of supplementary audit. Accordingly, Comptroller and Auditor General of India has neither appointed the Statutory Auditors nor conducted the supplementary audit of these companies. This supplementary audit has been carried out independently without access to the working papers of the statutory auditors and is limited primarily to inquiries of the statutory auditors and company personnel and a selective examination of some of the accounting records. Based on my supplementary audit, I would like to highlight the following significant matter under section 143(6)(b) read with section 129(4) of the Act which has come to my attention and which in my view is necessary for enabling a better understanding of the financial statements and the related audit report:	

Comment	Management Reply
Comments on Consolidated Financial Position	
Consolidated Balance sheet	
Capital work-in-progress (Note 3) ₹ 89,133.12 crore As per Regulation 5.1 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) (Second Amendment) Regulations, 2021, the date of commercial operation in case of integrated mine(s), shall mean the earliest of, a) the first date of the year succeeding the year in which 25 per cent of the Peak Rated Capacity as per the Mining Plan is achieved; or b) the first date of the year succeeding the year in which the value of production estimated in accordance with Regulation 7A of these regulations, exceeds total expenditure in that year; or, c) the date of two years from the date of commencement of production. NTPC in violation of both, CERC regulations and its Significant Accounting Policy No.7 did not declare commercial operation date of Talaipalli Coal Mine, despite commencement of production in 2019 itself, i.e. more than two years from the date of commencement of production. This resulted in overstatement of Capital work-in-progress and understatement of Property, plant and equipment by ₹ 925.80 crore each. Depreciation was also to be charged off from date of capitalisation. **ANNEXURE-I** **List of Subsidiaries, Associate Companies and Jointly Controlled Entities whose financial statements were audited by the Comptroller and Auditor General of India** **Subsidiaries** 1. NTPC Vidyut Vyapar Nigam Limited 2. Patratu Vidyut Utpadan Nigam Limited 3. NTPC Green Energy Limited 4. NTPC Mining Limited 5. Bhartiya Rail Bijlee Company Limited 6. North Eastern Electric Power Corporation Limited **Associate Companies and Joint Ventures** 1. NTPC-SAIL Power Company Limited 2. NTPC Tamil Nadu Energy Company Limited 3. Meja Urja Nigam Private Limited 4. CIL NTPC Urja Private Limited 5. Jhabua Power Limited	The Regulation 5.1 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) (Second Amendment) Regulations, 2021 referred by audit also provides that *'Provided further that in case the integrated mine(s) is ready for commercial operation but is prevented from declaration of the date of commercial operation for reasons not attributable to the generating company or its suppliers or contractors or the Mine Developer and Operator, the Commission, on an application made by the generating company, may approve such other date as the date of commercial operation as may be considered appropriate after considering the relevant reasons that prevented the declaration of the date of commercial operation under any of the sub-clauses of Clause (3) of this Regulation;* *Provided also that the generating company seeking the approval of the date of commercial operation under the preceding proviso shall give prior notice of one month to the beneficiaries of the end-use or associated generating station(s) of the integrated mine(s) regarding the date of commercial operation.'* As on date, there is no Mine Development Operator (MDO) for the subject Mine as the earlier appointed agency had left the work and the appointment of new MDO is in progress. The approved Mining Plan was challenged by the then MDO and hence the same was reviewed by Central Mine Planning & Design Institute Limited (CMPDIL) who in their report suggested for changes in original mining plan. The revised mining plan was received from CMPDIL and has been put up for approval of CCO (Coal Controller Organization), in the month of January 2023. Revised mining plan is under final stage of approval with CCO. Beneficiaries have been intimated about the tentative date of declaration of commercial operation as 1 August 2023 as per the Regulations. The application to CERC for approving the date of commercial declaration as per the Regulations will be filed considering the final date of commercial operation. In this context it would be very pertinent to bring forth certain cardinal principles of recognition of Property, plant and equipment as provided in Indian Accounting Standards. Paragraph 7 of Ind AS-16-'Property, plant and equipment' provides the recognition criteria that *the cost of an item of property, plant and equipment shall be recognised as an asset if, and only if it is probable that future economic benefits associated with the item will flow to the entity; and the cost of the item can be measured reliably*. Further, Paragraph 16 of Ind AS 16 provides that *any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management is included in the cost of assets.* Further, Paragraph 20 of Ind AS 16 also provides that *Recognition of costs in the carrying amount of an item of property, plant and equipment ceases when the item is in the location and condition necessary for it to be capable of operating in the manner intended by management.* And paragraph 55 of Ind AS 16 provides that *Depreciation of an asset begins when it is available for use, ie when it is in the location and condition necessary for it to be capable of operating in the manner intended by management.*

Comment	Management Reply
ANNEXURE-II **List of Subsidiaries, Associate Companies and Jointly Controlled Entities whose financial statements were not audited by the Comptroller and Auditor General of India** **Subsidiaries** 1. THDC India Limited 2. NTPC Electric Supply Company Limited 3. Ratnagiri Gas & Power Private Limited 4. NTPC EDMC Waste Solutions Private Limited **Associate Companies and Joint Ventures** 1. Aravali Power Company Private Limited 2. Hindustan Urvarak and Rasayan Limited 3. NTPC-BHEL Power Projects Private Limited 4. Transformers & Electricals Kerala Limited 5. National High Power Test Laboratory Private Limited 6. Energy Efficiency Services Limited 7. Anushakti Vidyut Nigam Limited	In the case of Talaipalli coal mine, the intention of the management is to ensure sustainable production, by operating in a manner intended by the management, considering the revised mining plan which is under consideration by the CCO. The commercial non-declaration of the Mine has been disclosed in the Note 66(d)(i) of the Standalone Financial Statements and discussed in the Directors' Report. The commercial declaration of the Mine as at 31 March 2023 would not have been in accordance with the provisions of Ind AS 16 stated above as the asset was not available for its intended use. As the asset was not capitalized, no depreciation has been charged. In view of the above, there is no overstatement of Capital work-in-progress and understatement of Property, plant and equipment.

For and on behalf of the
Comptroller & Auditor General of India

(Sanjay K. Jha)
Director General of Audit (Energy)
New Delhi

Place: New Delhi
Dated: 20 July, 2023

For and on behalf of the
Board of Directors

(Gurdeep Singh)
Chairman and Managing Director

Place: New Delhi
Dated: 29 July, 2023

Independent Assurance Report

Independent Assurance Statement to NTPC Limited on their select Non-financial Sustainability Disclosures in the Integrated Annual Report for FY 2022-23

Introduction

We, ('KPMG Assurance and Consulting Services LLP', or 'KPMG', or 'the 'Firm') have been engaged by NTPC Limited ('NTPC' or 'the Company') for the purpose of providing an independent assurance on the select non-financial sustainability disclosures presented in the Integrated Annual Report 2022-23 ('the Report') of the Company for the period covering 1st April 2022 to 31st March 2023 ('the Year' or 'the Reporting Period') as described in the 'scope, boundary, and limitations' below.

Company's Responsibilities

The management at the Company is responsible for preparing the Integrated Annual Report 2022-23 that is free from any material misstatement in accordance with the reporting criteria stated in the Report (Integrated Reporting <IR> Framework and GRI Standards 2021) and for the information contained therein. The management at the Company is also responsible for preparing the designed Integrated Annual Report 2022-23. The Company's responsibilities include designing, implementing, and maintaining internal controls relevant to the preparation and presentation of the Report that is free from any material misstatement, whether due to fraud or error. It also includes conducting the materiality assessment process to identify material topics relevant for the Company based on the responses of the internal and external stakeholders. The Company ensures that it complies with the reporting criteria and local regulations. It designs, implements, and effectively operates controls to achieve the stated control objectives; selects and applies policies; makes judgments and estimates that are reasonable in the circumstances; and maintains adequate records in relation to the Report. The Company is also responsible for preventing and detecting fraud and for identifying and ensuring compliance with laws and regulations applicable to its activities. The Company is responsible for ensuring that the Company's staff involved with the preparation of the Report are properly trained, systems are properly updated, and that any changes in reporting encompass all significant operational sites.

