



A Maharatna Company

एन टी पी सी लिमिटेड  
(भारत सरकार का उद्यम)

**NTPC Limited**  
(A Govt. of India Enterprise)

केन्द्रीय कार्यालय / Corporate Centre

Ref. No.: 01: SEC : LA-1

Dated: 26.09.2017

<b>Manager</b> Listing Department National Stock Exchange of India Limited "Exchange Plaza", Bandra-Kurla Complex Bandra (E) Mumbai -400 051	<b>General Manager</b> Department of Corporate Services Bombay Stock Exchange Limited Floor 25, Phiroze Jeejeebhoy Towers Dalal Street Mumbai-400 001
--	--

**Sub.: 41<sup>st</sup> Annual Report of NTPC Limited for the Year 2016-17  
- Regulation 34 of SEBI Listing Regulations, 2015**

Dear Sir,

In continuation of our letter dated 21.09.2017 intimating the voting results of items of business transacted at 41<sup>st</sup> Annual General Meeting of the Company and in terms of Regulation 34 of the SEBI (Listing Regulations and Disclosure Obligations) Regulations, 2015, please find attached 41<sup>st</sup> Annual Report of NTPC Limited for the year 2016-17 after the same has been approved and adopted in the Annual General Meeting of the Company held on Wednesday, 20<sup>th</sup> September 2017 at Manekshaw Centre, Parade Road, New Delhi - 110010.

Thanking you,

Yours faithfully,  
For NTPC Limited

(K.P. GUPTA)  
Company Secretary &  
Compliance Officer

Encl: as above

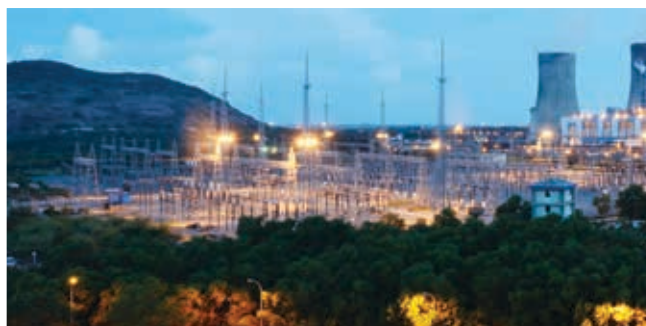
पंजीकृत कार्यालय : एनटीपीसी भवन, स्कोप कॉम्प्लेक्स, 7, इंस्टीट्यूशनल एरिया, लोधी रोड, नई दिल्ली-110003  
कार्पोरेट पहचान नम्बर: L40101DL1975GO1007966 टेलीफोन नं.: 011-24387333 फैक्स नं.: 011-24361018 ईमेल : ntpccc@ntpc.co.in वेबसाइट : www.ntpc.co.in

Registered Office : NTPC Bhawan, Scope Complex, 7, Institutional Area, Lodhi Road, New Delhi-110003  
Corporate Identification Number : L40101DL1975GO1007966 Tel. : 011-24387333 Fax : 011-24361018 E-mail : ntpccc@ntpc.co.in  
Website : www.ntpc.co.in



A Maharatna Company

## 41<sup>st</sup> Annual Report 2016-17



## VISION

"TO BE THE WORLD'S  
LEADING POWER COMPANY,  
ENERGIZING 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

- I** - INTEGRITY
- C** - CUSTOMER FOCUS
- O** - ORGANIZATIONAL PRIDE
- M** - MUTUAL RESPECT & TRUST
- I** - INNOVATION AND LEARNING
- T** - TOTAL QUALITY AND SAFETY





## CORPORATE OBJECTIVES

To realise the vision and mission, eight key corporate objectives have been identified. These objectives would provide the link between the defined mission and the functional strategies:

### ■ Business portfolio growth

- To sustain NTPC's position as the leading power generation company in the world.
- To broad base the generation mix with 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.

### ■ Customer Focus

- To foster a collaborative style of working with customers, growing to be a preferred brand for supply of quality and reliable power.
- 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.

### ■ 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 co-ordinated assessment of the business environment to identify and respond to opportunities and threats
- To create lean organization and business processes.
- To develop a learning organization having 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

### ■ Performance Leadership

- To continuously strive for innovation in reducing costs, enhancing operational flexibility and in 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 the new and emerging businesses.
- To embed quality and safety in all systems and processes.

- Support 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.
- To assist in capacity creation of key stakeholders.

### ■ Human Resource Development

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

### ■ 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 minimize receivables.

### ■ Sustainability and Corporate Social Responsibility

- To deliver business and environmental value through projects which are beneficial for business and 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-utilization, peripheral development and energy conservation practices.

### ■ Research and Development

- 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 environment friendliness.

## REFERENCE INFORMATION

### Registered Office

NTPC Bhawan, SCOPE Complex,  
7, Institutional Area, Lodhi Road,  
New Delhi - 110 003  
Phone No.: 011-2436 0100  
Fax No. . 011-24361018  
Email: ntpccc@ntpc.co.in  
Web site: www.ntpc.co.in  
CIN: L40101DL1975GOI007966

### Subsidiaries

NTPC Electric Supply Company Ltd.  
NTPC Vidyut Vyapar Nigam Ltd.  
Kanti Bijlee Utpadan Nigam Ltd.  
Bhartiya Rail Bijlee Company Ltd.  
Patratu Vidyut Utpadan Nigam Ltd.

### Registrar & Share Transfer Agent

Karvy Computershare Pvt. Ltd.  
Karvy Selenium Tower-B,  
Plot No. 31 & 32,  
Gachibowli Financial District,  
Nanakramguda, Serilingampally,  
Hyderabad – 500 008  
Phone No.: 040-67161518  
Email: einward.ris@karvy.com

### Shares listed at

National Stock Exchange of India Limited  
BSE Limited

### Depositories

National Securities Depository Limited  
Central Depository Services (India) Limited

### ED (Law) & Company Secretary

K. P. Gupta

### Bankers

Allahabad Bank  
Axis Bank  
Bank of Baroda  
Bank of India  
Canara Bank  
Central Bank of India  
Corporation Bank  
HDFC Bank  
ICICI Bank  
IDBI Bank Ltd.  
IDFC Bank  
Indian Bank  
Indian Overseas Bank  
IndusInd Bank  
Jammu & Kashmir Bank Ltd.  
Karnataka Bank Ltd.  
Oriental Bank of Commerce  
Punjab & Sind Bank  
Punjab National Bank  
State Bank of India  
Syndicate Bank  
UCO Bank  
Union Bank of India  
United Bank of India  
Vijaya Bank  
Yes Bank

### Auditors

1. M/s T. R. Chadha & Co LLP
2. M/s PSD & Associates
3. M/s Sagar & Associates
4. M/s Kalani & Co.
5. M/s P. A. & Associates
6. M/s S. K. Kapoor & Co.
7. M/s B M Chatrath & Co LLP

## 41<sup>st</sup> Annual Report 2016-17

### Reference Information



## CONTENTS

• Letter to Shareholders .....	07
• Notice of AGM .....	09
• Station-wise Generation .....	19
• Selected Financial Information .....	21
• Directors' Profile .....	22
• Senior Management Team .....	27
• Directors' Report .....	28
• Management Discussion and Analysis .....	59
• Report on Corporate Governance .....	85
• Corporate Social Responsibility Report .....	131
• Business Responsibility Report .....	136
• Standalone Financial Statements (SFS) .....	154
• Independent Auditors' Report on Standalone Financial Statements .....	281
• Comments of the Comptroller and Auditor General of India on SFS .....	291
• Employee Cost Summary .....	292
• Revenue Expenditure on Social Overheads .....	293
• Consolidated Financial Statements (CFS) .....	294
• Independent Auditors' Report on Consolidated Financial Statements .....	427
• Comments of the Comptroller and Auditor General of India on CFS .....	433

### GREEN INITIATIVE IN THE CORPORATE GOVERNANCE

The Ministry of Corporate Affairs has taken a "Green Initiative in the Corporate Governance" by allowing paperless compliances by the companies and has issued circulars stating that service of notice/ documents including Annual Reports can be sent by e-mail to its members. To support this green initiative of the Government in full measure, members who have not registered their e-mail addresses, so far, are requested to register their e-mail address, in respect of electronic holdings with the Depository through their concerned Depository Participants. Members who hold shares in physical form are requested to get their e-mail address registered with Karvy Computershare Private Limited, RTA of the Company.



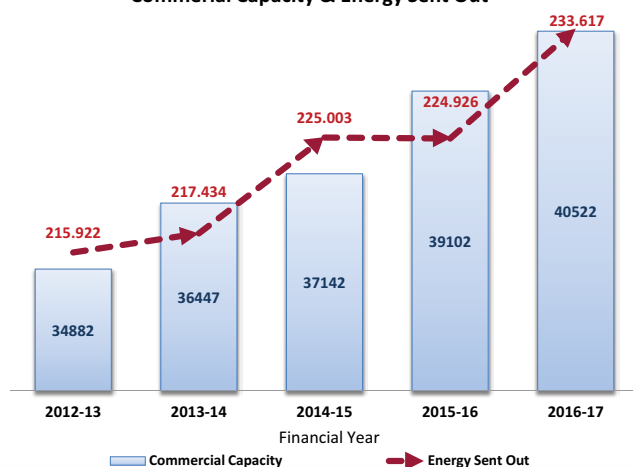


A VIEW OF NTPC JHANOR GANDHAR PROJECT SITUATED IN GUJARAT

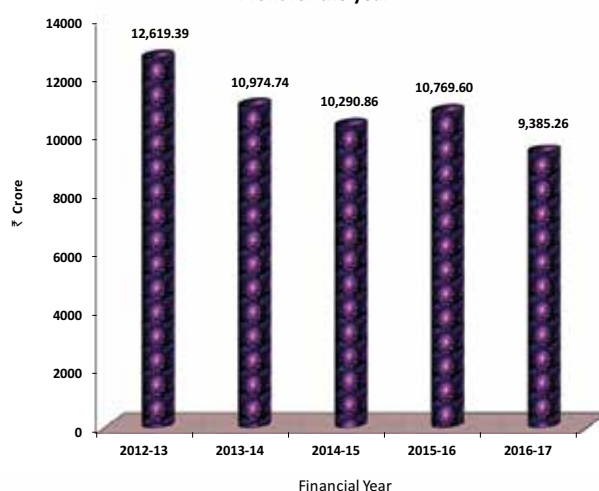
## THE YEAR AT A GLANCE

		2016-17	2015-16
Gross Generation	Million Units	250314	241975
Commercial Generation	"	250086	240778
Energy sent out	"	233617	224926
Sale of Energy (including Electricity duty)	₹ Crore	77071	69962
Profit before tax	"	12388	10596
Profit for the year	"	9385	10770
Dividend	"	3595	2762
Dividend tax	"	728	562
Retained Profit	"	5062	7446
Total Fixed Assets	"	180093	158196
Net Worth	"	96231	91294
Borrowings	"	103840	91828
Capital Employed	"	100757	94931
Net Cash From Operations	"	20301	23987
Value Added	"	29159	27440
No. of Employees	Number	20593	21633
Value added per employee	₹ Crore	1.42	1.27
Debt to Equity	Ratio	1.08	1.01
Debt Service Coverage Ratio (DSCR)	Times	1.55	1.74
Interest Service Coverage Ratio (ISCR)	Times	6.50	5.94
Return on Capital Employed	%	13.39	14.56
Face Value Per share	₹	10.00	10.00
Dividend Per Share	"	4.36	3.35
Book Value Per Share	"	116.71	110.72
Earnings Per Share	"	11.38	13.06

Commercial Capacity & Energy Sent Out



Profit for the year



## 41<sup>st</sup> Annual Report 2016-17

The year at a Glance





## Letter to Shareholders

Dear Shareowners,

You will be delighted to note that FY 16-17 turned out to be a pivotal year for your Company NTPC, as it crossed the 50,000MW+ mark in Installed Capacity. With its strong overall performance, your Company is expected to retain the “Excellent” rating for the MoU signed with Government of India.

Your Company commissioned 3845 MW and added 2190 MW to its commercial capacity during FY16-17. The installed capacity of NTPC Group is 51,671 MW as on 31.07.2017.

Your Company has over 20,000 MW capacities under construction and is committed to deliver these projects in time. Your Company is growing at a brisk pace, indicated by the all-time high capex of ₹ 28,252 crore (standalone basis).

The coal based stations of your Company achieved a plant load factor (PLF) of 78.59% against the all-India thermal PLF of 59.88%. Three stations - Talcher Thermal, Sipat and Korba were ranked as the Top 3 stations in the country, and 6 stations clocked a PLF of over 85% during this period. Very significantly, your Company added Wind to its power generation portfolio and has commissioned 18 MW as on 31.07.2017.

FY16-17 saw the flag off of your Company's first coal rake, from its mining operations at Pakri Barwadih. This coal is being used at Barh Thermal Station of NTPC, in Bihar. This is an important step in the direction of secured fuel supplies for your Company. The medium term target for mining will be able to cater to more than 10% of its present coal requirements.

Your Company realized huge cost efficiencies during the year by swapping and rationalization of coal, appointing agency for third party coal sampling, and reducing imported coal consumption by 85% of previous year. By these measures, your Company was able to reduce per unit cost by nearly 40 paise in FY16-17 as compared to FY14-15. This translates into savings of more than ₹ 8000 crore to the state over to years. Government of India has recently approved “SHAKTI” policy which will further increase transparency in coal allocation, and improve cost efficiencies.

Your Company was the first Company to offer Green Masala Bonds, raising ₹ 2000 crore through Rupee-denominated bonds from international markets. The cost of debt has also been substantially brought down this year, primarily by domestic loan restructuring. Robust cash flows will be assured by extending TPAs with 27 States & UTs. FY16-17 saw 100% realization of current bills for the fourteenth year in a row.

Power generation of your Company (Group) increased by 5.07%, contributing around 24% to the country's generation. Although profit before tax of NTPC increased by as high as 16.91%, Profit After Tax looks subdued, primarily due to substantial offset of income tax by way of refunds received in previous fiscal and impairment loss on investment in RGPPL.

Your Company's management has always believed in maximizing shareholders' wealth. The Company has already paid an interim dividend of ₹ 2.61 per share and has recommended a final dividend of ₹ 2.17 per share for FY16-17, subject to your approval. This is a whopping 143% of that paid out last year. The holding of the Government in your Company stands at 69.74%.



Moving beyond its conventional power generation business, your Company is now looking at diversification in allied sectors, such as setting up electric vehicle charging infrastructure, ancillary services and energy storage.

Your Company is investing substantially in order to comply with the environmental norms, and is geared to become fully compliant with new environmental norms. This means we will be able to provide not only affordable and reliable power, but cleaner power too. Apart from this, NTPC is taking several initiatives to contain pollution in various forms. Two such projects, your Company is experimenting with are Waste-to-Energy and Biomass Co-firing. Your Company is also proud to share that it planted one crore trees in a short duration of 3 months during FY16-17 for carbon sequestration.

Your Company is placing enormous focus on water, a life-giving but stressed resource. Apart from launching an internal Water Policy to become a conscious steward, your company has adopted technologies like Air-Cooled-Condenser instead of Water-Cooled-Condenser in two of its upcoming projects, making all its projects Zero Liquid Discharge, and is tying up with Municipal Corporations to use treated sewage water.

Your Company commissioned a solid waste management plant at Karsara in Varanasi. Varanasi now ranks 32<sup>nd</sup> in Swachh Survekshan Survey by Gol - a jump of 33 positions over previous year. Other initiatives include opening of generic medicine stores at 12 locations to make affordable medicines available to all, and promoting cashless economy, by making townships digital-payment enabled.

I assure you that Team NTPC shall continue to put its best efforts in sustaining the leadership position of your Company and thereby ensure sustained returns to its stakeholders.

With best wishes  
Yours sincerely



(Gurdeep Singh)  
Chairman & Managing Director





## NTPC Limited

CIN: L40101DL1975GOI007966

Regd. Office: NTPC Bhawan, SCOPE Complex, 7, Institutional Area, Lodhi Road,  
New Delhi-110 003

Tel. no.: 011-24369034 Fax: 011-24360241

Email: csntpc@ntpc.co.in Website: www.ntpc.co.in

### NOTICE

NOTICE is hereby given that the 41<sup>st</sup> Annual General Meeting of the Members of NTPC Limited will be held on **Wednesday, 20<sup>th</sup> September, 2017 at 10.30 a.m. at Manekshaw Centre, Parade Road, New Delhi – 110 010** to transact the following businesses:

#### ORDINARY BUSINESS:

1. To consider and adopt:
  - (a) the Audited Standalone Financial Statement of the Company for the financial year ended 31<sup>st</sup> March 2017, the reports of the Board of Directors and Auditors thereon; and
  - (b) the Audited Consolidated Financial Statement of the Company for the financial year ended 31<sup>st</sup> March 2017 and the report of the Auditors thereon.
2. To confirm payment of interim dividend and declare final dividend for the year 2016-17.
3. To appoint a Director in place of Shri K.K. Sharma (DIN: 03014947), who retires by rotation and being eligible, offers himself for re-appointment.
4. To fix the remuneration of the Statutory Auditors for the year 2017-18.

#### SPECIAL BUSINESS:

5. To appoint Shri Saptarshi Roy (DIN: 03584600), as Director (Human Resources) of the Company and in this regard to consider and if thought fit, to pass the following resolution as an **Ordinary Resolution**:  
 Resolved that pursuant to the provisions of Section 149, 152 and other applicable provisions, if any, of the Companies Act, 2013, Rules made thereunder, Shri Saptarshi Roy (DIN: 03584600), who was appointed as Director (Human Resources), by the President of India vide Ministry of Power letter No. 8/2/2006-Th-I dated 8<sup>th</sup> August, 2016 and subsequently appointed as an Additional Director and designated as Director (Human Resources) by the Board of Directors with effect from 1<sup>st</sup> November, 2016 to hold office until the date of this Annual General Meeting, in terms of Section 161 of the Companies Act, 2013 and in respect of whom the Company has received a notice in writing from a member under Section 160 of the Companies Act, 2013 signifying his intention to propose Shri Saptarshi Roy as a candidate for the office of a director of the Company, be and is hereby appointed as Director (Human Resources) of the Company on terms & conditions as may be fixed by the Government of India and he shall be liable to retire by rotation.
6. To appoint Shri Anand Kumar Gupta (DIN: 07269906), as Director (Commercial) of the Company and in this regard to consider and if thought fit, to pass the following resolution as an **Ordinary Resolution**:  
 Resolved that pursuant to the provisions of Section 149, 152 and other applicable provisions, if any, of the Companies Act, 2013, Rules made thereunder, Shri Anand Kumar Gupta (DIN: 07269906), who was appointed as Director (Commercial), by the President of India vide Ministry of Power letter No. 8/3/2006-Th-I dated 3<sup>rd</sup> February, 2017 and subsequently appointed as an Additional Director and designated as Director (Commercial) by the Board of Directors with effect from 3<sup>rd</sup> February, 2017 to hold office until the date of this Annual General Meeting, in terms of Section 161 of the Companies Act, 2013 and in respect of whom the Company has received a notice in writing from a member under Section 160 of the Companies Act, 2013 signifying his intention to propose Shri Anand Kumar Gupta as a candidate for the office of a director of the Company, be and is hereby appointed as Director (Commercial) of the Company on terms & conditions as may be fixed by the Government of India and he shall be liable to retire by rotation.
7. To ratify the remuneration of the Cost Auditors for the financial year 2017-18 and in this regard to consider and if thought fit, to pass the following resolution as an **Ordinary Resolution**:

“Resolved that pursuant to the provisions of Section 148 and all other applicable provisions of the Companies Act, 2013 and the Companies (Audit and Auditors) Rules, 2014 [including any statutory modification(s)], the Company hereby ratifies the remuneration of ₹ 31,01,250/- (Rupees Thirty One Lacs One Thousand Two Hundred and Fifty only) as approved by the Board of Directors payable to Cost Auditors to be appointed by the Board of Directors of the Company to conduct the audit of the cost records of the Company for the financial year 2017-18 as per detail set out in the Statement annexed to the Notice convening this Meeting.

Resolved further that the Board of Directors of the Company be and is hereby authorised to do all acts, deeds, matters and things as may be considered necessary, desirable or expedient for giving effect to this resolution.”

8. To raise funds upto ₹ 15,000 Crore through issue of Bonds/Debentures on Private Placement basis and in this regard to consider and if thought fit, to pass following resolution as a **Special Resolution**:

Resolved that pursuant to Section 23, 42, 71 and other applicable provisions of the Companies Act, 2013 read with Rule 14 (2) of the Companies (Prospectus and Allotment of Securities) Rules, 2014 and any other applicable statutory provisions (including any statutory modification or re-enactments thereof) the Board of Directors of the Company (the “Board”) be and are hereby authorized to make offer(s) or invitation(s) to subscribe to the secured/ unsecured, redeemable, taxable/tax-free, cumulative/non-cumulative, non-convertible debentures (“Bonds”) upto ₹ 15,000 Crore in one or more tranches/ series not exceeding 30 (thirty) ,through private placement, in domestic market for capex, working capital and general corporate purpose, during the period commencing from the date of passing of Special Resolution till completion of one year thereof or the date of next Annual General Meeting in the financial year 2018-19 whichever is earlier in conformity with rules, regulations, notifications and enactments as may be applicable from time to time, subject to the total borrowings of the Company approved by the shareholders under Section 180(1)(c) of Companies Act, 2013.

Resolved further that the Board be and is hereby authorized to do or delegate from time to time, all such acts, deeds and things as may be deemed necessary to give effect to private placement of such Bonds including but not limited to determining the face value, issue price, issue size, tenor, timing, amount, security, coupon/interest rate, yield, listing, allotment and other terms and conditions of issue of Bonds as it may, in its absolute discretion, consider necessary.

9. To amend Articles of Association of the Company with a view to insert provision regarding Consolidation and re-issuance of debt Securities and in this regard to consider and if thought fit, to pass following resolution as a **Special Resolution**:

Resolved that pursuant to Section 14 of the Companies Act, 2013, SEBI (Issue and Listing of Debt Securities) Regulations, 2008 and any other applicable statutory provisions read with the rules and regulations made there under including any amendment, re-enactment or statutory modification thereof, approval of the members be and is hereby accorded to amend the Articles of Association by inserting Article 7A after Article 7 to be read as under:

**Article 7A: Consolidation and re-issuance of debt Securities**

Subject to the requirements of SEBI (Issue and Listing of Debt Securities) Regulations, 2008 as amended from time to time and any other requirement of any regulatory authority, the Company shall, as and when required, carry-out consolidation and re-issuance of non convertible debt Securities issued on Private Placement basis.

Resolved further that the Board be and is hereby authorised to do or cause to be done all such acts, deeds and other things as may be required or considered necessary or incidental thereto, for giving effect to the aforesaid resolution.”

By order of the Board of Directors



(K.P.Gupta)

Company Secretary

Place: New Delhi

Date: 4<sup>th</sup> August, 2017

## 41<sup>st</sup> Annual Report 2016-17

Notice of 41<sup>st</sup> AGM



**Notes:-**

1. The relevant explanatory statement pursuant to Section 102 of the Companies Act, 2013, in respect of Special Businesses, as set out above is annexed hereto.
2. A member entitled to attend and vote at the meeting is entitled to appoint a proxy to attend and vote instead of himself/ herself and the proxy need not be a member of the company. In order to be effective, the proxy form duly completed should be deposited at the registered office of the company not less than forty eight hours before the scheduled time of the annual general meeting. Blank proxy form is enclosed.

Pursuant to the provisions of Section 105 of the Companies Act, 2013, a person can act as a proxy on behalf of members not exceeding fifty and holding in the aggregate not more than ten percent of the total share capital of the company carrying voting rights. A member holding more than ten percent of the total share capital of the company carrying voting rights may appoint a single person as proxy and such person shall not act as a proxy for any other person or shareholder. Proxies submitted on behalf of limited companies, societies, etc. must be supported by an appropriate resolution / authority, as applicable.

3. Every member entitled to vote at a meeting of the company or on any resolution to be moved thereat, shall be entitled during the period beginning twenty four hours before the time fixed for the commencement of the meeting and ending with the conclusion of the meeting, to inspect the proxies lodged, at any time during the business hours of the company, provided not less than three days' notice in writing of the intention to inspect is given to the company.
4. Corporate Members intending to send their authorized representatives to attend the Meeting are requested to send a certified copy of the Board Resolution authorizing their representative to attend and vote on their behalf at the Meeting.
5. In compliance with provisions of Regulation 44 of the SEBI (Listing Obligations & Disclosure Requirements) Regulations 2015 as well as Section 108 of the Companies Act, 2013 read with the Companies (Management and Administration) Rules, 2014, the Company is offering remote E- voting facility to all the Shareholders of the Company in respect of items to be transacted at this Annual General Meeting. User ID and Password including instructions for e-voting are given overleaf of Proxy form. All members are requested to read those instructions carefully before casting their e-vote. Once the vote on a resolution is cast by a Member, the Member shall not be allowed to change it subsequently. Further, the Members who have cast their vote electronically shall not be allowed to vote again at the Meeting. Members who have not voted electronically can cast their vote at the meeting through ballot papers.
6. Brief resume of the Directors seeking appointment or re-appointment at Annual General Meeting (AGM), as required under Regulation 36 of SEBI (Listing Obligations & Disclosure Requirements) Regulations 2015, is annexed hereto and forms part of the Notice.
7. Members are requested to:-
  - i. note that copies of Annual Report will not be distributed at the Annual General Meeting.
  - ii. bring their copies of Annual Report, Notice and Attendance Slip duly completed and signed at the meeting.
  - iii. note that the attendance slip/ proxy form should be signed as per the specimen signature registered with the Karvy Computershare Private Limited, Registrar & Transfer Agent (RTA)/ Depository Participant (DP).
  - iv. deliver duly completed and signed Attendance Slip at the entrance of the meeting venue as entry to the Hall will be strictly on the basis of the entry slip available at the counters at the venue to be exchanged with the attendance slip.
  - v. note that in case of joint holders attending the meeting, only such joint holder who is higher in the order of names will be entitled to vote.
  - vi. quote their Folio / Client ID & DP ID Nos. in all correspondence.
  - vii. note that due to strict security reasons mobile phones, briefcases, eatables and other belongings will not be allowed inside the Auditorium.
  - viii. note that no gifts/coupons will be distributed at the Annual General Meeting.
8. The Board of Directors, in its meeting held on February 8, 2017, had declared an interim dividend @ 26.10 % (₹ 2.61 per share) on the paid-up equity share capital of the company which was paid on February 22, 2017. Members who have not encashed or not received their dividend warrants may approach RTA of the Company for revalidating the warrants or for obtaining duplicate warrants. The Board of Directors, in its Meeting held on May 29, 2017, has recommended a final dividend @ 21.7% (₹ 2.17 per share) on the paid-up equity share capital of the company.



9. The Register of Members and Share Transfer Books of the Company will remain closed from September 9, 2017 to September 20, 2017 (both days inclusive). The final dividend on equity shares, as recommended by the Board of Directors, subject to the provisions of Section 91 of the Companies Act, 2013, if declared at the Annual General Meeting, will be paid on September 29, 2017 to the Members whose names appear on the Company's Register of Members on September 20, 2017 in respect of physical shares. In respect of dematerialized shares, the dividend will be payable to the "beneficial owners" of the shares whose names appear in the Statement of Beneficial Ownership furnished by National Securities Depository Limited and Central Depository Services (India) Limited as at the close of business hours on September 9, 2017.
10. Pursuant to the provisions of the Companies Act, 2013, the Company has transferred the unpaid or unclaimed final dividend for the financial year 2008-09 and interim dividend for the financial year 2009-10, on or before due dates, to the Investor Education and Protection Fund (IEPF) established by the Central Government. Pursuant to the provisions of IEPF Rules, the Company has uploaded the details of unpaid and unclaimed amounts lying with the Company as on September 20, 2016 (date of last Annual General Meeting) on the website of the Company ([www.ntpc.co.in](http://www.ntpc.co.in)) and also on the website of the Ministry of Corporate Affairs (<http://www.iepf.gov.in>).
11. Unclaimed final dividend for the financial year 2009-10 and Interim dividend for the financial year 2010-11 will be due for transfer to the Investor Education and Protection Fund of the Central Government on or before 23<sup>rd</sup> November, 2017 and 1<sup>st</sup> April, 2018 respectively pursuant to the provisions of Section 124 of the Companies Act, 2013.
12. **Attention of the members is drawn to the provisions of Section 124(6) of the Act which require a company to transfer in the name of IEPF Authority all shares in respect of which dividend has not been paid or claimed for 7 (seven) consecutive years or more. In accordance with the aforesaid provision of the Act read with the Investor Education and Protection Fund Authority (Accounting, Audit, Transfer and Refund) Rules, 2016, as amended, the Company has already initiated necessary action for transfer of all shares in respect of which dividend declared for the financial year 2009-10 or earlier financial years has not been paid or claimed by the members for 7 (seven) consecutive years or more. Members are advised to visit the web-link: <http://www.ntpc.co.in/en/Investors/miscellaneous-download> to ascertain details of unclaimed shares liable for transfer in the name of IEPF Authority in due course.**
13. Members, who have not registered their NECS Mandate, are requested to send their NECS Mandate Form to the Registrar / Investor Service Department of the Company or to their DP, as the case may be. For any change in bank particulars due to banker having migrated their operations to core banking solutions, Members are requested to register a fresh NECS Mandate with the revised bank particulars.
14. Members holding shares in multiple folios in physical mode are requested to apply for consolidation to the Company or its Registrar & Transfer Agent (RTA) alongwith relevant Share Certificates.
15. The Securities and Exchange Board of India (SEBI) has mandated the submission of Permanent Account Number (PAN) by every participant in securities market. Members holding shares in electronic form are, therefore requested to submit PAN to their DP with whom they are maintaining their demat accounts. It has also made mandatory for the transferee(s) to furnish a copy of PAN card to the Company/RTAs for registration of transfers and for securities market transactions and off-market/ private transactions involving transfer of shares of listed companies in physical form. Accordingly, members holding shares in physical mode should attach a copy of their PAN Card for every transfer request sent to the Company / RTA.
16. Members, holding shares in physical form, may avail the facility of nomination in terms of Section 72 of the Companies Act, 2013 by nominating in the Form-SH 13 as prescribed in the Companies (Share Capital & Debentures) Rule, 2014, any person to whom their shares in the Company shall vest on occurrence of event stated in the Form. Persons holding shares in physical form may send Form-SH 13 in duplicate to RTA of the Company. In case of shares held in dematerialized form, the nomination has to be lodged with the respective DP.
17. Members are requested to notify immediately any change of address:
  - i. to their DP in respect of shares held in dematerialized form, and
  - ii. to the Company at its Registered Office or to its RTA in respect of their physical shares, if any, quoting their folio number.
18. Members desirous of getting any information on any items of business proposed to be transacted at this Meeting are requested to address their queries to Shri K. P. Gupta, Company Secretary of the Company at the registered office of the company at least ten days prior to the date of the meeting, so that the information required can be made readily available at the meeting.

## 41<sup>st</sup> Annual Report 2016-17

Notice of 41<sup>st</sup> AGM



19. Annual listing fee for the year 2017-18 has been paid to all Stock Exchanges wherein shares of the Company are listed. Also, the Annual Custodian Fee for the year 2017-18 was paid to both Depositories i.e. Central Depository Services (India) Limited and National Securities Depository Limited.
20. Pursuant to Section 139 of the Companies Act, 2013, the Auditors of a Government Company are to be appointed or re-appointed by the Comptroller and Auditor General of India (C&AG) and in pursuant to Section 142 of the Companies Act, 2013, their remuneration is to be fixed by the Company in the Annual General Meeting or in such manner as the Company in general meeting may determine. The Members of the Company, in 40<sup>th</sup> Annual General Meeting held on September 20, 2016, had authorised the Board of Directors to fix the remuneration of Statutory Auditors for the financial year 2016-17. Accordingly, the Board of Directors has fixed audit fee of ₹ 1,65,20,000/- (Rupees One Crore Sixty Five Lakh Twenty Thousand only) for the Statutory Auditors for the financial year 2016-17 in addition to applicable service tax, education cess and reimbursement of actual traveling and out-of-pocket expenses for visits to accounting units. The Statutory Auditors of the Company for the year 2017-18 have been appointed by the C&AG. Accordingly, the Members may authorize the Board to fix an appropriate remuneration of Statutory Auditors as may be deemed fit by the Board for the year 2017-18.
21. None of the Directors of the Company is in any way related with each other.
22. All documents referred to in the accompanying notice are open for inspection at the registered office of the Company on all working days (barring Saturday and Sunday) between 11.00 a.m. to 1.00 p.m. prior to the Annual General Meeting.
23. **Members who have not registered their e-mail addresses so far or who want to update their e-mail address, are requested to approach their respective DP (for electronic holding) or with RTA/ Company (for physical holding), for receiving all communication including Annual Report, Notices, Circulars, NECS intimation etc. for the Company electronically.**
24. Members and proxy holders may please carry photo ID card for identification/ verification purposes.
25. Route Map for venue of the meeting is enclosed.

\*\*\*



## EXPLANATORY STATEMENT

### Item No. 5

Shri Saptarshi Roy (DIN: 03584600), was appointed as Director (Human Resources) of the Company by the President of India vide letter No. 8/2/2006-Th-I dated 8<sup>th</sup> August, 2016 issued by Ministry of Power for a period of five years from the date of assumption of charge of the post on or after 1<sup>st</sup> November, 2016 or till the date of superannuation or until further orders, whichever is earliest and was accordingly appointed as an Additional Director w.e.f 1<sup>st</sup> November, 2016 to hold office upto this Annual General Meeting. The Company has received a notice in writing from a member pursuant to the provisions of Section 160 of the Companies Act, 2013 (the Act), signifying his intention to propose Shri Saptarshi Roy for the office of Director (Human Resources). Shri Saptarshi Roy, if appointed, shall be liable to retire by rotation. The terms and conditions regulating the appointment of Shri Saptarshi Roy as Director (Human Resources) shall be determined by the Government of India.

His brief resume, inter-alia, giving nature of expertise in specific functional area, shareholding in the Company, other Directorship, Membership/ Chairmanship of Committees and other particulars are enclosed with this notice.

None of the Directors, Key Managerial Personnel of the Company or their relatives except Shri Saptarshi Roy, is in any way, concerned or interested, financially or otherwise, in the resolution.

The Board recommends the resolution for your approval.

### Item No. 6

Shri Anand Kumar Gupta (DIN: 07269906) was appointed as Director (Commercial) of the Company by the President of India vide letter no. 8/3/2006-Th-I dated 3<sup>rd</sup> February, 2017 for a period of five years from the date of assumption of charge of the post or till the date of superannuation or until further orders, whichever is earliest and was accordingly appointed as an Additional Director w.e.f 3<sup>rd</sup> February, 2017 to hold office upto the date of this Annual General Meeting. The Company has received a notice in writing from a member pursuant to the provisions of Section 160 of the Act, signifying his intention to propose Shri Anand Kumar Gupta for the office of Director (Commercial). Shri Anand Kumar Gupta, if appointed, shall be liable to retire by rotation. The terms and conditions regulating the appointment of Shri Anand Kumar Gupta as Director (Commercial) shall be determined by the Government of India.

His brief resume, inter-alia, giving nature of expertise in specific functional area, shareholding in the Company, other Directorship, Membership/ Chairmanship of Committees and other particulars are enclosed with this notice.

None of the Directors or Key Managerial Personnel of the Company or their relatives except Shri Anand Kumar Gupta, is in any way, concerned or interested, financially or otherwise, in the resolution.

The Board recommends the resolution for your approval.

### Item No. 7

Based on recommendation of Audit Committee, appointment of Cost Auditors for the Financial year 2017-18 will be decided on the outcomes of Expression of Interest (EOI) by the Board of Directors. Total fee of ₹ 31,01,250/- (Rupees Thirty One Lacs One Thousand Two Hundred and Fifty only) is payable for cost audit for the financial year 2017-18 as approved by the Board of Directors in its meeting held on 29<sup>th</sup> July, 2017. The fee structure for cost audit is broadly based on station capacity and number of stations. The reimbursement of applicable statutory taxes/ levies shall in addition to fees.

As per Rule 14 of Companies (Audit and Auditors) Rules, 2014 read with section 148(3) of the Companies Act, 2013, the remuneration recommended by the Audit Committee shall be considered and approved by the Board of Directors and ratified subsequently by the shareholders.

Accordingly, members are requested to ratify the remuneration payable to the Cost Auditors for the financial year 2017-18.

None of the Directors or Key Managerial Personnel of the Company or their relatives is in any way, concerned or interested, financially or otherwise, in the resolution.

The Board recommends the resolution for your approval.

### Item No. 8

The Company is the largest power producer in India with the commissioned capacity of over 51,635 MW as on 15<sup>th</sup> July 2017. The projects of the Company (except solar) are to be financed by debt & equity in the ratio of 70:30. As the Company is under rapid capacity expansion mode, major portion of capital expenditure requirement of the Company has

## 41<sup>st</sup> Annual Report 2016-17

Notice of 41<sup>st</sup> AGM





to be funded by debt. The Company borrows in the form of non-convertible bonds/ debentures, rupee term loans from banks and financial institutions, foreign currency borrowings, foreign currency bonds etc. The non-convertible bonds/ debentures are raised by the Company under public issue route or through private placement basis.

In addition to capital expenditure requirement as explained above, Company also needs to borrow for meeting its working capital requirement and other general corporate purpose which is partly proposed to be met through issuance of non-convertible bonds.

As per Section 42 of Companies Act, 2013 read with rule 14(2) of the Companies (Prospectus and Allotment of Securities) Rules, 2014, a Company shall not make a Private Placement of its securities unless the proposed offer of securities or invitation to subscribe to securities has been previously approved by the Shareholders of the Company by a Special Resolution for each of the offers or invitations. However, in case of offer or invitation for “non convertible debentures”, it shall be sufficient, if the Company passes a previous Special Resolution only once in a year for all the offers or invitations for such debentures during the year.

In view of the above, approval of the Shareholders of the Company is being sought to authorize the Board of Directors to make offer(s) or invitation(s) to subscribe to the secured/ unsecured, redeemable, taxable/tax-free, cumulative/non-cumulative, non-convertible debentures (“Bonds”) upto ₹ 15,000 Crore in one or more tranches/ series not exceeding 30 (thirty), through private placement, in domestic market for capex, working capital and general corporate purposes during the period commencing from the date of passing of Special Resolution till completion of one year thereof or the date of next Annual General Meeting in the financial year 2018-19 whichever is earlier, subject to ceiling approved by the shareholders under Section 180(1)(c) of Companies Act, 2013.

The Board of Directors of the Company in its Meeting held on 29<sup>th</sup> July, 2017 has approved the proposal and recommends the passing of the proposed Special Resolution.

The Directors or key managerial personnel or their relatives do not have concern or interest, financial or otherwise, in passing of the said Special Resolution, except to the extent of their shareholding in the Company.

#### Item No. 9

In order to meet the fund requirements for capacity addition and working capital, the Company borrows in the form of non-convertible bonds/ debentures, rupee term loans from banks and financial institutions, foreign currency borrowings, foreign currency bonds etc. The non-convertible bonds/ debentures are raised by the Company under public issue route or through private placement basis.

The Securities Exchange Board of India (SEBI) vide its Circular ref. CIR/IMD/DF-1/67/2017 dated June 30, 2017 mandated that in respect of private placement of debt securities, a maximum of 12 ISINs maturing per financial year shall be allowed for plain vanilla debt securities. Further, within these 12 ISINs, the issuer can issue both secured and unsecured debt securities. In addition, a maximum of 5 ISINs maturing per financial year shall be allowed for structured debt securities, such as debt securities for call/or put option. Additionally, 12 ISINs have been allotted for issuance of the capital gains tax debt securities by the authorized issuers under Section 54 EC of the Income Tax Act 1961 on private placement basis. The above provision is applicable for debt securities issued in the financial year 2017-18 after the date of the circular i.e 30<sup>th</sup> June 2017. The Circular has also mandated that in order to comply with the provisions of Clause (a) of Regulation 20A of the SEBI (Issue and Listing of Debt Securities) Regulations, 2008, the issuer shall have a time period of six months from the date of this circular to make an enabling provision in its Articles of Association to carry out consolidation and reissuance of debt securities.

In view of above, it is proposed to amend the Articles of Association by inserting Article 7A after Article 7. The Article 7A shall be read as under:

#### Article 7A: Consolidation and re-issuance of debt Securities

Subject to the requirements of SEBI (Issue and Listing of Debt Securities) Regulations, 2008 as amended from time to time and any other requirement of any regulatory authority, the Company shall, as and when required, carry-out consolidation and re-issuance of non convertible debt Securities issued on Private Placement basis.

The Board of Directors of the Company, in its Meeting held on 29<sup>th</sup> July, 2017 has approved the proposal and recommends the passing of the proposed Special Resolution.

The Directors or key managerial personnel or their relatives do not have concern or interest, financial or otherwise, in passing of the said Special Resolution, except to the extent of their shareholding in the Company.

By order of the Board of Directors



(K.P.Gupta)

Company Secretary

Place: New Delhi

Date: 4<sup>th</sup> August, 2017

## BRIEF RESUME OF THE DIRECTORS SEEKING APPOINTMENT/ RE-APPOINTMENT:

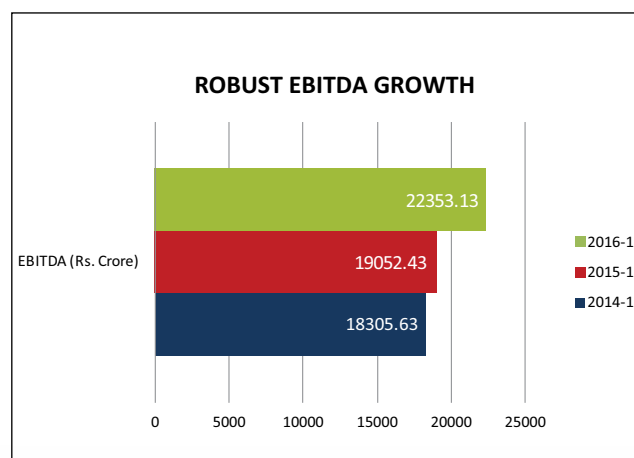
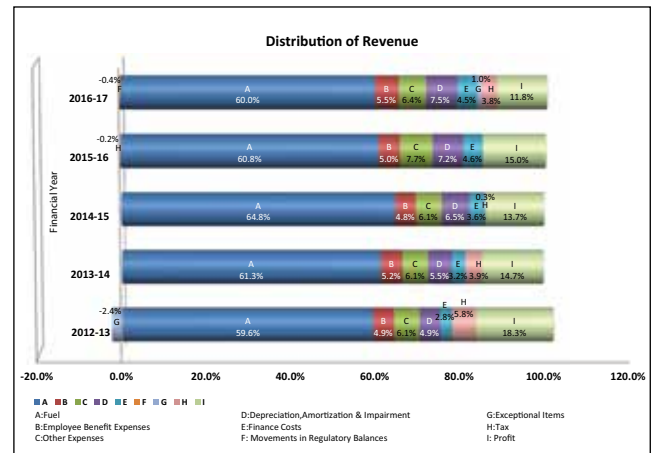
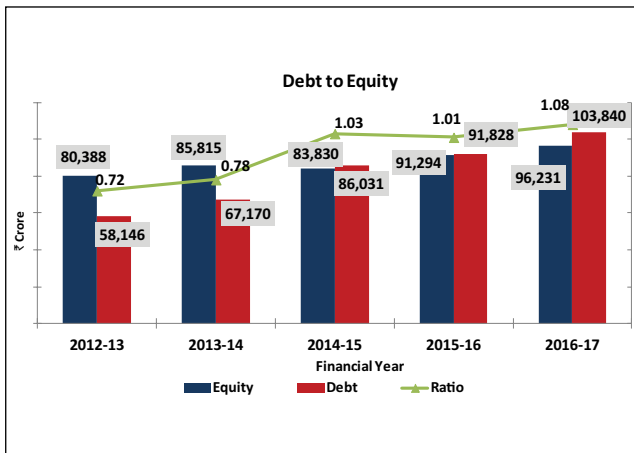
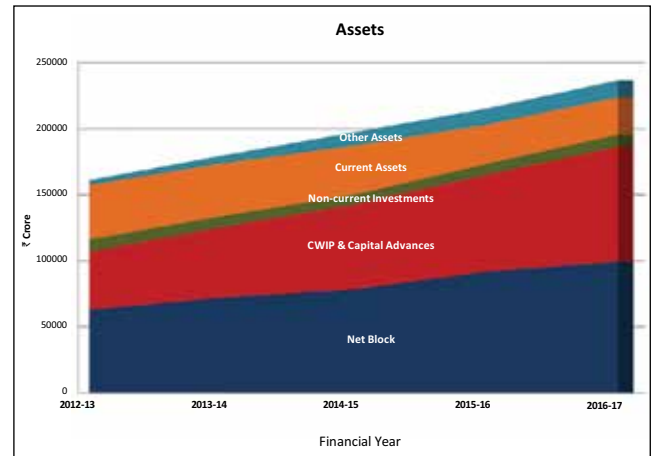
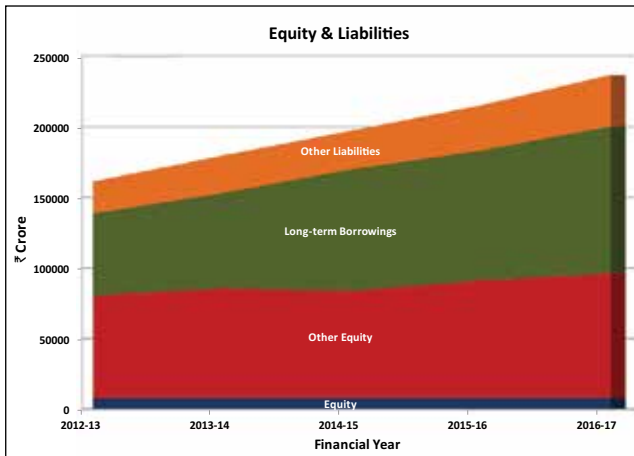
Name	Shri K. K. Sharma	Shri S. Roy	Shri A.K. Gupta
Date of Birth & Age	05/10/1957 59 Years	23/03/1960 57 Years	15/07/1960 57 Years
Date of Appointment	01/11/2014	01/11/2016	03/02/2017
Qualifications	Graduated in Mechanical Engineering and MBA in Finance.	Graduated in Electrical Engineering.	Graduated in Electrical Engineering.
Expertise in specific functional area	<p>He has over 41 years of experience in the areas of Mega-Budget Thermal, Hydro Power and Coal Mining Projects as a Professional Manager, Strategic Planner and a Business Leader.</p> <p>He had been Business Unit Head (BUH) of NTPC-SAIL Power Company Limited's Durgapur Station, General Manager of Farakka Super Thermal Power Station and General Manager of Hydro Electric Power Project of NTPC. He had been Regional Executive Director (Hydro Region), Executive Director (Coal mining/ Coal Washeries), Regional Executive Director (East-II), Executive Director (Project Planning &amp; Monitoring), NTPC and Chief Executive Officer of NTPC-SAIL Power Company Limited.</p>	<p>He has had a career spanning over 36 years of outstanding contribution in the Company in various positions including those of Regional Executive Director (North) and Eastern Region-I as well as Executive Director (Corporate Planning) besides that of Head of HR at Projects and Corporate Office.</p> <p>He a thorough professional, has been instrumental in introducing various pioneering HR initiatives in the areas of talent acquisition, employee welfare, industrial relations, wages and superannuation benefits. He made participative management a corner stone of NTPC's successful 'Industrial Relations Framework' and introduced a number of novel methods of employee engagement.</p> <p>He also played a critical role in managing transition and people integration issues during acquisition of old assets and turning them around into successful ventures.</p>	<p>He has illustrious career spanning over 37 years, in NTPC which entails all areas of Power generation business viz. Engineering &amp; Design of power projects, Plant operations &amp; Maintenance, Marketing &amp; business development and Commercial &amp; Regulatory affairs.</p> <p>He, as head of engineering division, was responsible for selection of technologies, investment decisions for new projects, complete engineering of power projects including quality assurance and operations support for complete portfolio of NTPC stations i.e. Thermal, Hydro and renewable projects.</p> <p>He also headed Business Development Department of NTPC as well as headed plant operations and maintenance at station. He made major contributions in development of international business for NTPC, evolving commercial strategies for changing business scenario, development of new projects and improving plant operations.</p>



Name	Shri K. K. Sharma	Shri S. Roy	Shri A.K. Gupta
Directorship held in other companies	<ol style="list-style-type: none"> <li>1. NTPC-SAIL Power Company Limited Part - Time Chairman</li> <li>2. Aravali Power Company Private Limited Part - Time Chairman</li> <li>3. Kanti Bijlee Utpadan Nigam Limited Part - Time Chairman</li> <li>4. Energy Efficiency Services Limited Part - Time Chairman</li> <li>5. NTPC Vidyut Vyapar Nigam Limited Part - Time Director</li> <li>6. The West Bengal Power Development Corporation Limited Part - Time Director</li> <li>7. NTPC Tamil Nadu Energy Company Limited Part - Time Director</li> <li>8. Patratu Vidyut Utpadan Nigam Limited Part - Time Director</li> </ol>	<ol style="list-style-type: none"> <li>1. NTPC Electric Supply Company Limited Part - Time Director</li> <li>2. Transformers and Electricals Kerala Limited Part - Time Director</li> </ol>	<ol style="list-style-type: none"> <li>1. Kanti Bijlee Utpadan Nigam Limited Part - Time Director</li> <li>2. Transformers and Electricals Kerala Limited Part - Time Director</li> </ol>
Memberships/ Chairmanship of Committees across all Public Companies* held as on 31.03.2017	<b>Audit Committee:</b> <ol style="list-style-type: none"> <li>1. NTPC Vidyut Vyapar Nigam Limited (Member)</li> <li>2. NTPC Tamil Nadu Energy Company Limited (Member)</li> </ol>	<b>Stakeholders' Relationship Committee:</b> <ol style="list-style-type: none"> <li>1. NTPC Limited (Member)</li> </ol>	<b>Audit Committee:</b> <ol style="list-style-type: none"> <li>1. Kanti Bijlee Utpadan Nigam Limited (Member)</li> </ol>
No. of Shares held in NTPC Limited as on 31.03.2017	2094	1205	2888
Attendance in Board Meetings till 31.03.2017	No. of Meetings during his tenure = 14 No. of Meetings attended = 12	No. of Meetings during his tenure = 6 No. of Meetings attended = 6	No. of Meetings during his tenure = 3 No. of Meetings attended = 3

\*In line with Regulation 26 of SEBI (Listing Obligations and Disclosure Requirements) Regulations 2015, membership of the Audit Committee and Stakeholders' Relationship Committee has only been taken into consideration.





## 41<sup>st</sup> Annual Report 2016-17

Graphs representing NTPC's Growth

## STATION-WISE GENERATION 2016-17

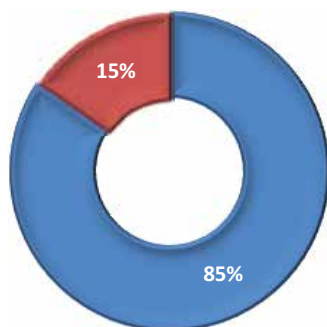
STATION	Fuel Type	*Gross Capacity (MW)	Gross Generation(MU)
<b>Northern Region</b>		<b>7653</b>	<b>47958</b>
Singrauli	Coal	2000	15219
Rihand	Coal	3000	21969
Unchahar	Coal	1550	6994
Tanda	Coal	440	3241
Auraiya	Gas	663	536
<b>DBF</b>		<b>3786</b>	<b>13742</b>
Dadri Coal	Coal	1820	8766
Badarpur	Coal	705	1705
Dadri Gas	Gas	830	2237
Faridabad	Gas	432	1034
<b>Western Region</b>		<b>14393</b>	<b>85425</b>
Mouda	Coal	2320	4300
Korba	Coal	2600	20365
Vindhyachal**	Coal	4760	32207
Sipat	Coal	2980	23779
Solapur	Coal	0	2
Anta	Gas	419	695
Kawas	Gas	656	1718
Gandhar	Gas	657	2359
<b>Southern Region</b>		<b>6560</b>	<b>33812</b>
Ramagundam	Coal	2600	19597
Simhadri	Coal	2000	14173
Kudgi	Coal	1600	25
Rajiv Gandhi CCP	Liquid Fuel	360	15
<b>Eastern Region</b>		<b>9720</b>	<b>65621</b>
Farakka	Coal	2100	13744
Kahalgaoon	Coal	2340	15948
Barh	Coal	1320	7642
Talcher Kaniha	Coal	3000	22848
Talcher Thermal	Coal	460	3760
Bongaigaon	Coal	500	1680
<b>Hydro Region</b>		<b>800</b>	<b>3225</b>
Koldam Hydro	Water	800	3225
<b>Total**</b>		<b>42912</b>	<b>249783</b>

\* As on 31.03.2017

\*\* As per NTPC, regional location of Vindhyachal is Northern Region

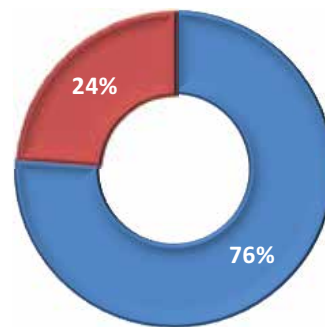
\*\*\* Excludes 531.1138 MU Solar Power Generation and 620 MW Capacity.

Share of Installed Capacity  
(as on 31<sup>st</sup> March 2017)



■ Rest of India 276350 MW ■ NTPC (Group) 50498 MW

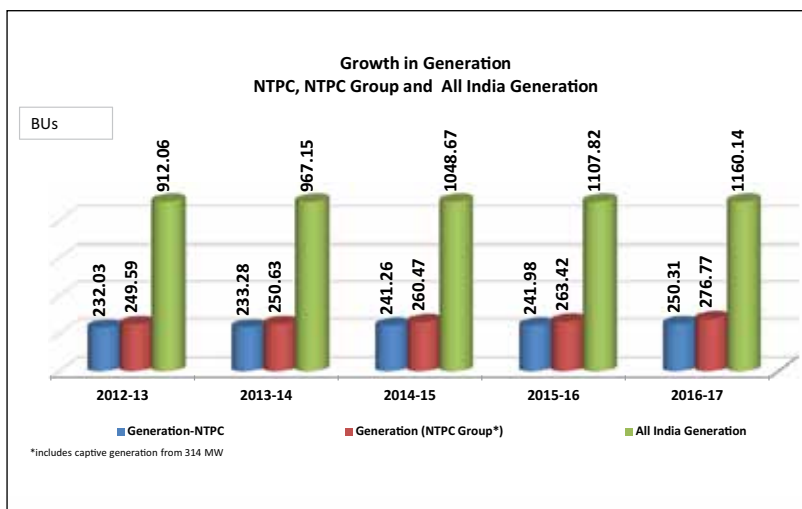
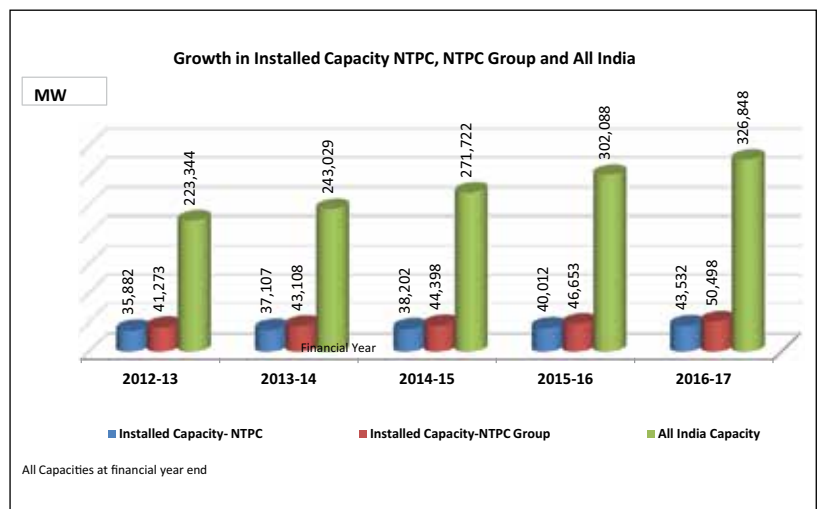
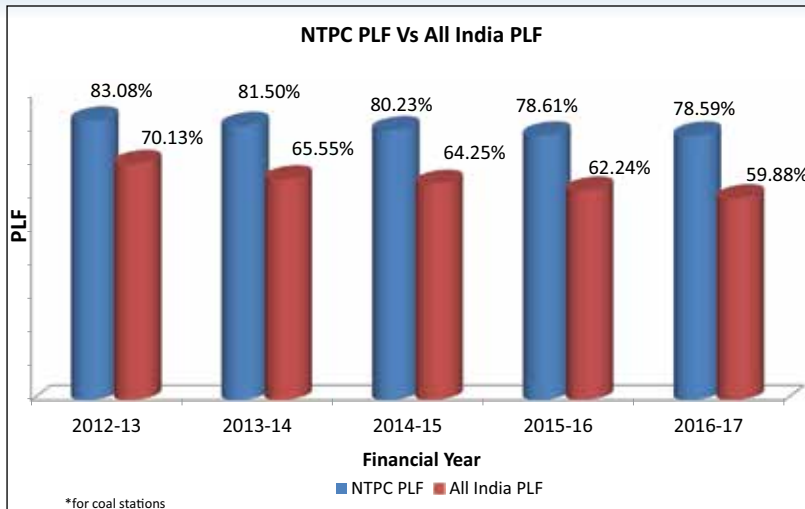
Share of Electricity Generated  
(During FY 2016-17)



■ Rest of India 883.37 BUs ■ NTPC (Group) 276.77 BUs

## 41<sup>st</sup> Annual Report 2016-17

Station-wise Generation



## 41<sup>st</sup> Annual Report 2016-17

Graphs representing NTPC PLF Growth in Generation vs All India

## SELECTED FINANCIAL INFORMATION\*

	₹ Crore				
	2016-17#	2015-16#	2014-15^	2013-14#	2012-13#
<b>A Revenue</b>					
Revenue from operations	78,273.44	70,843.81	73,236.94	72,018.93	65,673.93
Other income	1,068.86	1,165.35	2,100.42	2,688.89	3,101.58
<b>Total revenue</b>	<b>79,342.30</b>	<b>72,009.16</b>	<b>75,337.36</b>	<b>74,707.82</b>	<b>68,775.51</b>
<b>B Expenses</b>					
Fuel	47,572.19	43,798.59	48,833.57	45,829.71	41,018.25
Employee benefits expense	4,324.60	3,581.65	3,620.71	3,867.99	3,360.12
Other expenses	5,092.38	5,576.49	4,911.28	4,543.85	4,211.22
Prior period items (net)	-	-	(333.83)	12.84	(29.72)
<b>Profit before depreciation, finance costs and tax</b>	<b>22,353.13</b>	<b>19,052.43</b>	<b>18,305.63</b>	<b>20,453.43</b>	<b>20,215.64</b>
Depreciation, amortization and impairment expense	5,920.82	5,172.34	4,911.65	4,142.19	3,396.76
<b>Profit before finance costs and tax</b>	<b>16,432.31</b>	<b>13,880.09</b>	<b>13,393.98</b>	<b>16,311.24</b>	<b>16,818.88</b>
Finance costs	3,597.20	3,296.41	2,743.62	2,406.59	1,924.36
<b>Profit before exceptional items, tax and Rate Regulated Activities(RRA)</b>	<b>12,835.11</b>	<b>10,583.68</b>	<b>10,650.36</b>	<b>13,904.65</b>	<b>14,894.52</b>
Add: Movements in Regulatory deferral account balances	335.74	12.09	(103.71)	-	-
<b>Profit before exceptional items and tax</b>	<b>13,170.85</b>	<b>10,595.77</b>	<b>10,546.65</b>	<b>13,904.65</b>	<b>14,894.52</b>
Exceptional Items (+) income/ (-) loss	(782.95)	-	-	-	1,684.11
<b>Profit before tax</b>	<b>12,387.90</b>	<b>10,595.77</b>	<b>10,546.65</b>	<b>13,904.65</b>	<b>16,578.63</b>
Total Tax expense	3,002.64	(173.83)	255.79	2,929.91	3,959.24
<b>Profit for the year</b>	<b>9,385.26</b>	<b>10,769.60</b>	<b>10,290.86</b>	<b>10,974.74</b>	<b>12,619.39</b>
Other comprehensive income for the year (net of income tax)	(203.38)	(58.63)	-	-	-
<b>Total comprehensive income for the year</b>	<b>9,181.88</b>	<b>10,710.97</b>	<b>10,290.86</b>	<b>10,974.74</b>	<b>12,619.39</b>
Dividend	3,595.03	2,762.24	2,061.38	4,741.15	4,741.16
Dividend tax	727.79	562.32	417.40	804.74	781.87
Retained profit	5,062.44	7,445.04	7,812.08	5,428.85	7,096.36
<b>C Assets</b>					
Property, plant & equipment	99,062.70	91,499.36	78,153.38	71,865.86	62,687.42
Intangible assets	293.02	273.89	262.16	244.97	248.68
Capital work-in-progress	80,522.55	66,205.59	56,463.11	44,886.74	37,109.42
Intangible assets under development	214.54	217.61	30.38	1.93	-
<b>Total Fixed Assets (Net block)</b>	<b>180,092.81</b>	<b>158,196.45</b>	<b>134,909.03</b>	<b>116,999.50</b>	<b>100,045.52</b>
Investments in Subsidiaries, JVs & Others (Non-current)	8,952.36	8,014.32	7,239.15	8,120.90	9,137.64
Other non-current financial assets	1,730.44	1,534.30	1,449.94	-	-
Other non-current assets @	16,879.15	17,636.80	16,343.85	14,562.99	10,766.22
Current assets	28,399.90	29,756.45	37,228.29	39,870.79	41,167.08
Regulatory deferral account debit balances	522.83	-	-	-	-
<b>Total Assets</b>	<b>236,577.49</b>	<b>215,138.32</b>	<b>197,170.26</b>	<b>179,554.18</b>	<b>161,116.46</b>
<b>D Liabilities</b>					
Borrowings					
Non-current borrowings	97,339.28	85,096.95	78,564.51	62,405.75	53,253.66
Current maturities of non-current borrowings	6,500.37	6,730.79	7,466.17	4,764.47	4,892.64
<b>Total borrowings</b>	<b>103,839.65</b>	<b>91,827.74</b>	<b>86,030.68</b>	<b>67,170.22</b>	<b>58,146.30</b>
Other Non-current liabilities	4,225.78	4,645.94	4,311.98	4,443.43	3,621.21
Current liabilities	36,177.32	31,758.74	28,785.96	25,279.80	22,610.03
Less: Current maturities of non-current borrowings	6,500.37	6,730.79	7,466.17	4,764.47	4,892.64
<b>Net Current liabilities</b>	<b>29,676.95</b>	<b>25,027.95</b>	<b>21,319.79</b>	<b>20,515.33</b>	<b>17,717.39</b>
Deferred Revenue	2,121.14	2,047.34	1,369.97	1,609.88	1,244.05
Regulatory deferral account credit balances	482.74	295.65	307.74	-	-
<b>E Net-worth</b>					
Equity	8,245.46	8,245.46	8,245.46	8,245.46	8,245.46
Other Equity	87,985.77	83,048.24	75,584.64	77,569.86	72,142.05
<b>Net-worth</b>	<b>96,231.23</b>	<b>91,293.70</b>	<b>83,830.10</b>	<b>85,815.32</b>	<b>80,387.51</b>
<b>Total Liabilities</b>	<b>236,577.49</b>	<b>215,138.32</b>	<b>197,170.26</b>	<b>179,554.18</b>	<b>161,116.46</b>
<b>F Capital employed</b>	<b>100,757.21</b>	<b>94,930.73</b>	<b>94,740.61</b>	<b>92,891.91</b>	<b>84,419.44</b>
<b>G Value added</b>	<b>29,159.02</b>	<b>27,439.65</b>	<b>25,089.64</b>	<b>25,965.88</b>	<b>22,998.93</b>
<b>H Number of shares</b>	<b>8,245,464,400</b>	<b>8,245,464,400</b>	<b>8,245,464,400</b>	<b>8,245,464,400</b>	<b>8,245,464,400</b>
<b>I Number of employees</b>	<b>20,593</b>	<b>21,633</b>	<b>22,496</b>	<b>23,411</b>	<b>23,865</b>
<b>J Ratios</b>					
Return on capital employed (%)	13.39	14.56	13.68	14.37	15.95
Return on net worth (%)	17.68	19.56	16.78	17.72	19.73
Book value per Share (₹)	116.71	110.72	101.67	104.08	97.49
Earnings per share (₹)	11.38	13.06	12.48	13.31	15.30
Current ratio	0.79	0.94	1.29	1.58	1.82
Debt to equity	1.08	1.01	1.03	0.78	0.72
Value added per employee (₹ crore)	1.42	1.27	1.12	1.11	0.96

#Balance-Sheet & P&L figures for FY 2015-16 & FY 2016-17 are as per Ind AS and for FY 2012-13 & FY 2013-14 are as per previous GAAP.

^For FY 2014-15 Balance-Sheet figures are as per Ind AS while P&L figures are as per previous GAAP.

@Figure of Long-term loans and advances has been grouped with other non-current assets for FY 2012-13 & FY 2013-14.

\* Standalone



## DIRECTORS' PROFILE



**Chairman &  
Managing Director**

**Shri Gurdeep Singh, (DIN: 00307037), (aged 52 years),** took over as Chairman & Managing Director on 4<sup>th</sup> February 2016.

He has an illustrious career spanning nearly three decades in the power sector. He started his career in 1987 as an Engineer Trainee with NTPC and has worked his way through various ranks in both public sector and private sector. He has wide ranging experience entailing all aspects of power generation business. His rich experience has seen him serving as plant operation engineer as well as top leadership positions. Working in different organisations and cross cultural environment provided him with the ability to deal with intricate and complex issues.

Prior to joining NTPC, he was a Managing Director of Gujarat State Electricity Company (GSECL). His visionary leadership and innate ability to work through complexity and focus on core issues, helped bring transformational changes in GSECL. It also allowed the company to keep its energy cost under control. His sustained focus on cost reduction resulted in conceptualisation of coal swapping and freight rationalisation much ahead of time. Before GSECL, he worked with Powergen, CLP, AES, IDFC and CESC.

He graduated in mechanical engineering from NIT Kurukshetra and has undergone Management Education Program from IIM Ahmedabad. He has received management and leadership training from global institutions like Saïd Business School-Oxford, Darden School of Management-Virginia, USA, Singapore Civil Services College-Singapore, ISB-Hyderabad, etc.

He brings to NTPC dynamism and team approach. He firmly believes that the key to performance improvement is employee empowerment, their capability augmentation and process optimization.

His early years in NTPC helped in making an immediate connect at all levels in the company. He has launched various initiatives to sustain NTPC's growth and bring about cultural changes necessary to maintain NTPC's position as a leading global power company.



**Director (Projects)**

**Shri S.C. Pandey, (DIN: 03142319), (aged 60 years),** is B.E. in Instrumentation. He joined NTPC in 1978 as 3<sup>rd</sup> Batch Executive Trainee. He is having more than 38 years' rich experience in management of large size power projects in the area of Engineering, Project Construction and Power Plant Operation & Maintenance. He has a strong background in managing, operating and maintaining few of the largest stations of the country and has a rich experience and exposure of entire life cycle from concept to commissioning of Greenfield Projects.

He was associated with Erection, Commissioning and Operation of NTPC's First Thermal Power Project at Singrauli and first Hydro Project at Koldam.

Shri Pandey's experience in power sector includes 10 years of senior management level experience as a 'Business Unit Head' of NTPC's largest project i.e. Vindhyachal, Ramagundam & Simhadri STPP, Engineering Head of Corporation and as a Regional Head of NTPC projects of Eastern Region-II and Western Region.

Shri Pandey has been deputed for several overseas managerial and leadership development programmes and technical training programmes to enhance strategic leadership qualities, broaden the vision and to gain insight of complex national and global business environment.

As Director (Projects) his responsibility includes Project Planning & Monitoring of entire Business Portfolio of NTPC (Maharatna PSU) covering Thermal, Hydro, Coal Mining, International JVs, Renewable (Including Solar, Wind Projects & Small Hydro), Greenfield, Brownfield, under construction projects covering almost 20% capacity of country. Active involvement in implementation of over 20000+ MW Projects under construction at about 22 different locations and strategic planning of 40000+ MW New Project at various stages.

He joined NTPC Board in Oct' 2013 as Director (Projects). He is the Chairman of Bhartiya Rail Bijlee Company Ltd. and Nabinagar Power Generating Company Private Limited and Director on the Board of other joint ventures of NTPC Limited.





Director (Finance)

**Shri Kulamani Biswal (DIN: 03318539), (aged 56 years)**, a Commerce & Law Graduate; Fellow in Cost Accountancy and MBA from New Port University, California, USA has rich exposure of 32 years in the entire value chain of Energy sector - Coal, Power and Regulatory affairs. Sh. Biswal started his career in Coal India Limited where he worked for 12 years as a young, dynamic professional & gained insight in primary energy business. Then he moved to State Electricity Regulatory Commission – OERC where he witnessed the major reforms in power sector including unbundling of SEBs and assets segregation among generation, transmission & distribution utilities. After serving for 7 years in SERC, Sh. Biswal joined Central Regulator, i.e. CERC in Oct 2004. He went back to the Coal sector again in Oct 2010 at the Board level as Director (Finance) of Mahanadi Coalfields Limited for a short period of 3 years. Sh. Biswal took over the charge of Director (Finance), NTPC limited in December 2013.

In NTPC, he plays a pivotal role in providing valuable inputs to the Board for taking various strategic decisions to enable the company to achieve its Vision. He is responsible for the entire gamut of financial management of the organisation including financial resource mobilisation from domestic & global sources, optimum utilization of funds, budgetary controls, investment decisions and compilation of Accounts and Audit of the same by Statutory and Govt. Auditors.

During his stint as CFO of NTPC and as Board Member in-charge of coal mining business, some of the major achievements are raising Fund from Domestic as well as International Market at very competitive terms, including Green Masala Bonds, first ever by any Indian corporate; Innovative way of rewarding shareholders through issuance of Bonus Debentures – a first of its kind in India by any PSU, allotment and reallocation of coal blocks, production of coal from NTPC's first coal mine, acquisition of Patratu Power station.

Besides the responsibilities of Finance function & coal mining business of NTPC Limited, Sh. Biswal also supervises the business of Meja Urja Nigam Private Limited as its Chairman and of NTPC Vidyut Vyapar Nigam Limited, NTPC Electric Supply Company Limited, Bangladesh - India Friendship Power Company Pvt. Limited and PTC India Limited as director on their board. He has also been appointed as "Nominated Owner" under the provisions of Mines Act, 1952 for development/operation and management of Coal Mines allocated to NTPC.

His able leadership and guidance has brought him and NTPC lots of laurels and awards, some of these are - Honored as 'Fellow of World Academy of Productivity Science', a component of Confederation of Productivity Science (WCPS) in an international function at Halifax, Canada; Felicitated by Honb'le Union Minister for Agriculture in the presence of Honb'le Minister of State (I/c) for Petroleum & Natural Gas for outstanding contribution in the field of Finance in April 17; 'The Best CMA-CFO' by The Institute of Cost Accountants of India, 'CFO of the Year' Award by EPC World with E&Y as their knowledge partner, GSBA-Top Rankers Excellence Award 2015 – 'Financial Pride of India', 'BT-STAR PSU Director Finance of the Year' Award, 'Excellence in Financial Reporting' award to NTPC for the year 2013-14 by The Institute of Chartered Accountants of India, 'Golden Peacock Global Award' for the excellence in Corporate Governance in the year 2014 and Corporate Governance Excellence award 2014-15 by Assocham India.



Director  
(Operations)

**Shri K.K. Sharma, (DIN: 03014947), (aged 59 years)**, is a graduate in Mechanical Engg. and MBA in Finance. He has an illustrious career spanning over 41 years of outstanding contribution in the areas of Mega-Budget Thermal, Hydro Power and Coal Mining Projects as a Professional Manager, Strategic Planner and a Business Leader. He has led several strategic initiatives for execution of projects as well as achieving operational excellence.

He had been Business Unit Head (BUH) of NTPC-SAIL Power Company Limited's Durgapur Station, General Manager of Farakka Super Thermal Power Station and General Manager of Koldam Hydro Electric Power Project of NTPC. He also had been Regional Executive Director (Hydro Region), Executive Director (Coal mining/ Coal Washeries), Regional Executive Director (East-II), Executive Director (Project Planning & Monitoring), NTPC and Chief Executive Officer of NTPC-SAIL Power Company Limited.



**Director  
(Human Resources)**

Shri Sharma, through his multi-disciplinary approach in Engineering, O&M Management and financial areas, has made turnaround of NSPCL Durgapur by ramping up PLF from 63% to 81% and of Farakka STPS from 69% to 81%. He played the pivotal role in resolving Resettlement and Rehabilitation issues in Koldam, getting Forests and Environment clearances for captive mines of NTPC, developing business process for Mine Development, Green Field Projects Construction, SAP implementation in NSPCL & introduction of on-line monitoring of projects.

As a Director (Operations), he has overall responsibility for the activities relating to operation of all NTPC stations including fuel management. He has been instrumental in bringing down Energy Cost of generation.

He is also a Chairman of NTPC-SAIL Power Company Ltd. (NSPCL), Aravali Power Company Pvt. Ltd. (APCPL), Kanti Bijlee Utpadan Nigam Ltd. (KBUNL) and Energy Efficiency Services Ltd. (EESL). He is on the board of NTPC Vidyut Vyapar Nigam Limited (NVVN), NTPC Tamil Nadu Energy Company Ltd. (NTECL), Patratu Vidyut Utpadan Nigam Ltd. (PVUNL), West Bengal Power Development Corporation Limited (WBPDC) and Permanent Invitee on the board of Northern Coalfields Limited (NCL). He is a Co-chairman of the committee on third party coal sampling constituted by Ministry of Power (MoP). He is also a Chairman of Task Force of the Indo-German Energy Forum (IGEF) for Enhancing Flexibility of Existing Steam Power Plants to adapt to fluctuating renewable energies.

He is an active member of professional bodies viz. Life time member of Indian Institute of Professional Engineers (IIPE), and AIMA, Member of Institution of Engineers (IoE), Member of India GHG Programme led by WRI, India, CII and TERI, Member of the Advisory Board on Study on Energy Cost, TERI, Member of Research Council of CSIR-CMERI and Vice President CIGRE India.

**Shri Saptarshi Roy, (DIN: 03584600), (aged 57 years)**, a firm believer in institutionalizing the best practices and implementation of innovative initiatives, has a notable distinction of having a career, which has an excellent blend of technical and people management. His career spanning over 36 years, encompasses the erection, commissioning & operation of power plants and human resource management. Shri Roy is a graduate in Electrical Engineering from Visvesvaraya National Institute of Technology (erstwhile Regional Engineering College), Nagpur, joined NTPC as Engineering Executive Trainee in 1980.

He has taken over the charge of Director (Human Resources), NTPC Limited with effect from forenoon of 1<sup>st</sup> November 2016.

A thorough professional, Shri Roy has been instrumental in introducing various pioneering HR initiatives in the areas of talent acquisition, employee welfare, industrial relations, wages and superannuation benefits. He made participative management a corner stone of NTPC's successful 'Industrial Relations Framework' and introduced a number of novel methods of employee engagement.

An outstanding contribution of Shri Roy in NTPC's march towards excellence is to lead from front in the takeover and turnaround of power stations, running at abysmally low performance level, in the states of Odisha and Uttar Pradesh from the erstwhile State Electricity Boards. Through his innovative HR initiatives and trust building, these power plants today are among the best in the country. He played a critical role in managing transition and people integration issues during the process.

Prior to assuming his current role, he was the Regional head of NTPC's Northern Region, Eastern Region-I, ED (Corporate Planning & Corporate Communications) and ED to CMD. He also led a team of World Energy Council, India (WEC - India) secretariat.

As Director (Human Resources), he is responsible for the activities relating to Human Resource Management of NTPC i.e. leadership identification and grooming, talent management, career development of employees, performance management system and other organizational development interventions. In addition, he also oversees the functioning of Security, Medical Services, Business Excellence, public relations, CSR, R&R, sustainability development and Power Management Institute (The learning and development center).

## 41<sup>st</sup> Annual Report 2016-17

### Directors' Profile







**Director  
(Commercial)**

**Shri Anand Kumar Gupta, (DIN: 07269906), (aged 57 years)**, an electrical engineering graduate from MNIT, Allahabad, joined NTPC in 1980 as Executive Trainee (5<sup>th</sup> Batch). He has an illustrious career, spanning over 37 years, in NTPC which entails all areas of power generation business viz. engineering & design of power projects, plant operations and Maintenance, marketing & business development and commercial & regulatory affairs.

As head of engineering division, Sh. Gupta was responsible for selection of technologies, investment decisions for new projects, complete engineering of power projects including quality assurance and operations support for complete portfolio of NTPC stations i.e. Thermal, Hydro and renewable projects. He was a member of standing committee on transmission planning and was instrumental in introduction of 765 kV transmission voltage in India and the very first 765 kV substation of the country.

Sh. Gupta headed the Operation and Maintenance team at Unchahar and was instrumental in implementing many innovative strategies of plant operations & maintenance philosophies such as Bi-annual overhaul, Activity based budgeting, overhauling preparedness index etc. As head of Business Development, he created international business for NTPC by successfully negotiating with Bangladesh & Sri Lanka governments to set up NTPC power projects in joint venture mode.

Sh. Gupta has represented NTPC in many international forums like CIGRE and IEA and was part of the Indian delegation to Paris for the COP21 accord. He has visited many international power plants, substation installations and equipment manufacturing plants across the globe and is well versed with international best practices. He has also participated in several managerial and leadership programmes from the best global institutions.

He joined NTPC board in February 2017 as Director (Commercial) and is responsible for customer relationship management, marketing of power, payment realization, regulatory affairs, developing new businesses, formation of JV's and subsidiaries and managing consultancy business of NTPC.



**Govt. Nominee  
Director**

**Dr. Pradeep Kumar, (DIN: 05125269), (aged 56 years)**, an Indian Administrative Service Officer of Kerala Cadre, is B. Tech in Electronics, MBA, Master Diploma in Public Administration and Governance and Ph.D. in the area of Integrated Freight Transport Planning. During his illustrious career of 30 years as IAS officer, he has held various administrative positions in the areas of Revenue, Finance, Transport, Shipping, Inland Water Transportation, Water Resources, Power, Food and Civil Supplies, Consumer Affairs, Environment and Forests.



**Govt. Nominee  
Director**

**Shri Aniruddha Kumar, (DIN: 07325440), (aged 56 years)**, is a 1987 batch, Indian Revenue Service Officer. He completed his graduation in Electrical Engineering with honors from Aligarh Muslim University in 1984 and Graduation in Law from Delhi University in 1995.

He began his career with NTPC where he worked at Singrauli Thermal Power Station from 1984 to 1987. Thereafter, he joined Indian Revenue Service in 1987 and during his illustrious career of more than 30 years he has served in various key departments like Tax Policy Wing of Deptt. of Revenue, Ministry of Finance, various positions in Income Tax Department, Ministry of Urban Development (2005 to 2009), Ministry of Science and Technology (2009 to 2010) and Principal Commissioner of Income Tax in Agra. Shri Aniruddha Kumar has travelled extensively all over the world as a member of Indian delegations in various conferences and meetings.

Before taking over the charge of Joint Secretary (Thermal), he was Joint Secretary (Hydro) in the Ministry of Power.





**Independent  
Director**

**Shri Rajesh Jain, (DIN: 00103150), (aged 50 years),** is an Electrical Engineer from IIT, Mumbai and MS (Electrical Engineering) from Columbia University, New York. He worked as Member of Technical Staff at NYNEX, USA for 2 years before returning to India to pursue his entrepreneurial dreams in 1992. He is a Founder-Managing Director of **Netcore Solutions**, India's leading provider of digital real-time communications via email and mobile, and multi-channel marketing automation solutions for enterprises. He is also a part-time member of the Indian government's **Unique Identification Authority of India (UIDAI)**.

One of his early ventures, India World Communications, launched in 1995 was acquired by Satyam Inforway in November 1999 for US\$115 million in one of Asia's largest internet deals.

Shri Rajesh Jain is a well-known figure in the technology industry and is an invited speaker at national and international forums. He has also been featured in cover stories in both TIME and Newsweek.



**Independent  
Director**

**Dr. Gauri Trivedi, (DIN: 06502788), (aged 57 years),** is M.A. (Political Science) from JNU, Delhi, M. Phil (Soviet Studies), JNU, Delhi, Doctorate in Philosophy from Institute of Social & Economic Change, Bangalore and Institute of Development Studies, Mysore and PGPPM from Indian Institute of Management (IIM), Bangalore. During her illustrious career, she had held a number of administrative posts in Karnataka including Assistant Commissioner, Joint Director (Commerce and Industry), Chief Executive Officer/Director (Rural Development and Panchayati Raj), Deputy Commissioner (Excise), Joint Registrar of Cooperative Societies. She had also been General Manager (Handloom & Handicrafts Export Corporation), Director of Tea Promotion (WANA), Managing Director (HESCOM), a power distribution company, Managing Director (Karnataka State Food & Civil Supplies Corporation), Secretary to Government, Revenue Department, Govt. of Karnataka and Secretary to the Governor of Karnataka.

In August 2007, Dr. Gauri Trivedi took Voluntary Retirement from the Government of India due to her personal reasons.

After VRS, she was Vice President RRL and Director SIRD, Gujarat. She had been guest faculty in a number of reputed institutes teaching governance, public policy, rural planning and management.

She is currently guest faculty at IIM, Sardar Patel Institute of Public Administration, CEPT, Ahmedabad and Consultant AILSG. She teaches government officers, Civil Servant aspirants, young students and NGOs public policy, rural planning and management, current affairs and governance.

She has done a project for World Bank on Street vendors and a project for the Government of MP on Women Beneficial Programs.



**Independent  
Director**

**Shri Seethapathy Chander, (DIN: 092336635), (aged 63 years),** is B. Tech. (Electrical) from IIT, Delhi and Specialist Diploma in Business Management (Human Resources). He started his career as Executive Trainee, NTPC in February 1977 (first batch best trainee), and worked in transmission systems. He was responsible for commissioning of NTPC's first 400kV installations and introduction of new High Voltage Direct Current transmission technology in India. Later he become the first Technical Assistant to the then CMD of NTPC. During this tenure, NTPC Consultancy Wing was established, transmission business of NTPC was transferred to newly incorporated Govt. Co. Powergrid Corporation of India Limited and Unchahar Thermal Power Plant was transferred from UPSEB to NTPC in a debt asset swap – a first for the sector.

He had served in Asian Development Bank from 8<sup>th</sup> July 1992 to 6<sup>th</sup> April 2015 and has been leading teams engaged in energy policy, planning, portfolio management, investments, ICT infrastructure development, ADB's long-term strategy, private sector operations and public-private partnerships. He has travelled extensively world over for his project works and has published 63 papers.