Our Responsibilities

Our responsibility is to examine the Report prepared by the Company and to report thereon on the select non-financial sustainability disclosures in the form of an independent assurance conclusion based on the evidence obtained. We conducted our engagement in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (Revised), Assurance Engagements Other Than Audits or Reviews of Historical Financial Information issued by the International Auditing and Assurance Standards Board. That standard requires that we plan and perform our procedures to obtain a meaningful level of assurance about whether the select non-financial sustainability disclosures in the Report comply with the reporting standards in all material respects, as the basis for our assurance conclusions.

The Firm applies International Standard on Quality Management 1, which requires the Firm to design, implement and operate a system of quality management including policies or procedures regarding compliance with ethical requirements, professional standards, and applicable legal and regulatory requirements. We have complied with the independence and other ethical requirements of the International Ethics Standards Board for Accountants' International Code of Ethics for Professional Accountants (including International Independence Standards) (IESBA Code), which is founded on the fundamental principles of integrity, objectivity, professional competence, and due care, confidentiality, and professional behaviour. The assurance procedures selected depend on our understanding of the Report of the Company and other engagement circumstances, and our consideration of the areas where material misstatements are likely to arise.

In obtaining an understanding of the Report and other engagement circumstances, we have considered the process used to prepare the Report in order to design assurance procedures that are appropriate in the circumstances, but not for the purpose of expressing a conclusion as to the effectiveness of the Company's process or internal controls over the preparation and presentation of the Report.

Our engagement also included: assessing the appropriateness of the select non-financial sustainability disclosures and the suitability of the criteria used by the Company, evaluating the appropriateness of the methods, policies and procedures, and models used, and the reasonableness of estimates made by the Company in the context of the select non-financial sustainability disclosures in the Report. The procedures performed in a limited assurance engagement vary in nature and timing from and are less in extent than for a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

As part of this engagement, we have not performed any procedures by way of audit, review or verification of the financial disclosures nor of the underlying records or other sources from which the financial statements and information was extracted.

Assurance Procedures

Our assurance process involves performing procedures to obtain evidence about the reliability of specified disclosures. The nature, timing, and extent of the procedures selected depend on our professional judgment, including the assessment of the risks of material misstatement of the select non-financial disclosures whether due to fraud or error. In making those risk assessments, we have considered internal controls relevant to the preparation of the Report to design assurance procedures that are appropriate in the circumstances.

We are required to plan and perform our work to address the areas where we have identified that a material misstatement of the select non-financial disclosure is likely to arise. The procedures we performed were based on our professional judgment. In carrying out our reasonable assurance engagement on the select non-financial disclosures, we:

- Undertook site visits to the Company's power generation stations at Dadri, Mouda, and Koldam. We selected these sites based on the nature & size of the operations, the contribution of the site to the select non-financial disclosures, and the geographic location of the site.
- Through inquiries, obtained an understanding of the Company's control environment, processes, and information systems relevant to the preparation of the select non-financial disclosures, but did not evaluate the design of particular control activities, obtain evidence about their implementation or test their operating effectiveness.
- Evaluated the suitability in the circumstances of the Company's use of the reporting criteria, as the basis for preparing the select non-financial disclosures.
- Tested, at each of three sites visited, a limited number of items to or from supporting records, as appropriate.
- Considered the presentation and disclosure of the non-financial disclosures.
- Performed analytical procedures by comparing the expected performance data of the select non-financial disclosures with the actual performance data and made inquiries of management to obtain explanations for any significant differences we identified.
- Appropriate documentary evidence was obtained from the relevant authority at respective sites to support our conclusions on the information and data reviewed.

Scope and Boundary

The scope of assurance covers the select non-financial sustainability data related to the disclosures based on the reference reporting criteria, as mentioned below:

- The scope of assurance covers the topic-specific disclosures of NTPC as mentioned in the table below, for the period 01 April 2022 to 31 March 2023.
- The boundary of assurance covers the non-financial performance of the following power generating stations owned by NTPC and NTPC-Joint Venture and subsidiary companies in India mapped against respective disclosures-

Reference Reporting Criteria – GRI Standards 2021	Reporting Boundary for Assurance
Emissions (2016): • GRI 305-1 (Scope 1 GHG emissions)	• 33 NTPC-owned power generation stations • NTPC-SAIL Power Company Limited (Joint Venture) • North Eastern Electric Power Corporation Limited (Subsidiary) • NTPC Tamil Nadu Energy Company Limited (Joint Venture) • Bharat Rail Bijlee Company Limited (Subsidiary) • Meja Urja Private Limited (Joint Venture) • Ratnagiri Gas and Power Private Ltd (Subsidiary) • Aravali Power Company Limited (Joint Venture) • Jhabua Power Limited (Joint Venture)

Reference Reporting Criteria – GRI Standards 2021	Reporting Boundary for Assurance
Waste (2020): • GRI 306-4 (Waste diverted from disposal) • GRI 306-5 (Waste directed to disposal)	• 33 NTPC-owned power generation stations • NTPC-SAIL Power Company Limited (Joint Venture) • North Eastern Electric Power Corporation Limited (Subsidiary) • NTPC Tamil Nadu Energy Company Limited (Joint Venture) • Bharat Rail Bijlee Company Limited (Subsidiary) • Meja Urja Private Limited (Joint Venture) • Ratnagiri Gas and Power Private Ltd (Subsidiary) • Tehri Hydro Development Corporation Limited (Subsidiary) • Nabinagar Power Generation Company Pvt. Ltd. (Joint Venture) • The data for waste of solar and wind-based power generation plants of Tehri Hydro Development Corporation Limited (Subsidiary) is excluded from assurance.
Occupational Health and Safety (2018): • GRI 403-1 (Occupational health and safety management system) • GRI 403-2 (Hazard identification, risk assessment, and incident investigation) • GRI 403-3 (Occupational health services), • GRI 403-4 (Worker participation, consultation, and communication on occupational health and safety) • GRI 403-5 (Worker training on occupational health and safety) • GRI 403-6 (Promotion of worker health) • GRI 403-8 (Workers covered by an occupational health and safety management system)	• All permanent and non-permanent employees of NTPC including JVs and Subsidiaries in India
Freedom of Association and Collective Bargaining (2016): • GRI 407-1 (Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk)	• All Indian NTPC operations including JVs and Subsidiaries
Local Communities (2016): • GRI 413-1 (Operations with local community engagement, impact assessments, and development programs),	• All Indian NTPC operations including JVs and Subsidiaries

Limitations

The assurance scope excludes the following:

- Data related to the Company's financial performance.
- Data and information outside the defined Reporting Period FY 22-23.
- Data outside the operations mentioned in the assurance boundary above unless and otherwise specifically mentioned in this assurance report.
- The Company's statements that describe the expression of opinion, claims, belief, aspiration, expectation, aim to future intention provided by the Company, and assertions related to Intellectual Property Rights and other competitive issues.

- We have relied on the data furnished by the Company and have not independently verified the information or efficacy and reliability of the Company's information technology systems, technology tools/platforms, or data management systems.
- Strategy and other related linkages expressed in the Report.
- Mapping of the Report with reporting frameworks other than GRI Standards.
- Non-financial disclosures, trends, performance highlights, claims etc. made in the report other than those required as per GRI 2021 standards
- Aspects of the Report other than those mentioned under the scope and boundary above.
- Performance of any management function or making any decision relating to the services provided by us in the terms of this report. The Company is responsible for making management decisions, including accepting responsibility for the results of our services.
- Review of legal compliances.
- Our scope and associated responsibility exclude for the avoidance of doubt, any form of review of the commercial merits, technical feasibility, accuracy, or compliance with applicable legislation for the project, and accordingly we express no opinion thereon.
- We have also not verified any likelihood, timing, or effect of possible future-oriented information and commercial risks associated with the Report, nor comment upon the possibility of achieving any financial projections.
- NTPC Limited is responsible for making management decisions, including accepting responsibility for the results of our services.

Conclusion

Our conclusion has been formed on the basis of, and is subject to, the matters outlined in this report. We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion.

Based on the procedures performed and evidence obtained, in our opinion the select non-financial sustainability disclosures in the Report subjected to reasonable assurance procedures as defined under the scope of assurance, are fairly presented in all material respects, based on the GRI Standards.

Independence

The assurance was conducted by a multidisciplinary team including professionals with suitable skills and experience in auditing environmental, social, and economic information in line with the requirements of the ISAE 3000 (Revised) standard. Our work was performed in compliance with the requirements of the IFAC Code of Ethics for Professional Accountants, which requires, among other requirements, that the members of the assurance team (practitioners) be independent of the assurance client, in relation to the scope of this assurance engagement, including not being involved in writing the Report. The Code also includes detailed requirements for practitioners regarding integrity, objectivity, professional competence, and due care, confidentiality, and professional behaviour. KPMG has systems and processes in place to monitor compliance with the Code and to prevent conflicts regarding independence. The firm applies ISQM 1 and the practitioner complies with the applicable independence and other ethical requirements of the IESBA code.

Restriction on Use of Our Report

Our report should not be regarded as suitable to be used or relied on by any party wishing to acquire rights against us other than the Company for any purpose or in any context. Any party other than the Company who obtains access to our report or a copy thereof and chooses to rely on our report (or any part thereof) will do so at its own risk. We accept or assume no responsibility and deny any liability to any party other than the Company for our work, for this independent assurance report, or for the conclusion we have reached.

Our report is released to the Company on the basis that it shall not be copied, referred to, or disclosed, in whole (save for the Company's own internal purposes) or in part, without our prior written consent.

Sd/-

Apurba Mitra,

Partner, ESG Services,

KPMG Assurance and Consulting Services LLP

04th August 2023

Independent Assurance Statement to NTPC Limited on their select Non-financial Sustainability Disclosures in the Integrated Annual Report for FY 2022-23

Introduction

We, ('KPMG Assurance and Consulting Services LLP', or 'KPMG', or 'the 'Firm') have been engaged by NTPC Limited ('NTPC' or 'the Company') for the purpose of providing an independent assurance on the select non-financial sustainability disclosures presented in the Integrated Annual Report 2022-23 ('the Report') of the Company for the period covering 1st April 2022 to 31st March 2023 ('the Year' or 'the Reporting Period') as described in the 'scope, boundary, and limitations' below.

Company's Responsibilities

The management at the Company is responsible for preparing the Integrated Annual Report 2022-23 that is free from any material misstatement in accordance with the reporting criteria stated in the Report (Integrated Reporting <IR> Framework and GRI Standards 2021) and for the information contained therein. The management at the Company is also responsible for preparing the designed Integrated Annual Report 2022-23. The Company's responsibilities include designing, implementing, and maintaining internal controls relevant to the preparation and presentation of the Report that is free from any material misstatement, whether due to fraud or error. It also includes conducting the materiality assessment process to identify material topics relevant for the Company based on the responses of the internal and external stakeholders. The Company ensures that it complies with the reporting criteria and local regulations. It designs, implements, and effectively operates controls to achieve the stated control objectives; selects and applies policies; makes judgments and estimates that are reasonable in the circumstances; and maintains adequate records in relation to the Report. The Company is also responsible for preventing and detecting fraud and for identifying and ensuring compliance with laws and regulations applicable to its activities. The Company is responsible for ensuring that the Company's staff involved with the preparation of the Report are properly trained, systems are properly updated, and that any changes in reporting encompass all significant operational sites.

Our Responsibilities

Our responsibility is to examine the Report prepared by the Company and to report thereon on the select non-financial sustainability disclosures in the form of an independent assurance conclusion based on the evidence obtained. We conducted our engagement in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (Revised), Assurance Engagements Other Than Audits or Reviews of Historical Financial Information issued by the International Auditing and Assurance Standards Board. That standard requires that we plan and perform our procedures to obtain a meaningful level of assurance about whether the select non-financial sustainability disclosures in the Report comply with the reporting standards in all material respects, as the basis for our assurance conclusions.

The Firm applies International Standard on Quality Management 1, which requires the Firm to design, implement and operate a system of quality management including policies or procedures regarding compliance with ethical requirements, professional standards, and applicable legal and regulatory requirements. We have complied with the independence and other ethical requirements of the International Ethics Standards Board for Accountants' International Code of Ethics for Professional Accountants (including International Independence Standards) (IESBA Code), which is founded on the fundamental principles of integrity, objectivity, professional competence, and due care, confidentiality, and professional behaviour. The assurance procedures selected depend on our understanding of the Report of the Company and other engagement circumstances, and our consideration of the areas where material misstatements are likely to arise.

In obtaining an understanding of the Report and other engagement circumstances, we have considered the process used to prepare the Report in order to design assurance procedures that are appropriate in the circumstances, but not for the purpose of expressing a conclusion as to the effectiveness of the Company's process or internal controls over the preparation and presentation of the Report.

Our engagement also included: assessing the appropriateness of the select non-financial sustainability disclosures and the suitability of the criteria used by the Company, evaluating the appropriateness of the methods, policies, and procedures, and models used, and the reasonableness of estimates made by the Company in the context of the select non-financial sustainability disclosures in the Report. The procedures performed in a limited assurance engagement vary in nature and timing from and are less in extent than for a limited assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a limited assurance engagement been performed.

As part of this engagement, we have not performed any procedures by way of audit, review, or verification of the financial disclosures nor of the underlying records or other sources from which the financial statements and information was extracted.

Assurance Procedures

Our assurance process involves performing procedures to obtain evidence about the reliability of specified disclosures. The nature, timing, and extent of the procedures selected depend on our professional judgment, including the assessment of the risks of material misstatement of the select non-financial disclosures whether due to fraud or error. In making those risk assessments, we have considered internal controls relevant to the preparation of the Report to design assurance procedures that are appropriate in the circumstances.

We are required to plan and perform our work to address the areas where we have identified that a material misstatement of the select non-financial disclosure is likely to arise. The procedures we performed were based on our professional judgment. In carrying out our limited assurance engagement on the select non-financial disclosures, we:

- Undertook site visits to the Company's generation station at Dadri, Mouda, and Koldam. We selected these sites based on the nature & size of the operations, the contribution of the site to the select non-financial disclosures, and the geographic location of the site.
- Through inquiries, obtained an understanding of the Company's control environment, processes, and information systems relevant to the preparation of the select non-financial disclosures, but did not evaluate the design of particular control activities, obtain evidence about their implementation or test their operating effectiveness.
- Performed analytical procedures by comparing the expected performance data of the select non-financial disclosures with the actual performance data and made inquiries of management to obtain explanations for any significant differences we identified.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had we performed a reasonable assurance engagement.