He is currently an Independent Director on the Boards of Tata Power Solar Company Limited and Tata Power Trading Company Limited, and an honorary Senior Advisor to the Secretary General, World Energy Council. He also consults on infrastructure projects and is a part time adjunct faculty at NTPC School of Business.

## 41<sup>st</sup> Annual Report 2016-17

### Directors' Profile



## SENIOR MANAGEMENT TEAM As on 01.08.2017

S. No.	Executive Directors S/Shri	Position Held
1	Y.V. Rao	ED (Consultancy)
2	R.K.Srivastava	ED (NETRA)
3	K.S.Garbyal	RED (East – I)
4	K.K. Singh	RED (Hydro)
5	G. Ravindra	ED (Fuel Management)
6	Sudhir Arya	ED (Finance)
7	D.K.Sood	ED (CSR)
8	S.K. Roy	ED (Operations Services)
9	S. Ghosh	RED (West – I)
10	R.S.Rathe	RED (North)
11	P.M. Prasad	ED (PB/CB/KD CMP)
12	D Chakrabarty	ED (Vigilance)
13	Prasant Kumar Mohapatra	ED (Ramagundam)
14	Ajit Kumar Bhatnagar	ED (PMI)
15	Rajesh Kumar	RED (East-II)
16	Alind Rastogi	ED & Chief Forest Officer
17	B. Srinivas	ED (Security)

S. No.	Executive Directors S/Shri	Position Held
18	Arvind Kumar Sinha	ED (Farakka)
19	Arun Kumar Sinha	ED (Engg.)
20	Pramod Kumar	ED (Darlipalli)
21	Sure Krishna Reddy	ED (Lara)
22	Harbans Singh	ED (PP & M)
23	Satinder Pal Singh	ED to CMD
24	Tilak Raj Datta	ED (CC&M)
25	Kaza Ram Chandra Murty	ED (VSTPS/SSTPS/ Rihand)
26	Dilip Kumar Dubey	ED (RSTPS)
27	Manoj Saxena	ED (Comml.)
28	Kalyan Prasad Gupta	ED (Law) & Company Secretary

### Posted in Subsidiary / Joint Venture Companies and others

S. No.	Executive Directors S/Shri	Position Held
1	Manash Sarkar	CEO – NSPCL
2	Murari Prasad Sinha	CEO – NPGCPL
3	Surendra Kumar Patnaik	CEO – Patratu



## DIRECTORS' REPORT

**Dear Members,**

Your Directors are pleased to present the 41<sup>st</sup> Annual Report on the business and operations of the Company along with audited financial statements for the year ended March 31, 2017.

Financial Year 2016-17 had been yet another year of achievements for your Company. With the addition of 3,845 MW capacity (including 325 MW through Subsidiary Companies) during the year, total installed capacity of your Company (including subsidiaries & JVs) as on 31.03.2017 was 50,498 MW.

With the commissioning of 660 MW of Solapur Thermal, 245 MW of Mandasaur Solar, 18 MW of Rojmal Wind and 250 MW of BRBCL (subsidiary of NTPC) after 31.03.2017, group capacity of your Company has become 51,671 as on 31.07.2017.

Major highlights for the year 2016-17 are:

- Power projects of 3,845 MW were commissioned.
- Declared 2,190 MW Power Projects on commercial generation including 510 MW of Solar Projects.
- PLF of 78.59% as against all India PLF of 59.88% with two stations of your Company recording more than 90% PLF. Three stations of your Company achieved top three position and 11 stations (including JV) are in top 25 stations of the country in terms of PLF.
- Excellent MOU rating by Government of India for the year 2015-16.
- Group Capital Expenditure (CAPEX) including CAPEX of JV/subsidiaries of NTPC for the year 2016-17 was ₹ 33,991 crore.
- 100% realization of current bills from customers.
- Revenue from operations was ₹ 78,273.44 crore and total revenue was ₹ 79,342.30 crore. Net Profit after Tax (PAT) was ₹ 9,385.26 crore.
- Dividend of ₹ 4.78 per share comprising interim dividend of ₹ 2.61 per equity share paid in February 2017 and recommended final dividend

of ₹ 2.17 per equity share for the year 2016-17, subject to approval of the shareholders.

- Cash contribution of ₹ 5,998.36 crore to Government of India's exchequer through dividend, dividend distribution tax and income tax in the financial year 2016-17.
- Market capitalization of ₹ 1,36,874.64 crore as on 31.03.2017.
- Planted approx. 1 crore trees during 2016-17 to mitigate the GHG emissions arising out of plant operations, thereby bringing total to about 3.2 crore planted trees till end of 31.03.2017.
- About 7.15 crore fly ash bricks produced by fly ash brick plants of your Company's stations, which are being utilised in plant and township construction works.
- Honoured with Business Standard 'Star PSU Award'.
- Bestowed with India Pride Award 2016-17 for best performance in the Power Sector.
- Adjudged 4<sup>th</sup> among the Asian electric utilities in 2016 rankings as per Forbes Global 2000.
- Awarded with Dun & Bradstreet Corporate Awards 2016 for best performing Company in India in Power Sector.
- Bagged Golden Peacock Award for Excellence in Training from Institute of Directors for the year 2016.
- NTPC has been given SCOPE Award for RTI Act 2005 Compliance at SCOPE Meritorious Awards.
- NTPC conferred Good Corporate Citizen Award instituted by PHD Chamber of Commerce, New Delhi.

You will appreciate the fact that the company recorded growth and excellent performance despite numerous challenges before the sector.

## 41<sup>st</sup> Annual Report 2016-17

Directors' Report





## 1. FINANCIAL RESULTS (STAND ALONE)

Particulars	2016-17		2015-16	
	₹ Crore	US \$ Mn*	₹ Crore	US \$ Mn*
<b>Revenue</b>				
Revenue from operations (including energy sales, consultancy, energy consumed internally)	78,273.44	11,908.33	70,843.81	10,778.00
Other income	1,068.86	162.61	1,165.35	177.29
<b>Total Revenue</b>	<b>79,342.30</b>	<b>12,070.94</b>	<b>72,009.16</b>	<b>10,955.29</b>
<b>Expenses</b>				
Fuel	47,572.19	7,237.52	43,798.59	6,663.41
Employee benefits expense	4,324.60	657.93	3,581.65	544.90
Finance costs	3,597.20	547.27	3,296.41	501.51
Depreciation, amortization and impairment expense	5,920.82	900.78	5,172.34	786.91
Other expenses	5,092.38	774.74	5,576.49	848.39
<b>Total expenses</b>	<b>66,507.19</b>	<b>10,118.24</b>	<b>61,425.48</b>	<b>9,345.12</b>
<b>Profit before exceptional items, tax and rate regulated activities</b>	<b>12,835.11</b>	<b>1,952.70</b>	<b>10,583.68</b>	<b>1,610.17</b>
Add: Movements in Regulatory deferral account balances	335.74	51.08	12.09	1.84
<b>Profit before exceptional items and tax</b>	<b>13,170.85</b>	<b>2,003.78</b>	<b>10,595.77</b>	<b>1,612.01</b>
Exceptional items – impairment loss on investment	782.95	119.12	-	-
<b>Profit before tax</b>	<b>12,387.90</b>	<b>1,884.66</b>	<b>10,595.77</b>	<b>1,612.01</b>
Tax expense	3,002.64	456.81	(173.83)	(26.45)
<b>Profit for the year</b>	<b>9,385.26</b>	<b>1,427.85</b>	<b>10,769.60</b>	<b>1,638.46</b>

Appropriations:	2016-17		2015-16	
	₹ Crore	US \$ Mn*	₹ Crore	US \$ Mn*
Transfer to bonds/ debentures redemption reserve	1,667.08	253.63	1,284.13	195.36
Transfer to general reserve	4,500.00	684.62	6,000.00	912.83
Dividend paid	3,595.03	546.94	2,762.24	420.24
Tax on dividend paid	727.79	110.72	562.32	85.55

\* 1US \$ = ₹65.73 as on March 31, 2017

## 2. DIVIDEND

### Interim and Final Dividend:

Your company paid interim dividend of ₹ 2.61 per equity share in February 2017 and the Board of your Company have recommended a final dividend of ₹ 2.17 per equity share for the year 2016-17. With this, the total dividend for the year is ₹ 4.78 per equity share of ₹ 10/- each. In the year 2015-16, the total dividend paid was ₹ 3.35 per equity share of ₹ 10/- each.

The dividend payout is 42% and the total dividend payout including dividend tax is 50.54% of profit after tax.

The final dividend shall be paid after your approval at the Annual General Meeting.

The dividend has been recommended in accordance with your Company's Dividend Distribution Policy which is available at the website link <http://ntpc.co.in/en/investors/policy>.

## 41<sup>st</sup> Annual Report 2016-17

Directors' Report



### 3. OPERATIONAL PERFORMANCE

During the year, the power stations of your Company generated 250.31 BUs (276.77 BUs including JVs & Subsidiaries) of electricity (including solar and hydro power) which was 20.20% (22.40% including generation by JVs and Subsidiaries) of the total power generated in India registering an increase of 3.44% (5.07% including JVs & Subsidiaries) over the previous years generation of 241.98 BUs. Generation contributed by Koldam hydro station and NTPC solar power stations were 3.23 BUs and 0.528 BUs respectively.

The total generation contributed by coal stations is 237.96 BUs during the year against generation of 230.64 BUs last year registering a growth of 3.18%. Generation from coal based units could have been still higher but due to less generation schedule, there was opportunity loss of 41.25 BUs. The coal based stations operated at average Plant Load Factor (PLF) of 78.59% (All India PLF 59.88%) and average Availability Factor of 88.81% on bus bar during the year.

For 2<sup>nd</sup> year in succession, 3 NTPC Stations were ranked as the Top 3 stations in the country and 11 NTPC Stations were in top 25 stations in the country in terms of PLF. 6 coal based stations out of 18 commercial Stations achieved more than 85% PLF.

The gas stations having a capacity of 4,017 MW achieved annual generation of 8.59 BUs at a PLF of 24.42% as against 8.87 BUs last year, mainly due to less generation schedule which accounted for an opportunity loss of 24.48 BUs.

### 4. COMMERCIAL PERFORMANCE

#### 4.1 Billing and Realisation:

Your Company has realized 100% of its current bills raised for energy supplied in 2016-17, thus achieving this feat for the 14<sup>th</sup> consecutive year.

Most of the customers were making their payments within 60 days of billing and had availed rebates as per Company's Rebate Scheme. Beneficiaries have established and are maintaining Letter of Credit (LCs) at 105% of the average monthly billing.

The Company has in place a robust payment security mechanism in the form of Letter of Credit (LCs) backed by the Tri-Partite Agreement (TPA). Apart from the LCs, payment of NTPC is secured by the TPAs signed amongst the State Governments, Govt. of India and Reserve Bank of India (RBI). As per the TPA, any default in payment by the Distribution Companies of a state can be recovered directly from the account of the respective State Governments with RBI.

The original TPAs signed during 2000-01 were valid upto 31.10.2016. As per the decision of the Union Cabinet and as agreed by the various States and RBI, these TPAs have been extended for a further period of 10 to 15 years. As of now 26 States/UTs have signed the TPA documents. The signing process is in progress in the balance states.

#### 4.2

#### Rebate Scheme for realization of dues:

In order to encourage early and full realization of dues, your Company has issued 'Rebate Scheme' for the year 2017-18. In the Scheme for 2017-18, 2% rebate shall be allowed for amounts credited to the account of Company for any advance payment and payments made till 8<sup>th</sup> day of the billing month. From 9<sup>th</sup> day of the billing month till 30<sup>th</sup> day of the month next to billing month, rebate on amounts credited to the account of the Company shall gradually reduce from 1.95% to 0% on 31<sup>st</sup> of the month next to the billing month. An additional rebate of 0.1% of the monthly billing would be allowed in all months where a customer maintains monthly LCs.

#### 4.3

#### Commercial Capacity:

The following units including that of subsidiary companies were declared commercial during the year 2016-17, adding 2,190 MW to commercial capacity of your Company:

Project/ Unit	Capacity (MW)	COD*
<b>NTPC Units- Coal Based (I)</b>		
Bongaigaon, Unit#1	250	01.04.2016
Mouda, Stage-II, Unit#1	660	01.02.2017
<b>Total (I)</b>	<b>910</b>	
<b>NTPC Units - Solar (II)</b>		
Ananthapur Solar	200	09.05.2016
Ananthapur Solar	50	10.08.2016
Bhadla Solar Project	260	25.03.2017
<b>Total (II)</b>	<b>510</b>	
<b>Subsidiaries - Coal Based (III)</b>		
Patratu Thermal Power Station, Unit#1(PVUNL)**	325	01.04.2016
Nabinagar Thermal Power Project, Unit#1 (BRBCL)	250	15.01.2017

## 41<sup>st</sup> Annual Report 2016-17

### Directors' Report



Project/ Unit	Capacity (MW)	COD*
Muzaffarpur Thermal Power Station, Stage-II, Unit#1 (KBUNL)	195	18.03.2017
<b>Total (III)</b>	<b>770</b>	
<b>Total Capacity declared commercial during 2016-17 (I)+(II)+(III)</b>	<b>2,190</b>	

\* COD- Commercial Operation Date

\*\*as per PTPS Transfer Scheme, 2015 dated 01.04.2016, Government of Jharkhand has transferred specified assets of Patratu Thermal Power Station to Patratu Vidyut Utpadan Nigam Limited (subsidiary of NTPC)

As on 31.03.2017, the Commercial Capacity of NTPC stood at 40,522 MW and NTPC Group's Commercial Capacity stood at 47,293 MW.

In 2017-18, 195 MW of Muzaffarpur Thermal Power Station (subsidiary of NTPC i.e. KBUNL) and 800 MW of Kudgi Super Thermal Project had been declared commercial making commercial capacity of NTPC Group as on 31.07.2017 as 48,288 MW:

Owned by NTPC	MW
Coal based projects	35,885
Gas based projects	4,017
Renewable Energy Projects	620
Hydro Projects	800
<b>Sub-total</b>	<b>41,322</b>
<b>Joint Ventures &amp; Subsidiaries</b>	
Coal based projects	4,999
Gas based projects	1,967
<b>Sub-total</b>	<b>6,966</b>
<b>Total</b>	<b>48,288</b>

#### 4.4 Tariff Related Matters:

In the year 2016-17, your Company had been able to reduce the Energy Charge Rate significantly through various measures such as reduced consumption of imported coal, rationalization of coal transportation across its various stations.

Hearings for determination of tariff for the 2014-19 period for various stations were completed and tariff orders were issued for most of the stations.

#### 4.5

##### Strengthening Customer Relationship:

Your Company's Core Values - ICOMIT contains 'Customer Focus' as one of the key elements. In line with this, your Company has taken up several initiatives targeted towards the external Customers. Customer Relationship Management (CRM) and Customer Satisfaction Index (CSI) are some of the most important parts of these initiatives.

As part of the CRM, your Company has been implementing several structured activities with the objective of sharing its experiences and best practices with the customers, capturing their feedbacks and expectations and addressing their issues. Some of these activities included providing various support services to the beneficiaries, which involves identifying potential areas of cooperation and sharing of each others' best practices. In the financial year 2016-17, a total of 61 such programmes have been conducted for the customers on the basis of requirement expressed by them.

Your Company offers training programs to the representatives of beneficiary companies at Power Management Institute (PMI), the apex training institute of Company on free of cost basis. In 2016-17, 134 participants from various customer organizations attended training in 71 programs.

Your Company has also put in place Customer Satisfaction Index (CSI) survey scheme, to gather customer's feedbacks through a survey and respond to their requirements. This CSI survey was conducted in 2016-17.

#### 4.6

##### UDAY Scheme:

As part of the UDAY Scheme, your Company has been entrusted with the responsibility to help and guide the state generating companies to improve their operational efficiency and reduce the cost of generation. With this objective, workshops were conducted by your Company with representatives of Generating Companies of various states. Multi-disciplinary teams from your Company have also visited power stations at 12 states and suggested measures to improve efficiency in these plants.

#### 4.7

##### Power Trading in Power Exchange:

In line with provisions of amended Tariff Policy, your Company has commenced trading of the Un-Requisitioned Surplus (URS) power in the Power Exchange through its trading arm NTPC Vidyut Vyapar Nigam Limited (wholly-owned subsidiary) from June 2016. As per the amended Tariff Policy,

gains from these transactions have to be shared in the ratio of 50:50 with the beneficiaries whose URS power is sold.

## 5. INSTALLED CAPACITY

During the year 2016-17, your Company added 3,845 MW to its installed capacity as per details given below:

Project/ Unit installed	Capacity (MW)
<b>NTPC owned</b>	
<b>Coal Based Power Projects</b>	
Kudgi, Unit#1 and 2	1,600
Bongaigaon, Unit#2	250
Mouda, Unit#4	660
Unchahar, Unit#6	500
<b>Total NTPC owned</b>	<b>3,010</b>
<b>Solar Based Power Projects</b>	
Bhadla	260
Ananthapur Solar	250
<b>Total NTPC Owned</b>	<b>510</b>
<b>Under Subsidiaries (Coal Based Power Projects)</b>	
Patratu (subsidiary of NTPC in JV with JBVNL)	325
<b>Total by Subsidiaries</b>	<b>325</b>
<b>Total Addition during FY 2016-17</b>	<b>3,845</b>

With above capacity addition during 2016-17, capacity added in 12<sup>th</sup> Plan Period was 13,395 MW.

The total installed capacity of NTPC Group as on 31.03.2017 has become 50,498 MW (46,653 MW as on 31.03.2016) as tabulated below:

Owned by NTPC	MW
Coal based projects	38,095
Gas based projects	4,017
Renewable Energy Projects	620
Hydro Projects	800
<b>Sub-total</b>	<b>43,532</b>
<b>Joint Ventures &amp; Subsidiaries</b>	
Coal based projects	4,999
Gas based projects	1,967
<b>Sub-total</b>	<b>6,966</b>
<b>Total</b>	<b>50,498</b>

With the commissioning of 660 MW of Solapur Thermal, 245 MW of Mandsaur Solar, 18 MW of

Rojmal Wind and 250 MW of BRBCL (subsidiary of your Company) after 31.03.2017, installed capacity of your Company has become 51,671 MW as on 31.07.2017.

## 6. CORPORATE PLAN 2032

Due to changes in the business environment, regulatory and environment norms and emergence of renewable energy combined with technological breakthroughs, your Company has reviewed and has prepared its Long Term Corporate Plan to set the goals & targets for the period up to 2032. Through this Corporate Plan, the Company has adopted the vision to be "the world's leading power company, energizing India's growth."

Commensurate with India's growth aspirations, your company has embarked upon an ambitious plan to attain a total installed capacity of 130 GW and annual generation of more than 600 BU by 2032. The capacity will have a diversified fuel mix comprising 65.4% coal, 4.6% gas, 1.5% nuclear and 28.5% Renewable Energy Sources (RES) including hydro. Therefore, by 2032, non-fossil fuel based generation capacity shall make up nearly 30% of NTPC's portfolio.

Besides pursuing its strategic targets, your company is also likely to replace its old & inefficient units with technologically advanced, efficient and environmentally compliant units by 2032, in a phased manner.

Your company has been allotted 10 coal blocks with a peak production capacity of more than 100 MTPA. With these coal blocks, the company envisages being one of the largest captive coal mining companies in the Country fulfilling about one third of its own coal requirement by 2030.

Your company would continue pursuing the power trading business in India as well as with the neighboring countries increasing its market share in the region through its wholly-owned subsidiary 'NTPC Vidyut Vyapar Nigam Ltd'.

Going forward, your company envisages enhancing its current presence in the ancillary and consultancy services. It is also planning to make a foray into E-mobility and battery storage, supported by research & development and collaboration with OEMs, research institutes etc.

## 7. CAPACITY ADDITION PROGRAMME

### 7.1 Projects under Implementation

In addition to furthering capacity addition through Coal based power projects, your Company has been pursuing enhancement of its



power generation portfolio through Hydro and Renewable Energy projects.

Your Company's various projects having aggregate capacity of 19,656 MW (including 4,090 MW being undertaken by Joint Venture and subsidiary companies) are under implementation at 22 locations across length and breadth of the country as on 31.07.2017. This includes 18,800 MW through Coal based projects, 45 MW through Renewable Energy projects including Small Hydro project of 8 MW and 811 MW through Hydro capacity. Apart from these projects, your company is also implementing 1,320 MW coal based power projects in joint venture with BPDB at Bangladesh. The details of such projects are as under:

Ongoing Projects as on 31.07.2017	
	Capacity (MW)
<b>I. NTPC owned:</b>	
<b>A. Coal Based Projects</b>	
1. Bongaigaon, Assam	250
2. Barh-I, Bihar	1,980
3. Lara-I, Chattisgarh	1,600
4. North Karanpura, Jharkhand	1,980
5. Kudgi-I, Karnataka	800
6. Gadarwara-I, Madhya Pradesh	1,600
7. Solapur, Maharashtra	660
8. Darlipalli-I, Odisha	1,600
9. Tanda-II, Uttar Pradesh	1,320
10. Khargone, Madhya Pradesh	1,320
11. Telangana Phase-I, Telangana	1,600
<b>Sub Total (A)</b>	<b>14,710</b>
<b>B. Hydro Electric Power Projects (HEPP)</b>	
12. Tapovan Vishnugad, Uttarakhand	520
13. Lata Tapovan, Uttarakhand@	171
14. Rammam Hydro, West Bengal	120
<b>Sub Total (B)</b>	<b>811</b>
<b>C. Renewable Projects (Solar/Small Hydro)</b>	
15. Singrauli Small Hydro	8
16. Mandsaur SPV, Madhya Pradesh	5
17. Rojmal Wind	32
<b>Sub Total (C)</b>	<b>45</b>
<b>Total I (A)+(B)+(C)</b>	<b>15,566</b>

Ongoing Projects as on 31.07.2017	
	Capacity (MW)
<b>II Projects under JVs &amp; Subsidiaries</b>	
<b>Coal Based Projects</b>	
18. Nabinagar-JV with Railways (BRBCL), Bihar	500
19. Nabinagar, JV with BSPGCL (NPGCL), Bihar	1,980
20. Meja, JV with UPRVUNL (MUNPL), Uttar Pradesh	1,320
21. Rourkela, JV with SAIL (NSPCL), Odisha	250
22. Durgapur, JV with SAIL (NSPCL), West Bengal	40
23. Khulna, JV with BPDB (BIFPCL), Bangladesh	1,320
<b>Total II</b>	<b>5,410</b>
<b>III Total On-Going Projects as on 31.07.2017 (I)+(II)</b>	<b>20,976</b>

@Work of Lata Tapovan HEPP stopped since 07.05.2014 as per orders of the Hon'ble Supreme Court.

## 7.2 New Projects

Your Company awarded 1<sup>st</sup> Wind power project at Rojmal (50 MW) during the Financial Year 2016-17. The tender for Flue Gas Desulphurisation (FGD) for Telangana Project is under bidding stage.

As on 14.07.2017, your Company has projects for 3,720 MW Thermal capacity (Patratu 2,400 MW & Talcher-III 1,320 MW) and 1,276.5 MW Renewable capacity (Pavagada, Karnataka 1,000 MW Solar PV; Andaman 25 MW Solar PV with Battery backup; Kudgi Roof Top Solar PV of 1.5 MW & 250 MW Wind Project) under bidding.

## 7.3 New Technology & Initiatives

Your company has laid major stress on efficient utilization of resources and use of technological advancements for improving energy efficiency.

With emphasis on efficiency of electricity generation, your Company has adopted ultra super critical technology by improving the steam parameters for North Karanpura (3X660 MW) to 260 kg/ cm<sup>2</sup>, 593°C/ 593°C. For Khargone (2X660 MW) and Telangana (2X800 MW) steam parameter are 270 kg/ cm<sup>2</sup>, 600°C/ 600°C. Plant efficiency of these units is expected to increase by around 8% over that of a conventional sub-critical 500 MW unit and 3% over conventional super critical units using similar coal.



For the first time in your Company, Air Cooled Condenser System has been adopted at North Karanpura STPP, which has led to a significant reduction in make-up water requirement for the project.

Your Company has gone ahead for utility slab grid interactive Battery Energy Storage System for solar plant output smoothening (intermittences due to closed effect) and energy time shift application at Port Blair, Andaman & Nicobar (A&N). This is your Company's contribution towards greening the Islands. Your Company is taking up solar projects of 25 MW capacity at Port Blair, A&N Islands. This is first large scale commercial project for critical application for sustainability of Solar project at A&N.

#### **Pilot project for Biomass co-firing**

Your company is planning to install biomass co-firing facility as a pilot project at its Dadri station to partially substitute the coal by carbon neutral crop residues obtained from agricultural fields in form of pellets/briquettes. This is intended to cut down carbon emissions and also to discourage crop residue burning by farmers after harvesting by adding economic value to the crop residue and providing extra income to farmers and employment in rural sector.

#### **Hybrid solar thermal plant**

Your Company has awarded a project for Solar Thermal Integration with the existing coal based unit at Dadri during the financial year 2016-17. The project is under construction and is expected to be commissioned this year. The expected peak electrical output contribution from the plant would be about 3.6 MW.

This shall result in coal savings of around 3,825 Tonnes/year and in CO<sub>2</sub> emissions reduction of around 4,060 Tonnes/year.

#### **Development of Advanced Ultra Super Critical technology**

Your Company has entered into an MOU with BHEL and Indira Gandhi Centre for Atomic Research (IGCAR) for indigenous development of advanced ultra super critical technology. This will have enhanced efficiency of around 46% and about 18% less CO<sub>2</sub> emission per unit of power generation as compared to 500 MW sub-critical thermal power units. The program is targeted to deliver a plant having 800 MW unit with steam parameters of 310 kg/sq cm, 710° C/720° C. Phase-I (R&D phase-I) of the project is already approved by Government of India.

#### **Environment Protection**

Your Company, as pioneer in Environment monitoring, has already installed Ambient Air Quality Monitoring Systems (AAQMS) employing NOx, SOx, CO, SPM & RSPM analysers in 20

operating stations in 2009-10 and data is being made available to CPCB. Similarly, Continuous Emission Monitoring System (CEMS) employing NOx, SOx, CO & CO<sub>2</sub> analysers at stack for flue gas have been installed recently in various operating stations. Your company has recently introduced analysers for Mercury monitoring for both AAQMS and CEMS.

Your Company is working to install additional air and water pollution control systems at various projects to comply with the applicable new environmental norms notified by MOEF&CC vide gazette notification dated 07.12.2015.

Your Company has already tendered (Under Lot-1A) on 30.06.2017 for installation of Flue Gas De-Sulphurisation System Package for 11 Projects of total 17,440 MW capacity in order to meet SO<sub>2</sub> emission limits as per New Environmental Norms.

Your Company has also tendered on 30.06.2017 for installation of Waste to Energy (WtE) System Package for 400 tpd capacity to be located at Badarpur, New Delhi.

#### **7.3.1 Energy Conservation, Technology Absorption and Foreign Exchange Earnings and Outgo**

Details of conservation of energy, technology absorption and Foreign Exchange Earnings and Outgo in accordance with section 134(3)(m) of the Companies Act, 2013 read with Companies (Accounts) Rules, 2014 forms part of this report as Annex-III.

#### **7.4 Project Management**

Your Company has established state-of-the-art IT enabled Project Monitoring Centre (PMC) for facilitating fast track project implementation. PMC has advanced features like Web-based Milestone Monitoring System (Webmiles), Project Review and Internal Monitoring System (PRIMS), etc. PMC facilitates monitoring of key project milestones and also acts as decision support system for the management.

PMC is an integrated enterprise-wide collaborative system to facilitate consolidation of project related issues and their resolution. Features like SMS based information delivery; real time video capture, storage and retrieval facility and video conference facility are extensively utilized for project tracking, issues resolutions and management interventions. PMC has helped in providing effective coordination between the agencies and has provided enhanced/ efficient monitoring of the projects leading to better and faster project implementation.

#### **7.5 Capacity addition through Subsidiaries and Joint Ventures (JVs)**

Besides adding capacities on its own, your Company develops power projects through its subsidiaries and joint ventures, both in India and abroad.

## **41<sup>st</sup> Annual Report 2016-17**

### **Directors' Report**



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

Name of Company	JV Partner(s)	Details
<b>KBUNL</b> (Kanti Bijlee Utpadan Nigam Ltd.)	Bihar State Power Generation Company Limited (erstwhile BSEB)	A subsidiary Company in which your company holds 65% shares in joint venture with BSPGCL (erstwhile BSEB), took over Muzaffarpur Thermal Power Station having 2 units of 110 MW each from BSEB. Both the units of Stage-I have been declared on commercial operation. Total generation in FY 2016-17 was 769.88 MU at 38.63 % PLF.  The Company has also taken up expansion of the project by 2X195 MW units. Unit#3 of Stage-II was declared commercial on 18.03.2017 and Unit#4 of Stage-II was declared commercial on 01.07.2017.
<b>BRBCL</b> (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. Unit#1 of 250 MW was declared commercial on 15.01.2017 and Unit#2 was commissioned on 03.04.2017. Construction activities in other units are in progress.

Name of Company	JV Partner(s)	Details
<b>NSPCL</b> (NTPC-SAIL Power Co. Ltd.) (now converted into a Public Limited Company from NTPC-SAIL Power Company Private Limited)	Steel Authority of India Ltd. (SAIL)	A 50:50 Joint Venture Company between your company and SAIL, owns and operates captive power plants for SAIL at Durgapur (120 MW), Rourkela (120 MW) & Bhilai (74 MW) and Bhilai PP-III (2X250 MW), which is supplying power to SAIL, Chhattisgarh, DNH and D&D. Its present installed capacity is 814 MW.  NSPCL generated 5,981.91 MU at 83.89% PLF in FY 2016-17 with PAF of 96.68%.  Trading of URS power started from 03.08.16 at IEX. Total 130.34 MU has been traded during the year.  NSPCL has paid final dividend of ₹ 10 Cr for FY 2015-16 and interim dividend of ₹ 60 Cr for FY 2016-17 to NTPC.  <b>Under Implementation-</b> New Coal based Capacity at Rourkela PP-II Expansion (1 x 250 MW) & Durgapur PP-III (2 x 20 MW) is under construction.  Solar Power Plants of 200 MW capacity at various plant locations of SAIL is also being pursued. Solar Power Plant of 50 MW capacity at Salem is being implemented in the first phase.

Name of Company	JV Partner(s)	Details
<b>NTECL</b> (NTPC Tamil Nadu Energy Co. Ltd.)	Tamilnadu Generation and Distribution Corporation Limited (TANGEDCO) (erstwhile TNEB)	A 50:50 JVC has commissioned 3x500 MW coal based power project at Vallur, Tamilnadu.  All the units have been declared on commercial operation. Total generation of NTECL during FY 2016-17 was 9,211 MUs at 70.13% PLF.  NTECL had made a profit of ₹ 197.94 crore for FY 2016-17.
<b>APCPL</b> (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. NTPC, IPGCL and HPGCL have contributed equity in the ratio of 50:25:25.  Total generation of APCPL during FY 2016-17 was 5,474 MU.  APCPL has paid interim dividend of ₹ 66.60 crore to NTPC for FY 2016-17.
<b>MUNPL</b> (Meja Urja Nigam Pvt. Ltd.)	Uttar Pradesh Rajya Vidyut Utpadan Nigam Ltd. (UPRVUNL)	A 50:50 JVC is implementing 1,320 MW (2X660 MW) coal based power project in the state of Uttar Pradesh. Construction activities are in progress.
<b>NPGCL</b> (Nabinagar Power Generating Company Pvt.Ltd.)	Bihar State Power Generation Company Limited (erstwhile BSEB)	A 50:50 JVC is setting up a 3x660 MW Coal based plant at Nabinagar. Construction activities are in progress.

Name of Company	JV Partner(s)	Details
<b>RGPPPL</b> (Ratnagiri Gas and Power Pvt. Ltd.)	GAIL, ICICI Bank, SBI, IDBI, Canara Bank and MSEB Holding Co. Ltd.	Your company has a stake of 25.51%.  Total 15 LNG Cargos were unloaded during FY 2016-17.  PPAs have been signed by RGPPPL with Indian Railways for supply of ~500 MW for 5 years w.e.f. 01.04.2017 and Gas Supply Agreements were signed with GAIL for supply of 1.75 MMSCMD of RLNG w.e.f. 01.04.2017 for 5 years.  For the year 2016-17, gross generation was 4,560 MUs.  Pursuant to approval by RGPPPL Board for demerger of power & LNG Blocks into separate Companies, a scheme of demerger of its LNG Block into Konkan LNG Private Limited, in the Delhi High Court on 29.07.2016 for its approval. Last hearing was held on 29.06.2017. Final order from NCLT (before commencement of IBC Code, 2016, High Court was empowered to hear demerger petitions) is yet to come.
<b>ASHVINI</b> (Anushakti Vidhyut Nigam Ltd.)	Nuclear Power Corporation of India Ltd. (NPCIL)	Your company is having a stake of 49%. The company was formed for setting up nuclear power project(s). Department of Atomic Energy has permitted joint venture of two CPSEs to set up Nuclear Power Project, due to change in definition of Government Company under Atomic Energy (Amendment) Act, 2015.  Currently, no activities are being taken up by the Company.

## 41<sup>st</sup> Annual Report 2016-17

### Directors' Report



Name of Company	JV Partner(s)	Details
PVUNL (Patratu Vidyut Utpadan Nigam Limited)	Jharkhand Bijli Vitran Nigam Limited (JBVNL)	<p>PVUNL has been incorporated on 15.10.2015 as a subsidiary of your company with 74% stake in the Company and 26% of stake held by JBVNL to acquire, establish, operate, maintain, revive, refurbish, renovate and modernize the performing existing units of 325 MW and tie-lines, sub-stations and main power transmission lines connected therewith and setting up of the new units.</p> <p>Government of Jharkhand had issued the Notification dated 01.04.2016 for transfer of assets of Patratu Thermal Power Station to Patratu Vidyut Utpadan Nigam Limited.</p> <p>Keeping in view the high cost of generation, age of the units and difficulty in complying with the new environmental norms, operations of all existing units has been stopped w.e.f. 24.01.2017. Steps are being taken for decommissioning of these units.</p> <p>For expansion units (Phase-I 3X800 MW), application for environment clearance was submitted to MOEF on 09.06.2017. Further, Deed of Adherence was signed with Banhardi Coal Mine and bridge linkage was applied to Ministry of Coal.</p>

Name of Company	JV Partner(s)	Details
Pan-Asian (Pan-Asian Renewables Private Limited)	Asian Development Bank and Kyuden International Cooperation	<p>Pan-Asian was incorporated to carry on the business of power generation through non-conventional/renewable energy sources.</p> <p>Pan-Asian and Promoters made reasonable endeavours to identify and induct 4<sup>th</sup> Investor. However, the Board of Pan-Asian in its meeting, noted that since incorporation several efforts were made, but due to reasons beyond the control of the Board of Pan-Asian, the New Investor could not be inducted and business operations of the Company could not be started. It was then decided to voluntary wind-up the Company.</p> <p>Hon'ble High Court of Delhi, based on satisfaction accorded by the Official Liquidator, through its Order pronounced that the Pan-Asian is hereby wound up and dissolved with effect from the date of filing of the petition.</p>

An MOU has been signed with NALCO on 16.12.2016 for revival of Gajmara Power Project and supply of power to NALCO for captive use. A joint technical task force has been constituted for finalization of detailed modalities.

## 7.6

### Hydro Power

Your Company now has its footprints in renewable energy by developing hydro projects as detailed below:

- A. Koldam HEPP (4x200 MW) is on the river Satluj at Barmana, District Bilaspur (Himachal Pradesh). All the four units of 200 MW each were declared commercially operational on 18.07.2015. Since then, the project is running successfully. The generation for the financial year 2016-17 had been 3,225 MU.



**B. Tapovan Vishnugad HEPP (4x130 MW)** is on River Dhauliganga, District Chamoli (Uttarakhand). Project is under construction with approximately 80% work completed.

**C. Lata Tapovan HEPP (3x57 MW)** is just upstream of Tapovan-Vishnugad HEPP, in District Chamoli (Uttarakhand). The work was stopped by Hon'ble Supreme Court through order dated 07.05.2014 for 24 Hydro Projects in the State of Uttarakhand including Lata-Tapovan. The MOEF&CC constituted an expert body, which submitted its report on 19.10.2015 and submitted the same in court on 05.11.2015, where Lata Tapovan had been recommended for implementation with compliance of certain additional conditions. Your Company submitted in Court on 19.11.2015 that the conditions recommended by expert body shall be strictly complied. On the hearing held on 26.04.2016, Additional Solicitor General of India represented MOEF & CC and informed the Court that Lata - Tapovan Project must be implemented. The matter is still pending in Hon'ble Supreme Court for want of affidavit from Ministry of Water Resources.

For National Board of Wild Life (NBWL) Clearance, for Tapovan- Vishnugad and Lata Tapovan HEPPs, the proposal regarding redefining of Eco Sensitive Zone (ESZ) was discussed in Uttarakhand State Cabinet Meeting. Formal proposal redefining the limits of ESZ of Nanda Devi National Park has been forwarded by Govt. of Uttarakhand to the standing committee of NBWL on 26.07.2016. Approval of GOI is awaited.

**D. Rammam-III HEPP (3x40MW)** is situated on river Rammam in Teesta Basin, Darjeeling (West Bengal). Construction work is in progress.

## 7.7 Capacity Addition through Renewable Energy Sources

Your Company is adding capacity through renewable sources of energy, to broad-base its generation mix to ensure long term competitiveness, mitigation of fuel risks and promotion of sustainable power development.

### 7.7.1 Under Green Energy Commitment:

Your Company has committed to develop 10 GW of Renewable Energy Projects under Green Energy Commitment to Govt. of India. Your Company has already commissioned 883 MW of RE projects as on 31<sup>st</sup> July 2017 and 37 MW is under execution. Further, NITs have been issued for 1,025 MW of Solar PV projects to be set up in the states of A&N and Karnataka and 250 MW Wind power project in the states of Gujarat, Karnataka, Andhra Pradesh & Madhya Pradesh.

### 7.7.2 National Solar Mission:

Your Company has been entrusted to develop 15 GW Solar PV under National Solar Mission (NSM) Phase-II in three tranches between 2014-15 to 2018-19, where the Company will be the facilitator/trader between Discoms and developers. Your Company will purchase power from the developers and sell it to the Discoms. Under Tranche-I of 3,000 MW of Solar PV capacity, PPA have been signed for 2,750 MW solar PV projects till 30<sup>th</sup> June 2017 and for balance 250 MW, Reverse Auction has been completed. Out of this 3,000 MW, 1,380 MW Solar PV capacity has been commissioned till 30<sup>th</sup> June 2017. The guidelines for the balance 12 GW is awaited from MNRE.

## 8. STRATEGIC DIVERSIFICATION - INCREASING SELF-RELIANCE

**8.1** In order to strengthen its competitive advantage in power generation business, your Company has diversified its portfolio to emerge as an integrated power major, with presence across entire power value chain through backward and forward integration into areas such as coal mining, power equipment manufacturing, power trading and distribution.

Your Company continuously explores business opportunities through market scanning and adopts new business plans accordingly.

**8.2** The details of subsidiary companies engaged in business other than in power generation are as under:

**8.2.1 NTPC Electric Supply Company Limited (NESCL)**, a wholly-owned subsidiary, transferred and vested all its operations, with effect from April 1, 2015, to your company.

NESCL was incorporated for the distribution business and later started deposit and consultancy works. The transfer and vesting of existing operations would enable a focused business approach in the area of distribution, the objective for which NESCL was incorporated. 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.

**8.2.2 NTPC Vidyut Vyapar Nigam Limited (NVVN)**, a wholly-owned subsidiary, is engaged in the business of Power trading. NVVN has a trading License under Category I (highest category).

In the Financial Year 2016-17, NVVN achieved highest ever power trading volume of 15,861 million units (MUs) apart from trading of Renewable Energy Certificates equivalent to 68 MUs.

NVVN has paid dividend of ₹ 30 Crore as final dividend for FY 2016-17.

## 41<sup>st</sup> Annual Report 2016-17



8.3 The details of other joint venture companies which are taking up activities in other business related areas are given below:

Name of Company	JV Partner	Activities Undertaken
<b>UPL</b> (Utility Powertech Ltd.)	Reliance Infrastructure Limited	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 ₹ 2.5 Cr. as final dividend to NTPC for FY 2015-16.
<b>NGPSL</b> (NTPC GE Power Services Private Limited, earlier NTPC Alstom Power Services Private Limited)	GE Power Systems GmbH	To provide R&M services for coal based power plants in India. To renovate, modernise, refurbish, rehabilitate, upgrade, reverse engineering and component damage assessment. Also for undertaking Residual life assessment, reengineering in India and on a project by project basis elsewhere in abroad, utilising state-of-the-art technology.  General Electric Company (GEC) on 2 <sup>nd</sup> November 2015, has acquired the thermal power, renewable power and grid business of ALSTOM, which also includes indirectly acquiring the 50% shareholding of Alstom in NTPC-Alstom Power Services Pvt. Limited (NASL). Accordingly, Supplementary Promoters' Agreement was signed between NTPC and GE Power Systems GmbH for inducting GE as a JV Partner in place of ALSTOM. Also, the name of the Company was changed to NTPC GE Power Services Private Limited.  R&M including RLA work orders are under execution.  NGPSL gave ₹ 0.60 Cr as final dividend to NTPC for FY 15-16. The dividend was received in FY 16-17.

Name of Company	JV Partner	Activities Undertaken
<b>EESL</b> (Energy Efficiency Services Ltd.)	PFC, PGCIL and REC	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, Perform Achieve Trade (PAT) scheme work and standard & leveling work of BEE, Consultancy work, implementing Bachat Lamp Yojana and Agricultural & Municipal Pump replacement for various State Govts.  EESL gave ₹ 3.39 Cr as final dividend for FY 15-16. The dividend was received in FY 16-17.
<b>NHPTL</b> (National High Power Test Laboratory Pvt. Ltd.)	NHPC, PGCIL, DVC and CPRI	To establish a research and test facility for the power sector such as an "Online High Power Test Laboratory" for short circuit testing facility and other facilities as may be required for the same in the country.  Online High Power Test Laboratory has been set up at Bina, M.P.  Company has declared Commercial operations of the laboratory w.e.f 01.07.17.

Name of Company	JV Partner	Activities Undertaken
<b>NPEX</b> (National Power Exchange Ltd.)	NHPC, PFC TCS, BSE, IFCI, Meenakshi, DPSC	<p>The Company was formed to facilitate, promote, assist, regulate and manage nationwide trading of all forms of electrical energy and also to settle trades in a transparent fair and open manner.</p> <p>The purpose for which NPEX was incorporated could not be achieved and in order to protect further deterioration in equity investment, it was felt that there was no alternative available but to put NPEX into voluntary winding up, realize assets thereof and distribute proceeds to the shareholders.</p> <p>Hon'ble High Court of Delhi based on satisfaction accorded by the Official Liquidator, pronounced its Order dated May 26, 2017, that NPEX is wound up and shall deemed to be dissolved with effect from the date of the filing of the present petition i.e. March 31, 2017.</p>
<b>NBPPL</b> (NTPC-BHEL Power Projects Pvt. Limited)	Bharat Heavy Electricals Limited	<p>The Company was incorporated for taking up activities of engineering, procurement and construction (EPC) of power plants and manufacturing of equipments.</p> <p>NTPC has accorded in-principle approval for withdrawal of NTPC from NBPPL on 28.04.2016.</p> <p>EPC contract awarded to NBPPL for Unchahar-Stage IV (500MW) was commissioned on 31.03.2017.</p> <p>STG Trial Run of Monarchak 1X100 MW Combined Cycle Power Plant was completed on 4<sup>th</sup> April, 2017 and CoD had been declared.</p>

Name of Company	JV Partner	Activities Undertaken
<b>BF-NTPC</b> (BF-NTPC Energy Systems Limited)	Bharat Forge Limited	<p>This Company was incorporated to manufacture castings, forgings, fittings and high pressure piping required for power projects and other industries.</p> <p>However, since the project could not take off, it has been decided to wind up BF-NTPC.</p> <p>The proposal is awaiting clearance from Ministry of Power.</p>
<b>TELK</b> (Transformers and Electricals Kerala Limited)	Acquisition of 44.6% stake in TELK from Government of Kerala on June 19, 2009	<p>The Company deals in manufacturing and repair of Power Transformers.</p> <p>The Company had a turnover of ₹ 167.47 crore in FY 2016-17.</p> <p>NTPC has accorded in-principle approval for withdrawal of NTPC from TELK on 28.04.2016</p>
<b>ICVL</b> (International Coal Ventures Private Limited)	CIL, SAIL, RINL, NMDC	<p>ICVL was formed for acquisition of stake in coal mines/ blocks/ companies overseas for securing coking and thermal coal supplies.</p> <p>In view of lack of suitable commercially viable opportunities for thermal coal, your Company has decided to exit from ICVL.</p> <p>As the Company was formed by a directive from the Government of India, approval of the Government is awaited for exit.</p>
<b>NTPC-SCCL</b> (NTPC-SCCL Global Ventures Private Limited)	The Singareni Collieries Company Limited	<p>NTPC-SCCL was formed for acquisition/ development of mines, beneficiation processing, O&amp;M of coal/lignite blocks and selling of coal/ lignite produced thereof.</p> <p>As the Company could not attain its objectives, it is under voluntary winding up.</p>

## 41<sup>st</sup> Annual Report 2016-17

### Directors' Report



Name of Company	JV Partner	Activities Undertaken
HURL (Hindustan Urvarak & Rasayan Limited)	Coal India Limited Indian Oil Corporation Limited Fertilizer Corporation of India Limited (FCIL) Hindustan Fertilizer Corporation Limited (HFCL)	HURL was incorporated on 15.06.2016 to establish and operate new fertilizer and chemicals complexes (urea- ammonia and associated chemical plants) at Gorakhpur & Sindri units of FCIL and Barauni unit of HFCL and to market its products, taking into consideration the assets of FCIL and HFCL at Gorakhpur, Sindri and Barauni. Pre project activities like topographic survey, geotechnical investigation and Water availability for Gorakhpur, Sindri and Barauni project are under progress. EIA Report was submitted for all the three projects. Tenders have been floated for EPC work of all 3 projects.

Your Company is looking forward to develop the charging infrastructure and run a few pilot projects to get a foothold in this area and also to accumulate data sufficient for assessing the viability of the future business. It is currently looking to set up electric vehicle charging infrastructure, reach an MOU with city administrations and seek Strategic collaborations with other stakeholders in energy sector.

## 9. GLOBALISATION INITIATIVES

**9.1 Trincomalee Power Company Limited (TPCL),** a 50:50 joint venture between your Company and Ceylon Electricity Board was formed to undertake the development, construction, establishment, operation and maintenance of a coal based electricity generating station of 2X250 MW capacity at Trincomalee at Sri Lanka. As per the decision of the Board of TPCL, operation of the Company have been limited till September 2017.

Govt. of Sri Lanka (GoSL) had issued letter of intent to Government of India for development of 500 MW LNG based JV power project.

**9.2 Bangladesh-India Friendship Power Company Private Limited,** a 50:50 joint venture Company between your Company and Bangladesh Power Development Board (BPDB) was formed for

developing a 2X660 MW Coal based power project (Maitree Super Thermal Power Plant) at Khulna Division, Rampal, Bangladesh. EPC contract of the project except township has been awarded to BHEL. Financial closure has been achieved on 09.04.2017.

## 10. CONSULTANCY SERVICES

Consultancy Wing offers services "From Concept to Commissioning and beyond...." such as in Engineering, Operation & Maintenance Management, Project Management, Contracts & Procurement Management, Quality Management, Training & Development, Development of coal mines, Solar power projects etc. These services have been provided in India and abroad viz. Gulf countries, Bangladesh, Nepal, Sri Lanka and Bhutan. It is providing Services for more than 21,000 MW capacity to external clients besides 10,090 MW of NTPC JVs.

On international front, Consultancy Wing is providing O&M management services at Siddhirganj Peaking Power Plant (2x120MW) in Bangladesh under a World Bank funded contract which has been progressing successfully for last 4 years. There has been an all round improvement in terms of plant parameters due to implementation of best practices and systems in power plant with involvement of NTPC experts.

On the domestic front, Consultancy Wing provided Owner's Engineers Services for 2x600MW plant and is providing Pre-award services for 1x800MW power plant of Singhereni Collieries Co. Ltd. It is also providing Owner's Engineers and Mine Development Services for Patratu Vidyut Utpadan Nigam Limited. Also executing assignments of various clients such as UPRVUNL, NMDC, DPCC, THDC, HPGCL, OCPL and NTPC JVs towards FR/DPR Preparation, Procurement & Inspections and other advisory services.

Project Monitoring Services are being provided for 2x660 MW Shree Singhaji TPP Khandwa, MPPGCL by deployment of executives at site resulting in works progressing ahead of schedule.

Consultancy Wing is providing Performance Improvement services to 4x250 MW units of Chhabra TPS, RVUNL and Technical support in Operation of 2x600 MW units at Shree Singaji TPS, Khandwa & HQ Jabalpur by deployment of executives at respective sites. Major O&M Technical Audit and Performance Guarantee test assignments of HPGCL, RVUNL, LPGCL, MAHAGENCO, PPCL, NEEPCO and DVC were taken up by Consultancy Wing.



#### Highlights of FY 16-17:

- Consultancy Wing received orders of ₹ 468.43 crore, which is highest since inception.
- Consultancy Wing bagged 85 nos. of orders, which is highest since inception.
- 1310 MW capacity declared commercial for clients
- Chhabra Power Station of RVUNL achieved turnaround performance and moved up by 64 positions to find a place at 24<sup>th</sup> in all India ranking.
- Boiler Hydro test of Unit # I (660MW) of Shree Singaji TPP was successfully completed 3 months ahead of schedule.
- More than 90% availability achieved at 2X600 MW Shree Singaji TPS, Khandwa MPPGCL after commissioning

Consultancy Wing is looking ahead for future business opportunities in areas like implementation of solar & renewable power projects, mine development & supporting other power utilities for meeting new environmental norms.

#### 11. FINANCING OF NEW PROJECTS

The capacity addition programs shall be financed with a debt to equity ratio of 70:30, in case of thermal and hydro projects and that of 80:20 in case of solar projects. Your directors believe that internal accruals of the Company would be sufficient to finance the equity component for the new projects. Given its low geared capital structure and strong credit ratings, your Company is well positioned to raise the required borrowings.

Your Company is exploring domestic as well as international borrowing options including overseas development assistance provided by bilateral agencies to mobilize the debt required for the planned capacity expansion program.

The details of funding are discussed in the Management and Discussion Analysis Report which forms part of this Report.

#### 12. FIXED DEPOSITS

Your Company has discontinued the acceptance of fresh deposits and renewals of deposits under Public Deposit Scheme with effect from 11.05.2013. As such, there were no deposits which were not in compliance with the requirements of Chapter-V of the Companies Act, 2013.

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

(a)	Accepted during the year	Nil
(b)	Remained unpaid or unclaimed as at the end of the 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.

#### 13. FUEL SECURITY

##### 13.1 During the year, the supply position of coal and gas is given as under:

##### 13.1.1 Coal Supplies

Your Company had entered into long term Fuel Supply Agreement with Coal India Limited (CIL) & The Singareni Collieries Company Limited (SCCL) for total Annual Contracted Quantity (ACQ) of 149.93 MMT & 11.2 MMT respectively and Bridge linkage of 4.65 MMT for Barh-II. The Company has short term MOU with SCCL for supply of 5.5 MMT of coal for Ramagundam, Simhadri, Mouda, Solapur and Kudgi stations for supplies till March 2017 which was further extended upto 30<sup>th</sup> June 2017. Further, your Company has signed MOU with SCCL for supply of 8.0 MMT during 2017-18 to the above referred stations with the provision for additional quantity of 2.0 MMT. Your Company & CIL jointly agreed for rationalization of Source/ ACQ of stations on 13.06.2016 by shifting of some coal from non-pitheads to pithead stations. Annual benefit on above rationalization is envisaged at around ₹ 862 Crore.

To leverage further potential of rationalization of coal linkages, your Company has signed a Supplementary Agreement with CIL and its subsidiaries for all owned/ JV/ Subsidiary stations on 12.04.2017 for implementation of Govt. policy on "Flexibility in utilization of domestic coal for reducing cost of power generation". Under the Supplementary Agreement, your Company can allocate coal to any station of its own/ JV/ Subsidiary for optimising the Energy Charges.

Your Company was also allocated Bridge Linkages by Special SLC(LT) in its meeting held on 18.03.2016 for NTPC stations viz. i) Barethi (4x660 MW), ii) Barh - II (2x660 MW), iii) Darlipalli - I (2x800 MW), iv) Tanda- II (2x660 MW), v) Lara-I (2x800 MW), vi) Kudgi-I (3x800 MW) & vii) Bilhaur (2x660 MW).

## 41<sup>st</sup> Annual Report 2016-17

### Directors' Report



MOUs for Barh, Lara and Darlipalli have already been signed.

### 13.1.2 Domestic Coal and Imported Coal

During 2016-17, your Company received 160.4 MMT of coal as against 161.8 MMT in 2015-16 marking a decrease of (-) 0.86%.

Total domestic coal supply during 2016-17 was 159.35 MMT as against 152.3 MMT during 2015-16. Out of 159.35 MMT of coal, 152.17 MMT was from Annual Contracted Quantity of coal. The total coal supply from CIL was 144.33 MMT and from SCCL was 15.02 MMT. 6.78 MMT of coal was procured through MOU during 2016-17.

During 2016-17, Company imported 1.09 MMT (including swap) of coal as against 9.7 MMT in 2015-16.

During the period under review, approx. 52.52% coal (domestic and international) was transported through merry-go-round of NTPC (MGR).

### 13.1.3 Sourcing of coal through E-auction

Your Company participated in special E-auction for Vindhyachal, Stage-V and Unchahar Stage-IV in the year 2016-17 and 284 rakes (Approx. 1.136 MMT) had been allotted.

Total coal received through E-auction was 0.29 MMT during 2016-17 as compared to 0.94 MMT during 2015-16.

### 13.1.4 Supply through Inland Waterways

During 2016-17, about 3.71 lac MT imported coal has been supplied through inland waterways mode to Farakka station under a Tripartite Agreement with IWA and service provider.

### 13.1.5 Commencement of third party Sampling, Central Institute of Mining and Fuel Research (CIMFR)

In line with the decision made in the meeting held under the Chairmanship of Hon'ble Minister of State (I/C) for Power, Coal & NRE on 28.10.2015 for sampling and analysis of coal at loading end, Power Utilities and Coal companies had appointed a single third party agency, CIMFR. CIMFR has started sampling at the loading points of all stations and JV's expect for NEC supplies to Farakka and Bongaigaon. CIMFR has also started sampling at unloading end of all stations except Badarpur, Tanda, Bongaigaon, and Vallur, NTECL (JV of NTPC), Kanti, BRBCL and Patratu (subsidiaries of NTPC).

This will help your Company in reducing the cost of generation as CIMFR can ensure that the grade billed by coal companies is actually supplied to stations of the Company.

## 13.2

### Gas supplies

During 2016-17, your Company received total 5.17 MMSCMD of domestic gas as against 5.20 MMSCMD received during 2015-16. RLNG off-take was Nil during 2016-17 due to non-availability of generation schedule from the beneficiary Discoms. Your Company has Administered Price Mechanism (APM) gas agreements up to the year 2021 and Panna Mukta Tapti (PMT) gas agreements up to the year 2019 with GAIL. The agreement for Non-APM gas with GAIL is valid till 30<sup>th</sup> September 2017, which is getting extended from time to time.

For additional gas requirement over and above the supplies under long-term domestic gas/RLNG agreements, your Company has been making arrangements for tie-up and supply of Spot RLNG from domestic suppliers on 'Reasonable Endeavour' basis based on requirement and availability from time to time. There has been no generation loss on account of lack of availability of gas/RLNG during the year.

## 13.3

### Development of Coal Mining projects

Your Company has been allocated eight coal blocks, namely, Pakri-Barwadih, Chatti-Bariatu & Chatti-Bariatu(South), Kerandari, Dulanga, Talaipalli, Banai, Bhalumuda and Mandakini-B by Government of India. In addition, Government of India has also allocated Kudanali-Luburi coal block jointly to NTPC and the State of J&K, with NTPC's share of coal reserves in this block being two-third. Process of formation of Joint Venture Company with the state of J&K for Kudanali-Luburi coal block is underway.

Banhardih coal block, allocated earlier to Jharkhand Urja Utpadan Nigam Ltd., has been assigned to Patratu Vidyut Utpadan Nigam Ltd., a subsidiary of your Company in joint venture with JBVNL.

From these 10 coal blocks, with a total estimated geological reserves of about 7.3 Billion Metric Tonnes, your Company expects to produce about 107 Million Metric Tonnes of coal per annum.

Coal production commenced from Pakri-Barwadih coal block in December 2016 and a total of 2.27 lakh tonne of coal was extracted and 28 rakes were dispatched to Barh in FY 2016-17. Further, 3.98 lakh tonne of coal was extracted and 44 rakes were dispatched to Barh in Q1 2017-18. In this coal block, on community development / CSR activities, your Company has incurred an expenditure of ₹ 3.96 Crore in this FY 2016-17 (Cumulative expenditure of ₹ 22.29 Crore) which has helped in improving the socio-economic conditions of the locals.

Your Company has progressed well in other coal blocks, too. Mine Developer-cum-Operator (MDO) for Dulanga coal block has been appointed on 09.02.2017 and the same is in advanced stage for Talaipalli and Chatti-Bariatu coal blocks. For Kerandari coal block, techno-commercial bids opened on 15.05.2017 and are under evaluation.

CIL NTPC Urja Private Limited was incorporated as 50:50 joint venture company between your Company and Coal India Limited mainly to undertake development of Brahmini and Chichro Patsimal coal mines in Jharkhand and subsequently their operation and maintenance. Ministry of Coal de-allocated these mines in June 2011. Further, Hon'ble Supreme Court in September 2014 had cancelled allocation of 204 coal blocks including these two blocks. So far, Brahmini and Chichro Patsimal coal blocks have not been considered for allocation/auction.

#### 13.4 Exploration Activities

In Cambay exploration block (CB-ONN-2009/5) held by your Company as Operator with 100% participating interest, Minimum Work Programme (MWP) has been completed. No oil or gas of commercial value was observed in any of the wells. The block was relinquished to Government of India. In the KG basin exploration block KG-OSN-2009/4 where ONGC is the Operator and your Company has 10% stake, the exploration activities are in progress. As the permitted area of the block for exploration was reduced because of non-grant of defence clearance, GOI reduced the minimum work programme to drilling of one well and conduct airborne Full Tensor Gravity Gradiometer (FTG) survey in conditionally partial cleared area. Drilling of one well was completed. FTG survey is under progress.

#### 14. BUSINESS EXCELLENCE: GLOBAL BENCHMARKING

To achieve higher levels of excellence, NTPC has developed and adopted its own "Business Excellence Model" on the lines of globally reputed Excellence Models such as Malcom Baldrige Model, USA and EFQM Model of Europe.

This model has been deployed at our Business Units (Stations) and assessment of generating stations is being carried out using this framework of excellence.

The assessment process is aimed at identifying the area for enhancing stakeholders' engagement, improving critical processes and developing leadership potential.

The outcome of this model is identification of organizational strength, opportunities for improvement, issues of concern and best practices.

In the financial year 2016-17, 21 generating stations were assessed by a team of certified and professional assessors. Business Excellence Awards

for Best Performance was given to Vindhyachal.

Contemporary quality initiative and techniques like Quality Circles, Professional Circles, 5S, integrated management system (IMS) etc. have been deployed across the organization for continuous improvement.

#### 15. RENOVATION & MODERNISATION

In the present scenario of severe resource constraint, Renovation and Modernization (R&M) of power plants is considered to be a cost-effective option which can complement new capacity addition as R&M schemes have a shorter gestation period with all clearances, land, water, fuel and beneficiaries available. To this end, R&M is being carried out for the purpose of life extension of units, performance improvements, availability and reliability improvement and improved environment compliance. It ensures safe, reliable and economic electricity production by replacement of worn-out, deteriorated or obsolete electrical, mechanical, instrumentation, controls and protection system by state-of-the-art equipment.

Keeping in view the ageing of the fleet over the years, investment approval accorded till date for R&M in 19 stations (Coal & Gas based) is ₹ 14,275.93 crore. As against this, cumulative expenditure till 31.03.2017 is ₹ 6,272.84 crore. Out of this, R&M capital expenditure in the financial year 2016-17 was ₹ 592.53 crore.

With a view to remove technological obsolescence, renovation of control & instrumentation (C&I) had been taken up in 9 stations at Singrauli - I (5X200 MW) & Singrauli - II (2X500 MW), Korba - I (3X200 MW) & Korba - II (3X500 MW), Ramagundam - I (3X200 MW) & Ramagundam - II (3X500 MW), Farakka-II (2X500 MW), Dadri Thermal - I (4X210 MW), Unchahar - I (2X210 MW), Talcher STPS-I (2X500 MW), Kahalgaon-I (4X210 MW) and Rihand - (2X500 MW) comprising a total of 35 units. During 2016-17, C&I R&M was completed in one 500 MW unit of Singrauli and one 210 MW unit of Kahalgaon. DDCMIS R&M was completed in 26 units. On completion of these schemes, C&I systems in these stations have now been brought nearly at par with the new builds.

Owing to very high operating temperatures, R&M of Gas Turbines including their Control & Instrumentation was recommended by OEM after around 15 years of life. This activity was completed in all 4 Gas Turbines (GT) each in Kawas and in Auraiya and all 3 GTs in Gandhar. To overcome obsolescence, R&M activity for C&I Systems of all modules of GT, ST & WHRB in Anta, Auraiya and for one module of Dadri gas has been completed.

As a responsible corporate citizen, it has always been your Company's endeavour to ensure low levels of pollution from its power stations. With a view to maintaining a clean atmosphere in and around the power plant by reduction of particulate

## 41<sup>st</sup> Annual Report 2016-17

### Directors' Report

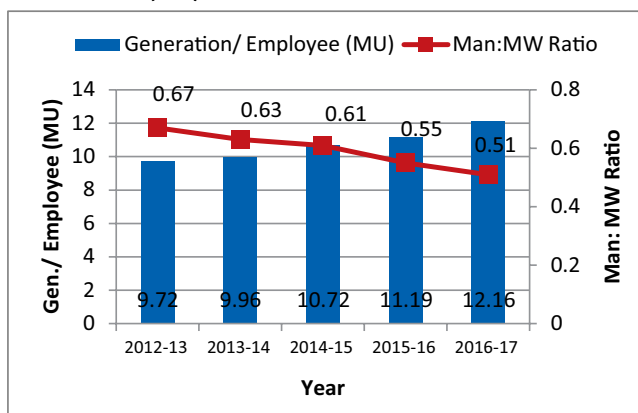




emission levels from generating stations, Renovation and Retrofitting of Electrostatic Precipitator (ESP) packages have been awarded and work is in progress in Singrauli-I & II (5X200 MW+2X500 MW), Farakka-I (3X200 MW), Unchahar-I (2X210 MW), Korba-I & II (3X200 MW+3X500 MW), Vindhyachal-I & II (6X210 MW+2X500 MW), Talcher STPS-I & II (2X500 MW+4X500 MW) and Talcher TPS-II (2X110 MW). During 2016-17, ESP R&M of two units of 210 MW and one unit of 500 MW of Korba, one unit each of Unchahar (210 MW), Vindhyachal (500 MW) and Rihand (500 MW) has been completed. Renovation of ESP has been ordered for Farakka (2x500 MW) while the same is in advanced stage of ordering in case of Unchahar (2x210 MW), Kahalgaon (4x210 MW) and Ramagundam (3x200 MW).

## 16. HUMAN RESOURCE MANAGEMENT

**16.1** Your Company takes pride in its highly motivated and competent Human Resource that has contributed its best to bring the Company to its present heights. The productivity of employees is demonstrated by increase in generation per employee and consistent reduction of Man-MW ratio year after year. The overall Man-MW ratio for the year 2016-17 excluding JV/subsidiary capacity is 0.51 and 0.47 including capacity of JVs/Subsidiaries. Generation per employee was 12.16 MUs during the year based on generation of your Company's stations.



The total employee strength of the Company (including JVs/ subsidiaries) stood at 22,124 as on 31.3.2017 against 23,133 as on 31.3.2016.

	FY 2016-17	FY 2015-16
<b>NTPC</b>		
Number of employees	20,593	21,633
<b>Subsidiaries &amp; Joint Ventures</b>		
Employees of NTPC in Subsidiaries & Joint Ventures	1,531	1,500
<b>Total employees</b>	<b>22,124</b>	<b>23,133</b>

The attrition rate of NTPC executives during the year was 0.93%.

## 16.2 Employee Relations

Employees are the driving force behind the sustained stellar performance of your Company over all these years of Company's ascendancy. As a commitment towards your Company's core values, employees' participation in Management was made effective based on mutual respect, trust and a feeling of being a progressive partner in growth and success. Communication meetings with unions and associations, workshop on production and productivity, etc. were conducted at projects, regions and corporate level during the year.

Both, employees and management complemented each other's efforts in furthering the interest of your Company as well as its stakeholders, signifying and highlighting overall harmony and cordial employee relations prevalent in your Company.

## 16.3 Safety and Security

Occupational health and safety at workplace is one of the prime concerns of Company Management and utmost importance is given to provide safe working environment and to inculcate safety awareness among the employees. Your Company has a 3-tier structure for Occupational Health and Safety management, namely at Stations/Projects, at Regional Head Quarters and at Corporate Centre. Safety issues are discussed in the highest forum of management like Risk Management Committee (RMC), Management Committee Meeting (MCM), ORTs, PRTs etc.

All of your Company's stations are certified with OHSAS-18001/IS-18001. Regular plant inspection and review with Head of Project/Station is being done. Internal safety audits by safety officers every year and external safety audits by reputed organizations as per statutory requirement are carried out for each Project/Station. Recommendations of auditors are regularly reviewed and complied with.

Height permit and height check list are implemented to ensure safety of workers while working at height. Adequate numbers of qualified safety officers are posted at all units as per statutory rules/provisions to look after safety of men & materials. For strict compliance & enforcement of safety norms and practices by the contractors, safety clauses are included in General Conditions of Contract/ Erection Conditions of Contract.

Detailed emergency plans have been developed and responsibilities are assigned to each concerned to handle the emergency situations. Mock drills are conducted regularly to check the healthiness of the system.

## 41<sup>st</sup> Annual Report 2016-17



Most of your Company's plants have been awarded with prestigious safety awards conferred by various Institutions/Body like Ministry of Labour & Employment-Govt. of India, National Safety Council, Institute of Directors, Institution of Engineers (India), in recognition of implementing innovative safety procedures and practices.

**Security:** Your Company recognizes and accepts its responsibility for establishing and maintaining a secured working environment for all its installations, employees and associates. This is being taken care of by deploying CISF at all units of your Company as per norms of Ministry of Home Affairs. Concrete steps are being taken for upgrading surveillance systems at all projects/ stations by installing state-of-the-art security systems.

#### 16.4 Training and Development

Your Company has consistently endeavored for attracting, on-boarding, grooming and motivating its talent recognising that nurturing the talent leads to competitive advantage.

In this process, your Company has always endeavored to be in the forefront of creation and dissemination of knowledge. Its sustained performance leadership has, to a large extent, been achieved on the platform of comprehensive learning and development programs for its employees. A large number of professionals from other organizations in the power sector have also benefitted immensely from the learning and development programs of your Company. It is not surprising to see many organisations in the country adopting practices and systems developed by your Company.

Our quest to keep the Company in tune with emerging business challenges is reflected in our new tagline for learning "Learning@speed of business".

The learning activities are being driven by a comprehensive infrastructure comprising NTPC Power Management Institute (PMI) at the corporate level, six Regional Learning Institutes (RLIs) located strategically in six large power stations of NTPC and Employee Development Centers (EDCs) located at almost all power projects and stations. At the foundation of the learning structure of your Company are the EDCs. The EDCs take care of training requirements of non-executives and junior level executives at the projects and stations. The training requirements of middle and senior level executives are catered to by RLIs at regional level and PMI, Noida at the corporate center as the apex learning center.

Together, the PMI, six RLIs and large number of EDCs form a strong learning grid covering the entire human resource of your Company. This learning grid enables us to provide learning solutions for

practically every aspect of the power value chain, covering the strategic, tactical and operational facets right down to the shop floor and learning domains ranging from mining to distribution.

#### Initiatives taken by PMI:

- (i) Learning and Development (L&D) interventions are designed and delivered after a multidimensional Training Need Analysis (TNA) focussed on enhancing technical, functional, strategic and leadership skills. Additionally, there are specific Planned Learning Interventions after about 7, 13 and 20 years of working in the Company which groom executives for the next level. In 2016-17, total 14 such planned interventions were carried for middle and senior level managers.
- (ii) During 2016-17, PMI conducted almost 387 training programmes covering nearly 8,096 professionals, logging a total of approximately 30,898 training mandays.
- (iii) PMI has also taken a learning initiative to develop a Project Analytics based learning module with an aim to bring paradigm change in Project Planning, Monitoring and Control. It will focus on creating single integrated dynamic Project Analytic System to facilitate active task management, measurement of progress, course correction and faster decision making for on-time project delivery.
- (iv) Conducted about 34 training programs through Web conferencing platform at workstations during 2016-17.
- (v) Launching the Harvard Management e-learning modules with 2000 licenses, which will be made available to middle level executives across the company.
- (vi) Has been pioneer to start an Employee Assistance Program, a confidential expert counselling service for employees and their family members.
- (vii) Started NTPC PMI eminent speaker series, in which eminent speakers from India and abroad are invited for delivering half day sessions on subjects like innovation, leadership, environment, water conservation, health and wellness, strategy etc. for top management and employees of your Company. This program is also telecasted live to all the projects, stations and offices of your Company across the country.
- (viii) PMI has conducted several customized training programs for the benefit of State utilities (like Himachal Pradesh, Punjab, Rajasthan and Uttar Pradesh), PSEs (like PFC, REC, THDC, EESL, DVC etc.), private sector companies (Adani, ICI, Siemens, GE India Power etc.)

## 41<sup>st</sup> Annual Report 2016-17

### Directors' Report



and overseas based clients (Abu Dhabi, UAE) at their locations as well as in PMI.

- (ix) With the objective of grooming professionals into world class leaders in power sector, your Company has also opened the "NTPC School of Business" for running the flagship program titled "Executive Post-Graduate Diploma in Management" (EPGDM). The program is duly approved by AICTE and is being administered at PMI premises. This 15 months' course has been launched with the objective of fulfilling the demand for professionals with focused domain expertise in their business and also having a general management perspective, in the rapidly growing power and energy sectors. This rigorous and challenging program also includes learning inputs from international faculty, 2 weeks' international exposure at Nanyang Technical University, Singapore, and exposure to industries within and outside India. 1<sup>st</sup> batch, which started on 03.08.2015, had completed the course successfully and 2<sup>nd</sup> batch is undergoing the course.
- (x) As the nodal agency, PMI is facilitating the adoption of existing Government ITIs and setting up of new ITIs in different parts of the country spanning 16 States. Till now, your Company has adopted 18 ITIs and set up 8 new ITIs near its power stations, thus associating with total 26 ITIs. Of the 18 Govt. ITIs adopted by your Company, 15 ITIs were adopted under the PPP scheme of GoI and 3 ITIs have been adopted under bilateral agreement with different State governments. These initiatives by your Company resulted in creation of total 1,831 new seats by starting of new trades/units in the adopted and new ITIs. Cumulatively, a total of 29,109 students benefitted from this initiative till 31.03.2017. For these ITI students, your Company organised 49,559 mandays of industrial training/plant visits.
- (xi) PMI has also been nominated to conduct focused capacity building programs for executives of several Discoms in the country under the IPDS (Integrated Power Development Scheme) of Govt of India. This capacity building mission aims at improving the skills and performance of Discoms, thus improving a vital link of the power value chain which also helps your Company immensely because these Discoms are our valued customers.

## 17. SUSTAINABLE DEVELOPMENT

Your Company has adopted the 'triple bottom-line' approach recognizing People, Planet and Profit as the primary pillars of corporate sustainability and believes that Development should not endanger the natural systems.

Your Company is preparing Sustainability Report based on the Global Reporting Initiative (GRI). Sustainability reporting has helped us in measuring and monitoring the Company's performance. It has served as an important management tool helping your Company to relook the systems, policies and procedures.

Your Company has developed a policy and in accordance with it, a Sustainable Development Plan was prepared for FY 2016-17. The main focus area of Sustainable Development Plan covers waste management, water management, bio-diversity, promotion of renewable energy. Major activities carried out under this plan include plantation of 10 million trees, installation of 310 kw rooftop of Solar PV at NTPC Dadri on public utilities buildings and on schools, Sewage treatment plant at Amarkantak, studies on impact assessment and carrying capacity river basin. Major activities under bio-diversity conservation taken up are conservation of Olive Ridley sea Turtles and study on bio-productivity of Gangetic Dolphin at NTPC Kahalgaon.

Business Responsibility Report is attached as Annex-X and forms part of the Annual Report

Revenue expenditure of ₹ 35.33 Crore was incurred on these SD projects during Financial Year 2016-17.

### 17.1 Inclusive Growth – Initiatives for Social Growth

#### 17.1.1 Corporate Social Responsibility:

Your Company commits itself to contribute to the society, discharging its corporate social responsibilities through initiatives that have positive impact on society at large, especially the community in the neighborhood of its operations by improving the quality of life of the people, promoting inclusive growth and environmental sustainability.

Focus areas of your Company's CSR & Sustainability activities are Health, Sanitation, Drinking Water, Education, Capacity Building, Women Empowerment, Social Infrastructure Development, support to Physically Challenged Person (PCPs), and activities contributing towards Environment Sustainability.

During the year, more than 400 villages and more than 360 schools have been benefitted by your Company's various CSR initiatives at different locations. These CSR initiatives have touched the lives of around 10 lakh people in one or the other way, residing at remote locations.

During 2016-17, special thrust had been given to the "Clean Water and Sanitation", with an objective to provide adequate and equitable drinking water & sanitation and hygiene to the people around your Company's operations and to end open defecation through construction of individual,



cluster and community toilets enabling a clean, safe, healthy, livable and sustainable city.

Your Company spent ₹ 277.81 crore during the financial year 2016-17 towards CSR initiatives, which surpassed the prescribed two percent amount of ₹ 227.85 crore, thus achieving a CSR spend of 2.43%.

#### 17.1.2 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 the Company under CSR are covered in the Annual Report on CSR annexed as Annex-VII to this Report.

#### 17.1.3 Rehabilitation & Resettlement (R&R)

Your Company is committed to help the populace displaced for execution of its projects and has been making efforts to improve the Socio-economic status of Project Affected Persons (PAPs). In line with its social objectives, the Company has focused on effective resettlement and rehabilitation (R&R) of PAPs and also on community development works in and around its projects.

R&R activities are initiated at projects by undertaking need based community development activities in the area of health, education, water, capacity building, infrastructure etc. by formulating 'Initial Community Development (ICD) Plan' in consultation with concerned Panchayat, district administration and opinion makers of the locality. Your Company addresses R&R issues in line with its R&R Policy with an objective that after a reasonable transition period, the conditions of affected families improve or at least they regain their previous standard of living, earning capacity and production levels. As per the Policy, a detailed Socio-economic Survey (SES)/other Survey is conducted by a professional agency to create a baseline data of PAPs. This follows formulation of a 'Rehabilitation and Resettlement (R&R) Plan' after adequate consultation with stakeholders in 'Village Development Advisory Committee (VDAC)', which comprises representatives of PAPs, Gram Panchayats, NTPC and District Administration. R&R Plan consists of measures for rehabilitation, resettlement and need based community development (CD) activities.

R&R Plan is implemented in a time bound manner so as to complete its implementation by the time the project is commissioned. On completion of the R&R Plan implementation, a Social Impact Evaluation (SIE) is conducted by a professional agency to know the efficacy of R&R Plan implementation for future learnings.

#### 17.1.4 R&R achievements during the year:

##### ➤ Initial Community Development (ICD) Plan:

Implementation of earlier approved ICD activities continued at Bilhaur and Pudimadaka projects.

##### ➤ Rehabilitation and Resettlement (R&R) Plan:

- R&R Plan for Khargone Railway siding covering R&R obligations and community development facilities in the area of Health, Education, Sanitation, Drinking water, Infrastructure facilities finalized in consultation with stakeholders and approved. CD Plan for Telangana Phase-I also approved. R&R Plan provisions for Tanda-II project enhanced to take care of additional requirements for resettlement of PAPs.

- R&R activities were implemented at the new Greenfield / Brownfield Thermal projects at Barh, Bongaigaon, Barethi, Darlipali, Gadarwara, Khargone, Muzaffarpur, Korba, Kudgi, Lara, Meja, Mouda, North-Karanpura, Solapur, Tanda-II, Unchahar-IV, Vallur, Vindhychal-IV, Vindhychal-V, Hydro projects at Koldam, Tapovan Vishnugad, Rammam-III and Coal Mining Projects at Pakri-Barwadih, Chhatti-Bariatu, Kerendari, Dulanga and Talaipali where R&R / CD Plans were finalized in consultation and participation of the stakeholders and approved earlier as well as at Telangana where the CD Plan has been approved during the year. Re-appropriation of under implementation R&R / CD Plans as required on a case to case basis for specific projects was also approved to take care of the local requirements during implementation.

##### ➤ Socio-economic Survey (SES)/ Need assessment Survey (NAS)/ Census and Survey (C&S):

SIA for Pudimadaka (earlier Lalam Koduru) project was conducted as per requirement.

##### ➤ Focus areas for Community Development activities:

- Swachh Bharat Abhiyan** - Various initiatives were taken to make project affected villages open defecation free by taking up activities related to construction of individual toilets and awareness programmes.
- Drinking water** - Planning and implementation for access to drinking water for 100% coverage of all project affected villages of your Company's projects under construction is being undertaken.

## 41<sup>st</sup> Annual Report 2016-17

### Directors' Report





- **Capacity building / Skill upgradation-** MOU / Tie up with National Skill Development Corporation (NSDC) is being implemented for imparting skill development to PAPs at various projects as part of 'National Skill Development Mission' of GOI.
- **Education** - Construction activities started for Medical College at Sundargarh (Odisha) and Engineering College at Shivpuri (MP). MOU signed with Govt. of Odisha for setting up a Polytechnic at Sundargarh (Odisha).
- **Health** - For the benefits of project affected persons and neighbouring population 'Mobile Health Clinic', Medical camps and dispensaries are being operated for comprehensive health coverage of PAPs at North Karanpura and mining projects at Jharkhand during the year.

## 17.2 Environment Management - Initiatives for preserving Environment

### Vision Statement on Environment Management:

"Going Higher on Generation, lowering GHG intensity"

Your Company has always envisaged environment protection and management practices as one of its prime responsibilities and focuses its efforts to minimize the impact of its operation on surrounding environment.

Your Company is undertaking massive renovation & modernization to upgrade air pollution equipments to reduce SPM emissions well below current statutory limits. Around 12%-15% of the project cost is spent on various environment protection equipments such as Electrostatic Precipitators (ESPs), Liquid Waste Treatment Plants (LWTP), Ash Water Recirculation System (AWRS), dry ash extraction system, dust extraction, suppression system, ambient air quality monitoring system, flue gas conditioning system and desulphurization system etc. It has adopted advanced and high efficiency technologies such as super critical boilers at new stations and upcoming green field projects.

Your Company is augmenting its capacity by installing solar power systems in a big way and small hydel power systems attached to its thermal power stations, wherever possible, so as to encourage garnering of renewable energy resources. These measures are aimed not only to achieve reduction in pollution and minimize use of precious natural resources but also to lead to reduction of CO<sub>2</sub> emissions per unit of generation thereby reducing global warming.

### 17.2.1 Control of Air Emissions:

High efficiency Electro-static Precipitators (ESPs) with efficiency of the order of 99.97% and above, with advanced control systems have been provided in all coal based stations to keep Particulate Matter (PM) below the prevailing permissible limits. All upcoming new plants are being provided with ESPs designed in such a manner that would cater to the notified future stringent norms. Performance enhancement of ESPs operating over the years is being carried out by augmentation of ESPs fields, retrofitting of advanced ESP controllers, new technology i.e. MEEP (Moving Electrode Electrostatic Precipitators) and adoption of sound O&M practices. Flue Gas Conditioning systems have also been provided at our old units which are helping in reduction of SPM emissions below statutory limits even during coal quality variations.

NO<sub>x</sub> control in coal fired plants is presently achieved by controlling its production by adopting best combustion practices (primarily through excess air and combustion temperatures controls). Over and above this, since tall stacks are provided in coal stations, gases emitted through stacks is widely dispersed and diluted. In gas based stations, NO<sub>x</sub> control systems (hybrid burners or wet DeNO<sub>x</sub>) have been provided for good combustion practices.

For compliance of new norms, pilot study based on SCR/SNCR technology are being undertaken at 11 locations to find out the optimal solution and suitable technology for DENO<sub>x</sub> system.

For control of SO<sub>x</sub>, first FGD has been commissioned at Vindhyachal. Erection of FGD at Bongaigaon is in advance stage.

Fugitive emission from ash pond is controlled by maintaining water cover, plantation on abandoned ash ponds, water spray and earth cover in inactive lagoons. Providing dust suppression and extraction system in CHP area has further added to reduction in fugitive dust in the vicinity of power stations.

### 17.2.2 Control of water pollution and promotion of water conservation:

Various water conservation measures have been taken up by your Company to reduce water consumption in power generation by using 3Rs (Reduce, Recycle & Reuse) as guiding principle.

Provision of advanced treatment facilities such as Liquid Waste Treatment Plants (LWTP), Coal Settlement Pit (CHP), Recycling Systems for Ash Pond Effluent called Ash Water Recirculation System (AWRS) and closed cycle condenser cooling water systems with higher Cycle of Concentration (COC), rain water harvesting wherever possible and reuse of treated sewage effluent for horticulture purposes are some of the measures implemented in most of the stations. For effective monitoring



of water use, flow meters with integrators are being installed at all designated stations. All these measures have resulted in reduction of effluent discharge from the power plants of your Company. In view of water stressed scenario and new norms for specific water consumption, water conservation and reduction in water consumption per unit of generation has assumed great importance. Your Company has taken a proactive approach of making all its power stations to operate with ZLD (Zero liquid discharge) progressively in phases. ZLD at six power plants have already been completed during this fiscal year. Further, ZLD is planned in all other stations during the current year.

#### 17.2.3 Automation of environment measurement system:

All the power stations are equipped with continuous ambient air quality monitoring stations (AAQMS) to capture the real time data of PM 10, PM 2.5, SO<sub>2</sub>, NO<sub>x</sub> and access thereof viz., and access has been provided to the Regulators such as Central Pollution Control Board and State Pollution Control Boards. Additional ozone analyzers for ambient air are also being provided phase-wise at the existing stations. Continuous Emission Monitoring Systems (CEMS) to monitor emissions of SO<sub>2</sub> and NO<sub>x</sub> in all units on real time basis 24x7 are installed and commissioned in addition to the opacity meter installed for monitoring of particulate emission. Installation of real time monitors for pollutants in effluents (EQMS) is also completed for all its existing projects. The real-time data is being transmitted to regulators through the cloud server and alerts are being generated in case of excursions beyond the limits. For all the upcoming projects, real time monitors for ambient air, effluents and emissions are included in the engineering packages during design stage itself.

#### 17.2.4 Revised Emission Norms:

MOEF&CC vide notification dated 7<sup>th</sup> December, 2015, has stipulated the emission limits for Oxides of Nitrogen (NO<sub>x</sub>), Sulphur dioxide (SO<sub>2</sub>) and Mercury also and made stringent norms for particulate matter. The emission limits of these elements depend on the unit size and age of the units and shall be complied by 7<sup>th</sup> December, 2017 for all operating units. Various issues due to implementation of revised norms, including relaxation in time period for implementation, has been taken up with MOEF&CC.

Your company is designing its new plants to comply with new norms. Parallely various actions are being taken up for operating units and under construction units for meeting revised norms. Your company has already undertaken extensive R&M of ESPs for complying emission limit of particulate matter. For meeting SO<sub>2</sub> emission limit, First set of tenders for installation of Flue Gas De-sulphurisation (FGD) has been issued for 54 units of around 33GW. Selective catalytic reduction (SCR) will be required

for controlling of NO<sub>x</sub> for which Pilot test studies are being undertaken at various NTPC operating stations to check the suitability of SCR technology for high ash and abrasive ash. Once the technology for DeNO<sub>x</sub> is established, which is expected by Mid-2018, tendering for implementation for NO<sub>x</sub> control with SCR will be taken up.

#### 17.2.5 Tree Plantation:

Your Company is undertaking tree plantation covering vast areas of land in and around its projects and till date about 32 million trees have been planted throughout the country including 10 million trees planted during 2016-17 under accelerated afforestation programme.

The afforestation has not only contributed to the 'aesthetics' but also helped in carbon sequestration by serving as a 'sink' for pollutants released from the stations and thereby protecting the quality of ecology and environment. Further, your Company has embarked upon long-term Memorandums with State authorities to assist National Commitment of INDC in COP 21, by planning to plant 10 million trees during 2016-2026 @ 1 million trees per year across the country.

#### 17.2.6 ISO 14001 & OHSAS 18001 Certification:

All stations of your Company have been certified with ISO 14001 and OHSAS 18001 by reputed National and International certifying agencies as a result of sound environment management systems and practices.

#### 17.3 Quality Assurance and Inspection (QA&I)

Your Company continues to place great emphasis on quality, with the view to secure long term reliability and availability of its productive assets and the investments. This is ensured by committing adequate number of qualified and trained human resources for quality related activities, maintaining field laboratories at the construction sites and pursuing time tested systems & processes, resulting in world class standards of performance of the plants.

In your Company, quality needs are identified & planned, keeping in mind the interests of all the stake holders, by interacting with major Power Equipment manufacturers of the world, thereby embracing the latest technologies available. The quality requirements associated with such technologies are rigorously pursued during manufacturing, erection & commissioning of various products/ systems/ services. The dynamic feedback system ensures that the gaps, if any, are filled through resetting the methods and standards resulting in continuous improvement.

Your Company's robust performance on all parameters, is a testimony to the soundness of the quality system deployed.

Your Company is represented on various technical committee of ISO and IEC and is actively

## 41<sup>st</sup> Annual Report 2016-17

### Directors' Report



contributing in formulation and updating of power sector technical and quality standards/ guidelines, to serve the national as well as international community at large.

#### 17.4 Clean Development Mechanism (CDM)

Your Company is addressing climate change issues proactively.

Your Company has taken several initiatives in CDM projects in Power Sector. It has gone ahead with nine projects in CDM foray. 8 MW Small Hydro Power Project at Singrauli, three 5 MW solar PV projects at Dadri, Port Blair (Andaman & Nicobar) & Faridabad, 50 MW Solar PV project at Rajgarh (MP) & 10 MW Solar PV Project at Unchahar had already been registered with UNFCCC CDM Executive Board with estimated annual Certified Emission Reductions (CERs) potential of approx. 1,57,000. Another three Solar PV projects i.e. 15 MW Singrauli (UP), 10 MW Talcher (Odisha) & 10 MW Ramagundam (Telangana) are in advanced stage of registration.

#### 17.5 Ash Utilisation

During the year 2016-17, 50.58% viz. 295.69 lakh tonnes (52.38% viz 335.1 lac tonnes including JV & Subsidiaries) of ash had been utilized for various productive purposes.

Important areas of ash utilization are – cement & asbestos industry, ready mix concrete plants (RMC), road embankment, brick making, mine filling, ash dyke raising & land development.

Pond ash from all stations of your Company is being issued free of cost to all users. Fly ash is also being issued free of cost to fly ash/ clay-fly ash bricks, blocks and tiles manufacturers on priority basis over the other users from all coal based thermal power stations. The funds collected from sale of ash is being maintained in the separate account and this fund is being utilized for development of infrastructure facilities, promotion and facilitation activities to enhance ash utilization.

Your Company has an Ash Utilization Policy, which is a vision document dealing with the ash utilization issue in an integral way from generation to end product. This policy aims at maximizing utilization of ash for productive usage along with fulfilling social and environmental obligations as a green initiative in protecting the nature and giving a better environment to future generations.

The quantity of ash produced, ash utilized and percentage of such utilization during 2016-17 from your Company's Stations is at Annex VIII.

#### 17.6 CenPEEP – towards enhancing efficiency and protecting Environment

Your Company initiated a unique voluntary program of GHG emission reduction by establishing 'Center for Power Efficiency and Environmental Protection

(CenPEEP)' and under this program, it is estimated that cumulative CO<sub>2</sub> avoided is 43.7 million tonnes since 1996, by sustained efficiency improvements.

CenPEEP is working for efficiency and reliability improvement in stations through strategic initiatives, development and implementation of systems and introduction of new techniques & practices. Critical efficiency parameter, draft power consumption, efficiency improvement through overhauling are monitored. PI based real time programs and dashboards are in use for real time tracking of plant parameters. These programs also assist operating engineers in tracking the gaps in heat rate and auxiliary power consumption and trending the degradation of equipment performance.

CenPEEP is also working towards reduction in specific water consumption and auxiliary power consumption in coal and gas stations. A dedicated group CEETEM – Centre for Energy Efficient Technology & Energy Management, conducts regular Energy audits to identify potential improvement areas and improvement actions.

CenPEEP is actively involved in training and development of power professionals for the Company and other utilities in the power sector in the areas of Boiler & Auxiliaries, Turbine & Auxiliaries, Cooling Towers, RCM and PdM technologies etc.

CenPEEP coordinated implementation of Perform, Achieve & Trade (PAT) scheme under Prime Minister's National Mission on Enhanced Energy Efficiency (NMEEE) in your Company coal & gas plants. As per notification, Company's coal and gas stations exceeded the Net Heat Rate improvement targets and earned net 170653 ESCerts (Energy saving certificates) in PAT-1 cycle. CenPEEP is taking up benchmarking study for your Company coal station by EPRI. Performance & Guarantee tests are being coordinated by CenPEEP which includes approval of procedure, conducting test & its evaluation.

#### 18. NETRA

Your Company, as the leading power utility of the country, has been assigning a minimum of 1% of its PAT for R&D activities.

Your Company has focused its research efforts to address the major concerns of the sector as well as the future technology requirements of the sector. In this effort, your Company has established NTPC Energy Technology Research Alliance (NETRA) as state-of-the-art centre for research, technology development and scientific services in the domain of electric power to enable seamless work flow right from concept to commissioning. The focus areas of NETRA are - Efficiency Improvement & Cost Reduction; New & Renewable Energy; Climate Change & Environmental Protection which includes Water Conservation, Ash Utilization & Waste Management. NETRA also provides



Advanced Scientific Services to its stations and other utilities in the area of oil/water chemistry, environment, electrical, Rotor dynamics etc. for efficient performances.

Research Advisory Council (RAC) of NETRA comprising eminent scientists and experts from India and abroad is in place to steer research direction.

Scientific Advisory Council (SAC) provides directions for undertaking specific applied research projects aimed to develop techniques in power plant for efficient, reliable and environment friendly operation with emphasis on reducing cost of generation.

Initiatives are taken to develop technologies for reducing forced outages, installing intelligent online monitoring of critical components, understanding the likely damages due to corrosion and providing appropriate solutions etc. Effort is being made for reducing cost of generation by either increasing the overhaul cycle or reducing overhaul duration through correct and proper health assessment of critical components, developing diagnostic tools and ensuring environmental & safety compliances. The prime thrust is towards clean and economic power generation. Patents have been filed in the areas of climate change, waste management etc.

NETRA has collaborations with National Institutes like IIT's, IISc-Bangalore, C-DAC, NML, CSIR labs, IOCL R&D, CPRI, CINFR, CBRI Roorkee and Geological Survey of India, etc. to promote research in the field of CFD, Flow batteries, Renewable, environment, water chemistry, ash utilization, process development, etc.

NETRA is setting up Solar Thermal & PV Labs under the aegis of Indo German R&D co-operation. Projects on improvement in the ESP performance through CFD modeling has been undertaken with Excellence Enhance Centre (EEC), VGB Germany. NETRA is also a member of EPRI USA.

NETRA laboratories are ISO 17025 accredited and provide high end scientific services to all the stations of your Company as well as many other utilities. NETRA NDT laboratory is also recognized as Remnant Life Assessment Organization under the Boiler Board Regulations, 1950.

Phase-II NETRA infrastructure is under construction with approx. 21,000 sq m floor area and is expected to be completed by 2018. Phase-II will have 30 laboratories, workshop, pilot plant bay and an auditorium with seating capacity of 400 persons.

The details of activities undertaken by NETRA are given in Annex-III.

## 19.

### IMPLEMENTATION OF OFFICIAL LANGUAGE

Several initiatives were taken for the progressive use of Hindi in 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 our projects and regional headquarters was inspected and need based suggestions were given to the respective Heads of offices in this regard.

Quarterly meeting of Official Language Implementation Committee were held under the chairmanship of CMD & Director (HR), in which extensive discussions took place on the use of Hindi and the ways and means to bring about further improvements.

Hindi Divas was celebrated on 14<sup>th</sup> September 2016 and Hindi Fortnight was organised from 01-15 September, 2016 at Corporate Centre as well as regional headquarters and projects to create awareness among the employees, associates and their family members. Vidyut Swar, our biannual Hindi magazine was published to promote creative writing in Hindi. Annual conference of Hindi Officers organised to review the progress of Rajbhasha in your Company.

Employees were motivated to use Hindi in official work by organising Hindi workshop, Unicode Hindi Computer Training and Hindi incentive schemes. Hindi webpage was updated with important information of Rajbhasha for employees.

The second sub-committee of Parliament on official Language had inspected our units and Headquarters; reviewed the progress of Rajbhasha implementation and appreciated our efforts.

Your Company's website also has a facility of operating in bilingual form, in Hindi as well as in English.

## 20.

### VIGILANCE

#### 20.1

#### Vigilance Mechanism

Your Company ensures transparency, objectivity and quality of decision making in its operations, and to monitor the same, the Company has a Vigilance Department headed by Chief Vigilance Officer, a nominee of Central Vigilance Commission. Vigilance set up comprises Vigilance Executives in Corporate Centre and Projects. Corporate Vigilance consists of four cells namely Investigation & Processing Cell, Departmental Proceedings Cell, Technical Examination Cell and MIS Cell deal with various facets of vigilance mechanism. For speedier disposal of vigilance cases, works have been assigned to Vigilance Executive at each of the regions of the Company.

344 surprise checks were made during the period.

## 41<sup>st</sup> Annual Report 2016-17

### Directors' Report





## 20.2 Implementation of Integrity Pact

Your Company is committed to have total transparency to its business processes and as a step in this direction; it signed a Memorandum of Understanding with Transparency International India in December, 2008. The Integrity Pact is being implemented for all contracts having value exceeding ₹10 crore. Presently, your Company is having one Independent External Monitor to oversee the implementation of Integrity Pact Programme.

## 20.3 Implementation of various policies/ circulars

Fraud Prevention Policy and Whistle Blower Policy have been implemented in your Company to build and strengthen a culture of transparency. Your Company has also laid down a comprehensive policy for withholding and banning of business dealings with agencies, wherever the situation so demands. During 2016-17, 117 complaints were handled, out of which 71 complaints were carried to a logical conclusion and the remaining 46 complaints are under various stages of investigation. Appropriate disciplinary action has also been initiated wherever necessary.

## 20.4 Vigilance Awareness Week and Workshops

During 2016-17, 11 preventive vigilance workshops were conducted at various projects/ places in which 477 employees participated. Vigilance Awareness Week was observed from October 31, 2016 to November 5, 2016 in all the projects and stations/ establishments of your Company.

The focus of Vigilance Awareness Week was "Public Participation in Promoting Integrity and eradicating Corruption". 72,380 pamphlets were distributed containing Citizens Pledge in bilingual at all locations of Projects and Regional Headquarters all over the country. 45 links were provided for e-pledges to be placed on intranets of all projects/Subsidiaries and Joint Ventures. 32 workshop/sensitization programmes were conducted at various locations of Projects and Regional Headquarters. A total no. of 165 competitions (debates, quiz etc.) held for employees and families at various locations of Projects and Regional Headquarters all over the country were conducted.

Outreach activities were conducted in 48 Colleges/Universities in 17 States in which 3,297 no. of students participated. Similarly, outreach activities were conducted in 127 schools in 17 states in which 11,922 students participated. 19 Customer Grievance Redressal Camps were organized at Projects in which vendors concerns and suggestions were discussed and noted. Use of Social Media, Facebook, Twitter & LinkedIn were made for the purpose.

## 21. REDRESSAL OF PUBLIC GRIEVANCES

Your Company is committed for resolution of public grievance in efficient and time bound manner. ED (Human Resources) has been designated as Director (Grievance) to facilitate earliest resolution of public grievances received from President Secretariat, Prime Minister's Office, Ministry of Power etc.

In order to facilitate resolution of grievances in transparent and time bound manner, Department of Administrative Reforms & Public Grievances, Department of Personnel & Training, Government of India has initiated web-based monitoring system at [www.pgportal.gov.in](http://www.pgportal.gov.in).

As per directions of GOI, public grievances are to be resolved within two months time. If it is not possible to resolve the same within two months period, an interim reply is to be given. Your Company is making all efforts to resolve grievances in above time frame.

## 22. RIGHT TO INFORMATION

Your Company has implemented Right to Information Act, 2005 in order to provide information to citizens and to maintain accountability and transparency. The Company has put RTI manual on its website for access to all citizens of India and has designated a Central Public Information Officer (CPIO), an Appellate Authority and APIOs at all sites and offices of the Company.

During 2016-17, 1,580 applications were received under the RTI Act, 2005 out of which 1,496 applications were replied to, till 31.03.2017.

## 23. USING INFORMATION AND COMMUNICATION TECHNOLOGY FOR PRODUCTIVITY ENHANCEMENT

Your Company is leveraging Information Technology in its goal of sustainable growth in business. Since 2008, your Company has implemented Enterprise Resource Planning (ERP) application to integrate all its business functions to improve information availability, transparency and decision making. PI data system has been developed to capture, display and analyze the plant performance parameters on real time basis. Non-ERP applications areas are Engineering Drawings approval, Quality Control Management, Hospital Management, Transit Camp Management, RTI, Security Control etc.

The Stations projects and Offices across India, are connected to Corporate Office and main Data-centre (DC) through 2x12 mbps MPLS links to facilitate seamless communication. The DC and DR (Disaster Recovery) site is connected with 156 mbps MPLS links for data backup. The progress of ongoing projects and issues of the running power stations are discussed regularly over high definition Video Conferencing system at Project Monitoring Centre of Corporate Office. Dashboards for top



management (REDs, Heads of Projects) were developed and deployment of the same is in progress. Some of the highlights of the progress in IT/ERP area during the year 2016-17 are as follows:

**ERP Hardware Refresh** - The Hardware refresh of both ERP Data centre and Disaster Recovery Centre was carried out. Your Company also built and commissioned its own Disaster Recovery Centre. The Company was awarded with Data Centre Transformation award at Indian Express IT meet. The availability of ERP and DR set up was more than 99.9% during the year.

**ERP** - The Employee Self Service Portal was launched on Internet. A number of new processes such as commercial billing as per 2014-19 tariff, Coal mining, FGD, third party coal sampling, Self-Booking Travel interface with Balmer Lawrie, PMS for all etc. were developed in ERP.

**Paperless Office** - In an effort towards 'Go Green' initiative, a number of processes like e-MB, Telephone claim, Travel Claim, Probation clearance etc. were made paperless. Tender has been initiated for Enterprise Content Management to go for 100% digitization across the organization. Board Agenda is being e-mailed to the Board Members in encrypted form through an in-house software.

**Security** - No major security breach was observed during the year 2016-17. A 24x7 Security Operation Centre(SOC) is in operation where round the clock monitoring of all external and internal data traffic is being analyzed with latest tools monitored through SOC and latest threat management tools are being applied to prevent any cyberattack or data theft. Timely communication is being sent to all users based on threat perception. The IT security Audit for plants have been completed.

**Mobile Apps** - Emphasis is being given for digital communication in place of paper communication. A number of mobile apps have been developed for ease in communication.

**Vendor Bill Tracking Portal** - Online Vendor Bill Tracking Portal was developed and deployed for bill submission and bill tracking by the vendors. Other Vendor Portals are also in operation to facilitate for registration and bidding.

## 24. **NTPC GROUP: SUBSIDIARIES AND JOINT VENTURES**

Your Company has currently 5 subsidiary companies and 18 joint venture companies for undertaking specific business activities.

Besides 18 joint venture companies detail of which is elsewhere in this Report, National Power Exchange Limited and Pan-Asian Renewables Private Limited have been wound up by the Order of Hon'ble High Court.

NTPC-SCCL Global Ventures Private Limited is also being wound up voluntarily. In view of lack of suitable commercially viable opportunities for thermal coal, your Company has decided to exit from International Coal Ventures Private Limited.

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.

## 25. **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 are as under:

### 25.1 **Statutory Auditors**

The Statutory Auditors of your Company are appointed by the Comptroller & Auditor General of India. Joint Statutory Auditors for the financial year 2016-17 were (i) M/s T R Chadha & Co LLP, Chartered Accountants, New Delhi (ii) M/s PSD & Associates, Chartered Accountants, New Delhi, (iii) M/s Sagar & Associates, Chartered Accountants, Hyderabad, (iv) M/s Kalani & Co., Chartered Accountants, Jaipur, (v) M/s P A & Associates, Chartered Accountants, Bhubaneshwar, (vi) M/s S.K. Kapoor & Co., Chartered Accountants, Kanpur and (vii) M/s B M Chatrath & Co LLP, Chartered Accountants, Kolkata.

The appointment of the same Statutory Auditors for the financial year 2017-18 has also been made by the Comptroller & Auditor General of India.

### 25.2 **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 2016-17. However, they have drawn attention under 'Emphasis of Matter' to Note No. 37 (a) & (b) regarding billing & recognition of sales on provisional basis and measurement of GCV of coal on 'as received' basis after secondary crusher till 30<sup>th</sup> September 2016 and GCV measured on wagon top at the unloading point w.e.f. 1<sup>st</sup> October 2016 in respect of most of the stations pending disposal of petition by CERC and ratification by Hon'ble Delhi High Court and related matters as mentioned in the said note; Note No.47 in respect of a Company's ongoing project where the order of NGT has been stayed by the Hon'ble Supreme Court of India and the matter is sub-judice; and Note No. 60 regarding recognition of an impairment loss of ₹ 782.95 crore in respect of investment in joint venture Ratnagiri Gas & Power Private Limited (RGPPPL) as 'Exceptional items - impairment loss on investment' in the Statement

## 41<sup>st</sup> Annual Report 2016-17

### Directors' Report



of Profit and Loss based on recoverable amount of these investments arrived at by an independent expert after considering the proposed demerger scheme awaiting approval of NCLT, New Delhi.

The issues have been adequately explained in the respective Notes referred to by the Auditors.

## 25.3 Review of accounts by Comptroller & Auditor General of India (C&AG)

The Comptroller & Auditor General of India, through letter dated 14.07.2017, has given 'NIL' Comments on the Standalone Financial Statements of your Company for the year ended 31<sup>st</sup> March 2017 after conducting supplementary audit under Section 143 (6) (a) of the Companies Act, 2013.

The Comptroller & Auditor General of India, through letter dated 24.07.2017, has also given 'NIL' Comments on the Consolidated Financial Statements of your Company for the year ended 31<sup>st</sup> March 2017 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), the comments of C&AG for both the stand-alone and consolidated financial statements of your Company for the year ended 31<sup>st</sup> March 2017 are being placed with the report of Statutory Auditors of your Company elsewhere in this Annual Report.

## 25.4 COST AUDIT

As prescribed under the Companies (Cost Records and Audit) Rules, 2014, the Cost Accounting records are being maintained by all stations of your Company.

The firms of Cost Accountants appointed under Section 148(3) of the Companies Act, 2013 for the financial year 2016-17 were (i) M/s Bhandopadhyay Bhaumik & Co., Kolkata, (ii) M/s S. Dhal & Co., Bhubhaneshwar (iii) M/s Musib & Co., Mumbai, (iv) M/s Sanjay Gupta & Associates, New Delhi, (v) M/s Narasimha Murthy & Co., Hyderabad, and (vi) M/s R.J. Goel & Co., Delhi.

The due date for filing consolidated Cost Audit Report in XBRL format for the financial year ended March 31, 2016 was September 30, 2016 and the consolidated Cost Audit Report for your Company was filed with the Central Government on September 28, 2016.

The Cost Audit Report for the financial year ended March 31, 2017 shall be filed within the prescribed time period under the Companies (Cost Records & Audit) Rules, 2014.

## 25.5 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 term of its Exchange Risk Management Policy, during financial year 2016-17, your Company has entered into derivative contracts amounting to USD 101 million equivalent in different currencies in respect of foreign currency loans exposure.

## 25.6 Performance Evaluation of the Directors and the Board

Ministry of Corporate Affairs (MCA), through General Circular dated 5<sup>th</sup> June, 2015, has exempted Government Companies from the provisions of Section 178 (2) of the Companies Act, 2013 which requires performance evaluation of every director by the Nomination & Remuneration Committee. The aforesaid circular of MCA further exempted listed 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 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.

Now, MCA, through Notification dated 05.07.2017, has amended Schedule IV to the Companies Act, 2013 with respect to performance evaluation of directors of the Government Companies that in case of 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, such provisions of Schedule IV are exempt for the Government Companies.

Further, Deptt. of Public Enterprises (DPE) has already laid down a mechanism for performance appraisal of all functional directors. Your Company enters into Memorandum of Understanding (MOU) with Government of India each year, demarcating key performance parameters for the Company. The performance of the Company and Board of Directors are evaluated by the Department of Public Enterprises vis-à-vis MOU entered into with the Government of India.

Similar exemption has been requested from SEBI under the SEBI LODR, which is under consideration.

## 25.7 Secretarial Audit

The Board has appointed M/s Agarwal S. & Associates, Company Secretaries, to conduct Secretarial Audit for the financial year 2016-17. The Secretarial Audit Report for the financial year ended March 31, 2017 is annexed herewith marked as Annexure XI to this Report.

The Management's Comments on Secretarial Audit Report are as under:

Observations	Management's Comments
Compliance of Regulation 17(1) of the Securities and Exchange Board of India (Listing Obligations & Disclosure Requirements) Regulations, 2015 and Clause 3.1.4 of the DPE Guidelines on Corporate Governance for Central Public Sector Enterprises w.r.t. appointment of requisite no. of Independent Directors on the Board of the Company.	As per Regulation 17(1) of SEBI LODR Regulations, 2015 and DPE Guidelines on Corporate Governance for CPSEs, the Company should have nine Independent Directors since Company has seven functional Directors including the Chairman & Managing Director and two Government Nominee Directors on its Board. At present, Company has three Independent Directors in position.  Being a Government Company, the power to appoint the Directors on the Board of the Company vests with the President of India and accordingly, the Company is, from time to time, requesting Ministry of Power to appoint requisite number of Independent Directors on its Board.
Compliance of Regulation 17(10) & 25(4) 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 25.6

**25.8 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- IX) as required under Section 134(3)(h) of the Companies Act, 2013. They were intended to further enhance your Company's interests.

Web-link for Policy on Materiality of Related Party Transactions & also on Dealing with Related Party Transactions has been provided in the Report on Corporate Governance, which forms part of the Annual Report.

**25.9 Significant and material orders passed by the regulators or courts or tribunals impacting the going concern status and company's operations in future: NIL**

**25.10 Adequacy of internal financial controls with reference to the financial reporting:**

The Company has in place adequate internal financial controls with reference to financial reporting. During the year, such controls were tested and no reportable material weakness in the design or operation was observed.

**25.11 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 FY 2016-17.

Your Company had granted loans to its subsidiaries namely, Patratu Vidyut Utpadan Nigam Limited (PVUNL) and Kanti Bijlee Utpadan Nigam Limited (KBUNL) during 2016-17 covered under Section 185 and 186 of the Companies Act, 2013. The details of loans granted to PVUNL and KBUNL is given in Note - 57 of Standalone Financial Statements for 2016-17.

**25.12 Prevention, Prohibition and Redressal of Sexual Harassment of Women at Workplace**

Your Company has in place a Policy on Prevention, Prohibition and Redressal of Sexual Harassment of Women at Workplace in line with the requirements of the Sexual Harassment of Women at the Workplace (Prevention, Prohibition & Redressal) Act, 2013. Internal Complaints Committee (ICC) has been set up to redress complaints received regarding sexual harassment. All employees (permanent, contractual, temporary, trainees) are covered under this policy.

These ICCs have been constituted at all Projects/stations also. Every three years, the constitution of these committees is changed and new members are nominated.

## 41<sup>st</sup> Annual Report 2016-17

### Directors' Report





No complaint of sexual harassment was received by the ICC during the year 2016-17.

Your Company has been conducting gender sensitization workshops for building a collaborative and safe work culture across the organisation. In these workshops, employees, both male and female, are sensitized and made aware about issues and laws pertaining to sexual harassment as well as appropriate behaviour at the workplace. During 2016-17, PMI has conducted nine such workshops across the organization covering about 200 employees.

#### 25.13 Procurement from MSEs

The Government of India has notified a Public Procurement Policy for Micro and Small Enterprises (MSEs) Order, 2012. The total procurement made from MSEs (including MSEs owned by SC/ST entrepreneurs) during the year 2016-17 was ₹ 1,019.06\* crore, which was 25.61% of total annual procurement of ₹ 3,978.40\* crore against target of 20% of total procurement made by your Company.

The total procurement made from MSEs owned by SC/ST entrepreneurs during the year 2016-17 was ₹ 15.59\* crore, which was 0.39% against the target of 4% of total procurement value.

\*It excludes Primary fuel, Secondary fuel, Steel & Cement, the Project procurement including R&M packages and procurement from OEM, OES & PAC sources.

Your Company organised 15 vendor development programmes for MSEs. Annual procurement plan for purchases from MSEs is uploaded on [www.ntpc.co.in](http://www.ntpc.co.in).

#### 25.14 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 5<sup>th</sup> 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 as part of Directors' Report.

#### 25.15 Extract of Annual Return:

Extract of Annual Return of the Company is annexed herewith as Annexure VI to this Report.

25.16 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, 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.

25.17 Para on development of risk management policy including therein the elements of risks are given elsewhere in the Annual Report.

25.18 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 annexures forming part of this report 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
Extract of Annual Return	VI
Annual Report on CSR Activities	VII
Project Wise Ash Utilisation	VIII
Disclosure of Related Party Transactions in Form AOC-2	IX
Business Responsibility Report for the year 2016-17	X
Secretarial Audit Report in Form MR-3	XI



## 26. BOARD OF DIRECTORS & KEY MANAGERIAL PERSONNEL

Shri Seethapathy Chander had been appointed as Independent Director w.e.f. 22.06.2016 for a period of three years.

On completion of three years' tenure, Shri Prashant Mehta has ceased to be Independent Director of the Company w.e.f. 29.07.2016 (A/N).

Shri U.P. Pani ceased to be Director (Human Resources) of the Company w.e.f. 31.10.2016 on attaining the age of superannuation.

Shri Saptarshi Roy, Executive Director had taken over the charge as Director (Human Resources) of the Company w.e.f. 01.11.2016.

Shri Anand Kumar Gupta, Executive Director had taken over the charge as Director (Commercial) of the Company w.e.f. 03.02.2017.

Shri A.K. Rastogi, Executive Director & Company Secretary separated from NTPC Limited w.e.f. 28.02.2017 after taking pre-mature retirement. Shri K.P. Gupta, Executive Director took over the charge as Company Secretary on 22.03.2017.

The Board wishes to place on record its deep appreciation for the valuable services rendered by Shri Prashant Mehta, Shri U.P. Pani and Shri A.K. Rastogi during their association with the Company.

In accordance with Section 152 of the Companies Act, 2013 and the provisions of the Articles of Association of the Company, Shri K.K. Sharma, Director shall retire by rotation at the Annual General Meeting of your Company and, being eligible, offers himself for re-appointment.

## 27. DIRECTORS' RESPONSIBILITY STATEMENT

As required under Section 134 (5) of the Companies Act, 2013, your Directors confirm that:

1. in the preparation of the annual accounts, 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 at the end of the financial year 2016-17 and of the profit of the company for that period;
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.

## 28. 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, Department of Public Enterprises, Central Electricity Authority, Central Electricity Regulatory Commission, Comptroller & Auditor General of India, Appellate Tribunal for Electricity, State Governments, Regional Power Committees, State Utilities and Office of the Attorney General of India.

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 and Statutory Auditors.

We wish to place on record our appreciation for the untiring efforts and contributions made by the employees at all levels to ensure that the company continues to grow and excel.

For and on behalf of the Board of Directors



(Gurdeep Singh)

Chairman & Managing Director

DIN: 00307037

Place: New Delhi

Date: 4<sup>th</sup> August, 2017

## 41<sup>st</sup> Annual Report 2016-17

### Directors' Report



## MANAGEMENT DISCUSSION AND ANALYSIS

### ECONOMIC AND SECTOR OUTLOOK

Indian economy has moved on a higher growth path. Gross Domestic Product for Financial Year 2016-17 has increased by 7.1% over the previous financial year. Electricity, water supply gas and other utilities have registered a growth rate of 7.2% at constant prices. With macro-economic stability, Indian economy is slated to grow between 7-8 percent and electricity generation will play a key role in India's development.

For the power sector, the two recent biggest announcements pertain to rural electrification and solar energy. The Government has reiterated its priority to achieve "100 percent village electrification" by May 1, 2018. Giving impetus to the clean energy, the government has also announced the second phase of solar development for 20 GW capacity.

This augurs well for the entire Power Sector and would unleash the huge latent demand for electricity.

The year has been a land mark year for renewable energy. For the first time, renewable capacity addition matched the convention thermal capacity addition. With solar tariffs touching new lows which are even lower than the coal-fired power tariff, the landscape of the power sector is going to change rapidly.

### INDUSTRY STRUCTURE AND DEVELOPMENTS

Power Sector is a key enabler for India's economic growth. The sector consists of generation, transmission and distribution utilities and is a crucial component of India's infrastructure. The achievements regarding developments and various issues/challenges faced by the Power Sector have been discussed in the ensuing paragraphs.

#### Snap Shot 2016-17

- Gross annual generation of the country increased by 4.72% from 1107.82 BUs in the previous year to 1160.14 BUs in the financial year 2016-17.
- Generation capacity of 14209.80 MW (excluding renewable) added during the year compared to 23976.60 MW added in the previous year.
- Land mark year for renewable energy. 14410.85 MW Capacity added during the year.
- 26300 Ckms of transmission lines added during the year as compared to 28114 Ckms in the previous year.
- 81816 MVA of transformation capacity added during the year as against 62849 MVA in the previous year, a jump of 30%.
- PLF of thermal stations declined from 62.24% in financial year 2015-16 to 59.88% in the financial year 2016-17.

- During the financial year 2016-17, peak power deficit and energy deficit was 2.6% and 1.1% respectively as against the peak power deficit and energy deficit of 3.2% and 2.1% during financial year 2015-16.

(Source: Central Electricity Authority)

#### Existing Installed Capacity

The total installed capacity in the country as on March 31, 2017 was 326848.54 MW (including renewable) with private sector contributing 44% of the installed capacity followed by State Sector with 32% share and Central Sector with 24% share.

	Total Capacity (MW)	% share
State	103967.28	32
Centre	80257.25	24
Private	142624.01	44
<b>Total*</b>	<b>326848.54</b>	<b>100</b>

Source: Central Electricity Authority-Installed Capacity report. \*including RES

During the financial year 2016-17, capacity of 14209.80 MW (excluding renewable) was added. With this the total capacity addition during the 12<sup>th</sup> plan period is 99209.47 MW (excluding renewable) which is about 112.05% of the planned capacity addition of 88537 MW for the Plan.

#### Capacity Utilization and Generation

Capacity utilisation in the Indian power sector is measured by Plant Load Factor (PLF).

#### Sector wise PLF (Thermal) (in %)

Sector	2015-16	2016-17
State	56.83	54.35
Central	71.03	71.98
Private	60.07	55.59
<b>All India</b>	<b>62.24</b>	<b>59.88</b>

The overall decline in PLF was mainly due to backing down/shut down of units on account of low schedule from beneficiary states (Source: Central Electricity Authority). The outlook of generation looks promising with expected increase in industrial production and Government of India's mission to provide 24x7 electricity to all.

#### Existing Generation

The total power available in the country during the financial year 2016-17 was 1160.14 billion units as compared to 1107.82 billion units during last year, registering a growth of 4.72%. (generation figures pertain to monitored capacity by CEA)

Sector-wise and fuel-wise break-up of generation (BUs) for the year 2016-17 is detailed as under:

Sector	Thermal	Hydro	Nuclear	Bhutan Import	Total
Central	337.92	57.90	37.92	-	433.74
State	299.59	51.35	-	-	350.94
Pvt/IPP	356.72	13.12	-	-	369.84
Bhutan Import	-	-	-	5.62	5.62
<b>Total</b>	<b>994.23</b>	<b>122.37</b>	<b>37.92</b>	<b>5.62</b>	<b>1160.14</b>

(Source: Central Electricity Authority)

As far as Thermal generation is concerned, based on the monitored capacity by CEA, the generation contribution of central sector is 33.98% with installed capacity share of 28.32%, state sector contributes 30.13% of generation with installed capacity share of 33.12% and private sector contributes 35.89% of generation with installed capacity share of 38.56%. Central Sector utilities have better performing stations as compared to those of State utilities and Private Sector.

#### Consumption

In terms of per capita power consumption, India ranks among the lowest in the world. The per capita consumption of power in India is just 1075 units in financial year 2015-16 (provisional). (Source: Central Electricity Authority Executive Summary March 2017).

Major end users of power can be broadly classified into industrial, agricultural, domestic and commercial consumers. These consumers represented approximately 42%, 17%, 24% and 9%, respectively, of power consumption measured by units of electricity consumed in the year 2015-16 (provisional). Traction & Railways and others represented about 8% of power consumption. The electricity consumption in Industry sector and domestic sector has increased at a much faster pace compared to other sectors during 2006-07 to 2015-16 with CAGR of 9.47% and 7.97% respectively (Source: Ministry of Statistics and Programme Implementation- Energy Statistics 2017).

#### Transmission

The transmission network (at voltages of 220 kV and above) in the country has grown at an average rate of ~ 8% p.a. during the 12<sup>th</sup> Plan.

The total inter-regional transmission capacity of country has been enhanced from 27,750 MW to 75,050 MW from 11<sup>th</sup> plan to 12<sup>th</sup> plan. During the period April 2016 to March 2017, 17600 MW inter-regional capacity has been added. This augmentation of the national grid will help promote competition and enable merit order dispatch of generation leading to lower cost of power for consumers.

Over the next few years, the demand for transmission capacity is expected to increase significantly, driven primarily

by rising trend in power generation capacity, reforms in fuel sector and large scale integration of renewable energy.

#### Distribution

The electricity business is not merely about setting up power generation stations and transmission systems, but equally, and probably more crucially, about retailing electricity and recovering the cost of service from consumers.

In the past few years the average tariff has increased however the rise has not been commensurate with the increase in the cost of supply. The consistent revenue gap, coupled with high AT&C losses have piled up huge losses for the state utilities.

To improve the distribution segment's performance, Government of India launched the most comprehensive power sector reform scheme ever i.e Ujjwal Discom Assurance Yojana to turnaround Discoms (UDAY) on 5<sup>th</sup> November 2015.

UDAY has started to show results with improved performance of many of the State Distribution Companies with reduction in AT&C losses and reduction in revenue gaps. In fact one of the state discom has achieved turn around and has posted profit during financial year 2016-17.

#### Power Trading

In India, power is transacted largely through long term Power Purchase Agreements (PPA) entered into between Generating/Transmission Companies and the Distribution utilities. A small portion is transacted through various short-term mechanisms like trading through licensees, bi-lateral trading, trading through power exchanges and balancing market mechanism (i.e. Deviation Settlement Mechanism).

In the year 2016-17, around 90% of power generated in the Country was transacted through the long term PPA route. 10% of the power was transacted through trading mechanism which included trading through short term licensees, bi-lateral trading, trading through power exchanges and through Deviation Settlement Mechanism. (Source: Central Electricity Regulatory Commission).

#### Energizing the Power Sector – Key Initiatives / Reforms & Regulatory Changes

- Flexibility in utilization of domestic coal:** Gol has allowed flexibility in utilisation of domestic coal for reducing the cost of power generation. The Annual Contracted Quantity (ACQ) of each coal linkages would be aggregated as consolidated ACQ for each State/Central/Private Gencos. These Gencos now have flexibility in use of such coal amongst their different generating stations. This will facilitate power producers to use coal optimally in more efficient generating stations resulting in reduction in the power purchase cost for Discoms.
- Cross Border Electricity Trade Policy:** At present, Cross Border Trade of Electricity has been taking place with Bangladesh, Bhutan and Nepal under

## 41<sup>st</sup> Annual Report 2016-17





bilateral Memorandum of Understanding (MoU) / Power Trade Agreement (PTA). In order to facilitate and promote cross border trade of electricity with greater transparency, consistency and predictability in regulatory approaches across jurisdictions and minimise perception of regulatory risks, GoI has issued guidelines on Cross Border Trade of Electricity. This policy is likely to help in creating demand for the Gencos.

**(c) Amendment in the IEGC (4<sup>th</sup>) Amendment to allow compensation on account of partial loading of the units**

- i. CERC has allowed Compensation due to degradation of the operational parameters like Heat rate and auxiliary power consumption due to lower loading of the units. For this purpose, CERC has defined the technical minimum level of operation as 55% and has allowed compensation when unit operations are below 85% and upto 55%. These compensations will be in the form of increased norms in the Heat rate and APC as per different factors for different ranges of unit loading, as provided in the Regulations.
- ii. It has also been provided that a unit can go under Reserve Shut Down (RSD) in case the schedules are below 55%. In these cases, the Units will be compensated for the additional oil consumption on account of higher start/stop of the units.
- iii. CERC in its order dated 5<sup>th</sup> May 2017 has approved a detailed procedure for calculation of the compensation amount and process of apportionment among the beneficiaries.

**(d) Reduction in coal import:** On account of increased production of domestic coal, imports have fallen from 217.78 MT in 2014-15 to 199.88 MT in 2015-16, a decline of 8%. The trend of fall in import of coal has continued in 2016-17. This has helped the country in reducing cost of electricity generated in coal based power plants and reduction in forex expenditure.

**(e) UJALA:** Government has identified lighting as key focus area for energy efficiency. Under the Unnat Jyoti by Affordable LEDs for All (UJALA), more than 24 crore LED bulbs have been distributed. This will help in a recurring saving of ₹ 34.95 crore and 87 MU per day in terms of cost and energy respectively. It will also help in reduction of CO<sub>2</sub> to the extent of 70,780 ton per day thereby reiterating India's commitment made at Conference of Parties (COP) 21 Summit held in Paris to reduce its energy intensity.

**(f) SHAKTI (Scheme for Harnessing and Allocating Koyala (Coal) Transparently in India):** During the current financial year (FY 17-18), GoI has introduced the Scheme,

'SHAKTI' to make coal allocation more transparent and bidding based. As per the Scheme, future allocation/ grant of linkages to power producers/ IPPs will be based on auction.

The Scheme shall benefit the sector in terms of coal availability to all power plants in transparent and objective manner, providing cheaper and affordable power, reduction of sectoral stress on account of non-availability of linkages to power projects thereby enhancing confidence of financial institutions on power sector.

**(g) Portal on weather information:** Due to enhanced presence of Renewable Energy in the Indian power sector, weather information like irradiance, wind speed etc. have become very important. Besides, weather information is also very important for load forecasting. During the current financial year (FY 17-18), GoI has launched weather Portal for Power Sector in association with POSOCO and IMD. The information available in the Portal regarding weather forecast shall help State Discoms to take pro-active steps regarding short term and medium term management processes and supply planning requirements and also for better planning for infrastructure availability to ensure cost effective and reliable supply.

## OPPORTUNITIES AND THREATS/ CHALLENGES

### OPPORTUNITIES

As per Niti Aayog, presently more than 300 million people in our country do not have access to electricity and our per capita electricity consumption is about one third of the world average. Further, GDP of the country and even population of the country is on rising trend. India is one of the fastest growing country, hence your Company has sustained opportunities to grow its business.

**(a) Electric Vehicles**

Ministry of Heavy Industry, under the 'National Electric Mobility Mission Plan 2020', has formulated 'Faster Adoption and Manufacturing of Electric Vehicles (FAME)' scheme to push e-mobility adoption in the country. The scheme envisages a population of 6-7 million electric vehicles in India by the year 2020. This mission will create opportunities for your Company in the form of additional demand of electricity, development of charging infrastructure & battery swapping facilities. This has also created opportunities for Battery and Vehicle Manufacturers.

Your Company has decided to enter E-mobility business starting with Electric Vehicle charging infrastructure. Electric Vehicle charging business would not only help your Company in opening up a new business area but would also help increase power demand across the country. Your Company has started two Electric Vehicle charging



stations on pilot basis in its office premises at New Delhi and Noida. Going forward, your Company envisages to build an e-mobility eco-system.

**(b) Nuclear Power**

From its present level of 6 GW Nuclear power capacity, India wants to increase the same to 63 GW by 2032. Your Company also has a plan to install 2 GW Nuclear based power generation capacity through its JV company Anushakti Vidyut Nigam (ASHVINI) with Nuclear Power Corporation by the same period.

**(c) Renewable Energy**

Gol has targeted to achieve 175 GW capacity by 2022, comprising of 100 GW Solar, 60 GW Wind, 5 GW of small hydro and 10 GW of biomass and others. Several measures in the solar power sector such as solar park policy, grid-connected rooftop solar plants in conjunction with sharp decline in solar tariff has made the investment in solar power business highly attractive.

On the wind power front, National Institute of Wind Energy under MNRE has estimated the country's wind energy potential at 100 meters above ground level to be of 302 GW. The Gol's target for setting-up 60 GW of wind power by 2022, augurs well for wind power developers.

Your Company has made a target of achieving 32 GW of RE capacity by 2032. Your Company is also helping the Country in achieving 15 GW of solar capacity under National Solar Mission.

Renewable Energy also opens up doors for foreign investment as India's renewable energy sector has potential to attract the attention of a diverse range of investors including those who desist from investing in thermal power sector and allocate their funds to such companies who score high on environment and social merits.

Further, phasing out of old thermal power stations also provides an opportunity for renewable energy projects to replace thermal capacity.

**(d) Cross Border Power Trading**

NVVN, 100% owned subsidiary of your Company, has been assigned the role of Nodal Agency for cross border trading of power with Bhutan, Bangladesh and Nepal by GOI.

NVVN has started supplying 250 MW power to Bangladesh since October 2013. Further, supply of 100 MW has started in March 2016, for which necessary PPA has been signed with BPDB. NVVN has also signed PPA with Nepal Electricity Authority for supply of 160 MW power to Nepal.

Country intends to establish power grid connecting countries under BIMSTEC (Bay of Bengal Initiative for

Multi-Sectoral Technical and Economic Cooperation). This will open up opportunities for your Company and the Indian power sector.

**(e) Cement Business**

Your Company has decided to enter into Cement manufacturing business, which will benefit it in achieving higher ash utilization level besides its presence in adjacent business area. Your Company has sought Expression of Interest from interested parties for establishing integrated cement plant/ cement clinker grinding unit/ cement blending unit/ allied products manufacturing unit adjacent to its Power Plant premises on Built, Own and Operate (BOO)/ JV mode, using ash from its thermal power plants. The interest shown by the various parties is highly encouraging.

**Threats/ Challenges/ Concerns**

**(a) Solar Power**

For your Company solar power is an opportunity as well as a challenge/ threat. Solar tariff has been continuously falling and is quite close to grid parity. Solar power plants being 'must run', get preference in generation scheduling and coal based power plants have to regulate their generation as per solar power supply in the grid. Therefore, influx of more solar power in the grid would require many coal based plants to operate in a flexible manner. This cyclic operation has impact on coal based power plants in terms of lower efficiency at partial load leading to higher generation cost and more stress on the machine.

**(b) Environmental Concerns**

The environmental concerns particularly relating to coal based thermal stations have emerged as a major issue. In December, 2015, Ministry of Environment, Forest and Climate change notified the new standards for Thermal Power Stations relating to water consumption, particulate matter, SO<sub>x</sub>, NO<sub>x</sub> and mercury. Notification deals with 3 categories – plants installed before 31.12.2003; those set up after 2003 but before 31.12.2016 and beyond. The Thermal plants have to achieve the standards within 2 years from the date of publication of notice.

Although, it is a step in right direction for controlling pollution generated by Thermal Plants, however, keeping in view tight time lines and several constraints like non-availability of space in older plants and indigenous technology to handle poor quality of Coal, it may be extremely challenging to meet the revised standards. Further,



implementation of new technology to take care of revised standards will increase the tariff.

Recently, CEA has prepared a list of 373 coal based units aggregating to 146 GW capacity, for scheduled phasing of FGD installation by 31<sup>st</sup> December 2023. This list includes units of your Company as well.

Your Company, aware of its responsibility towards environment and commitment towards clean energy, is awarding contracts for installation of FGDs for its coal based units in a phased manner.

### (c) Availability of Gas

The PLF of gas based power plants in the country remained low and the power sector has been struggling to recover costs from capital investment in gas-based capacity. To make gas-based power projects viable, GoI is exploring long term solutions.

### Other Issues/Concerns

- Availability of land/ Right to use of land/Right of way on land.
- Availability of water.
- Environment and forest clearance at State level to expedite E & F clearance to the project .
- Logistics for movement of heavy machinery like roads and bridges .
- Human resource requirement commensurate with the requirement of the various skilled and unskilled jobs.
- Impact on conventional power capacity: Increasing share of Renewables is not only going to reduce PLF of conventional power plants , but also force to regulate generation to compensate for intraday variation in power generation by RE sources.
- Grid integration issues: The integration of Renewable power into power systems results in 'integration costs' for grid which includes cost for balancing services, more flexible operation of thermal plants, reduced utilization of transmission network.

## OUTLOOK AND OPPORTUNITIES FOR THE COMPANY

### Strategic focus of the Company

Your Company is market leader in power generation and has its presence in the entire power sector value chain which gives it a competitive edge in the market. As a state-owned utility, Company's priority is to provide cheaper power and support for country's rapidly developing economy. Your Company provides ~ 25% of Country's electricity supply and as such plays a key role in India's economic activity.

Your Company continues to focus on scaling up generating capacity through a mix of conventional and non-conventional fuel sources, efficiently running its installed capacity, developing own coal mines and providing other value adding services like power trading, consultancy etc.

The key is not to add capacity alone, but to see that the capacity which has been added is financially viable and also does not become stranded as has been the case with many IPP's. As a policy, the Board of Directors of your company accord investment approval only after having 5 basic requirements in place viz. land, water, environment clearance, fuel supply arrangements and power purchase agreement(s) (PPAs). As a responsible corporate citizen, your Company is also focussed on providing clean energy.

### In-organic growth opportunities

Your Company scouts for acquisition of power plants at attractive valuations for adding capacity after analysing the technical and financial viability of such assets. Considering a lot of capacity of private/state developers is stranded there is a good scope for consolidation in the sector.

Your Company is in discussions with Rajasthan State Government for acquisition of Chhabra Power Project (Stage I -4x250 MW and Stage II -2x660 MW). This will be a win-win situation for your Company as well as Rajasthan. Rajasthan will have lower tariff, reliable power and learning from best practices of NTPC, while NTPC will have power assets which will immediately start earning revenues.

### Fuel Security

GoI has taken a number of measures, including flexibility in utilization of coal, to improve coal supplies as well as quality of the coal. Accordingly your Company has been receiving better coal supplies under its long term coal supply agreements. Coupled with its captive coal mines, your Company strives to ensure long term fuel security. With increased supplies of domestic coal, reliance on imported coal is negligible thereby contributing to reduction in cost of power. In fact, during the financial year 2016-17, no new contract was awarded for procurement of imported fuel.

Your Company led the coal rationalisation initiative of GoI to reduce transport costs and avoid criss-cross movement of coal thereby decongest the railway network.

Your Company has been allocated 10 coal blocks with estimated geological reserves of ~7 billion tonnes with estimated mining capacity of 107 million tonnes per annum. During the financial year 2016-17, your Company has upped the pace of coal mining developments. Coal production has commenced from Pakri-Barwadih coal mine project and coal is being supplied to Company's Barh Super Thermal Power Project. Your Company has appointed Mine Developer-cum-Operator (MDO) for Dulanga coal block on 9<sup>th</sup> February 2017. MDO for 3 more blocks will be appointed shortly.

## 41<sup>st</sup> Annual Report 2016-17

## Renewable Energy

The Government of India has set a target of 175 GW renewable energy by 2022 and by 2027, Government is planning for 275 GW of renewable energy capacity. Historically, your Company has been engaged primarily in fossil fuel fired electricity generation. Your Company is a key stakeholder in ongoing energy transition and is committed to add 10 GW of own renewable power capacity. Your Company takes cognisance of the challenges of adding renewable energy capacity in India and will add such capacity progressively.

Your Company is also leading the way with installation of 100 KW floating solar PV Plant at its Rajiv Gandhi Combined Cycle Power plant in Kerala.

Your Company is also entrusted with the responsibility of adding 15 GW of solar power under National Solar Mission of Government of India.

## Off-take and realisation

There have been concerns about the capacity addition programme undertaken by your company due to weak off-take and country presently being power surplus. In real terms, it may not be necessarily so because of restricted off-take by Discoms and huge latent demand. Your company firmly believes that with structural reforms put in place in the distribution segment through UDAY Scheme launched by Gol in November, 2015, economic growth of the country, Gol's mission of power to all by May, 2018 and aspiration among the end users to consume more power, the demand will pick-up.

Almost, the entire output of the company's power stations has been contracted under long term PPAs. Further, your Company produces power at a very competitive cost. The average tariff for financial year 2016-17 was ₹ 3.30/kWh as against ₹ 3.19/kWh for the previous year. The increase was mainly on account of coal cess and increase in freight by railways. Low cost of power mitigates off-take risks. Your Company has, for the 14<sup>th</sup> consecutive year, realised 100% of its dues and is confident of maintaining its track record in future also. Further, with extension of Tri-partite Agreements by most of the states, the risk of non-realization is mitigated to great extent.

## Pooled Tariff for NTPC Stations

Your Company is aware of its responsibility to provide cheaper power and has taken various measures to reduce the fuel charges through coal swapping, flexibility in usage of coal etc. Recently, your Company has brought-out concept of fixed charge tariff pooling which envisages national merit order operation of all NTPC stations which will effectively reduce the average energy charge rate (ECR) of all NTPC stations and benefit all states. This will provide a framework for URS power from one region to be scheduled by other

region since fixed charges of all states are pooled thereby replacing the costlier power, resulting in net savings to their end consumers.

## Leveraging on strengths for delivering better future performance

Your Company derives competitive edge from its strengths and is confident of meeting future challenges in the sector.

### a. Project Management

Your Company has adopted an integrated system for the planning, scheduling, monitoring and controlling of approved 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 which integrates its engineering management, contract management and construction management control centres.

Your company has successfully effected standardization, bulk ordering of 660 MW and 800 MW units and Engineering Procurement and Construction (EPC) contracting to reduce engineering time and thereby reduce project execution time.

Your Company has added 13,395 MW capacity in 12<sup>th</sup> Plan (2012-2017) exceeding the assigned capacity target of 11,920 MW in the Plan.

NTPC's Vindhyachal Super Thermal Power Station Stage -V Project has been the Silver Winner in award category-Project Excellence in Mega-Sized Project 2016 by International Project Management Association which is the highest international honour for excellent project performance.

### b. Operational Efficiency

The operating performance of NTPC has been considerably above the national average. During the financial year 2016-17 PLF of NTPC coal stations was 78.59% against all India PLF of 59.88%. Over the years, NTPC has consistently operated at much higher operating efficiency as compared to All India operating performance. Also DC of coal stations for FY 2016-17 was 92.80 % as against 92.29 % achieved in last FY 2015-16

In order to achieve cost-competitive, environment friendly, efficient & reliable power generation, the company has adopted following strategies:-

- Advance alert/support to stations through remote (Special Analytics & Computational services center) analysis of critical operation parameters, which in turn improves system reliability, reduction of outages & maintenance costs.
- Reduction of forced outages through knowledge based unit overhaul & maintenance practices.
- Optimizing planned outage period through implementation of overhaul preparedness index,

## 41<sup>st</sup> Annual Report 2016-17





ensuring all quality checks and time bound monitoring of each activity.

To implement best practices at enterprise level, knowledge teams for each equipment has been created.

- Improvement in Heat Rate & Auxiliary Power Consumption achieved by parametric optimization at part loads by operation of units in sliding pressure mode & optimizing excess air.
- To minimize efficiency losses in stations, process interface (PI) system based applications for real time efficiency & loss calculations.
- Structured & regular energy audit helps to identify potential areas of improvement in APC reduction which are being addressed in planned time bound implementation schedule.
- Implementation of Energy Efficiency Management System (EEMS) consisting of periodic assessments, field tests, performance gap analysis deviations and updation of action plans at all stations.
- To reduce cost of thermal generation, steps have been taken to maximize use of domestic coal, swapping of coal sources to reduce transport cost & proper blending.
- Use of comprehensive Performance Evaluation Matrix for relative evaluation of the performance of various power plants over a set of comprehensive performance indicators to create an environment of in-house challenge and competition. The parameters are reviewed annually to include new set of parameters commensurate with market dynamics and development of power sector.
- Adopting advanced technologies in new units e.g. commissioning of super critical units, which improves system efficiency & reduces carbon foot print.
- Renovation & modernization for reduction of greenhouse gas emissions, effective modernized control systems for environment friendly economic generation.

#### 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 pool of ~21,000 employees creating value for the Company. Your Company has a very low executive attrition rate. The HR vision of your Company is "To enable its people to be a family of committed world class professionals, making NTPC a learning organisation." 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 terms of financial parameters such as sales/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 and CARE. The foreign ratings by Fitch and S&P 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 both in domestic as well international market.

#### RISK, CONCERNS AND THEIR MANAGEMENT

Your Company has an elaborate Enterprise Risk Management framework in place. A Functional Director level Committee called Risk Management Committee (RMC) has been constituted in compliance with the Companies Act, 2013 and the listing agreements. The RMC is responsible for identifying & reviewing the risks and to formulate action plans and strategies to mitigate risks on short term as well as long term basis.

The RMC has identified 25 risks and out of which 7 have been classified as the top risks for the company:

- Compliance of emission, ash utilization and regulatory norms
- Risks pertaining to Hydro Projects
- Risks related to coal mining
- Delay in execution of projects
- Difficulties in acquisition of land
- Sustaining efficient plant operations
- Inadequate fuel supply

These areas are being regularly monitored through reporting of key performance indicators of identified risks. Exceptions with respect to risk assessment criteria are reported regularly to the Board of Directors.



## Internal Control

To ensure regulatory and statutory compliance as well as 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 being 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. In order 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 the experienced firms of Chartered Accountants in close co-ordination with the Company's own Internal Audit Department. Besides, the 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 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 implement process changes, wherever required, keeping in view the dynamic environment in which your 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

In exercise of the powers conferred by Section 133 read with Section 469 of the Companies Act, 2013, and sub-section 1 of Section 210A of the Companies Act, 1956, the Central Government, in consultation with the National Advisory Committee on Accounting Standards notified the Companies (Indian Accounting Standards) Rules, 2015 commonly referred to as Ind AS. All the Listed Companies having net worth of more than ₹ 500 crore are required to mandatorily follow Ind AS for the accounting periods beginning 1<sup>st</sup> April 2016, with the comparative figures for the preceding accounting period ended on 31<sup>st</sup> March 2016. Considering the above requirements, the Company has implemented Ind AS during the financial year 2016-17 with the transition date being 1<sup>st</sup> April 2015. According to Ind AS 101, the first Ind AS financial statements must use recognition and measurement principles that are based on standards and interpretations that are effective as at 31<sup>st</sup> March 2017, the date of first-time preparation of Financial Statements according to Ind AS. These accounting principles and measurement principles are to be applied retrospectively to the date of transition to Ind AS and

for all periods presented within the first Ind AS financial statements. Accordingly, 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. Further, the Company has made available a note explaining the areas of difference between Indian GAAP and IND AS and explained the reconciliation between the two GAAPs in Note-62 to the Financial Statements for the year 2016-17. Reference to Note (s) in the following paragraphs refers to the Notes to the Financial Statements for the year 2016-17 placed elsewhere in this report:

### A Results from Operations

#### 1 Total Revenue (Note-37 & 38)

		FY 2016-17	FY 2015-16	Change
	<b>Units of electricity sold (MUs)</b>	233,617	224,926	4%
	<b>Revenue</b>	<b>Amount in ₹ Crore</b>		
1	Energy Sales (Including electricity duty)	77,071.11	69,961.62	10%
2	Consultancy & other services	163.71	117.04	40%
3	Lease rentals on assets on operating lease	240.42	223.25	8%
4	Energy internally consumed	68.93	81.82	-16%
5	Interest from beneficiaries	397.09	221.29	79%
6	Provisions for tariff adjustments written back	162.49	154.51	5%
7	Interest income on assets under finance lease	154.31	84.25	83%
8	Recognized from deferred revenue-government grant	15.38	0.03	51167%
	<b>Revenue from operations</b>	<b>78,273.44</b>	<b>70,843.81</b>	<b>10%</b>
9	Other income	1,068.86	1,165.35	-8%
	<b>Total revenue</b>	<b>79,342.30</b>	<b>72,009.16</b>	<b>10%</b>

The revenue of the Company comprises income from energy sales, 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 and dividend income from mutual

## 41<sup>st</sup> Annual Report 2016-17



funds and long term investment in subsidiary & joint venture companies. The total revenue for financial year 2016-17 is ₹ 79,342.30 crore as against ₹ 72,009.16 crore in the previous year registering an increase of 10%. The main reasons for increase in total revenue are increase in the energy sales, increase in revenue from consultancy & other services, increase in interest and surcharge received from the beneficiaries and also increase in interest from finance lease as explained elsewhere in the section.

The major revenue comes from energy sales. The tariff for computing energy sales is determined in terms of Central Electricity Regulatory Commission Regulations as notified from time to time which are briefly discussed below:

#### Tariff for computation of Sale of Energy (Note-37)

The Central Electricity Regulatory Commission (CERC) notified the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (Regulations, 2014) on 21<sup>st</sup> February, 2014 for the period 2014-19. Pending issue of final/provisional tariff orders for some stations under Regulations, 2014 by the CERC, sales have been provisionally recognized on the basis of principles enunciated in Regulations, 2014. As per the Regulations, 2014, the tariff for supply of electricity comprises of two parts i.e. Capacity Charges for recovery of Annual Fixed Cost based on plant availability and Energy Charges for recovery of fuel cost. In addition, Regulations also provide for the recovery of certain miscellaneous charges. The CERC sets tariff for each stage of a station in accordance with the notified tariff regulations/norms.

#### Capacity Charges

The capacity charges are allowed to be recovered in full if normative annual plant availability factor is at least 83%. If the availability of the plant is lower than 83%, the capacity charges are recovered on a pro-rata basis based on normative parameters as specified in the said Regulations. With effect from 1<sup>st</sup> April 2017 the recovery of capacity charges in full would be at the plant availability factor of 85%.

#### Energy Charges

Energy charges for the electricity sold are determined on the basis of landed cost of fuel applied on the quantity of fuel consumption derived on the basis of norms for heat rate, auxiliary power consumption, specific oil consumption etc.

#### Other Charges

Besides the capacity and energy charges, the other elements of tariff are:

- Deferred tax liability for the period before 1<sup>st</sup> April 2009 on generation income is allowed to be recovered from the customers on materialization.

- Cost of hedging in respect of interest and repayment of foreign currency loans and exchange rate fluctuations for the un-hedged portion of interest and repayment of foreign currency loans on a normative basis.

In addition, the Central Electricity Regulatory Commission (Deviation Settlement Mechanism and related matters) Regulations, 2014, provides for charges for the deviations in generation with respect to schedule, payable (or receivable) at rates linked to average frequency to bring grid discipline and security.

Each element of total revenue is 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 beneficiaries.

Income from energy sales (including electricity duty) for the financial year 2016-17 was ₹ 77,071.11 crore constituting 97% of the total revenue. The income from energy sales (including electricity duty) has increased by 10% over the previous year's income of ₹ 69,961.62 crore.

During the year, there is an increase in the commercial capacity by 1420 MW as detailed below:

Project/Unit	Capacity (MW)	Commercial Operation Date
Bongaigaon U# 1	250	01.04.2016
Anantpur Solar	200	09.05.2016
Anantpur Solar	50	10.08.2016
Mauda II Unit # 1	660	01.02.2017
Bhadla Solar	260	25.03.2017
<b>Total</b>	<b>1420</b>	

Further, the commercial capacity of 1960 MW comprising Unit#2 of 660 MW of Barh-II, Unit#1,2,3,4 of 200 MW each of Koldam and 500 MW Unit#13 of Vindhyachal which were declared under commercial operation during the financial year 2015-16, were available for the entire financial year 2016-17 as compared to part of financial year 2015-16.

The CERC notified the Tariff Regulations, 2014 in February 2014 (Regulations, 2014). The CERC has issued tariff orders for some of the stations for the period 2014-19 under Regulations 2014, and beneficiaries are billed based on such tariff orders issued by the CERC. For other stations, beneficiaries are billed in accordance with the principles given in the Regulations 2014. The energy charges in respect

of the coal based stations are provisionally billed based on the GCV of coal 'as received', measured after the secondary crusher till 30 September 2016 and on wagon top w.e.f. 1 October 2016 in respect of most of the stations barring a few on the grounds of safety issues, for the quantity supplied through conveyors/road and other difficulties. The amount provisionally billed is ₹ 74,710.65 crore (31 March 2016: ₹ 69,616.43 crore) (Note-37(a)).

Your Company has filed a writ petition before the Hon'ble Delhi High Court contesting certain provisions of the Regulations, 2014. As per directions from the Hon'ble High Court on the issue of point of sampling for measurement of GCV of coal on 'as received' basis, CERC has issued an order dated 25 January 2016 (subject to final decision of the Hon'ble High Court) that samples for measurement of coal on 'as received' basis should be collected from wagon top at the generating stations. The Company's review petition before the CERC in respect of the above order was dismissed vide their order dated 30 June 2016. Vide order dated 10 November 2016, the Hon'ble Delhi High Court has permitted the Company to approach the CERC with the difficulties being faced in implementation of the order of CERC in this regard. Accordingly, the Company has filed a petition with CERC and hearing of the same was held on 31 January 2017. The petition is yet to be disposed off by CERC.

Pending disposal of the petition by CERC and ratification by the Hon'ble Delhi High Court, measurement of GCV of coal from wagon top samples at the unloading point has started with effect from 1 October 2016 in respect of most of the stations barring a few on the grounds of safety issues, for the quantity supplied through conveyors/road and other difficulties. Sales has been provisionally recognized at ₹ 75,800.54 crore (31 March 2016: ₹ 71,355.67 crore) on the basis of said Regulations 2014 (Note-37(b)).

Sales include ₹ 995.59 crore (31 March 2016: ₹ 50.74 crore) pertaining to previous years recognized based on the orders issued by the CERC/Appellate Tribunal for Electricity (APTEL)(Note-37(c)).

Sales include ₹ Nil (31 March 2016: (-) ₹ 1,693.65 crore) on account of income-tax refundable to the beneficiaries as per Regulations, 2004. Sales also include ₹ 46.04 crore (31 March 2016: ₹ 28.12 crore) on account of deferred tax materialized which is recoverable from beneficiaries as per Regulations, 2014 (Note-37(d)).

Energy sales include electricity duty amounting to ₹ 697.99 crore (31 March 2016: ₹ 729.20 crore).

The average tariff for the financial year 2016-17 is ₹ 3.30/kWh as against ₹ 3.18/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 ₹ 3.26/kWh in financial year 2016-17 as against ₹ 3.18/kWh in the previous year.

There has been 100% realization of the dues within the stipulated time frame for the fourteenth year in succession. Most of the beneficiaries have opened and are maintaining Letter of Credit equal to or more than 105% of average monthly billing. In order to ensure prompt and early payment of bills for supply of energy to beneficiaries, your Company has formulated a rebate scheme by way of providing graded incentive for early payment based on the bill(s) raised on state utilities who are the members of NTPC's rebate scheme. The rebate is netted off from energy sales.

Tri-partite agreements, which were valid upto 31<sup>st</sup> October 2016 have been extended by most of the states/union territories. The tri-partite agreements for remaining states are likely to be signed shortly.

#### Consultancy and other services

Accredited with an ISO 9001:2008 certification, the Consultancy Division of your Company undertakes consultancy and turnkey project contracts for domestic and international clients in the different phases of power plants viz. engineering, project management, construction management, operation & maintenance of power plants, Research & Development, Management Consultancy etc.

During the financial year 2016-17, Consultancy Division posted an income of ₹ 132.72 crore as against ₹ 100.76 crore achieved in the last financial year. In the financial year 2016-17, it has recorded a profit after tax of ₹ 40.15 crore as against ₹ 22.02 crore in the last financial year. Orders valued at ₹ 468.43 crore were secured by the division during the year.

#### Lease rentals on assets on operating lease

As per the provisions of Appendix C to Ind AS-17 on Leases w.r.t. determining whether an arrangement contains a lease, the Company has ascertained that the PPA entered into for two of the power stations fall under operating lease. Recovery of capacity charges towards depreciation (including AAD), interest on loan capital & return on equity (pre-tax) components from the beneficiaries are considered as lease rentals on the assets which are on operating lease. Accordingly, the lease rentals amounting to ₹ 240.42 crore has been recognised in the financial year 2016-17 as compared to ₹ 223.25 crore in the last financial year.

## 41<sup>st</sup> Annual Report 2016-17





## 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. There is a 16% decrease in the value of energy internally consumed during the year over the previous year mainly due to decrease in fuel cost.

### Interest from beneficiaries

CERC Regulations provide that where after the truing-up, the tariff recovered is less than the tariff approved by the CERC, the Company shall recover from the beneficiaries the under recovered amount along-with simple interest. Accordingly, the interest recoverable from the beneficiaries amounting to ₹ 397.09 crore has been recognised as Interest from beneficiaries.

### Provisions written back

During the financial year 2016-17, the Company had written back provisions for tariff adjustments made in earlier years amounting to ₹ 162.49 crore in comparison to ₹ 154.51 crore in the financial year 2015-16.

### Interest income on assets on finance lease

As per the provisions of Appendix C to Ind AS-17 on Leases w.r.t. determining whether an arrangement contains a lease, the Company has 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 has been derecognized from Property, Plant & Equipment and accounted as Finance Lease Receivable (FLR). Recovery of capacity charges towards depreciation (including AAD), interest on loan capital & return on equity (pre-tax) components from the beneficiary are 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 recognised as 'Interest income on Assets under finance lease'. Accordingly, an amount of ₹ 154.31 crore has been recognised in the financial year 2016-17 as compared to ₹ 84.25 crore in the last financial year.

### Other Income (Note-38)

'Other income' mainly comprises income from interest on term deposits with banks, interest on loan to employees, dividend from investments in subsidiary & joint venture companies and 'Other non-operating income' comprising mainly surcharge received from beneficiaries, sale of scrap & miscellaneous income.

'Other income' in financial year 2016-17 was ₹ 1,068.86 crore as compared to ₹ 1,165.35 crore in the financial year 2015-16. Broadly, the break-up of other income is as under:

₹ Crore

	FY 2016-17	FY 2015-16
Interest on OTSS bonds / Loan to State Government	2.03	115.45
Interest from deposits, Dividend from current investment in mutual funds and profit on redemption of current investments	97.30	495.05
Dividend from JVs and Subsidiary Companies/ Interest from Subsidiary Company	168.16	132.21
Income earned on other heads such as surcharge from beneficiaries, hire charges, sale of scrap, misc. income etc.	879.30	507.44
<b>Total</b>	<b>1,146.79</b>	<b>1,250.15</b>
Less: Transfer to EDC/ development of coal mines/hedging cost recoverable/(payable) from/to beneficiaries	77.93	84.80
<b>Net other income</b>	<b>1,068.86</b>	<b>1,165.35</b>

Interest income from OTSS bonds (including loan to State Government) for financial year 2016-17 is ₹ 2.03 crore as compared to ₹ 115.45 crore in financial year 2015-16 due to complete redemption of OTSS bonds in the previous year and repayment of balance loan in lieu of settlement of dues to State Government during financial year 2016-17. During the previous year 2015-16, all the bonds issued under the OTSS were redeemed and there was no income in the current financial year on account of the said bonds. The Company has earned income of ₹ 97.30 crore during the financial year 2016-17 on account of term deposits made in banks, investments in mutual funds and redemption of current investments as against ₹ 495.05 crore earned last year on these accounts. The income from investment in bank term deposits, mutual funds etc. has registered a decline of 80% from last financial year attributed to decrease in earnings on account of decrease in average annual investment from ₹ 7,065 crore in financial year 2015-16 to ₹ 3,348 crore in financial year 2016-17 as well as of lower interest rates.

The Company has earned ₹ 163.09 crore as dividend from our investments in subsidiaries and joint venture companies. Further, ₹ 5.07 crore has been earned as interest from loan

## 41<sup>st</sup> Annual Report 2016-17



extended to Kanti Bijlee Utpadan Nigam Limited and Patratu Vidyut Utpadan Nigam Limited, our subsidiary companies. Also, an amount of ₹ 879.30 crore has been earned from various other sources mainly consisting of surcharge received from beneficiaries ₹ 439.39 crore, miscellaneous income of ₹ 200.28 crore, sale of scrap ₹ 83.13 crore, interest from contractors ₹ 44.69 crore and interest on loans to employees ₹ 58.88 crore, etc.

## 2 Expenses (Statement of Profit & Loss and Note-39, 40,41,42 & 68)

### 2.1 Expenses related to operations

Year	FY 2016-17		FY 2015-16	
Commercial generation (MUs)	250,086		240,778	
Expenses				
	₹ Crore	₹ per kWh	₹ Crore	₹ per kWh
Fuel	47,572.19	1.90	43,798.59	1.82
Employee benefits expense	4,324.60	0.17	3,581.65	0.15
Other expense	5,092.38	0.21	5,576.49	0.23
Total	56,989.17	2.28	52,956.73	2.20

The expenditure incurred on fuel, employee benefits expense and other expenses for the financial year 2016-17 was ₹ 56,989.17 crore as against the expenditure of ₹ 52,956.73 crore incurred during the previous year. In terms of expenses per unit of power produced, it was ₹ 2.28 per unit in financial year 2016-17 as against ₹ 2.20 per unit in financial year 2015-16. Component-wise, there has been an increase in the fuel cost and employee benefits expenses and a decrease in the other expenses. The increase in commercial generation is due to commercial operation of new units i.e. units declared under commercial operations during the year as well as units declared under commercial operation during financial year 2015-16 which were under operation for part of the previous year as against under operation for full year during the current year has resulted in an additional operational expenditure of ₹ 2,003.77 crore.

A discussion on each of these components is given below:

#### 2.1.1 Fuel (Statement of Profit & Loss)

Expenditure on fuel constituted 83% of the total expenditure relating to operations. Expenditure on fuel was ₹ 47,572.19 crore in financial year 2016-17 in comparison to ₹ 43,798.59 crore in financial year 2015-16 representing an increase of about 9%. The break-up of fuel cost in percentage terms is as under:

	FY 2016-17	FY 2015-16
Fuel cost (₹ Crore)	47,572.19	43,798.59
% break-up		
Coal	95.09%	92.86%
Gas	4.29%	6.06%
Oil	0.60%	0.85%
Naphtha	0.02%	0.23%

For the financial year 2016-17, the expenditure towards coal has increased, due to increase in the coal based commercial generation from 229.954 Billion Units to 237.735 Billion Units and also increase in average price of coal from ₹ 2532 to ₹ 2759 per MT.

The expenditure towards gas has decreased due to decrease in the gas consumption in line with the decline in the generation from gas based units. A part of decrease in the expenditure towards gas is also attributable to lower average price of gas during the financial year 2016-17 as compared to previous year.

The expenditure towards other component of fuel cost i.e. oil and naphtha have also decreased. The decline in the expenditure towards oil is due to lower average price of oil during the financial year 2016-17 as compared to previous year and the decline in the expenditure towards naphtha is mainly due to lesser consumption owing to the lesser naphtha based generation and partly due to lower average price of naphtha during the financial year 2016-17 as compared to previous year.

An increase of ₹ 1,647.43 crore in fuel cost 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.

Over all, fuel cost per unit generated increased to ₹ 1.90 in financial year 2016-17 from ₹ 1.82 in financial year 2015-16.

The power plants of the Company use coal and natural gas as the primary fuels. Oil is used as a secondary fuel for coal-fired plants and naphtha as an alternate fuel in gas-fired plants. Under the tariff norms set by the CERC, your Company is allowed to pass on fuel charges through the tariff, provided the Company meets certain operating parameters.

#### 2.1.2 Employee benefits expense (Note-39)

Employee benefits expense include salaries & wages, bonuses, allowances, benefits, contribution to provident & other funds and welfare expenses.

Employee benefits expense have increased from ₹ 3,581.65 crore in financial year 2015-16 to ₹ 4,324.60 crore in financial year 2016-17.

## 41<sup>st</sup> Annual Report 2016-17



Of the total increase in employee benefits expense, an increase of ₹117.17 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. Further, there is an increase of ₹260.24 crore due to pay revision provision which is due from 1<sup>st</sup> January 2017 and the 3<sup>rd</sup> Pay Revision Committee appointed by the GOI has enhanced the ceiling of gratuity limit from ₹ 0.10 crore to ₹ 0.20 crore. Accordingly, provision for gratuity as at 31<sup>st</sup> March 2017 has been made for ₹ 614.25 crore.

In terms of expenses per unit of generation, it is ₹ 0.17 in financial year 2016-17 as compared ₹ 0.15 in previous financial year. These expenses account for approximately 8% of operational expenditure in financial year 2016-17.

### 2.1.3 Other Expenses (Note-42)

Other expenses consist primarily the expenses for repair and maintenance of plant & machinery, buildings, water charges, security, corporate social responsibility, electricity duty, contribution to water conservation fund, travelling, power charges, insurance, training and recruitment and provisions. These expenses are approximately 9% of operational expenditure in financial year 2016-17. In absolute terms, these expenses decreased to ₹ 5,092.38 crore in financial year 2016-17 from ₹ 5,576.49 crore in financial year 2015-16 registering a decrease of 9%. During the Financial year 2016-17, there were no expenses towards contribution to water conservation fund as against ₹ 303.72 crore accounted during the financial year 2015-16. Further, there is a reduction in CSR expenses by ₹ 216.11 crore, loss on disposal of fixed assets by ₹ 60.91 crore and favourable impact of ERV to the tune of ₹ 233.13 crore. Repair & maintenance expenses constitute 50% of total other expenses and have increased to ₹ 1,839.63 crore from ₹ 1,657.10 crore (Net of transfer to EDC, development of coal mines etc.) in previous year, resulting in an increase of 11%.

In terms of expenses per unit of generation, it is ₹ 0.21 in financial year 2016-17 as compared to ₹ 0.23 in previous financial year. An increase of ₹ 239.17 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.

During the financial year 2016-17, the Company had made provisions amounting to ₹ 161.10 crore. This includes a provision of ₹ 98.88 crore towards tariff adjustments, ₹ 12.04 crore towards obsolescence in stores, ₹ 22.19 crore towards impairment in the value of investment by the Company in two of its joint venture companies (₹ 22.07 crore in NTPC BHEL Power Projects Private Ltd. and ₹ 0.12

crore in BF-NTPC Energy Systems Ltd.), ₹ 2.89 crore towards unfinished minimum work programme for oil and gas exploration and ₹ 4.75 crore towards unserviceable capital works.

### 2.2 Finance Costs (Note-40)

The finance costs for the financial year 2016-17 are ₹ 3,597.20 crore in comparison to ₹ 3,296.41 crore in financial year 2015-16. The details of interest and other borrowing costs are tabulated below:

₹ Crore

	FY 2016-17	FY 2015-16
<b>Interest on:</b>		
Borrowings	7,124.72	6,592.12
Unwinding of discount on vendor liabilities and Discount on commercial papers	550.60	350.57
Others	0.47	2.26
<b>Total interest</b>	<b>7,675.79</b>	<b>6,944.95</b>
Other borrowing costs	46.49	49.42
<b>Total</b>	<b>7,722.28</b>	<b>6,994.37</b>
<b>Less: Transfers to</b>		
Expenditure during construction period	4,005.33	3,584.80
Development of coal mines	119.75	113.16
<b>Net interest and Other borrowing costs</b>	<b>3,597.20</b>	<b>3,296.41</b>

Total Interest (including interest during construction) has increased by 11% over last financial year due to increase in long term borrowings. The long term borrowings as on 31.03.2017 was ₹ 103,839.65 crore as against ₹ 91,827.74 crore as on 31.03.2016. Further short term borrowing also increased to ₹ 3,000.56 crore as on 31.03.2017 from ₹ 1,299.50 crore as on 31.03.2016. For the financial year 2016-17, the average cost of borrowing has decreased to 7.44% from 7.67% in previous financial year. The decrease in the average cost of borrowing is on account of lower rate of interest on new Rupee borrowings.

For the financial year 2016-17, an amount of ₹ 4,005.33 crore relating to finance costs of projects under construction was capitalized while the corresponding amount for the previous year was ₹ 3,584.80 crore. In addition, ₹ 119.75 crore has been capitalized in respect of development of coal mines as against ₹ 113.16 crore in previous year. Thus, finance costs capitalized registered an increase of 12%.

### 2.3 Depreciation, amortization and impairment expense (Note-41)

The depreciation and amortization expense charged to the profit and loss account during the financial year 2016-17 was ₹ 5,920.82 crore as compared to ₹ 5,172.34 crore in financial year 2015-16, registering an increase of 14%. This is due to increase in the gross block by ₹ 14,124.52 crore i.e. from ₹ 97,625.30 crore in the previous financial year to ₹ 1,11,749.82 crore in the current financial year. The increase in gross block is largely on account of increase in commercial capacity by 1420 MW resulting in additional capitalization on account of commercial declaration of new units as discussed under "Energy Sales". The depreciation on new units capitalized during the year is on pro-rata basis.

Further, depreciation for units declared commercial during financial year 2015-16 aggregating to 1960 MW as already discussed under "Energy Sales" has been charged for the entire financial year 2016-17 as against a pro-rata charge during the financial year 2015-16. The impact on depreciation on this account for the financial year 2016-17 is ₹ 600.96 crore.

As per the accounting policy of the Company, depreciation on the assets of the generation of electricity business is charged on straight line method following the rates and methodology notified by the CERC Tariff Regulations in accordance with Schedule II of the Companies Act, 2013 and depreciation on the assets of the coal mining, oil & gas exploration and consultancy business, is charged on straight line method following the rates specified in Schedule II of the Companies Act, 2013.

In case of certain assets, the Company has continued to charge higher depreciation based on technical assessment of useful life of those assets.

### 2.4 Regulatory Income/(Expense) (Note-68)

The Company is mainly engaged in generation and sale of electricity. The price to be charged by the Company for electricity sold to its customers 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. The Company is eligible to apply Ind AS 114, Regulatory Deferral Accounts. The standard permits an eligible entity to continue previous GAAP (Guidance Note on accounting for Rate Regulated Activities) accounting policy for its regulatory deferral account balances. Hence, Company has opted to continue with its previous GAAP accounting policy for such balances.

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 difference arising during the construction period is within the scope of Ind AS 114.

In view of the above, the, exchange differences arising from settlement/translation of monetary item denominated in foreign currency (other than long term) 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 deferred account debit/credit balance' by credit/debit to 'Movements in Regulatory deferral account balances' during construction period and adjusted from the year in which the same becomes recoverable from or payable to the beneficiaries. Accordingly, an amount of ₹ 187.09 crore has been accounted for favourable FERV and credited to regulated deferred account credit balance.

Further, revision of pay scales of employees of PSEs are due w.e.f. 1 January 2017 (Refer Note 33). The recommendations of the constituted committee to the Government inter-alia include 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 and the enhanced amount from ₹ 0.10 crore to ₹ 0.20 crore will be borne by the Company. 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 proposed increase in gratuity from ₹ 0.10 crore to ₹ 0.20 crore falls under the category of 'Change in law'.

CERC Tariff Regulations provide truing up of capital expenditure, subject to prudence check, considering inter-alia change in laws. Considering the methodology followed by the CERC in the previous pay revision and the provisions of CERC Tariff Regulations, 2014, a regulatory asset of ₹ 522.83 crore has been created (Regulatory deferral account debit balance) towards the increase in O&M expenditure due to the pay revision. This will be claimed upon implementation of revision of pay scales and discharge of related liabilities.

Accordingly, for the financial year 2016-17, the regulatory income recognized in the Statement of Profit and Loss on account of FERV and employee expenses together amount to ₹ 335.74 crore whereas for the financial year 2015-16, ₹ 12.09 crore was recognized as regulatory income in the Statement of Profit and Loss.