Scope and Boundary

The scope of assurance covers the select non-financial sustainability data related to the disclosures based on the reference reporting criteria, as mentioned below:

- The scope of assurance covers the topic-specific disclosures of NTPC as mentioned in the table below, for the period 01 April 2022 to 31 March 2023.
- The boundary of assurance covers the non-financial performance of the following power generating stations owned by NTPC and NTPC-Joint Venture and subsidiary companies in India mapped against respective disclosure.

Reference Reporting Criteria – GRI Standards 2021	Reporting Boundary for Assurance
Materials (2016): • GRI 301-1 (Materials used by weight or volume)	• 33 NTPC-owned power generation stations • NTPC-SAIL Power Company Limited (Joint Venture) • North Eastern Electric Power Corporation Limited (Subsidiary) • NTPC Tamil Nadu Energy Company Limited (Joint Venture) • Bharat Rail Bijlee Company Limited (Subsidiary) • Meja Urja Private Limited (Joint Venture) • Ratnagiri Gas and Power Private Ltd (Subsidiary) • Aravali Power Company Limited (Joint Venture) • Jhabua Power Limited (Joint Venture) • The data for biomass consumption of 20034 MT is excluded from the assurance scope.

Reference Reporting Criteria – GRI Standards 2021	Reporting Boundary for Assurance
Energy (2016): • GRI 302-1 (Energy consumption within the organization)	• 33 NTPC-owned power generation stations • NTPC-SAIL Power Company Limited (Joint Venture) • North Eastern Electric Power Corporation Limited (Subsidiary) • NTPC Tamil Nadu Energy Company Limited (Joint Venture) • Bharat Rail Bijlee Company Limited (Subsidiary) • Meja Urja Private Limited (Joint Venture) • Ratnagiri Gas and Power Private Ltd (Subsidiary) • Aravali Power Company Limited (Joint Venture) • Jhabua Power Limited (Joint Venture) • Energy generated from petrol, diesel, LPG consumption, biomass, and solar energy generated is excluded from the assurance scope
Energy (2016): • GRI 302-3 (Energy intensity) **Energy (2016):** • GRI 302-4 (Reduction of energy consumption) **Water and Effluents (2018):** • GRI 303-3 (Water withdrawal) • GRI 303-4 (Water discharge) • GRI 303-5 (Water consumption)	• 33 NTPC-owned power generation stations • NTPC-SAIL Power Company Limited (Joint Venture) • North Eastern Electric Power Corporation Limited (Subsidiary) • NTPC Tamil Nadu Energy Company Limited (Joint Venture) • Bharat Rail Bijlee Company Limited (Subsidiary) • Meja Urja Private Limited (Joint Venture) • Ratnagiri Gas and Power Private Ltd (Subsidiary) • Aravali Power Company Limited (Joint Venture) • Jhabua Power Limited (Joint Venture)
Emissions (2016): • GRI 305-2 (Scope 2 GHG emissions)	• NTPC regional and corporate offices • 33 NTPC-owned power generation stations • NTPC-SAIL Power Company Limited (Joint Venture) • North Eastern Electric Power Corporation Limited (Subsidiary) • NTPC Tamil Nadu Energy Company Limited (Joint Venture) • Bharat Rail Bijlee Company Limited (Subsidiary) • Meja Urja Private Limited (Joint Venture) • Ratnagiri Gas and Power Private Ltd (Subsidiary) • Aravali Power Company Limited (Joint Venture) • Jhabua Power Limited (Joint Venture)

Reference Reporting Criteria – GRI Standards 2021	Reporting Boundary for Assurance
Emissions (2016): • GRI 305-3 (Scope 3 GHG emission for Employee Commute, Business travel and upstream transportation and distribution)	• NTPC regional and corporate offices • 33 NTPC-owned power generation stations • NTPC-SAIL Power Company Limited (Joint Venture) • North Eastern Electric Power Corporation Limited (Subsidiary) • NTPC Tamil Nadu Energy Company Limited (Joint Venture) • Bharat Rail Bijlee Company Limited (Subsidiary) • Meja Urja Private Limited (Joint Venture) • Ratnagiri Gas and Power Private Ltd (Subsidiary) • Aravali Power Company Limited (Joint Venture) • Jhabua Power Limited (Joint Venture) • NTPC Green Energy Limited (Subsidiary) • Tehri Hydro Development Corporation Limited (Subsidiary)
Emissions (2016): • GRI 305-6 (Emissions of ozone-depleting substances (ODS) • GRI 305-7 (Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions)	• 33 NTPC-owned power generation stations • NTPC-SAIL Power Company Limited (Joint Venture) • North Eastern Electric Power Corporation Limited (Subsidiary) • NTPC Tamil Nadu Energy Company Limited (Joint Venture) • Bharat Rail Bijlee Company Limited (Subsidiary) • Meja Urja Private Limited (Joint Venture) • Ratnagiri Gas and Power Private Ltd (Subsidiary) • Aravali Power Company Limited (Joint Venture) • Jhabua Power Limited (Joint Venture)
Waste (2020): • GRI 306-3 (Waste generated)	• 33 NTPC-owned power generation stations • NTPC-SAIL Power Company Limited (Joint Venture) • North Eastern Electric Power Corporation Limited (Subsidiary) • NTPC Tamil Nadu Energy Company Limited (Joint Venture) • Bharat Rail Bijlee Company Limited (Subsidiary) • Meja Urja Private Limited (Joint Venture) • Ratnagiri Gas and Power Private Ltd (Subsidiary) • Tehri Hydro Development Corporation Limited (Subsidiary) • Nabinagar Power Generation Company Pvt. Ltd. (Joint Venture) • Waste generation and disposal of solar and wind-based power generation plants of Tehri Hydro Development Corporation Limited (Subsidiary) is excluded from the assurance scope.
Employment (2016): • GRI 401-1 (New employee hires and employee turnover)	• NTPC Limited employees only • Employees of JVs and subsidiaries have been excluded from the assurance scope for new employee hires and employee turnover

Reference Reporting Criteria – GRI Standards 2021	Reporting Boundary for Assurance
Employment (2016): • GRI 401-2 (Benefits provided to full-time employees that are not provided to temporary or part-time employees)	• All permanent employees of NTPC in India • Non-permanent employees of NTPC are excluded from the assurance scope.
Employment (2016): • GRI 401-2 (Benefits provided to full-time employees that are not provided to temporary or part-time employees)	• All permanent employees of NTPC in India • The data for GRI 401-3(a) (Total number of employees that were entitled to parental leave, by gender) is excluded from assurance. • Non-permanent employees are excluded from the assurance scope.
Occupational Health and Safety (2018): • GRI 403-9 (Work-related injuries)	• All permanent and non-permanent employees of NTPC including JVs and Subsidiaries in India
Training and Education (2016): • GRI 404-1 (Average hours of training per year per employee) • GRI 404-2 (Programs for upgrading employee skills and transition assistance programs) • GRI 404-3 (Percentage of employees receiving regular performance and career development reviews)	• All employees of NTPC in India • Trainings and education of permanent and non-permanent employees of JVs and subsidiaries have been excluded from assurance scope.
Diversity and Equal Opportunity (2016): • GRI 405-1 (Diversity of governance bodies and employees)	• All employees of NTPC in India • Diversity of governance bodies and employees of permanent and non-permanent employees of JVs and subsidiaries have been excluded from assurance scope.
Non-discrimination (2016): • GRI 406-1 (Incidents of discrimination and corrective actions taken)	• NTPC Owned Generating Stations and Offices in India • Incidents of discrimination and corrective actions taken of permanent and non-permanent employees of JVs and subsidiaries have been excluded from assurance scope.
Rights of Indigenous Peoples (2016): • GRI 411-1 (Incidents of violations involving rights of indigenous peoples)	• All Indian NTPC operations including JVs and Subsidiaries

Limitations

The assurance scope excludes the following:

- Data related to the Company's financial performance.
- Data and information outside the defined Reporting Period FY 22-23.
- Data outside the operations mentioned in the assurance boundary above unless and otherwise specifically mentioned in this assurance report.
- The Company's statements that describe the expression of opinion, claims, belief, aspiration, expectation, aim to future intention provided by the Company, and assertions related to Intellectual Property Rights and other competitive issues.
- We have relied on the data furnished by the Company and have not independently verified the information or efficacy and reliability of the Company's information technology systems, technology tools/platforms, or data management systems.
- Strategy and other related linkages expressed in the Report.
- Mapping of the Report with reporting frameworks other than GRI Standards.

- Non-financial disclosures, trends, performance highlights, claims etc. made in the report other than those required as per GRI 2021 standards
- Aspects of the Report other than those mentioned under the scope and boundary above.
- Performance of any management function or making any decision relating to the services provided by us in the terms of this report. The Company is responsible for making management decisions, including accepting responsibility for the results of our services.
- Review of legal compliances.
- Our scope and associated responsibility exclude for the avoidance of doubt, any form of review of the commercial merits, technical feasibility, accuracy, or compliance with applicable legislation for the project, and accordingly we express no opinion thereon.
- We have also not verified any likelihood, timing, or effect of possible future-oriented information and commercial risks associated with the Report, nor comment upon the possibility of achieving any financial projections.
- NTPC Limited is responsible for making management decisions, including accepting responsibility for the results of our services

Conclusion

Our conclusion has been formed on the basis of, and is subject to, the matters outlined in this report. We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion.

Based on the procedures performed and evidence obtained, for the select non-financial sustainability disclosures in the Report subjected to limited assurance procedures as defined under the scope of assurance, nothing has come to our attention that causes us to believe that the select non-financial sustainability disclosures are not fairly presented in all material respects based on the GRI Standards.

Independence

The assurance was conducted by a multidisciplinary team including professionals with suitable skills and experience in auditing environmental, social and economic information in line with the requirements of ISAE 3000 (Revised) standard. Our work was performed in compliance with the requirements of the IFAC Code of Ethics for Professional Accountants, which requires, among other requirements, that the members of the assurance team (practitioners) be independent of the assurance client, in relation to the scope of this assurance engagement, including not being involved in writing the Report. The Code also includes detailed requirements for practitioners regarding integrity, objectivity, professional competence and due care, confidentiality, and professional behaviour. KPMG has systems and processes in place to monitor compliance with the Code and to prevent conflicts regarding independence. The firm applies ISQM 1 and the practitioner complies with the applicable independence and other ethical requirements of the IESBA code.

Restriction on Use of Our Report

Our report should not be regarded as suitable to be used or relied on by any party wishing to acquire rights against us other than the Company for any purpose or in any context. Any party other than the Company who obtains access to our report or a copy thereof and chooses to rely on our report (or any part thereof) will do so at its own risk. We accept or assume no responsibility and deny any liability to any party other than the Company for our work, for this independent assurance report, or for the conclusion we have reached.

Our report is released to the Company on the basis that it shall not be copied, referred to or disclosed, in whole (save for the Company's own internal purposes) or in part, without our prior written consent.

Sd/-

Apurba Mitra,

Partner, ESG Services,

KPMG Assurance and Consulting Services LLP

04th August 2023

GRI Index/ UN SDG Index

Disclosure	Indicator	Page No.
2-1	**Organizational Details**	1, 2, 263-266 (BRSR)
	Name of the organization	
	Location of headquarters	
	Location of operations	
	Ownership and legal form	
	Nature of ownership and legal form	
2-2	**Entities included in the organization's sustainability reporting**	2, 24, 265-66 (BRSR)
	List all entities included in its sustainable reporting This includes subsidiaries, joint ventures, and affiliates, including joint interests.	
	If the organization has audited consolidated financial statements or financial information filed on public record, specify the differences between the list of entities included in its financial reporting and the list included in its sustainability reporting; if the organization consists of multiple entities, explain the approach used for consolidating the information, including: whether the approach involves adjustments to information for minority interests	
	how the approach takes into account mergers, acquisitions, and disposal of entities or parts of entities	
	whether and how the approach differs across the disclosures in this Standard and across material topics.	
2-3	**Reporting period**	1
	Date of most recent report	
	Reporting cycle	
	Contact point for questions regarding the report	
2-4	**Restatements of information**	Not Applicable
	Restatement and the effect of any restatements of information given in previous reports, and the reasons for such restatements	
2-5	**External assurance**	1, 659-674
	Describe the policy and practice for seeking external assurance along with if and how and senior body is involved. If the report has been externally assured, provide	
	i. the assurance statement, ii. What has been assured, using which standard and the limitations iii. describe relationship between the company and the assurance provider	
2-6	**Activities, value chain and other business relationships**	21
	The company should disclose sectors of activity, describe their entire value chain, and describe other business relations. Also, they are to disclose any significant changes which have occurred since the previous reporting period.	
2-7	**Employees**	122
	The company should report the total number of employees with breakdown by gender and region. They should also give the following by breakdown into gender and region i. Permanent Employees ii. Temporary Employees iii full-time employees iv. Part-time Employees	

Disclosure	Indicator	Page No.
2-8	**Workers who are not employees** a. report the total number of workers who are not employees and whose work is controlled by the organization and describe: i. the most common types of worker and their contractual relationship with the organization; ii. the type of work they perform; b. describe the methodologies and assumptions used to compile the data, including whether the number of workers who are not employees is reported: i. in head count, full-time equivalent (FTE), or using another methodology; ii. at the end of the reporting period, as an average across the reporting period, or using another methodology; c. describe significant fluctuations in the number of workers who are not employees during the reporting period and between reporting periods.	148
2-9	**Governance structure and composition** describe its governance structure, including committees of the highest governance body; a. list the committees of the highest governance body that are responsible for decision-making on and overseeing the management of the organization's impacts on the economy, environment, and people; b. describe the composition of the highest governance body and its committees by: i. executive and non-executive members; ii. independence; iii. tenure of members on the governance body; iv. number of other significant positions and commitments held by each member, and the nature of the commitments; v. gender; vi. under-represented social groups; vii. competencies relevant to the impacts of the organization; viii. stakeholder representation.	193-223
2-10	**Nomination and selection of the highest governance body** a. describe the nomination and selection processes for the highest governance body and its committees; b. describe the criteria used for nominating and selecting highest governance body members, including whether and how the following are taken into consideration: i. views of stakeholders (including shareholders); ii. diversity; iii. independence; iv. competencies relevant to the impacts of the organization.	193-223
2-11	**Chair of the highest governance body** a. report whether the chair of the highest governance body is also a senior executive in the organization; b. if the chair is also a senior executive, explain their function within the organization's management, the reasons for this arrangement, and how conflicts of interest are prevented and mitigated.	193-223