## 41<sup>st</sup> Annual Report 2016-17





### 3 Profit Before Exceptional Items & Tax

The profit of the Company before tax and exceptional items is tabulated below:

₹ Crore

	FY 2016-17	FY 2015-16
Total revenue	79,342.30	72,009.16
<b>Less:</b>		
Expenditure related to operations	56,989.17	52,956.73
Finance cost	3,597.20	3,296.41
Depreciation, amortization and impairment expenses	5,920.82	5,172.34
<b>Add:</b>		
Regulatory Income/(Expense)	335.74	12.09
<b>Profit Before Exceptional items &amp; Tax</b>	<b>13,170.85</b>	<b>10,595.77</b>

### 4 Exceptional Items-Impairment loss on investment (Note-60)

The Company has recognised an impairment loss of ₹ 782.95 crore in respect of investments in joint ventures as 'Exceptional items - impairment loss on investment' in the Statement of Profit and Loss. Company has an investment of ₹ 974.30 crore in the equity shares of Ratnagiri Gas & Power Private Limited (RGPPL). RGPPL has incurred losses during last few years which has resulted in erosion of net worth of the Company. Also, value of RGPPL's assets has declined during the period significantly more than that would be expected as a result of the passage of time or normal use. Further, neither Power plant nor Gas plant (CGUs) of RGPPL are working at their installed capacity from last many years. The recoverable amount of this investment has been assessed at ₹ 191.35 crore and an impairment loss of ₹ 782.95 crore has been recognized by the Company during the year.

### 5 Tax Expense

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, including tax expense pertaining to Rate Regulated Activities of ₹ 2,670.01 crore has been made towards current tax for the financial year 2016-17 as against net provision of (-) ₹ 346.98 crore made in financial year 2015-16.

#### Provision for Deferred tax

The deferred tax liability related to the period upto March 31, 2009 is recoverable from beneficiaries as and when the

same materializes. However, the deferred tax liability/asset for the period 01.04.2009 to 31.03.2014 is to the account of the Company.

For the period commencing from 01.04.2014, CERC Regulations, 2014 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. Deferred asset for deferred tax liability for the year will be reversed in future years when the related deferred tax liability forms a part of current tax. Accordingly, the same has been accounted as "Deferred asset for deferred tax liability".

The deferred tax liability for the year on account of timing difference is ₹ 1,287.31 crore as against ₹ 226.88 crore in financial year 2015-16.

#### Details of tax provision

	FY 2016-17 (₹ Crore)		
	Current tax	Deferred tax	Total
Provision for FY 2016-17	2,705.75	1,287.31	3,993.06
Adjust. for earlier years	(107.56)	-	(107.56)
Tax expense/(saving) pertaining to Rate Regulated Activities	71.82	-	71.82
Adjust. for Deferred asset for deferred tax liability	-	(954.68)	(954.68)
Net prov. as per statement of P&L	2,670.01	332.63	3,002.64

	FY 2015-16 (₹ Crore)		
	Current tax	Deferred tax	Total
Provision for FY 2015-16	2,103.92	226.88	2,330.80
Adjust. for earlier years	(2,453.48)	-	(2,453.48)
Tax expense/(saving) pertaining to Rate Regulated Activities	2.58	-	2.58
Adjust. for Deferred asset for deferred tax liability	-	(53.73)	(53.73)
Net prov. as per statement of P&L	(346.98)	173.15	(173.83)

The increase in the provision for current tax during the year over the previous year is mainly due to accounting of favourable assessment orders received during the financial



year 2015-16. Accordingly, net provision of tax for the financial year 2016-17 was ₹ 3,002.64 crore in comparison to (-) ₹ 173.83 crore for the financial year 2015-16.

## 6 Profit After Tax

The profit of the Company after tax is tabulated below:

₹ Crore

	FY 2016-17	FY 2015-16
<b>Profit Before Exceptional items &amp; Tax</b>	13,170.85	10,595.77
Less: Exceptional items-impairment loss on investment	782.95	-
Less:- Tax expense	3,002.64	(173.83)
<b>Profit After Tax</b>	<b>9,385.26</b>	<b>10,769.60</b>

## 7 Other Comprehensive Income

The other comprehensive income net of tax for the financial year 2016-17 is (-) ₹ 203.38 crore in comparison to (-) ₹ 58.63 crore in the financial year 2015-16. For the financial year 2016-17, Net actuarial loss on defined benefit plans is ₹ 238.66 crore, while net gain on fair value of equity instruments is ₹ 35.28 crore as against net actuarial loss on defined benefit plan and net loss on fair value of equity instrument amounting to ₹ 38.35 crore and ₹ 20.28 crore respectively in the previous financial year.

## 8 Segment-wise Performance

The Company has two reportable segments i.e. 'Generation of Energy' and 'Other operations'. The Company's principal business is generation and sale of bulk power. Other operations include providing consultancy, project management and supervision, oil and gas exploration and coal mining.

The profit before unallocated corporate interest and other income & unallocated corporate expenses, interest and finance charges, in the generation business for the financial year 2016-17 was ₹ 17,765.47 crore as against ₹ 14,212.77 crore for financial year 2015-16. The loss before Unallocated corporate interest and other income & Unallocated corporate expenses, interest and finance charges from 'Other operations' was ₹ 64.51 crore for financial year 2016-17 as against a loss of ₹ 16.43 crore in the previous financial year.

### B. Financial Position

The items of the Balance Sheet are as discussed under:

#### 1 Property, plant & equipment (PPE), Intangible assets, Capital work-in-progress and Intangible assets under development (Note-2 to Note-5)

The PPE, Intangible Assets, Capital work-in-progress and Intangible assets under development of the Company are detailed as under:

₹ Crore

	As at March 31		% Change
	2017	2016	
Gross block of Property, plant & equipment (Note-2)	1,11,414.60	97,332.00	14%
Gross block of Intangible assets (Note-3)	335.22	293.30	14%
<b>Total Gross block of PPE &amp; Intangible assets</b>	<b>1,11,749.82</b>	<b>97,625.30</b>	<b>14%</b>
<b>Total Net block of PPE &amp; Intangible assets</b>	<b>99,355.72</b>	<b>91,773.25</b>	<b>8%</b>
<b>Capital work-in-progress and Intangible assets under development (Note-4 &amp; 5)</b>	<b>80,737.09</b>	<b>66,423.20</b>	<b>22%</b>

During the year, total gross block of PPE & Intangible assets increased by ₹ 14,124.52 crore over the previous year i.e. by 14%. This was mainly on account of declaration of commercial operation of 1420 MW during 2016-17 and also capitalisation of some other assets. Correspondingly, net block has increased by 8%. Capital work-in-progress and Intangible assets under development taken together also increased by ₹ 14,313.89 crore registering an increase of 22% over the last year.

#### 2 Investments in subsidiaries & joint ventures (Note-6)

Broadly the break-up of investments in Subsidiaries and Joint Ventures is as follows:

₹ Crore

	As at March 31	
	2017	2016
Investment in Subsidiaries	2,438.09	1,930.43
Investment in Joint Ventures	6,400.79	6,004.29
<b>Total</b>	<b>8,838.88</b>	<b>7,934.72</b>

During the year, investment in Subsidiaries and Joint Ventures increased by 11%. The Company invested ₹ 507.66 crore in the following subsidiary companies:

₹ Crore

Name of subsidiary company	Amount
Kanti Bijlee Utpadan Nigam Ltd.	241.87
Bhartiya Rail Bijlee Company Ltd.	232.29
Patratu Vidyut Utpadan Nigam Limited	33.50
<b>Total Investment</b>	<b>507.66</b>

## 41<sup>st</sup> Annual Report 2016-17

The Company's investment in Joint Ventures increased by ₹ 396.50 crore as under:

₹ Crore

Name of JV Companies	Amount
NTPC-Tamil Nadu Energy Company Ltd.	44.39
Aravali Power Company Private Ltd.	66.51
Meja Urja Nigam Private Ltd.	325.00
BF-NTPC Energy Systems Ltd.	0.69
Nabinagar Power Generating Company Pvt. Ltd.	590.00
National High Power Test Laboratory Pvt. Ltd.	6.50
Energy Efficiency Services Ltd.	99.00
Bangladesh-India Friendship Power Co. Pvt. Ltd.	64.52
Hindustan Urvarak & Rasayan Ltd.	5.03
<b>Total Investment</b>	<b>1,201.64</b>
Less: Provision for impairment made during the year	
Ratnagiri Gas & Power Private Ltd.	(782.95)
NTPC BHEL Power Projects Private Ltd.	(22.07)
BF-NTPC Energy Systems Ltd.	(0.12)
<b>Net increase in Investment</b>	<b>396.50</b>

### 3 Non-current Financial Assets (Note-7 to Note-10)

Non-current financial assets mainly comprise of investment in equity instruments, trade receivables, loans to related parties, employees & others, claims recoverable and finance lease receivables.

₹ Crore

	As at March 31		% Change
	2017	2016	
Investments (Note-7)	113.48	79.60	43%
Trade Receivables (Note-8)	35.59	71.18	-50%
Loans (Note-9)	530.59	440.93	20%
Claims Recoverable (Note-10)	638.97	510.99	25%
Finance lease receivables (Note-10)	525.29	511.20	3%
<b>Total</b>	<b>1,843.92</b>	<b>1,613.90</b>	<b>14%</b>

Investments mainly comprise of investment in equity instruments of PTC India Ltd. The carrying value of equity instruments of PTC India Ltd. has increased from ₹ 76.80

crore as at 31.03.2016 to ₹ 112.08 crore as at 31.03.2017 due to increase in market value of shares of PTC India Limited.

Loans have increased from ₹ 440.93 crore as at 31.03.2016 to ₹ 530.59 crore as at 31.03.2017. Increase in loans is mainly due to increase in the amount of loans given to subsidiaries; Kanti Bijli Utpadan Nigam Ltd. amounting to ₹ 121.00 crore (previous year ₹ 0.86 crore) and Patratu Vidyut Utpadan Nigam Ltd. amounting to ₹ 8.25 crore (previous year ₹ Nil). In addition loan of ₹ 25 crore extended to Patratu Vidyut Utpadan Nigam Ltd. is appearing in Current Financial Assets-Loans (Note-17).

Claims recoverable includes ₹ 619.34 crore (previous year ₹ 469.73 crore) towards the cost incurred upto 31<sup>st</sup> March 2017 in respect of Lohari Nagpala hydro power project, the construction of which has been discontinued on the advice of the Ministry of Power (MOP), GOI. This includes ₹ 332.38 crore (previous year ₹ 185.41 crore) in respect of arbitration awards challenged by the Company before Hon'ble High Court. In the event the High Court grants relief to the Company, the amount would be adjusted against Current liabilities - Provisions - Provision for Others (Note 33). Management expects that the total cost incurred, anticipated expenditure on the safety and stabilization 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.

Keeping in view the provisions of Appendix C to Ind AS-17 on 'Leases' w.r.t. determining whether an arrangement contains a lease, the Company has 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 has been derecognized from PPE and accounted for as Finance Lease Receivable (FLR). Recovery of capacity charges towards depreciation (including AAD), interest on loan capital & return on equity (pre-tax) components from the beneficiary are 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 recognized as 'Interest income on Assets under finance lease' under 'Revenue from operations' (Note-37).

### 4 Other Non-Current Assets (Note-11)

Total other non-current assets as at 31.03.2017 were ₹ 16,879.15 crore as against ₹ 17,636.80 crore as at 31.03.2016. Other non-current assets consist of advances for capital expenditure, advances other than capital advances, security deposits, advance tax net of provision for tax, deferred foreign currency fluctuation asset and deferred payroll expenditure.

Other non-current assets have decreased by ₹ 757.65 crore, a decrease of over 4%. The decrease is mainly due to reduction in capital advances from ₹ 6,908.27 crore to ₹ 6,390.22 crore and decrease in deferred foreign currency fluctuation asset from ₹ 1,368.79 crore to ₹ 1,032.68 crore.

As per the opinion of the EAC of the ICAI, exchange differences on account of translation of foreign currency borrowings which are recoverable from the beneficiaries in subsequent periods as per CERC Tariff Regulations are accounted as 'Deferred foreign currency fluctuation asset'. Accordingly, an amount of ₹ 1,032.68 crore has been accounted under this head up to 31.03.2017 (Previous year ₹ 1,368.79 crore). Deferred foreign currency fluctuation asset has decreased mainly due to appreciation of Indian Rupee against US Dollar, Japanese Yen and Euro.

#### 5 Current Assets (Note-12 to Note-19)

The current assets as at 31.03.2017 and 31.03.2016 and the changes therein are as follows:

₹ Crore

Current Assets	As at March 31		Y o Y Change	% Change
	2017	2016		
Inventories (Note-12)	6,504.81	7,010.37	-505.56	-7%
Investments (Note 13)	-	378.72	-378.72	-100%
Trade receivables (Note 14)	8,137.92	7,732.22	405.70	5%
Cash & cash equivalent (Note 15)	157.12	1,372.40	-1,215.28	-89%
Bank balances other than cash and cash equivalent (Note 16)	2,773.37	3,088.38	-315.01	-10%
Loans (Note 17)	236.92	251.78	-14.86	-6%
Other financial assets (Note 18)	6,053.32	5,246.03	807.29	15%
Other current assets (Note 19)	4,536.44	4,676.55	-140.11	-3%
Total current assets	28,399.90	29,756.45	-1,356.55	-5%

#### Inventories (Note-12)

Inventories as at 31.03.2017 were ₹ 6,504.81 crore (being 23% of current assets) as against ₹ 7,010.37 crore as at 31.03.2016. Inventories mainly comprise of stores & spares and coal which are maintained for operating plants. Stores

and spares were ₹ 2,890.96 crore as against ₹ 2,593.53 crore as at previous year end. Value of coal inventory decreased from ₹ 3,490.12 crore as at 31.03.2016 to ₹ 2,627.38 crore as at 31.03.2017 due to overall reduction in coal stock and also due to negligible proportion of imported coal stock in total coal stock at our power plants.

#### Trade Receivables (Note-14)

Trade receivables as at 31.03.2017 are ₹ 8,137.92 crore as against ₹ 7,732.22 crore as at 31.03.2016. Trade receivables have increased by 5% over the year, however on number of sales days basis, the same have gone down from 40 days to 38 days. Considering the financial health of our customers and industry standards, average 38 days debtors are at acceptable levels. The company has collected 100% dues for the 14<sup>th</sup> year in succession.

Keeping in view the requirements of Companies Act, 2013, unbilled revenues are shown under 'Other current financial assets' in Note 18 of balance sheet.

#### Other financial assets (Note-18)

Other financial assets excluding unbilled revenue are as under:

₹ Crore

	As at March 31	
	2017	2016
Other financial assets (Note-18)	6,053.32	5,246.03
Less: Unbilled revenue	5,718.67	4,953.50
Net Other current financial assets	334.65	292.53

Unbilled revenue consists of items viz. (i) sales for the month of March which is billed in April and (ii) other credits which are to be passed on to beneficiaries. For the year 2016-17, the credits which are to be passed on to beneficiaries have already been accounted for in sales. Unbilled revenue of ₹ 5,718.67 crore (previous year ₹ 4,953.50 crore) is net of credits to be passed to beneficiaries at the time of billing and includes ₹ 7,496.34 crore (previous year ₹ 6,579.06 crore) billed to the beneficiaries after 31<sup>st</sup> March for energy sales.

Other current financial assets mainly include advances to subsidiary & joint venture companies and other related parties, employees & others and Finance lease receivables.

#### Other current assets (Note-19)

Other current assets as at 31.03.2017 comprise of security deposits, advances to contractors and suppliers, short term advances to employees, claims recoverable etc. Other current assets have decreased from ₹ 4,676.55 crore as on 31.03.2016 to ₹ 4,536.44 crore as on 31.03.2017 mainly on account of reduction in claims recoverable from ₹ 2,543.11 crore as on 31.03.2016 to ₹ 2,367.47 crore as on 31.03.2017.

## 41<sup>st</sup> Annual Report 2016-17



Claims recoverable include claims against railways ₹ 1,488.82 crore (previous year ₹ 1,946.68 crore) which are mainly towards diverted out coal wagons.

#### 6 Regulatory deferral account debit balances (Note-20) and credit balances (Note-36):

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 accounts balances are adjusted from the year in which the same become recoverable from or payable to the beneficiaries.

As already explained in para 2.4, CERC Tariff Regulations provide for truing up of capital expenditure, subject to prudence check, considering inter-alia change in laws. Considering the methodology followed by the CERC in the previous pay revision and the provisions of CERC Tariff Regulations, 2014, regulatory asset amounting to ₹ 522.83 crore has been created (Regulatory deferral account debit balance-Note 20) towards the increase in O&M expenditure due to the pay revision and increase in the gratuity limit from ₹ 0.10 crore to ₹ 0.20 crore. This will be claimed upon implementation of revision of pay scales and discharge of related liabilities.

Further, 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 'Movements in Regulatory deferral account balances' during construction period and adjusted from the year in which the same becomes recoverable from or payable to the beneficiaries.

The regulatory deferral account credit balance assets/liability (Note 36) recognized in the books to be recovered from or payable to beneficiaries in future periods are as follows:

Particulars	Regulated Liability (₹ crore)
A. Opening balance as on 01.04.2016	295.65
B. Addition during the year	193.38
C. Amount collected/refunded during the year	6.29
D. Regulatory income/(expense) recognized in the Statement of Profit & Loss (B-C)	187.09
E. Closing balance as on 31.03.2017 (A-D)	482.74

#### 7 Total Equity (Note-21 & Note-22)

The total equity of the Company at the end of financial year 2016-17 increased to ₹ 96,231.23 crore from ₹ 91,293.70 crore in the previous year, an increase of over 5%. Major reason for the same are tabulated below:

	Total Equity (₹ crore)	BVPS (₹)
Opening Balance as on 01.04.2016	91,293.70	110.72
Add: Profit/ EPS for the year	9,385.26	11.38
Less: Other Comprehensive Income and other adjustments to Reserves	124.91	0.15
Less: Dividend & dividend tax	4,322.82	5.24
Balance as on 31.03.2017	96,231.23	116.71

The increase in net worth resulted in increase in Book Value per Share (BVPS) to ₹ 116.71 from ₹ 110.72 as at the end of previous year. During the financial year 2016-17, Government of India (GoI) disinvested its 0.22% stake in the company through Offer for Sale to Employees of NTPC Limited. After the disinvestment, GoI's stake came down from 69.96% to 69.74%.

#### 8 Non-Current and Current Liabilities (Note-23 to Note-34)

Details of non-current and current liabilities are discussed below:

##### a. Non-current financial liabilities –Borrowings (Note-23):

Total borrowings as at 31.03.2017 were ₹ 1,03,839.65 crore in comparison to ₹ 91,827.74 crore as at 31.03.2016. Current maturities out of long term borrowings have been shown under current liabilities. Details of the total borrowings are as under:

₹ Crore

	As at March 31	
	2017	2016
Long term borrowings in non-current financial liabilities-Borrowings (Note 23)	97,339.28	85,096.95
Current maturities of long term borrowings included in current liabilities- other financial liabilities (Note 31)	6,500.37	6,730.79
<b>Total borrowings*</b>	<b>1,03,839.65</b>	<b>91,827.74</b>

\*Includes adjustments for transaction costs on borrowings as per Ind-AS.

## 41<sup>st</sup> Annual Report 2016-17



A summary of the borrowings outstanding is given below:

₹ Crore

	Non-current financial liabilities (Note-23)		Other current financial liabilities (Note-31)		Total borrowings		% Change
	2017	2016	2017	2016	2017	2016	
<b>Secured</b>							
Domestic Bonds	33,059.00	24,842.92	650.00	628.00	33,709.00	25,470.92	32%
Others	1.62	1.46	0.78	0.48	2.40	1.94	24%
Sub-total	33,060.62	24,844.38	650.78	628.48	33,711.40	25,472.86	32%
<b>Unsecured</b>							
Foreign currency term loans/ Notes/ Masala Bonds	29,579.61	26,348.12	2,361.84	1,979.06	31,941.45	28,327.18	13%
Rupee term loans	34,573.80	33,781.14	3,470.38	4,108.13	38,044.18	37,889.27	0%
Others	125.25	123.31	17.37	15.12	142.62	138.43	3%
Sub-total	64,278.66	60,252.57	5,849.59	6,102.31	70,128.25	66,354.88	6%
Total	97,339.28	85,096.95	6,500.37	6,730.79	103,839.65	91,827.74	13%

As on 31.03.2017, the foreign currency loan basket comprises of loans denominated in US Dollar, Japanese Yen and Euro which contributed about 74%, 8% and 18% respectively of the total foreign currency loans.

Over the last financial year, total borrowings have increased by 13%. Debt amounting to ₹ 23,803.93 crore was raised during the year 2016-17. The amount raised through term loans, bonds and foreign currency borrowings is used for capital expenditure, refinancing and recoupment of capital expenditure.

Details in respect of proceeds and repayment of borrowings for the year 2016-17 are as under:

₹ Crore

Source (Principal Amount)	Debt raised	Repayment	Net
Term loan	8,600.00	8,445.09	154.91
Domestic bonds	8,867.50	628.00	8,239.50
Foreign currency debts	6,336.43	2,022.77	4,313.66
<b>Total</b>	<b>23,803.93</b>	<b>11,095.86</b>	<b>12,708.07</b>
FERV on foreign currency borrowings			(661.11)
Transaction Costs			(39.70)
Others (Finance Lease Obligations)			4.65
<b>Total</b>			<b>12,011.91</b>

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 2016-17, agreement for a term loan of ₹ 2,000 crore was entered into with ICICI Bank Ltd. An amount of ₹ 8,600 crore was drawn from domestic banks & financial institutions during the year and an amount of ₹ 8,445.09 crore was repaid during the year. The cumulative amount of domestic loans tied up till 31<sup>st</sup> March 2017 is ₹ 79,369.35 Crore (excluding undrawn loans short closed as per the loan agreements). The cumulative drawl up to 31<sup>st</sup> March 2017 was ₹ 70,754.35 Crore.

Domestic bonds: Bonds amounting to ₹ 8,867.50 crore were issued during 2016-17. The details are as follows:

S. No.	Type of Issue	Tenure (in Years)	Coupon Rate	Amount (in ₹ Crore)
60	Taxable, Private	10	8.05%	1,000.00
61	Taxable, Private	3 equal STRPPs of 5, 10 and 15 years respectively	8.10%	1,072.50
62	Taxable, Private	10	7.58%	800.00
63	Taxable, Private	10	7.47%	670.00
64	Taxable, Private	15	7.49%	700.00
65	Taxable, Private	5	6.72%	700.00
66	Taxable, Private	15	7.37%	3,925.00

During the financial year 2016-17, Bonds amounting to ₹ 628.00 crore were redeemed. The principal amount of Bonds outstanding as on 31<sup>st</sup> March 2017 is ₹ 33,712.33 crore.

Foreign currency debts: During the financial year 2016-17, the Company raised ₹ 2,000 crore & EUR 500 million through external commercial borrowings by way of Green Masala Bonds & Eurobonds respectively under the USD 4 billion MTN programme.

The Green Masala Bonds are in the nature of senior unsecured fixed rate notes having a coupon of 7.375%. The Bonds carry certification from climate Bonds initiative, London. The bonds are due for bullet repayment in August 2021. The proceeds of the bonds have been utilized to finance the capital expenditure incurred on various ongoing Solar and Wind power projects of the company in the financial year 2016-17. These bonds were the first Green Masala Bonds by an Indian Corporate and also by an Indian Issuer with dual listing on Singapore Stock Exchange and London Stock Exchange.

## 41<sup>st</sup> Annual Report 2016-17

Management Discussion and Analysis | Annexure - I to Directors' Report



The Euro Bonds are in the nature of senior unsecured fixed rate notes having a coupon of 2.75%. The bonds are due for bullet repayment in February 2027. An amount of ₹ 3,628.03 crore was received as proceeds against the issuance of these bonds. As against this, an amount of ₹ 2,672.70 crore was utilized to part finance the capital expenditure incurred on various ongoing power projects of the Company till 31<sup>st</sup> March 2017.

Under the existing loan facilities available from JBIC and KfW, during the year, the Company has drawn ₹ 708.40 crore towards capital expenditure of various projects.

In all, the Company has drawn ₹ 6,336.43 crore during the year from foreign currency loans and repaid foreign currency debts amounting to ₹ 2,022.77 crore. The principal amount of rupee equivalent of foreign borrowings outstanding as on 31<sup>st</sup> March 2017 is ₹ 32,007.15 crore.

The Company continues to enjoy highest credit ratings for its bonds programme, borrowings from banks as well as fixed deposits, while Company's International Ratings are at par with sovereign ratings as detailed hereunder:

Credit Rating Agency	Rating	Remarks
Domestic		
CRISIL	CRISIL AAA	Highest ratings
ICRA	ICRA AAA (Stable)	
CARE	CARE AAA	
International		
S&P	BBB-/Stable	Equivalent to sovereign ratings
Fitch	BBB-/ Stable	

The debt to equity ratio at the end of financial year 2016-17 of the Company increased to 1.08. The Debt Service Coverage Ratio (DSCR) and Interest Service Coverage Ratio (ISCR) for financial year 2016-17 are 1.55 and 6.50 respectively.

Formula used for computation of coverage ratios DSCR = Earnings before Interest, Depreciation, Tax and Exceptional items/ (Interest net of transferred to expenditure during construction + Principal repayment) and ISCR = Earnings before Interest, Depreciation, Tax and Exceptional items/ (Interest net of transferred to expenditure during construction).

The maturity profile of the principal amount of borrowings by the Company is as under:

₹ Crore

	Domestic Borrowings	Foreign Borrowings	Total
Within 1 year	4,120.38	2,361.84	6,482.22
2 – 3 years	9,830.90	4,407.21	14,238.11
4 – 5 years	9,921.16	8,031.21	17,952.37
6 – 10 years	34,539.46	16,729.52	51,268.98
Beyond 10 years	13,344.61	477.37	13,821.98
<b>Total</b>	<b>71,756.51</b>	<b>32,007.15</b>	<b>103,763.66</b>

**b. Non-Current financial liabilities- Other financial liabilities (Note-25)**

Other financial liabilities primarily consist of liabilities for capital expenditure and others. Liabilities for capital expenditure has decreased from ₹ 2,634.51 crore as at 31.03.2016 to ₹ 1,999.77 crore as at 31.03.2017. Liabilities for capital expenditure which are due for payment within 12 months from the reporting date have been classified under 'Other current financial liabilities' (Note 31).

**c. Non-current liabilities- Provisions (Note-26):**

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. Long term provision as at 31.03.2017 was ₹ 463.15 crore as compared to ₹ 436.41 crore as at 31.03.2016.

**d. Non-current liabilities -Deferred tax liabilities (net) (Note-27):**

Deferred tax liabilities (net) have increased from ₹ 1,152.21 crore as at 31.03.2016 to ₹ 1,484.84 crore as at 31.03.2017. CERC Regulations, 2014 provide for recovery of deferred tax liability as on 31<sup>st</sup> March 2009 from the beneficiaries. Accordingly, deferred tax liability as on 31<sup>st</sup> March 2009 is recoverable on materialization from the beneficiaries. For the period commencing from 1<sup>st</sup> April 2014, Regulations, 2014 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. Deferred asset for deferred tax liability for the year will be reversed in future years when the related deferred tax liability forms part of current tax. The net increase during the year in the deferred tax liability of ₹ 332.63 crore (previous year increase of ₹ 173.14 crore) has been debited to the Statement of Profit and Loss.

**e. Other non-current liabilities (Note-28):**

Other non-current liabilities represents deposits received for Deen Dayal Upadhyay Gram Jyoti Yojana which are expected to be settled beyond a period of 12 months from the Balance Sheet date. Other non-current liabilities as at 31.03.2017 was ₹ 17.49 crore as compared to ₹ 49.68 crore as at 31.03.2016.

**f. Current Liabilities (Note-29 to Note-34):**

The current liabilities as at 31.03.2017 were ₹ 36,177.32 crore as against ₹ 31,758.74 crore as at the end of previous year. The break-up of current liabilities is as under:

₹ Crore

	As at March 31		Y-o-Y Change	% Change
	2017	2016		
Borrowings (Note-29)	3,000.56	1,299.50	1701.06	131%
Trade payables (Note-30)	4,876.08	5,311.64	-435.56	-8%
Other Financial Liabilities (Note-31)	19,179.40	17,445.02	1734.38	10%
Other current liabilities (Note-32)	1,081.16	775.59	305.57	39%
Provisions (Note-33)	7,964.92	6,775.69	1189.23	18%
Current tax liabilities (net)	75.20	151.30	-76.10	-50%
<b>Total</b>	<b>36,177.32</b>	<b>31,758.74</b>	<b>4,418.58</b>	<b>14%</b>

In order to finance the mismatches in the short term fund requirement, short term borrowings (Note-29) in the form of commercial papers was resorted to by the Company. The commercial papers outstanding as on 31<sup>st</sup> March 2017 were ₹ 3,000.00 crore.

The trade payables mainly comprise amount payable towards supply of goods & services, deposits & retention money from contractors. Trade payables have reduced by ₹ 435.56 crore i.e. from ₹ 5,311.64 crore as at 31<sup>st</sup> March 2016 to ₹ 4,876.08 crore as at 31<sup>st</sup> March 2017 mainly on

account of discharge of liabilities towards suppliers of goods and services.

Other current financial liabilities (Note-31) mainly comprise of current maturities of long term borrowings, interest accrued but not due on borrowings and payables towards capital expenditure. The details of other current financial liabilities are as under:

₹ Crore

	As at March 31	
	2017	2016
Other current financial liabilities	19,179.40	17,445.02
Less: Current maturities of long term borrowings and Finance lease obligations	6,500.37	6,730.79
Interest accrued but not due on borrowings	1,160.92	775.27
Other current liabilities (net)	11,518.11	9,938.96

Other current financial liabilities has increased mainly due to increase in payables for capital expenditure which has increased from ₹ 7,926.23 crore as on 31.03.2016 to ₹ 9,578.24 crore as on 31.03.2017 and also due to payables to employees which has increased from ₹ 269.17 crore as on 31.03.2016 to ₹ 516.88 crore as on 31.03.2017.

Other current liabilities (Note-32) consists mainly of advances from customers and others and Statutory dues. The main reasons for increase of other current liabilities is due to increase in advance received for the implementation of DDUGJY scheme of the GOI from ₹ 388.87 crore as on 31.03.2016 to ₹ 597.75 crore as on 31.03.2017 and increase in statutory dues from ₹ 298.95 crore as on 31.03.2016 to ₹ 391.06 crore as on 31.03.2017.

Current liabilities-provisions (Note-33) mainly consist of provisions for employee benefits, provision for obligations incidental to land acquisition, provision for tariff adjustment and other provisions. As at 31.03.2017, Company had outstanding current liabilities-provisions of ₹ 7,964.92 crore as against ₹ 6,775.69 crore as at 31.03.2016.

The increase in current liabilities-provisions is mainly due to increase in Provision for Employee benefits from ₹ 1,240.78 as on 31.03.2016 to ₹ 2,388.05 crore as on 31.03.2017. The increase in provision for employee benefits is due to provision for pay revision of the employees of the company which is due w.e.f. 1<sup>st</sup> January 2017. Department of Public Enterprises, has constituted the 3<sup>rd</sup> Pay Revision Committee to review the structure of pay scales and allowances/benefits of various categories of Central Public Sector Enterprises and suggest changes after taking in to account

## 41<sup>st</sup> Annual Report 2016-17



7<sup>th</sup> Central Pay Commission recommendations applicable to central government employees. The recommendations of the committee have been submitted and guidelines are yet to be issued by DPE. Pending issuance of the same, provision for the year amounting to ₹ 260.24 crore has been made towards pay revision on an estimated basis in line with the recommendations of the 3<sup>rd</sup> Pay Revision Committee. Further, the 3<sup>rd</sup> Pay Revision Committee appointed by the GOI has enhanced the ceiling of gratuity limit from ₹ 0.10 crore to ₹ 0.20 crore. Accordingly, provision for gratuity as at 31 March 2017 has been made for ₹ 614.25 crore considering the enhanced ceiling based on the actuarial report.

As a prudent and conservative policy, provision for tariff adjustment has been created in the books of accounts to the extent of the impact of the challenged issues of the APTEL judgement and the interest thereon, as the appeal filed by the CERC with the Hon'ble Supreme Court is still pending for disposal and the CERC tariff orders are subject to the outcome of these appeals. Accordingly, provision of ₹ 98.88 crore (previous year ₹ 145.28 crore) has been made during the year and in respect of some of the stations, an amount of ₹ 162.49 crore (previous year ₹ 154.51 crore) has been written back.

Other provisions include ₹ 68.24 crore (previous year ₹ 65.35 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, ₹ 640.25 crore (previous year ₹ 496.44 crore) towards provision for cases under litigation and ₹ 1.81 crore (previous year ₹ 1.87 crore) towards provision for shortage in fixed assets on physical verification pending investigation.

## 9 Deferred Revenue (Note-35)

Deferred revenue consists of three items detailed as under:

₹ Crore

Deferred revenue on account of	As at March 31	
	2017	2016
Advance Against Depreciation (AAD)	247.02	279.94
Income from foreign currency fluctuation	1,376.67	1,642.07
Government Grants	497.45	125.33
<b>Total</b>	<b>2,121.14</b>	<b>2,047.34</b>

Advance Against Depreciation (AAD) was an element of tariff provided under the CERC Tariff Regulations for the period 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 EAC of the 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. Accordingly, the amount of AAD considered as deferred revenue in earlier years is included in sales, to the extent depreciation recovered in tariff during the year is lower than corresponding depreciation charged in accounts. Thus, an amount of ₹ 32.92 crore (previous year ₹ 129.26 crore) has been recognized as sales during the year ended March 31, 2017.

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 fixed assets, which is recoverable from the customers in future years as per 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 total equity and liabilities.

Government grants include ₹ 497.14 crore (previous year ₹ 125.00 crore) received from Solar Energy Corporation of India under MNRE Scheme for setting up 1,000 MW of grid connected solar PV power projects.

## 10 Cash flows

Cash & cash equivalents and cash flows on various activities is given below:

₹ Crore

	FY 2016-17	FY 2015-16
<b>Opening cash &amp; cash equivalents</b>	<b>1,372.40</b>	<b>280.65</b>
Net cash from operating activities	20,301.37	23,987.38
Net cash used in investing activities	(24,718.82)	(18,346.09)
Net cash flow from financing activities	3,202.23	(4,549.62)
Exchange difference arising from translation of foreign currency cash and cash equivalents	(0.06)	0.08
Change in cash and cash equivalents	(1,215.28)	1,091.75
<b>Closing cash &amp; cash equivalents</b>	<b>157.12</b>	<b>1,372.40</b>



Net cash generated from operating activities was ₹ 20,301.37 crore during the financial year 2016-17 as compared to ₹ 23,987.38 crore in the previous year.

Cash outflows on investing activities arise from expenditure on setting up power projects, investments in joint ventures & subsidiaries and tax outflow on income from investing activities. Cash inflows arise from interest from banks and dividend income from joint ventures and subsidiaries and mutual funds. Cash invested on purchase of fixed assets increased from ₹ 20,373.54 crore in financial year 2015-16 to ₹ 23,530.75 crore in financial year 2016-17. Considering all the investing activities, the net cash used in investing activities was ₹ 24,718.82 crore in financial year 2016-17 as compared to ₹ 18,346.09 crore in the previous year.

During the financial year 2016-17 the Company had an inflow of ₹ 23,821.17 crore from long term borrowings as against ₹ 11,801.22 crore in the previous year and net inflow of ₹ 1,701.06 crore from short term borrowings (Commercial Papers & Cash Credit) as against ₹ 1,299.50 crore in the previous year. Cash used for repayment of long term borrowings during the financial year 2016-17 was ₹ 11,108.46 crore as against ₹ 7,700.74 crore repaid in the previous year. Interest paid during the year was ₹ 6,888.72 crore as compared to ₹ 6,625.16 crore during the previous year. Cash used for paying dividend was ₹ 3,595.03 crore (previous year ₹ 2,762.24 crore) and the dividend tax thereon was ₹ 727.79 crore (previous year ₹ 562.32 crore). Thus, from financing activities during the year, the Company has an inflow of ₹ 3,202.23 crore as against an outflow of ₹ 4,549.62 crore in the previous year.

#### FINANCIAL SUMMARY OF SUBSIDIARY COMPANIES

Your Company has five subsidiary companies as at 31.03.2017 out of which two are wholly owned.

A summary of the financial performance of the subsidiary companies during the financial year 2016-17 based on their audited results is given below:

₹ crore

	Company	NTPC's investment in equity	Total Income	Total comprehensive income/(loss)
1	NTPC Electric Supply Company Ltd. #	0.08	-	(0.18)
2	NTPC Vidyut Vyapar Nigam Limited	20.00	5,261.16	76.43
3	Kanti Bijlee Utpadan Nigam Limited <sup>s</sup>	962.89	416.30	(21.93)
4	Bhartiya Rail Bijlee Company Limited <sup>^</sup>	1,420.54	88.79	7.66
5	Patratu Vidyut Utpadan Nigam Limited <sup>*</sup>	34.58	182.41	(0.07)
	<b>Total</b>	<b>2,438.09</b>	<b>5,948.66</b>	<b>61.91</b>

# Operations of the company are suspended since 1 April, 2015.

<sup>s</sup> Includes share application money pending allotment amounting to ₹ 233.43 crore.

<sup>^</sup> Includes share application money pending allotment amounting to ₹ 247.93 crore.

<sup>\*</sup> Includes share application money pending allotment amounting to ₹ 34.50 crore.

#### FINANCIAL SUMMARY OF JOINT VENTURE COMPANIES

Your Company has interests in the following joint venture companies. Proportion of ownership and financial performance of the companies for the financial year 2016-17 are given below:

₹ crore

Sl.	Company	NTPC's interest (Ex. Share application Money) (%)	NTPC's investment in equity (net of impairment)	Total Income	Total comprehensive income/(loss)
<b>A. Joint Venture Companies incorporated in India</b>					
1	Utility Powertech Ltd. @	50.00	1.00	742.88	18.85
2	NTPC-GE Power Services Pvt. Ltd.	50.00	3.00	241.68	0.53
3	NTPC-SAIL Power Company Ltd. *	50.00	490.25	2,630.40	386.78
4	NTPC Tamil Nadu Energy Company Ltd. !	50.00	1,410.00	3,806.70	197.94
5	Ratnagiri Gas And Power Private Ltd.	25.51	191.35	2,385.96	(3,081.13)
6	Aravali Power Company Private Ltd. *	50.00	1,398.51	4,068.86	787.05
7	Meja Urja Nigam Private Ltd. *	50.00	1,166.44	-	(0.09)
8	NTPC BHEL Power Projects Private Ltd.	50.00	21.32	643.15	(76.92)
9	BF-NTPC Energy Systems Ltd. *	49.00	2.82	-	(0.25)
10	Nabinagar Power Generating Company Private Ltd. #*	50.00	1,353.30	-	(0.29)
11	National High Power Test Laboratory Pvt. Ltd.	20.00	30.40	-	-

## 41<sup>st</sup> Annual Report 2016-17

Management Discussion and Analysis | Annexure - I to Directors' Report



12	Transformers & Electricals Kerala Ltd.	44.60	31.34	186.96	1.06
13	Energy Efficiency Services Ltd.	31.70	146.50	1,293.29	61.24
14	CIL NTPC Urja Private Ltd.	50.00	0.08	-	-
15	Anushakti Vidhyut Nigam Ltd.*	49.00	0.05	-	-
16	Hindustan Urvarak and Rasayan Limited	33.28	5.03	-	(4.82)
<b>B. Joint Venture Companies incorporated outside India</b>					
17	Trincomalee Power Company Limited, Srilanka	50.00	15.20	0.76	0.24
18	Bangladesh -India Friendship Power Company Private Ltd.	50.00	134.20	-	-
<b>Total</b>		<b>6,400.79</b>	<b>16,000.64</b>	<b>(1,709.81)</b>	

\* Financial statements are audited.

@ excluding ₹ 1 crore equity issued as fully paid bonus shares

! including share application money pending allotment of ₹ 24.39 crore

# including share application money pending allotment of ₹ 164 crore

As may be seen, out of 18 joint venture companies considered for consolidation, 9 companies listed at Sl. No.1 to 6, 8, 12 and 13 are operational with 7 of them registered total comprehensive income of ₹ 1453.45 crore and balance 2 operational companies have suffered a total comprehensive loss of ₹ 3,158.05 crore in the current financial year. 9 non-operational companies have incurred a total comprehensive loss of ₹ 5.21 crore.

## Consolidated Financial Results of NTPC Ltd.

A brief summary of the results on a consolidated basis is given below:

₹ Crore

	FY 2016-17	FY 2015-16
Total revenue	83,047.64	74,484.00
Profit before Tax	13,760.55	10,617.92
Profit for the year	10,713.94	10,780.73
Other comprehensive income for the year, net of income tax	(212.85)	(55.30)
<b>Total comprehensive income for the year</b>	<b>10,501.09</b>	<b>10,725.43</b>

## 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

(Gurdeep Singh)  
Chairman & Managing Director  
DIN: 00307037

Place: New Delhi

Date: 4<sup>th</sup> August, 2017





NTPC's Koldam Hydro Power Project  
(4 x 200 MW)  
Dedicated to the Nation  
by

**Shri Narendra Modi**  
Prime Minister

In the august presence of  
**Acharya Devvrat**  
Governor, Himachal Pradesh

**Shri Virbhadra Singh**  
Chief Minister, Himachal Pradesh

**Shri Piyush Goyal**  
Union Minister of State (I/C) for Power,  
Coal, New & Renewable Energy and Mines

**Shri Anurag Singh Thakur**  
Member of Parliament

**Shri Ram Swaroop Sharma**  
Member of Parliament

**Shri Anand Sharma**  
Member of Parliament

Mandi, Himachal Pradesh  
18 October 2016

SHRI NARENDRA MODI, HON'BLE PRIME MINISTER OF INDIA DEDICATING 800MW NTPC-KOLDAM HPP TO THE NATION

## REPORT ON CORPORATE GOVERNANCE

For NTPC, Corporate governance is a process of creating and enhancing long-term sustainable value for its stakeholders through a business process based on conscience, openness, fairness, professionalism and accountability.

### 1. CORPORATE GOVERNANCE PHILOSOPHY

Our Corporate Governance philosophy has been scripted as under:

"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."

Our corporate structure, business and disclosure practices have been aligned with our Corporate Governance Philosophy. Transparency, accountability, fairness and intensive interaction with stakeholders are integral to our functioning. We believe in system driven performance and performance oriented systems in order to create sustainable wealth for all our stakeholders.

### 2. THE BOARD OF DIRECTORS

The Board of Directors is entrusted with the ultimate responsibility of the management, general affairs, direction and performance of the Company. The Board of Directors function in accordance with the powers delegated under the Companies Act, 2013, Articles of Association, Maharatna Guidelines issued by DPE vide Office Memorandum dated 19<sup>th</sup> May, 2010 and other guidelines issued by the Government of India from time to time, as may be applicable on 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 per the provisions of the Articles of Association of the Company, the strength of our Board shall not be less than four Directors or more than twenty Directors. The Article of Association further provide that the power to appoint Directors vests with the President of India.

SEBI (Listing Obligations & Disclosure Requirements) Regulations, 2015, as amended from time to time, (hereinafter referred as SEBI LODR) stipulate that the Board of Directors of the company shall have an optimum combination of executive and non-executive

directors with at least one woman director and not less than fifty percent of the Board of Directors comprising non-executive directors. Presently, the sanctioned strength of the Board of Directors is as under:

- (i) Seven Functional Directors including the Chairman & Managing Director,
- (ii) Two Government Nominee Directors and
- (iii) Nine Independent Directors as per the requirement of the SEBI LODR.

However, against the sanctioned strength, as on 31<sup>st</sup> March 2017, the Board comprised twelve Directors out of whom seven were whole-time Directors, including the Chairman & Managing Director, two Government Nominee Directors and three Independent Directors including one Woman Director. Details of the Board of Directors are as follows:

Sl. No.	Names of Directors	Designation
1	Shri Gurdeep Singh	Chairman & Managing Director
2	Shri A. K. Jha	Director (Technical)
3	Shri S. C. Pandey	Director (Projects)
4	Shri K. Biswal	Director (Finance)
5	Shri K. K. Sharma	Director (Operations)
6	Shri Saptarshi Roy	Director (HR)
7	Shri A.K.Gupta	Director (Commercial)
8	Dr. Pradeep Kumar Joint Secretary & Financial Advisor, Ministry of Power, Government of India	Govt. Nominee Director
9	Shri Aniruddha Kumar Joint Secretary (Thermal), Ministry of Power, Government of India	Govt. Nominee Director
10	Shri Rajesh Jain	Independent Director
11	Dr. Gauri Trivedi	Independent Woman Director
12	Shri S. Chander	Independent Director

The number of independent directors during the financial year 2016-17 was insufficient as compared to



the number of independent directors required under SEBI LODR and Companies Act 2013. However, between 22/6/2016 to 28/7/2016, number of independent Directors was as per the requirement of Companies Act, 2013.

As the power to appoint the Directors on the Board vests with the President of India, the Company has been, from time to time, requesting Ministry of Power to appoint requisite number of independent directors on the Board.

None of Directors of the Company is related to each other.

## 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.

## 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 Board Meetings

The meetings of the Board of Directors are convened by giving appropriate advance notices. To address any urgent needs, sometimes Board meetings are also

called at a shorter notice subject to observance of statutory provisions. In case of urgency, resolutions are also passed through circulation, if permitted under the statute.

Detailed agenda notes, management reports and other explanatory statements are normally circulated at least a week before the Board Meeting in a defined format amongst the Board Members for facilitating meaningful, informed and focused discussions in the meeting. In exceptional cases, where it is not possible to circulate documents in advance, the same is tabled during the meeting with the approval of Chairman & Managing Director and with the consent of a majority of the Directors present in the Meeting, including at least one Independent Director present at the meeting. Agenda for the meetings are sent through electronic mode ensuring encryption & password protection.

The meetings of the Board of Directors are generally held at the Company's registered office at New Delhi.

During the financial year 2016-17, fourteen (14) meetings of the Board of Directors were held on 28<sup>th</sup> April 2016, 30<sup>th</sup> May 2016, 22<sup>nd</sup> June 2016, 29<sup>th</sup> July 2016, 22<sup>nd</sup> August 2016, 3<sup>rd</sup> September 2016, 4<sup>th</sup> October 2016, 28<sup>th</sup> October 2016, 30<sup>th</sup> November 2016, 5<sup>th</sup> January 2017, 3<sup>rd</sup> February 2017, 8<sup>th</sup> February 2017, 22<sup>nd</sup> March 2017 and 31<sup>st</sup> March 2017. The maximum interval between any two meetings was well within the permissible gap of 120 days.

The table below shows attendance of the Board members in Board meetings held during the FY 2016-17 and their attendance at last AGM:



Names of Directors	Meeting Date(s)	28/4/2016	30/5/2016	22/6/2016	29/7/2016	22/8/2016	3/9/2016	4/10/2016	28/10/2016	30/11/2016	5/1/2017	3/2/2017	8/2/2017	22/3/2017	31/3/2017	Whether Attended Last AGM	No. of Board Meetings held during the tenure	Total Attendance	% of Attendance of Board Meeting
Shri Gurdeep Singh Chairman & Managing Director		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Y	14	14	100%
Shri A. K. Jha Director (Technical)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X	✓	✓	✓	Y	14	13	93%
Shri U. P. Pani <sup>1</sup> Director (HR)		✓	✓	X	✓	✓	✓	✓	✓	-	-	-	-	-	-	Y	8	7	88%
Shri Prashant Mehta <sup>2</sup> Independent Director		✓	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	4	4	100%
Dr. Pradeep Kumar, Joint Secretary & Financial Advisor, MoP & Govt. Nominee Director		✓	✓	✓	✓	✓	✓	✓	X	✓	✓	✓	✓	✓	✓	Y	14	13	93%
Shri S. C. Pandey Director (Projects)		✓	✓	✓	✓	✓	✓	✓	✓	X	✓	X	✓	✓	✓	Y	14	12	86%
Shri K. Biswal Director (Finance)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Y	14	14	100%
Shri K. K. Sharma Director (Operations)		✓	✓	✓	✓	✓	✓	✓	✓	✓	X	X	✓	✓	✓	Y	14	12	86%
Shri Rajesh Jain Independent Director		X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	N	14	13	93%
Dr. Gauri Trivedi Independent Director		✓	✓	X	✓	✓	X	✓	✓	✓	✓	✓	✓	✓	✓	Y	14	11	76%
Shri Aniruddha Kumar Joint Secretary (Thermal), MoP & Govt. Nominee Director		✓	✓	✓	✓	✓	✓	X	✓	✓	✓	✓	✓	✓	✓	Y	14	13	93%
Shri S. Chander <sup>3</sup> Independent Director		-	-	-	✓	✓	✓	✓	✓	X	✓	✓	✓	✓	✓	Y	11	10	91%
Shri Saptarshi Roy <sup>4</sup> Director (HR)		-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	✓	-	6	6	100%
Shri A.K. Gupta <sup>5</sup> Director (Commercial)		-	-	-	-	-	-	-	-	-	-	-	✓	✓	✓	-	3	3	100%

1. Ceased to be Director w.e.f. 31<sup>st</sup> October 2016
2. Ceased to be Director w.e.f. 29<sup>th</sup> July, 2016
3. Appointed as Director w.e.f. 22<sup>nd</sup> June, 2016
4. Appointed as Director w.e.f. 1<sup>st</sup> November 2016
5. Appointed as Director w.e.f. 3<sup>rd</sup> February, 2017

## 41<sup>st</sup> Annual Report 2016-17

Report on Corporate Governance | Annexure - II to Directors' Report

Details of other Directorships & Membership/Chairmanship of Committees of Directors as on 31<sup>st</sup> March, 2017 are as follows:

Names of Directors	No. of other Directorship	No. of Committee membership*	
		As Chairman	As member
<b>Functional Directors</b>			
Shri Gurdeep Singh	4	-	-
Shri A. K. Jha	6	-	2
Shri S. C. Pandey	7	2	2
Shri K. Biswal	7	2	3
Shri K. K. Sharma	8	-	2
Shri Saptarshi Roy	2	-	1
Shri A.K.Gupta	2	-	1
<b>Govt. Nominee Directors</b>			
Dr. Pradeep Kumar	1	-	2
Shri Aniruddha Kumar	2	-	-
<b>Independent Directors</b>			
Shri Rajesh Jain	10	-	2
Dr. Gauri Trivedi	3	-	2
Shri S. Chander	2	3	-

\* Membership of only Stakeholders' Relationship Committee and Audit Committee has been considered (including NTPC).

## 2.5 Board Independence:

All the Independent Directors have given the declaration that they meet the criteria of independence as per the provisions of the Companies Act, 2013 and SEBI LODR.

## 2.6 Performance Evaluation of Board Members:

Ministry of Corporate Affairs (MCA) vide General Circular dated 5<sup>th</sup> June, 2015 has exempted Government Companies from the provisions of Section 178 (2) which requires performance evaluation of every director by the Nomination & Remuneration Committee. Similar exemption has been requested from SEBI under the SEBI LODR, which is under consideration. 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. Further, Deptt. of Public Enterprise (DPE) has already laid down a mechanism for performance appraisal of all functional directors.

It is worth mentioning that, NTPC enters into Memorandum of Understanding (MoU) with Government of India each year, demarcating key performance parameters for the company. The MoU targets are internalized and cascaded down and form an integral part of the performance appraisal of the individuals. The internal MoU covers all operational and performance parameters like – Plant Performance and Efficiency, Financial targets, Cost cutting targets, Environment, Welfare, Community development and any other relevant factor. The performances of the Company and Board of Directors are evaluated by the Department of Public Enterprise vis-à-vis MoU entered into with the Government of India.

## 2.7 Separate Meeting of Independent Directors:

As per the Guidelines issued by DPE on Role & Responsibilities of Non-Official Directors (Independent Directors) of CPSEs, Code of Conduct for Independent Directors prescribed under the Companies Act, 2013 and Regulation 25 of SEBI LODR, a separate meeting of the Independent Directors need to be held at least once in a year to, inter-alia:

- review the performance of the non-independent directors and the Board as a whole;
- review the performance of the Chairperson of the Company, taking into account the views of executive directors and non-executive directors; and
- assess the quality, quantity and timeliness of flow of information between the management of the Company and the Board of Directors that is necessary for the Board to effectively and reasonably perform their duties.

DPE through Office Memorandum No. F. No. 16(4)/2012-GM dated 20.06.2013, had amended the Roles & Responsibilities of non-official Directors on the Board of CPSEs to effect that the separate meeting of the Independent Directors shall not review the performance of the Directors or of the Board.

A separate meeting of Independent Directors was held on 14<sup>th</sup> December, 2016. The meeting was attended by all three Independent Directors. In this meeting, independent directors assessed the performance of the Board as a whole and also the quality, quantity and timeliness of flow of information between the Company management and the Board which is necessary for the Board to effectively and reasonably perform their duties. Considering the above office memorandum of

# 41<sup>st</sup> Annual Report 2016-17

Report on Corporate Governance | Annexure - II to Directors' Report



the DPE and evaluation methodology prescribed by DPE for evaluation of functional Directors, the performance of the Functional Directors was not evaluated by the Independent Directors in their Separate meeting.

## 2.8 Information placed before the Board of Directors:

The Board has complete access to any information within the Company to be able to take informed decisions, exercise control over the organisation as well as to review the progress of implementation of the strategic decisions and corporate plans formulated by the Board. Information provided to the Board normally includes:

- Annual operating plans and budgets and any updates.
- Capital Budgets and any updates.
- Quarterly financial results.
- Annual Accounts, Directors' Report.
- Major investments, formation of subsidiaries and Joint Ventures, Strategic Alliances, etc.
- Minutes of meetings of Audit Committee 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 CMD, 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.
- 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.

## 3. COMMITTEES OF THE BOARD OF DIRECTORS

With a view to ensure effective decision making, the Board of Directors has constituted various Committees to have focused attention on crucial issues. Some of these committees have been constituted voluntarily even though there is no legal requirement under the Companies Act, 2013 or SEBI LODR. The Board has established the following major Committees:-

1. Audit Committee.
2. Stakeholders' Relationship Committee
3. Remuneration Committee for PRP
4. Nomination and Remuneration Committee
5. Committee on Management Controls
6. Project Sub-Committee
7. Investment/Contribution Sub-Committee
8. Contracts Sub-Committee
9. Committee of Functional Directors for Contracts
10. Committee of the Board for Allotment and Post-Allotment activities of NTPC's Securities
11. Committee of Directors on Corporate Social Responsibility & Sustainability
12. Committee for Vigilance Matters
13. Exchange Risk Management Committee
14. Risk Management Committee

### 3.1 Audit Committee

The composition, quorum, scope, etc. of the Audit Committee are in line with the Companies Act, 2013, SEBI LODR and Guidelines on Corporate Governance as issued by Department of Public Enterprises, Govt. of India.



### Composition

As on 31<sup>st</sup> March 2017, the Audit Committee comprised the following members:-

S. No.	Name of the Member	Designation
1	Shri Seethapathy Chander	Independent Director, Chairman of the Committee
2	Dr. Pradeep Kumar	Government Nominee
3	Shri Rajesh Jain	Independent Director
4	Dr. Gauri Trivedi	Independent Director

Director (Finance), Head of Internal Audit Department and Senior Executives are invited to the Audit Committee Meetings for interacting with the members of the Committee. The Statutory Auditors and Cost Auditors of the Company are also invited to the meetings of the Audit Committee while discussing financial statements & 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:-

- Before commencement of Audit, discussion with the auditors about the nature and scope of audit and after the completion of Audit, deliberation on area of concern.
- Provide an open avenue of communication between the independent auditors, internal auditors and the Board of Directors.
- Approval or any subsequent modification of transactions of the company with related parties.
- Scrutiny of inter-corporate loans and investments.
- Reviewing, with the management, the quarterly financial statements before submission to the Board for approval.
- 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:
  - 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;
  - Changes, if any, in accounting policies and practices and reasons for the same;
  - Major accounting entries involving estimates based on the exercise of judgment by management;
  - Significant adjustments made in the financial statements arising out of audit findings;
  - Compliance with listing and other legal requirements relating to financial statements;
  - Disclosure of related party transactions;
  - Qualifications in the draft audit report.
- Noting the appointment and removal of independent auditors. Recommending audit fee of independent auditors and also approval for payment for any other service.
- Recommending to the Board the appointment and remuneration of the cost auditors of the Company.
- Review of observations of C&AG including status of Government Audit paras.
- 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.
- Valuation of undertakings or assets of the company, wherever it is necessary
- Evaluation of internal financial controls and risk management systems.
- 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.
- To review the functioning of the Whistle Blower mechanism.
- 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.
- To review the follow up action taken on the recommendations of Committee on Public Undertakings (COPU) of the Parliament.
- Review of:
  - Management discussion and analysis of financial condition and results of operations;

## 41<sup>st</sup> Annual Report 2016-17

Report on Corporate Governance | Annexure - II to Directors' Report



- 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. 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 Guidelines issued by DPE.

#### Meetings and Attendance

During the financial year 2016-2017, six (6) meetings of the Audit Committee were held and details including attendance of members of the Committee are as follows:

Name of Directors	28/4/2016	30/5/2016	29/7/2016	22/8/2016	28/10/2016	8/2/2017	Total Meeting held during tenure	No. of Meetings Attended	% of attendance at the meeting
Shri Prashant Mehta <sup>1</sup>	✓	✓	✓	-	-	-	3	3	100%
Shri S. Chander <sup>2</sup>	-	-	-	✓	✓	✓	3	3	100%
Dr. Pradeep Kumar	✓	✓	✓	✓	X	X	6	4	67%
Dr. Gauri Trivedi	✓	✓	✓	✓	✓	✓	6	6	100%
Shri Rajesh Jain	X	✓	✓	✓	✓	✓	6	5	83%

1. Ceased to be Director w.e.f. 29<sup>th</sup> July, 2016 2. Appointed w.e.f. 22<sup>nd</sup> June, 2016

Shri S. Chander, Chairman of the Audit Committee was present in the Annual General Meeting held on 20.09.2016, to answer the queries of the shareholders.

#### 3.2 Stakeholders' Relationship Committee

This Committee 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.

#### Constitution

The Committee has been constituted with the membership of:

- i) Two non-Executive Directors
- ii) Director (Finance),
- iii) Director (HR)

### Composition

As on 31<sup>st</sup> March 2017, this committee was constituted with the following Directors:

Dr. Gauri Trivedi	Independent Director & Chairman of the Committee
Shri Saptarshi Roy	Director (HR)
Shri K. Biswal	Director (Finance)
Shri Rajesh Jain	Independent Director

### Meeting and Attendance

During the financial year 2016-17, four (4) meetings of the Stakeholders' Relationship Committee were held and details including attendance of members of the Committee are as follows:

Name	28/4/2016	28/7/2016	28/10/2016	8/2/2017	Total Meetings held during the tenure	Meetings Attended	% of attendance at the meeting
Shri Prashant Mehta <sup>1</sup>	✓	✓	-	-	2	2	100%
Dr. Gauri Trivedi	✓	✓	✓	✓	4	4	100%
Shri U. P. Pani <sup>2</sup>	✓	✓	✓	-	3	3	100%
Shri K. Biswal	✓	✓	✓	✓	4	4	100%
Shri Rajesh Jain	-	-	✓	✓	2	2	100%
Shri S. Roy <sup>3</sup>	-	-	-	✓	1	1	100%

1. Ceased to be director w.e.f. 29<sup>th</sup> July, 2016.

2. Ceased to be Director w.e.f. 31<sup>st</sup> October 2016.

3. Appointed as Director w.e.f. 1<sup>st</sup> November 2016.

### Name and designation of Compliance Officer

The Board of Directors has appointed Shri K.P.Gupta, Company Secretary as the Company Secretary & Compliance Officer in terms of Regulation 6 of SEBI LODR w.e.f. 22<sup>nd</sup> March, 2017. Shri A.K.Rastogi was Company Secretary & Compliance Officer upto 28<sup>th</sup> February, 2017.

### Investor Grievances

The Company has always valued its investor's relationship. During the financial year ending 31<sup>st</sup> March 2017, Company has attended its investor grievances expeditiously except for the cases constrained by disputes or legal impediments. The details of the complaints received, resolved and disposed off during the year are as under:

Particulars	Opening Balance	Received	Resolved	Pending
<b>Complaints relating to</b>				
Equity Shares	0	3308	3308	0
Tax Free Bonds – 2013	0	145	145	0
Tax Free Bonds – 2015	0	114	114	0
Bonus Debentures	0	509	509	0

### Number of pending share transfers

As on 31<sup>st</sup> March, 2017, 144 requests for transfer of shares were pending which were processed in meeting of Committee for allotment & post allotment activities held on 6<sup>th</sup> April, 2017.

Share Transfers have been affected within 30 days from the date of lodgement of valid transfer deeds as prescribed under SEBI LODR. A certificate to this effect duly signed by a Practising Company Secretary was furnished to Stock Exchanges.

### 3.3 Remuneration Committee for PRP

As per the provisions of the DPE Guidelines, a Remuneration Committee has been constituted to

decide the annual bonus/variable pay pool and policy for its distribution within the limits prescribed under the DPE guidelines.

As on 31<sup>st</sup> March 2017, the Committee comprised the following Members:

Dr. Gauri Trivedi	Independent Director
Dr. Pradeep Kumar	Government Nominee
Shri Rajesh Jain	Independent Director
Shri Seethapathy Chander	Independent Director

Director (Human Resources) and Director (Finance) are the permanent invitees to the Meeting of the Remuneration Committee for PRP.

## 41<sup>st</sup> Annual Report 2016-17

Report on Corporate Governance | Annexure - II to Directors' Report



### Meeting and Attendance

One meeting of Remuneration Committee for PRP was held and details including attendance of members of the Committee are as follows:

Names of Members	28/7/2016	% Attendance at the meeting
Shri Prashant Mehta	✓	100%
Dr. Pradeep Kumar	✓	100%
Dr. Gauri Trivedi	✓	100%
Shri Rajesh Jain	X	0%
Shri S.Chander*	-	-

\*No meeting of the Committee was held after his induction in the Committee.

### 3.4 Nomination and Remuneration Committee

As per the requirements of Section 178 of the Companies Act, 2013 and Regulation 19 of SEBI LODR, a Nomination & Remuneration Committee of the Directors has been constituted. The scope of the Committee is as per aforesaid provisions.

Being a Central Public Sector Undertaking, as per the Articles of Association, the appointment, tenure and remuneration of Chairman & Managing Director, Whole Time Directors and other Directors, are done by the Government of India. Further the remuneration of Functional Directors and employees of the Company is fixed as per extant guidelines issued by Department of Public Enterprises (DPE), from time to time. Further, 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 Director is not entitled to get any remuneration/sitting fee from the Company.

Ministry of Corporate Affairs (MCA) vide notification dated June 5, 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. Similar exemption has been requested from SEBI under the SEBI LODR, which is under consideration.

As on 31<sup>st</sup> March 2017, the Committee comprised the following Members:

Shri Gurdeep Singh	Chairman & Managing Director
Shri Rajesh Jain	Independent Director
Dr. Gauri Trivedi	Independent Director
Shri S.Chander	Independent Director

Chairman of the Committee is senior most Independent Director present in the Meeting.

### Meeting and Attendance

No meeting of Nomination and Remuneration Committee was held during 2016-17.

### 3.5 Committee on Management Controls

This committee has been constituted for establishing transparent and effective system of internal monitoring. This Committee, inter alia, reviews significant deviations in project implementation and construction, operation and maintenance budgets etc.

As on 31<sup>st</sup> March 2017, the Committee comprised the following members:

Shri Seethapathy Chander	Independent Director
Shri K. Biswal	Director (Finance)
Shri K.K. Sharma	Director (Operations)
Dr. Pradeep Kumar	Government Nominee Director

### Meeting and Attendance

One meeting of the Committee on Management Controls was held and details including attendance of members of the Committee are as follows:

Name	26/10/2016	% Attendance at the meeting
Shri Seethapathy Chander	✓	100%
Dr. Pradeep Kumar	✓	100%
Shri K. Biswal	✓	100%
Shri K. K. Sharma	✓	100%

### 3.6 Project Sub-Committee

This Committee examines and makes recommendations to the Board on proposals for Investment in New/ Expansion Projects and approves Feasibility Reports of new projects.

As on 31<sup>st</sup> March 2017, the Committee comprised the following members:

Shri A.K. Jha	Director (Technical)
Shri S.C. Pandey	Director (Projects)
Shri K. Biswal	Director (Finance)
Shri K.K. Sharma	Director (Operations)
Dr. Pradeep Kumar	Government Nominee
Shri Rajesh Jain	Independent Director

### Meeting and Attendance

During 2016-17, Seven (7) meetings of the Projects Sub-Committee of the Board of Directors was held and details including attendance of members of the Committee are as follows:



Name	30/5/2016	29/7/2016	22/8/2016	28/10/2016	30/11/2016	5/1/2017	22/3/2017	Total Meetings held during the tenure	Meetings Attended	% Attendance at the meeting
Shri Gurdeep Singh <sup>1</sup>	✓	✓	✓	✓	✓	-	-	5	5	100%
Shri A.K. Jha	✓	✓	✓	✓	✓	✓	✓	7	7	100%
Shri U. P. Pani <sup>2</sup>	✓	✓	✓	-	-	-	-	3	3	100%
Dr. Pradeep Kumar	✓	✓	✓	X	✓	✓	✓	6	5	86%
Shri S. C. Pandey	✓	✓	✓	✓	X	✓	✓	6	5	86%
Shri K. K. Sharma	✓	✓	✓	✓	✓	X	✓	6	5	86%
Shri Aniruddha Kumar <sup>1</sup>	✓	✓	✓	✓	✓	-	-	5	5	100%
Shri Rajesh Jain	✓	✓	✓	✓	✓	✓	✓	7	7	100%
Shri. K. Biswal	✓	✓	✓	✓	✓	✓	✓	7	7	100%

1. Ceased to be member of the Committee consequent upon resolution passed in the 440<sup>th</sup> Board meeting held on 30<sup>th</sup> Nov. 2016.

2. Ceased to be hold charge of Director (Commercial) w.e.f. 2/9/2016.

### 3.7 Investment/Contribution Committee

The terms of reference of Investment/Contribution Committee of the Board is to approve deployment of surplus funds as per Govt. guidelines issued from time to time and also to approve contribution/donation for national, public, benevolent or charitable cause.

As on 31<sup>st</sup> March 2017, the composition of the Committee was as under:

Shri Gurdeep Singh	Chairman & Managing Director
Shri K. Biswal	Director (Finance)
Shri K.K. Sharma	Director (Operations)

In case of investment of funds and contribution matters, Director (HR) and in case of Commercial matters, Director (Commercial) are co-opted in the meeting.

#### Meeting and Attendance

No meeting of the Investment/Contribution Committee of the Board of Directors was held during 2016-17.

### 3.8 Committee of Functional Directors for Contracts

This Committee has been constituted for award of works or purchase contracts or incurring of commitments exceeding ₹150 crore but not exceeding ₹250 crore.

As on 31<sup>st</sup> March 2017, the Committee comprised all the Functional Directors including the Chairman & Managing Director as under:

Shri Gurdeep Singh	Chairman & Managing Director
Shri A.K. Jha	Director (Technical)
Shri S.C. Pandey	Director (Projects)
Shri K. Biswal	Director (Finance)
Shri K.K. Sharma	Director (Operations)
Shri S.Roy	Director (HR)
Shri A.K.Gupta	Director (Commercial)

#### Meeting and Attendance

During 2016-17, Six (6) meetings of the Committee of the Board of Directors were held and details including attendance of members of the Committee are as follows:

Name of the members	No. of Meetings						No. of Meetings held during tenure	Total Meetings attended	% Attendance at the meeting
	7/5/2016	22/6/2016	28/7/2016	3/9/2016	5/1/2017	8/2/2017			
Shri Gurdeep Singh	✓	✓	✓	✓	✓	✓	6	6	100%
Shri A. K. Jha	✓	✓	✓	✓	✓	✓	6	6	100%
Shri U. P. Pani <sup>1</sup>	✓	X	✓	✓	-	-	4	3	75%
Shri S. C. Pandey	✓	✓	✓	✓	✓	✓	6	6	100%
Shri. K. Biswal	✓	✓	✓	✓	✓	✓	6	6	100%
Shri K. K. Sharma	✓	✓	X	✓	X	✓	6	4	67%
Shri S. Roy <sup>2</sup>	-	-	-	-	✓	✓	2	2	100%
Shri A. K. Gupta <sup>3</sup>	-	-	-	-	-	✓	1	1	100%

1. Ceased to be Director w.e.f. 30<sup>th</sup> October, 2016 . 2. Appointed as Director w.e.f. 1<sup>st</sup> November, 2016 3. Appointed as Director w.e.f. 3<sup>rd</sup> February 2017.

## 41<sup>st</sup> Annual Report 2016-17

Report on Corporate Governance | Annexure - II to Directors' Report

### 3.9 Contracts Sub-Committee

This Committee approves award of works or purchase contracts or incurring commitments of value exceeding ₹ 250 crore but not exceeding ₹ 500 crore, Consultancy assignments including foreign consultancy assignments exceeding ₹ 5 crore each and appointment of sponsor/ agents for overseas consultancy assignments involving sponsorship/ agency commission exceeding ₹ 5 crore each.

As on 31<sup>st</sup> March 2017, the Contracts Sub-Committee was constituted as under:

Shri Gurdeep Singh	Chairman & Managing Director
Shri A.K. Jha	Director (Technical)
Shri S.C. Pandey	Director (Projects)

Shri K. Biswal	Director (Finance)
Shri K.K. Sharma*	Director (Operations)
Dr. Pradeep Kumar	Government Nominee
Shri Aniruddh Kumar	Government Nominee
Dr. Gauri Trivedi	Independent Director

\*Director (Operations) is the additional member for all matters relating to award of contracts for import of coal.

#### Meeting and Attendance

During 2016-17, five (5) meetings of the Contract Sub-Committee of the Board of Directors were held and details including attendance of members of the Committee are as follows:

Name of Members	28/4/2016	4/10/2016	30/11/2016	5/1/2017	8/2/2017	No. of Meetings held during tenure	Total Meetings attended	% Attendance at the meeting
Shri Gurdeep Singh	✓	✓	✓	✓	✓	5	5	100%
Shri A. K. Jha	✓	✓	✓	✓	✓	5	5	100%
Dr. Pradeep Kumar	✓	✓	✓	✓	✓	5	5	100%
Shri S. C. Pandey	✓	✓	X	✓	✓	5	4	80%
Shri K. Biswal	✓	✓	✓	✓	✓	5	5	100%
Shri Aniruddha Kumar	✓	X	✓	✓	✓	5	4	80%
Dr. Gauri Trivedi <sup>1</sup>	-	-	-	-	✓	1	1	100%

1. Inducted as member of Committee w.e.f. 8<sup>th</sup> February 2017

### 3.10 Committee for Allotment and Post-Allotment Activities of NTPC's Securities

The Committee has been constituted for Allotment and Post-allotment activities of Company's Securities. The scope of work of this committee is 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.

As on 31<sup>st</sup> March 2017, the Committee comprised the following three Members:

Shri A.K. Jha/ Shri S.C. Pandey	Director (Technical)/ Director (Projects)
Shri K. Biswal / Shri K.K. Sharma	Director(Finance)/ Director (Operations)
Shri S.Roy/ Shri A.K.Gupta	Director (Commercial)/ Director (HR)

#### Meeting

During 2016-17, twenty four (24) meetings of the Committee for Allotment and Post-allotment activities of Directors were held.

### 3.11 Corporate Social Responsibility and Sustainability Committee

This Committee has been constituted as per the requirements of Section 135 of the Companies Act, 2013 & DPE guidelines on Sustainability (SD) to formulate and recommend to the Board, Corporate Social Responsibility & Sustainability Policy, to recommend the amount of expenditure to be incurred on the activities specified in the CSR & SD Policy, to monitor the Corporate Social Responsibility Policy of the company and any other matter as the Board may delegate from time to time.

#### Meeting and Attendance

During 2016-17, five (5) meetings of the Committee for CSR & Sustainability were held and details including attendance of members of the Committee are as follows:

Name of Members	28/4/2016	30/5/2016	28/7/2016	5/1/2017	22/3/2017	No. of Meetings held during tenure	Total Meetings attended	% Attendance
Shri Gurdeep Singh	✓	✓	✓	✓	✓	5	5	100%
Shri U. P. Pani <sup>1</sup>	✓	✓	✓	-	-	3	3	100%
Shri Prashant Mehta <sup>2</sup>	✓	✓	✓	-	-	3	3	100%
Shri K. Biswal	✓	✓	✓	✓	✓	5	5	100%
Dr. Pradeep Kumar	✓	✓	✓	✓	✓	5	5	100%
Dr. Gauri Trivedi <sup>3</sup>	-	-	-	✓	✓	2	2	100%
Shri Saptarshi Roy <sup>4</sup>	-	-	-	✓	✓	2	2	100%

1. Ceased to be Director w.e.f. 31<sup>st</sup> October, 2016

2. Ceased to be Director w.e.f. 29<sup>th</sup> July, 2016

3. Appointed as member of CSR Committee w.e.f. 29<sup>th</sup> July 2016

4. Appointed as Director w.e.f. 1<sup>st</sup> November, 2016

### 3.12 Committee for Vigilance Matters

This Committee has been constituted 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.

As on 31<sup>st</sup> March 2017, the Committee comprised the following members:

Shri S.Roy	Director (HR)*
Dr. Gauri Trivedi	Independent Director
Shri Rajesh Jain	Independent Director
In case of Vigilance cases, Chief Vigilance Officer is co-opted.	

\*In case where Director (HR) acts as a Disciplinary Authority, any other whole-time Director as may be decided by the Chairman & Managing Director on case to case basis.

As on 31<sup>st</sup> March 2017, the Committee comprised the following members:

Shri Gurdeep Singh	Chairman & Managing Director
Dr. Pradeep Kumar	Government Nominee Director
Shri K. Biswal	Director (Finance)
Dr. Gauri Trivedi	Independent Director
Shri S.Roy	Director (HR)

NTPC's Policy on CSR & Sustainability can be viewed at the weblink: <http://ntpc.co.in/download/ntpc-policy-csr-sustainability>.

#### Meeting and Attendance :

One meeting of the Committee of the Board of Directors for vigilance matters was held and detail including attendance of members of the Committee are as follows:

Name of Members	No. of Meetings held & Attended during the tenure	% Attendance
	29/7/2016	
Shri U. P. Pani <sup>1</sup>	✓	100%
Shri Prashant Mehta <sup>2</sup>	✓	100%
Dr. Gauri Trivedi	✓	100%
Shri S. Roy*	-	
Shri Rajesh Jain*	-	

1. Ceased to be director w.e.f. 31<sup>st</sup> October, 2016.

2. Ceased to be Director w.e.f. 29<sup>th</sup> July, 2016.

\*No meeting of the Committee was held during his tenure

## 41<sup>st</sup> Annual Report 2016-17

Report on Corporate Governance | Annexure - II to Directors' Report



### 3.13 Exchange Risk Management Committee

This Committee has been constituted 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, hedging proposals etc.

As on 31<sup>st</sup> March, 2017, the Committee comprised the following Members:

Shri Gurdeep Singh	Chairman & Managing Director
Dr. Pradeep Kumar	Government Nominee
Shri K. Biswal	Director (Finance)
Shri A.K.Gupta	Director (Commercial)*
Dr. Gauri Trivedi	Independent Director
Shri S.Chander	Independent Director

\*In the absence of Director (Commercial), either Director (Technical) or Director (Operations) shall be the Member of the Committee.

#### Meeting and Attendance

During 2016-17, four (4) meetings of the Exchange Risk Management Committee of the Board of Directors were held and details including attendance of members of the Committee are as follows:

Name of Members	22/6/2016	3/9/2016	5/1/2017	22/3/2017	No. of Meetings held during tenure	Total Meetings attended	% Attendance
Shri Gurdeep Singh	✓	✓	✓	✓	4	4	100%
Shri. A. K. Jha <sup>1</sup>	-	-	✓	-	1	1	100%
Dr. Pradeep Kumar	✓	✓	✓	✓	4	4	100%
Shri Prashant Mehta <sup>2</sup>	✓	-	-	-	1	1	100%
Shri K. Biswal	✓	✓	✓	✓	4	4	100%
Dr. Gauri Trivedi	X	X	✓	✓	4	2	50%
Shri S. Chander	-	✓	✓	✓	3	3	100%
Shri A. K. Gupta <sup>3</sup>	-	-	-	✓	1	1	100%

1. Shri A.K.Jha was given additional charge of Director (Commercial) from 2<sup>nd</sup> September, 2016 to 2<sup>nd</sup> February, 2017 vide letter dt. 30.09.2016 from the Ministry of Power.

2. Ceased to be Director w.e.f. 29<sup>th</sup> July, 2016.

3. Appointed w.e.f. 3<sup>rd</sup> February, 2017.

### 3.14 Risk Management Committee

Pursuant to Regulation 21 of SEBI LODR, Risk Management Committee has been constituted for risk assessment under the Risk Management Framework, monitor and review risk management plan/ framework as approved by the Board; inform the Board about the risk assessed and action required to be taken/ already taken for mitigating the risks on quarterly basis by the Chief Risk Officer (CRO) and take up any other matter as directed by the Board from time to time.

The Risk Management Framework is being reviewed periodically by the Board. Details on risk management mechanism are given in the Management's Discussion

and Analysis report annexed with the Directors' Report.

As on 31<sup>st</sup> March, 2017, the Committee comprised the following Members:

Shri A.K. Jha	Director (Technical)
Shri S.C. Pandey	Director (Projects)
Shri K.K. Sharma	Director (Operations)
Shri Sharad Anand <sup>1</sup>	RED (Coal Mining)* / *any other Executive Director/ Group General Manager or General Manager- In-charge of the Department as may be nominated by the Chairman & Managing Director.
Shri P.Purkayastha	General Manager-I/c (CP)/ Chief Risk Officer(CRO), Member

1. Ceased to be member of the committee consequent upon superannuation w.e.f 30.04.2017.



## Meeting and Attendance

During 2016-17, two (2) meetings of the Risk Management Committee were held and details including attendance of members of the Committee are as follows:

Name of Members	9/6/2016	14/2/2017	No. of Meetings held during tenure	Total Meetings attended	% Attendance
Shri A.K Jha	✓	✓	2	2	100%
Shri S. C. Pandey	✓	✓	2	2	100%
Shri K. K. Sharma	✓	✓	2	2	100%
Shri S. Roy *	✓	-	1	1	100%
Shri Sharad Anand (RED)	X	X	0	0	-
Shri P. Purkayastha (GM- I/C)	-	✓	1	1	100%

\*{the then ED (CP)}

## REMUNERATION OF DIRECTORS

As already stated under the heading Nomination & Remuneration Committee above, the remuneration of the Functional Directors including that of the Chairman & Managing Director is decided by the Government of India.

The Company makes payment of ₹ 20,000/- as sitting fee for attending each meeting of the Board and Committees of the Board constituted by the Board from time to time to each Independent Director.

Details of remuneration of Functional Directors for the financial year 2016-17 are given below:-

(in ₹)

Name of the Director	Salary	Benefits	Performance Linked Incentives <sup>4</sup>	Total <sup>5</sup>
Shri Gurdeep Singh	4,203,239	2,105,293	365,750	6,674,282
Shri Anil Kumar Jha	2,957,144	1,115,158	1,379,040	5,451,342
Shri Umesh Prasad Pani <sup>1</sup>	6,218,837	985,466	1,292,810	8,497,113
Shri S.C. Pandey	3,171,705	1,585,195	1,147,303	5,904,203
Shri Kulamani Biswal	2,741,877	1,519,586	1,127,771	5,389,234
Shri K. K. Sharma	4,408,407	1,188,361	1,233,528	6,830,296
Shri Saptarshi Roy <sup>2</sup>	1,222,898	187,918	-	1,410,816
Shri A.K.Gupta <sup>3</sup>	472,955	87,177	-	560,132

1. Ceased to be director w.e.f. 31<sup>st</sup> October, 2016.

2. Appointed as director w.e.f. 1<sup>st</sup> November, 2016.

3. Appointed as Director w.e.f. 3<sup>rd</sup> February, 2017.

4. Performance linked incentives paid is based on the incentive

scheme of the Company. The Company has not issued any stock options during the financial year 2016-17.

5. Besides above, Functional Directors are also entitled for medical benefit as per the applicable employees' rules of the company.

Details of payments towards sitting fee to Independent Directors during the financial year 2016-17 are given below:

(in ₹)

Name of Part-time non-official Directors	Sitting Fees (Excluding Service Tax)		Total
	Board Meeting	Committee Meeting	
Shri Prashant Mehta <sup>1</sup>	80,000	2,20,000	3,00,000
Shri Rajesh Jain	2,60,000	3,00,000	5,60,000
Dr. Gauri Trivedi	2,20,000	4,20,000	6,40,000
Shri Seethapathy Chander <sup>2</sup>	2,00,000	2,20,000	4,20,000

1. Ceased to be director w.e.f. 29<sup>th</sup> July, 2016

2. Appointed as Director w.e.f. 22<sup>nd</sup> June, 2016.

## 41<sup>st</sup> Annual Report 2016-17

Report on Corporate Governance | Annexure - II to Directors' Report



## 5. MATERIAL SUBSIDIARY:

The Company has formulated a Policy for determining 'Material' Subsidiaries as per Regulation 16(1)(c) of SEBI LODR. The same is available at the weblink: <http://www.ntpc.co.in/download/policy-determining-material>.

In the year 2016-17, the Company had no 'Material Subsidiary' as defined under Regulation 16(1)(c) of SEBI LODR or the subsidiaries as defined under Guidelines on Corporate Governance for Central Public Sector Enterprises issued by Department of Public Enterprises, Govt. of India.

## 6. FAMILIARIZATION PROGRAMME FOR DIRECTORS

The Company has framed a Training Policy for its Directors which aims at honing leadership qualities and providing a platform to share the knowledge, skills and experience gained by the Directors. Directors are being imparted training organised from time to time by the Company and other agencies/ institutions which

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: <http://www.ntpc.co.in/en/familiarisation-program-independent-directors>.

## 7. GENERAL BODY MEETINGS

### Annual General Meetings

Date, time and location of last three Annual General Meetings alongwith details of Special Resolutions passed are as under:

Date & Time	August 27, 2014	September 18, 2015	September 20, 2016
Time	10.30 A.M.	10.30 A.M.	10:30 A.M.
Venue	Manekshaw Centre, Parade Road, New Delhi - 110010	Manekshaw Centre, Parade Road, New Delhi - 110010	Manekshaw Centre, Parade Road, New Delhi - 110010
Special Resolution	Authorization to Board to raise funds upto ₹ 13,000/- 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 and authorising the Board to decide the terms and conditions of the Issue.	<p>(i) Authorization to Board to raise funds upto ₹ 5,000/- 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.</p> <p>(ii) Approval for entering into related party transaction with Utility Powertech Limited, an Associate Company of NTPC Limited, subject to cumulative ceiling or 2% of the annual turnover of the Company as per the Audited Annual Financial Statement of preceding financial year of ₹ 1000 crore whichever is more, in any financial year.</p>	(i) 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.

The Annual General Meeting held on 20.09.2016, was attended by Partners of two Statutory Auditors firms out of seven Statutory Auditors. Leave of absence was given to other Statutory Auditors, as per their request pursuant to Section 146 of the Companies Act, 2013. Meeting was also attended by the Scrutiniser appointed by the Board for E-voting/ Polling at AGM and Secretarial Auditor of the Company.

In accordance with Regulation 44 of the SEBI LODR and Section 108 of Companies Act 2013 e-voting facility was provided to the shareholders, in respect of resolutions passed at the AGM held on 20.09.2016. In addition to above, facility of voting through ballot papers was also provided to the shareholders, who did not have access to e-voting.

#### Special Resolution passed through Postal Ballot

No special resolution was passed during last year through postal ballot. Further, as of now, no special resolution is proposed to be conducted 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:

<http://www.ntpc.co.in/download/related-party-transaction-policy-ntpc>

The Company had obtained the approval of shareholders, by way of special resolution, for entering into related party transaction with Utility Powertech Limited, an associate company, subject to cumulative ceiling of 2% of the annual turnover of the Company as per the Annual Audited financial statement of preceding financial year or ₹ 1,000 crore, whichever is more, in any financial year. Review of transactions with Utility Powertech Limited, in pursuance of special resolution, is being done periodically by the Audit Committee. Other related party transactions are being approved by the Audit Committee as and when required. The details of Related Party Transactions are given in form AOC-2 forming part of Board's Report.

- (b) The Company has broadly complied with all the requirements of SEBI LODR, the Companies Act, 2013 and Guidelines on Corporate Governance for Central Public Sector Enterprises issued by Department of Public Enterprises, Ministry of Heavy Industries and Public Enterprises, Government of India except as mentioned above in the Report.
- (c) 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. Non-compliance, if any, of the Regulations of SEBI LODR has been specifically mentioned in the Report. The discretionary requirements as specified in Part E of Schedule II adopted by the Company are at Annex-I of the Report.

- (e) Schedule of Compliances with Presidential Directive issued during the financial year 2016-17 and during last three years preceding the financial year 2016-17 is at Annex-II.

## 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 29<sup>th</sup> May 2017 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 its 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 during the month of August where Board of the Company interacts with the investing community. Financial results are discussed by way of conference calls regularly after the close of each quarter.

Information, latest updates and announcements regarding the Company can be accessed at company's website: [www.ntpc.co.in](http://www.ntpc.co.in) including the following:-

- Quarterly/ Half-yearly/ 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 2016-17, Quarterly Results have been published as per details given below:

Quarter	Date of Publication	Newspaper (s)
Q1	23.08.2016	Hindustan (Hindi), The Times of India (English)
Q2	29.10.2016	Hindustan (Hindi), The Times of India (English)
Q3	9.02.2017	Financial Express, Business Line, Hindustan Times (English) & Jansatta (Hindi)

## 41<sup>st</sup> Annual Report 2016-17

Report on Corporate Governance | Annexure - II to Directors' Report



## 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/en/investors/code-of-conduct>.

### 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 March 31, 2017.

New Delhi (Gurdeep Singh)  
11<sup>th</sup> May, 2017 Chairman & Managing Director

## 12. CODE OF INTERNAL PROCEDURES AND CONDUCT FOR PREVENTION OF INSIDER TRADING

Pursuant to Regulation 9(1) of SEBI (Prohibition of Insider Trading) Regulations, 2015, the Board has laid down Internal Code of Conduct for Prevention of Insider Trading in dealing with Securities of NTPC Limited (Insider Trading Code) with the objective that insiders of the company shall not derive any benefit or assist others to derive any benefit from the access to and possession of Unpublished Price Sensitive Information (UPSI) about the Company which is not in public domain. Company Secretary has been designated as Compliance Officer for this Code. Copy of the Insider trading code is available on following web-link: <http://www.ntpc.co.in/download/internal-code-conduct-prevention-insider-trading-dealing-securities-ntpc-limited>.

## 13. CODE OF CORPORATE FAIR DISCLOSURE PRACTICES FOR PREVENTION OF INSIDER TRADING

As per provision of Insider Trading code, General Manager (Finance-ISD), NTPC has been appointed as the Chief Investor Relation Officer (CIRO) who is responsible for overseeing and coordinating disclosure of UPSI, dissemination of UPSI to analysts, institutional investors handling of unanticipated questions and responding to market rumours etc.

## 14. 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 safeguards against victimization of employees, who avail the mechanism and for direct access to the Chairman of the Audit Committee.

No personnel of the company had been denied access to the audit committee. The Whistle Blower Policy is available at the web link: <http://www.ntpc.co.in/sites/default/files/downloads/WhistleBlowerPolicy.pdf>.

## 15. SECURITYHOLDERS' INFORMATION

### i) Annual General Meeting

Date : September 20, 2017  
(Tentative)  
Time : 10.30 a.m.  
Venue : Manekshaw Centre  
Parade Road  
New Delhi - 110010

### ii) Financial Calendar for FY 2017-18

Particulars	Date
Accounting Period	April 1, 2017 to March 31, 2018
Unaudited Financial Results for the first three quarters	Announcement within stipulated period under SEBI LODR
Fourth Quarter Results	Announcement of Audited Accounts on or before May 30, 2018
AGM (Next year)	September 2018 (Tentative)

### iii) Book Closure

The Register of Members and Share Transfer Books of the Company will remain closed tentatively from September 09, 2017 to September 20, 2017 (both days inclusive).

### iv) Payment of Dividend

The Board of Directors of the Company has recommended payment of final Dividend of ₹ 2.17 per share (21.7% on the paid-up share capital) for the financial year ended March 31, 2017 in addition to the Interim Dividend of ₹ 2.61 per share (26.1% on the paid-up share capital) paid on February 22, 2017.

The record date for the payment of Dividend is September 9, 2017 (Tentative). The payment date for the Dividend shall be September 29, 2017 (Tentative).



## V) Dividend History

Year	Total paid-up capital (₹ in crore)	Total amount of dividend paid (₹ in crore) and amount per share	Date of AGM in which dividend was declared	Date of payment of Dividend (Interim and Final)
2011-12	8245.46	3298.19 (₹4.00)	27.01.2012* 18.09.2012	09.02.2012 25.09.2012
2012-13	8245.46	4741.16 (₹5.75)	26.02.2013* 17.09.2013	12.03.2013 27.09.2013
2013-14	8245.46	4741.15 (₹5.75)	28.01.2014* 27.08.2014	10.02.2014 09.09.2014
2014-15	8245.46	2061.38 (₹2.50)	30.01.2015* 18.09.2015	13.02.2015 30.09.2015
2015-16	8245.46	2762.22 (₹ 3.35)	29.01.2016* 20.09.2016	15.02.2016 30.09.2016
2016-17	8245.46	2152.07 (₹ 2.61)#	08.02.2017*	22.02.2017

\* Date of Board Meeting in which interim dividend was declared.

# amount represents the interim dividend paid for the year 2016-17.

## VI) Listing on Stock Exchanges

NTPC equity shares are listed on the following Stock Exchanges:

National Stock Exchange of India Limited Address: Exchange Plaza, Plot No. C/1, G Block, Bandra (E), Mumbai - 400051 Scrip Code of NTPC: NTPC EQ	BSE Limited Address: Phiroze Jeejeebhoy Towers, Dalal Street, Mumbai - 400001 Scrip Code of NTPC: 532555
--	--

Stock Code : ISIN – INE733E01010

The Annual Listing Fee for the financial year 2017-18 have been paid to National Stock Exchange of India Limited and BSE Limited before April 30, 2017. Also, the Annual Custodian Fee for the financial year 2017-18 has been paid to Central Depository Services (India) Limited. The payment shall be made to National Securities Depository Limited on receipt of bill and within due date.

## VII) Market Price Data :

	Market Price Data: High, Low during each month in the financial year 2016-17									
	BSE				NSE				INDEX	
	Price			Volume	Price			Volume	BSE	NSE
	HIGH	LOW	CLOSE		HIGH	LOW	CLOSE			
Apr-16	144.00	125.05	138.80	4487615	144.00	125.05	139.30	80657693	25606.60	7849.80
May-16	147.70	133.50	143.25	5491185	147.95	133.40	143.15	138854296	26668.00	8160.10
Jun-16	156.95	141.55	156.40	5342426	157.00	141.55	156.30	75638981	26999.70	8287.75
Jul-16	160.25	139.70	158.45	16400712	160.40	142.85	158.35	80492066	28051.90	8638.50
Aug-16	169.95	156.50	159.25	13659801	170.00	156.70	159.25	86961155	28452.20	8786.20
Sep-16	163.95	147.85	148.50	7341158	164.00	147.30	148.00	67637801	27866.00	8611.15
Oct-16	155.00	143.45	151.25	5735884	154.95	143.30	152.25	69930641	27930.20	8625.70
Nov-16	165.20	146.00	163.15	4594487	165.20	145.60	163.15	111219880	26652.80	8924.50
Dec-16	167.75	158.10	164.70	6918071	168.00	157.90	164.45	66098283	26626.50	8185.80

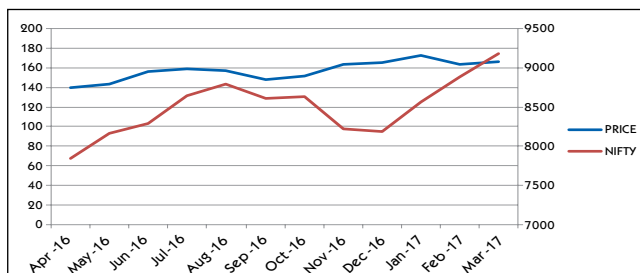
## 41<sup>st</sup> Annual Report 2016-17

Report on Corporate Governance | Annexure - II to Directors' Report

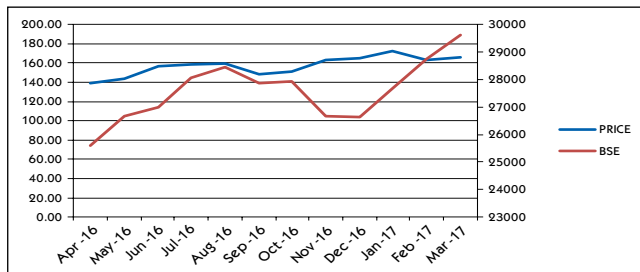


	Market Price Data: High, Low during each month in the financial year 2016-17									
	BSE				NSE				INDEX	
	Price			Volume	Price			Volume	BSE	NSE
	HIGH	LOW	CLOSE		HIGH	LOW	CLOSE			
Jan-17	177.80	161.30	172.75	9943222	178.25	161.00	172.35	104208899	27656.00	8561.30
Feb-17	176.00	162.60	163.10	8935932	176.00	162.95	162.95	110628232	28743.30	8879.60
Mar-17	166.80	154.80	165.95	7856639	166.75	154.70	166.00	102846240	29620.50	9173.75

viii) Performance in comparison to indices  
NSE NIFTY 50 and NTPC Share Price



BSE Sensex and NTPC Share Price



ix (a) Registrar and Transfer Agent for Equity Shares, Tax Free Bonds- 2013 (Series 50), Bonus Debentures (Series 54) and Tax Free Bonds- 2015 (Series 56)

Karvy Computershare Pvt. Ltd  
Karvy Selenium Tower-B,  
Plot No. 31 & 32,  
Gachibowli Financial District,  
Nanakramguda, Serilingampally,  
Hyderabad – 500 008  
Phone No.: 040-67161518  
Email: [einward.ris@karvy.com](mailto:einward.ris@karvy.com)

(b) Registrar and Transfer Agent for Bonds (Series 19 to 26)

MAS Services Ltd.

T-34, 2<sup>nd</sup> Floor, Okhla Industrial Area Phase-II,  
New Delhi-110020

Telephone: +91 011 26387281,82,83

Fax: +91 011 26387384

Email: [sm@masserv.com](mailto:sm@masserv.com)

(c) Registrar and Transfer Agent for Bonds (Series 13A, 13B, 16, 17, 27 to 49, 51 to 53, 55 and 57 to 66)

Beetal Financial & Computer Services (P) Ltd.

99, Madangir, Near Dada Harsukh Das Mandir,  
New Delhi - 110062

Telephone : +91 011 29961281,

+91 011 29961282

Fax: +91 011 29961284

Email : [beetalrta@gmail.com](mailto:beetalrta@gmail.com)

x) Share Transfer System

The share transfer system consists of activities like receipt of shares along with transfer deed from transferees, verification, preparation of Memorandum of Transfers, etc. Shares transfers are approved by Sub-Committee of the Board for Allotment and Post-Allotment activities of NTPC's Securities.

Entire share transfer activities under physical segment are being carried out by Karvy Computershare Private Limited. A certificate to this effect under Regulation 7(3) of SEBI LODR for the half-year ending on 31.03.2017 duly signed by the Compliance Officer (Company Secretary) and Share Transfer Agent (Karvy) had been submitted to the Stock Exchanges.

Pursuant to Regulation 40(10) of SEBI LODR, certificate from Practicing Company Secretary on half-yearly basis confirming that all certificates had been issued within thirty days of the date of lodgement for transfer, sub-division, consolidation, renewal, exchange or endorsement of calls/ allotment monies had been submitted to Stock Exchange within stipulated time.

**xi) Transfer of Unclaimed Amount of Dividend to Investor Education and Protection Fund (IEPF)**

In accordance with Section 125 of the Companies Act, 2013, during the financial year 2016-17, an amount of ₹ 58.24 lakh pertaining to unclaimed final dividend for financial year 2008-09 have been transferred to Investor Education and Protection Fund. Further, during the year an amount of ₹ 45,951/- pertaining to unclaimed refund amount of FPO made in financial year 2009-10 has also been transferred to Investor Education and Protection Fund. Further, during the year an amount of ₹594/- pertaining to matured deposits and interest thereon for the financial year 2009-10 has also been transferred to Investor Education and Protection Fund. The unclaimed & unpaid dividend w.r.t. interim dividend for 2009-10 is transferred to IEPF Account on or before 12<sup>th</sup> May, 2017.

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 who have not preferred their claims, to submit their claims towards the unpaid and unclaimed dividend.

**xii) Transfer of Shares to IEPF :**

MCA, Government of India notified the Investor Education and Protection Fund Authority (Accounting, Audit, Transfer and Refund) Rules, 2016 on 05.09.2016. However, the same was kept in abeyance vide MCA's General Circular No. 15/2016 dated 07.12.2016. Subsequently, on 28.02.2017, MCA, Government of India notified the Investor Education and Protection Fund Authority (Accounting, Audit, Transfer

and Refund) Amendment Rules, 2017. The said Rules requires that in case a beneficial owner has not encashed any dividend warrant during the period of 7 consecutive years, his/her shares shall be credited to DEMAT Account of the Authority within a period of 30 days of such shares becoming due to be transferred to the Fund.

The Rules further states that in cases where the period of 7 years provided under sub-section (5) of Section 124 has been completed or being completed during the period 07.09.2016 to 31.05. 2017, the due date of transfer of such shares shall be deemed to be 31.05.2017. In above regard, individual reminders were sent on 24.11.2016 to all such shareholders who have not claimed their dividend for seven consecutive years. On 24.11.2016, a notice was also published in leading newspapers drawing attention of such shareholders.

In this regard, MCA vide General Circular No. 03/2017 dated 27<sup>th</sup> April 2017 had informed that IEPF Authority had opened a special Demat Account with NSDL. However, MCA vide General Circular No. 5/2017 dated 16<sup>th</sup> May, 2017 had withdrawn the aforesaid circular. It was further informed that fresh instruction on the matter will be issued in due course.

**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 shares, 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 making an online application.

**xiv) Offer for Sale of NTPC's Equity Shares by the Government of India**

Pursuant to the successful OFS of NTPC during February, 2016 by way of 5% stake sale by Government of India and transfer of net proceeds of ₹ 5,014.55 crore against sale of 41,22,73,220 fully paid up equity shares of

## 41<sup>st</sup> Annual Report 2016-17

Report on Corporate Governance | Annexure - II to Directors' Report



NTPC Ltd., a total of 2,06,13,661 shares were offered to employees being 5% of stake sold by Government. The lowest cut off during the OFS was ₹ 122/- per equity share. Accordingly, after 5% discount to the OFS offer price, employees were offered shares at a price of ₹ 115.90/- per share.

The Employee Offer for Sale of Shares by Government of India was opened on 27.06.2016 and closed on 05.07.2016. The Employee Offer

of NTPC Limited got warm response as 10,826 employees participated in the offer and applied for 1,75,82,590 shares being 85.30% of 2,06,13,661 shares offered for allotment. The Government realized ₹ 203.78 crore from the above Employee OFS.

After the disinvestment of NTPC through Employee Offer for Sale, the Government of India's stake came down from 69.96% to 69.74%.

#### xv) Debenture Trustees for various Series

<b>For Series 13A, 13B, 16, 17, 19, 44 to 49, 50, 53, 54, 55, 57 to 66</b> 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 : <a href="mailto:itclcomplianceofficer@ilfsindia.com">itclcomplianceofficer@ilfsindia.com</a> Website : <a href="http://www.itclindia.com">www.itclindia.com</a>	<b>For Series 20 to 43, 51, 52 and 56</b> 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 : <a href="mailto:itsl@idbitrustee.com">itsl@idbitrustee.com</a> Website: <a href="http://www.idbitrustee.com">http://www.idbitrustee.com</a>
---	---

#### xvi) Distribution of Shareholding

Shares held by different categories of shareholders and according to the size of holdings as on 31<sup>st</sup> March 2017 are given below:

##### According to Size

##### a. Distribution of shareholding according to size, % of holding as on 31<sup>st</sup> March, 2017:

Number of shares	Number of shareholders	% of shareholders	Total No. of shares	% of shares
1-5000	585431	92.73	74281352	0.90
5001-10000	26271	4.16	19705061	0.24
10001-20000	11444	1.81	16821145	0.20
20001-30000	3308	0.53	8217992	0.10
30001-40000	1342	0.21	4720758	0.06
40001-50000	837	0.13	3881798	0.05
50001-100000	1112	0.18	7886916	0.10
100001 and above	1567	0.25	8109949378	98.36
<b>Total</b>	<b>631312</b>	<b>100.00</b>	<b>8245464400</b>	<b>100.00</b>



**b. Shareholding pattern on the basis of ownership:**

Category	As on 31.03.2016			As on 31.03.2017			Change
	No of shareholders	Total Shares	%	No of shareholders	Total Shares	%	
GOVERNMENT OF INDIA	1	5768341760	69.96	1	5750759170	69.74	-0.22
INDIAN FINANCIAL INSTITUTIONS	63	1120900988	13.59	63	1049484307	12.73	-0.86
FOREIGN INSTITUTIONAL INVESTORS	270	566112890	6.87	59	90781719	1.1	-5.77
MUTUAL FUNDS	130	173727480	2.11	203	254773132	3.09	0.98
FOREIGN PORTFOLIO INVESTORS	288	320124783	3.88	517	769572003	9.33	5.45
RESIDENT INDIVIDUALS	649526	143707471	1.74	601705	132368014	1.61	-0.13
BODIES CORPORATES	2930	16970935	0.21	2567	64652338	0.78	0.57
INSURANCE COMPANIES	54	71818984	0.87	66	63226613	0.77	-0.10
BANKS	35	36015471	0.44	33	35187061	0.43	-0.01
TRUSTS	98	7536825	0.09	89	11309396	0.14	0.05
HUF	12259	4907014	0.06	11118	4119545	0.05	-0.01
Others	17293	15299799	0.19	14891	19231102	0.23	0.04
<b>Total</b>	<b>682947</b>	<b>8245464400</b>	<b>100</b>	<b>631312</b>	<b>8245464400</b>	<b>100</b>	<b>0.00</b>

**c. Major Shareholders**

Details of Shareholders holding more than 1% of the paid-up capital of the Company as on 31<sup>st</sup> March, 2017 are given below:

Name of Shareholder	No. of Shares	Percentage to Paid-up Capital	Category
PRESIDENT OF INDIA	5750759170	69.74	Govt. of India
LIFE INSURANCE CORPORATION OF INDIA (including shares held in various funds/ scheme)	998258968	12.11	Indian Financial Inst.
ICICI Prudential Mutual Fund (including shares held in various funds/ scheme)	99465291	1.21	Indian Financial Inst.

**xvii) Dematerialisation of Shares and 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 Practicing Company Secretary has been submitted to Stock Exchanges within stipulated time.

No. of shares held in dematerialized and physical mode as on 31.03.2017

Category	No. of Holders	Total Shares	Percentage
PHYSICAL	13145	94656	0.00
DEMAT			
With NSDL	453411	8207593690	99.54
With CDSL	164756	37776054	0.46
<b>Total</b>	<b>631312</b>	<b>8245464400</b>	<b>100.00</b>



xviii) The names and addresses of the Depositories are as under:

1. National Securities Depository Ltd.  
Trade World, 4<sup>th</sup> Floor  
Kamala Mills Compound  
Senapathi Bapat Marg,  
Lower Parel, Mumbai-400 013

2. Central Depository Services (India) Limited  
Phiroze Jeejeebhoy Towers  
28<sup>th</sup> Floor, Dalal Street, Mumbai-400 023

xix) 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, Employee OFS and Bonus Debentures as on 31<sup>st</sup> March, 2017 is furnished below:

Details of "NTPC LIMITED – IPO – Unclaimed Shares Demat Suspense Account" (account opened and maintained after IPO):

Opening Balance (as on 01.04.2016)		Requests received and Disposed off during 2016-17		Closing Balance (as on 31.03.2017)	
Cases	Shares	Cases	Shares	Cases	Shares
176	31,197	-	-	176	31,197

Details of "NTPC LIMITED – FPO Unclaimed Shares Demat Suspense Account" (account opened and maintained after FPO):

Opening Balance (as on 01.04.2016)		Requests received and Disposed off during 2016-17		Closing Balance (as on 31.03.2017)	
Cases	Shares	Cases	Shares	Cases	Shares
25	3164	1	168	24	2996

Details of "NTPC LIMITED – Employee OFS – Unclaimed Shares Demat Suspense Account" (account opened and maintained after Employee OFS):

Opening Balance (as on 01.04.2016)		Requests received and Disposed off during 2016-17		Closing Balance (as on 31.03.2017)	
Cases	Shares	Cases	Shares	Cases	Shares
1	1,400	1	1,400	-	-

Details of "NTPC LIMITED – Employee OFS (Issued in July 2016)– Unclaimed Shares Demat Suspense Account" (account opened and maintained after Employee OFS):

Opening Balance (as on 01.04.2016)		Requests received and Disposed off during 2016-17		Requests Disposed off during 2016-17		Closing Balance (as on 31.03.2017)	
Cases	Shares	Cases	Shares	Cases	Shares	Cases	Shares
-	-	278	4,45,025	272	4,34,675	6	10,350

The voting rights on the shares mentioned in the closing balance of above accounts shall remain frozen till the rightful owner of such shares claims the shares.

Details of "NTPC LIMITED – Bonus Debentures – Unclaimed Debentures Demat Suspense Account" (account opened and maintained after Issue of Bonus Debentures):

Opening Balance (as on 01.04.2016)		Requests received and Disposed off during 2016-17		Closing Balance (as on 31.03.2017)	
Cases	Shares	Cases	Shares	Cases	Shares
33	6,052	4	578	29	5,474

**xx) 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

**xxi) Number of Shares held by the Directors**

Directors	No. of shares (as on 31 <sup>st</sup> March, 2017)
Shri Gurdeep Singh	1725
Shri A. K. Jha	3165
Shri S. C. Pandey	4725
Shri K. Biswal	1725
Shri K. K. Sharma	2094
Shri S. Roy	1205
Shri A. K. Gupta	2888
Dr. Pradeep Kumar	Nil
Shri Aniruddha Kumar	214
Shri Rajesh Jain	Nil
Dr. (Ms.) Gauri Trivedi	Nil
Shri Seethapathy Chander	Nil

**xxii) Locations of NTPC plants**

**National Capital Region**

**Thermal Power Stations**

- Badarpur Thermal Power Station- Badarpur, New Delhi
- National Capital Thermal Power Station - Distt. Gautam Budh Nagar, Uttar Pradesh

**Gas Power Stations**

- Anta Gas Power Project - Distt. Baran, Rajasthan
- Auraiya Gas Power Project - Distt. Auraiya, Uttar Pradesh
- Faridabad Gas Power Project - Distt. Faridabad, Haryana
- National Capital Gas Power Project- Distt. Gautam Budh Nagar, Uttar Pradesh

**Solar Power Stations**

- 5 MWp, Dadri Solar Power Plant, Dadri, Distt. Gautam Budh Nagar, Uttar Pradesh
- 5 MWp, Faridabad Solar Power Plant, Distt. Faridabad, Haryana

**Eastern Region - I**

**Thermal Power Stations**

- Barh Super Thermal Power Project- Patna, Bihar
- Farakka Super Thermal Power Station - Distt. Murshidabad, West Bengal

- Kahalgaoon Super Thermal Power Project- Distt. Bhagalpur, Bihar
- North Karanpura Super Thermal Power Project - Distt. Hazaribagh, Jharkhand

**Eastern Region - II**

**Thermal Power Stations**

- Talcher Super Thermal Power Station- Distt. Angul, Odisha
- Talcher Thermal Power Station- Distt. Angul, Odisha
- Bongaigaon Thermal Power Project, Distt. Kokrajhar, Assam.
- Darlipalli Super Thermal Power Project, Distt. Sundergarh, Jharsuguda, Odisha

**Solar Power Station**

- 10 MWp Talcher Kaniha Solar Power Station, Distt. Angul, Odisha

**Northern Region**

**Thermal Power Stations**

- Feroze Gandhi Unchahar Thermal Power Station - Distt. Raebareli, Uttar Pradesh
- Rihand Super Thermal Power Project - Distt. Sonebhadra, Uttar Pradesh
- Singrauli Super Thermal Power Station- Distt. Sonebhadra, Uttar Pradesh
- Tanda Thermal Power Station- Distt. Ambedkar Nagar, Uttar Pradesh
- Vindhyachal Super Thermal Power Station- Distt. Singrauli, Madhya Pradesh

**Solar Power Stations**

- 10 MWp Unchahar PV Solar Power Station, Distt. Raebareli, Uttar Pradesh
- 15 MWp Singrauli Solar PV Power Stations, Distt. Sonebhadra, Uttar Pradesh

**Southern Region**

**Thermal Power Stations**

- Ramagundam Super Thermal Power Station- Distt. Karimnagar, Telangana
- Simhadri Super Thermal Power Project- Distt. Vishakapatnam, Andhra Pradesh
- Telangana Super Thermal Power Project, Distt. Karimnagar, Telangana

**Gas Power Station**

- Rajiv Gandhi Combined Cycle Power Project - Distt. Alappuzha, Kerala

**Solar Power Stations**

- 5 MWp Solar PV Power Plant, Port Blair, A&N Islands

## 41<sup>st</sup> Annual Report 2016-17

Report on Corporate Governance | Annexure - II to Directors' Report



- ii) 10 MWp Ramagundam Solar Power Station, Distt. Karimnagar, Andhra Pradesh
- iii) 250 MWp Anantapur Solar PV Project, Distt. Anantapur, Andhra Pradesh

#### Western Region -I

##### Thermal Power Stations

- i) Solapur Super Thermal Power Project – Distt. Solapur, Maharashtra
- ii) Mouda Super Thermal Power Project – Distt. Nagpur, Maharashtra
- iii) Kudgi Thermal Power Project, Distt. Bijapur, Karnataka

##### Gas Power Stations

- i) Jhanor Gandhar Gas Power Project- Distt. Bharuch, Gujarat
- ii) Kawas Gas Power Project- Distt. Surat, Gujarat

##### Solar Power Project

- i) 260MWp Bhadla Solar Power Project, Distt. Jodhpur, Rajasthan

#### Western Region -II

##### Thermal Power Stations

- i) Korba Super Thermal Power Station- Distt. Korba, Chhattisgarh
- ii) Sipat Super Thermal Power Project-Distt. Bilaspur, Chhattisgarh
- iii) Gadarwara Super Thermal Power Project, Distt. Narsinghpur, Madhya Pradesh
- iv) Lara Super Thermal Power Project, Distt. Raigarh, Chhattisgarh
- v) Khargone Super Thermal Power Project, Distt. Khargone, Madhya Pradesh

##### Solar Power Stations

- i) 50 MWp Solar PV Power Plant, Rajgarh, Madhya Pradesh
- ii) 250 MWp Mansaur Solar Power Project, Distt. Mandasaur, Madhya Pradesh

#### HYDRO POWER PROJECTS

- i) Koldam Hydro Power Project – Distt. Bilaspur, Himachal Pradesh
- ii) Tapovan – Vishnugad Hydro Power Project – Distt. Chamoli, Uttarakhand
- iii) Lata Tapovan Hydro Power Projects – Distt. Chamoli, Uttarakhand
- iv) Rammam – III Hydro Electric Power Project Distt. Darjeeling, West Bengal.
- v) Singrauli Small Hydro Power Projects, Distt. Sonebhadra, Uttar Pradesh

#### POWER PROJECTS UNDER SUBSIDIARY COMPANIES

##### Thermal Power Projects

- i) Kanti Bijli Utpadan Nigam Limited : Muzaffarpur Thermal Power Station, Muzaffarpur, Bihar
- ii) Bhartiya Rail Bijlee Co. Ltd. : Nabinagar Thermal Power Project, Distt. Aurangabad, Nabinagar, Bihar (in JV with Railways)
- iii) Patratu Vidyut Utpadan Nigam Limited: Patratu Thermal Power Project, Patratu, Jharkhand

#### JOINT VENTURE POWER PROJECTS

##### 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), Chhattisgarh
- b. Ratnagiri Gas & Power Pvt. Ltd. : Ratnagiri Power Project - Maharashtra
- c. NTPC Tamil Nadu Energy Co. Ltd: Vallur Thermal Power Project – Chennai, Tamil Nadu
- d. Aravali Power Co. Pvt. Ltd.: Indira Gandhi Super Thermal Power Project - Distt. Jhajjar, Haryana
- e. Meja Urja Nigam Pvt. Ltd.: Meja Super Thermal Power Project – Tehsil Meja, Allahabad
- f. Nabinagar Power Generating Company Pvt. Limited : Nabinagar Super Thermal Power Project – Distt. Aurangabad, Nabinagar, Bihar (in JV with Bihar State Power Generation Co. Pvt. Ltd.)

##### Overseas Joint Venture Projects

- i) Trincomalee Power Co. Ltd. : Trincomalee Power Project, Trincomalee, Sri Lanka
- 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, Hazaribagh, Jharkhand
- iii) Kerandari Coal Mining Project, Hazaribagh, Jharkhand
- iv) Talaipalli Coal Mining Project, Raigarh, Chhattisgarh
- v) Dulanga Coal Mining Project, Sundargarh, Odisha
- vi) Banai Coal Mining Project, Raigarh, Chhattisgarh

## 41<sup>st</sup> Annual Report 2016-17



vii) Bhalumunda Coal Mining Project, Raigarh, Chattisgarh

viii) Mandakini-B Coal Mining Project, Angul, Odisha

**JOINT VENTURE COAL MINES**

ix) Banhardih Coal Mining Project, Latehar, Jharkhand

x) Kudanali-Laburi Coal Mining Project, Angul, Odisha (In JV with J&K)

xxiii) **Address for correspondence:**  
NTPC Bhawan, SCOPE Complex  
7, Institutional Area, Lodi Road,  
New Delhi – 110003

The phone numbers and e-mail reference for communication are given below:

	Telephone No.	Fax No.
<b>Registered Office</b> NTPC Limited NTPC Bhawan, Core-7, 7 Institutional Area, SCOPE Complex, New Delhi -110003	2436 0100	2436 1018
<b>Company Secretary &amp; Compliance Officer</b> Shri K. P. Gupta	24369034	2436 0241
E-mail id	kpgupta@ntpc.co.in	
<b>Chief Investor Relations Officer</b> Ms. Sangeeta Bhatia	2436 7072	2436 1724
E-mail id	sbhatia@ntpc.co.in	
E-mail ID (exclusive) for redressal of investors complaints	<b>For Shares and Tax Free Bonds, 2015:</b> isd@ntpc.co.in <b>For Tax Free Bonds, 2013:</b> tfb@ntpc.co.in <b>For Bonds including Bonus Debentures:</b> powerbonds@ntpc.co.in	

## 16. CORPORATE GOVERNANCE AWARDS & RECOGNITIONS

In recognition of our efforts towards excellence in Corporate Governance, NTPC has been conferred various awards in area of Corporate Governance from time to time including:

- ASSOCHAM Corporate Governance Excellence Award – 2014-15 for Listed Companies in PSU category in recognition for outstanding governance practices undertaken by the Company. The award was presented by Hon'ble Minister of Power at New Delhi on 14.08.2015.
- 'Golden Peacock Global Award for Excellence in Corporate Governance' by World Council for Corporate Governance for the year 2014. This award was also received by the Company during the years 2007, 2009 and 2012.
- Award for Excellence 2011 - Good Corporate Citizen Award by PHD Chamber of Commerce and Industry.
- 'ICSI National Award for Excellence in Corporate Governance – 2009' by the Institute of Company Secretaries of India.

For and on behalf of Board of Directors



(Gurdeep Singh)

Chairman & Managing Director

DIN: 00307037

Place: New Delhi

Date : 29<sup>th</sup> May, 2017

## 41<sup>st</sup> Annual Report 2016-17

Report on Corporate Governance | Annexure - II to Directors' Report



## Annex-I

### DISCRETIONARY REQUIREMENTS

Besides the mandatory requirements, as mentioned in preceding pages, the status of compliance with 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. **Separate Posts of Chairman and CEO:** The Company has an Executive Chairman & Managing Director.
5. **Reporting of the Internal Auditor:** The Internal Auditor reports to the Audit Committee of the Board.

## Annex-II

**Schedule of Compliances with Presidential Directive issued during the financial year 2016-17 and during last three years preceding the financial year 2016-17:**

Year	Content of Presidential Directives	Compliance
2016-17	NIL	NIL
2015-16	NIL	NIL
2014-15	NIL	NIL
2013-14	NIL	NIL



MOBILE HEALTH CAMP AT NTPC PROJECT



## CHIEF EXECUTIVE OFFICER (CEO) & CHIEF FINANCIAL OFFICER (CFO) CERTIFICATION

We, Gurdeep Singh, Chairman & Managing Director and K. Biswal, Director (Finance) of NTPC Limited to the best of our knowledge and belief, certify that:

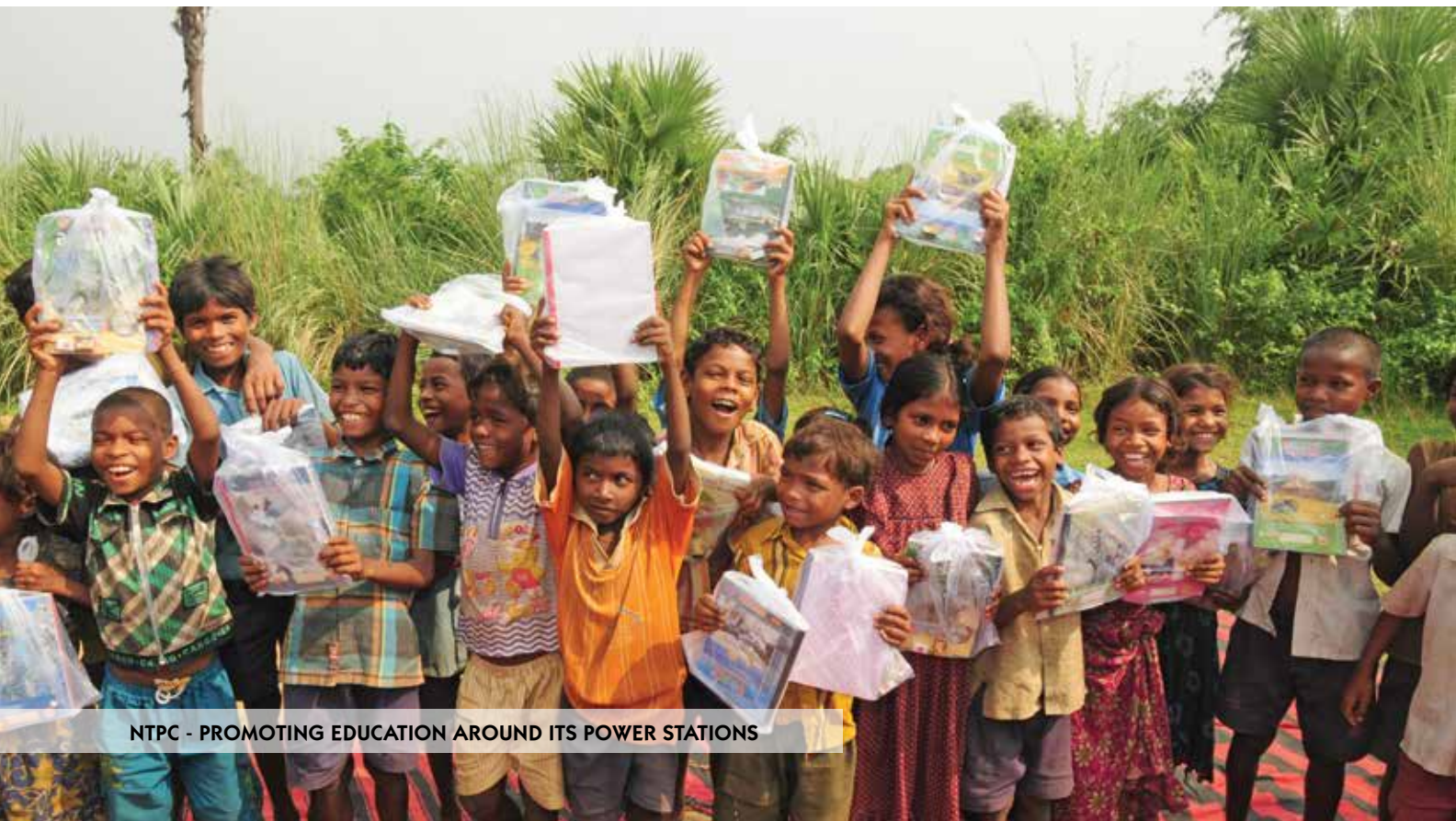
- (a) We have reviewed financial statements and the cash flow statement for the year ended March 31, 2017 (stand alone and consolidated) and to the best of our knowledge and belief:
  - (i) these statements do not contain any materially untrue statement or omit any material fact or contain statements 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 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

Date : May 26, 2017

(K. Biswal)  
Director (Finance)

(Gurdeep Singh)  
Chairman & Managing Director



## AUDITORS' CERTIFICATE ON CORPORATE GOVERNANCE

To  
The Members of  
NTPC Limited

1. We have examined the compliance of conditions of Corporate Governance by NTPC Limited for the year ended on 31 March 2017 as per the relevant provisions of Securities Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015 ("Listing Regulations") as referred to in Regulation 15 (2) of the Listing Regulations and as stipulated in the Guidelines on Corporate Governance for Central Public Sector Enterprises issued by Department of Public Enterprises (DPE), Ministry of Heavy Industries and Public Enterprises, Government of India.
2. The compliance of conditions of Corporate Governance is the responsibility of the management. Our examination is limited to review of procedures and implementation thereof, adopted by the Company for ensuring the compliance of the conditions of the Corporate Governance as stipulated in the Listing Regulations. It is neither an audit nor an expression of opinion on the financial statements of the Company.
3. In our opinion and to the best of our knowledge and information and according to the explanations given to us, we certify that the Company has complied with the mandatory conditions of Corporate Governance as stipulated in the Listing Regulations and DPE Guidelines on Corporate Governance for Central Public Sector Enterprises, except:
  - (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.
  - (b) As stated in Point No. 2.6 regarding compliance with the Board Members Evaluation Policy of the Report on Corporate Governance.
4. We further 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 T.R. Chadha & Co LLP  
Chartered Accountants  
Firm Reg. No. 006711N/N500028

(Neena Goel)  
Partner  
M. No. 057986

For PSD & Associates  
Chartered Accountants  
Firm Reg. No. 004501C

(Thalendra Sharma)  
Partner  
M. No. 079236

For Sagar & Associates  
Chartered Accountants  
Firm Reg. No. 003510S

(D. Manohar)  
Partner  
M. No.029644

For Kalani & Co.  
Chartered Accountants  
Firm Reg. No. 000722C

(Vikas Gupta)  
Partner  
M. No. 077076

For P. A. & Associates  
Chartered Accountants  
Firm Reg. No. 313085E

(S. S. Poddar)  
Partner  
M. No.051113

For S. K. Kapoor & Co.  
Chartered Accountants  
Firm Reg. No. 000745C

(V. B. Singh)  
Partner  
M. No. 073124

For B M Chatrath & Co. LLP  
Chartered Accountants  
Firm Reg. No. 301011E/E300025

(P. R. Paul)  
Partner  
M. No. 051675

Place: New Delhi  
Date: 29 May 2017



## 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 year 2016-17 in different areas are as under:

#### ENERGY AUDITS

During 2016-17, all stations had conducted Auxiliary Power Consumption Energy Audits (26 nos.). Also Water Balance audits were conducted at 9 nos. stations. A Conference of Energy Managers of all NTPC stations was organized to deliberate actions for energy / water conservation and disseminate the activities undertaken at various Stations.

#### AUXILIARY POWER CONSUMPTION

Some of the actions undertaken to reduce auxiliary power consumption at various stations are:

Retrofitting HT VFD in ID Fans of one unit, Replacement of inefficient BFP cartridges based on high SEC, Energy Efficient Coating on pump internals of Cooling Water / other large water pumps, Installation of VFD's in various LT drives, Installing grid-connected roof top Solar PV systems, Retrofitting FRP blades in CT fans, Replacing existing motors with Energy Efficient motors, De-staging of HPBFP to optimize power consumption, Replacing old compressor with energy efficient screw compressor, ESP hopper heater modification to save energy, BFP Power saving by adopting sliding pressure operation during part loading, Optimization of operation of CW pumps, ARCW, clarified water pumps & Cooling Tower Fans during part load operation and during low ambient temperature conditions, Optimizing mills, BFP and fans during prolonged partial loading, Using TDBFP during unit startups, Modification of Ash slurry pump scoop operation.

#### LIGHTING

Replacement of existing lighting (FTL's, HPSV's) in boiler, turbine, switchgear rooms, offices with LED lighting and replacement of street lighting HPSV / Halogen / FTL fixtures with LED light fixtures in plant and township were undertaken at various stations during the year. Further, NTPC has entered into a pact with Energy Efficiency Services Ltd. (EESL) to implement energy efficient LED lighting solutions for all its projects, stations and offices across the country.

#### HEAT ENERGY

Boiler modification in 3 units for improving steam parameters and heat rate, CT fill replacement and restoration of HP heaters were undertaken at some of the Stations.

#### b) Additional investments and proposals for reduction in consumption of energy :

Provision of ₹ 5,453 lacs has been kept in BE 2017-18 for different energy conservation schemes like:

- Retrofitting VFD's in ID fans / CEP's
- LED lighting
- Grid-connected roof top Solar PV systems
- Energy efficient LT motors
- Energy Efficient fan blades in Cooling Towers

### B. IMPACT OF MEASURES TAKEN FOR ENERGY CONSERVATION :

Savings achieved during 2016-17 on account of specific efforts for energy conservation:-

S.No.	Area/Activities	Energy Unit	Savings Qty. of units	₹ (Crore)
1	Electrical	MU	118.60	30.54
2	Heat Energy (equivalent MT of coal)	MT	46178	12.04
	<b>Grand Total</b>			<b>42.58</b>

Savings achieved during 2015-16 - ₹ 30.14 Crore

## 41<sup>st</sup> Annual Report 2016-17



**C. TECHNOLOGY ABSORPTION :**

Efforts made towards technology absorption are contained in enclosed Form -B.

**D. FOREIGN EXCHANGE EARNINGS AND OUTGO**

Activities relating to export initiative taken to increase export, development of new export markets for products and services and export plan:

Total Foreign Exchange Used/ Earned (2016-17)	(₹ Crore)
1. Foreign Exchange Outgo	
- Capital Goods & Spare Parts	4,375.15
- Professional and Consultancy Fee	2.31
- Interest & Bond Issue Expenses	991.84
- Others	7.60
2. Foreign Exchange Earned	
- Professional & Consultancy Fee	5.82

**FORM B**

**Form for disclosure of particulars with respect to Absorption of Technology**

**1.0 Specific areas in which NETRA activities have been carried out during 2016 - 17:**

**A. Completion of MOU Projects:**

- Indigenous floater development and set up of 100 Kw Floating PV system at Kayakulam,
- Set up of 120 TPD Flue gas based Desalination Plant at NTPC Simhadri,
- Robot Based Solar PV Panel Cleaning at NTPC Dadri,
- NIT of Solar Thermal Hybrid Plant at NTPC Dadri,
- Award of 400 TR Flue Gas based Air Conditioning system,
- Commissioning of Multi utility heat pump at NETRA,
- Lab Scale development of Super hydrophobic nano-coating for Solar PV panels,
- Completion of pH control of Ash pond re-circulation water using Flue gas at Ramagundam,
- ESP performance improvement using CFD Analysis at Badarpur Unit-4,
- On Line assessment of Partial Discharge in Six Transformers based on DGA findings &
- Weld Inspection of Boiler tubes using UTPI(Cobra Scanner)

**B. Developmental Projects (ongoing):**

- Development of Smart Inverter
- Development of applications based on PMU
- Development of device to minimize switching over-voltages for optimum switching of Solar PV Plant Transformers.
- Earthing adequacy study of Mauda Stage-1
- DC Microgrid Installation at NETRA
- Development of fiber optic vibration sensors for vibration monitoring of generator overhang winding
- Power System Stabilization (PSS) Tuning on a 500MW unit of NTPC
- OCT installation at 400KV switchyard Dadri
- Flexible Unit Control of Unit#6 at Dadri
- PMU installation at 4 NTPC sites
- Indigenous Solar Thermal (IIT Bombay) (3 Projects)
- 400 T Flue gas based AC system
- Solar wind Hybrid
- Setting up of fly ash based Light Weight Aggregate pilot plant at NTPC-Sipat
- Construction of road using Geopolymer by converting fly ash

- Use of Bottom Ash as Replacement of Fine Aggregate in Cement Concrete
- Development of Fly ash based Geo-Polymeric Blocks through utilization of Sea Sand and Sea Water
- Solar Thermal Hybrid Plant at NTPC Dadri
- Flue gas fixation through algae and further utilization through conversion of algae into Bio methane
- Development of Flow Battery (500W, 5H, soluble lead redox flow battery (SLFB))
- 10 TR ground sourced heat pump system at NETRA
- VFD Retrofitting for Air Compressors
- CW physical Modeling of future station
- UAV/Drone for power plant application
- Centralized PV Forecasting
- In-situ inspection of weld integrity on Boiler Tubes using Ultrasonic phased array
- Non-destructive assessment of creep damage of high temperature headers / pipelines
- Building Integrated PV test hut and associated system
- Development of nano-fluid for heat exchangers
- Super hydrophobic nano coating for solar PV panel cleaning
- Development of sensor for in-situ continuous tube length thickness mapping of boiler water wall tubes

**C. Scientific Support to NTPC Stations (Continuous basis):**

- ❖ Life enhancement & availability improvement of components by NDE of boilers, steam turbine, Gas turbines and generator components and health assessment using advanced Non-destructive analysis tools such as Eddy current testing, video imaging, phased array and TOFD etc.
- ❖ Enhancing reliability through robotic Inspections of LTSH tubes in Boiler.
- ❖ Performance enhancement through CFD Analysis of Flue gas ducts, CW sumps and ESP.
- ❖ Metallurgical Failure analysis of Boiler pressure parts components etc.
- ❖ Quantitative and Qualitative analysis of deposit, solvent selection and post operational chemical cleaning recommendations for boilers.
- ❖ Corrosion analysis, monitoring, control of power plants such as cooling water treatments, coating selection, etc.
- ❖ Specialized analytical support for characterizing the turbine deposits, corrosion products, heavy metals in effluents using state of art equipments such as SEM, XRD, IC, TOC, particle count analyser etc.
- ❖ Condition Monitoring of High voltage transformers, Super heater / re-heater tubes, Lubricating oils of rotating components, ion exchange resins & activated carbon for capacity enhancement and its kinetics and Rotating machines.

**D. Scientific Support to Other Utilities:**

**Govt. Sectors :**

HPGCL(Deen Bhandu), RGTPP-HPGCL, HPGCL-Panipat, NHPC LTD-Uri I&II, NHPC Tanakpur, RGPPL, MPPGCL Khandwa, WBPCL Kolaghat, MPPGCL Birsinghpur, RVUNL Chhabra, GSECL UKAI

**Private Sectors :**

THDCIL-KOTESHVAR, THDC – KOTA, SCALEAWAY (India), Prayagraj Power GCL, Jhajjar Power Ltd., NPGC, Gama Infra, Gupta Enterprises, Siemens Ltd., Haldia Energy Ltd., Jaiprakash Power, R B Electricals, TPSC (India)P. Ltd., Balaji Power, DVC-Chandrapura

**JV's & Subsidiary :**

NSPCL-Rourkela, NSPCL-Durgapur, NSPCL-Bhilai, KBNUL, APCPL

**2.0 Benefits derived as a result of above Research & Technology Development:**

NETRA activities have helped the stations in analysis of failures and its 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. CFD based modifications have resulted in power saving and have been helpful in analyzing and resolving vibration problems in CW pumps. Studies on CO<sub>2</sub> capture and utilization, solar thermal, bio-fuels will result into development of technologies for reduction in the impact on climate change and technologies for affordable renewable energy sources.

## 41<sup>st</sup> Annual Report 2016-17

Annexure - III to Directors' Report



### 3.0 Future Plans:

Developmental Projects planned to be taken up in following areas:

- Blade tip timing technique for blade vibration monitoring system
- Development of Control Renewable Hybrid system
- CT vapor recovery and “De-Sox, De-NOx” Pilot Plant
- FG Condensate Pre heating
- Development of Geo-polymer utilising fly ash
- Plasma nitriding for coal nozzle burner tips
- Pulsed Power System for ESP to improve dust collection performance of ESP
- Development of nano-lubricant for coal mill gear box
- Extraction of nanostructured materials from gaseous effluents of power plant
- Production of Bio oil/Bio-gas from MSW using catalytic liquefaction (demo / pilot plant)
- Production of high energy fuel pellets from MSW (demo / pilot plant)
- Development and Demonstration of 1 TPD Plasma gasification technology for utilizing MSW, hospital waste, mill rejects, industrial waste, and biomass

### 4.0 Expenditure on R&D: 2016-17

S.No.	Description	Expenditure in (₹/Crore)	
		2016-17	2015-16
a)	Capital	81.88	21.68
b)	Revenue	80.40	108.00
c)	Total	162.28	129.68
d)	Target	101.62	102.91
e)	Total R&D expenditure as a percentage of PAT of previous year	1.59%	1.26%

### 5.0 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	Ultra- supercritical Power plants with steam parameters 270 kg/cm <sup>2</sup> steam pressure and 600/600 deg C at turbine end.	2014-16	Being implemented in Khargone (2X660 MW), Telangana –I (2X800 MW) and Lalam Koduru (4X1000 MW).
2	Air cooled condenser for super critical units.	2013-14	Being implemented in (3x660 MW) North Karanpura.
3	Adoption of USC steam parameters 260 Kg/ cm <sup>2</sup> steam pressure and 593/593 deg C at turbine end.	2013-14	Being implemented in (3x660 MW) North Karanpura.
4	Super critical technology with 256 Kg/cm <sup>2</sup> Steam Pressure and 568/596 deg C MS/RH steam temperature is being adopted at steam generator end for improvement in thermal efficiency and reduced emission of green house gasses.	2012-13	Being implemented in Mauda (2X660MW), Solapur (2X660MW), Meja (2X660MW), Nabinagar (3X660MW) through bulk tendering mechanism & for 9 units of 800 MW units (Kudgi, Darlipalli, Gadawara & Lara) through bulk tendering.

For and on behalf of the Board of Directors



(Gurdeep Singh)

Chairman & Managing Director

DIN: 00307037

Place: New Delhi

Date: 4<sup>th</sup> August, 2017

## 41<sup>st</sup> Annual Report 2016-17

Annexure - III to Directors' Report



## STATISTICAL INFORMATION ON RESERVATION OF SCs/STs FOR THE YEAR 2016-17

Representation of SCs/STs as on 01.01.2017:

Group	Employees on Roll	SCs	%age	STs	%age
A	13,259	1,748	13.20	660	5.00
B	4,768	843	17.70	428	9.00
C	3,500	533	15.20	207	5.90
D	778	190	24.40	103	13.20
<b>Total*</b>	<b>22,305</b>	<b>3,314</b>	<b>14.90</b>	<b>1398</b>	<b>6.30</b>

\*The above data is inclusive of manpower posted at JVs and Subsidiaries and manpower of taken over projects.

Recruitment of SCs/STs during the year 2016:

Group	Total Recruitment	SCs	%age	STs	%age
A	308	47	15.30	21	6.80
B	0	0	0.00	0	0.00
C	378	54	14.30	58	15.30
D	7	4	57.10	0	0.00
<b>Total</b>	<b>693</b>	<b>105</b>	<b>15.20</b>	<b>79</b>	<b>11.40</b>

Promotions of SCs/STs during the year 2016:

Group	Total Promotion	SCs	%age	STs	%age
A	2,829	491	17.40	244	8.60
B	1,128	216	19.10	89	7.90
C	579	90	15.50	32	5.50
D	7	1	14.30	0	0.00
<b>Total</b>	<b>4,543</b>	<b>798</b>	<b>17.60</b>	<b>365</b>	<b>8.00</b>

For and on behalf of the Board of Directors



(Gurdeep Singh)

Chairman & Managing Director

DIN: 00307037

Place: New Delhi  
Date: 4<sup>th</sup> August, 2017



## INFORMATION ON DIFFERENTLY ABLED PERSONS

With a view to focus on its role as a socially responsible and socially conscious organization, NTPC has endeavored to take responsibility for adequate representation of Differently-abled Persons (DAPs) in its workforce. With this in view, total of 34 DAPs were recruited during the year 2016. As on 01.01.2017, 489(2.2%) DAP (97 VH 108 HH and 284 OH) are on the rolls of the company. Reservation has been provided for DAPs as per rules/policy. Some of the other initiatives taken for the welfare of DAPs by NTPC over the years are as under:

- NTPC has entered into an agreement with Artificial Limbs Manufacturing Corporation (ALIMCO) to benefit around 5000 DAP in the Neighbourhood of NTPC stations/projects over period of three years starting from 2016-17.
- For individual needs of the Visually Hampered 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 NTPC Projects, wherever houses are located in multi-storied structures, allotments to DAP has been made on the ground floor. Special parking enclosure near the ramp at the office entrance as well as PH friendly toilet and lift at Corporate Centre (CC) have been Provided.
- Wheel chairs have been provided to employees with orthopedics disabilities. If required, the assistance of an attendant has also been sanctioned.
- Wherever required, gates / door of the quarter has been widened.
- Petty contracts like book binding, scribbling pad preparation from waste paper, file binding, furniture repair, screen printing, spiral binding, painting contract were also given to disabled persons.
- At CC, procurement of stationery items like files, envelopes were also done from NGOs/ Agencies like ADDI, MUSKAN, Blind Relief Association who are working for physically challenged thereby creating indirect employment.
- Paintings made by disabled persons have also been procured and placed at different locations in the Company Offices.
- Medical camps have been organized in various projects of NTPC for treatment and distribution of aids like artificial limbs, tricycles, wheelchairs, calipers etc.
- Shops have been allotted in NTPC Township to DAP so that they may earn their livelihood. Similarly, PCOs within/ outside plant premises are also allotted to DAP.
- Regular interactive meetings are being organized with DAPs.
- 20 number of Scholarships @ ₹4,000 /- per month/ per student are given to differently abled students pursuing MBA/ PGDBM/Degree in Engineering Courses /MBBS.
- In order to encourage and motivate children and youth from neighbourhood villages of NTPC Projects/Stations for higher studies, NTPC management has launched 'NTPC Utkarsh'-Merit Scholarship under "NTPC Foundation" for students (including Physically Challenged) from the neighbourhood of its projects / stations w.e.f. FY 2016-17. The scheme will benefit about 7300 students every year from neighbourhood 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 NTPC conveyance Advance Rules.
- At all Projects / Offices, Nodal Officers (Physically Challenged) have been nominated.
- Reimbursement towards low vision aids, dark glasses etc. subject to maximum of ₹2,000/- every year. Similarly hearing aid; behind the ear model for each ear restricted to ₹ 25,000/- or actual cost whichever is lower. It may be replaced every four years subject to certificate of condemnation by ENT Specialist. Aforesaid reimbursement is admissible to employees and dependents of employees who are visually challenged/Hearing impaired.
- 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 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



(Gurdeep Singh)

Chairman & Managing Director

DIN: 00307037

Place: New Delhi  
Date: 4<sup>th</sup> August, 2017

**FORM NO. MGT 9**  
**EXTRACT OF ANNUAL RETURN**

As on financial year ended on March 31, 2017

Pursuant to Section 92 (3) of the Companies Act, 2013 and rule 12(1) of the Company  
(Management & Administration) Rules, 2014.

**I. REGISTRATION & OTHER DETAILS:**

1.	CIN	L40101DL1975GOI007966
2.	Registration Date	7 <sup>th</sup> November 1975
3.	Name of the Company	NTPC Limited
4.	Category/Sub-category of the Company	Public Company / Government Company
5.	Address of the Registered office & contact details	NTPC Bhawan, Scope Complex, 7, Institutional Area, Lodhi Road, New Delhi-110003 Telephone No : 011 24360100 /7072 Fax No : 011 24361018 /1724 E mail : ntpccc@ntpc.co.in
6.	Whether listed company	Yes
7.	Name, Address & contact details of the Registrar & Transfer Agent, if any.	Karvy Computershare Pvt. Ltd. Karvy Selenium Tower-B Plot No.31 to 32, Gachibowli Financial District Nanakramguda, Serilingampally, Hyderabad-500 008 Phone No.: 91 -40-67161518 Fax No.: 91-40-23420814 E-mail: einward.ris@karvy.com Website : www.ntpc.co.in

**II. PRINCIPAL BUSINESS ACTIVITIES OF THE COMPANY :**

(All the business activities contributing 10% or more of the total turnover of the company shall be stated)

S. No.	Name and Description of main products / services	NIC Code of the Product/Service	% to total turnover of the company
1	Electric power generation by coal based thermal power plant	35102	91.47



### III. PARTICULARS OF HOLDING, SUBSIDIARY AND ASSOCIATE COMPANIES:

Sl. No.	Name and address of the company	CIN/GLN	% of shares held
<b>Subsidiary Company {Section 2(87)(ii)}</b>			
1	NTPC Vidyut Vyapar Nigam Limited NTPC Bhawan, SCOPE Complex Lodi Road, New Delhi-110003	U40108DL2002GOI117584	100.00
2	NTPC Electric Supply Co. Limited NTPC Bhawan, SCOPE Complex Lodi Road, New Delhi-110003	U40108DL2002GOI116635	100.00
3	Kanti Bijli Utpadan Nigam Limited NTPC Bhawan, SCOPE Complex Lodi Road, New Delhi-110003	U40102DL2006GOI153167	65.00
4	Bhartiya Rail Bijlee Co. Limited. NTPC Bhawan, SCOPE Complex Lodi Road, New Delhi-110003	U40102DL2007PLC170661	74.00
5	Patratu Vidyut Utpadan Nigam Limited NTPC Bhawan, SCOPE Complex Lodi Road, New Delhi-110003	U40300DL2015GOI286533	74.00
<b>Associate Company {Section 2(6)}</b>			
1	Utility Powertech Limited, H block, 3 <sup>rd</sup> Floor, Dhirubhai Ambani Knowledge City, Thane Belapur Road, Navi Mumbai, Mumbai	U45207MH1995PLC094719	50.00
2	NTPC SAIL Power Company Limited, 4 <sup>th</sup> FLOOR NBCC TOWER, 15 <sup>th</sup> Bhikaji Cama Place New Delhi	U74899DL1999PLC098274	50.00
3	NTPC GE Power Services Pvt. Limited, NTPC Bhawan, SCOPE Complex Lodi Road, New Delhi-110003	U74899DL1999PTC101702	50.00
4	NTPC Tamil Nadu Energy Company Limited, NTPC Bhawan, SCOPE Complex Lodi Road, New Delhi-110003	U40108DL2003PLC120487	50.00
5	Ratnagiri Gas & Power Pvt. Limited, NTPC Bhawan, SCOPE Complex Lodi Road, New Delhi-110003	U40105DL2005PTC138458	25.51
6	Aravali Power Company Pvt. Limited, NTPC Bhawan, SCOPE Complex Lodi Road, New Delhi-110003	U40105DL2006PTC156884	50.00
7	NTPC SCCL Global Ventures Pvt. Limited, NTPC Bhawan, SCOPE Complex Lodi Road, New Delhi-110003 <sup>5</sup>	U40101DL2007PTC166472	50.00
8	Meja Urja Nigam Pvt. Limited, NTPC Bhawan, SCOPE Complex Lodi Road, New Delhi-110003	U74900DL2008PTC176247	50.00
9	NTPC BHEL Power Projects Private Limited, NTPC Bhawan, SCOPE Complex Lodi Road, New Delhi-110003	U40102DL2008PTC177307	50.00
10	BF-NTPC Energy Systems Limited, 14 <sup>th</sup> Floor, Antariksh Bhawan, 22 KG Marg, New Delhi-110003	U40106DL2008PLC179793	49.00
11	Nabinagar Power Generating Company Pvt. Limited, NTPC Bhawan, SCOPE Complex Lodi Road, New Delhi-110003	U40104DL2008PTC183024	50.00
12	National Power Exchange Limited, NTPC Bhawan, SCOPE Complex Lodi Road, New Delhi-110003 <sup>6</sup>	U40100DL2008PLC185689	16.67
13	Transformers and Electricals Kerala Limited, Angamaly South, Ernakulam District Cochin, Kerala, India.	U31102KL1963SGC002043	44.60



14	National High Power Test Laboratory Pvt. Limited, NTPC Bhawan, SCOPE Complex Lodi Road, New Delhi-110003	U73100DL2009PTC190541	20.00
15	Energy Efficiency Services Limited, 4 <sup>th</sup> Floor, Sewa Bawan, R. K. Puram, New Delhi	U40200DL2009PLC196789	31.70
16	CIL NTPC Urja Private Limited, NTPC Bhawan, SCOPE Complex Lodi Road, New Delhi-110003	U14105DL2010PTC202053	50.00
17	International Coal Ventures Pvt. Limited, 20 <sup>th</sup> Floor, Scope Minar, (Core-2), North Tower, Laxmi Nagar District Centre, Delhi%	U10100DL2009PTC190448	0.11
18	Anushakti Vidhyut Nigam Limited, 16 <sup>th</sup> Floor, Centre 1, World Trade Centre, Cuffe Parade, Mumbai	U40300MH2011GOI212727	49.00
19	Pan Asian Renewables Pvt. Limited, NTPC Bhawan, SCOPE Complex Lodi Road, New Delhi-110003@	U40108DL2011PTC226296	50.00
20	Trincomalee Power Company Limited, 3 <sup>rd</sup> Floor, No.240, High Level Road, Kirulapone, Colombo – 00600, Sri Lanka	Not Applicable / Foreign Company	50.00
21	Bangladesh - India Friendship Power Company (P) Limited, 14 <sup>th</sup> Floor, Bidyut Bhawan, 1 Abdul Gani Road, Dhaka	Not Applicable / Foreign Company	50.00
22	Hindustan Urvarak & Rasayan Limited, Coal Bhawan, 10 Netaji Subhash Road Kolkata, Kolkata WB 700001	U24100WB2016PLC216175	33.28

\$ NTPC SCCL Global Ventures Pvt. Limited is under voluntary winding up.

# National Power Exchange Limited wound up by the order of Hon'ble High Court with effect from 31<sup>st</sup> March 2017

% NTPC has decided to exit from International Coal Ventures Pvt. Limited, Approval from Government of India is awaited.

@ Pan-Asian Renewables Private Limited have been wound up by the order of Hon'ble High Court.



## 41<sup>st</sup> Annual Report 2016-17

Annexure - VI to Directors' Report



#### IV. (A) SHARE HOLDING PATTERN (Equity Share Capital Breakup as percentage of Total Equity)

##### Category-wise Share Holding

CATEGORY OF SHAREHOLDER		NO. OF SHARES HELD AT THE BEGINNING OF THE YEAR i.e. 01/04/2016				NO. OF SHARES HELD AT THE END OF THE YEAR i.e. 31/03/2017				% CHANGE DURING THE YEAR
		DEMAT	PHYSICAL	TOTAL	% OF TOTAL SHARES	DEMAT	PHYSICAL	TOTAL	% OF TOTAL SHARES	
(I)	(II)	(III)	(IV)	(V)	(VI)	(VII)	(VIII)	(IX)	(X)	(XI)
(A)	<b>PROMOTER / AND PROMOTER GROUP</b>									
(1)	INDIAN									
(a)	Individual /HUF	0	0	0	0.00	0	0	0	0.00	0.00
(b)	Central Government/ State Government(s)	5,76,83,41,760	0	5,76,83,41,760	69.96	5,75,07,59,170	0	5,75,07,59,170	69.74	0.21
(c)	Bodies Corporate	0	0	0	0.00	0	0	0	0.00	0.00
(d)	Financial Institutions / Banks	0	0	0	0.00	0	0	0	0.00	0.00
(e)	Others	0	0	0	0.00	0	0	0	0.00	0.00
	<b>Sub-Total A(1):</b>	<b>5,76,83,41,760</b>	<b>0</b>	<b>5,76,83,41,760</b>	<b>69.96</b>	<b>5,75,07,59,170</b>	<b>0</b>	<b>5,75,07,59,170</b>	<b>69.74</b>	<b>0.21</b>
(2)	FOREIGN									
(a)	Individuals (NRIs/Foreign Individuals)	0	0	0	0.00	0	0	0	0.00	0.00
(b)	Bodies Corporate	0	0	0	0.00	0	0	0	0.00	0.00
(c)	Institutions	0	0	0	0.00	0	0	0	0.00	0.00
(d)	Qualified Foreign Investor	0	0	0	0.00	0	0	0	0.00	0.00
(e)	Others	0	0	0	0.00	0	0	0	0.00	0.00
	<b>Sub-Total A(2):</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	<b>0.00</b>
	<b>Total A=A(1)+A(2)</b>	<b>5,76,83,41,760</b>	<b>0</b>	<b>5,76,83,41,760</b>	<b>69.96</b>	<b>5,75,07,59,170</b>	<b>0</b>	<b>5,75,07,59,170</b>	<b>69.74</b>	<b>0.21</b>
(B)	<b>PUBLIC SHARE-HOLDING</b>									
(1)	INSTITUTIONS									
(a)	Mutual Funds /UTI	17,37,27,480	0	17,37,27,480	2.11	25,48,38,520	0	25,48,38,520	3.09	(0.98)
(b)	Financial Institutions / Banks	1,15,69,16,459	0	1,15,69,16,459	14.03	1,08,46,71,568	0	1,08,46,71,568	13.15	0.88
(c)	Central Government / State Govt(s)	0	0	0	0.00	0	0	0	0.00	0.00
(d)	Venture Capital Funds	0	0	0	0.00	0	0	0	0.00	0.00
(e)	Insurance Companies	7,18,18,984	0	7,18,18,984	0.87	6,32,26,613	0	6,32,26,613	0.77	0.10
(f)	Foreign Institutional Investors	88,62,37,673	0	88,62,37,673	10.75	86,03,53,722	0	86,03,53,722	10.43	0.31
(g)	Foreign Venture Capital Investors	0	0	0	0.00	0	0	0	0.00	0.00
(h)	Qualified Foreign Investor	0	0	0	0.00	0	0	0	0.00	0.00
(i)	Others	0	0	0	0.00	0	0	0	0.00	0.00
	<b>Sub-Total B(1):</b>	<b>2,28,87,00,596</b>	<b>0</b>	<b>2,28,87,00,596</b>	<b>27.76</b>	<b>2,26,30,90,423</b>	<b>0</b>	<b>2,26,30,90,423</b>	<b>27.45</b>	<b>0.31</b>

CATEGORY OF SHAREHOLDER		NO. OF SHARES HELD AT THE BEGINNING OF THE YEAR i.e. 01/04/2016				NO. OF SHARES HELD AT THE END OF THE YEAR i.e. 31/03/2017				% CHANGE DURING THE YEAR
		DEMAT	PHYSICAL	TOTAL	% OF TOTAL SHARES	DEMAT	PHYSICAL	TOTAL	% OF TOTAL SHARES	
(I)	(II)	(III)	(IV)	(V)	(VI)	(VII)	(VIII)	(IX)	(X)	(XI)
(2)	NON-INSTITUTIONS									
(a)	Bodies Corporate	1,75,36,668	0	1,75,36,668	0.21	6,52,56,784	0	6,52,56,784	0.79	(0.58)
(b)	Individuals									
	(i) Individuals holding nominal share capital upto ₹1 lakh	14,02,73,021	58,593	14,03,31,614	1.70	12,86,08,139	46,456	12,86,54,595	1.56	0.14
	(ii) Individuals holding nominal share capital in excess of ₹1 lakh	1,56,27,958	0	1,56,27,958	0.19	1,55,18,410	0	1,55,18,410	0.19	0.00
(c)	Others									
	Clearing Members	25,62,137	0	25,62,137	0.03	63,70,880	0	63,70,880	0.08	(0.05)
	Directors	7,171	0	7,171	0.00	11,709	0	11,709	0.00	0.00
	Foreign Bodies	1,500	0	1,500	0.00	1,500	0	1,500	0.00	0.00
	Foreign Nationals	2,690	0	2,690	0.00	1,590	0	1,590	0.00	0.00
	Non Resident Indians	47,67,281	48,200	48,15,481	0.06	44,41,743	48,200	44,89,943	0.06	0.02
	Trusts	75,36,825	0	75,36,825	0.09	1,13,09,396	0	1,13,09,396	0.14	(0.05)
(d)	Qualified Foreign Investor	0	0	0	0.00	0	0	0	0.00	0.00
	Sub-Total B(2) :	18,83,15,251	1,06,793	18,84,22,044	2.29	23,15,20,151	94,656	23,16,14,807	2.81	(0.52)
	Total B=B(1)+B(2) :	2,47,70,15,847	1,06,793	2,47,71,22,640	30.04	2,49,46,10,574	94,656	2,49,47,05,230	30.26	(0.21)
	Total (A+B) :	8,24,53,57,607	1,06,793	8,24,54,64,400	100.00	8,24,53,69,744	94,656	8,24,54,64,400	100.00	0.00
(C)	Shares held by custodians, for GDRs/ ADRs									
(1)	Promoter and Promoter Group	0	0	0	0.00	0	0	0	0.00	0.00
(2)	Public	0	0	0	0.00	0	0	0	0.00	0.00
	Total C	0	0	0	0.00	0	0	0	0.00	0.00
	GRAND TOTAL (A+B+C) :	8,24,53,57,607	1,06,793	8,24,54,64,400	100.00	8,24,53,69,744	94,656	8,24,54,64,400	100.00	

### B) Shareholding of Promoter-

S. No.	Shareholder's Name	Shareholding at the beginning of the year			Shareholding at the end of the year			% change in shareholding during the year
		No. of Shares	% of total Shares of the company	% of Shares Pledged / encumbered to total shares	No. of Shares	% of total Shares of the company	% of Shares Pledged / encumbered to total shares	
1	PRESIDENT OF INDIA	5,76,83,41,760	69.96	0	5,75,07,59,170	69.74	0	(0.21)

## 41<sup>st</sup> Annual Report 2016-17

Annexure - VI to Directors' Report



**C) Change in Promoters' Shareholding (please specify, if there is no change)**

S. No.	Particulars	Shareholding at the beginning of the year		Transaction during the year			Cumulative Shareholding during the year	
		No. of shares	% of total shares of the company	Date	Increase/ Decrease in share holding	Reason	No. of shares	% of total shares of the company
1	At the beginning of the year	5,76,83,41,760	69.96				5,76,83,41,760	69.96
2	Employees-Offer for sale			23/6/2016	-1,75,82,590	Transferred to Offer for sale Account	5,75,07,59,170	69.74
3	At the end of the year	5,75,07,59,170	69.74				5,75,07,59,170	69.74

**D) Shareholding Pattern of top ten Shareholders (Closing Balance)  
(Other than Directors, Promoters and Holders of GDRs and ADRs)**

S. No.	For Each of the Top 10 Shareholders*	Shareholding at the beginning of the year		Cumulative Shareholding during the year	
		No. of shares	% of total shares of the company	No. of shares	% of total shares of the company
1	LIC NEW ENDOWMENT PLUS-BALANCED FUND				
	At the beginning of the year	1,07,05,30,189	12.98	1,07,05,30,189	12.98
	Bought during the year	12,400	0.00	1,07,05,42,589	12.98
	Sold during the year	7,22,83,621	0.88	99,82,58,968	12.11
	At the end of the year	99,82,58,968	12.11	99,82,58,968	12.11
2	ICICI PRUDENTIAL INDIA RECOVERY FUND-SERIES 1				
	At the beginning of the year	8,35,48,388	1.01	8,35,48,388	1.01
	Bought during the year	9,02,75,207	1.09	17,38,23,595	2.10
	Sold during the year	7,43,58,304	0.90	9,94,65,291	1.20
	At the end of the year	9,94,65,291	1.20	9,94,65,291	1.20
3	T. ROWE PRICE INTERNATIONAL STOCK FUND				
	At the beginning of the year	5,66,92,172	0.69	5,66,92,172	0.69
	Bought during the year	50,69,040	0.06	6,17,61,212	0.75
	Sold during the year	16,21,256	0.02	6,01,39,956	0.73
	At the end of the year	6,01,39,956	0.73	6,01,39,956	0.73
4	PLATINUM INTERNATIONAL FUND				
	At the beginning of the year	4,31,42,033	0.52	4,31,42,033	0.52
	Bought during the year	10,04,000	0.02	4,41,46,033	0.54
	Sold during the year	0	0.00	4,41,46,033	0.54
	At the end of the year	4,41,46,033	0.54	4,41,46,033	0.54
5	FRANKLIN TEMPLETON MUTUAL FUND A/C FRANKLIN INDIA				
	At the beginning of the year	1,71,429	0.00	1,71,429	0.00
	Bought during the year	3,75,05,718	0.46	3,76,77,147	0.46
	Sold during the year	30,030	0.00	3,76,47,117	0.46
	At the end of the year	3,76,47,117	0.46	3,76,47,117	0.46



S. No.	For Each of the Top 10 Shareholders*	Shareholding at the beginning of the year		Cumulative Shareholding during the year	
		No. of shares	% of total shares of the company	No. of shares	% of total shares of the company
6	GOVERNMENT OF SINGAPORE				
	At the beginning of the year	3,68,23,897	0.45	3,68,23,897	0.45
	Bought during the year	94,65,462	0.11	4,62,89,359	0.56
	Sold during the year	81,13,361	0.10	3,81,75,998	0.46
	At the end of the year	3,81,75,998	0.46	3,81,75,998	0.46
7	HDFC TRUSTEE COMPANY LIMITED-HDFC EQUITY FUND				
	At the beginning of the year	1,46,85,938	0.18	1,46,85,938	0.18
	Bought during the year	3,04,86,161	0.37	4,51,72,099	0.55
	Sold during the year	89,83,897	0.11	3,61,88,202	0.44
	At the end of the year	3,61,88,202	0.44	3,61,88,202	0.44
8	ABU DHABI INVESTMENT AUTHORITY - LGLINV				
	At the beginning of the year	3,14,79,719	0.38	3,14,79,719	0.38
	Bought during the year	1,25,99,836	0.15	4,40,79,555	0.53
	Sold during the year	1,03,08,616	0.12	3,37,70,939	0.41
	At the end of the year	3,37,70,939	0.41	3,37,70,939	0.41
9	VANGUARD EMERGING MARKETS STOCK INDEX FUND, ASERIE				
	At the beginning of the year	3,06,33,010	0.37	3,06,33,010	0.37
	Bought during the year	29,75,107	0.03	3,36,08,117	0.40
	Sold during the year	7,34,313	0.00	3,28,73,804	0.40
	At the end of the year	3,28,73,804	0.40	3,28,73,804	0.40
10	BIRLA SUN LIFE TRUSTEE COMPANY PRIVATE LIMITED A/C				
	At the beginning of the year	3,01,28,976	0.37	3,01,28,976	0.37
	Bought during the year	56,34,399	0.06	3,57,63,375	0.43
	Sold during the year	1,55,45,213	0.18	2,02,18,162	0.25
	At the end of the year	2,02,18,162	0.25	2,02,18,162	0.25
11	PLATINUM ASIA FUND				
	At the beginning of the year	2,85,71,415	0.35	2,85,71,415	0.35
	Bought during the year	0	0.00	2,85,71,415	0.35
	Sold during the year	1,66,75,851	0.21	1,18,95,564	0.14
	At the end of the year	1,18,95,564	0.14	1,18,95,564	0.14
12	ICICI PRUDENTIAL LIFE INSURANCE COMPANY LTD.				
	At the beginning of the year	2,77,63,258	0.34	2,77,63,258	0.34
	Bought during the year	6,59,15,125	0.79	9,36,78,383	1.13
	Sold during the year	4,46,68,954	0.54	4,90,09,429	0.59
	At the end of the year	4,90,09,429	0.59	4,90,09,429	0.59

\*The shares of the Company are traded on a daily basis and hence the date wise increase / decrease in shareholding is not indicated. Shareholding is consolidated based on permanent account number (PAN) of the shareholder.

## 41<sup>st</sup> Annual Report 2016-17

Annexure - VI to Directors' Report



**E) Shareholding of Directors and Key Managerial Personnel:**

S. No.	Shareholding of Directors and Key Managerial Personnel	Shareholding at the beginning of the year		Transaction during the year			Cumulative Shareholding during the year	
		No. of shares	% of total shares of the company	Date	Increase/Decrease in share holding	Reason	No. of shares	% of total shares of the company
1	Shri Gurdeep Singh	0	0.00	01/04/2016			0	0.00
				15/07/2016	1,725	Transfer (Emp. OFS)	1,725	0.00
				31/03/2017			1,725	0.00
2	Shri Subhash Chandra Pandey	3,000	0.00	01/04/2016			3,000	0.00
				15/07/2016	1,725	Transfer (Emp. OFS)	4,725	0.00
				31/03/2017			4,725	0.00
3	Shri Anil Kumar Jha	1,440	0.00	01/04/2016			1,440	0.00
				15/07/2016	1,725	Transfer (Emp. OFS)	3,165	0.00
				31/03/2017			3,165	0.00
4	Shri Kaushal Kishore Sharma	369	0.00	01/04/2016			369	0.00
				15/07/2016	1,725	Transfer (Emp. OFS)	2,094	0.00
				31/03/2017			2,094	0.00
5	Shri Umesh Prasad Pani <sup>s</sup>	2,362	0.00	01/04/2016			2,362	0.00
				15/07/2016	(637)	Sale	1,725	0.00
				31/03/2017			1,725	0.00
6	Shri K. Biswal	0	0.00	01/04/2016			0	0.00
				15/07/2016	1,725	Transfer (Emp. OFS)	1,725	0.00
				31/03/2017			1,725	0.00
7	Shri Anand Kumar Gupta	2,888	0.00	01/04/2016			2,888	0.00
				31/03/2017			2,888	0.00
8	Shri Saptarshi Roy	361	0.00	01/04/2016			361	0.00
				17/06/2016	(7)	Sale	354	0.00
				15/07/2016	870	Transfer (Emp. OFS)	1,224	0.00
				16/09/2016	(7)	Sale	1,217	0.00
				23/12/2016	(6)	Sale	1,211	0.00
				17/03/2017	(6)	Sale	1,205	0.00
				31/03/2017			1,205	0.00
9	Shri Aniruddha Kumar	214	0.00	01/04/2016			214	0.00
				31/03/2017			214	0.00
10	Shri A K Rastogi*	2,383	0.00	01/04/2016			2,383	0.00
				31/03/2017			2,383	0.00

S. No.	Shareholding of Directors and Key Managerial Personnel	Shareholding at the beginning of the year		Transaction during the year			Cumulative Shareholding during the year	
		No. of shares	% of total shares of the company	Date	Increase/Decrease in share holding	Reason	No. of shares	% of total shares of the company
11	Shri K P Gupta <sup>#</sup>	2,000	0.00	01/04/2016			2,000	0.00
				22/04/2016	(500)	Sale	1,500	0.00
				03/06/2016	(200)	Sale	1,300	0.00
				10/06/2016	(500)	Sale	800	0.00
				24/06/2016	(500)	Sale	300	0.00
				30/06/2016	(300)	Sale	0	0.00
				15/07/2016	1300	Transfer (Emp. OFS)	1,300	0.00
				08/05/2016	(300)	Sale	1,000	0.00
				24/03/2017	(1,000)	Sale	0	0.00
				31/03/2017			0	0.00

§ KMP, Separated after completion of their terms of appointment as mentioned above.

\* Ceased to be Company Secretary & Compliance Officer w.e.f. 28<sup>th</sup> Feb., 2017.

# Appointed as Company Secretary & Compliance Officer w.e.f. 22<sup>nd</sup> March, 2017.

V) **INDEBTEDNESS** - Indebtedness of the Company including interest outstanding/accrued but not due for payment.