Disclosure	Indicator	Page No.
2-12	**Role of the highest governance body in overseeing the management of impacts** a. describe the role of the highest governance body and of senior executives in developing, approving, and updating the organization's purpose, value or mission statements, strategies, policies, and goals related to sustainable development; b. describe the role of the highest governance body in overseeing the organization's due diligence and other processes to identify and manage the organization's impacts on the economy, environment, and people, including: i. whether and how the highest governance body engages with stakeholders to support these processes; ii. how the highest governance body considers the outcomes of these processes; c. describe the role of the highest governance body in reviewing the effectiveness of the organization's processes as described in 2-12-b, and report the frequency of this review	193-223
2-13	**Delegation of responsibility for managing impacts** a. describe how the highest governance body delegates responsibility for managing the organization's impacts on the economy, environment, and people, including: i. whether it has appointed any senior executives with responsibility for the management of impacts; ii. whether it has delegated responsibility for the management of impacts to other employees; iii. describe the process and frequency for senior executives or other employees to report back to the highest governance body on the management of the organization's impacts on the economy, environment, and people	193-223
2-14	**Role of the highest governance body in sustainability reporting** a. report whether the highest governance body is responsible for reviewing and approving the reported information, including the organization's material topics, and if so, describe the process for reviewing and approving the information; b. if the highest governance body is not responsible for reviewing and approving the reported information, including the organization's material topics, explain the reason for this.	193-223
2-15	**Conflicts of interest** a. Processes for the highest governance body to ensure conflicts of interest are avoided and managed. b. Whether conflicts of interest are disclosed to stakeholders, including, at a minimum, conflicts of interest relating to: i. Cross-board membership; ii. Cross-shareholding with suppliers and other stakeholders; iii. Existence of controlling shareholder; iv. Related party disclosures.	193-223, 263-307
2-16	**Communicating critical concerns** a. Process for communicating critical concerns to the highest governance body. b. Nature and total number of critical concerns i. Total number and nature of critical concerns that were communicated to the highest governance body. ii. Mechanism(s) used to address and resolve critical concerns."	193-223
2-17	**Collective knowledge of highest governance body** a. Measures taken to develop and enhance the highest governance body's collective knowledge of economic, environmental, and social topics.	193-223
2-18	**Evaluating the highest governance body's performance** a. Processes for evaluating the highest governance body's performance with respect to governance of economic, environmental, and social topics. b. Whether such evaluation is independent or a self-assessment, and its frequency. c. Actions taken in response to evaluation of the highest governance body's performance including changes to the composition of the highest governance body and organizational practices.	193-223

Disclosure	Indicator	Page No.
2-19	**Remuneration policies** a. describe the remuneration policies for members of the highest governance body and senior executives, including: i. Fixed pay and variable pay, including performance-based pay, equity-based pay, bonuses, and deferred or vested shares; ii. Sign-on bonuses or recruitment incentive payments; iii. Termination payments; iv. Clawbacks; v. Retirement benefits, including the difference between benefit schemes and contribution rates for the highest governance body, senior executives, and all other employees. b. How performance criteria in the remuneration policies relate to the highest governance body's and senior executives' objectives for economic, environmental, and social topics. When compiling the information specified in Disclosure 102-35, the reporting organization should, if termination payments are used, explain whether: 1) notice periods for governance body members and senior executives are different from those for other employees; 2) termination payments for governance body members and senior executives are different from those for other employees; 3) any payments other than those related to the notice period are paid to departing governance body members and senior executives; 4) any mitigation clauses are included in the termination arrangements	153, 197, 263-307
2-20	**Process for determining remuneration** a. describe the process for designing its remuneration policies and for determining remuneration, including: i. whether independent highest governance body members or an independent remuneration committee oversees the process for determining remuneration; ii. how the views of stakeholders (including shareholders) regarding remuneration are sought and taken into consideration; iii. whether remuneration consultants are involved in determining remuneration and, if so, whether they are independent of the organization, its highest governance body and senior executives; b. report the results of votes of stakeholders (including shareholders) on remuneration policies and proposals, if applicable	153, 155, 197, 263-307
2-21	**Annual total compensation ratio** a. Ratio of the annual total compensation for the organization's highest-paid individual in each country of significant operations to the median annual total compensation for all employees (excluding the highest-paid individual) in the same country. b. Ratio of the percentage increase in annual total compensation for the organization's highest-paid individual in each country of significant operations to the median percentage increase in annual total compensation for all employees (excluding the highest-paid individual) in the same country	263-307
2-22	**Statement on sustainable development strategy** Present a statement from the highest governance body or most senior executive of the organization about the relevance of sustainable development to the organization and its strategy for contributing to sustainable development	675
2-23	**Policy commitments** a. describe its policy commitments for responsible business conduct, including: i. the authoritative intergovernmental instruments that the commitments reference; ii. whether the commitments stipulate conducting due diligence; iii. whether the commitments stipulate applying the precautionary principle; iv. whether the commitments stipulate respecting human rights; b. describe its specific policy commitment to respect human rights, including: mmunicated to workers, business partners, and other relevant parties.	263-307

Disclosure	Indicator	Page No.
	i. the internationally recognized human rights that the commitment covers; ii. the categories of stakeholders, including at-risk or vulnerable groups, that the organization gives particular attention to in the commitment; c. provide links to the policy commitments if publicly available, or, if the policy commitments are not publicly available, explain the reason for this; d. report the level at which each of the policy commitments was approved within the organization, including whether this is the most senior level; e. report the extent to which the policy commitments apply to the organization's activities and to its business relationships; f. describe how the policy commitments are co	
2-24	**Embedding policy commitments**	263-307
	a. describe how it embeds each of its policy commitments for responsible business conduct throughout its activities and business relationships, including: i. how it allocates responsibility to implement the commitments across different levels within the organization; ii. how it integrates the commitments into organizational strategies, operational policies, and operational procedures; iii. how it implements its commitments with and through its business relationships; iv. training that the organization provides on implementing the commitments	
2-25	**Processes to remediate negative impacts**	263-307
	a. describe commitments to provide for or cooperate in the remediation of negative impacts that the organization identifies it has caused or contributed to; b. describe approach to identify and address grievances, including the grievance mechanisms that the organization has established or participates in; c. describe other processes by which the organization provides for or cooperates in the remediation of negative impacts that it identifies it has caused or contributed to; d. describe how the stakeholders who are the intended users of the grievance mechanisms are involved in the design, review, operation, and improvement of these mechanisms; e. describe how the organization tracks the effectiveness of the grievance mechanisms and other remediation processes, and report examples of their effectiveness, including stakeholder feedback	
2-26	**Mechanisms for seeking advice and raising concerns**	263-307
	The organization shall: a. describe the mechanisms for individuals to: i. seek advice on implementing the organization's policies and practices for responsible business conduct; ii. raise concerns about the organization's business conduct	
2-27	**Compliance with laws and regulations**	263-307
	a. report the total number of significant instances of non-compliance with laws and regulations during the reporting period, and a breakdown of this total by: i. instances for which fines were incurred; ii. instances for which non-monetary sanctions were incurred;	
	b. report the total number and the monetary value of fines for instances of noncompliance with laws and regulations that were paid during the reporting period, and a breakdown of this total by: i. fines for instances of non-compliance with laws and regulations that occurred in the current reporting period; ii. fines for instances of non-compliance with laws and regulations that occurred in previous reporting periods; c. describe the significant instances of non-compliance; d. describe how it has determined significant instances of non-compliance	
2-28	**Membership associations**	263-307
	The organization shall report industry associations, other membership associations, and national or international advocacy organizations in which it participates in a significant role	