Amount in ₹ Crore

Particulars	Secured Loans excluding deposits	Unsecured Loans	Deposits	Total Indebtedness
<b>Indebtedness at the beginning of the financial year (as at 01.04.2016)</b>				
i) Principal Amount	25,472.86	67,654.38	-	93,127.24
ii) Interest due but not paid	-	-	-	-
iii) Interest accrued but not due	487.44	287.83	-	775.27
<b>Total (i+ii+iii)</b>	<b>25,960.30</b>	<b>67,942.21</b>	<b>-</b>	<b>93,902.51</b>
<b>Change in Indebtedness during the financial year (2016-17)</b>				
i) Addition in principal amount	8,868.60	16,653.63	-	25,522.23
ii) Reduction in principal amount	628.64	10,479.82	-	11,108.46
iii) Change in principal amount due to ERV	-	(661.11)	-	(661.11)
iv) Change due to unamortised borrowing cost	(1.42)	(38.27)	-	(39.69)
v) Change in interest accrued but not due	317.19	68.46	-	385.65
<b>Net Change (i-ii+iii+iv)</b>	<b>8,555.73</b>	<b>5,542.89</b>	<b>-</b>	<b>14,098.62</b>
<b>Indebtedness at the end of the financial year (as on 31.03.2017)</b>				
i) Principal Amount	33,711.40	73,128.81	-	1,06,840.21
ii) Interest due but not paid	-	-	-	-
iii) Interest accrued but not due	804.63	356.29	-	1,160.92
<b>Total (i+ii+iii)</b>	<b>34,516.03</b>	<b>73,485.10</b>	<b>-</b>	<b>1,08,001.13</b>

## 41<sup>st</sup> Annual Report 2016-17

Annexure - VI to Directors' Report



**VI. REMUNERATION OF DIRECTORS AND KEY MANAGERIAL PERSONNEL-**  
**A. Remuneration to Managing Director, Whole-time Directors and/or Manager**

S. No.	Particulars of Remuneration	Name of MD /WTD /Manager								Total Amount (₹)		
		CMD/CEO	WTD/CFO	WTD	WTD	Sh.U.P.Pani (Up to 31.10.2016)	Sh.S.C. Pandey	Sh.K.K. Sharma	Sh. S. Roy #		WTD	WTD
1	Gross salary											
	(a) Salary as per provisions contained in section 17(1) of the Income-tax Act, 1961	45,68,989	38,66,855	42,77,570	74,99,754	42,83,803	55,95,430	34,09,590	34,17,632		36,919,623	
	(b) Value of perquisites u/s 17(2) Income-tax Act, 1961	6,71,448	6,02,425	5,69,487	6,70,994	6,64,306	5,94,774	66,558	76,025		3,916,017	
	(c) Profits in lieu of salary under section 17(3) Income- tax Act, 1961	-	-	-	-	-	-	-	-		-	
2	Stock Option	-	-	-	-	-	-	-	-		-	
3	Sweat Equity	-	-	-	-	-	-	-	-		-	
4	Commission - as % of profit - others, specify...	-	-	-	-	-	-	-	-		-	
5	Others, please specify	-	-	-	-	-	-	-	-		-	
	Total (A)	5,240,437	4,469,280	4,847,057	8,170,748	4,948,109	6,190,204	3,476,148	3,493,657		4,08,35,640	
	Ceiling as per the Act	Not Applicable *										

# Appointed as Director (HR) w.e.f. 1<sup>st</sup> November 2016, however Salary for entire period (i.e. for FY 2016-17 was considered)

\$ Appointed as Director (Commercial) w.e.f. 3<sup>rd</sup> February 2017, however Salary for entire period (i.e. for FY 2016-17 was considered)

\* Section 197 of Companies Act, 2013 shall not apply vide MCA notification dated 5.6.2015



**B. Remuneration to other directors: (Refer Corporate Governance Report for details)**

S. No.	Particulars of Remuneration	Fee for attending board / committee meetings	Commission	Others, please specify- Honorarium	Total Amount
1.	<b>Independent Directors</b>				
	Shri Prashant Mehta (upto 29.07.2016)	3,00,000	-	-	3,00,000
	Dr.(Mrs.) Gauri Trivedi	6,40,000	-	-	6,40,000
	Shri Rajesh Jain	5,60,000	-	-	5,60,000
	Shri Seethapathy Chander	4,20,000	-	40,000	4,60,000
	<b>Total (1)</b>	<b>19,20,000</b>	<b>-</b>	<b>40,000</b>	<b>19,60,000</b>
2.	<b>Other Non-Executive Directors</b>	-	-	-	-
	<b>Total (2)</b>	-	-	-	-
	<b>Total (B)=(1+2)</b>	<b>19,20,000</b>	<b>-</b>	<b>40,000</b>	<b>19,60,000</b>
	<b>Total Managerial Remuneration (A+B)</b>				<b>4,27,95,640</b>
	Ceiling as per the Act (@ 1% of profits calculated under Section 198 of the Companies Act, 2013)	Not Applicable			

\* Section 197 of Companies Act, 2013 shall not apply vide MCA notification dated 5.6.2015.

**C. REMUNERATION TO KEY MANAGERIAL PERSONNEL OTHER THAN MD/MANAGER/WTD**

S. No.	Particulars of Remuneration	Key Managerial Personnel		
		Company Secretary	Company Secretary	Total
		Shri A. K. Rastogi*	Shri K. P. Gupta <sup>§</sup>	
1	Gross salary			
	(a) Salary as per provisions contained in section 17(1) of the Income-tax Act, 1961	60,96,616	42,53,874	1,03,50,490
	(b) Value of perquisites u/s 17(2) Income-tax Act, 1961	29,957	71,162	1,01,119
	(c) Profits in lieu of salary under section 17(3) Income-tax Act, 1961	-	-	-
2	Stock Option	-	-	-
3	Sweat Equity	-	-	-
4	Commission	-	-	-
	- as % of profit	-	-	-
5	Others, please specify	-	-	-
	<b>Total</b>	<b>61,26,573</b>	<b>43,25,036</b>	<b>1,04,51,609</b>

\* Ceased to be Company Secretary & Compliance Officer w.e.f. 28<sup>th</sup> February, 2017.

§ Appointed as Company Secretary & Compliance Officer w.e.f. 22<sup>nd</sup> March, 2017, however Salary for entire period (i.e. for FY 2016-17 was considered)

**VII. PENALTIES / PUNISHMENT/ COMPOUNDING OF OFFENCES:**

Type	Section of the Companies Act	Brief Description	Details of Penalty / Punishment/ Compounding fees imposed	Authority [RD / NCLT/ COURT]	Appeal made, if any (give Details)
There were no penalties/ punishment / compounding of offences for breach of any section of Companies Act against the Company or its Directors or other officers in default, if any, during the year.					

For and on behalf of the Board of Directors



(Gurdeep Singh)

Chairman & Managing Director

DIN: 00307037

Place: New Delhi  
Date: 4<sup>th</sup> August, 2017

**41<sup>st</sup> Annual Report 2016-17**

Annexure - VI to Directors' Report



## FORMAT FOR THE ANNUAL REPORT ON CSR ACTIVITIES TO BE INCLUDED IN THE BOARD'S REPORT

1. A brief outline of the company's CSR policy, including overview of projects or 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 Company's core business of power generation. 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 development activities are taken up along with the project development. Separate CSR Community Development Policy, formulated in July 2004 and Sustainability Policy formulated in November 2012 were combined and revised in 2015 as **"NTPC Policy for CSR & Sustainability"** in line with Companies Act, 2013 and DPE Guidelines for CSR. It covers a wide range of activities including implementation of key programmes through NTPC Foundation.

CSR & Sustainability programs undertaken by Company include activities specified in Schedule VII of the Companies Act, 2013 & rules made there under and any other activity for benefit of community at large. Focus areas of NTPC CSR & Sustainability activities are Health, Sanitation, Drinking Water, Education, Capacity Building, Women Empowerment, Social Infrastructure Development, support to Physically Challenged Person (PCPs) and activities contributing towards Environment Sustainability. The Company commits itself to contribute to the society, discharging its corporate social responsibilities through initiatives that have positive impact on society at large, especially the community in the neighbourhood of its operations by improving the quality of life of the people, promoting inclusive growth and environmental sustainability.

Preference for CSR & Sustainability activities is given to local areas around Company's operations, ensuring that majority CSR funds are spent for activities in local areas. However, considering Inclusive Growth & Environment Sustainability and to supplement Government effort, activities are taken up anywhere in the country. During the year, more than 400 villages and more than 360 schools have been benefited by NTPC's various CSR initiatives at different locations. NTPC's CSR initiatives have touched the lives of around 10 lakhs people in one or the other way, residing at remote locations.

During the year, special thrust has been given to the **"Clean Water and Sanitation"**. With an objective to provide adequate and equitable drinking water & sanitation and hygiene to the people around NTPC operations and to end open defecation through construction of individual, cluster and community toilets enabling a Clean, safe, healthy, livable and sustainable city.

During the Year, Company undertook the following initiatives:

- Provision for piped drinking water lines, hand pumps, bore wells, RO plants supply through tankers based on locational requirements. Deepening of ponds, water harvesting projects, construction of Ghats to improve water levels and Revival of Municipal Solid Waste Processing Plant.
- Mechanized Sweeping, Collection and Transportation of Municipal Solid Waste (MSW) in Varanasi.
- Construction of Individual Toilets and awareness creation and Setting up of Biomethanation Plants.

Another Major initiative of the company is **"Provision for income generation opportunities"** through vocational training, skill up gradation and income generation programs. NTPC has adopted 18 ITI's and is setting up 8 new ITI's. NTPC has signed MoU with NSDC for skill development of 30000 youth over a period of 5 years spread in 12 states. The company is providing vocational training to the village youth and had taken livestock developments and crop management Projects to enhance Income generation of the village community.

NTPC, being a member of Global Compact Network, India, confirms its involvement in various CSR activities in line with 10 Global Compact principles and shares its experience with the representatives of the world through Communication on Progress (COP). It submits COP to United Nations Global Compact on regular basis.

Web link for accessing uploaded COP is given below:

[www.unglobalcompact.org/what-is-gc/participants/7032-NTPC-Ltd#cop](http://www.unglobalcompact.org/what-is-gc/participants/7032-NTPC-Ltd#cop)

Web Link to the CSR Policy & Projects or programs:

<http://www.ntpc.co.in/en/corporate-citizenship/corporate-social-responsibility>

## 2. The Composition of the CSR Committee

The Board Level Corporate Social Responsibility & Sustainability Committee comprises of three functional Directors, one Government nominee and one Independent Director, recommends to the Board for approval, the amount of expenditure to be incurred on the activities and also monitors from time to time the Policy for Corporate Social Responsibility & Sustainability approved by the Board.

- |   |   |                     |
|---|---|---------------------|
| 3. Average net profit of the Company for the previous 3 financial years           | - | ₹ 11392.68 Crore    |
| 4. Prescribed CSR Expenditure (2% of the amount as in item 3 above)               | - | ₹ 227.85 Crore      |
| Unspent amount of 2015-16   | - | NIL                 |
| Total Prescribed CSR Expenditure  | - | ₹ 227.85 Crore      |
| 5. Details of CSR spent during the financial year                                 |   |                     |
| (a) Total amount to be spent for the financial year                               | - | ₹ 227.85 Crore      |
| Amount spent  | - | ₹ 277.81 Cr (2.43%) |
| Amount exceeding prescribed CSR Expenditure                                       | - | ₹ 49.96 Crore       |
| (b) Amount unspent, if any  | - | NIL                 |
| (c) Manner in which the amount spent during the financial year is detailed below: |   |                     |

Amount (₹ Crore)

5(c) Manner in which the amount spent during the financial year is detailed below :							
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
S.No.	CSR project or activity identified	Sector in which the Project is covered/ Relevant Section of Schedule VII in which the project is covered (Note)	Project or programs (1) Local area or other (2) Specify the State and district where projects or programs was undertaken	Amount outlay (budget) project or programs wise	Amount spent on the projects or programs Sub-heads*: (1) Direct expenditure on projects or programs (2) Overheads:	Cumulative expenditure upto to the reporting period*	Amount spent: Direct or through implementing agency
1	Swachh Vidyalaya Abhiyaan	i	CSR initiatives during the Financial Year 2016-17 have been taken up on PAN India basis around NTPC operations primarily in 20 states mentioned below: Andhra Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh, Uttarakhand, West Bengal	0.00	35.73	35.73	Through Implementing / Contracting Agency/NTPC Foundation/ Trusts/ societies
2	Healthcare & Sanitation	i		33.68	55.52	55.52	
3	Education & Skill Development	ii		53.06	60.45	60.45	
4	Rural Development	x		32.66	51.30	51.30	
5	Environment	iv		60.58	35.33	35.33	
6	Drinking Water	i		33.03	9.36	9.36	
7	Sports	vii		1.61	1.90	1.90	
8	Protection of National Heritage Art & Culture	v		1.28	0.82	0.82	
9	Other CSR Activities	ii, iii, iv		14.19	16.01	16.01	
10	Capacity Building (Overheads)			0.00	11.39	11.39	
	<b>Total</b>			<b>230.09</b>	<b>277.81</b>	<b>277.81</b>	

Note\* Including expenditure on activities carried forward from previous years, which have been completed during 2016-17.

Note :

- Eradicating hunger, poverty and malnutrition, promoting healthcare incl. preventive health care and sanitation including contribution to the Swachh Bharat Kosh set-up by the Central Government for the promotion of sanitation and making available safe drinking water;
- Promoting education, including special education and employment enhancing vocation skills especially among children, women, elderly, and the differently abled and livelihood enhancement projects;

## 41<sup>st</sup> Annual Report 2016-17

Annexure - VII to Directors' Report



- (iii) Promoting gender equality, empowering women, setting up homes and hostels for women and orphans; setting up old age homes, day care centres and such other facilities for senior citizens and measures for reducing inequalities faced by socially and economically backward groups;
  - (iv) Ensuring environmental sustainability, ecological balance, protection of flora and fauna, animal welfare, agroforestry, conservation of natural resources and maintaining quality of soil, air and water including contribution to the Clean Ganga Fund set-up by the Central Government for rejuvenation of river Ganga;
  - (v) Protection of national heritage, art and culture including restoration of buildings and sites of historical importance and works of art; setting up public libraries; promotion and development of traditional arts and handicrafts;
  - (vii) Training to promote rural sports, nationally recognized sports, paralympic sports and Olympic sports;
  - (viii) Rural development projects.
6. In case the company has failed to spend the two percent of the average net profit of the last three financial years or any part thereof, the company shall provide the reasons for not spending the amount in its Board Report.  
By spending ₹ 277.81 Crore during the financial year, the company has surpassed the prescribed two percent amount of ₹ 227.85 Crore by ₹ 49.96 Crore, thus achieving a CSR spend of 2.43%.
7. This is to state that the implementation and monitoring of CSR policy is in compliance with CSR objectives and policy of the Company.

For and on behalf of the Board of Directors



(Gurdeep Singh)

Chairman & Managing Director

DIN: 00307037

Place: New Delhi  
Date: 4<sup>th</sup> August, 2017





## PROJECT-WISE ASH PRODUCED AND UTILISED

The quantity of ash produced, ash utilized and percentage of such utilization during 2016-17 from NTPC Stations is as under:

Sl.No.	Stations	Ash Produced	Ash Utilization	% Utilization
		Lakh MTs	Lakh MTs	%
1	Badarpur	3.64	5.71	157.00
2	Dadri	18.33	37.29	203.47
3	Singrauli	36.77	3.34	9.09
4	Rihand	48.54	7.51	15.47
5	Unchahar	14.87	18.74	126.08
6	Tanda	7.48	8.84	118.17
7	Vindhyachal	76.39	17.96	23.51
8	Mouda	8.98	8.98	100.00
9	Korba	50.61	22.79	45.03
10	Sipat	54.50	12.46	22.87
11	Ramagundam	47.11	43.89	93.16
12	Simhadri	30.58	25.58	83.65
13	Farakka	30.36	16.76	55.22
14	Kahalgaoon	50.54	22.28	44.08
15	Barh	20.87	0.98	4.72
16	Talcher-Thermal	11.75	11.84	100.75
17	Talcher-Kaniha	71.21	30.72	43.14
18	Bongaigaon	2.06	0.00	0.00
	<b>Total</b>	<b>584.60</b>	<b>295.69</b>	<b>50.58</b>

For and on behalf of the Board of Directors



(Gurdeep Singh)

Chairman & Managing Director

DIN: 00307037

Place: New Delhi  
Date: 4<sup>th</sup> August, 2017



## 41<sup>st</sup> Annual Report 2016-17

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 –

Power Station and Office Maintenance Agreement with Utility Powertech Limited (UPL) (a 50:50 Joint Venture between NTPC and Reliance Infrastructure Limited). UPL undertakes jobs such as overhauling, repair, refurbishment of various mechanical and electrical equipments of power stations. The rates are fixed on cost plus basis after mutual discussion and after taking into account the prevailing market conditions.

Approval of the Members of the Company was taken in the Annual General Meeting held on 18.09.2015 for transactions with UPL subject to cumulative ceiling of 2% of the annual turnover of the Company as per the Audited Annual financial statement of the preceding financial year or ₹ 1,000 crore, whichever is more, in any financial year.

On the basis of above, NTPC has entered into Power Station and Office Maintenance Agreement with Utility Powertech Limited for a period of five years.

### 2. Details of material contracts or arrangement 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

- Name(s) of the related party and nature of relationship - NA
- Nature of contracts/arrangements/transactions - NA
- Duration of the contracts / arrangements/transactions- NA
- Salient terms of the contracts or arrangements or transactions including the value, if any - NA
- Date(s) of approval by the Board, if any - NA
- Amount paid as advances, if any - NA

For and on behalf of the Board of Directors



(Gurdeep Singh)

Chairman & Managing Director

DIN: 00307037

Place: New Delhi  
Date: 4<sup>th</sup> August, 2017

VIEW FROM NTPC KOLDAM-UPSTREAM



## NTPC BUSINESS RESPONSIBILITY REPORT (2016-17)

### Section A : General information about the Company

1. CIN (Corporate identity number) L40101DL1975GOI007966
2. Name of the Company NTPC LIMITED
3. Registered address NTPC Bhawan, Scope Complex, 7, Institutional Area, Lodhi Road, New Delhi-110003
4. Website [www.ntpc.co.in](http://www.ntpc.co.in)
5. Email id ntpccc@ntpc.co.in
6. FY reported 2016-17
7. Sector that company is engaged in Power
8. Product/services that the company manufacturers /provides (as in balance sheet):
  - i. Generation of Electricity
  - ii. Consultancy
  - iii. Coal Mining
9. Total number of location where business activity is undertaken by the company:
 

International locations - 03 nos.

  - a. Trincomalee Power Project, Srilanka
  - b. Power Project at Khulna, Bangladesh
  - c. Power Project at Siddhirganj, Bangladesh

National locations - 70 nos.
10. Markets served by the company : National & International

### Section B : Financial details of the Company

Sl. No.	Particulars	₹ in Crores
1.	Paid up capital	₹ 8245.46
2.	Total Turnover (Gross)	₹ 77,475.24
3.	Total profit after taxes	₹ 9,385.26
4.	Total spending on CSR and Sustainable Development (SD) as % of PAT	2.96 % (₹ 277.81 ) of PAT of FY 16-17
5.	List of activities in which expenditure in 4 above has been incurred	<p>Broad areas of the activities :</p> <ul style="list-style-type: none"> <li>- Education &amp; skill development</li> <li>- Swachh Vidhyalya Abhiyaan</li> <li>- Health care &amp; Sanitation</li> <li>- Rural Development</li> <li>- Protection of National Culture and Heritage</li> <li>- Capacity Building</li> <li>- Women Empowerment</li> <li>- Roads &amp; Infrastructure strengthening</li> <li>- Providing Drinking Water</li> <li>- Art &amp; Culture and Sports</li> <li>- Biodiversity, Tree Plantation</li> <li>- Waste management</li> <li>- Environmental Studies</li> <li>- Promotion of Renewable Energy</li> <li>- Water management</li> </ul>

## 41<sup>st</sup> Annual Report 2016-17



### Section C: Other Details

**Subsidiaries:** The Company has the following five (5) Subsidiary Companies as on 31-03-2017:

- NTPC Electric Supply Company Limited
- NTPC Vidyut Vyapar Nigam Limited
- Kanti Bijlee Utpadan Nigam Limited
- Bhartiya Rail Bijlee Company Limited
- Patratu Vidyut Utpadan Nigam Limited

The Business Responsibility (BR) Initiatives of the parent company are applicable to the subsidiary companies also. However, none of the entities that the Company does business with, participate in the BR initiatives of the Company.

### Section D: BR information

#### 1. Individual Directors responsible for implementation of the BR policy / policies:

Principle No.	Description	Policy / Policies	Director(s) Responsible
<b>Principle 1 (P1)</b>	Businesses should conduct and govern themselves with Ethics, Transparency and Accountability.	<ol style="list-style-type: none"> <li>Code of Conduct*</li> <li>Core Values</li> <li>Fraud Prevention Policy</li> <li>CDA Rules</li> <li>Whistle Blower Policy</li> <li>Internal code of conduct for prevention of insider trading</li> <li>Code of Corporate Fair Disclosure Practices for prevention of insider trading</li> <li>Related Party Transaction Policy</li> <li>Policy for determination of materiality of events or information for disclosure</li> <li>Policy on maintenance &amp; preservation of documents</li> <li>Policy for Determining Material Subsidiaries</li> <li>Training Policy for Directors of NTPC</li> <li>Dividend Distribution Policy</li> </ol>	All Directors & Chief Vigilance Officer
<b>Principle 2 (P2)</b>	Businesses should provide goods and services that are safe and contribute to sustainability throughout their life cycle.	<ol style="list-style-type: none"> <li>Safety Policy</li> <li>NTPC Policy for CSR and Sustainability</li> </ol>	Director (Operations) & Director (HR)
<b>Principle 3 (P3)</b>	Businesses should promote the well-being of all employees.	<ol style="list-style-type: none"> <li>Human Resource (HR) Policies</li> <li>Placement and Transfer Policy</li> </ol>	Director (HR)
<b>Principle 4 (P4)</b>	Businesses should respect the interests of and be responsive towards all stakeholders, especially those who are disadvantaged, vulnerable and marginalized.	<ol style="list-style-type: none"> <li>R&amp;R Policy</li> <li>Initial Community Development (ICD) Policy</li> <li>HR Policies</li> </ol>	Director (HR)



Principle No.	Description	Policy / Policies	Director(s) Responsible
<b>Principle 5 (P5)</b>	Businesses should respect and promote human rights.	HR Policies	Director (HR)
<b>Principle 6 (P6)</b>	Businesses should respect, protect, and make efforts to restore the environment.	1. Environment Policy 2. NTPC Policy for CSR and Sustainability	Director (Operation) & Director (HR)
<b>Principle 7 (P7)</b>	Businesses, when engaged in influencing public and regulatory policy, should do so in a responsible manner.	1. Code of Conduct* 2. Core Values	All Directors
<b>Principle 8 (P8)</b>	Businesses should support inclusive growth and equitable development.	1. R&R Policy 2. Initial Community Development (ICD) Policy	Director (HR)
<b>Principle 9 (P9)</b>	Businesses should engage with and provide value to their customers and consumers in a responsible manner.	Commercial systems & Procedures	Director (Commercial)

\* Code of Conduct for Board Members & Senior Management Personnel.

## 2. Details of Director/Directors responsible for BR as a whole

### a. Details of the Director/Directors responsible for implementation of the BR policy/policies:

S. No.	Particulars	Details
1.	DIN Number	00307037
2.	Name	Shri Gurdeep Singh
3.	Designation	Chairman & Managing Director
4.	Telephone number	011-24360044
5.	e-mail id	cmd@ntpc.co.in

### b. Details of BR head: Same as above

## 3. Principle wise reply to each question on BR Policy / Policies:

	Question	P1	P2	P3	P4	P5	P6	P7	P8	P9
1.	Do you have a policy/ policies for the Principle .....	Y	Y	Y	Y	Y	Y	Y	Y	N
2.	Has the policy being formulated in consultation with the relevant stakeholders?	Y	Y	Y	Y	Y	Y	Y	Y	-
3.	Does the policy conform to any national / international standards?	Y	Y	Y	Y	Y	Y	Y	Y	-
4.	Has the policy being approved by the Board? If yes, has it been signed by MD/owner/CEO/ appropriate Board Director?	Y	Y	Y	Y	Y	Y	Y	Y	-
5.	Does the company have a specified committee of the Board/ Director/ Official to oversee the implementation of the policy?	Y	Y	Y	Y	Y	Y	Y	Y	-
6.	Indicate the link for the policy to be viewed online?	(i)	(i)	(ii)	(i)	(ii)	(i)	(i)	(i)	-
7.	Has the policy been formally communicated to all relevant internal and external stakeholders?	Y	Y	Y <sup>s</sup>	Y	Y <sup>s</sup>	Y	Y	Y	-

## 41<sup>st</sup> Annual Report 2016-17

Annexure - X to Directors' Report



	Question	P1	P2	P3	P4	P5	P6	P7	P8	P9
8.	Does the company have in-house structure to implement the policy/ policies?	Y	Y	Y	Y	Y	Y	Y	Y	-
9.	Does the company have a grievance redressal mechanism related to the policy / policies to address stakeholders' grievances related to the policy / policies?	Y	Y	Y	Y	Y	Y	Y	Y	-
10.	Has the company carried out independent audit / evaluation of the working of this policy by an internal or external agency?	Y	Y	Y	Y	Y	Y	Y	Y	-

§ Communicated to Internal Stakeholders only.

(i) Web links for the Policies :

- Code of Conduct  
<http://www.ntpc.co.in/investors/code-of-conduct>
- R&R Policy  
<http://www.ntpc.co.in/en/corporate-citizenship/r-and-r-policies>
- CSR and Sustainability Policy  
<http://www.ntpc.co.in/download/ntpc-policy-csr-sustainability>
- Fraud Prevention Policy  
<http://www.ntpctender.com/about/FraudPolicy.asp>
- Internal Code of Conduct for prevention of insider trading  
<http://www.ntpc.co.in/download/internal-code-conduct-prevention-insider-trading-dealing-securities-ntpc-limited>
- Code of Corporate fair disclosure practices for prevention of insider trading <http://www.ntpc.co.in/download/code-corporate-fair-disclosure-practices-prevention-insider-trading>
- Related Party Transaction Policy  
<http://www.ntpc.co.in/download/related-party-transaction-policy-ntpc>
- Whistle Blower Policy  
<http://www.ntpc.co.in/sites/default/files/downloads/WhistleBlowerPolicy.pdf>
- Policy for determination of materiality of events or information for disclosure  
<http://www.ntpc.co.in/sites/default/files/downloads/NTPC%20-%20Policy%20For%20Determination%20of%20Materiality%20of%20events.pdf>
- Policy on maintenance & preservation of documents  
<http://www.ntpc.co.in/sites/default/files/downloads/Document%20Preservation%20Policy.pdf>
- Policy for Determining Material Subsidiaries  
<http://www.ntpc.co.in/download/policy-determining-material>
- Training Policy for Directors of NTPC  
<http://www.ntpc.co.in/download/training-policy-directors-ntpc>
- Initial Community Development Policy  
<http://www.ntpc.co.in/download/initial-community-development-policy-2009>

(ii) Policies not hosted on web:

- Environment Policy: Policy is in hard copy only and not hosted on web. However, Principles of Environment Policy have been given on the website [www.ntpc.co.in](http://www.ntpc.co.in) under Environment Head.
- Safety Policy, HR Policies & Placement and Transfer Policy: Available for internal stakeholders only and not hosted on web.

**4. If answer against any principle is 'No', please explain why:**

Principle 9: All the sub-principles identified under principle -9 are duly followed by company through its commercial systems and procedures. However, Company feels that a separate Policy on Principle -9 is not required because:

- The Company supplies power to the Bulk Customers (State Electricity Distribution companies) majority of which are owned by the respective State Govts.
- The CERC, while finalizing Tariff and other Regulations engages all Stakeholders and takes views of them. CERC Tariff Regulations and relevant orders are being displayed on CERC Website [www.cercind.gov.in](http://www.cercind.gov.in).
- The Company & Our bulk customers i.e. Discoms works under Regulated Environment. NTPC strives for supplying cheapest power deploying all resources optimally in best possible ways resulting in well being of customers & Society.
- The company being a Government Company is also subject to the various checks and balances mechanism such as audits etc.
- CERC while determining the tariff of NTPC stations does prudence check on the costs of company.
- NTPC never restricts the freedom of choice and free competition in any manner while supplying bulk Power.
- Needs of the customers is taken into account and accordingly PPA are signed and Allocation of Power is made by Ministry of Power as per existing guidelines & Policy to meet the requirement of customers. Unallocated quota of power is allocated by MoP as per demand and requirement of different States hence always keep customer first.
- Power Supply regularity, Performance and all other Commercial parameters are governed by Central Electricity Regulatory Commission and the company always excels in satisfying customers by disclosing all relevant information.
- Issues, if any, regarding operational issues etc. are being discussed and resolved in common forums such as Regional Power Committees.
- The company has developed a Customer Satisfaction Index (CSI), which is evaluated through a questionnaire and the based on the feedbacks received, actions are taken.
- The company engages with customers and provides value to the customers in a responsible manner.

**5. Governance related to BR**

i.	Indicate the frequency with which the Board of Directors, Committee of the Board or CEO to assess the BR performance of the Company.	Within 3-6 months
ii.	Does the Company publish a BR or a Sustainability Report? What is the hyperlink for viewing this report? How frequently it is published?	The company has published business Responsibility Report as a part of annual report 2015-16 and publicises Business Responsibility Report Annually

**Section E: Principle -wise performance**

**Principle 1: Businesses should conduct and govern themselves with Ethics, Transparency and Accountability**

Does the policy relating to ethics, bribery and corruption covers only the company? Does it extend to the Group/ Joint Ventures/ Suppliers/ Contractors/ NGOs / Others?

- Code of Conduct for Board Members & Senior Management Personnel covers all the Directors and Senior Management Personnel of the Company.
- Fraud Prevention Policy applies to any fraud, or suspected fraud involving employees of NTPC as well as representatives of vendors, suppliers, contractors, consultants, service providers or any outside agency (ies) doing any type of business with NTPC.
- CDA Rules are applicable to all employees of NTPC and employees posted in JVs/ Subsidiaries.
- Insider Trading Code is applicable to designated employee of the company.
- However, in line with NTPC, RGPPL and NTECL, JVs of NTPC have also adopted Fraud Prevention Policy and CDA rules.
- Related Party Transaction Policy is framed with intention to ensure proper approval and reporting of transactions between the Company and its Related Parties.

**41<sup>st</sup> Annual Report 2016-17**

Annexure - X to Directors' Report



- vii. The objective of Whistle Blower Policy is to build and strengthen a culture of transparency and trust in the organization and to provide employees with a framework / procedure for responsible and secure reporting of improper activities (whistle blowing) within the company and to protect employees wishing to raise a concern about improper activity/serious irregularities within the Company.
- viii. The Policy for determination of materiality of events or information for disclosure was framed in terms of Regulation 30 (1) of Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015 SEBI (LODR).
- ix. The Policy on maintenance & preservation of documents was framed in pursuance to Regulation 9 of the SEBI (LODR).
- x. The Policy for Determining Material Subsidiaries was framed in accordance with the requirement stated under the Listing Agreement.
- xi. The Training Policy aims at providing Orientation & Training programs to be offered to the Board of Directors NTPC.

NTPC has a Vigilance Department headed by Chief Vigilance Officer of the rank of Joint Secretary, GOI, who is a nominee of the Central Vigilance Commission. Vigilance set up in NTPC comprises of Vigilance Executives in Corporate Centre and Projects. In Projects, the VEs report to the Project Head in administrative matters but in functional matters, they report to Chief Vigilance Officer. Corporate Vigilance consists of 4 Cells, namely, Investigation & Processing Cell, Departmental Proceedings Cell, Technical Examination Cell and MIS Cell. These Cells deal with various facets of vigilance mechanism. The vigilance works of each Region namely ER-I, ER-II, WR-I, WR-II, NR, NCR, SR and Hydro Region have been separately assigned to one Vigilance Executive of GM/AGM rank for speedier disposal of vigilance cases.

Integrity Pact has been implemented in NTPC since 2009. Presently tenders having estimated value of ₹ 10 Crore (excluding taxes and duties) and above are covered under the Integrity Pact. Presently NTPC is having 1 Independent External Monitor - Sh. Satyananda Mishra, IAS (retd.) Ex.CIC to oversee the implementation of Integrity Pact Programme.

As per the provisions of Section 619(3) of the Companies Act, 1956, Fraud Prevention Policy has been implemented in NTPC and suspected fraud cases referred by the Nodal Officers to Vigilance Dept. are investigated immediately to avoid/stop fraudulent behaviours as defined in "Fraud Prevention Policy".

How many stakeholder complaints have been received in the past financial year and what percentage was satisfactorily resolved by the management? If so, provide details thereof, in about 50 words or so.

During the period, total 111 new complaints were received. 55 complaints (including 26 complaints previously received) were closed after verification. 49 complaints (including 11 complaints previously received) were taken up for investigation and 46 were under verification as on 31.03.2017.

**Principle 2: Businesses should provide goods and services that are safe and contribute to sustainability throughout their life cycle**

1. List up to 3 of your products or services whose design has incorporated social or environmental concerns, risks and/or opportunities
  - i. Generation of Electricity: NTPC produces Electricity through Coal, Gas, Hydro and Solar PV. These Systems have incorporated State of the Art technologies such as High Concentration slurry disposal (HCSD), Real time monitoring of Pollutants and Zero discharge in new projects.
2. For each such product, provide the following details in respect of resource use (energy, water, raw material etc.) per unit of product (optional):
  - a. Reduction during sourcing/production/distribution achieved since the previous year throughout the value chain?
  - b. Reduction during usage by consumers (energy, water) has been achieved since the previous year?





#### Raw Material (Energy) Consumption per year:

Energy Source	2014-15		2015-16		2016-17	
	Qty.	Per Unit Consumption	Qty.	Per Unit Consumption	Qty.	Per Unit Consumption
Coal	162.10 MMT	0.707 Kg/kwh	160.60 MMT	0.699 Kg/kwh	162.47 MMT	0.683 Kg/kwh
Gas	6.44 MMSCMD	0.218 scm/kwh	5.21 MMSCMD	0.22 scm/kwh	5.16 MMSCMD	0.22 scm/kwh
LDO	23246 KL	0.10 ml/kwh	15862KL	0.07ml/kwh	21545 KL	0.09 ml/kwh
HFO	63407 KL	0.28ml/kwh	76943KL	0.33ml/kwh	68354 KL	0.29 ml/kwh
Naphtha	144577MT	0.25 Ltr/kwh	26854MT	0.25 Ltr/kwh	2882 MT	0.25 Ltr/kwh
HSD	1241KL		388KL		96.975 KL	

#### Water Withdrawal per year (in million KL):

S. No.	Type of water	Quantity Consumed		
		2014-15	2015-16	2016-17
1	Total Water withdrawal	4546.3	4405.0	5533.16*
2	Per unit withdrawal	18.89Litre/kwh	18.44Litre/kwh	3.22* Litre/kwh
* Water calculated on closed loop systems				

#### Energy saving per year:

Energy saved by the initiatives taken in NTPC power plants for energy conservation / efficiency improvement	2014-15	2015-16	2016-17
	115.4 MUs	116.9 MUs	118.6 MUs

3. Does the company have procedures in place for sustainable sourcing (including transportation)? If yes, what percentage of your inputs was sourced sustainably? Also, provide details thereof,

The Following procedures are in place for the sustainable sourcing of coal by NTPC for its different power station:

- Coal Linkage:** Coal linkage for a new project is accorded by Standing Linkage Committee-Long Team (SLC-LT) under the aegis of Ministry of Coal, GOI. Accordingly, NTPC applies for coal linkage to SLC (LT) for its new projects. On the direction of SLC-LT, Coal companies issue Letter of Assurance (LoA) to the Buyer valid for 24 months. On receipt of LOA, NTPC completes all the formalities enabling for signing of FSA.
- Fuel Supply Agreement (FSA):** FSA is signed between the Buyer and Coal Companies for a period of 20 years with a provision of review after every 5 years. Based on the terms & conditions of FSA, coal companies supply coal to the power stations.
- Bilateral MOUs:** Short term coal procurements are done as per requirement through Bilateral MoUs with coal companies for the quantity, price & period mutually agreed by buyer & Coal Company.

**E-Auctions:** Coal is also procured for critical stations by participating in E-Auctions conducted by Coal companies as approved by NTPC Board.

**Import:** NTPC imports coal with the approval of NTPC Board. NTPC procures the coal on short term basis and in multi-packages to enable cost benefit to NTPC.

During 2016-17, NTPC sourced about 159.347 Million Metric Tons of domestic coal and 1.025 Million Metric Tons of imported coal.

4. Has the company taken any steps to procure goods and services from local & small producers, including communities surrounding their place of work? If yes, what steps have been taken to improve their capacity and capability of local and small vendors?

The Company adopts fair, equitable and transparent tendering procedures. To encourage Indian bidders and suppliers, provisions regarding price preference and deemed export benefits are stipulated in the bidding documents as per the extant policy of Government of India. Company has taken various initiatives to encourage participation in tender for local & small manufacturer including SMEs.

## 41<sup>st</sup> Annual Report 2016-17

Annexure - X to Directors' Report



The benefits include EMD exemption, tender document fee exemption and purchase preference of 15%.

Further, NTPC is organizing regular vendor meet for local SMEs for development of items and services and encourage the local vendor for SME registration under Udyog Aadhaar.

There are certain economic opportunities arising out of need for goods and services by the project and its township. NTPC provides opportunities to the local communities including Project Affected Persons (PAPs) for gainful employment by formation of Co-operative Societies and Self Help Groups. The preference for award of petty contracts etc. for supplying goods and services is given to Project Affected Persons (PAPs).

NTPC conducts regular capacity- building programmes for local communities including PAPs for better employability. The programs are conducted based on the findings of Need Assessment Surveys and Individual requirements and after due consultation with the community. The people are trained under various training programs through training institutes engaged by NTPC/ State Govt.

5. Does the company have a mechanism to recycle products and waste? If yes what is the percentage of recycling of products and waste (separately as <5%, 5-10%, >10%). Also, provide details thereof, in about 50 words or so.

Our Product viz. Electricity gets completely consumed and hence there is no scope of its recycling. Guidelines have been issued in line with National Environment Policy for disposal of hazardous wastes from NTPC power stations. The hazardous wastes generated at our power stations such as used transformer oil, used lubricants, lead acid batteries etc. are sold only to government approved recyclers or given back to the sellers for recycling under buy back arrangements, which takes care of 100% recycling of such wastes.

Around 50.58% of the total ash generation from electricity generation has been used for various productive purposes during 2016-17. Important areas of ash utilization are – cement & asbestos industries, ready mix concrete plant (RMC), road embankment construction, brick/ block/ tile manufacturing, mine filling, ash dyke raising, and land development.

**Principle 3: Businesses should promote the wellbeing of all employees**

1. Number of Employees: (excluding Employees posted in JVs & Subsidiary)

Category	2014-15	2015-16	2016-17
Executives	12,486	12,001	11,636
Non- Executives	10,010	9,632	8,957

2. Number of Employees hired on Temporary / Contractual / Casual basis:

NTPC does not hire employees on temporary / casual basis. The no. of workers with Contractors are dynamic in nature and vary from time to time.

3. Number of permanent Women Employees: 1330

4. Number of permanent Employees with Disabilities: 493

5. Do you have an employee association that is recognized by management:

NTPC Limited is a multi-unit organization. Association(s) comprising of executives of NTPC need not be recognized in the absence of any statutory mandate. Workmen of various NTPC Units have formed unions. The same are accorded recognition by NTPC Limited as per applicable law / practice.

6. What percentage of your permanent employees is members of this recognized employee association?

About 50-55% of the permanent employees in workmen category are members of the recognized union of workmen.

7. Please indicate the Number of complaints relating to child labour, forced labour, involuntary labour, sexual harassment in the last financial year and pending, as on the end of the financial year.

No.	Category	No. of previous year pending complaints	No. of complaints filed during the FY 16-17	No. of complaints pending as on 31-03-2017
1	Child labour / forced labour / involuntary labour	NIL	NIL	NIL
2	Sexual harassment	NIL	NIL	NIL
3	Discriminatory employment	NIL	NIL	NIL

8. What percentage of your under mentioned employees were given safety & skill up-gradation training in the last year? (Excluding joint venture companies)

Category of employee	Training for safety (% covered)	Training for skill up-gradation (% covered)
Permanent Employees	25.29	68.12
Permanent Women Employees	7.74	63.75
Casual / Temporary / Contractual Employees	82.54	6.10
Employees with Disabilities	18.05	71

**Principle 4: Businesses should respect the interests of, and be responsive towards all stakeholders, especially those who are disadvantaged, vulnerable and marginalized.**

- Has the company mapped its internal and external stakeholders? Yes
- Out of the above, has the company identified the disadvantaged, vulnerable & marginalized stakeholders  
The Company has a well structure R&R and CSR Policy to take care of the disadvantages, vulnerable and marginalized people in and around the plants.  
Vulnerable category of persons has been detailed in NTPC's CSR and R&R Policies. These include old-aged, women, PCPs, SC/ST/OBC etc. They are identified through Socio Economic Survey (SES), Need Assessment Survey (NAS) and other consultations with the stakeholders etc at the time of formulation of CSR/ R&R Plans.
- Are there any special initiatives taken by the company to engage with the disadvantaged, vulnerable and marginalized stakeholders? If so, provide details thereof, in about 50 words or so.

Yes,

NTPC has always been sensitive to the needs of disadvantaged, vulnerable and marginalized stakeholders. As part of R&R, in addition to the entitlements and packages as envisaged for PAP's, NTPC makes special efforts for the welfare measures for this section of the society in the neighbourhood community of NTPC locations. The measures include special vocational training programmes for making them self-employable, priority in engagement for suitable jobs, pension under Widow Pension Scheme, old age pension scheme etc as per provisions outlined in extant policies or as decided in Village Development Advisory Committee VDAC/ R&R plan. Furthering these efforts under CSR, NTPC regularly undertakes Skill up gradation programs for improving employability of youth/ women in the neighbourhood of its operations, some of which also fall in the Backward Districts identified under BRGF of Planning Commission. NTPC has also taken up the activities for women empowerment, construction of SC/ST multipurpose halls & hostels, relief through distribution of various articles & support to orphanages & old age homes in the vicinity of its stations. Some of the initiatives to address the needs of differently abled include Information and Communication Technology (ICT) Centres and Disability Rehabilitation Centres by NTPC Foundation and inclusive education, distribution of equipments like tricycles, wheelchairs, vocational training etc.

**Principle 5: Businesses should respect and promote human rights**

- Does the policy of the company on human rights cover only the company or extend to the Group / Joint Ventures / Suppliers / Contractors / NGOs / Others?  
All HR Policies of NTPC are applicable to all its employees posted in various stations, projects, offices, JVs and Subsidiaries. Human Rights provisions are also built in our bidding documents for supply cum erection and civil packages invited on competitive bidding basis covering our suppliers and contractors.
- How many stakeholder complaints have been received in the past financial year and what percent was satisfactorily resolved by the management?  
No complaint on human rights, such as child labour, forced labour, involuntary labour, sexual harassment, discrimination, rights of the disabled etc. was pending as on 31.3.2017.  
(refer principle 3)

**Principle 6: Business should respect, protect, and make efforts to restore the environment**

- Does the policy relate to Principle 6 cover only the company or extends to the Group / Joint Ventures / Suppliers / Contractors / NGOs / Others?

## 41<sup>st</sup> Annual Report 2016-17

Annexure - X to Directors' Report



The environment policy of NTPC and implementation thereof covers the core business activity of producing thermal power through its power stations. However, the Joint Ventures / Suppliers / Contractors / Other stake holders are free to adopt the same voluntarily.

2. Does the company have strategies/ initiatives to address global environmental issues such as climate change, global warming, etc? If yes, please give hyperlink for webpage etc.

Yes,

NTPC is one of the premiers PSU under Ministry of Power (MoP) and has been doing its bit in tackling the issue of global warming & climate change. NTPC, as a responsible global citizen, has taken various steps i.e readjustment of NTPC's fuel/ power generation mix by adopting more & more renewable, introduction of clean coal technologies etc in line with various GoI missions under National Action Plan on Climate Change (NAPCC).

NTPC low carbon initiatives may be categorized into following broad categories:

- i) Re-adjustment of NTPC's fuel/ power generation mix
  - ii) Introduction of Thermodynamically Efficient Technologies
  - iii) Renovation & Modernization of old power stations
  - iv) Induction of advanced clean coal technologies for power generation
  - v) Establishment of NETRA for addressing climate change concerns
- (i) **Re-adjustment of NTPC's fuel/ power generation mix**
- In order to reduce its carbon footprint, NTPC plans to gradually reduce its dependence on the fossil fuels by readjusting its fuel/power generation mix. We intend to include non-fossil fuel based power generation in our portfolio by setting up power plants based on hydro and renewable sources (solar, wind) of energy. Such generation does not have any CO<sub>2</sub> emissions.
- (ii) **Introduction of Thermodynamically Efficient Technologies**
- NTPC has constantly improved the steam cycle parameters of its generating units with consequent improvements in the plant efficiencies and reduction in CO<sub>2</sub> emissions. Heat rates (which are a direct indicator of efficiency at which power is generated) of NTPC power plants have evolved and have shown an impressive improvement since inception of its first unit in 1978, resulting in commensurate reduction in CO<sub>2</sub> emission per unit of power generated.
- (iii) **Renovation & Modernization of old power stations**
- NTPC has taken up extensive renovation and modernization of its old power generating units to maintain/ upgrade their efficiencies. Schemes are also implemented to reduce plant emissions and hence improve their environmental performance to aid sustainable development.
- (iv) **Induction of advanced clean coal technologies for power generation**
- NTPC along with BHEL and IGCAR is participating in 'Mission 2017- Development of Adv-USC technology'. The Mission envisages development of indigenous capabilities in the field of Adv-USC technology with steam parameters of about 310 Kg/cm<sup>2</sup> Main Steam pressure & 710 °C MS and 720 °C HRH Steam temperatures and is expected to deliver an Indigenous Adv-USC plant with expected efficiency to be about 46% as against approx. 38% for conventional 500 MW sub-critical power plants, leading to approximately 20% less CO<sub>2</sub> emission compared to a typical sub-critical plant. After development of Adv-USC technology, Mission proposes to establish an 800MWe Adv-USC Demo plant based on indigenous technology. If successful, this will prove to be a major national achievement in the direction of self-reliance in getting an efficient, cleaner and affordable power generation technology.
- (v) **Establishment of NETRA for addressing climate change concerns**
- NTPC has established NTPC Energy Technologies Research Alliance (NETRA) which basically focuses on clean technologies main attention being on climate change concerns. We have earmarked 1% of NTPC's distributable profits for this venture. Its R&D wing, NETRA, is engaged in various research and technology development programs with a view to address the climate change issues and mitigate CO<sub>2</sub> emission.
3. Does the company identify and assess potential environmental risks?
- NTPC has an elaborate and structured methodology for identifying and assessing potential environmental risks through an institutionalized "Enterprise Risk Management (ERM)" framework. ERM comprises of a functional Director level committee, which meets every quarter to review and mitigate risks. NTPC's risk portfolio includes "Compliance of



emission, ash utilization and regulatory norms" risk, under which environmental risks are regularly identified, assessed & reviewed and steps for mitigation are evolved.

4. Does the company have any project related to Clean Development Mechanism? If so, provide details thereof, in about 50 words or so. Also, if Yes, whether any environmental compliance report is filed?

NTPC is pioneer in undertaking climate change issues proactively. The company has taken several initiatives in CDM Projects in Power Sector.

Six of its renewable energy projects viz. 5 MW Solar PV Power Project at NTPC-Dadri, 5 MW Solar PV Power Project at Port Blair (A&N), 5 MW Solar PV Power Project at NTPC-Faridabad and 8 MW small hydro power project at NTPC-Singrauli, 50 MW Solar PV Plant at Rajgarh (MP) and 10 MW Solar PV Project at NTPC Unchahar has already been registered with United Nations Frame Work Convention on Climate Change (UNFCCC) CDM Executive Board.

Coordinating / Managing Entity (CME) has been appointed for 15 MW Solar PV Power project at NTPC-Singrauli and 10 MW Solar PV project at NTPC Talcher and is in process to include the same in registered UNFCCC CDM Programme of Activities (PoA).

6173 nos. of Certified Emission Reductions (CERs) for 5 MW Solar PV Power Project at Port Blair (A&N) has been issued by UNFCCC CDM Executive Board. Further, another 5842 nos of CERs have also been issued by UNFCCC CDM Executive Board for 5 MW Solar PV Power Project at NTPC-Dadri.

The methodology prepared by NTPC viz. "Consolidated base line and monitoring methodology for new grid connected fossil fuel fired power plants using less GHG intensive technology" for Super Critical technology has been approved by "United Nations Frame Work Convention on Climate Change (UNFCCC)" under 'Approved Consolidated Methodology 13 (ACM0013)'. More green field CDM projects are in pipeline.

5. Has the company undertaken any other initiatives on – clean technology, energy efficiency, renewable energy, etc. Y/N. If yes, please give hyperlink for web page or write up.

Yes, the company has taken up several Initiatives for clean technology, energy efficiency and renewable energy. Details are as follows:

NTPC as the leading power utility of the country has assigned 1% of PAT for R&D activities. Company has focused its research efforts to address the major concerns of the sector as well as the futuristic technology requirements of the sector.

The NTPC Energy Technology Research Alliance (NETRA) as state-of-the-art centre for research, technology development and scientific services is working on the focus areas of - Efficiency Improvement & Cost Reduction, New & Renewable Energy, Climate Change & Environmental Protection, Recovery of energy from Waste and Advanced Scientific Services. Major research initiative has been taken by the company to achieve breakthrough technologies for efficiency improvement & carbon emission reduction, efficient solar energy utilization, low grade waste heat utilization etc. The main initiatives taken in FY 16-17 are listed below:

#### **A – New & Renewable Energy**

1. ***Development of Geothermal Energy: Detail Project Report for establishment of 10MWe Geothermal based power plant at Tatapani, Chhattisgarh:***

For resource assessment of geothermal reservoir at Tatapani Balrampur, Chhattisgarh, measurement of geological parameters like MT studies, DRS studies is in progress. Subsequently exploratory bore well to establish geothermal potential for power generation shall be carried out. The Project has been taken up under aegis of CREDA in association with Geological Survey of India and National Geographic Research Institute, Hyderabad.

2. ***Integration of Solar thermal energy with conventional rankine cycle for efficient use of solar thermal energy:***

Approx. 15 MW-Thermal hybrid plant is being designed and engineered in-house for integration with a 210MW unit at NTPC-Dadri as technology demonstration project for efficient use of solar thermal energy.

3. ***Indigenous production of solar floating platforms for economical floating solar PV fields:***

NETRA in collaboration with Central Institute for Plastic Engineering and Technology (CIPET), Chennai has taken up this project to establish indigenous product development of floating platform to bring down the capital cost of floating solar PV fields comparable to the land based solar PV installations.

## **41<sup>st</sup> Annual Report 2016-17**

Annexure - X to Directors' Report



#### 4. *Setting up of solar thermal cooking system*

The cost effective solar thermal cooking system designed at NETRA is a Thermal energy Storage system i.e., it serves as buffer for cooking during no / low solar period as well as quick start-up in morning, capable of cooking in different temperature regimes. The system has been commissioned with LPG based thermic fluid heater for non / lean solar period operation at Dadri.

#### 5. *Ground Source Heat Pump (GSHP) for Cooling/ Heating Application*

A 10 TR Ground Source Heat Pump (GSHP) System has been installed at NETRA for study of the closed loop and open loop technology for using ground as a heat sink or heat source rather than ambient air, thereby taking advantage of the undisturbed and renewable ground temperature of around 25-28°C. The system can be used for cooling in summer and heating in winter with higher CoP, leading to 30-40% savings over conventional AC.

### **B – Clean coal & carbon Capture**

#### 1. *CO<sub>2</sub> Capture and Utilization Technologies:*

##### i. *CO<sub>2</sub> fixation by micro-algae:*

NETRA along with IOCL (R&D) is working for developing a process for fixation of CO<sub>2</sub> from flue gas using micro-algae. A 70 sqm open pond pilot plant has been developed at Faridabad power plant. Process condition for algae growth and harvesting has been optimized.

##### ii. *Development of modified amine absorption based process to separate CO<sub>2</sub> from flue gas:*

A collaborative research project with IIT-Guwahati has been taken up to develop an amine absorption based process for CO<sub>2</sub> separation. A bench scale test facility with capacity 20 lpm under development at IIT Guwahati.

#### 2. *Setting Up Fly Ash Based Light Weight Aggregate Pilot Plant at NTPC-SIPAT*

In order to utilize the fly ash in eco-friendly manner a light weight aggregate pilot plant based on fly ash is being set up at NTPC-Sipat. This shall also help in bulk fly ash utilization.

### **C – Energy Efficiency**

#### • *Utilization of low grade heat from power plant flue gas for various industrial applications:*

##### (a) *Development of HVAC system using low grade heat from Steam generator (SG) flue gas*

A 100 TR full scale pilot plant has been established at NTPC Ramagundam to meet the HVAC requirement of the power plant. CFC and GHG free system utilizes the waste heat from the SG flue gas and it uses less power than the conventional HVAC system. Now a full scale plant of capacity 400 TR is being planned to meet the total HVAC requirements at Talcher STPS.

##### (b) *Design and Engineering of FG based desalination plant*

A 120 TPD desalination plant using low grade heat from SG flue gas is being designed in-house and being setup at NTPC Simhadri. The plant shall utilize waste flue gas heat for DM Water generation from sea water.

##### (c) *Performance on PAT (Perform, Achieve and Trade)*

NTPC has exceeded the targets and earned 170635 ESCerts. One ESCerts is equivalent to one ton of oil energy saving & cost.

#### • *Capacity building in areas CFD modelling, online performance optimization tools for thermal power stations using Artificial Neural Network, fuzzy system, Genetic algorithm etc:*

i. CFD is a process simulation tool that uses computational techniques to represent and analyze power plant processes involving turbulent flow, heat transfer, chemical reactions etc. Processes like flow through flue gas ducts, CW intake channel/sump, boiler combustion etc can be analyzed by CFD modelling. NETRA has developed expertise in CFD modelling of power plant processes and implemented various modifications to reduce duct erosion, ID fan power consumption and CW pump vibration etc.

ii. NePPS - An Artificial Intelligence based Software Package for Power plant Performance, Analysis, Diagnosis & Optimization for performance improvement has been developed in house using state of art Artificial Intelligence based technologies like Artificial Neural network, Fuzzy system, Genetic Algorithm etc. and consist of various modules viz. set point optimization for operator advisory, Chem Analyzer, an expert system for chemical

parameters, prediction of real time Gross Caloric Value (GCV), Power plant performance monitoring and analysis, data validation, fault tree analysis etc.

### **Renewable Energy:**

#### **INITIATIVES IN RENEWABLE ENERGY:**

NTPC has submitted its green Commitment to Government of India in February 2015 for developing 10,000 MW of Renewable Energy Projects during 2014-19. In addition to this, NTPC has been designated as the Nodal Agency for implementing of a scheme for setting up of 15,000 MW of Grid connected Solar PV power plants under National Solar Mission in five years from 2014-15 to 2018-19.

NTPC has already developed 850 MW of solar PV projects. Out of this 55 MW projects are at its own stations at Dadri (5 MW), Ramagundam (10 MW), Talcher-Kaniha (10MW), Unchahar (10 MW), Faridabad (5 MW) and Singrauli (15 MW). And 250 MW solar PV projects at Ananthapuramu Ultra Mega solar park, Rajgarh M.P. (50 MW) and Port Blair A.N. (5 MW), Bhadla Solar(Rajasthan) 260 MW, Mandsaur-Solar PV-230 MW. The solar project at Rajgarh is the first largest solar PV project in India which was built with domestically manufactured solar PV modules. ***NTPC has also ventured into wind power and installed 16 MW wind power in Gujarat till 21.06.2017.***

NTPC has plans to develop solar PV projects at various projects of NTPC on spare land available at these projects. Further NTPC has planned to harness solar energy on the roof tops of potential buildings on its various upcoming thermal power projects.

6. Are the Emissions / Waste generated by the company within the permissible limits given by CPCB/SPCB for the financial year being reported?

All the legal parameters including emission norms and effluent (wastes) norms are being adhered to by NTPC stations. Change of Law in certain cases, has necessitated up-gradation of pollution control equipments which are being addressed through R&M Schemes for which actions plans have been submitted to the Regulators.

7. Number of show cause/ legal notices received from CPCB/SPCB which are pending (i.e. not resolved to satisfaction) as on end of Financial Year.

All the complaints / notices are addressed timely.

#### ***Principle 7: Businesses, when engaged in influencing public and regulatory policy, should do so in a responsible manner***

1. Is your company a member of any trade and chamber or association? If Yes, Name only those major ones that your business deals with.

The Company has taken Corporate Membership of 62 Chambers & association including SCOPE, FICCI, CII, TERI, ITRHD, WEC, SHRM, IPE, IERE, IFGE, NACE, ICSI, ICAI etc.

2. Have you advocated / lobbied through above associations for the advancement or improvement of public good? if yes specify the broad areas (drop box: Governance and Administration, Economic Reforms, Inclusive Development Policies, Energy security, Water, Food Security, Sustainable Business Principles, Others).

NTPC is a member of World Energy Council. Chairman and Managing Director of NTPC is also an ex-officio Member Secretary WEC India and its international counterpart WEC work towards sustainable use and supply of energy. Their work enables promoting policies which balance Energy Security, Energy Equity (Energy access/inclusive growth) and Environmental Sustainability.

#### ***Principle 8: Businesses should support inclusive growth and equitable development***

1. Does the company have specified programmes / initiatives / projects in pursuit of the policy related to Principle 8? If yes details thereof. Yes,

To achieve the aim of inclusive growth and equitable development, 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 development activities are taken up along with the project development. Separate CSR community Development Policy, formulated in July 2004 and Sustainability Policy formulated in Nov 2012 have been combined and revised in 2015 as "NTPC Policy for CSR & Sustainability" in line with Companies Act, 2013 and DPE Guidelines 2014. It covers a wide range of activities for inclusive growth including implementation of key programmes through a NTPC Foundation. Focus areas of NTPC CSR & Sustainability activities are Health, Sanitation, Drinking Water, Education, Capacity Building, Women Empowerment, Social Infrastructure Development, support to Physically Challenged Person (PCPs), and activities contributing towards Environment Sustainability.

## **41<sup>st</sup> Annual Report 2016-17**

Annexure - X to Directors' Report



**2. Are the programmes/projects undertaken through in-house team/own foundation/external NGO/government structures/any other organization?**

Programmes are undertaken by well-defined in-house team through specialized agencies, NGO's, government agencies/ bodies etc. Some of the activities are carried by NTPC Foundation.

**3. Have you done any impact assessment of your initiative? Yes,**

Social Impact Evaluation (SIE) studies/ surveys are conducted by NTPC as per policy provisions for all its major community development activities at various stations/ projects at regular interval. Annual Internal Audit of CSR Activities are also carried out. This year SIE has been conducted at 04 locations viz Anta, Ramagundam, Talcher-Thermal & Unchahar.

**4. What is your company's direct contribution to community development projects- Amount in INR and the details of the projects undertaken? Yes,**

Company as specified programmes for inclusive growth & equitable development not only at station level but also at National level. Details of the programmes and spending are listed below:

**Total spending on CSR - ₹ 277.81 Crore**

S. No.	Activity	CSR spend - 2016-17 (₹ Crore)
1	Swachh Vidhyalya Abhiyaan	35.73
2	Healthcare & Sanitation	55.52
3	Education & skill development	60.45
4	Rural Development	51.30
5	Environment	35.33
6	Drinking Water	9.36
7	Sports	1.90
8	Capacity Building	11.39
9	Protection of National Culture and Heritage	0.82
10	Other CSR Activities	16.01
	<b>Grand Total</b>	<b>277.81</b>

Further, as most of the stations are located in remote rural areas, NTPC during 2016-17 undertook activities in the neighbourhood area of stations addressing primarily the basic needs like primary education, community health, drinking water, sanitation, vocational training, women empowerment and village infrastructure like roads, community centre, solar street lights etc. In addition, Quality Circles (QCs) activities are being carried out in neighbourhood villages of stations which contribute for improvements in various areas. NTPC employees participate in various activities through Employee Voluntary Organization for Initiative in Community Empowerment (EVOICE). NTPC has been taking up CSR Activities in all the major sectors, in the vicinity of its operating stations, benefiting communities in more than 400 villages.

Apart from above during Project construction stage NTPC is also taking up big ticket projects like establishment of ITIs/ Polytechnic/ Engineering / Medical Colleges / Big infrastructure projects like construction of 4 lane roads, water supply scheme etc as part of Community Development (CD) activities under R&R Plan.

**5. Have you taken steps to ensure that this community development initiative is successfully adopted by the community? Please explain in 50 words or so.**

Community Development initiatives in NTPC are taken in a planned way. The community is engaged in all steps of activities from planning to completion.

Bottom up approach is adopted for taking up these activities. CSR activities/ CD plans are identified after consultations with relevant stakeholders like community, village panchayats, local/ district administration & Village Development Advisory Committee based on Need Assessment Surveys.

Stakeholders participate at each stage of the activity and also execution of some of the activities is supervised by the local authorities. People's involvement is also ensured during implementation and monitoring.

NTPC's flexible & open approach in this regard coupled with community participation along with local administration & village Panchayats leads to successful adoption & acceptability of initiatives by community. Assets are handed over to local authorities and gram panchayats for maintenance.

Social Impact Evaluation (SIE) study/ survey are conducted through external agencies on completion of developmental initiatives. Social audit is done from time to time to evaluate whether all activities have been completed satisfactorily that gives recommendation for necessary modification/ corrective measures, if any, for the future projects.



***Principle 9: Businesses should engage with and provide value to their customers and consumers in a responsible manner***

- 1 Customer complaints / consumer cases are pending as on the end of financial year: There are no complaints as such from customers. However, as part of the tariff determination process under the overall Regulatory System, different cases have been filed by NTPC against CERC/ Customers or filed at the Appellate Tribunal/ Courts by different Beneficiaries against NTPC/ CERC.  
APTEL: 31 Cases  
Supreme Court and Other courts: 29 Cases  
Total: 60 Cases as on 01.06.2017
- 2 Does the company display product information on the product label, over and above what is mandated as per local laws?  
Not Applicable
- 3 Is there any case filed by any stakeholder against the company regarding unfair trade practices, irresponsible advertising and / or anti-competitive behaviour during the last five years and pending as on end of financial year? If so, provide details thereof, in about 50 words or so.  
Nil
- 4 Did your company carry out any consumer survey/ consumer satisfaction trends: Yes,  
As part of the Customer Relationship Management programme, NTPC conducts a Customer Satisfaction Survey to assess the satisfaction level of the customers, captured through an Index and to get feedback from the customers.

For and on behalf of the Board of Directors



(Gurdeep Singh)

Chairman & Managing Director  
DIN: 00307037

Place: New Delhi  
Date: 4<sup>th</sup> August, 2017

**RECREATION CENTRE IN NTPC TALCHER KANIHA**



**41<sup>st</sup> Annual Report 2016-17**

Annexure - X to Directors' Report



## SECRETARIAL AUDIT REPORT FOR THE FINANCIAL YEAR ENDED 31<sup>st</sup> MARCH, 2017

{Pursuant to Section 204(1) of the Companies Act, 2013 and  
Rule 9 of the Companies (Appointment and Remuneration of Managerial Personnel) Rules, 2014}

To,  
The Members,  
NTPC Limited

We have conducted the Secretarial Audit of the compliance of applicable statutory provisions and the adherence to good corporate practices by **NTPC Limited** (hereinafter called NTPC/the Company). Secretarial Audit was conducted in a manner that provided us a reasonable basis for evaluating the corporate conducts/statutory compliances and expressing our opinion thereon.

Based on our verification of the NTPC's 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 period ended on 31<sup>st</sup> March, 2017 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 for the financial year ended on 31<sup>st</sup> March, 2017 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 and Listing of Debt Securities) Regulations, 2008;
  - (d) 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;
  - (e) The Securities and Exchange Board of India (Issue of Capital and Disclosure Requirements) Regulations, 2009;
  - (f) The Securities and Exchange Board of India (Employee Stock Option Scheme and Employee Stock Purchase Scheme) Guidelines, 1999;
  - (g) The Securities and Exchange Board of India (Delisting of Equity Shares) Regulations, 2009; and
  - (h) The Securities and Exchange Board of India (Buyback of Securities) Regulations, 1998;
- (vi) Compliances/processes/systems under following specific **applicable Laws** (as applicable to the industry) to the Company are being verified on the basis of periodic certificate submitted to the Board of Directors of the Company:
  - (a) The 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:

- Secretarial Standards issued by the Institute of Company Secretaries of India. *Generally complied with.*
- The Securities and Exchange Board of India (Listing Obligations & Disclosure Requirements) Regulations, 2015 with National Stock Exchange of India Limited & BSE Limited.
- DPE Guidelines on Corporate Governance for CPSE.

During the period under review the Company has complied with the provisions of the Act, Rules, Regulations, Guidelines, Standards, etc. mentioned above, subject to the following observations:

- Compliance of Regulation 17(1) of Securities and Exchange Board of India (Listing Obligations & Disclosure Requirements) Regulations, 2015 and Clause 3.1.4 of the DPE Guidelines on Corporate Governance for Central Public Sector Enterprises w.r.t. appointment of requisite no. of Independent Directors on the Board of the Company.*
- Compliance of Regulation 17(10) & 25(4) 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.*

**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 of the Board of Directors 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 under review were carried out in compliance with the provisions of the Act.

Generally, 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 from whole time directors.

All the decisions made in the Board/Committee meeting(s) were carried out with unanimous consent of all the Directors/ Members present during the meeting and dissent, if any, have been duly incorporated in 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, there were no specific events/actions having a major bearing on the Company's affairs in pursuance of the above referred laws.

For Agarwal S. & Associates,  
Company Secretaries

Sachin Agarwal  
Partner  
FCS No. : 5774  
C.P No. : 5910

Place: New Delhi  
Date: 03.07.2017

This report is to be read with our letter of even date which is annexed as "Annexure A" and forms an integral part of this report.

## 41<sup>st</sup> Annual Report 2016-17

Annexure - XI to Directors' Report





To,  
The Members,  
NTPC Limited

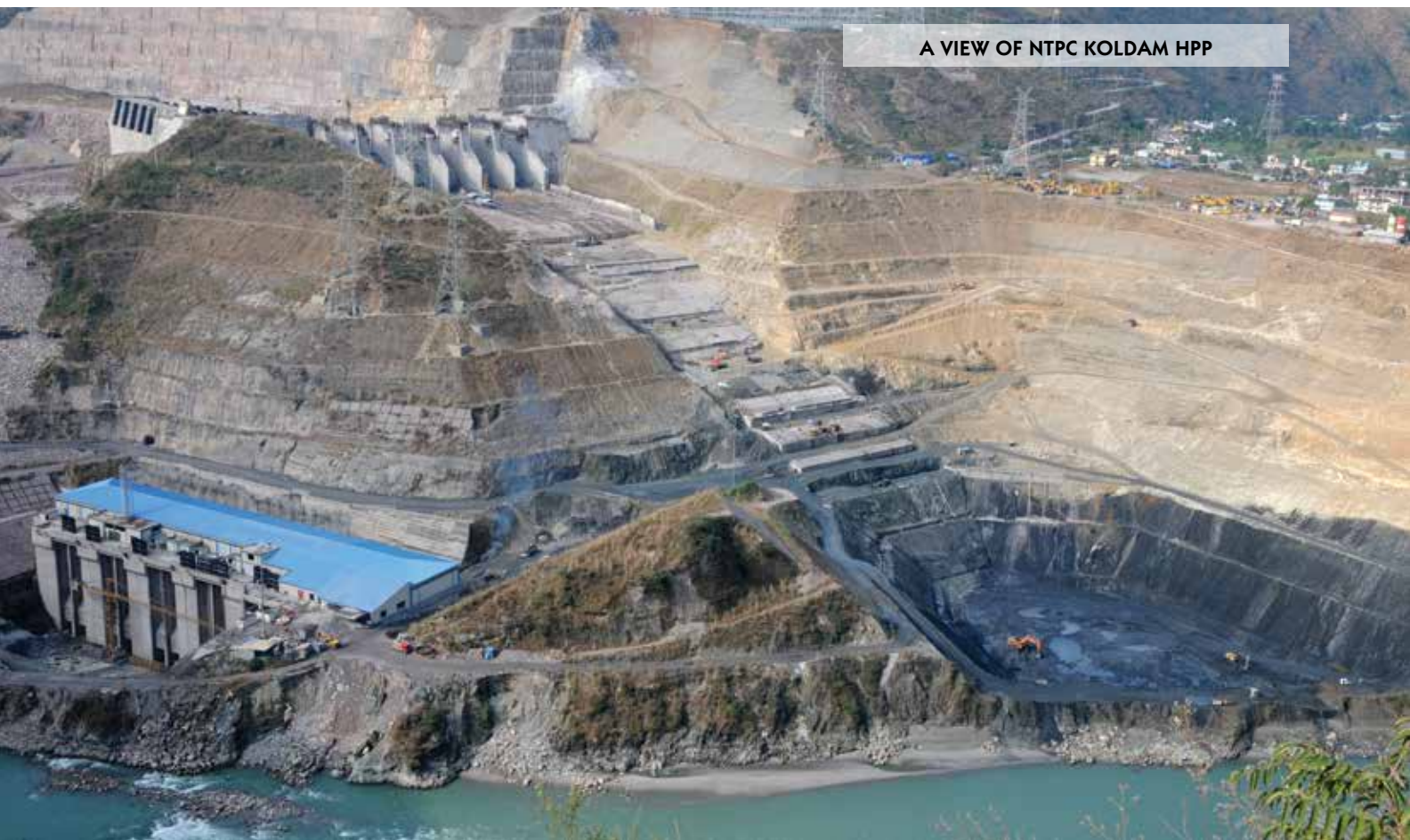
Our report of even date is to be read along with this letter.

1. Maintenance of secretarial record is the responsibility of the management of the Company. Our Responsibility is to express an opinion on these secretarial records based on our audit.
2. We have followed the audit practices and processes as were appropriate to obtain reasonable assurance about the correctness of the contents of the secretarial records. The verification was done on test basis to ensure that correct facts are reflected in secretarial records. We believe that the processes and practices we followed provide a reasonable basis for our opinion.
3. We have not verified the correctness and appropriateness of financial records and Books of Accounts of the Company.
4. Wherever required, we have obtained the Management representation about the compliance of laws, rules and regulations and happening of events etc.
5. The Compliance of the provisions of corporate and other applicable laws, rules, regulations, standards is the responsibility of management. Our examination was limited to the verification of procedures on test basis.
6. The Secretarial Audit Report is neither an assurance as to future viability of the Company nor of the efficacy or effectiveness with which the management has conducted the affairs of the Company.

For Agarwal S. & Associates,  
Company Secretaries

Place: New Delhi  
Date: 03.07.2017

Sachin Agarwal  
Partner  
FCS No. : 5774  
C.P No. : 5910



A VIEW OF NTPC KOLDAM HPP



## BALANCE SHEET

₹ Crore

Particulars	Note No.	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
<b>ASSETS</b>				
<b>Non-current assets</b>				
Property, plant & equipment	2	99,062.70	91,499.36	78,153.38
Intangible assets	3	293.02	273.89	262.16
Capital work-in-progress	4	80,522.55	66,205.59	56,463.11
Intangible assets under development	5	214.54	217.61	30.38
Investments in subsidiaries & joint ventures	6	8,838.88	7,934.72	7,140.67
Financial assets				
Investments	7	113.48	79.60	98.48
Trade receivables	8	35.59	71.18	-
Loans	9	530.59	440.93	468.46
Other financial assets	10	1,164.26	1,022.19	981.48
Other non-current assets	11	16,879.15	17,636.80	16,343.85
<b>Total non-current assets</b>		<b>207,654.76</b>	<b>185,381.87</b>	<b>159,941.97</b>
<b>Current assets</b>				
Inventories	12	6,504.81	7,010.37	7,297.06
Financial assets				
Investments	13	-	378.72	1,983.34
Trade receivables	14	8,137.92	7,732.22	7,604.37
Cash and cash equivalent	15	157.12	1,372.40	280.65
Bank balances other than cash and cash equivalent	16	2,773.37	3,088.38	12,994.35
Loans	17	236.92	251.78	272.63
Other financial assets	18	6,053.32	5,246.03	2,930.38
Other current assets	19	4,536.44	4,676.55	3,865.51
<b>Total current assets</b>		<b>28,399.90</b>	<b>29,756.45</b>	<b>37,228.29</b>
Regulatory deferral account debit balances	20	522.83	-	-
<b>TOTAL ASSETS</b>		<b>236,577.49</b>	<b>215,138.32</b>	<b>197,170.26</b>
<b>EQUITY AND LIABILITIES</b>				
<b>Equity</b>				
Equity share capital	21	8,245.46	8,245.46	8,245.46
Other equity	22	87,985.77	83,048.24	75,584.64
<b>Total equity</b>		<b>96,231.23</b>	<b>91,293.70</b>	<b>83,830.10</b>
<b>Liabilities</b>				
<b>Non-current liabilities</b>				
Financial liabilities				
Borrowings	23	97,339.28	85,096.95	78,564.51
Trade payables	24	13.17	8.37	3.47
Other financial liabilities	25	2,247.13	2,999.27	2,213.72

## 41<sup>st</sup> Annual Report 2016-17

Standalone Financial Statements



## BALANCE SHEET

₹ Crore

Particulars	Note No.	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
Provisions	26	463.15	436.41	1,115.71
Deferred tax liabilities (net)	27	1,484.84	1,152.21	979.07
Other non-current liabilities	28	17.49	49.68	0.01
<b>Total non-current liabilities</b>		<b>101,565.06</b>	<b>89,742.89</b>	<b>82,876.49</b>
<b>Current liabilities</b>				
Financial liabilities				
Borrowings	29	3,000.56	1,299.50	-
Trade payables	30	4,876.08	5,311.64	5,953.15
Other financial liabilities	31	19,179.40	17,445.02	16,437.32
Other current liabilities	32	1,081.16	775.59	373.45
Provisions	33	7,964.92	6,775.69	6,022.04
Current tax liabilities (net)	34	75.20	151.30	-
<b>Total current liabilities</b>		<b>36,177.32</b>	<b>31,758.74</b>	<b>28,785.96</b>
Deferred revenue	35	2,121.14	2,047.34	1,369.97
Regulatory deferral account credit balances	36	482.74	295.65	307.74
<b>TOTAL EQUITY AND LIABILITIES</b>		<b>236,577.49</b>	<b>215,138.32</b>	<b>197,170.26</b>
Significant accounting policies	1			

The accompanying notes 1 to 74 form an integral part of these financial statements.

For and on behalf of the Board of Directors

(K.P. Gupta)  
Company Secretary

(K.Biswal)  
Director (Finance)

(Gurdeep Singh)  
Chairman & Managing Director

This is the Balance Sheet referred to in our report of even date

For T.R. Chadha & Co LLP  
Chartered Accountants  
Firm Reg. No. 006711N/N500028

For PSD & Associates  
Chartered Accountants  
Firm Reg. No. 004501C

For Sagar & Associates  
Chartered Accountants  
Firm Reg. No. 003510S

(Neena Goel)  
Partner  
M. No. 057986

(Thalendra Sharma)  
Partner  
M. No. 079236

(D. Manohar)  
Partner  
M. No.029644

For Kalani & Co.  
Chartered Accountants  
Firm Reg. No. 000722C

For P. A. & Associates  
Chartered Accountants  
Firm Reg. No. 313085E

For S. K. Kapoor & Co.  
Chartered Accountants  
Firm Reg. No. 000745C

For B M Chatrath & Co. LLP  
Chartered Accountants  
Firm Reg. No. 301011E/E300025

(Vikas Gupta)  
Partner  
M. No. 077076

(S. S. Poddar)  
Partner  
M. No.051113

(V. B. Singh)  
Partner  
M. No. 073124

(P. R. Paul)  
Partner  
M. No. 051675

Place: New Delhi  
Date: 29 May 2017

## STATEMENT OF PROFIT AND LOSS

Particulars	Note No.	₹ Crore	
		For the year ended 31.03.2017	For the year ended 31.03.2016
<b>Revenue</b>			
Revenue from operations	37	78,273.44	70,843.81
Other income	38	1,068.86	1,165.35
<b>Total revenue</b>		<b>79,342.30</b>	<b>72,009.16</b>
<b>Expenses</b>			
Fuel		47,572.19	43,798.59
Employee benefits expense	39	4,324.60	3,581.65
Finance costs	40	3,597.20	3,296.41
Depreciation, amortization and impairment expense	41	5,920.82	5,172.34
Other expenses	42	5,092.38	5,576.49
<b>Total expenses</b>		<b>66,507.19</b>	<b>61,425.48</b>
<b>Profit before exceptional items, tax and Rate Regulated Activities (RRA)</b>		<b>12,835.11</b>	<b>10,583.68</b>
<b>Add: Movements in Regulatory deferral account balances</b>	68	<b>335.74</b>	<b>12.09</b>
<b>Profit before exceptional items and tax</b>		<b>13,170.85</b>	<b>10,595.77</b>
<b>Exceptional items - impairment loss on investment</b>	60	<b>782.95</b>	<b>-</b>
<b>Profit before tax</b>		<b>12,387.90</b>	<b>10,595.77</b>
<b>Tax expense</b>	54		
Current tax			
Current year		2,705.75	2,103.92
Earlier years		(107.56)	(2,453.48)
Tax expense/(saving) pertaining to RRA		71.82	2.58
Deferred tax		1,287.31	226.88
Less: Deferred asset for deferred tax liability		954.68	53.73
<b>Total tax expense</b>		<b>3,002.64</b>	<b>(173.83)</b>
<b>Profit for the year</b>		<b>9,385.26</b>	<b>10,769.60</b>
<b>Other comprehensive income</b>			
Items that will not be reclassified to profit or loss (net of tax)			
- Net actuarial gains/(losses) on defined benefit plans		(238.66)	(38.35)
- Net gains/(losses) on fair value of equity instruments		35.28	(20.28)
<b>Other comprehensive income for the year, net of income tax</b>		<b>(203.38)</b>	<b>(58.63)</b>
<b>Total comprehensive income for the year</b>		<b>9,181.88</b>	<b>10,710.97</b>

## 41<sup>st</sup> Annual Report 2016-17

Standalone Financial Statements



## STATEMENT OF PROFIT AND LOSS

₹ Crore

Particulars	Note No.	For the year ended 31.03.2017	For the year ended 31.03.2016
Significant accounting policies	1		
Expenditure during construction period (net)	43		
<b>Earnings per equity share (Par value ₹ 10/- each)</b>	<b>59</b>		
Basic & Diluted (₹) (from operations including regulatory deferral account balances)		<b>11.38</b>	13.06
Basic & Diluted (₹) (from operations excluding regulatory deferral account balances)		<b>11.06</b>	13.05
The accompanying notes 1 to 74 form an integral part of these financial statements.			

For and on behalf of the Board of Directors

(K.P. Gupta)  
Company Secretary

(K.Biswal)  
Director (Finance)

(Gurdeep Singh)  
Chairman & Managing Director

This is the Statement of Profit and Loss referred to in our report of even date

For T.R. Chadha & Co LLP  
Chartered Accountants  
Firm Reg. No. 006711N/N500028

For PSD & Associates  
Chartered Accountants  
Firm Reg. No. 004501C

For Sagar & Associates  
Chartered Accountants  
Firm Reg. No. 003510S

(Neena Goel)  
Partner  
M. No. 057986

(Thalendra Sharma)  
Partner  
M. No. 079236

(D. Manohar)  
Partner  
M. No.029644

For Kalani & Co.  
Chartered Accountants  
Firm Reg. No. 000722C

For P. A. & Associates  
Chartered Accountants  
Firm Reg. No. 313085E

For S. K. Kapoor & Co.  
Chartered Accountants  
Firm Reg. No. 000745C

For B M Chatrath & Co. LLP  
Chartered Accountants  
Firm Reg. No. 301011E/E300025

(Vikas Gupta)  
Partner  
M. No. 077076

(S. S. Poddar)  
Partner  
M. No. 051113

(V. B. Singh)  
Partner  
M. No. 073124

(P. R. Paul)  
Partner  
M. No. 051675

Place: New Delhi  
Date: 29 May 2017



## STATEMENT OF CASH FLOWS

Particulars	₹ Crore	
	For the year ended 31.03.2017	For the year ended 31.03.2016
<b>A. CASH FLOW FROM OPERATING ACTIVITIES</b>		
Profit before tax	12,387.90	10,595.77
Adjustment for:		
Depreciation/amortisation & impairment expense	5,920.82	5,172.34
Provisions	161.10	189.12
Impairment loss on investments - exceptional item	782.95	-
Deferred revenue on account of advance against depreciation	(32.92)	(129.26)
Deferred revenue on account of government grants	372.12	125.02
Deferred foreign currency fluctuation asset	336.11	(88.30)
Deferred income from foreign currency fluctuation	(102.30)	797.66
Regulatory deferral account credit balances	187.09	(12.09)
Regulatory deferral account debit balances	(522.83)	-
Fly ash utilisation reserve fund	78.47	77.07
Exchange differences on translation of foreign currency cash and cash equivalents	0.06	(0.08)
Finance costs	3,515.33	3,223.91
Unwinding of discount on vendor liabilities	81.87	72.50
Interest/income on term deposits/bonds/investments	(104.40)	(561.15)
Dividend income	(166.09)	(184.20)
Provisions written back	(174.87)	(175.43)
Profit on disposal of fixed assets	(10.36)	(1.66)
Loss on disposal of fixed assets	82.94	143.85
	10,405.09	8,649.30
Operating profit before working capital changes	22,792.99	19,245.07
Adjustment for:		
Trade receivables	(370.11)	(199.03)
Inventories	841.22	605.12
Trade payables, provisions and other liabilities	246.75	(574.93)
Loans, advances and other assets	(912.06)	(3,312.74)
Bank balances other than cash & cash equivalents	287.46	9,559.61
	93.26	6,078.03
Cash generated from operations	22,886.25	25,323.10
Direct taxes paid	(2,584.88)	(1,335.72)
Net cash from operating activities - A	20,301.37	23,987.38
<b>B. CASH FLOW FROM INVESTING ACTIVITIES</b>		
Purchase of fixed assets	(23,530.75)	(20,373.54)
Disposal of fixed assets	72.01	122.85
Purchase of investments	-	(117.03)
Sale of investments	343.63	1,651.46
Investment in subsidiaries/joint ventures	(1,707.91)	(802.34)
Loans & advances to subsidiaries	(184.81)	147.89
Interest/income on term deposits/bonds/investments received	167.04	977.70
Income tax paid on interest income	(44.12)	(137.28)
Dividend received	166.09	184.20
Net cash used in investing activities - B	(24,718.82)	(18,346.09)

## 41<sup>st</sup> Annual Report 2016-17

Standalone Financial Statements



## STATEMENT OF CASH FLOWS

Particulars	For the year ended 31.03.2017	For the year ended 31.03.2016
<b>C. CASH FLOW FROM FINANCING ACTIVITIES</b>		
Proceeds from long term borrowings	23,821.17	11,801.22
Repayment of long term borrowings	(11,108.46)	(7,700.74)
Proceeds from short term borrowings	1,701.06	1,299.50
Security premium received	-	0.12
Interest paid	(6,888.72)	(6,625.16)
Dividend paid	(3,595.03)	(2,762.24)
Tax on dividend	(727.79)	(562.32)
<b>Net cash used in financing activities - C</b>	<b>3,202.23</b>	<b>(4,549.62)</b>
<b>D. Exchange differences on translation of foreign currency cash and cash equivalents</b>	<b>(0.06)</b>	<b>0.08</b>
<b>Net increase/(decrease) in cash and cash equivalents (A+B+C+D)</b>	<b>(1,215.28)</b>	<b>1,091.75</b>
<b>Cash and cash equivalents at the beginning of the year (see Note 1&amp;2 below)</b>	<b>1,372.40</b>	<b>280.65</b>
<b>Cash and cash equivalents at the end of the period (see Note 1&amp;2 below)</b>	<b>157.12</b>	<b>1,372.40</b>
<b>NOTES:</b>		
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 equivalent as per Note-15	157.12	1,372.40
3. Previous year figures have been regrouped/rearranged wherever considered necessary.		