Disclosure	Indicator	Page No.
2-29	**Approach to stakeholder engagement** The organization shall: a. describe its approach to engaging with stakeholders, including: i. the categories of stakeholders it engages with, and how they are identified; ii. the purpose of the stakeholder engagement; iii. how the organization seeks to ensure meaningful engagement with stakeholders	24-26
2-30	**Collective bargaining agreements** The organization shall: a. report the percentage of total employees covered by collective bargaining agreements; b. for employees not covered by collective bargaining agreements, report whether the organization determines their working conditions and terms of employment based on collective bargaining agreements that cover its other employees or based on collective bargaining agreements from other organizations	81, 263-307
3-1	**Process to determine material topics**	26-27
3-2	**List of material topics**	28-30

GRI Standard	Disclosure	Description	Page No.
		GRI 200: Economic	
GRI 201: Economic Performance 2016	3-3	Management of material topics	43, 45, 400
	201-1	Direct economic value generated and distributed	
	201-2	Financial implications and other risks and opportunities due to climate change	
	201-3	Defined benefit plan obligations and other retirement plans	
GRI 202: Market Presence 2016	3-3	Management of material topics	284
	202-1	Ratios of standard entry level wage by gender compared to local minimum wage	
GRI 203: Indirect Economic Impacts 2016	3-3	Management of material topics	101, 102-104
	203-1	Infrastructure investments and services supported	
	203-2	Significant indirect economic impacts	
GRI 204: Procurement Practices 2016	3-3	Management of material topics	99-100
	204-1	Proportion of spending on local suppliers	
GRI 205: Anti-Corruption 2016	3-3	Management of material topics	35, 129, 272
	205-2	Communication and training about anti-corruption policies and procedures	
	205-3	Confirmed incidents of corruption and actions taken	
GRI 207: Tax 2019	3-3	Management of material topics	393, 433
	207-1	Approach to tax	
	207-2	Tax governance, control, and risk management	
	207-3	Stakeholder engagement and management of concerns	

GRI Standard	Disclosure	Description	Page No.
		GRI 300: Environment	
GRI 301: Material 2016	3-3	Management of material topics	65, 66, 118-119
	301-1	Materials used by weight or volume	
	301-2	Recycled input materials	
GRI 302: Energy 2016	3-3	Management of material topics	66-67, 118-119
	302-1	Energy consumption within the organization	
	302-3	Energy intensity	
	302-4	Reduction of energy consumption	
GRI 303: Water and Effluents 2018	3-3	Management of material topics	61-64, 117-118
	303-1	Interactions with water as a shared resource	
	303-2	Management of water discharge-related impacts	
	303-3	Water withdrawal	
	303-4	Water discharge	
	303-5	Water consumption	
GRI 304: Biodiversity 2016	3-3	Management of material topics	70-75
	304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	
	304-2	Significant impacts of activities, products, and services on biodiversity	
	304-3	Habitats protected or restored	
GRI 305: Emissions 2016	3-3	Management of material topics	68-70, 121
	305-1	Direct (Scope 1) GHG emissions	
	305-2	Energy indirect (Scope 2) GHG emissions	
	305-3	Other indirect (Scope 3) GHG emissions	
	305-4	GHG emissions intensity	
	305-5	Reduction of GHG Emissions	68, 121
	305-6	Emissions of ozone-depleting substances (ODS)	
GRI 306: Waste 2020	305-7	Nitrogen oxides (NO_x), sulfur oxides (SO_x), and other significant air emissions	68, 69, 122
	306-3	Waste generated	
	306-4	Waste diverted from disposal	
	306-5	Waste directed to disposal	
GRI 308: Supplier Environmental Assessment 2016	3-3	Management of material topics	64, 120
	308-1	New suppliers that were screened using environmental criteria	
	308-2	Negative environmental impacts in the supply chain and actions taken	
		GRI 400: Social	
GRI 401: Employment 2016	3-3	Management of material topics	79, 124, 81, 80, 125
	401-1	New employee hires and employee turnover	
	401-2	Benefits provided to full-time employees that are not provided to temporary or part time employee	
	401-3	Parental leave	

GRI Standard	Disclosure	Description	Page No.
GRI 402: Labor/Management Relations 2016	3-3	Management of material topics	81
	402-1	Minimum notice periods regarding operational changes	
GRI 403: Occupational Health and Safety 2018	3-3	Management of material topics	84-92, 127-128
	402-1	Minimum notice periods regarding operational changes	
	3-3	Management of material topics	
	403-1	Occupational health and safety management system	
	403-2	Hazard identification, risk assessment, and incident investigation	
	403-3	Occupational health services	
	403-4	Worker participation, consultation, and communication on occupational health and safety	
	403-5	Worker training on occupational health and safety	
	403-6	Promotion of worker health	
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	
	403-8	Workers covered by an occupational health and safety management system	
	403-9	Work-related injuries	
	403-10	Work-related ill health	
GRI 404: Training and Education 2016	3-3	Management of material topics	83-84, 125, 126, 79, 278
	404-1	Average hours of training per year per employee	
	404-2	Programs for upgrading employee skills and transition assistance programs	
	404-3	Percentage of employees receiving regular performance and career development reviews	
GRI 405: Diversity and Equal Opportunity 2016	3-3	Management of material topics	122-123, 125
	405-1	Diversity of governance bodies and employees	
	405-2	Ratio of basic salary and remuneration of women to men	
GRI 406: Non-Discrimination 2016	3-3	Management of material topics	129
	406-1	Incidents of discrimination and corrective actions taken	
GRI 407: Freedom of Association and Collective Bargaining 2016	3-3	Management of material topics	81
	407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	
GRI 408: Child Labor 2016	3-3	Management of material topics	81
	408-1	Operations and suppliers at significant risk for incidents of child labor	
GRI 409: Forced or Compulsory Labor 2016	3-3	Management of material topics	81
	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	

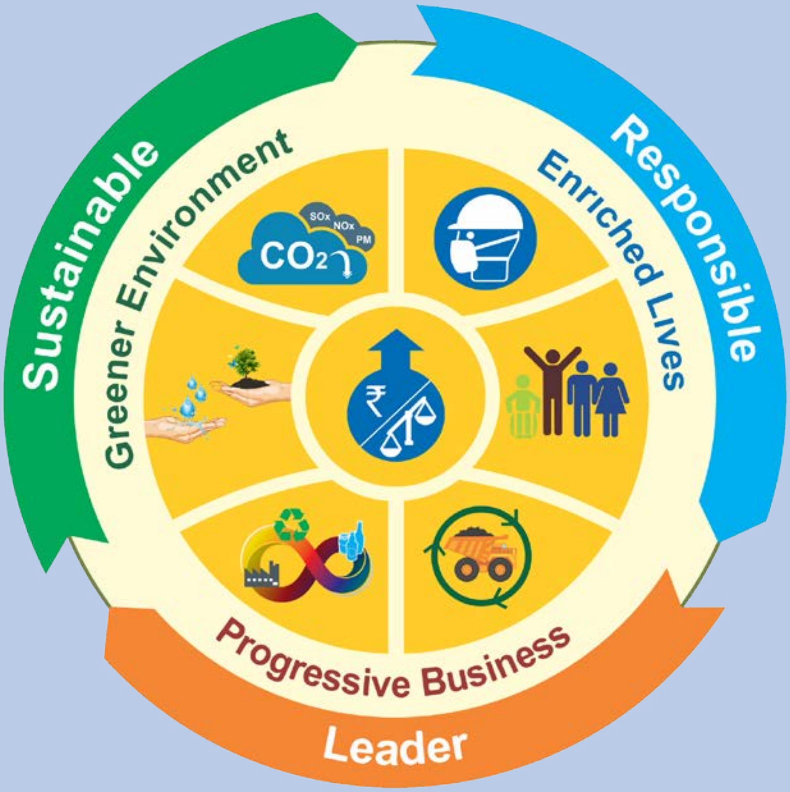
GRI Standard	Disclosure	Description	Page No.
GRI 410: Security Practices 2016	410-1	Security personnel trained in human rights policies or procedures	82
GRI 411: Rights of Indigenous Peoples 2016	3-3	Management of material topics	104
	411-1	Incidents of violations involving rights of indigenous peoples	
GRI 412: Human Rights Assessment 2016	3-3	Management of material topics	87, 102, 126
	412-2	Employee training on human rights policies or procedures	
GRI 413: Local Communities 2016	3-3	Management of material topics	102
	413-1	Operations with local community engagement, impact assessments, and development programmes	
GRI 414: Supplier Social Assessment 2016	3-3	Management of material topics	99
	414-1	New suppliers that were screened using social criteria	
	414-2	Negative social impacts in the supply chain and actions taken	
GRI 415: Public Policy 2016	3-3	Management of material topics	101
	415-1	Political contributions	
GRI 417: Marketing and Labelling 2016	3-3	Management of material topics	48-50, 98
	417-1	Requirements for product and service information and labeling	
GRI 418: Customer Privacy 2016	3-3	Management of material topics	96
	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	