For and on behalf of the Board of Directors

(K.P. Gupta)  
Company Secretary

(K.Biswal)  
Director (Finance)

(Gurdeep Singh)  
Chairman & Managing Director

This is the Statement of Cash Flows referred to in our report of even date

For T.R. Chadha & Co LLP  
Chartered Accountants  
Firm Reg. No. 006711N/N500028

For PSD & Associates  
Chartered Accountants  
Firm Reg. No. 004501C

For Sagar & Associates  
Chartered Accountants  
Firm Reg. No. 003510S

(Neena Goel)  
Partner  
M. No. 057986

(Thalendra Sharma)  
Partner  
M. No. 079236

(D. Manohar)  
Partner  
M. No.029644

For Kalani & Co.  
Chartered Accountants  
Firm Reg. No. 000722C

For P. A. & Associates  
Chartered Accountants  
Firm Reg. No. 313085E

For S. K. Kapoor & Co.  
Chartered Accountants  
Firm Reg. No. 000745C

For B M Chatrath & Co. LLP  
Chartered Accountants  
Firm Reg. No. 301011E/E300025

(Vikas Gupta)  
Partner  
M. No. 077076

(S. S. Poddar)  
Partner  
M. No.051113

(V. B. Singh)  
Partner  
M. No. 073124

(P. R. Paul)  
Partner  
M. No. 051675

Place: New Delhi  
Date: 29 May 2017

## STATEMENT OF CHANGES IN EQUITY

### (A) Equity share capital

For the year ended 31 March 2017

	₹ Crore
Balance as at 1 April 2016	8245.46
Changes in equity during the year	-
Balance as at 31 March 2017	8245.46

### For the year ended 31 March 2016

	₹ Crore
Balance as at 1 April 2015	8245.46
Changes in equity during the year	-
Balance as at 31 March 2016	8245.46

### (B) Other equity

For the year ended 31 March 2017

Particulars	Reserves & surplus						Equity instruments through OCI	Total
	Capital reserve	Securities premium account	Bonds/Debt redemption reserve	Fly ash utilisation reserve fund	Corporate social responsibility (CSR) reserve	General reserve	Retained earnings	
Balance as at 1 April 2016	50.08	2,228.46	4,608.73	478.21	-	72,331.63	3,371.41	83,048.24
Profit for the year							<b>9,385.26</b>	<b>9,385.26</b>
Other comprehensive income							(238.66)	(203.38)
<b>Total comprehensive income</b>	-	-	-	-	-	-	<b>9,146.60</b>	<b>9,181.88</b>
Transfer to retained earnings			(314.00)				314.00	-
Transfer from retained earnings			1,667.08			4,500.00	(6,167.08)	-
Transfer to fly ash utilisation reserve fund				78.47				78.47
Final dividend 2015-16 (refer note 21)							(1,442.96)	(1,442.96)
Tax on final dividend							(289.68)	(289.68)
Interim dividend 2016-17 (refer note 21)							(2,152.07)	(2,152.07)
Tax on interim dividend							(438.11)	(438.11)
<b>Balance as at 31 March 2017</b>	<b>50.08</b>	<b>2,228.46</b>	<b>5,961.81</b>	<b>556.68</b>	<b>-</b>	<b>76,831.63</b>	<b>2,342.11</b>	<b>87,985.77</b>



## STATEMENT OF CHANGES IN EQUITY

For the year ended 31 March 2016

Particulars	Reserves & surplus						Equity instruments through OCI	Total
	Capital reserve	Securities premium account	Bonds/Debt redemption reserve	Fly ash utilisation reserve fund	Corporate social responsibility (CSR) reserve	General reserve	Retained earnings	
Balance as at 1 April 2015	50.08	2,928.34	3,694.60	401.14	78.30	66,331.63	2,870.55	75,584.64
Profit for the year							10,769.60	10,769.60
Other comprehensive income							(38.35)	(58.63)
Total comprehensive income	-	-	-	-	-	-	10,731.25	10,710.97
Amount received during the year		0.12						0.12
Transfer to retained earnings			(300.00)				378.30	-
Transfer from retained earnings			1,284.13		(78.30)	6,000.00	(7,284.13)	-
Transfer to fly ash utilisation reserve fund				77.07				77.07
Final dividend 2014-15 (refer note 21)							(1,442.96)	(1,442.96)
Tax on final dividend							(293.75)	(293.75)
Interim dividend 2015-16 (refer note 21)							(1,319.28)	(1,319.28)
Tax on interim dividend							(268.57)	(268.57)
Balance as at 31 March 2016	50.08	2,928.46	4,608.73	478.21	-	79,331.63	3,371.41	83,048.24

₹ Crore

For and on behalf of the Board of Directors

(K.P. Gupta)  
Company Secretary

(K.Biswal)  
Director (Finance)

(Gurdeep Singh)  
Chairman & Managing Director

This is the Statement of Changes in Equity referred to in our report of even date

For T.R. Chadha & Co LLP  
Chartered Accountants  
Firm Reg. No. 006711N/N5000928

(Neena Goel)  
Partner  
M. No. 057986

For Kalani & Co.  
Chartered Accountants  
Firm Reg. No. 000729C

(Vikas Gupta)  
Partner  
M. No. 077076

Place: New Delhi  
Date: 29 May 2017

For PSD & Associates  
Chartered Accountants  
Firm Reg. No. 004501C

(Thalendra Sharma)  
Partner  
M. No. 079236

For S. K. Kapoor & Co.  
Chartered Accountants  
Firm Reg. No. 000745C

(V. B. Singh)  
Partner  
M. No. 073124

For B M Chatrath & Co. LLP  
Chartered Accountants  
Firm Reg. No. 301011E/E3000925

(P. R. Paul)  
Partner  
M. No. 051675

For Sagar & Associates  
Chartered Accountants  
Firm Reg. No. 003510S

(D. Manohar)  
Partner  
M. No. 029644



## 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 publicly traded on the National Stock Exchange of India Limited and BSE Limited. The address of the Company's registered office is NTPC Bhawan, SCOPE Complex, 7 Institutional Area, Lodi Road, New Delhi - 110003. The Company is primarily involved in the generation and sale of bulk power to State Power Utilities. Other business includes providing consultancy, project management & supervision, oil & gas exploration and coal mining.

### B. Basis of preparation

#### 1. Statement of Compliance

These standalone financial statements are prepared on accrual basis of accounting and comply with the Indian Accounting Standards (Ind AS) notified under the Companies (Indian Accounting Standards) Rules, 2015 and subsequent amendments thereto, the Companies Act, 2013 (to the extent notified and applicable), applicable provisions of the Companies Act, 1956, and the provisions of the Electricity Act, 2003 to the extent applicable. These are the Company's first Ind AS compliant financial statements and Ind AS 101 'First Time Adoption of Indian Accounting Standards' has been applied.

For all the periods upto and including 31 March 2016, the Company prepared its financial statements in accordance with Generally Accepted Accounting Principles (GAAP) in India, accounting standards specified under Section 133 of the Companies Act, 2013, the Companies Act, 2013 (to the extent notified and applicable), applicable provisions of the Companies Act, 1956, and the provisions of the Electricity Act, 2003 to the extent applicable. The Company followed the provisions of Ind AS 101 in preparing its opening Ind AS Balance Sheet as of the date of transition, viz. 1 April 2015. Some of the Company's Ind AS accounting policies used in the opening Balance Sheet are different from its previous GAAP policies applied as at 31 March 2015, and accordingly the adjustments were made to restate the opening balances as per Ind AS. The resulting adjustments arose from events and transactions before the date of transition to Ind AS. Therefore, as required by Ind AS 101, those adjustments were recognized directly through retained earnings as at 1 April 2015. This is the effect of the general rule of Ind AS 101 which is to apply Ind AS retrospectively.

An explanation of how the transition to Ind AS has affected the reported financial position, financial performance and cash flows of the Company is provided in Note 62.

These financial statements were authorized for issue by Board of Directors on 29 May 2017.

#### 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 accounting policy regarding financial instruments). The methods used to measure fair values are discussed further in notes to financial statements.

#### 3. Functional and presentation currency

These financial statements are presented in Indian Rupees (INR), which is the Company's functional currency. All financial information presented in INR has been rounded to the nearest crore (upto two decimals), except as stated 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 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 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.

### 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 by not applying the provisions of Ind AS 16 & Ind AS 38 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. 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

Items of property, plant and equipment are initially recognized at cost. Subsequent measurement is done at cost less accumulated depreciation/amortization and accumulated impairment losses. Cost includes expenditure that is 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.

When parts of an item of property, plant and equipment have different useful lives, they are recognized separately.

Deposits, payments/liabilities made provisionally towards compensation, rehabilitation and other expenses relating 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.

Expenditure on major inspection and overhauls of generating unit is capitalized, when it meets the asset recognition criteria.

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 in the statement of profit and loss on consumption.

##### 1.2. 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.

The cost of replacing 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. The costs of the day-to-day servicing of property, plant and equipment are recognized in profit or loss as 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. Derecognition

Property, plant and equipment is derecognized when no future economic benefits are expected from their use or upon their disposal. Gains and losses on disposal of an item of property, plant and equipment are

determined by comparing the proceeds from disposal with the carrying amount of property, plant and equipment, and are recognized in the statement of profit and loss.

### 1.5. Depreciation/amortization

Depreciation is recognized in statement of profit and loss on a straight-line basis over the estimated useful lives of each part of an item of property, plant and equipment. Leased assets are depreciated over the shorter of the lease term and their useful lives unless it is reasonably certain that the Company will obtain ownership by the end of the lease term.

Depreciation on the assets of the generation of electricity business and on the assets of Corporate & other offices is charged on straight line method following the rates and methodology notified by the CERC Tariff Regulations in accordance with Schedule II of the Companies Act, 2013.

Depreciation on the assets of the coal mining, oil & gas exploration 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 in policy no. C.6.

Depreciation on the following assets is provided on their estimated useful life ascertained on technical evaluation:

a) Kutch roads	02 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.	05 years
c) Personal computers & laptops including peripherals	03 years
d) Photocopiers, fax machines, water coolers and refrigerators	05 years
e) Temporary erections including wooden structures	01 year
f) Telephone exchange	15 years
g) Wireless systems, VSAT equipments, display devices viz. projectors, screens, CCTV, audio video conferencing systems and other communication equipments	06 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.

Leasehold land and buildings relating to generation of electricity business are fully amortized over lease period or life of the related plant whichever is lower following the rates and methodology notified by the CERC Tariff Regulations.

Leasehold land and buildings relating to Corporate and other offices are fully amortized over lease period or twenty-five years whichever is lower following the rates and methodology notified by the CERC Tariff Regulations.

Land acquired for mining business under Coal Bearing Areas (Acquisition & Development) Act, 1957 is amortized on the basis of balance useful life of the project. Other leasehold land acquired for mining business is amortized over the lease period or balance life of the project whichever is less.

Depreciation on additions to/deductions from property, plant & equipment during the year is charged on pro-rata basis from/up to the month in which the asset is available for use/disposed.

Where the cost of depreciable assets has undergone a change during the year due to increase/decrease in long term liabilities on account of exchange fluctuation, 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 cost incurred will flow to the enterprise and the cost of the item can be measured reliably, subsequent expenditure on a PPE along-with its unamortized depreciable amount is charged off prospectively over the revised useful life determined by technical assessment.

In circumstance, where a property is abandoned, the cumulative capitalized costs relating to the property are written off in the same period.



## 2. 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 borrowing costs.

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

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 includes any directly attributable incidental expenses necessary to make the assets ready for its intended use.

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. Derecognition

An intangible asset is derecognized when no future economic benefits are expected from their use or upon their disposal. Gains and losses on disposal of an item of intangible assets are determined by comparing the proceeds from disposal with the carrying amount of intangible assets and are recognized in the statement of profit and loss.

### 3.3. Amortisation

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.

## 4. Regulatory deferral account balances

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 accounts balances are adjusted from the year in which the same become recoverable from or payable to the beneficiaries.

## 5. Oil and gas exploration costs

### 5.1. Interest in Joint Operations

The Company has entered into 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.

### 5.2. Intangible assets under development – Exploratory wells in progress

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' till the time these are either transferred to Oil and Gas Assets on completion 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 as per the policy of the Company.





Survey costs - 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. Development of coal mines

The costs of mining properties, which include the costs of acquiring and developing mining properties and mineral rights, are capitalized as 'Mining properties' in the year in which they are incurred.

### 6.1. Mine development expenditure

Pre-production primary development expenditure (including stripping costs as mentioned below) other than land, buildings, plant & equipment is capitalized as capital work-in-progress as and when incurred until the mining property is capable of commercial production and then capitalised as part of the cost of the mining property. Development costs incurred after the commencement of production are capitalised to the extent they are expected to give rise to a future economic benefit.

Mines under development are capitalised on occurrence of earliest of the following milestones except when commercial readiness is stated in the project report -

- From the beginning of the financial year immediately after the year in which the project achieves physical output of 25% of rated capacity as per approved project report; or
- From the beginning of the financial year in which the value of production is more than total expenses; or
- 2 years of touching of coal.

### 6.2. Stripping costs

Expenditure incurred on removal of overburden and other waste material necessary to extract the coal reserves is referred to as stripping cost.

### 6.3. Decommissioning costs

Decommissioning costs - Costs to decommission the mines are estimated at their present value based on approved mine closure plan of the Company and included in 'Tangible assets - Mining properties'.

### 6.4. Amortisation

Mining properties are amortized over the life of the mine on a unit of production basis on stripping ratio. The stripping ratio for the life of the mine is obtained by dividing the estimated quantity of overburden by the estimated quantity of mineable coal reserve to be extracted over the life of the mine. This ratio is periodically reviewed and changes, if any, are accounted for prospectively.

## 7. Borrowing 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 take a 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 general borrowing that are outstanding during the period and used for the acquisition, construction/exploration or erection of the qualifying asset.

Capitalization of borrowing costs ceases when substantially all the activities necessary to prepare the qualifying assets for their intended uses are complete. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds. Income earned on temporary investment of the borrowings pending their expenditure on the qualifying assets is deducted from the borrowing costs eligible for capitalization. Borrowing costs include exchange differences arising from foreign currency borrowings to the extent that they are regarded as an adjustment to interest costs.

Other borrowing costs are recognized as an expense in the year in which they are incurred.

## 8. 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 and discounts. 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 and surplus stores & spares is ascertained on review and provided for.

#### 9. Cash and cash equivalents

Cash and cash equivalents in the balance sheet comprise cash at banks and on hand and short-term deposits with an original maturity of three months or less, which are subject to an insignificant risk of changes in value.

#### 10. Government grants

Government grants are recognized initially as deferred income 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 an asset are recognized in profit or loss on a systematic basis over the useful life of the related asset. Grants that compensate the Company for expenses incurred are recognized over the period in which the related costs are incurred and deducted from the related expenses.

#### 11. Fly ash utilization reserve fund

Proceeds from sale of ash/ash products along-with income on investment of such proceeds 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.

#### 12. Provisions and contingent liabilities

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 any reimbursement.

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.

#### 13. Foreign currency transactions and translation

Transactions in foreign currencies are initially recorded at the functional currency spot rates at the date the transaction first qualifies for recognition.

Monetary assets and liabilities denominated in foreign currencies are translated at the functional currency spot rates of exchange at the reporting date. Exchange differences arising on settlement or translation of monetary items are recognized in profit or 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 & equipment recognized upto 31 March 2016 are adjusted to carrying cost of property, plant & equipment.

Non-monetary items are measured in terms of historical cost in a foreign currency are translated using the exchange rate at the date of the transaction.

## 14. Revenue

Company's revenues arise from sale of energy, consultancy, project management & supervision services and other income. Revenue from sale of energy is mostly regulated and governed by the applicable CERC Tariff Regulations under Electricity Act, 2003. Certain revenue from sale of energy is recognized based on the rates & terms and conditions mutually agreed with the beneficiaries and trading of power through power exchanges. Revenue from other income comprises interest from banks, employees, contractors etc., dividend from investments in joint venture and subsidiary companies, dividend from mutual fund investments, surcharge received from customers for delayed payments, sale of scrap, other miscellaneous income, etc.

### 14.1. 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.

Revenue from the sale of energy is measured at the fair value of the consideration received or receivable. Revenue is recognized when the significant risks and rewards of ownership have been transferred to the buyer, recovery of the consideration is probable, the associated costs can be estimated reliably, there is no continuing management involvement, and the amount of revenue can be measured reliably.

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 customer and is measured through a regular review of usage meters. Customers 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 customers but not yet billed i.e. unbilled revenue.

The incentives/disincentives are accounted for based on the norms notified/approved by the CERC as per principles enunciated in Ind AS 18. 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 sale of energy is recognized based on the rates & terms and conditions mutually agreed with the beneficiaries and trading of power through power exchanges.

Rebates allowed to beneficiaries as early payment incentives are deducted from the amount of revenue.

Advance against depreciation considered as deferred revenue in earlier years is included in sales, to the extent depreciation recovered in tariff during the year is lower than the corresponding depreciation charged.

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 adjusted from the year in which the same becomes recoverable/payable.

Exchange differences on account of translation of foreign currency borrowings recognized upto 31 March 2016, recoverable from or payable to the beneficiaries in subsequent periods as per the CERC Tariff Regulations are accounted as 'Deferred foreign currency fluctuation asset'. The increase or decrease in depreciation for the year due to the accounting of such exchange differences as mentioned above is adjusted in depreciation. Fair value changes in respect of forward exchange contracts of derivative contracts recoverable from/payable to the beneficiaries as per the CERC Tariff Regulations, are recognized in sales.

### 14.2. Revenue from services

Revenue from consultancy, project management and supervision services rendered is recognized in profit or loss in proportion to the stage of completion of the transaction at the reporting date. The stage of completion is assessed by reference to actual progress/technical assessment of work executed, in line with the terms of the respective consultancy contracts. Claims for reimbursement of expenses are recognized as other income, as per the terms of the consultancy service contracts.



#### 14.3. Other income

Interest income is recognized, when no significant uncertainty as to measurability or collectability exists, on a time proportion basis taking into account the amount outstanding and the applicable interest rate, using the effective interest rate method (EIR).

Scrap other than steel scrap is accounted for as and when sold.

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.

For debt instruments measured either at amortized cost or at fair value through other comprehensive income (OCI), interest income is recorded using the EIR. 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.

The interest/surcharge on late payment/overdue sundry debtors for sale of energy is recognized when no significant uncertainty as to measurability or collectability exists.

Interest/surcharge recoverable on advances to 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 on the date that the Company's right to receive payment is established, which in the case of quoted securities is the ex-dividend date.

#### 15. Employee benefits

##### 15.1. Defined contribution plans

A defined contribution plan is a post-employment benefit plan under which an entity pays fixed contributions into 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 profit or 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 contributions to the fund for the year are recognized as an expense and charged to the statement of profit and loss.

##### 15.2. 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, 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 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 profit or 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 (GoI).



The gratuity is funded by the Company and is managed by separate trust. Pension scheme at one of the taken over projects is also funded by the Company and is managed by separate trust. The Company has Post-Retirement Medical Facility (PRMF), under which retired employee and the spouse 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 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. Any unrecognized past service costs and the fair value of any plan assets are 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 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 total of any unrecognized past service costs and 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. Any actuarial gains or losses are recognized in OCI in the period in which they arise.

When the benefits of a plan are improved, the portion of the increased benefit relating to past service by employees is recognized in profit or loss on a straight-line basis over the average period until the benefits become vested. To the extent that the benefits vest immediately, the expense is recognized immediately in profit or loss.

### 15.3. 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 leave encashment is 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. The calculation is performed using the projected unit credit method. Any actuarial gains or losses are recognized in profit or loss in the period in which they arise.

As per the Company's economic rehabilitation scheme which is optional, the nominee of the deceased employee is paid a fixed amount based on the last salary drawn by the employee till the date of superannuation of the employee by depositing the final provident fund and gratuity amount which will be interest free.

### 15.4. 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.

## 16. Other expenses

Expenses on ex-gratia payments under voluntary retirement scheme, training & recruitment and research & development are charged to the Statement of Profit and Loss in the year incurred.

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.

Voluntary community development expenditure is charged to Statement of Profit & Loss in the year incurred.



## 17. Income tax

Income tax expense comprises current and deferred tax. Current tax expense is recognized in profit or loss except to the extent that it relates to items recognized directly in other comprehensive income or equity, in which case it is recognized in OCI or equity.

Current tax is the expected tax payable on the taxable income for the year, using tax rates enacted or substantively enacted and as applicable at the reporting date, and any adjustment to tax payable in respect of previous years.

Deferred tax is recognized using the balance sheet method, providing for temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. Deferred tax is measured at the tax rates that are expected to be applied to temporary differences when they reverse, 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 liabilities and assets, and they relate to income taxes levied by the same tax authority.

Deferred tax is recognized in profit or 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.

A deferred tax asset is recognized to the extent that it is probable that future taxable profits will be available against which the 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 related tax benefit will be realized.

Additional income taxes that arise from the distribution of dividends are recognized at the same time that the liability to pay the related dividend is recognized.

## 18. Leases

### 18.1. As lessee

#### Accounting for finance leases

Leases of property, plant and equipment where the Company, as lessee has substantially all risks and rewards of ownership are classified as finance lease. On initial recognition, assets held under finance leases are recorded as property, plant and equipment and the related liability is recognized under borrowings. At inception of the lease, finance leases are recorded at amounts equal to the fair value of the leased asset or, if lower, the present value of the minimum lease payments. Minimum lease payments made under finance leases are apportioned between the finance expense and the reduction of the outstanding liability.

The finance expense is allocated to each period during the lease term so as to produce a constant periodic rate of interest on the remaining balance of the liability.

#### Accounting for operating leases

Leases in which a significant portion of the risks and rewards of ownership are not transferred to the Company as lessee are classified as operating lease. Payments made under operating leases are recognized as an expense over the lease term. Lease incentives received are recognized as an integral part of the total lease expense, over the term of the lease.

### 18.2. As lessor

At 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 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 of 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.

### **19. 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 to 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 profit or 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 depreciation or amortization, if no impairment loss had been recognized.

### **20. Operating segments**

In accordance with Ind AS 108, 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 expenses and income tax expenses.

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, and intangible assets other than goodwill.

Segment assets comprise property, plant and equipment, intangible assets, trade and other receivables, inventories and other assets that can be directly or reasonably allocated to segments. For the purpose of segment reporting for the year, property, plant and equipment have been allocated to segments based on the extent of usage of



assets for operations attributable to the respective segments. Segment assets do not include investments, income tax assets, capital work in progress, capital advances, corporate assets and other current assets that cannot reasonably be allocated to segments.

Segment liabilities include all operating liabilities in respect of a segment and consist principally of trade and other payables, employee benefits and provisions. Segment liabilities do not include equity, income tax liabilities, loans and borrowings and other liabilities and provisions that cannot reasonably be allocated to segments.

## 21. Dividends

Dividends and interim dividends payable to a Company's shareholders are recognized as changes in equity in the period in which they are approved by the shareholders' meeting and the Board of Directors respectively.

## 22. 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.

## 23. 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.

Basic and diluted earnings per equity share are also computed using the earnings amounts excluding the movements in regulatory deferral account balances.

## 24. Cash flow statement

Cash flow statement is prepared in accordance with the indirect method prescribed in Ind AS 7 'Statement of Cash Flows'.

## 25. 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.

### 25.1. Financial assets

#### Initial recognition and measurement

All financial assets are recognized initially at fair value plus, in the case of financial assets not recorded at fair value through profit or loss, transaction costs that are attributable to the acquisition or issue of the financial asset.

#### Subsequent measurement

#### Debt instruments at amortized cost

A 'debt instrument' is measured at the amortized cost if both the following conditions are met:

- The asset is held within a business model whose objective is to hold assets for collecting contractual cash flows, and
- 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 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 profit or loss. The losses arising from impairment are recognized in the profit or 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 profit and loss. On derecognition of the asset, cumulative gain or loss previously recognized in OCI is reclassified from the equity to 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 profit and loss.

#### **Equity investments**

All equity investments in entities other than subsidiaries and joint ventures 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 P&L, even on sale of investment. However, the Company may transfer the cumulative gain or loss within equity.

Equity instruments included within the FVTPL category are measured at fair value with all changes recognized in the profit and loss.

Equity investments in subsidiaries and joint ventures are measured at cost.

#### **Derecognition**

A financial asset (or, where applicable, a part of a financial asset or part of a Company of similar financial assets) is primarily derecognised (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.

#### **Impairment of financial assets**

In accordance with Ind AS 109, 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, trade receivables and bank balance.
- (b) Financial assets that are debt instruments and are measured as at FVTOCI.
- (c) Lease receivables under Ind AS 17.
- (d) Trade receivables under Ind AS 18.
- (e) Loan commitments which are not measured as at FVTPL.



- (f) Financial guarantee contracts which are not measured as at FVTPL.

For recognition of impairment loss on other financial assets and risk exposure, 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.

## 25.2. Financial liabilities

### Initial recognition and measurement

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through profit or loss, borrowings, payables, or as derivatives designated as hedging instruments in an effective hedge, as appropriate. All financial liabilities are recognized initially at fair value and, in the case of borrowings and payables, net of directly attributable transaction costs. 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 profit or 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 profit or 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 profit or 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 are 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. All other changes in fair value of such liability are recognized in the statement of profit or loss. The Company has not designated any financial liability as at fair value through profit and loss.

### Derecognition

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 derecognition 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 or loss.



### 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.

### D. Use of estimates and management judgments

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, income, 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 and 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 recognised 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 recognised in the financial statements is as under:

#### 1. Useful life of property, plant and equipment

The estimated useful life of property, plant and equipment 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 is determined by the CERC Tariff Regulations in accordance with Schedule II of the Companies Act, 2013.

The Company reviews at the end of each reporting date the useful life of property, plant and equipment, other than the assets of generation of electricity business which are governed by CERC Regulations, and are adjusted prospectively, if appropriate.

#### 2. Recoverable amount of property, plant and equipment

The recoverable amount of plant and equipment 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.

#### 3. Post-employment benefit plans

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.

#### 4. 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 18. However, in cases where tariff rates are yet to be approved, provisional rates are adopted considering the applicable CERC Tariff Regulations.

#### 5. Leases not in legal form of lease

Significant judgment is required to apply lease accounting rules under Appendix C to Ind AS 17 'Determining whether an arrangement contains a lease'. In assessing the applicability to 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 needs the criteria under Appendix C to Ind AS 17.

**6. 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.

**7. 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 has required best judgment by management regarding the probability of exposure to potential loss. Should circumstances change following unforeseeable developments, this likelihood could alter.

**8. Impairment test of non-financial assets**

The recoverable amount of investment in joint ventures 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.



## 2. Non-current assets - Property, plant & equipment

As at 31 March 2017

₹ Crore

Particulars	Gross block				Depreciation/amortisation and impairment				Net block	
	As at 01.04.2016	Additions	Deductions/ adjustments	As at 31.03.2017	Upto 01.04.2016	For the year	Deductions/ adjustments	Upto 31.03.2017	As at 31.03.2017	As at 31.03.2016
Land (including development expenses)										
Freehold	6,793.98	188.86	(31.07)	7,013.91	-	-	-	-	7,013.91	6,793.98
Leasehold	4,450.70	284.51	(173.54)	4,908.75	61.14	140.89	1.89	200.14	4,708.61	4,389.56
Under submergence (refer footnote e)	719.69	56.15	43.01	732.83	25.10	27.94	3.78	49.26	683.57	694.59
Roads, bridges, culverts & helipads	749.68	77.48	(51.74)	878.90	33.55	38.37	2.38	69.54	809.36	716.13
Building										
Freehold										
Main plant	3,901.92	195.65	(18.59)	4,116.16	155.32	168.40	-	323.72	3,792.44	3,746.60
Others	2,439.73	337.65	(71.52)	2,848.90	128.58	147.06	3.18	272.46	2,576.44	2,311.15
Leasehold	18.91	-	-	18.91	1.85	1.85	-	3.70	15.21	17.06
Temporary erection	2.54	5.45	(0.84)	8.83	2.38	5.72	-	8.10	0.73	0.16
Water supply, drainage & sewerage system	379.22	88.50	(5.58)	473.30	23.46	25.93	-	49.39	423.91	355.76
Hydraulic works, barrages, dams, tunnels and power channel	4,120.98	-	(9.93)	4,130.91	163.19	218.52	-	381.71	3,749.20	3,957.79
MGR track and signalling system	946.57	27.12	(53.61)	1,027.30	58.55	65.28	-	123.83	903.47	888.02
Railway siding	649.75	64.97	(42.86)	757.58	34.99	45.15	-	80.14	677.44	614.76
Earth dam reservoir	161.68	44.76	(4.92)	211.36	10.28	12.11	-	22.39	188.97	151.40
Plant and equipment										
Owned	70,742.09	11,237.96	(683.34)	82,663.39	4,952.15	5,523.07	32.37	10,442.85	72,220.54	65,789.94
Leased	85.77	-	-	85.77	4.62	4.75	-	9.37	76.40	81.15
Furniture and fixtures	265.57	52.06	(21.49)	339.12	21.98	25.31	0.07	47.22	291.90	243.59
Vehicles including speedboats										
Owned	7.45	3.39	0.26	10.58	0.92	1.04	0.07	1.89	8.69	6.53
Leased	2.19	1.23	0.17	3.25	0.33	0.75	0.08	1.00	2.25	1.86
Office equipment	130.68	32.98	1.31	162.35	24.52	19.69	0.32	43.89	118.46	106.16
EDP, WP machines and satcom equipment	141.88	135.21	4.05	273.04	74.19	47.33	5.24	116.28	156.76	67.69
Construction equipments	110.74	24.02	0.53	134.23	11.64	11.99	0.54	23.09	111.14	99.10
Electrical installations	356.66	69.60	(8.16)	434.42	21.82	24.35	0.72	45.45	388.97	334.84
Communication equipments	58.55	10.01	0.29	68.27	16.85	7.94	0.15	24.64	43.63	41.70
Hospital equipments	24.26	1.74	0.10	25.90	1.52	1.61	0.01	3.12	22.78	22.74
Laboratory and workshop equipments	70.81	15.38	(0.45)	86.64	3.71	5.01	-	8.72	77.92	67.10
Assets for ash utilisation	22.56	3.66	-	26.22	-	-	-	-	26.22	22.56
Less: Adjusted from fly ash utilisation reserve fund	22.56	3.66	-	26.22	-	-	-	-	26.22	22.56
<b>Total</b>	<b>97,332.00</b>	<b>12,954.68</b>	<b>(1,127.92)</b>	<b>111,414.60</b>	<b>5,832.64</b>	<b>6,570.06</b>	<b>50.80</b>	<b>12,351.90</b>	<b>99,062.70</b>	<b>91,499.36</b>

## 41<sup>st</sup> Annual Report 2016-17

### Standalone Financial Statements



As at 31 March 2016

₹ Crore

Particulars	Gross block				Depreciation/amortisation and impairment				Net block	
	As at 01.04.2015	Additions	Deductions/ adjustments	As at 31.03.2016	Upto 01.04.2015	For the year	Deductions/ adjustments	Upto 31.03.2016	As at 31.03.2016	As at 01.04.2015
Land (including development expenses)										
Freehold	6,523.21	527.69	256.92	6,793.98	-	-	-	-	6,793.98	6,523.21
Leasehold	2,666.35	1,639.20	(145.15)	4,450.70	-	63.49	2.35	61.14	4,389.56	2,666.35
Under submergence (refer footnote e)	-	-	(719.69)	719.69	-	22.65	(2.45)	25.10	694.59	-
Roads, bridges, culverts & helipads	591.62	125.11	(32.95)	749.68	-	32.89	(0.66)	33.55	716.13	591.62
Building										
Freehold										
Main plant	3,390.26	417.20	(94.46)	3,901.92	-	158.42	3.10	155.32	3,746.60	3,390.26
Others	1,961.51	404.25	(73.97)	2,439.73	-	127.51	(1.07)	128.58	2,311.15	1,961.51
Leasehold	18.91	-	-	18.91	-	1.85	-	1.85	17.06	18.91
Temporary erection	1.12	4.35	2.93	2.54	-	3.13	0.75	2.38	0.16	1.12
Water supply, drainage & sewerage system	356.94	21.39	(0.89)	379.22	-	23.45	(0.01)	23.46	355.76	356.94
Hydraulic works, barrages, dams, tunnels and power channel	-	4,103.50	(17.48)	4,120.98	-	163.22	0.03	163.19	3,957.79	-
MGR track and signalling system	818.82	75.17	(52.58)	946.57	-	58.55	-	58.55	888.02	818.82
Railway siding	513.12	110.07	(26.56)	649.75	-	34.99	-	34.99	614.76	513.12
Earth dam reservoir	151.02	10.40	(0.26)	161.68	-	10.28	-	10.28	151.40	151.02
Plant and equipment										
Owned	60,112.68	8,181.45	(2,447.96)	70,742.09	-	4,805.38	(146.77)	4,952.15	65,789.94	60,112.68
Leased	55.77	30.00	-	85.77	-	4.62	-	4.62	81.15	55.77
Furniture and fixtures	206.66	56.19	(2.72)	265.57	-	21.74	(0.24)	21.98	243.59	206.66
Vehicles including speedboats										
Owned	6.82	0.99	0.36	7.45	-	0.95	0.03	0.92	6.53	6.82
Leased	-	2.13	(0.06)	2.19	-	0.33	-	0.33	1.86	-
Office equipment	99.48	31.65	0.45	130.68	-	24.37	(0.15)	24.52	106.16	99.48
EDP, WP machines and satcom equipment	108.72	36.18	3.02	141.88	-	76.25	2.06	74.19	67.69	108.72
Construction equipments	90.63	28.30	8.19	110.74	-	11.90	0.26	11.64	99.10	90.63
Electrical installations	291.43	52.39	(12.84)	356.66	-	21.09	(0.73)	21.82	334.84	291.43
Communication equipments	45.51	12.50	(0.54)	58.55	-	16.85	-	16.85	41.70	45.51
Hospital Equipments	21.17	3.24	0.15	24.26	-	1.53	0.01	1.52	22.74	21.17
Laboratory and workshop equipments	50.87	20.05	0.11	70.81	-	3.71	-	3.71	67.10	50.87
Assets under 5 KM scheme of the GOI	70.76	-	70.76	-	-	-	-	-	-	70.76
Assets for ash utilisation	17.30	4.29	(0.97)	22.56	-	-	-	-	22.56	17.30
Less: Adjusted from fly ash utilisation reserve fund	17.30	5.26	-	22.56	-	-	-	-	22.56	17.30
<b>Total</b>	<b>78,153.38</b>	<b>15,892.43</b>	<b>(3,286.19)</b>	<b>97,332.00</b>	<b>-</b>	<b>5,689.15</b>	<b>(143.49)</b>	<b>5,832.64</b>	<b>91,499.36</b>	<b>78,153.38</b>

- a) The conveyancing of the title to **9,235 acres** of freehold land of value ₹ **1,940.44 crore** (31 March 2016: 10,753 acres of value ₹ 2,217.27 crore, 1 April 2015: 9,719 acres of value ₹ 1,969.68 crore), buildings & structures of value ₹ **4.97 crore** (31 March 2016: ₹ 4.97 crore, 1 April 2015: ₹ 4.97 crore) and also execution of lease agreements for **12,570 acres** of land of value ₹ **1,869.67 crore** (31 March 2016: 15,717 acres of value ₹ 2,917.00 crore, 1 April 2015: 13,716 acres of value ₹ 1,390.08 crore) in favour of the Company are awaiting completion of legal formalities.
- b) Land does not include value of **34 acres** (31 March 2016: 33 acres, 1 April 2015: 33 acres) of land in possession of the Company. This will be accounted for on settlement of the price thereof by the State Government Authorities.
- c) Land includes **1,295 acres** of value ₹ **155.37 crore** (31 March 2016: 1,306 acres of value ₹ 234.94 crore, 1 April 2015: 1,302 acres of value ₹ 72.36 crore) not in possession of the Company. The Company is taking appropriate steps for repossession of the same.
- d) Land includes an amount of ₹ **262.91 crore** (31 March 2016: ₹ 262.91 crore, 1 April 2015: ₹ 179.65 crore) deposited with various authorities in respect of land in possession which is subject to adjustment on final determination of price.
- e) Gross block of land under submergence represents ₹ **552.52 crore** (31 March 2016: ₹ 496.37 crore, 1 April 2015: ₹ Nil) of freehold land and ₹ **180.31 crore** (31 March 2016: ₹ 223.32 crore, 1 April 2015: ₹ Nil) of leasehold land. The land has been amortised 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.
- f) Possession of land measuring **98 acres** (31 March 2016: 98 acres, 1 April 2015: 98 acres) consisting of **79 acres** of freehold land (31 March 2016: 79 acres, 1 April 2015: 79 acres) and **19 acres** of lease hold land (31 March 2016: 19 acres, 1 April 2015: 19 acres) of value ₹ **0.21 crore** (31 March 2016: ₹ 0.21 crore, 1 April 2015: ₹ 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 -31 - Current liabilities - other financial liabilities.
- g) Ministry of Power, GOI vide letter dated 27 April 2010 notified the Scheme for providing electricity in 5 KM area of all existing and upcoming power plants by CPSUs. The Scheme provided that expenditure incurred under this scheme will be booked by the CPSU under project cost and will be included in the tariff by the appropriate commission. Keeping in view the above, the expenditure incurred by the Company under the scheme was capitalised as a separate asset and was being depreciated over the remaining useful life of the related plant. The CERC while giving the tariff orders for some of the stations has directed that the actual expenditure should be reimbursed by the beneficiaries w.e.f. 1 April 2016 in equal monthly installments in the remaining three years of tariff period till March 2019 along-with interest instead of servicing the same as part of the capital cost. Consequently, cost of such tangible assets of ₹ 116.87 crore was charged off as expenditure for the year ended 31 March 2016 and corresponding depreciation of ₹ 46.11 crore charged till 31 March 2015 was written back. Consequently, revenue from operations of ₹ 108.19 crore (including interest of ₹ 3.05 crore) was recognised during the year 2015-16.
- h) In line with Para D13AA of Ind AS 101, the Company has adopted the existing policy for capitalisation of exchange differences arising from translation of long-term foreign currency monetary items recognised in the financial statements for the period ending immediately before the beginning of the first Ind AS financial reporting period as per the previous GAAP i.e. the year 2015-16. Refer Note 62 also.
- i) Refer Note 55 (b) regarding property, plant and equipment under finance lease.
- j) Based on assessment, reversal of an impairment loss of ₹ **0.73 crore** (31 March 2016: ₹ Nil) has been done during the year in respect of plant and equipment of a Solar PV Station of the Company. The impairment loss of ₹ 4.48 crore was recognised in 31 March 2016. Refer Note 60.
- k) Refer Note 23 for information on property, plant and equipment pledged as security by the Company.
- l) Refer Note 71 for disclosure of contractual commitments for the acquisition of property, plant and equipment.

## 41<sup>st</sup> Annual Report 2016-17

### Standalone Financial Statements



m) Deduction/adjustments from gross block and depreciation/amortisation/impairment for the year includes:

₹ Crore

	Gross block		Depreciation/ amortisation/impairment	
	31.03.2017	31.03.2016	31.03.2017	31.03.2016
Disposal of assets	76.36	26.59	10.34	24.65
Retirement of assets	102.99	519.93	24.42	256.83
Cost adjustments including exchange differences	(1,200.64)	(3,225.79)	-	-
Assets capitalised with retrospective effect/write back of excess capitalisation	(139.81)	(200.45)	(8.95)	57.93
Others incl. Ind AS Adjustments	33.18	(406.47)	24.99	(482.90)
	<u>(1,127.92)</u>	<u>(3,286.19)</u>	<u>50.80</u>	<u>(143.49)</u>

n) Exchange differences capitalised are disclosed in the 'Addition' column of CWIP and allocated to various heads of CWIP in the year of capitalisation through 'Deductions/Adjustment' column of CWIP. Exchange differences in respect of assets already capitalised are disclosed in the 'Deductions/Adjustments' column of PPE. Asset-wise details of exchange differences and borrowing costs included in the cost of major heads of PPE and CWIP through 'Addition' or 'Deductions/Adjustments' column are given below:

₹ Crore

	For the year ended 31 March 2017		For the year ended 31 March 2016	
	Exchange Difference included in PPE/ CWIP	Borrowing costs incl in PPE/ CWIP	Exchange Difference included in PPE/ CWIP	Borrowing costs incl in PPE/ CWIP
Building				
Main plant	(4.52)	197.09	25.45	164.47
Others	(0.25)	83.35	3.23	49.33
Hydraulic works, barrages, dams, tunnels and power channel	(5.62)	183.06	22.99	202.71
MGR track and signalling system	-	2.89	0.21	14.62
Railway siding	(0.06)	45.16	0.01	19.13
Plant and equipment	(172.18)	3,121.72	1,466.46	2,752.04
Others including pending allocation	(232.66)	491.81	438.26	495.66
<b>Total</b>	<u>(415.29)</u>	<u>4,125.08</u>	<u>1,956.61</u>	<u>3,697.96</u>



- o) Information regarding gross block of Property, plant and equipments and accumulated depreciation/amortisation under previous GAAP is as follows:

					₹ Crore
Particulars	Gross block as at 01.04.2015	Accumulated depreciation as at 01.04.2015	Net block as at 01.04.2015 (Deemed Cost)	Ind AS adjustments as at 01.04.2015	Opening balance as at 01.04.2015
Land					
(including development expenses)					
Freehold	6,523.21	-	6,523.21	-	6,523.21
Leasehold	3,166.04	499.69	2,666.35	-	2,666.35
Roads, bridges, culverts & helipads	852.00	257.73	594.27	2.65	591.62
Building					
Freehold					
Main plant	5,000.69	1,602.33	3,398.36	8.10	3,390.26
Others	3,180.50	1,183.39	1,997.11	35.60	1,961.51
Leasehold	50.00	31.09	18.91	-	18.91
Temporary erection	39.35	38.23	1.12	-	1.12
Water supply, drainage & sewerage system	720.54	357.02	363.52	6.58	356.94
MGR track and signalling system	1,542.01	723.19	818.82	-	818.82
Railway siding	750.73	231.46	519.27	6.15	513.12
Earth dam reservoir	290.10	136.22	153.88	2.86	151.02
Plant and equipment					
Owned	103,754.88	43,270.61	60,484.27	371.59	60,112.68
Leased	60.00	4.23	55.77	-	55.77
Furniture and fixtures	484.73	278.07	206.66	-	206.66
Vehicles including speedboats					
Owned	12.77	5.95	6.82	-	6.82
Office equipment	196.25	96.77	99.48	-	99.48
EDP, WP machines and satcom equipment	423.43	314.71	108.72	-	108.72
Construction equipments	193.35	102.72	90.63	-	90.63
Electrical installations	487.21	195.78	291.43	-	291.43
Communication equipments	106.96	61.45	45.51	-	45.51
Hospital Equipments	39.78	18.61	21.17	-	21.17
Laboratory and workshop equipments	70.10	19.23	50.87	-	50.87
Assets under 5 KM scheme of the GOI	116.87	46.11	70.76	-	70.76
Assets for ash utilisation	17.30	-	17.30	-	17.30
Less: Adjusted from fly ash utilisation reserve fund	17.30	-	17.30	-	17.30
<b>Total</b>	<b>128,061.50</b>	<b>49,474.59</b>	<b>78,586.91</b>	<b>433.53</b>	<b>78,153.38</b>



### 3. Non-current assets - Intangible assets

As at 31 March 2017

₹ Crore

Particulars	Gross block				Amortisation				Net block	
	As at 01.04.2016	Additions	Deductions/ adjustments	As at 31.03.2017	Upto 01.04.2016	For the year	Deductions/ adjustments	Upto 31.03.2017	As at 31.03.2017	As at 31.03.2016
Software	16.39	9.97	(0.54)	26.90	6.31	7.94	(0.42)	14.67	12.23	10.08
Right of use - Land	73.20	28.36	(3.05)	104.61	2.78	4.11	-	6.89	97.72	70.42
- Others	203.71	-	-	203.71	10.32	10.32	-	20.64	183.07	193.39
<b>Total</b>	<b>293.30</b>	<b>38.33</b>	<b>(3.59)</b>	<b>335.22</b>	<b>19.41</b>	<b>22.37</b>	<b>(0.42)</b>	<b>42.20</b>	<b>293.02</b>	<b>273.89</b>

As at 31 March 2016

Particulars	Gross block				Amortisation				Net block	
	As at 01.04.2015	Additions	Deductions/ adjustments	As at 31.03.2016	Upto 01.04.2015	For the year	Deductions/ adjustments	Upto 31.03.2016	As at 31.03.2016	As at 01.04.2015
Software	12.78	3.50	(0.11)	16.39	-	6.21	(0.10)	6.31	10.08	12.78
Right of use - Land	45.67	14.33	(13.20)	73.20	-	2.78	-	2.78	70.42	45.67
- Others	203.71	-	-	203.71	-	10.32	-	10.32	193.39	203.71
<b>Total</b>	<b>262.16</b>	<b>17.83</b>	<b>(13.31)</b>	<b>293.30</b>	<b>-</b>	<b>19.31</b>	<b>(0.10)</b>	<b>19.41</b>	<b>273.89</b>	<b>262.16</b>

- The right of use of land & others are amortized over the period of legal right to use or life of the related plant, whichever is less.
- Cost of acquisition of the right for drawl of water amounting to ₹ 203.71 crore (31 March 2016: ₹ 203.71 crore, 1 April 2015: ₹ 203.71 crore) is included under intangible assets – Right of use - Others.
- Deduction/adjustments from gross block and amortisation for the year includes:

₹ Crore

	Gross Block		Amortisation	
	31.03.2017	31.03.2016	31.03.2017	31.03.2016
Cost adjustments	(3.16)	(13.20)	-	-
Others	(0.43)	(0.11)	(0.42)	(0.10)
<b>Total</b>	<b>(3.59)</b>	<b>(13.31)</b>	<b>(0.42)</b>	<b>(0.10)</b>

- Information regarding gross block of intangible assets and accumulated amortisation under previous GAAP is as follows:

₹ Crore

Particulars	Gross block as at 01.04.2015	Accumulated amortisation as at 01.04.2015	Net Block as at 01.04.2015 (Deemed cost)	Ind AS adjustments as at 01.04.2015	Opening balance as at 01.04.2015
Software	111.55	98.77	12.78	-	12.78
Right of use - Land	56.46	10.79	45.67	-	45.67
- Others	248.08	44.37	203.71	-	203.71
	416.09	153.93	262.16	-	262.16

#### 4. Non-current assets - Capital work-in-progress

As at 31 March 2017					₹ Crore
Particulars	As at 01.04.2016	Additions	Deductions/ adjustments	Capitalised	As at 31.03.2017
Development of land	734.44	184.40	40.33	-	878.51
Roads, bridges, culverts & helipads	75.12	106.05	4.48	77.48	99.21
Piling and foundation	675.70	31.84	51.61	-	655.93
Buildings					
Main plant	3,155.65	1,370.65	732.62	195.65	3,598.03
Others	1,439.01	803.31	205.32	337.65	1,699.35
Temporary erection	36.58	10.36	5.53	5.45	35.96
Water supply, drainage and sewerage system	77.58	46.37	(19.08)	81.81	61.22
Hydraulic works, barrages, dams, tunnels and power channel	1,982.10	341.31	3.64	-	2,319.77
MGR track and signalling system	231.56	77.28	244.10	27.12	37.62
Railway siding	454.92	809.66	57.38	64.97	1,142.23
Earth dam reservoir	106.79	9.53	(17.69)	44.76	89.25
Plant and equipment	48,356.68	23,612.18	351.08	10,098.95	61,518.83
Furniture and fixtures	12.85	29.53	1.33	17.90	23.15
Office equipment	2.03	5.60	0.19	1.93	5.51
EDP/WP machines & satcom equipment	28.27	2.04	(0.77)	29.52	1.56
Construction equipments	-	0.03	-	-	0.03
Electrical installations	368.88	175.83	(31.47)	59.49	516.69
Communication equipments	2.35	1.23	0.01	0.62	2.95
Hospital equipments	0.07	0.47	0.01	0.03	0.50
Laboratory and workshop equipments	2.96	11.34	0.32	8.07	5.91
Development of coal mines	1,301.30	383.51	0.18	-	1,684.63
	59,044.84	28,012.52	1,629.12	11,051.40	74,376.84
<b>Expenditure pending allocation</b>					
Survey, investigation, consultancy and supervision charges	92.88	-	5.49	-	87.39
Difference in exchange on foreign currency loans	1,920.69	35.13	457.69	-	1,498.13
Pre-commissioning expenses (net)	99.39	341.81	167.61	-	273.59
Expenditure during construction period (net)*	1,037.44	5,273.17	13.78	-	6,296.83
Other expenditure directly attributable to project construction	469.92	99.79	66.99	-	502.72
Less: Allocated to related works	-	5,914.10	-	-	5,914.10
	62,665.16	27,848.32	2,340.68	11,051.40	77,121.40
Less: Provision for unserviceable works	99.39	-	0.66	-	98.73
<b>Construction stores (net of provision)</b>	3,639.82	(139.94)	-	-	3,499.88
<b>Total</b>	<b>66,205.59</b>	<b>27,708.38</b>	<b>2,340.02</b>	<b>11,051.40</b>	<b>80,522.55</b>



As at 31 March 2016

₹ Crore

Particulars	Deemed cost as at 01.04.2015	Additions	Deductions/ adjustments	Capitalised	As at 31.03.2016
Development of land	662.17	264.85	192.58	-	734.44
Roads, bridges, culverts & helipads	116.45	62.33	(21.45)	125.11	75.12
Piling and foundation	641.51	34.82	0.63	-	675.70
Buildings				-	
Main plant	2,728.88	1,213.40	369.43	417.20	3,155.65
Others	1,126.02	771.79	54.55	404.25	1,439.01
Temporary erection	44.84	65.87	70.23	3.90	36.58
Water supply, drainage and sewerage system	68.02	33.22	2.81	20.85	77.58
Hydraulic works, barrages, dams, tunnels and power channel	5,268.97	797.68	(1.01)	4,085.56	1,982.10
MGR track and signalling system	213.72	145.60	52.59	75.17	231.56
Railway siding	324.54	291.88	51.43	110.07	454.92
Earth dam reservoir	76.60	40.86	0.27	10.40	106.79
Plant and equipment	37,508.74	19,242.09	756.07	7,638.08	48,356.68
Furniture and fixtures	23.16	15.75	(9.48)	35.54	12.85
Office equipment	1.61	5.90	0.44	5.04	2.03
EDP/WP machines & satcom equipment	2.06	29.46	0.33	2.92	28.27
Construction equipments	1.82	-	0.01	1.81	-
Electrical installations	264.97	294.48	145.21	45.36	368.88
Communication equipments	2.19	2.40	0.71	1.53	2.35
Hospital equipments	0.13	0.07	-	0.13	0.07
Laboratory and workshop equipments	0.06	2.94	0.01	0.03	2.96
Development of coal mines	1,086.49	214.81	-	-	1,301.30
	50,162.95	23,530.20	1,665.36	12,982.95	59,044.84
<b>Expenditure pending allocation</b>				-	
Survey, investigation, consultancy and supervision charges	166.26	12.83	86.21	-	92.88
Difference in exchange on foreign currency loans	1,528.42	893.96	501.69	-	1,920.69
Pre-commissioning expenses (net)	49.32	173.20	123.13	-	99.39
Expenditure during construction period (net)*	725.88	4,698.23	126.74	-	5,297.37
Other expenditure directly attributable to project construction	76.37	447.01	53.06	0.40	469.92
Less: Allocated to related works	-	4,259.93	-	-	4,259.93
	52,709.20	25,495.50	2,556.19	12,983.35	62,665.16
Less: Provision for unserviceable works	105.99	4.22	10.82	-	99.39
<b>Construction stores (net of provision)</b>	3,859.90	(220.08)	-	-	3,639.82
<b>Total</b>	<b>56,463.11</b>	<b>25,271.20</b>	<b>2,545.37</b>	<b>12,983.35</b>	<b>66,205.59</b>

\* Brought from expenditure during construction period (net) - Note 43



- a) Construction stores are net of provision for shortages pending investigation amounting to ₹ 14.06 crore (31 March 2016: ₹ 7.40 crore, 1 April 2015: ₹ 4.69 crore).
- b) Pre-commissioning expenses for the year amount to ₹ 384.87 crore (31 March 2016: ₹ 328.16 crore, 1 April 2015: ₹ 292.74 crore) and after adjustment of pre-commissioning sales of ₹ 43.06 crore (31 March 2016: ₹ 154.96 crore, 1 April 2015: ₹ 50.04 crore) resulted in net pre-commissioning expenditure of ₹ 341.81 crore (31 March 2016: ₹ 173.20 crore, 1 April 2015: ₹ 242.70 crore).
- c) Additions to the development of coal mines include expenditure during construction period (net) of ₹ 353.95 crore (31 March 2016: ₹ 214.75 crore, 1 April 2015: ₹ 153.90 crore).

#### 5. Non-current assets - Intangible assets under development

As at 31 March 2017					₹ Crore
Particulars	As at 01.04.2016	Additions	Deductions/ Adjustments	Capitalised	As at 31.03.2017
Right of use - others	140.19	-	(74.34)	-	214.53
Exploratory wells-in-progress	85.06	20.45	97.86	-	7.65
	225.25	20.45	23.52	-	222.18
Less: Provision for unserviceable works	7.64	-	-	-	7.64
<b>Total</b>	<b>217.61</b>	<b>20.45</b>	<b>23.52</b>	<b>-</b>	<b>214.54</b>

As at 31 March 2016					₹ Crore
Particulars	Deemed cost as at 01.04.2015	Additions	Deductions/ Adjustments	Capitalised	As at 31.03.2016
Software	0.10	-	-	0.10	-
Right of use - others	-	140.19	-	-	140.19
Exploratory wells-in-progress	37.92	69.24	22.10	-	85.06
	38.02	209.43	22.10	0.10	225.25
Less: Provision for unserviceable works	7.64	-	-	-	7.64
<b>Total</b>	<b>30.38</b>	<b>209.43</b>	<b>22.10</b>	<b>0.10</b>	<b>217.61</b>



6. Non-current assets - Investments in subsidiaries & joint ventures

			₹ Crore		
Particulars			As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
	Number of shares/ bonds/ securities Current year/ (previous year)/ [date of transition]	Face value per share/ bond/ security Current year/ (previous year)/ [date of transition] (₹)			
<b>Equity instruments - Unquoted (fully paid up - unless otherwise stated, at cost)</b>					
<b>Subsidiary companies</b>					
NTPC Electric Supply Company Ltd.	80910 (80910) [80910]	10 (10) [10]	0.08	0.08	0.08
NTPC Vidyut Vyapar Nigam Ltd.	20000000 (20000000) [20000000]	10 (10) [10]	20.00	20.00	20.00
Kanti Bijlee Utpadan Nigam Ltd.	729457976 (689979992) [650000000]	10 (10) [10]	729.46	689.98	650.00
Bhartiya Rail Bijlee Company Ltd.	1172613850 (1172613850) [1172613850]	10 (10) [10]	1,172.61	1,172.61	1,172.61
Patratu Vidyut Utpadan Nigam Ltd.	74000 (74000) [-]	10 (10) [-]	0.08	0.08	-
			1,922.23	1,882.75	1,842.69
<b>Share application money pending allotment in</b>					
Kanti Bijlee Utpadan Nigam Ltd.			233.43	31.04	-
Bhartiya Rail Bijlee Company Ltd.			247.93	15.64	-
Patratu Vidyut Utpadan Nigam Ltd.			34.50	1.00	-
			515.86	47.68	-
<b>Joint venture companies</b>					
Utility Powertech Ltd. (includes 1000000 bonus shares)	2000000 (2000000) [2000000]	10 (10) [10]	1.00	1.00	1.00
NTPC-GE Power Services Private Ltd. (formerly NTPC-Alstom Power Services Private Ltd.)	3000000 (3000000) [3000000]	10 (10) [10]	3.00	3.00	3.00
NTPC-SAIL Power Company Ltd. (formerly NTPC-SAIL Power Company Private Ltd.)	490250050 (490250050) [490250050]	10 (10) [10]	490.25	490.25	490.25

				₹ Crore		
Particulars				As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
NTPC-Tamil Nadu Energy Company Ltd.	1385606112 (1345606112) [1325606112]	10 (10) [10]		<b>1,385.61</b>	1,345.61	1,325.61
Ratnagiri Gas & Power Private Ltd.	974308300 (974308300) [974308300]	10 (10) [10]	974.30		974.30	974.30
Less: Provision for impairment			<u>782.95</u>		-	-
				<b>191.35</b>	974.30	974.30
Aravali Power Company Private Ltd.	1398508200 (1332008200) [1257508200]	10 (10) [10]		<b>1,398.51</b>	1,332.00	1,257.51
NTPC BHEL Power Projects Private Ltd.	50000000 (50000000) [50000000]	10 (10) [10]	50.00		50.00	50.00
Less: Provision for impairment			<u>28.68</u>		6.61	-
				<b>21.32</b>	43.39	50.00
Meja Urja Nigam Private Ltd.	1166439800 (841439800) [412429800]	10 (10) [10]		<b>1,166.44</b>	841.44	412.43
BF-NTPC Energy Systems Ltd.	6570900 (5880000) [5880000]	10 (10) [10]	6.57		5.88	5.88
Less: Provision for impairment			<u>3.75</u>		3.63	3.35
				<b>2.82</b>	2.25	2.53
Nabinagar Power Generating Company Private Ltd.	1189300000 (713300000) [511125000]	10 (10) [10]		<b>1,189.30</b>	713.30	511.13
Transformers and Electricals Kerala Ltd.	19163438 (19163438) [19163438]	10 (10) [10]		<b>31.34</b>	31.34	31.34
National High Power Test Laboratory Private Ltd.	30400000 (23900000) [23900000]	10 (10) [10]		<b>30.40</b>	23.90	23.90
Energy Efficiency Services Ltd.	146500000 (47500000) [22500000]	10 (10) [10]		<b>146.50</b>	47.50	22.50
CIL NTPC Urja Private Ltd.	76900 (76900) [25000]	10 (10) [10]		<b>0.08</b>	0.08	0.03
Anushakti Vidhyut Nigam Ltd.	49000 (49000) [49000]	10 (10) [10]		<b>0.05</b>	0.05	0.05
NTPC-SCCL Global Ventures Private Ltd.	- (-) [50000]	- (-) [10]		-	-	0.05

## 41<sup>st</sup> Annual Report 2016-17

Standalone Financial Statements



			₹ Crore		
Particulars			As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
National Power Exchange Ltd.	-	-	-	-	2.19
	(-)	(-)			
	[2188325]	[10]			
Less: Provision for impairment		-	-	-	1.06
			-	-	1.13
Pan-Asian Renewables Private Ltd.	-	-	-	-	1.50
	(-)	(-)			
	[1500000]	[10]			
Less: Provision for impairment		-	-	-	1.28
			-	-	0.22
Hindustan Urvarak and Rasayan Ltd.	5025000	10	5.03	-	-
	(-)	(-)			
	[-]	[-]			
Trincomalee Power Company Ltd. (* Srilankan rupees)	3286061 (3286061) [2036061]	100* (100)* [100]*	15.20	15.20	9.26
Bangladesh-India Friendship Power Company Pvt.Ltd. (* Bangladeshi Taka)	16250000 (8750000) [2000000]	100* (100)* [100]*	134.20	69.68	15.53
			6,212.40	5,934.29	5,131.77
<b>Share application money pending allotment in</b>					
NTPC-Tamil Nadu Energy Company Ltd.			24.39	20.00	-
Nabinagar Power Generating Company Private Ltd.			164.00	50.00	-
Aravali Power Company Private Ltd.			-	-	21.34
Meja Urja Nigam Private Ltd.			-	-	128.92
CIL NTPC Urja Private Ltd.			-	-	0.05
Bangladesh-India Friendship Power Company Pvt. Ltd.			-	-	15.90
			188.39	70.00	166.21
<b>Total</b>			<b>8,838.88</b>	<b>7,934.72</b>	<b>7,140.67</b>
<b>Aggregate amount of unquoted investments</b>			<b>8,838.88</b>	<b>7,934.72</b>	<b>7,140.67</b>
<b>Aggregate amount of impairment in the value of investments</b>			<b>815.38</b>	<b>10.24</b>	<b>5.69</b>

a) Investments have been valued as per accounting policy no. C.25.1 (Note 1).

b) The Board of Directors of NTPC Limited in its meeting held on 25 March 2015 accorded in principle approval for voluntary winding up of NTPC-SCCL Global Ventures Pvt. Ltd. (NTPC-SCCL). On 8 September 2015, the Company received the approval from the shareholders of NTPC-SCCL. Pending liquidation, the Company had lost the joint control over the entity and accordingly, has classified the investment in NTPC SCCL as 'Investment in unquoted equity instruments' as at 31 March 2016 and 31 March 2017 in Note 7 (Non-current financial assets - Investments).



The liquidator has distributed winding up proceeds to the shareholders. Accordingly, the Company has received ₹ 0.04 crore out of the total investment of ₹ 0.05 crore as final settlement during the year. The final general meeting of NTPC-SCCL was held on 15 November 2016 after which the documents and books of liquidation were filed to the Official Liquidator. The Official Liquidator, after scrutiny of documents, filed the report to the Hon'ble Delhi High Court. The order from the Hon'ble High Court for dissolution of NTPC-SCCL is awaited.

- c) The Board of Directors of NTPC Limited in its meeting held on 28 April 2016 accorded in principle approval for withdrawal from NTPC BHEL Power Projects Private Ltd. (NTPC-BHEL), a Joint Venture of the Company. As NTPC-BHEL was formed by a directive from the GOI, approval of exit from GOI is awaited. Pending withdrawal, provision of ₹ **28.68 crore** (31 March 2016: ₹ 6.61 crore, 1 April 2015: Nil) for impairment in the value of investment has been made based on the unaudited accounts of NTPC-BHEL as at 31 March 2017.
- 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 NTPC Limited. GOI has suggested to wind up BF-NTPC. NTPC Limited has given its consent for winding up. Approval from the GOI is awaited to start winding up process. Pending winding-up, provision of ₹ **3.75 crore** (31 March 2016: ₹ 3.63 crore, 1 April 2015: ₹ 3.35 crore) for impairment in the value of investment has been made based on the unaudited accounts of BF-NTPC as at 31 March 2017.
- e) The Board of Directors of NTPC Limited in its meeting held on 7 November 2012 accorded in principle approval for withdrawal from National Power Exchange Ltd. (NPEX). On 28 October 2014, the shareholders of NPEX approved the proposal for voluntary winding up of NPEX. Pending liquidation, company had lost the joint control over the entity and accordingly, has classified the investment in NPEX as 'Investment in unquoted equity instruments' as at 31 March 2016 and 31 March 2017 in Note 7 (Non-current financial assets - Investments). The liquidator has distributed winding up proceeds to the Shareholders. Accordingly, the Company has received ₹ 1.21 crore out of the total investment of ₹ 2.19 crore as final settlement during the year. The final general meeting of NPEX was held on 14 October 2016 after which the documents and books of liquidation were filed to the Official Liquidator. The Official Liquidator, after scrutiny of documents, filed the report to the Hon'ble Delhi High Court. The order from the Hon'ble High Court for dissolution of NPEX is awaited.
- f) The Board of Directors of NTPC Limited 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). The decision of the Board of Directors of NTPC Limited has been conveyed to the Government of Kerala (JV Partner) & TELK and response on the same is awaited. Pending withdrawal, no provision for impairment in the value of investment in TELK is required to be made.
- g) The Board of Directors of NTPC Limited in its meeting held on 31 October 2014 approved the proposal for voluntary winding up of Pan-Asian Renewables Private Ltd. (Pan-Asian). On 22 January 2015, the shareholders of Pan-Asian approved the proposal for voluntary winding up of Pan-Asian. Pending liquidation, the Company had lost the joint control over the entity and accordingly, has classified the investment in Pan-Asian as 'Investment in unquoted equity instruments' as at 31 March 2016 and 31 March 2017 in Note 7 (Non-current financial assets - Investments). The liquidator has distributed winding up proceeds to the Shareholders. Accordingly, the Company has received ₹ 0.19 crore out of the total investment of ₹ 1.50 crore as final settlement during the year. The final general meeting of Pan-Asian was held on 21 September 2016 after which the documents and books of liquidation were filed to the Official Liquidator. The Official Liquidator, after scrutiny of documents, filed the report to the Hon'ble Delhi High Court. The order from the Hon'ble High Court for dissolution of Pan-Asian is awaited.
- h) As required by Ind AS 36, an assessment of impairment of the investment in Ratnagiri Gas and Power Private Ltd. (RGPL) was carried out by an independent expert. Consequently, impairment loss on the investment in RGPL amounting to ₹ **782.95 Crore** (31 March 2016: ₹ Nil, 1 April 2015: ₹ Nil) has been provided and disclosed as 'Exceptional items - Impairment loss on investments' in the statement of profit and loss. Also refer Note No.60.
- i) Restrictions for the disposal of investments held by the Company and commitments towards certain Subsidiary & Joint Venture entities are disclosed in Note 71.

## 41<sup>st</sup> Annual Report 2016-17

### Standalone Financial Statements



## 7. Non-current financial assets - Investments

			₹ Crore		
Particulars			As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
	Number of shares/ bonds/ securities Current year/ (previous year)/ [date of transition]	Face value per share/bond/ security Current year/ (previous year)/ [date of transition] (₹)			
<b>Equity instruments (fully paid up - unless otherwise stated)</b>					
<b>Quoted (designated at fair value through other comprehensive income)</b>					
PTC India Ltd.	12000000 (12000000) [12000000]	10 (10) [10]	<b>112.08</b>	76.80	97.08
			<b>112.08</b>	76.80	97.08
<b>Unquoted (measured at fair value through profit or loss)</b>					
NTPC-SCCL Global Ventures Private Ltd.	- (50000) [-]	- (10) [-]	-	0.05	-
National Power Exchange Ltd.	- (2188325) [-]	- (10) [-]	-	1.13	-
Pan-Asian Renewables Private Ltd.	- (1500000) [-]	- (10) [-]	-	0.22	-
International Coal Ventures Private Ltd.	1400000 (1400000) [1400000]	10 (10) [10]	<b>1.40</b>	1.40	1.40
			<b>1.40</b>	2.80	1.40
<b>Cooperative societies</b>			<b>#</b>	<b>#</b>	<b>#</b>
<b>Total</b>			<b>113.48</b>	<b>79.60</b>	<b>98.48</b>
<b>Aggregate amount of quoted investments and market value thereof</b>			<b>112.08</b>	<b>76.80</b>	<b>97.08</b>
<b>Aggregate amount of unquoted investments</b>			<b>1.40</b>	<b>2.80</b>	<b>1.40</b>

# Equity shares of ₹ 30,200/- (31 March 2016: ₹ 30,200/-, 1 April 2015: ₹ 30,200/-) held in various employee co-operative societies.

a) Investments have been valued as per accounting policy no. C.25.1 (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 is awaited for exit by NTPC Limited.

- 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). As the Company was formed by a directive from the GOI, approval of the GOI is awaited for exit by NTPC Limited. 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'. Pending withdrawal, no provision for impairment in the value of investment in ICVPL is required to be made.
- d) No strategic investments in equity instruments measured at FVTOCI were disposed during 2016-17, and there were no transfers of any cumulative gain or loss within equity relating to these investments.

#### 8. Non-current financial assets - Trade receivables

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
Trade receivables			
Unsecured, considered good	<b>35.59</b>	71.18	-

#### 9. Non-current financial assets - Loans

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
<b>Loans</b>			
Related parties			
Unsecured	<b>129.92</b>	1.48	3.17
Employees (including accrued interest)			
Secured	<b>252.52</b>	236.88	234.73
Unsecured	<b>97.81</b>	149.34	127.08
Loan to state government in settlement of dues from customers			
Unsecured	-	-	47.86
Others			
Secured	<b>50.34</b>	53.23	55.62
<b>Total</b>	<b>530.59</b>	440.93	468.46

- a) Due from directors and officers of the Company
- |                                     |             |      |   |
|-------------------------------------|-------------|------|---|
| Directors                           | <b>0.06</b> | 0.02 | - |
| Officers (# ₹ 3,728/- * ₹ 49,873/-) | <b>0.01</b> | #    | * |
- b) Loans to related parties include:
- |  |               |      |      |
|--|---------------|------|------|
| Key management personnel (* ₹ 49,873/-)        | <b>0.07</b>   | 0.02 | *    |
| Kanti Bijli Utpadan Nigam Ltd. (Subsidiary)    | <b>121.00</b> | 0.86 | 2.57 |
| Patratu Vidyut Utpadan Nigam Ltd. (Subsidiary) | <b>8.25</b>   | -    | -    |
| NTPC Education and Research Society            | <b>0.60</b>   | 0.60 | 0.60 |
- c) Other loans represent loan of ₹ **50.34 crore** (31 March 2016: ₹ 53.23 crore, 1 April 2015: ₹ 55.62 crore) given to Andhra Pradesh Industrial Infrastructure Corporation Ltd. (APIIC).
- d) Details of collateral held as security:
- 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.
  - Loan to APIIC is secured by a guarantee given by the Government of Andhra Pradesh vide GO dated 3 April 2003.



## 10. Non-current assets - Other financial assets

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
Claims recoverable	638.97	510.99	466.28
Finance lease receivables {Refer Note 55(b)}	525.29	511.20	515.20
<b>Total</b>	<b>1,164.26</b>	<b>1,022.19</b>	<b>981.48</b>

- a) Claims recoverable includes ₹ 619.34 crore (31 March 2016: ₹ 469.73 crore, 1 April 2015: ₹ 466.28 crore) towards the cost incurred upto 31 March 2017 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 ₹ 332.38 crore (31 March 2016: ₹ 185.41 crore, 1 April 2015: ₹ 214.34 crore) in respect of arbitration awards challenged by the Company before Hon'ble High Court. In the event the High Court grants relief to the Company, the amount would be adjusted against Current liabilities - Provisions - Provision for Others (Note 33). 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) Keeping in view the provisions of Appendix C to Ind AS-17 on 'Leases' w.r.t. determining whether an arrangement contains a lease, the Company has 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 has been derecognized from PPE and accounted for as Finance Lease Receivable (FLR). Recovery of capacity charges towards depreciation (including AAD), interest on loan capital & return on equity (pre-tax) components from the beneficiary are 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 recognised as 'Interest income on Assets under finance lease' under 'Revenue from operations' (Note - 37).

## 11. Other non-current assets

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
<b>Capital advances</b>			
Secured	16.23	17.34	16.48
Unsecured			
Covered by bank guarantee	3,296.66	3,623.71	4,050.18
Others	3,077.33	3,267.22	3,654.03
Considered doubtful	5.74	1.92	2.06
Less: Allowance for bad & doubtful advances	5.74	1.92	2.06
	<b>6,390.22</b>	<b>6,908.27</b>	<b>7,720.69</b>
<b>Advances other than capital advances</b>			
Security deposits	85.67	81.75	90.26
Advances to related parties	20.95	20.95	20.95
Advances to contractors & suppliers	2,296.71	2,273.47	2,257.53
Advance tax & tax deducted at source	11,423.36	16,210.46	11,692.79
Less: Provision for tax	4,517.16	9,384.10	6,879.31
	<b>6,906.20</b>	<b>6,826.36</b>	<b>4,813.48</b>
Deferred foreign currency fluctuation asset	1,032.68	1,368.79	1,280.49
Deferred payroll expenditure	146.72	157.21	160.45
<b>Total</b>	<b>16,879.15</b>	<b>17,636.80</b>	<b>16,343.85</b>

- a) In line with accounting policy no. 14 (Note 1), deferred foreign currency fluctuation asset has been accounted and (-) ₹ 233.80 crore (31 March 2016: (-) ₹ 709.35 crore) being exchange fluctuations on account of foreign currency loans has been recognised in energy sales in Note-37 'Revenue from operations'.



- 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. (Previously NTPC-Alstom Power Services Private Ltd.) | <b>48.42</b>  | 5.11   | 17.96  |
| NTPC BHEL Power Projects Private Ltd.  | <b>117.03</b> | 154.10 | 162.24 |
- c) Capital advances include ₹ **224.29 crore** (31 March 2016: ₹ 224.48 crore, 1 April 2015: ₹ 268.72 crore), paid to a contractor pending settlement of certain claims which are under arbitration. The amount will be adjusted in the cost of related work or recovered from the party, depending upon the outcome of the arbitration proceedings.
- d) Advances to contractors & suppliers include payments to Railways amounting to ₹ **2,226.22 crore** (31 March 2016: ₹ 2,226.16 crore, 1 April 2015 ₹ 2,210.22 crore) under Customer funding model as per policy on 'Participative model for rail-connectivity and capacity augmentation projects' issued by Ministry of Railways, GOI. As per the 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 & 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 recovered along-with 5% interest on the fund provided by the Company after COD of the railway projects. The railway projects as per the agreement are yet to achieve the COD.
- e) Capital advance are secured against the hypothecation of the construction equipment/material supplied by the contractors/parties.
- f) Loans given to employees are measured at amortised cost. The deferred payroll expenditure represents the benefits accruing to employees. The same is amortised on a straight line basis over the remaining period of the loan.

## 12. Current assets - Inventories

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
Coal	<b>2,627.38</b>	3,490.12	3,827.37
Fuel oil	<b>270.30</b>	249.24	344.06
Naphtha	<b>112.64</b>	118.54	139.81
Stores & spares	<b>2,890.96</b>	2,593.53	2,475.37
Chemicals & consumables	<b>97.87</b>	78.32	66.21
Loose tools	<b>7.41</b>	7.89	7.22
Steel scrap	<b>18.68</b>	24.88	20.59
Others	<b>582.43</b>	540.75	502.21
	<b>6,607.67</b>	7,103.27	7,382.84
Less: Provision for shortages	<b>5.10</b>	5.63	4.48
Provision for obsolete/unserviceable items/diminution in value of surplus inventory	<b>97.76</b>	87.27	81.30
<b>Total</b>	<b>6,504.81</b>	7,010.37	7,297.06
Inventories include material-in-transit			
Coal	<b>183.92</b>	323.71	421.24
Stores & spares	<b>46.50</b>	37.88	35.59
Chemicals & consumables	<b>0.78</b>	1.16	0.38
Loose tools	<b>0.08</b>	0.07	0.04
Others	<b>0.91</b>	0.63	0.84

- a) Inventory items, other than steel scrap have been valued as per accounting policy no. C.8 (Note 1). Steel scrap has been valued at estimated realisable value.
- b) Inventories - Others includes steel, cement, ash bricks etc.

## 41<sup>st</sup> Annual Report 2016-17

### Standalone Financial Statements



### 13. Current financial assets - Investments

			₹ Crore		
Particulars			As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
	Number of shares/ bonds/ securities Current year/ (previous year)/ [date of transition]	Face value per share/bond/ security Current year/ (previous year)/ [date of transition] (₹)			
<b>Current maturities of long term investments</b>					
<b>Bonds (fully-paid up) (measured at amortised cost)</b>					
Unquoted					
8.50 % Tax-Free State Government Special Bonds of the Government of					
Andhra Pradesh	-	-	-	2.68	134.11
	(-)	(-)			
	[1260650]	[1000]			
Assam	-	-	-	0.11	5.48
	(-)	(-)			
	[51464]	[1000]			
Bihar	-	-	-	4.03	201.52
	(-)	(-)			
	[1894400]	[1000]			
Chattisgarh	-	-	-	1.03	51.40
	(-)	(-)			
	[483220]	[1000]			
Gujarat	-	-	-	1.78	89.07
	(-)	(-)			
	[837240]	[1000]			
Haryana	-	-	-	2.28	114.35
	(-)	(-)			
	[1075000]	[1000]			
Himachal Pradesh	-	-	-	0.07	3.55
	(-)	(-)			
	[33388]	[1000]			
Jammu and Kashmir	-	-	-	0.78	39.08
	(-)	(-)			
	[367360]	[1000]			
Jharkhand	-	-	-	2.04	102.13
	(-)	(-)			
	[960136]	[1000]			
Kerala	-	-	-	2.13	106.63
	(-)	(-)			
	[1002400]	[1000]			
Madhya Pradesh	-	-	-	1.77	88.38
	(-)	(-)			
	[830840]	[1000]			

			₹ Crore		
Particulars			As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
	Number of shares/ bonds/ securities Current year/ (previous year)/ [date of transition]	Face value per share/bond/ security Current year/ (previous year)/ [date of transition] (₹)			
Maharashtra	-	-	-	0.81	40.57
	(-)	(-)			
	[381400]	[1000]			
Orissa	-	-	-	2.34	117.32
	(-)	(-)			
	[1102874]	[1000]			
Punjab	-	-	-	0.73	36.83
	(-)	(-)			
	[346230]	[1000]			
Rajasthan	-	-	-	0.62	30.85
	(-)	(-)			
	[290000]	[1000]			
Sikkim	-	-	-	0.07	3.64
	(-)	(-)			
	[34196]	[1000]			
Uttar Pradesh	-	-	-	8.48	424.42
	(-)	(-)			
	[3989900]	[1000]			
Uttaranchal	-	-	-	0.85	42.51
	(-)	(-)			
	[399650]	[1000]			
West Bengal	-	-	-	2.49	124.90
	(-)	(-)			
	[1174248]	[1000]			
			-	35.09	1,756.74
Investment in mutual funds (measured at fair value through profit or loss)					
UTI Liquid Cash Plan-IP-Direct-DDR*			-	159.58	151.36
IDBI Liquid Fund-Direct-DDR*			-	79.30	75.24
SBI Premier Liquid Fund - Direct - DDR*			-	104.75	-
			-	343.63	226.60
<b>Total</b>			-	<b>378.72</b>	<b>1,983.34</b>
<b>Aggregate amount of unquoted investments</b>			-	<b>378.72</b>	<b>1,983.34</b>

\* Investments out of fly ash utilization reserve fund.

- Investments have been valued as per accounting policy no. C.25.1 (Note 1).
- The above investments are unquoted and hence market value is not applicable.
- Investments in 8.50 % Tax-Free State Government Special Bonds of the Government of various states as at 31 March 2016 represent accrued interest amount as these bonds have been redeemed during the financial year 2015-16.

## 41<sup>st</sup> Annual Report 2016-17

Standalone Financial Statements



#### 14. Current financial assets - Trade receivables

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
Trade receivables			
Unsecured, considered good	8,137.92	7,732.22	7,604.37
Considered doubtful	0.20	0.20	0.20
	8,138.12	7,732.42	7,604.57
Less: Allowance for bad & doubtful receivables	0.20	0.20	0.20
<b>Total</b>	<b>8,137.92</b>	<b>7,732.22</b>	<b>7,604.37</b>

#### 15. Current financial assets - Cash and cash equivalents

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
Balances with banks			
Current accounts	150.60	61.75	189.41
Deposits with original maturity upto three months (including interest accrued)	3.35	1,310.24	-
Cheques & drafts on hand	3.10	0.32	59.66
Balance with Reserve Bank of India (including interest accrued)	-	-	31.46
Others (stamps on hand)	0.07	0.09	0.12
<b>Total</b>	<b>157.12</b>	<b>1,372.40</b>	<b>280.65</b>

#### 16. Current financial assets - Bank balances other than cash and cash equivalents

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
Deposits with original maturity of more than three months and maturing within one year (including interest accrued)*	1,287.97	2,286.98	12,821.55
Earmarked balances with banks #	1,485.40	801.40	172.80
<b>Total</b>	<b>2,773.37</b>	<b>3,088.38</b>	<b>12,994.35</b>
# Earmarked balances with banks towards:			
Redemption of bonds due for repayment within one year	101.04	107.49	108.32
Fly ash utilisation reserve fund**	556.68	136.77	36.73
DDUGJY Scheme of the GOI***	802.05	527.52	-
Public deposit repayment reserve	-	-	0.08
Unpaid dividend account balance	17.61	15.05	14.95
Amount deposited as per court orders	5.00	12.38	12.37
Unpaid interest/refund account balance - Bonds	2.97	2.15	0.30
Unpaid interest on public deposit	0.03	0.03	0.03
Security with government authorities	0.02	0.01	0.02
<b>Total</b>	<b>1,485.40</b>	<b>801.40</b>	<b>172.80</b>

\* Includes deposits of ₹ Nil (31 March 2016: ₹ Nil, 1 April 2015: ₹ 2,750 crore) with more than twelve months maturity from the date of deposit.

\*\* Refer Note 22 regarding fly ash utilization reserve fund.

\*\*\* Out of advance for DDUGJY Scheme of the GOI. Refer Note 32 (a).



## 17. Current financial assets - Loans

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
<b>Loans (including interest accrued)</b>			
Related parties			
Unsecured	25.05	0.94	0.87
Employees			
Secured	72.55	75.99	76.41
Unsecured	134.32	121.98	94.62
State Government in settlement of dues from customers			
Unsecured	-	47.87	95.73
Others			
Secured	5.00	5.00	5.00
<b>Total</b>	<b>236.92</b>	<b>251.78</b>	<b>272.63</b>
a) Due from Directors and Officers of the Company			
Directors	0.04	0.08	-
Officers (* ₹ 8260/-)	0.01	*	0.01
b) Loans to related parties include:			
Key management personnel	0.05	0.08	0.01
Kanti Bijli Utpadan Nigam Ltd. (Subsidiary)	-	0.86	0.86
Patratu Vidyut Utpadan Nigam Ltd. (Subsidiary)	25.00	-	-
c) Other loans represent loans of ₹ 5.00 crore (31 March 2016: ₹ 5.00 crore, 1 April 2015: ₹ 5.00 crore) given to APIIC.			
d) Details of collateral held as security:			
- 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.			
- Loan to APIIC is secured by a guarantee given by the Government of Andhra Pradesh vide GO dated 3 April 2003.			

## 18. Current assets - Other financial assets

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
<b>Advances</b>			
Related parties			
Unsecured	179.44	179.27	311.06
Employees			
Unsecured	5.78	6.04	6.95
Considered doubtful	0.04	0.04	0.04



₹ Crore

Particulars	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
Others			
Unsecured	14.72	11.34	1.22
Less: Allowance for bad & doubtful advances	0.04	0.04	0.04
	199.94	196.65	319.23
Claims recoverable			
Unsecured, considered good	94.63	58.03	64.25
Considered doubtful	0.12	0.54	0.62
Less: Allowance for doubtful claims	0.12	0.54	0.62
	94.63	58.03	64.25
Unbilled revenue	5,718.67	4,953.50	2,502.34
Hedging cost recoverable from beneficiaries	1.60	0.04	4.59
Derivative MTM asset	-	3.66	-
Finance lease receivables	29.77	29.12	24.72
Others	8.71	5.03	15.25
<b>Total</b>	<b>6,053.32</b>	<b>5,246.03</b>	<b>2,930.38</b>

a) Unbilled revenue is net of credits to be passed to beneficiaries at the time of billing and includes ₹ 7,496.34 crore (31 March 2016: ₹ 6,579.06 crore, 1 April 2015: ₹ 6,384.00 crore) billed to the beneficiaries after 31 March for energy sales.

b) Advance to related parties include:

Subsidiary companies	125.96	98.06	239.84
Joint venture companies	45.55	52.70	38.96

c) Advances 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. (Previously NTPC-Alstom Power Services Private Ltd.)	0.37	0.44	0.53
NTPC-SAIL Power Company Ltd. (Previously NTPC-SAIL Power Company Private Ltd.)	-	1.74	1.96
Aravali Power Company Private Ltd.	9.03	4.24	1.98
NTPC BHEL Power Projects Private Ltd.	4.80	3.77	2.62
Meja Urja Nigam Private Ltd.	3.50	3.25	8.54
Nabinagar Power Generating Company Private Ltd.	2.61	3.04	0.71
Pan-Asian Renewables Private Ltd.	-	-	0.04
Bangladesh India Friendship Power Company Pvt.Ltd.	9.34	8.97	4.58

d) Other financial assets - Others include amount recoverable from contractors and other parties towards hire charges, rent/electricity etc.