GRI Exclusions for NTPC IAR FY 2022-23

GRI Principle	Disclosure	Reasons for Exclusions
Disclosure 201-1 Direct economic value generated and distributed	b. Where significant, report EVG&D separately at country, regional, or market levels, and the criteria used for defining significance.	Not applicable.
Disclosure 201-2 Financial implications and other risks and opportunities due to climate change	a. iii. the financial implications of the risk or opportunity before action is taken; v. the costs of actions taken to manage the risk or opportunity	In process of calculating financial implications due to climate change
Disclosure 202-1 Ratios of standard entry level wage by gender compared to local minimum wage	a. When a significant proportion of employees are compensated based on wages subject to minimum wage rules, report the relevant ratio of the entry level wage by gender at significant locations of operation to the minimum wage. b. When a significant proportion of other workers (excluding employees) performing the organization's activities are compensated based on wages subject to minimum wage rules, describe the actions taken to determine whether these workers are paid above the minimum wage. c. Whether a local minimum wage is absent or variable at significant locations of operation, by gender. In circumstances in which different minimums can be used as a reference, report which minimum wage is being used. d. The definition used for 'significant locations of operation'	All workers are given wages in excess of minimum wage, hence not applicable.
Disclosure 202-2 Proportion of senior management hired from the local community	a. Percentage of senior management at significant locations of operation that are hired from the local community. b. The definition used for 'senior management'. c. The organization's geographical definition of 'local'. d. The definition used for 'significant locations of operation'.	For senior management, the hiring is done through central examinations. In addition, since NTPC is spread across India with regular transfer of employees, this data is not applicable.
Disclosure 206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	a. Number of legal actions pending or completed during the reporting period regarding anti-competitive behavior and violations of anti-trust and monopoly legislation in which the organization has been identified as a participant. b. Main outcomes of completed legal actions, including any decisions or judgements.	No incidents were reported.

GRI Principle	Disclosure	Reasons for Exclusions
Disclosure 301-3 Reclaimed products and their packaging materials	a. Percentage of reclaimed products and their packaging materials for each product category. b. How the data for this disclosure have been collected.	Not applicable for NTPC, as NTPC major product being electricity cannot be reclaimed or require packaging
Disclosure 302-2 Energy consumption outside of the organization	a. Energy consumption outside of the organization, in joules or multiples. b. Standards, methodologies, assumptions, and/or calculation tools used. c. Source of the conversion factors used.	Not applicable for NTPC
Disclosure 303-4 Water discharge	d. Priority substances of concern for which discharges are treated, including: i. how priority substances of concern were defined, and any international standard, authoritative list, or criteria used; ii. the approach for setting discharge limits for priority substances of concern; iii. number of incidents of non-compliance with discharge limits.	Not applicable as all the discharge as per government norms
Disclosure 304-3	c. Status of each area based on its condition at the close of the reporting period. d. Standards, methodologies, and assumptions used.	Not monitored
Disclosure 306-3 Significant spills	a. Total number and total volume of recorded significant spills. b. The following additional information for each spill that was reported in the organization's financial statements: i. Location of spill; ii. Volume of spill; iii. Material of spill, categorized by: oil spills (soil or water surfaces), fuel spills (soil or water surfaces), spills of wastes (soil or water surfaces), spills of chemicals (mostly soil or water surfaces), and other (to be specified by the organization). c. Impacts of significant spills.	No incidents were reported.
Disclosure 412-1 Human Rights Assessment 2016	Operations that have been subject to human rights reviews or impact assessments	No incidents were reported.
Disclosure 415-1 Political contributions	a. Total monetary value of financial and in-kind political contributions made directly and indirectly by the organization by country and recipient/beneficiary. b. If applicable, how the monetary value of in-kind contributions was estimated.	Organization does not contribute to any political parties.

GRI Principle	Disclosure	Reasons for Exclusions
Disclosure 416-1 Assessment of the health and safety impacts of product and service categories	a. Percentage of significant product and service categories for which health and safety impacts are assessed for improvement	Not Applicable
Disclosure 416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	a. Total number of incidents of non-compliance with regulations and/or voluntary codes concerning the health and safety impacts of products and services within the reporting period, by: i. incidents of non-compliance with regulations resulting in a fine or penalty; ii. incidents of non-compliance with regulations resulting in a warning; iii. incidents of non-compliance with voluntary codes.	Organization has not identified any non-compliance with regulations or voluntary codes
Disclosure 417-1 Requirements for product and service information and labeling	a. Whether each of the following types of information is required by the organization's procedures for product and service information and labeling: ii. Content, particularly with regard to substances that might produce an environmental or social impact; iii. Safe use of the product or service; iv. Disposal of the product and environmental or social impacts; v. Other (explain). b. Percentage of significant product or service categories covered by and assessed for compliance with such procedures.	Organization has not identified any non-compliance with regulations or voluntary codes
Disclosure 417-2 Incidents of non-compliance concerning product and service information and labeling	a. Total number of incidents of non-compliance with regulations and/or voluntary codes concerning product and service information and labeling, by: i. incidents of non-compliance with regulations resulting in a fine or penalty; ii. incidents of non-compliance with regulations resulting in a warning; iii. incidents of non-compliance with voluntary codes.	Organization has not identified any non-compliance with regulations or voluntary codes
Disclosure 417-3 Incidents of non-compliance concerning marketing communications	a. Total number of incidents of non-compliance with regulations and/or voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship, by: i. incidents of non-compliance with regulations resulting in a fine or penalty; ii. incidents of non-compliance with regulations resulting in a warning; iii. incidents of non-compliance with voluntary codes.	Organization has not identified any non-compliance with regulations or voluntary codes



The Brighter Plan 2032

Uniquely built on NTPC's vision, our sustainability strategy i.e. The Brighter Plan 2032 aims to accelerate NTPC's efforts in leading the energy transition to a decentralised, decarbonised and digitalised energy future on TBL (Triple Bottom Line) framework and setting new benchmarks in sustainability along the entire energy value chain

Board of Directors of NTPC Limited

एनटीपीसी
NTPC

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Leading the Power Sector