## 19. Current assets - Other current assets

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
<b>Security deposits (unsecured)</b>	<b>950.81</b>	903.03	756.78
<b>Advances</b>			
Related parties			
Unsecured	<b>79.70</b>	410.85	672.25
Employees			
Unsecured	<b>4.74</b>	5.85	4.57
Contractors & suppliers			
Secured	<b>1.51</b>	1.38	-
Unsecured	<b>943.90</b>	668.85	312.31
Considered doubtful	<b>1.90</b>	1.66	1.59
Others			
Unsecured	<b>110.51</b>	84.58	69.83
Less: Allowance for bad & doubtful advances	<b>1.90</b>	1.66	1.59
	<b>1,140.36</b>	1,171.51	1,058.96
<b>Interest accrued on</b>			
Advance to contractors	<b>41.76</b>	30.69	15.15
<b>Claims recoverable</b>			
Unsecured, considered good	<b>2,367.47</b>	2,543.11	2,010.21
Considered doubtful	<b>11.96</b>	12.59	12.78
Less: Allowance for doubtful claims	<b>11.96</b>	12.59	12.78
	<b>2,367.47</b>	2,543.11	2,010.21
Assets held for disposal	<b>1.72</b>	1.93	2.12
Deferred payroll expenses	<b>21.53</b>	21.35	17.18
Others	<b>12.79</b>	4.93	5.11
<b>Total</b>	<b>4,536.44</b>	4,676.55	3,865.51

- a) Security deposits (unsecured) include ₹ **63.31 crore** (31 March 2016: ₹ 32.60 crore, 1 April 2015: ₹ 224.15 crore) towards sales tax deposited with sales/commercial tax authorities, ₹ **346.30 crore** (31 March 2016: ₹ 346.30 crore, 1 April 2015: ₹ 306.30 crore) deposited with Courts, ₹ **177.06 crore** (31 March 2016: ₹ 165.51 crore, 1 April 2015: ₹ 160.97 crore) deposited with LIC for making annuity payments to the land oustees and ₹ **275.05 crore** (31 March 2016: ₹ 275.05 crore, 1 April 2015: ₹ Nil) towards the amount deposited with the Water Resource Department, Govt. of Chhattisgarh for drawl of water.
- b) Advances - Others include prepaid expenses amounting to ₹ **88.43 crore** (31 March 2016: ₹ 84.52 crore, 1 April 2015: ₹ 69.55 crore) and unamortized discount on commercial paper amounting to ₹ **21.89 crore** (31 March 2016: ₹ Nil, 1 April 2015: ₹ Nil).
- 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. (Previously NTPC-Alstom Power Services Private Ltd.) | <b>0.07</b> | 0.09 | - |
| NTPC BHEL Power Projects Private Ltd.  | <b>0.22</b> | -    | - |
- d) Loans given to employees are measured at amortised cost. The deferred payroll expenditure represents the benefits accruing to employees. The same is amortised on a straight line basis over the remaining period of the loan.



## 20. Regulatory deferral account debit balances

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
On account of employee benefits expense	522.83	-	-

Regulatory deferral account balances have been accounted in line with Accounting policy no. C.4. Refer Note 68 for detailed disclosures.

## 21. Equity share capital

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
<b>Equity share capital</b>			
<b>Authorised</b>			
10,00,00,00,000 shares of par value ₹10/- each (10,00,00,00,000 shares of par value ₹10/- each as at 31 March 2016 and 1 April 2015)	10,000.00	10,000.00	10,000.00
<b>Issued, subscribed and fully paid up</b>			
8,24,54,64,400 shares of par value ₹ 10/- each (8,24,54,64,400 shares of par value ₹10/- each as at 31 March 2016 and 1 April 2015)	8,245.46	8,245.46	8,245.46

### a) Movements in equity share capital:

During the year, the Company has neither issued nor bought back any shares.

### 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:

Particulars	₹ Crore	
	2016-17	2015-16
<b>(i) Equity shares - Dividend paid during the year</b>		
Final dividend for the year ended 31 March 2016 of ₹ 1.75 (31 March 2015: ₹ 1.75) per fully paid share	1,442.96	1,442.96
Interim dividend for the year ended 31 March 2017 of ₹ 2.61 (31 March 2016: ₹ 1.60) per fully paid share	2,152.07	1,319.28
<b>(ii) Equity shares - Dividends not recognised at the end of the reporting period</b>		
In addition to the above dividends, since year end the directors have recommended the payment of a final dividend of ₹ 2.17 (31 March 2016: ₹ 1.75) per fully paid equity share. This proposed dividend is subject to the approval of shareholders in the ensuing annual general meeting.	1,789.27	1,442.96

### d) Details of shareholders holding more than 5% shares in the Company:

Particulars	31.03.2017		31.03.2016		01.04.2015	
	Nos.	% age	Nos.	% age	Nos.	% age
- President of India	5,750,759,170	69.74	5,768,341,760	69.96	6,180,614,980	74.96
- Life Insurance Corporation of India (including shares held in various Funds/Schemes)	998,258,968	12.11	1,070,530,189	12.98	817,585,952	9.92



## 22. Other equity

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
Capital reserve	50.08	50.08	50.08
Securities premium account	2,228.46	2,228.46	2,228.34
Bonds/debentures redemption reserve	5,961.81	4,608.73	3,624.60
Fly ash utilisation reserve fund	556.68	478.21	401.14
Corporate social responsibility (CSR) reserve	-	-	78.30
General reserve	76,831.63	72,331.63	66,331.63
Retained earnings	2,342.11	3,371.41	2,870.55
Other reserves- FVTOCI reserve	15.00	(20.28)	-
<b>Total</b>	<b>87,985.77</b>	<b>83,048.24</b>	<b>75,584.64</b>

	₹ Crore	
	For the year ended 31.03.2017	For the year ended 31.03.2016
<b>(a) Capital reserve</b>		
Opening balance	50.08	50.08
Less: Adjustments during the year	-	-
<b>Closing balance</b>	<b>50.08</b>	<b>50.08</b>
Capital reserve represents amount received by the Company during 2001-02 as consideration under settlement for withdrawal from a erstwhile JV project.		
<b>(b) Securities premium account</b>		
Opening balance	2,228.46	2,228.34
Add : Received during the year	-	0.12
<b>Closing balance</b>	<b>2,228.46</b>	<b>2,228.46</b>
Securities premium account is used to record the premium on issue of shares/securities. This amount is utilised in accordance with the provisions of the Companies Act, 2013.		
<b>(c) Bonds/Debentures redemption reserve</b>		
Opening balance	4,608.73	3,624.60
Add : Transfer from retained earnings	1,667.08	1,284.13
Less : Transfer to retained earnings	314.00	300.00
<b>Closing balance</b>	<b>5,961.81</b>	<b>4,608.73</b>
In accordance with applicable provisions of the Companies Act, 2013 read with Rules and as per decision of Board of Directors, the Company has created Debenture Redemption Reserve (DRR) out of profits of the Company @ 50% of the value of debentures on a prudent basis, every year in equal installments till the year prior to the year of redemption of debentures/bonds for the purpose of redemption of bonds/debentures.		
<b>(d) Fly ash utilisation reserve fund</b>		
Opening balance	478.21	401.14
Add: Transfer from		
NTPC Vidyut Vyapar Nigam Ltd. (NVVN)	-	1.67
Revenue from operations	108.42	113.37
Other income	27.63	24.60
Less: Utilised during the year		
Capital expenditure	3.66	5.26
Employee benefits expense	20.80	16.87
Other administration expenses	33.12	40.44
<b>Closing balance</b>	<b>556.68</b>	<b>478.21</b>

## 41<sup>st</sup> Annual Report 2016-17

Standalone Financial Statements



₹ Crore

For the year ended 31.03.2017	For the year ended 31.03.2016
----------------------------------	----------------------------------

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.

During the year, proceeds of ₹ 108.42 crore (31 March 2016: ₹ 113.37 crore) from sale of ash/ash products, ₹ 27.63 crore (31 March 2016: ₹ 24.60 crore) towards income on investment have been transferred to fly ash utilisation reserve fund. Further, interest on investments of ₹ 1.67 crore (31 March 2016) maintained by NVVN Ltd. has been transferred to fly ash utilisation reserve fund. An amount of ₹ 57.58 crore (31 March 2016: ₹ 62.57 crore) has been utilized from the fly ash utilisation reserve fund on expenses incurred for activities as specified in the aforesaid notification of MOEF.

Out of fund balance of ₹ 556.68 crore (31 March 2016: ₹ 478.21 crore), ₹ Nil (31 March 2016: ₹ 343.63 crore) is invested in mutual funds - Note 13. Further, the balance amount has been kept in 'Bank balances other than cash & cash equivalents' (Note 16).

(e) Corporate social responsibility (CSR) reserve

Opening balance	-	78.30
Less: Transfer to retained earnings	-	78.30
Closing balance	-	-

In terms of Section 135 of the Companies Act, 2013 read with guidelines on corporate social responsibility issued by Department of Public Enterprises (DPE), 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 Company has spent an amount of ₹ 277.81 crore during the year (31 March 2016: ₹ 491.42 crore). The amount equivalent to unspent CSR expenditure of ₹ 78.30 crore transferred in 2014-15 to CSR reserve from retained earnings, has been transferred back to retained earnings during the year 2015-16 on actual expenditure.

(f) General reserve

Opening balance	72,331.63	66,331.63
Add : Transfer from retained earnings	4,500.00	6,000.00
Closing balance	76,831.63	72,331.63

(g) Retained earnings

Opening balance	3,371.41	2,870.55
Add: Profit for the year as per Statement of Profit and Loss	9,385.26	10,769.60
Transfer from bonds/debentures redemption reserve	314.00	300.00
Transfer from CSR reserve	-	78.30
Less: Transfer to bonds/debentures redemption reserve	1,667.08	1,284.13
Transfer to general reserve	4,500.00	6,000.00
Final dividend paid	1,442.96	1,442.96
Tax on final dividend paid	289.68	293.75
Interim dividend paid	2,152.07	1,319.28
Tax on interim dividend paid	438.11	268.57
	2,580.77	3,409.76
Items of other comprehensive income recognised directly in retained earnings:		
- Net actuarial gains/(losses) on defined benefit plans, net of tax	(238.66)	(38.35)
Closing balance	2,342.11	3,371.41

	₹ Crore	
	For the year ended 31.03.2017	For the year ended 31.03.2016
(h) Other reserves- FVTOCI reserve		
Opening balance	(20.28)	-
Add: Fair value gain/(loss) on equity instruments for the year	35.28	(20.28)
Closing balance	15.00	(20.28)

The Company has elected to recognise changes in the fair value of certain investments in equity securities in other comprehensive income. These changes are accumulated within FVTOCI reserve within equity. The Company transfers amounts from this reserve to retained earnings when the relevant equity securities are derecognised.

### 23. Non-current financial liabilities - Borrowings

	₹ Crore		
Particulars	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
<b>Bonds/debentures</b>			
<b>Secured</b>			
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) <sup>xi</sup>	188.94	188.96	-
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) <sup>xi</sup>	171.71	171.72	-
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) <sup>iii</sup>	322.11	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) <sup>vii</sup>	319.87	319.93	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) <sup>vii</sup>	410.32	410.39	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) <sup>xiii</sup>	4,010.34	-	-
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) <sup>xii</sup>	720.58	-	-
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) <sup>xi</sup>	133.44	133.45	-
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) <sup>xi</sup>	49.88	49.88	-



₹ Crore

Particulars	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
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) <sup>iii</sup>	105.70	105.70	105.69
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) <sup>vii</sup>	256.10	256.14	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) <sup>vii</sup>	93.71	93.73	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) <sup>xii</sup>	696.77	-	-
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) <sup>xii</sup>	836.47	-	-
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) <sup>xii</sup>	1,072.76	-	-
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) <sup>xii</sup>	511.77	511.83	-
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) <sup>xi</sup>	111.96	111.95	-
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) <sup>xi</sup>	68.15	68.15	-
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) <sup>ix</sup>	313.05	313.13	-
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) <sup>ix</sup>	1,047.99	1,048.10	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) <sup>iii</sup>	751.54	751.54	751.53
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) <sup>iii</sup>	75.47	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) <sup>vii</sup>	499.95	500.03	499.95



Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
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) <sup>vii</sup>	213.89	213.92	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 11 year and in annual installments thereafter upto the end of 15 year respectively commencing from 04 May 2023 and ending on 04 May 2027 (Forty Fourth Issue - Private Placement) <sup>vii</sup>	542.07	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) <sup>i</sup>	50.01	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) <sup>vii</sup>	217.46	217.46	217.46
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 8 <sup>th</sup> year, 9 <sup>th</sup> year and 10 <sup>th</sup> year on 25 March 2023, 25 March 2024 and 25 March 2025 respectively (Fifty Fourth Issue - Bonus Debentures) <sup>x</sup>	10,318.82	10,316.42	10,323.57
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) <sup>vii</sup>	301.79	301.79	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 11 <sup>th</sup> year and in annual installments thereafter upto the end of 15 <sup>th</sup> year respectively commencing from 25 January 2023 and ending on 25 January 2027 (Forty Second Issue - Private Placement) <sup>iii</sup>	508.14	508.24	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) <sup>vii</sup>	406.91	406.96	406.91
6.72% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 24 November 2021 (Sixty Fifth Issue - Private Placement) <sup>xii</sup>	716.26	-	-
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 5 <sup>th</sup> year, 10 <sup>th</sup> year & 15 <sup>th</sup> year on 27 May 2021, 27 May 2026 and 27 May 2031 respectively (Sixty First Issue - Private Placement) <sup>xi</sup>	1,145.94	-	-
8.33% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 24 February 2021 (Fifty Ninth Issue - Private Placement) <sup>xii</sup>	660.18	660.27	-

## 41<sup>st</sup> Annual Report 2016-17

Standalone Financial Statements



₹ Crore

Particulars	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
8.93% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 19 January 2021 (Thirty Seventh Issue - Private placement) <sup>iii</sup>	317.17	317.17	317.17
8.18% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 31 December 2020 (Fifty Eighth Issue - Private Placement) <sup>xii</sup>	305.92	305.92	-
8.73% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 31 March 2020 (Thirty Third Issue- Private Placement) <sup>iii</sup>	209.97	209.97	209.97
8.78% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 9 March 2020 (Thirty First Issue- Private Placement) <sup>iii</sup>	531.27	531.27	531.27
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) <sup>iii</sup>	368.12	368.12	368.12
7.89% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 5 May 2019 (Thirtieth Issue - Private Placement) <sup>iii</sup>	701.82	701.82	701.82
8.65% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 4 February 2019 (Twenty Ninth Issue - Private Placement) <sup>iii</sup>	552.87	552.87	552.87
7.50% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 12 January 2019 (Nineteenth Issue - Private Placement) <sup>ii</sup>	50.92	50.92	50.92
11.00% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 21 November 2018 (Twenty Eighth Issue - Private Placement) <sup>iii</sup>	1,027.42	1,027.42	1,027.42
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 6 <sup>th</sup> year and in annual installments thereafter upto the end of 20 <sup>th</sup> year respectively commencing from 20 July 2018 and ending on 20 July 2032 (Forty Sixth Issue - Private Placement) <sup>vii</sup>	80.07	80.10	80.09
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 6 <sup>th</sup> year and in annual installments thereafter upto the end of 20 <sup>th</sup> year respectively commencing from 16 May 2018 and ending on 16 May 2032 (Forty Fifth Issue - Private Placement) <sup>vii</sup>	80.12	80.14	80.14
8.00% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 10 April 2018 (Sixteenth Issue -Private Placement) <sup>i</sup>	103.33	103.33	103.33

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
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 6 <sup>th</sup> year and in annual installments thereafter upto the end of 20 <sup>th</sup> year respectively commencing from 2 March 2018 and ending on 2 March 2032 (Forty Third Issue - Private Placement) <sup>iii</sup>	80.02	80.05	80.04
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 6 year and in annual installments thereafter upto the end of 20 <sup>th</sup> year respectively commencing from 23 December 2017 and ending on 23 December 2031 (Forty First Issue - Private Placement) <sup>iii</sup>	80.25	80.27	80.27
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 6 <sup>th</sup> year and in annual installments thereafter upto the end of 20 <sup>th</sup> year respectively commencing from 29 July 2017 and ending on 29 July 2031 (Fortieth Issue - Private Placement) <sup>iii</sup>	80.18	80.20	80.20
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 6 <sup>th</sup> year and in annual installments thereafter upto the end of 20 <sup>th</sup> year respectively commencing from 9 June 2017 and ending on 9 June 2031 (Thirty Ninth Issue - Private Placement) <sup>iii</sup>	112.13	112.16	112.16
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 6 <sup>th</sup> year and in annual installments thereafter upto the end of 20 <sup>th</sup> year respectively commencing from 22 March 2017 and ending on 22 March 2031 (Thirty Eighth Issue - Private Placement) <sup>iii</sup>	74.64	79.99	79.99
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 6 <sup>th</sup> year and in annual installments thereafter upto the end of 20 <sup>th</sup> year respectively commencing from 15 December 2016 and ending on 15 December 2030 (Thirty Sixth Issue - Private Placement) <sup>iii</sup>	74.46	79.80	79.80
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 6 <sup>th</sup> year and in annual installments thereafter upto the end of 20 <sup>th</sup> year respectively commencing from 15 September 2016 and ending on 15 September 2030 (Thirty Fifth Issue - Private Placement) <sup>iii</sup>	119.12	127.65	127.65

## 41<sup>st</sup> Annual Report 2016-17

Standalone Financial Statements



₹ Crore

Particulars	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
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 6 <sup>th</sup> year and in annual installments thereafter upto the end of 20 <sup>th</sup> year respectively commencing from 10 June 2016 and ending on 10 June 2030 (Thirty Fourth Issue - Private Placement) <sup>III</sup>	148.82	159.49	159.49
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 6 <sup>th</sup> year and in annual installments thereafter upto the end of 20 <sup>th</sup> year respectively commencing from 25 March 2016 and ending on 25 March 2030 (Thirty Second Issue - Private Placement) <sup>III</sup>	96.82	104.30	111.75
9.37% Secured non-cumulative non-convertible redeemable taxable bonds of ₹70,00,000/- each with fourteen separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 4 June 2012 and ending on 4 December 2018 (Twenty Fifth Issue - Private Placement) <sup>III</sup>	146.78	220.43	294.07
9.06% Secured non-cumulative non-convertible redeemable taxable bonds of ₹70,00,000/- each with fourteen separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 4 June 2012 and ending on 4 December 2018 (Twenty Sixth Issue - Private Placement) <sup>III</sup>	146.64	220.21	293.79
8.6077% Secured non-cumulative non-convertible redeemable taxable bonds of ₹20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 9 September 2011 and ending on 9 March 2021 (Twenty Fourth Issue - Private Placement) <sup>IV</sup>	204.24	255.31	306.37
8.3796% Secured non-cumulative non-convertible redeemable taxable bonds of ₹20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 5 August 2011 and ending on 5 February 2021 (Twenty Third Issue - Private Placement) <sup>IV</sup>	204.13	255.16	306.20
8.1771% Secured non-cumulative non-convertible redeemable taxable bonds of ₹20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 2 July 2011 and ending on 2 January 2021 (Twenty Second Issue - Private Placement) <sup>IV</sup>	204.03	255.04	306.05
7.7125% Secured non-cumulative non-convertible redeemable taxable bonds of ₹20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 2 August 2010 and ending on 2 February 2020 (Twenty First Issue - Private Placement) <sup>V</sup>	305.71	407.61	509.51



Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
7.552% Secured non-cumulative non-convertible redeemable taxable bonds of ₹20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 23 September 2009 and ending on 23 March 2019 (Twentieth Issue - Private Placement) <sup>vi</sup>	101.86	152.79	203.72
9.55% Secured non-cumulative non-convertible taxable redeemable bonds of ₹10,00,000/- each with ten equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of the 6 <sup>th</sup> year and in annual installments thereafter upto the end of 15 <sup>th</sup> year respectively from 30 April 2002 (Thirteenth Issue - Part B - Private Placement) <sup>viii</sup>	77.37	154.75	232.12
9.55% Secured non-cumulative non-convertible taxable redeemable bonds of ₹10,00,000/- each redeemable at par in ten equal annual installments commencing from the end of 6 <sup>th</sup> year and upto the end of 15 <sup>th</sup> year respectively from 18 April 2002 (Thirteenth Issue -Part A - Private Placement) <sup>viii</sup>	77.38	154.75	232.12
	<b>34,513.63</b>	<b>25,958.36</b>	<b>24,065.00</b>
<b>Foreign currency notes</b>			
<b>Unsecured</b>			
2.750 % Fixed rate notes due for repayment on 1 February 2027	3,529.38	-	-
4.250 % Fixed rate notes due for repayment on 26 February 2026	3,274.75	3,331.41	-
4.375 % Fixed rate notes due for repayment on 26 November 2024	3,336.43	3,395.81	3,207.50
4.750 % Fixed rate notes due for repayment on 3 October 2022	3,286.50	3,345.00	3,159.50
7.375 % Fixed green global INR denominated bonds due on 10 August 2021	2,066.05	-	-
5.625 % Fixed rate notes due for repayment on 14 July 2021	3,326.04	3,385.24	3,197.51
5.875 % Fixed rate notes due for repayment on 2 March 2016	-	-	1,904.67
<b>Term loans</b>			
<b>From Banks</b>			
<b>Unsecured</b>			
Foreign currency loans	7,782.47	9,068.32	8,679.23
Rupee loans	29,979.46	28,313.44	23,418.16
<b>From Others</b>			
<b>Unsecured</b>			
Foreign currency loans (guaranteed by GOI)	2,102.96	2,309.97	2,193.77
Other foreign currency loans	3,516.85	3,660.51	3,232.07
Rupee loans	8,141.03	9,694.58	13,597.10



₹ Crore

Particulars	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
<b>Finance lease obligations</b>			
Secured	2.40	1.94	-
Unsecured	142.62	138.43	103.46
	105,000.57	92,603.01	86,757.97
<b>Less:</b>			
Current maturities of			
Bonds-secured	650.00	628.00	600.00
5.875 % Fixed rate notes	-	-	1,895.70
Foreign currency loans from banks - unsecured	1,681.74	1,328.91	281.82
Rupee loans from banks - unsecured	2,111.00	2,573.75	2,540.48
Foreign currency loans from other - unsecured (guaranteed by GOI)	172.58	175.16	154.61
Other foreign currency loans from others - unsecured	507.52	474.99	406.03
Rupee loans from others - unsecured	1,359.38	1,534.38	1,584.38
Finance lease obligations - secured	0.78	0.48	-
Finance lease obligations - unsecured	17.37	15.12	3.15
Interest accrued but not due on borrowings	1,160.92	775.27	727.29
<b>Total</b>	<b>97,339.28</b>	<b>85,096.95</b>	<b>78,564.51</b>

**a) Details of terms of repayment and rate of interest**

- 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 19 to 28 semi annual installments as of 31 March 2017.
  - Unsecured foreign currency loans – Banks include loans of ₹ 463.02 crore (31 March 2016: ₹ 590.36 crore, 1 April 2015: ₹ 645.70 crore) which carry fixed rate of interest of 1.88% p.a. to 4.31% p.a. and loans of ₹ 7,319.45 crore (31 March 2016: ₹ 8,477.96 crore, 1 April 2015: ₹ 8,033.53 crore) which carry floating rate of interest linked to 6M LIBOR. These loans are repayable in 2 to 23 semi annual installments as of 31 March 2017, commencing after moratorium period if any, as per the terms of the respective loan agreements.
  - Unsecured foreign currency loans – Others include loans of ₹ 3,300.64 crore (31 March 2016: ₹ 3,165.62 crore, 1 April 2015: ₹ 2,526.24 crore) which carry fixed rate of interest ranging from 1.88% p.a. to 4.31% p.a. and loans of ₹ 216.21 crore (31 March 2016: ₹ 494.89 crore, 1 April 2015: ₹ 705.83 crore) which carry floating rate of interest linked to 6M LIBOR/6M EURIBOR. These loans are repayable in 1 to 24 semi annual installments as of 31 March 2017, commencing after moratorium period if any, as per the terms of the respective loan agreements.
  - Unsecured rupee term loans carry interest rate ranging from 6.571% p.a. to 11.00% p.a. with monthly/half-yearly rests. These loans are repayable in quarterly/half-yearly/yearly installments as per the terms of the respective loan agreements. The repayment period extends from a period of seven years to sixteen years after a moratorium period of two years to six years.
- The finance lease obligations are repayable in installments as per the terms of the respective lease agreements generally over a period of four to ninety-nine years.
  - There has been no default in repayment of any of the loans or interest thereon as at the end of the year.

### 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 (I) English mortgage, on first pari-passu charge basis, of the office premises of the Company at Mumbai and (II) Hypothecation of all the present and future movable assets (excluding receivables) of Singrauli Super Thermal Power Station, Anta Gas Power Station, Auraiya Gas Power Station, Barh Super Thermal Power Project, Farakka Super Thermal Power Station, Kahalgaon Super Thermal Power Station, Koldam Hydel Power Project, Simhadri Super Thermal Power Project, Sipat Super Thermal Power Project, Talcher Thermal Power Station, Talcher Super Thermal Power Project, Tanda Thermal Power Station, Vindhyachal Super Thermal Power Station, National Capital Power Station, Dadri Gas Power Station, Feroze Gandhi Unchahar Power Station and Tapovan-Vishnugad Hydro Power Project as first charge, ranking pari-passu with charge, if any, already created in favour of the Company's Bankers on such movable assets hypothecated to them for working capital requirement.
- 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 (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 the title deeds of the immovable properties pertaining to Sipat Super Thermal Power Project.
- V Secured by (I) English mortgage, on first pari-passu charge basis, of the office premises of the Company at Mumbai, (II) Hypothecation of all the present and future movable assets (excluding receivables) of Barh Super Thermal Power Project on first pari-passu charge basis, ranking pari-passu with charge already created in favour of Trustee for other Series of Bonds and (III) Equitable mortgage of the immovable properties, on first pari-passu charge basis, pertaining to Ramagundam Super Thermal Power Station by extension of charge already created.
- 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, by way of first charge, by deposit of title deeds of the immovable properties pertaining to Ramagundam Super Thermal Power Station.
- VII 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.
- VIII Secured by (I) English mortgage, on first pari-passu charge basis, of the office premises of the Company at Mumbai, (II) Hypothecation of all the present and future movable assets (excluding receivables) of Singrauli Super Thermal Power Station, Anta Gas Power Station, Auraiya Gas Power Station, Barh Super Thermal Power Project, Farakka Super Thermal Power Station, Kahalgaon Super Thermal Power Station, Koldam Hydel Power Project, Simhadri Super Thermal Power Project, Sipat Super Thermal Power Project, Talcher Thermal Power Station, Talcher Super Thermal Power Project, Tanda Thermal Power Station, Vindhyachal Super Thermal Power Station, National Capital Power Station, Dadri Gas Power Station, Feroze Gandhi Unchahar Power Station and Tapovan-Vishnugad Hydro Power Project as first charge, ranking pari-passu with charge, if any, already created in favour of the Company's Bankers on such movable assets hypothecated to them for working capital requirement and (III) Equitable mortgage of the immovable properties, on first pari-passu charge basis, pertaining to Singrauli Super Thermal Power Station by extension of charge already created.
- IX Secured by English mortgage of the immovable properties pertaining to Solapur Super Thermal Power Project on first charge basis.
- X Secured by Equitable mortgage of the immovable properties pertaining to Barh Super Thermal Power Project on first charge basis.
- XI Secured by English mortgage, on pari-passu charge basis, of the immovable properties pertaining to Solapur Super Thermal Power Project.
- XII Secured by Equitable mortgage, on pari-passu charge basis, of the immovable properties pertaining to Barh Super Thermal Power Project.
- XIII Secured by Equitable mortgage of the immovable properties pertaining to Vindhyachal Super Thermal Power Station on first charge basis.
- XIV Security cover mentioned at Sl. No. I to XIII is above 100% of the debt securities outstanding.

## 41<sup>st</sup> Annual Report 2016-17

### Standalone Financial Statements



#### 24. Non-current financial liabilities - Trade payables

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
Trade payable	13.17	8.37	3.47

#### 25. Non-current liabilities - Other financial liabilities

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
Other liabilities			
Payable for capital expenditure	1,999.77	2,634.51	2,211.69
Deposits from contractors and others	1.72	1.79	2.03
Others	245.64	362.97	-
<b>Total</b>	<b>2247.13</b>	<b>2999.27</b>	<b>2213.72</b>

Other liabilities - others mainly include amount payable to the Department of Water Resource, Government of Odisha pursuant to the Resolution No. 11011 dated 18 May 2015.

#### 26. Non-current liabilities - Provisions

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
Provision for employee benefits	463.15	436.41	1,115.71

Disclosure as per Ind AS 19 on 'Employee benefits' is made in Note 56.

#### 27. Non-current liabilities - Deferred tax liabilities (net)

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
Deferred tax liability			
Difference in book depreciation and tax depreciation	10,065.74	8,153.37	7,761.51
Less: Deferred tax assets			
Provisions	1,025.09	713.01	544.32
Statutory dues	492.37	174.44	129.64
Leave encashment	430.69	342.45	332.41
Others	93.08	107.86	156.30
	8,024.51	6,815.61	6,598.84
Less: Deferred asset for deferred tax liability	6,539.67	5,663.40	5,619.77
<b>Total</b>	<b>1,484.84</b>	<b>1,152.21</b>	<b>979.07</b>

a) Deferred tax assets and deferred tax liabilities have been offset as they relate to the same governing laws.



- b) CERC Regulations, 2014 provide for recovery of deferred tax liability as on 31 March 2009 from the beneficiaries. Accordingly, deferred tax liability as on 31 March 2009 is recoverable on materialisation from the beneficiaries. For the period commencing from 1 April 2014, Regulations, 2014 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. Deferred asset for deferred tax liability for the year will be reversed in future years when the related deferred tax liability forms part of current tax.

#### Movement in deferred tax balances

					₹ Crore
31 March 2017					
Particulars	Net balance 1 April 2016	Recognised in profit or loss	Recognised in OCI	Other	Net balance 31 March 2017
Difference in book depreciation and tax depreciation	8,153.37	1,912.37	-	-	10,065.74
Provisions	713.01	312.08	-	-	1,025.09
Statutory dues	174.44	317.93	-	-	492.37
Leave encashment	342.45	88.24	-	-	430.69
Others	107.86	(14.78)	-	-	93.08
<b>Tax assets/(liabilities)</b>	<b>6,815.61</b>	<b>1,208.90</b>	<b>-</b>	<b>-</b>	<b>8,024.51</b>
Less: Deferred asset for deferred tax liability	5,663.40	876.27	-	-	6,539.67
<b>Net tax assets/(liabilities)</b>	<b>1,152.21</b>	<b>332.63</b>	<b>-</b>	<b>-</b>	<b>1,484.84</b>

					₹ Crore
31 March 2016					
Particulars	Net balance 1 April 2015	Recognised in profit or loss	Recognised in OCI	Other	Net balance 31 March 2016
Difference in book depreciation and tax depreciation	7,761.51	391.86	-	-	8,153.37
Provisions	544.32	168.69	-	-	713.01
Statutory dues	129.64	44.80	-	-	174.44
Leave encashment	332.41	10.04	-	-	342.45
Others	156.30	(48.44)	-	-	107.86
<b>Tax assets/(liabilities)</b>	<b>6,598.84</b>	<b>216.77</b>	<b>-</b>	<b>-</b>	<b>6,815.61</b>
Less: Deferred asset for deferred tax liability	5,619.77	43.63	-	-	5,663.40
<b>Net tax assets/(liabilities)</b>	<b>979.07</b>	<b>173.14</b>	<b>-</b>	<b>-</b>	<b>1,152.21</b>

#### 28 Non-current liabilities - Other non-current liabilities

				₹ Crore
Particulars	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015	
Advance from customers and others	17.49	49.68	0.01	

Represents deposits received from the contractors, customers and other parties for Deen Dayal Upadhyay Gram Jyoti Yojna. Refer Note 32.

## 41<sup>st</sup> Annual Report 2016-17

### Standalone Financial Statements



## 29. Current financial liabilities - Borrowings

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
<b>Loans repayable on demand</b>			
<b>From banks</b>			
<b>Unsecured</b>			
Cash credit	0.56	1,299.50	-
<b>Other loans</b>			
<b>Unsecured</b>			
Commercial paper	3,000.00	-	-
<b>Total</b>	<b>3,000.56</b>	<b>1,299.50</b>	<b>-</b>

There has been no default in servicing of loan as at the end of the year.

## 30. Current financial liabilities - Trade payables

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
For goods and services	4,876.08	5,311.64	5,953.15

## 31. Current liabilities - Other financial liabilities

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
<b>Current maturities of long term borrowings</b>			
Bonds - Secured	650.00	628.00	600.00
5.875% Foreign currency fixed rate notes - Unsecured	-	-	1,895.70
<b>From Banks</b>			
<b>Unsecured</b>			
Foreign currency loans	1,681.74	1,328.91	281.82
Rupee term loans	2,111.00	2,573.75	2,540.48
<b>From Others</b>			
<b>Unsecured</b>			
Foreign currency loans (guaranteed by GOI)	172.58	175.16	154.61
Other foreign currency loans	507.52	474.99	406.03
Rupee term loans	1,359.38	1,534.38	1,584.38
	<b>6,482.22</b>	<b>6,715.19</b>	<b>7,463.02</b>
Current maturities of finance lease obligations - Secured	0.78	0.48	-
Current maturities of finance lease obligations - Unsecured	17.37	15.12	3.15
Interest accrued but not due on borrowings	1,160.92	775.27	727.29
Unpaid dividends	17.61	15.05	14.95
Unpaid matured deposits and interest accrued thereon	0.19	0.19	0.21
Unpaid matured bonds and interest accrued thereon	3.29	2.28	0.72
Unpaid bond refund money-Tax free bonds	0.26	0.45	0.16
Payable to customers	802.95	763.99	374.45
Book overdraft	-	400.00	546.01
Payable for capital expenditure	9,578.24	7,926.23	6,421.73

## 41<sup>st</sup> Annual Report 2016-17

Standalone Financial Statements

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
Hedging cost payable to beneficiaries	-	3.66	-
Derivative MTM liability	1.60	0.04	4.59
Other payables			
Deposits from contractors and others	124.69	140.04	124.86
Payable to employees	516.88	269.17	318.74
Others	472.40	417.86	437.44
<b>Total</b>	<b>19,179.40</b>	<b>17,445.02</b>	<b>16,437.32</b>

- a) Details in respect of rate of interest and terms of repayment of current maturities of secured and unsecured long term borrowings indicated above are disclosed in Note 23.
- b) 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 has been transferred.
- 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 payable - 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. The Company has been advised that the amount accepted under the Scheme is not a deposit under the Companies Act, 2013.
- d) Other payables - Others mainly include amount payable to the Department of Water Resource, Government of Odisha, payable to hospitals, parties for stale cheques etc.

### 32. Current liabilities - Other current liabilities

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
Advances from customers and others	690.10	476.55	87.26
Other payables			
Statutory dues	391.06	298.95	286.11
Others	-	0.09	0.08
<b>Total</b>	<b>1,081.16</b>	<b>775.59</b>	<b>373.45</b>

Implementation of Deen Dayal Upadhyay Gram Jyoti Yojana (DDUGJY) Scheme of GOI is 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 regards. Advance received for the DDUGJY (including interest thereon) of ₹ 597.75 crores (31 March 2016: ₹ 388.87 crores, 1 April 2015: ₹ Nil) is included in 'Advance from customers and others'.

### 33. Current liabilities - Provisions

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
Provision for			
Employee benefits	2,388.05	1,240.78	1,174.66
Obligations incidental to land acquisition	3,695.78	3,736.84	3,098.72
Tariff adjustment	1,170.79	1,234.41	1,243.64
Others	710.30	563.66	505.02
<b>Total</b>	<b>7,964.92</b>	<b>6,775.69</b>	<b>6,022.04</b>

## 41<sup>st</sup> Annual Report 2016-17

Standalone Financial Statements



- Disclosures required by Ind AS 19 'Employee Benefits' is made in Note 56.
- Disclosure required by Ind AS 37 'Provisions, Contingent Liabilities and Contingent Assets' is made in Note 61.
- The pay revision of the employees of the Company is due w.e.f 1 January 2017. Department of Public Enterprises, GOI (DPE) has constituted the 3<sup>rd</sup> Pay Revision Committee to review the structure of pay scales and allowances/benefits of various categories of Central Public Sector Enterprises and suggest changes after taking in to account 7<sup>th</sup> Central Pay Commission recommendations applicable to central government employees. The recommendations of the committee have been submitted and guidelines are yet to be issued by DPE. Pending issuance of the same, provision for the year amounting to ₹ 260.24 crore has been made towards pay revision on an estimated basis having regard to the recommendations of the 3<sup>rd</sup> Pay Revision Committee.

Further, the 3<sup>rd</sup> Pay Revision Committee appointed by the GOI has enhanced the ceiling of gratuity limit from ₹ 0.10 crore to ₹ 0.20 crore. Accordingly, provision for gratuity as at 31 March 2017 has been made for ₹ 614.25 crore considering the enhanced ceiling based on the actuarial report.

- The Company aggrieved over many of the issues considered by the CERC in the tariff orders for its stations for the period 2004-09 had filed appeals with the Appellate Tribunal for Electricity (APTEL). The APTEL disposed off the appeals favourably directing the CERC to revise the tariff orders as per directions and methodology given. Some of the issues decided in favour of the Company by the APTEL were challenged by the CERC in the Hon'ble Supreme Court of India. Subsequently, the CERC has issued revised tariff orders for all the stations except one for the period 2004-09, considering the judgment of APTEL subject to disposal of appeals pending before the Hon'ble Supreme Court of India. Towards the above and other anticipated tariff adjustments, provision of ₹ **98.88 crore** (31 March 2016: ₹ 145.28 crore, 1 April 2015: ₹ 148.10 crore) has been made during the year and in respect of some of the stations, an amount of ₹ **162.49 crore** (31 March 2016: ₹ 154.51 crore, 1 April 2015: ₹ 180.16 crore) has been written back.
- Provision for others comprise ₹ **68.24 crore** (31 March 2016: ₹ 65.35 crore, 1 April 2015: ₹ 58.64 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 63], ₹ **640.25 crore** (31 March 2016: ₹ 496.44 crore, 1 April 2015: ₹ 440.35 crore) towards provision for cases under litigation and ₹ **1.81 crore** (31 March 2016: ₹ 1.87 crore, 1 April 2015: ₹ 6.03 crore) towards provision for shortage in fixed assets on physical verification pending investigation.

#### 34. Current liabilities - current tax liabilities (net)

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
Current tax (net of advance tax)	<b>75.20</b>	151.30	-

#### 35. Deferred revenue

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
On account of advance against depreciation	<b>247.02</b>	279.94	409.20
On account of income from foreign currency fluctuation	<b>1,376.67</b>	1,642.07	960.46
On account of government grants	<b>497.45</b>	125.33	0.31
<b>Total</b>	<b>2,121.14</b>	2,047.34	1,369.97

- 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 shareholders' funds and liabilities.
- In line with significant accounting policy no. C.14 (Note 1), an amount of ₹ **32.92 crore** (31 March 2016: ₹ 129.26 crore, 1 April 2015: ₹ 75.03 crore) has been recognized during the year from the AAD and included in energy sales (Note 37).



- c) 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 fixed assets, which is recoverable from the customers in future years as provided in accounting policy no. C.14 (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 shareholder's funds and liabilities.
- d) Government grants include ₹ **497.14 crore** (31 March 2016: ₹ 125.00 crore, 1 April 2015: ₹ Nil) received from Solar Energy Corporation of India under MNRE Scheme for setting up 1,000 MW of grid connected solar PV power projects.

### 36. Regulatory deferral account credit balances

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
Exchange differences	<b>482.74</b>	295.65	307.74

Regulatory deferral account balances have been accounted in line with Accounting policy no. C.4. Refer Note 68 for detailed disclosures.

### 37. Revenue from operations

Particulars	₹ Crore	
	For the year ended 31.03.2017	For the year ended 31.03.2016
Energy sales (including electricity duty)	<b>77,071.11</b>	69,961.62
Consultancy, project management and supervision fee	<b>163.71</b>	117.04
Lease rentals on assets on operating lease	<b>240.42</b>	223.25
	<b>77,475.24</b>	70,301.91
Sale of fly ash/ash products	<b>108.42</b>	113.37
Less: Transferred to fly ash utilisation reserve fund	<b>108.42</b>	113.37
	-	-
<b>Other operating revenues</b>		
Interest from beneficiaries	<b>397.09</b>	221.29
Energy internally consumed	<b>68.93</b>	81.82
Interest income on assets under finance lease	<b>154.31</b>	84.25
Recognised from deferred revenue - government grant	<b>15.38</b>	0.03
Provisions for tariff adjustments written back	<b>162.49</b>	154.51
	<b>798.20</b>	541.90
<b>Total</b>	<b>78,273.44</b>	70,843.81

- a) The CERC notified the Tariff Regulations, 2014 in February 2014 (Regulations, 2014). The CERC has issued tariff orders for some of the stations for the period 2014-19 under Regulations 2014, and beneficiaries are billed based on such tariff orders issued by the CERC. For other stations, beneficiaries are billed in accordance with the principles given in the Regulations 2014. The energy charges in respect of the coal based stations are provisionally billed based on the GCV of coal 'as received', measured after the secondary crusher till 30 September 2016 and on wagon top w.e.f. 1 October 2016 in respect of most of the stations barring a few on the grounds of safety issues, for the quantity supplied through conveyors/road and other difficulties. The amount provisionally billed is ₹ **74,710.65 crore** (31 March 2016: ₹ 69,616.43 crore).
- b) The Company has filed a writ petition before the Hon'ble Delhi High Court contesting certain provisions of the Regulations, 2014. As per directions from the Hon'ble High Court on the issue of point of sampling for measurement

## 41<sup>st</sup> Annual Report 2016-17

### Standalone Financial Statements



of GCV of coal on 'as received' basis, CERC has issued an order dated 25 January 2016 (subject to final decision of the Hon'ble High Court) that samples for measurement of coal on 'as received' basis should be collected from wagon top at the generating stations. The Company's review petition before the CERC in respect of the above order was dismissed vide their order dated 30 June 2016. Vide order dated 10 November 2016, the Hon'ble Delhi High Court has permitted the company to approach the CERC with the difficulties being faced in implementation of the order of CERC in this regard. Accordingly, the Company has filed a petition with CERC, hearing of the same was held on 31 January 2017. Pending disposal of the petition by CERC and ratification by the Hon'ble Delhi High Court, measurement of GCV of coal from wagon top samples at the unloading point has started with effect from 1 October 2016 in respect of most of the stations barring a few on the grounds of safety issues, for the quantity supplied through conveyors/road and other difficulties.

Sales has been provisionally recognized at ₹ **75,800.54 crore** (31 March 2016: ₹ 71,355.67 crore) on the basis of said Regulations 2014, wherein energy charges included in sales, in respect of the coal based stations have been recognized based on the GCV of coal 'as received' measured after secondary crusher till 30 September, 2016 and GCV measured on wagon top w.e.f. 1 October, 2016 in respect of most of the stations barring a few on the grounds of safety issues, for the quantity supplied through conveyors/road and other difficulties.

- c) Sales include ₹ **995.59 crore** (31 March 2016: ₹ 50.74 crore) pertaining to previous years recognized based on the orders issued by the CERC/Appellate Tribunal for Electricity (APTEL).
- d) Sales include ₹ **Nil** (31 March 2016: (-) ₹ 1,693.65 crore) on account of income-tax refundable to the beneficiaries as per Regulations, 2004. Sales also include ₹ **46.04 crore** (31 March 2016: ₹ 28.12 crore) on account of deferred tax materialized which is recoverable from beneficiaries as per Regulations, 2014.
- e) Energy sales include electricity duty amounting to ₹ **697.99 crore** (31 March 2016: 729.20 crore).
- f) Energy sales are net of rebate to beneficiaries amounting to ₹ **469.05 crore** (31 March 2016: 508.46 crore).
- g) Other operating revenue includes ₹ **68.93 crore** (31 March 2016: ₹ 81.82 crore) towards energy internally consumed, valued at variable cost of generation and the corresponding amount is included in power charges in Note 42.
- h) 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/pay from/to the beneficiaries the under/over recovered amount along-with simple interest. Accordingly, the interest recoverable from the beneficiaries amounting to ₹ **397.09 crore** (31 March 2016: ₹ 221.29 crore) has been accounted as 'Interest from beneficiaries'. Further, the amount payable to the beneficiaries has been accounted as 'Interest to beneficiaries' in Note 42.
- i) One of the power stations of the Company, having 3 units of 95 MW each and two units of 210 MW each, was issued consent to operate (Renewal) order by Delhi Pollution Control Committee (DPCC) on 2 January 2014 which was valid till 31 January 2018 with a condition that particulate emission level shall not exceed 150 mg/Nm<sup>3</sup>. In a volte-face on 8 July 2015, DPCC issued a show cause notice to the station as to why four units out of five units of plant ought not to be closed down for failing to bring down its particulate emission level below 50 mg/Nm<sup>3</sup>. Further, vide order dated 31 December 2015, DPCC directed that four units out of five units of plant shall not operate. On 11 February 2016, DPCC modified the norms for particulate emission level of the consent to operate from 150 mg/Nm<sup>3</sup> to 50 mg/Nm<sup>3</sup>. Further, vide order dated 21 March 2016, DPCC allowed operation of 2 units of 210 MW subject to meeting the SPM of 50 mg/Nm<sup>3</sup>. Company's petition to direct beneficiaries for payment of fixed charges from 31 December 2015 under change in law is pending disposal before the CERC. Further, in view of severe pollution level in Delhi, DPCC vide order dated 6 November 2016, directed not to operate all units of station for 10 days which was subsequently extended till further orders. DPCC, vide order dated 14 March 2017 has allowed operation of two units of 210 MW each for the period from 15 March 2017 to 15 October 2017. NTPC filed a fresh petition before CERC to direct beneficiaries for payment of fixed charges for the closure from 7 November 2016 under change in law which is pending disposal before the CERC.
- j) Keeping in view the provisions of Appendix C to Ind AS-17 on Leases w.r.t. determining whether an arrangement contains a lease, the Company has ascertained that the PPA entered into for two of the power stations of the Company fall under operating lease. Recovery of capacity charges towards depreciation (including AAD), interest on loan capital & return on equity (pre-tax) components from the beneficiaries are considered as lease rentals on the assets which are on operating lease.
- k) Keeping in view the provisions of Appendix C to Ind AS-17 on Leases w.r.t. determining whether an arrangement contains a lease, the Company has 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 has been derecognized from PPE and accounted as Finance Lease Receivable (FLR). Recovery of capacity charges towards depreciation (including AAD), interest on loan capital & return on equity (pre-tax) components from the beneficiary are 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 recognised as 'Interest income on Assets under finance lease'.

### 38. Other income

	₹ Crore	
Particulars	For the year ended 31.03.2017	For the year ended 31.03.2016
<b>Interest from</b>		
Financial assets at amortized cost		
Long-term investments - Government securities (8.5% tax free bonds)	-	105.28
Loan to state government in settlement of dues from customers (8.5% tax free)	2.03	10.17
Loan to subsidiary companies	5.07	0.45
Loan to employees	58.88	51.31
Deposits with banks/Reserve Bank of India	72.49	428.91
Deposits with banks out of fly ash utilisation reserve fund	23.92	7.57
Less : Transferred to fly ash utilisation reserve fund	23.92	7.57
	-	-
Deposits with banks - DDUGJY funds	36.27	29.40
Less : Transferred to DDUGJY advance from customers	36.27	29.40
Advance to contractors	44.69	49.48
Others	23.81	20.00
<b>Dividend from</b>		
Long-term investments in		
Subsidiaries	20.00	-
Joint ventures	143.09	131.76
Equity instruments designated at fair value through OCI	3.00	2.64
Current investments in		
Mutual funds measured at fair value through profit or loss	-	49.80
Current investments in mutual funds out of fly ash utilisation reserve fund	3.71	17.03
Less : Transferred to fly ash utilisation reserve fund	3.71	17.03
<b>Other non-operating income</b>		
Surcharge received from beneficiaries	439.39	142.28
Hire charges for equipment	3.38	2.09
Gain on option contract	-	5.07
Derivative MTM Gain	-	8.22
Sale of scrap	83.13	58.17
Profit on redemption of current investments	24.81	16.34
Miscellaneous income	200.28	145.60
Profit on disposal of PPE	10.36	1.66
Provisions written back		
Unservicable capital works	4.62	10.69
Others	7.76	10.23
	1,146.79	1,250.15
Less: Transferred to expenditure during construction period (net) - Note 43	76.33	74.72
Transferred to development of coal mines - Note 4	1.60	1.86
Transferred to hedging cost recoverable/(payable) from/to beneficiaries	-	8.22
<b>Total</b>	<b>1,068.86</b>	<b>1,165.35</b>

## 41<sup>st</sup> Annual Report 2016-17

Standalone Financial Statements



- Interest from others includes interest on advance to APIIC for drawal of water and deposits with LIC towards annuity to the land losers.
- Miscellaneous income includes income from township recoveries and receipts towards insurance claims.
- Provisions written back - Others include provision for doubtful loans, advances, claims, debts and provision for shortage/obsolescence in stores and shortage in fixed assets.

### 39. Employee benefits expense

₹ Crore		
Particulars	For the year ended 31.03.2017	For the year ended 31.03.2016
Salaries and wages	4,037.01	3,583.09
Contribution to provident and other funds	1,077.82	596.09
Staff welfare expenses	441.24	441.78
	<b>5,556.07</b>	<b>4,620.96</b>
Less: Allocated to fuel cost	262.77	216.81
Transferred to development of coal mines - Note 4	57.26	46.99
Transferred to fly ash utilisation reserve fund	20.80	16.87
Transferred to CSR expenses	54.90	50.23
Reimbursements for employees on deputation	73.91	65.95
Transferred to expenditure during construction period (net)- Note 43	761.83	642.46
<b>Total</b>	<b>4,324.60</b>	<b>3,581.65</b>

- Disclosures as per Ind AS 19 in respect of provision made towards various employee benefits are made in Note 56.
- Salaries and wages include special allowance paid by the Company to eligible employees serving in difficult and far flung areas w.e.f. 26 November 2008. As per the Office Memorandum dated 26 November 2008 of DPE relating to revision of pay scales w.e.f 1 January 2007, special allowance can be paid to such employees upto 10% of basic pay as approved by concerned administrative ministry. In line with the office memorandum dated 22 June 2010 of DPE, Board of Directors has approved the special allowance (Difficult and Far Flung Areas) to eligible employees. The approval of MOP for the same is awaited.
- The pay revision of the employees of the Company is due w.e.f 1 January 2017. The required provision towards revision of pay scales and gratuity has been made during the year. Refer Note 33 (c).

### 40. Finance costs

₹ Crore		
Particulars	For the year ended 31.03.2017	For the year ended 31.03.2016
<b>Finance charges on financial liabilities measured at amortised cost</b>		
Bonds	2,492.45	1,963.21
Foreign currency term loans	354.19	315.69
Rupee term loans	3,507.37	3,609.66
Foreign currency bonds/notes	763.41	701.61
Cash credit	7.30	1.95
Unwinding of discount on vendor liabilities	487.60	350.57
Discount on commercial papers	63.00	-
Others	0.47	2.26
	<b>7,675.79</b>	<b>6,944.95</b>



Particulars	₹ Crore	
	For the year ended 31.03.2017	For the year ended 31.03.2016
<b>Other borrowing costs</b>		
Guarantee fee	31.68	26.28
Management/arrangers fee	-	5.81
Foreign currency bonds/notes expenses	0.57	0.04
Others	14.24	17.29
	<b>46.49</b>	<b>49.42</b>
<b>Sub-Total</b>	<b>7,722.28</b>	<b>6,994.37</b>
Less: Transferred to expenditure during construction period (net) - Note 43	<b>4,005.33</b>	<b>3,584.80</b>
Transferred to development of coal mines - Note 4	<b>119.75</b>	<b>113.16</b>
<b>Total</b>	<b>3,597.20</b>	<b>3,296.41</b>

a) Other borrowing costs - Others include bond issue & service expenses, commitment charges, exposure premium and insurance premium & legal expenses on foreign currency loans.

#### 41. Depreciation, amortization and impairment expense

Particulars	₹ Crore	
	For the year ended 31.03.2017	For the year ended 31.03.2016
On property, plant and equipment - Note 2	6,570.06	5,689.15
On intangible assets - Note 3	22.37	19.31
	<b>6,592.43</b>	<b>5,708.46</b>
Less:		
Allocated to fuel cost	345.93	326.74
Transferred to expenditure during construction period (net) - Note 43	148.38	90.73
Transferred to development of coal mines - Note 4	14.20	2.60
Adjustment with deferred revenue from deferred foreign currency fluctuation	163.10	116.05
<b>Total</b>	<b>5,920.82</b>	<b>5,172.34</b>

#### 42. Other expenses

Particulars	₹ Crore	
	For the year ended 31.03.2017	For the year ended 31.03.2016
Power charges	238.60	223.95
Less: Recovered from contractors & employees	27.55	23.89
	<b>211.05</b>	<b>200.06</b>
Water charges	553.45	515.12
Cost of captive coal	33.72	-
Contribution to water conservation fund	-	303.72
Stores consumed	57.48	53.89
Rent	35.91	38.07
Less: Recoveries	11.50	10.50
	<b>24.41</b>	<b>27.57</b>
Load dispatch centre charges	28.74	3.09
Repairs & maintenance		
Buildings	244.14	237.28
Plant & machinery	1,826.68	1,656.02
Others	238.89	213.11
	<b>2,309.71</b>	<b>2,106.41</b>

## 41<sup>st</sup> Annual Report 2016-17

Standalone Financial Statements



Particulars	₹ Crore	
	For the year ended 31.03.2017	For the year ended 31.03.2016
Insurance	117.19	115.30
Interest to beneficiaries	101.72	49.91
Rates and taxes	46.84	36.85
Water cess & environment protection cess	25.93	29.98
Training & recruitment expenses	33.64	32.48
Less: Receipts	0.98	1.34
	32.66	31.14
Communication expenses	59.03	59.17
Travelling expenses	200.76	208.86
Tender expenses	25.12	33.35
Less: Receipt from sale of tenders	1.83	2.03
	23.29	31.32
Payment to auditors	5.36	4.36
Advertisement and publicity	18.88	17.32
Electricity duty	699.59	729.20
Security expenses	595.31	500.68
Entertainment expenses	26.95	24.81
Expenses for guest house	27.77	25.08
Less: Recoveries	2.74	2.78
	25.03	22.30
Education expenses	42.97	39.51
Donation	-	0.05
Ash utilisation & marketing expenses	21.78	27.44
Directors sitting fee	0.21	0.18
Professional charges and consultancy fee	112.75	37.89
Legal expenses	40.45	47.14
EDP hire and other charges	18.42	20.36
Printing and stationery	15.59	14.88
Oil & gas exploration expenses	110.58	32.77
Hiring of vehicles	87.14	80.39
Reimbursement of LC charges on sales realization	1.08	0.29
Net loss/(gain) in foreign currency transactions & translations	(199.04)	34.09
Cost of hedging	5.27	6.26
Derivatives MTM loss/(gain) (net)	5.22	-
Horticulture expenses	39.79	33.94
Hire charges of helicopter/aircraft	17.02	14.93
Hire charges of construction equipments	9.42	9.58
Transport vehicle running expenses	7.01	6.76
Demurrage charges	-	2.81
Loss on disposal/write-off of fixed assets	82.94	143.85
Miscellaneous expenses	99.96	223.95
	5,715.66	5,848.13
Less: Allocated to fuel cost	421.65	388.60
Transferred to development of coal mines - Note 4	144.01	34.52

Particulars	₹ Crore	
	For the year ended 31.03.2017	For the year ended 31.03.2016
Transferred to hedging cost recoverable/(payable) from/to beneficiaries	5.22	-
Transferred to Corporate Social Responsibility (CSR) expense	42.17	33.36
Transferred to fly ash utilisation reserve fund	33.12	40.44
Transferred to expenditure during construction period (net) - Note 43	411.56	453.30
	<b>4,657.93</b>	<b>4,897.91</b>
<b>Corporate Social Responsibility (CSR) expense*</b>	<b>273.35</b>	<b>489.46</b>
<b>Provisions for</b>		
Tariff adjustments	98.88	145.28
Impairment in investments in joint venture	22.19	6.89
Obsolescence in stores	12.04	8.88
Unserviceable capital works	4.75	4.22
Unfinished minimum work programme for oil and gas exploration	2.89	6.71
Others	20.35	17.14
	<b>161.10</b>	<b>189.12</b>
<b>Total</b>	<b>5,092.38</b>	<b>5,576.49</b>
a) During the development stage of mine, transfer price of coal extracted from Company's captive mine has been determined considering the notified price of Coal India Ltd. for equivalent grade of coal. The same has been netted from the cost of captive coal and carried to 'Development of coal mines' (Note 4) through 'Transferred to development of coal mines'.		
b) Contribution to water conservation fund represents the amount paid/payable by the Company pursuant to the Resolution No. 11011 dated 18 May 2015 of Department of Water Resource, Government of Odisha.		
c) Details in respect of payment to auditors:		
As auditor		
Audit fee	1.68	1.17
Tax audit fee	0.59	0.41
Limited review	0.95	0.70
In other capacity		
Other services (certification fee)	0.70	0.70
Reimbursement of expenses	0.85	0.95
Reimbursement of service tax	0.59	0.43
<b>Total</b>	<b>5.36</b>	<b>4.36</b>

Payment to the auditors includes ₹ 0.67 crore (31 March 2016: ₹ 0.50 crore) relating to earlier year.

- d) 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 ₹ 101.72 crore (31 March 2016: ₹ 49.91 crore) has been accounted and disclosed as 'Interest to beneficiaries'.
- e) Miscellaneous expenses include expenditure on books & periodicals, workshops, operating expenses of DG sets, brokerage & commission, bank charges, furnishing expenses etc.
- f) Provisions - Others include provision for doubtful loans, advances & claims, debts, arbitration cases and shortage in stores & property, plant and equipment.
- g) \* Refer Note 72.

## 41<sup>st</sup> Annual Report 2016-17

Standalone Financial Statements



43. Expenditure during construction period (net)

		₹ Crore	
Particulars		For the year ended 31.03.2017	For the year ended 31.03.2016
<b>A. Employee benefits expense</b>			
Salaries and wages		582.22	522.17
Contribution to provident and other funds		131.61	71.53
Staff welfare expenses		48.00	48.76
<b>Total (A)</b>		<b>761.83</b>	<b>642.46</b>
<b>B. Finance costs</b>			
Finance charges on financial liabilities measured at amortised cost			
Bonds		1,335.26	1,066.58
Foreign currency term loans		191.67	151.95
Rupee term loans		1,634.14	1,768.97
Foreign currency bonds/notes		434.08	309.31
Unwinding of discount on vendor liabilities		405.73	278.07
Other borrowing costs			
Management/arrangers fee		-	5.81
Foreign currency bonds/notes expenses		0.57	0.04
Others		3.88	4.07
<b>Total (B)</b>		<b>4,005.33</b>	<b>3,584.80</b>
<b>C. Depreciation and amortisation</b>		<b>148.38</b>	<b>90.73</b>
<b>D. Generation, administration &amp; other expenses</b>			
Power charges	138.38		131.34
Less: Recovered from contractors & employees	3.33		2.92
		135.05	128.42
Water charges		8.55	10.14
Rent		3.78	4.68
Repairs & maintenance			
Buildings	6.44		10.96
Plant and machinery	0.75		0.74
Others	33.02		46.72
		40.21	58.42
Insurance		0.72	1.33
Rates and taxes		13.16	12.91
Communication expenses		7.57	8.00
Travelling expenses		42.77	45.89
Tender expenses		3.88	5.79
Advertisement and publicity		1.94	2.29



Particulars	₹ Crore	
	For the year ended 31.03.2017	For the year ended 31.03.2016
Security expenses	64.93	70.14
Entertainment expenses	5.42	5.70
Expenses for guest house	3.16	4.48
Professional charges and consultancy fee	6.87	4.66
Legal expenses	8.10	10.32
EDP hire and other charges	2.06	2.49
Printing and stationery	1.81	2.34
Miscellaneous expenses	61.58	75.30
<b>Total (D)</b>	<b>411.56</b>	<b>453.30</b>
<b>E. Less: Other income</b>		
Interest from contractors	33.05	37.19
Interest others	14.83	15.58
Hire charges for equipment	2.67	1.31
Sale of scrap	2.57	0.73
Miscellaneous income	23.21	19.91
<b>Total (E)</b>	<b>76.33</b>	<b>74.72</b>
<b>F. Net actuarial gain/loss - OCI</b>	<b>22.40</b>	<b>1.66</b>
<b>Grand total (A+B+C+D-E+F)</b>	<b>5,273.17 *</b>	<b>4,698.23 *</b>

\* Carried to Capital work-in-progress - (Note 4)

44. Amount in the financial statements are presented in ₹ Crore (upto two decimals) except for per share data and as other-wise stated. Certain amounts, which do not appear due to rounding off, are disclosed separately. Previous years' figures have been regrouped/rearranged wherever considered necessary.
45. 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 sale of energy, 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 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.



46. 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 subjudice 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.
47. The environmental clearance ("clearance") granted by the Ministry of Environment and Forest, Government of India (MoEF) for one of the Company's ongoing project was challenged before the National Green Tribunal (NGT). The NGT disposed the appeal, 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 judgment of the NGT and for referring the matter to the Expert Appraisal Committee ("Committee") for its re-scrutiny, which shall complete the process within six months from the date of NGT order. NGT also directed that the environmental clearance 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. Aggregate cost incurred on the project upto 31 March 2017 is ₹ **14,461.58 crore** (31 March 2016: ₹ 11,748.50 crore, 1 April 2015: ₹ 8,728.42 crore). Management is confident that the approval for proceeding with the project shall be granted, hence no provision is considered necessary.
48. 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 2017 is ₹ **160.75 crore** (31 March 2016: ₹ 157.19 crore, 1 April 2015: ₹ 157.47 crore). Management is confident that the approval for proceeding with the project shall be granted, hence no provision is considered necessary.

**49. Disclosure as per Ind AS 2 'Inventories'**

Amount of inventories recognised as expense during the year is as under:

₹ Crore

Particulars	For the year ended 31.03.2017	For the year ended 31.03.2016
Fuel	47,572.19	43,798.59
Others (included in Note 42 - Other expenses)	1,080.69	1,059.75
<b>Total</b>	<b>48,652.88</b>	<b>44,858.34</b>

**50. 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 & Loss is (-) ₹ **5.66 crore** (31 March 2016: debit of ₹22.55 crore).

**51. Disclosure as per Ind AS 23 'Borrowing Costs'**

Borrowing costs capitalised during the year is ₹ **4,125.08 crore** (31 March 2016: ₹ 3,697.96 crore).

**52. Disclosure as per Ind AS 38 'Intangible Assets'**

Research expenditure charged to revenue during the year is ₹ **80.40 crore** (31 March 2016: ₹ 108.00 crore).

### 53. Disclosure as per Ind AS 11 - 'Construction contracts'

The net balance sheet position for ongoing construction contracts is as follows:

₹ Crore

Particulars	For the year ended	
	31 March 2017	31 March 2016
Contract revenue recognised during the year	117.42	79.13
Aggregate amount of contract costs incurred and recognised profits (less recognised losses, if any) upto the Balance Sheet date for all contracts in progress as at that date	768.35	472.60

₹ Crore

Particulars	31 March 2017	31 March 2016	1 April 2015
Amount of customers' advances outstanding for contracts in progress as at Balance Sheet date	637.58	468.78	306.64
Retention amounts by customer for contract work in progress as at the end of the financial year	1.21	1.50	-
Gross amount due from customer for contract work- presented as an assets	56.28	40.60	42.13
Gross amount due to customer for contract work - presented as liability	23.56	31.73	43.76

### 54. Disclosure as per Ind AS 12 'Income taxes'

#### (a) Income tax expense

##### i) Income tax recognised in Statement of Profit and Loss

₹ Crore

Particulars	31 March 2017	31 March 2016
<b>Current tax expense</b>		
Current year	2,705.75	2,103.92
Adjustment for earlier years	(107.56)	(2,453.48)
Pertaining to regulatory deferral account balances	71.82	2.58
<b>Total current tax expense</b>	<b>2,670.01</b>	<b>(346.98)</b>
<b>Deferred tax expense</b>		
Origination and reversal of temporary differences	1,287.31	226.88
Less: Deferred asset for deferred tax liability	954.68	53.73
<b>Total deferred tax expense</b>	<b>332.63</b>	<b>173.15</b>
<b>Total income tax expense</b>	<b>3,002.64</b>	<b>(173.83)</b>

##### ii) Income tax recognised in other comprehensive income

₹ Crore

Particulars	31 March 2017			31 March 2016		
	Before tax	Tax expense/ (benefit)	Net of tax	Before tax	Tax expense/ (benefit)	Net of tax
- Net actuarial gains/ (losses) on defined benefit plans	(303.42)	(64.76)	(238.66)	(48.76)	(10.41)	(38.35)
- Net gains/(losses) on fair value of equity instruments	35.28	-	35.28	(20.28)	-	(20.28)
	(268.14)	(64.76)	(203.38)	(69.04)	(10.41)	(58.63)

## 41<sup>st</sup> Annual Report 2016-17

Standalone Financial Statements



iii) Reconciliation of tax expense and the accounting profit multiplied by India's domestic tax rate

₹ Crore

Particulars	31 March 2017	31 March 2016
Profit before tax	12,387.90	10,595.77
Tax using the Company's domestic tax rate of 34.6081% (31 March 2016 - 34.6081%)	4,287.20	3,666.99
Tax effect of:		
Non-deductible tax expenses	169.55	(91.30)
Tax-exempt income	(35.88)	(63.95)
Foreign exchange differences	0.13	0.44
Previous year tax liability	(107.56)	(2,453.48)
Minimum alternate tax adjustments	(1,310.80)	(1,232.53)
Total tax expense in the Statement of Profit and Loss	3,002.64	(173.83)

(b) Tax losses carried forward

₹ Crore

Particulars	31 March 2017	Expiry date	31 March 2016	Expiry date
Unused tax losses for which no deferred tax asset has been recognised	-	-	39.01	31.03.2017

Deferred tax assets have not been recognised in respect of the tax losses incurred by the Company that is not likely to generate taxable income in the foreseeable future.

(c) Dividend distribution tax on proposed dividend not recognised at the end of the reporting period

Since year end, the directors have recommended the payment of final dividend amounting to ₹ 1,789.27 crore (31 March 2016: ₹ 1,442.96 crore). The dividend distribution tax on this proposed dividend amounting to ₹ 364.25 crore (31 March 2016: ₹ 289.68 crore) has not been recognised since this proposed dividend is subject to the approval of shareholders in the ensuing annual general meeting.

(d) MAT Credit available to the Company in future but not recognised in the books:

₹ Crore

Financial years	31 March 2017	Expiry date	31 March 2016	Expiry date
For the year 2016-17	1,864.23	31.03.2027	-	-
For the year 2015-16	1,708.82	31.03.2026	1,708.82	31.03.2026
For the year 2014-15	883.58	31.03.2025	883.58	31.03.2025

55. Disclosure as per Ind AS 17 'Leases'

A) Operating leases

i. Leases as lessee

- The Company's significant leasing arrangements are in respect of operating leases of premises for residential use of employees, offices and guest houses/transit camps for a period of one to two years. These leasing arrangements are usually renewable on mutually agreed terms but are not non-cancellable. An amount of ₹ 29.69 crore (31 March 2016: ₹ 35.10 crore) towards lease payments (net of recoveries) in respect of premises for residential use of employees is included under 'Salaries and wages' in Note 39. Lease payments in respect of premises for offices and guest house/transit camps amounting ₹ 24.41 crore (net of recoveries) (31 March 2016: ₹ 27.57 crore) are included under 'Rent' in Note 42.
- The Company has taken a helicopter on wet lease basis for a period of eleven years and the amount of lease charges of ₹ 17.02 crore (31 March 2016: ₹ 14.93 crore) is included under 'Hire charges of helicopter/aircraft' in Note 42. The lease is renewable on mutually agreed terms but not non-cancellable.



- c) Ministry of Power, Government of India vide its notification no. 2/38/99-BTPS (Volume VII) dated 22 September 2006 transferred land of a power station to the Company on operating lease of 50 years. Lease rent for the year amounting to ₹ **6.26 crore** (31 March 2016: ₹ 6.25 crore) has been charged to the Statement of Profit and Loss and included under 'Rates and taxes' in Note 42.

ii. **Leases as lessor**

The Company has classified the arrangement with its customer for two power stations (one thermal and one gas) 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. The future minimum lease payments (MLPs) under non-cancellable leases in respect of the same are as follows:

(i) Thermal Power Station

PPA signed with the beneficiary was operative for a period of five years from the date of take over of the plant and the agreement may be mutually extended, renewed or replaced by another agreement on such terms and conditions for such further period as the parties may mutually agree.

(ii) 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.

₹ Crore

	31 March 2017	31 March 2016	1 April 2015
Less than one year	229.91	222.82	117.32
Between one and five years	667.67	782.57	381.17
More than five years	263.27	355.32	461.53
	<b>1,160.85</b>	<b>1,360.71</b>	<b>960.02</b>

B) Finance leases

i) **Leases as lessee**

- a) The Company has taken on lease certain vehicles as per terms of the lease agreements, details of which are as under:

₹ Crore

	31 March 2017		31 March 2016		1 April 2015	
	MLPs	Present value of MLP	MLPs	Present value of MLP	MLPs	Present value of MLP
Less than one year	1.05	0.78	0.71	0.48	-	-
Between one and five years	1.83	1.62	1.71	1.46	-	-
More than five years	-	-	-	-	-	-
<b>Total minimum lease payments</b>	<b>2.88</b>	<b>2.40</b>	<b>2.42</b>	<b>1.94</b>	<b>-</b>	<b>-</b>
Less amounts representing finance charges	0.48	-	0.48	-	-	-
<b>Present value of minimum lease payments</b>	<b>2.40</b>	<b>2.40</b>	<b>1.94</b>	<b>1.94</b>	<b>-</b>	<b>-</b>



- b) The Company has entered into a lease agreement for coal movement through inland waterways transport. As per the agreement, the operator shall design, build, operate and maintain the unloading infrastructure and material handling system ("facility"), and transfer the same to the Company after expiry of 7 years at ₹ 1/-. The facility has been completed and is under operation. Fair value of the entire facility is ₹ 90.00 crore (31 March 2016: ₹ 90.00 crore). The total contingent rents recognised as expense during the year is ₹ 0.82 crore (31 March 2016: ₹ 9.52 crore).

₹ Crore

	31 March 2017		31 March 2016		1 April 2015	
	MLPs	Present value of MLP	MLPs	Present value of MLP	MLPs	Present value of MLP
Less than one year	18.89	12.12	20.60	10.83	15.45	7.83
Between one and five years	82.41	64.79	82.41	57.88	82.41	52.31
More than five years	5.15	3.39	24.04	22.42	46.36	39.51
<b>Total minimum lease payments</b>	<b>106.45</b>	<b>80.30</b>	<b>127.05</b>	<b>91.13</b>	<b>144.22</b>	<b>99.65</b>
Less amounts representing finance charges	26.15	-	35.92	-	44.57	-
<b>Present value of minimum lease payments</b>	<b>80.30</b>	<b>80.30</b>	<b>91.13</b>	<b>91.13</b>	<b>99.65</b>	<b>99.65</b>

- c) 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 'Finance lease obligation' at their present values. The leasehold land is amortised considering the significant accounting policies of the Company.

₹ Crore

	31 March 2017		31 March 2016		1 April 2015	
	MLPs	Present value of MLP	MLPs	Present value of MLP	MLPs	Present value of MLP
Less than one year	5.66	5.19	4.72	4.32	3.46	3.15
Between one and five years	21.42	15.69	18.01	13.14	13.84	10.04
More than five years	425.06	40.06	383.72	29.85	292.37	22.15
<b>Total minimum lease payments</b>	<b>452.14</b>	<b>60.94</b>	<b>406.45</b>	<b>47.31</b>	<b>309.67</b>	<b>35.34</b>
Less amounts representing finance charges	391.20	-	359.14	-	274.33	-
<b>Present value of minimum lease payments</b>	<b>60.94</b>	<b>60.94</b>	<b>47.31</b>	<b>47.31</b>	<b>35.34</b>	<b>35.34</b>

## ii) Leases as lessor

The Company has 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.

The PPA 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.

	₹ Crore					
	31 March 2017		31 March 2016		1 April 2015	
	MLPs	Present value of MLP	MLPs	Present value of MLP	MLPs	Present value of MLP
Less than one year	119.42	29.77	99.67	29.12	94.73	24.72
Between one and five years	477.70	182.65	388.61	151.24	369.35	126.77
More than five years	456.72	342.64	489.96	360.46	560.79	388.43
<b>Total minimum lease payments</b>	<b>1,053.84</b>	<b>555.06</b>	<b>978.24</b>	<b>540.82</b>	<b>1,024.87</b>	<b>539.92</b>
Less amounts representing unearned finance income	498.78	-	437.42	-	484.95	-
<b>Present value of minimum lease payments</b>	<b>555.06</b>	<b>555.06</b>	<b>540.82</b>	<b>540.82</b>	<b>539.92</b>	<b>539.92</b>

#### 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. An amount of ₹ 237.34 crore (31 March 2016: ₹ 223.24 crore) for the year is recognized as expense on this account 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	31 March 2017	31 March 2016	1 April 2015
Net defined benefit (asset)/liability	(53.17)	(59.48)	(54.26)
Non-current	-	-	-
Current	(53.17)	(59.48)	(54.26)



**Movement in net defined benefit (asset)/liability**

Particulars	₹ Crore					
	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset)/liability	
	31 March 2017	31 March 2016	31 March 2017	31 March 2016	31 March 2017	31 March 2016
Opening balance	6,832.89	6,143.59	6,892.37	6,197.85	(59.48)	(54.26)
Current service cost recognised in statement of profit & loss	252.12	242.04	-	-	252.12	242.04
Interest cost/(income)	546.63	491.49	(551.39)	(495.83)	(4.76)	(4.34)
<b>Total</b>	<b>798.75</b>	<b>733.53</b>	<b>(551.39)</b>	<b>(495.83)</b>	<b>247.36</b>	<b>237.70</b>
Remeasurement loss (gain):						
Actuarial loss (gain) arising from:						
Financial assumptions	0.62	-	-	-	0.62	-
Experience adjustment	71.22	69.00	-	-	71.22	69.00
Return on plan assets excluding interest income	-	-	(60.77)	(69.88)	(60.77)	(69.88)
<b>Total</b>	<b>71.84</b>	<b>69.00</b>	<b>(60.77)</b>	<b>(69.88)</b>	<b>11.07</b>	<b>(0.88)</b>
Other						
Contribution by participants	485.54	474.81	485.54	474.81	-	-
Contribution by employer	-	-	252.12	242.04	(252.12)	(242.04)
Benefits paid	653.39	588.04	653.39	588.04	-	-
<b>Closing balance</b>	<b>7,535.63</b>	<b>6,832.89</b>	<b>7,588.80</b>	<b>6,892.37</b>	<b>(53.17)</b>	<b>(59.48)</b>

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 ₹ 53.17 crore determined through actuarial valuation. Accordingly, Company 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 company.

**B. Gratuity & pension**

- 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 ₹ 0.10 crore on superannuation, resignation, termination, disablement or on death. The maximum ceiling of ₹ 0.10 crore has been recommended for enhancement to ₹ 0.20 crore by the Report of the 3<sup>rd</sup> Pay Revision Committee appointed by the GOI. The Company has carried out actuarial valuation of gratuity benefit considering the enhanced ceiling.
- The Company has pension schemes at two of its stations in respect of employees taken over from erstwhile state government power utilities

The existing schemes stated at (a) and at one of the power stations at (b) above are funded by the Company and are managed by separate trusts. Pension scheme of another power station in respect of employees taken from erstwhile State Government Power Utility is unfunded. The liability for gratuity and the pension schemes as above 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 :

Gratuity (funded)

Pension (funded)

Pension (non-funded)

Non-current

Current

31 March 2017	31 March 2016	1 April 2015
627.71	(19.27)	(16.09)
125.13	118.93	108.28
271.71	258.18	242.04
1,024.55	357.84	334.23
19.83	17.93	16.47
1,004.72	339.91	317.76

Movement in net defined benefit (asset)/liability

₹ Crore

Particulars	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset) liability	
	31 March 2017	31 March 2016	31 March 2017	31 March 2016	31 March 2017	31 March 2016
Opening balance	1,823.53	1,783.65	1,465.69	1,449.42	357.84	334.23
Included in profit or loss:						
Current service cost	96.29	72.07	-	-	96.29	72.07
Past service cost	433.24	-	-	-	433.24	-
Interest cost (income)	145.88	142.69	(117.26)	(115.96)	28.62	26.73
<b>Total amount recognised in profit or loss</b>	<b>675.41</b>	<b>214.76</b>	<b>(117.26)</b>	<b>(115.96)</b>	<b>558.15</b>	<b>98.80</b>
Included in OCI:						
Remeasurement loss (gain):						
Actuarial loss (gain) arising from:						
Financial assumptions	85.23	-	-	-	85.23	-
Experience adjustment	57.14	(40.58)	-	-	57.14	(40.58)
Return on plan assets excluding interest income	-	-	(10.10)	(11.79)	(10.10)	(11.79)
<b>Total amount recognised in other comprehensive income</b>	<b>142.37</b>	<b>(40.58)</b>	<b>(10.10)</b>	<b>(11.79)</b>	<b>132.27</b>	<b>(52.37)</b>
<b>Other</b>						
Benefits paid	135.41	134.30	111.70	111.48	23.71	22.82
<b>Closing balance</b>	<b>2,505.90</b>	<b>1,823.53</b>	<b>1,481.35</b>	<b>1,465.69</b>	<b>1,024.55</b>	<b>357.84</b>

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 during 2015-16 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

	31 March 2017	31 March 2016	1 April 2015
Net defined benefit (asset)/liability	97.44	(0.22)	727.49
Non-current	-	-	-
Current	97.44	(0.22)	727.49

**Movement in net defined benefit (asset)/liability**

₹ Crore

Particulars	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset) liability	
	31 March 2017	31 March 2016	31 March 2017	31 March 2016	31 March 2017	31 March 2016
Opening balance	889.78	727.49	890.00	-	(0.22)	727.49
Included in profit or loss:						
Current service cost	29.41	21.93	-	-	29.41	21.93
Past service cost	-	-	-	-	-	-
Interest cost (income)	71.18	58.20	(71.20)	-	(0.02)	58.20
<b>Total amount recognised in profit or loss</b>	<b>100.59</b>	<b>80.13</b>	<b>(71.20)</b>	<b>-</b>	<b>29.39</b>	<b>80.13</b>
Included in OCI:						
Remeasurement loss (gain):						
Actuarial loss (gain) arising from:						
Demographic assumptions	-	-	-	-	-	-
Financial assumptions	86.06	-	-	-	86.06	-
Experience adjustment	119.03	110.00	-	-	119.03	110.00
Return on plan assets excluding interest income	-	-	(9.18)	-	(9.18)	-
<b>Total amount recognised in other comprehensive income</b>	<b>205.09</b>	<b>110.00</b>	<b>(9.18)</b>	<b>-</b>	<b>195.91</b>	<b>110.00</b>
<b>Other</b>						
Contribution by participants	-	-	5.81	-	(5.81)	-
Contribution by employer	-	-	121.83	890.00	(121.83)	(890.00)
Benefits paid	36.06	27.84	36.06	-	-	27.84
<b>Closing balance</b>	<b>1,159.40</b>	<b>889.78</b>	<b>1,061.96</b>	<b>890.00</b>	<b>97.44</b>	<b>(0.22)</b>

**D. Other retirement benefit plans**

Other retirement benefit plans include baggage allowance for settlement at home town for employees & 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

	31 March 2017	31 March 2016	1 April 2015
Net defined benefit (asset)/liability :	138.18	126.49	120.97
Non-current	125.11	113.79	109.71
Current	13.07	12.70	11.26

### Movement in net defined benefit (asset)/liability

	₹ Crore	
	Defined benefit obligation	
	31 March 2017	31 March 2016
Opening balance	126.49	120.97
Included in profit or loss:		
Current service cost	6.36	5.58
Past service cost	-	-
Interest cost (income)	10.11	9.68
<b>Total amount recognised in profit or loss</b>	<b>16.47</b>	<b>15.26</b>
Included in OCI:		
Remeasurement loss (gain):		
Actuarial loss (gain) arising from:		
Financial assumptions	4.25	-
Experience adjustment	(6.59)	(7.07)
Return on plan assets excluding interest income	-	-
<b>Total amount recognised in other comprehensive income</b>	<b>(2.34)</b>	<b>(7.07)</b>
<b>Other</b>		
Contributions paid by the employer	-	-
Benefits paid	2.44	2.67
<b>Closing balance</b>	<b>138.18</b>	<b>126.49</b>

### E. Plan assets

Plan assets comprise the following

	₹ Crore								
	31 March 2017			31 March 2016			1 April 2015		
	Quoted	Unquoted	Total	Quoted	Unquoted	Total	Quoted	Unquoted	Total
State government securities	2,144.63	-	2,144.63	1,666.50	-	1,666.50	1,284.23	-	1,284.23
Central government securities	1,884.84	-	1,884.84	1,906.60	-	1,906.60	1,931.19	-	1,931.19
Corporate bonds/debentures	3,281.34	94.95	3,376.29	3,135.36	94.95	3,230.31	3,124.53	94.95	3,219.48
Money market instruments/liquid mutual fund	-	39.33	39.33	-	17.72	17.72	2.50	-	2.50
Equity & equity linked investments	115.32	-	115.32	47.52	-	47.52	-	-	-
Investments with insurance companies	-	2,382.65	2,382.65	-	1,306.32	1,306.32	-	1,051.92	1,051.92
<b>Total (excluding accrued interest)</b>	<b>7,426.13</b>	<b>2,516.93</b>	<b>9,943.06</b>	<b>6,755.98</b>	<b>1,418.99</b>	<b>8,174.97</b>	<b>6,342.45</b>	<b>1,146.87</b>	<b>7,489.32</b>

## 41<sup>st</sup> Annual Report 2016-17

Standalone Financial Statements



Plan assets of ₹ 890.00 crore towards the post retirement medical benefit trust has been invested after 31 March 2016.

No amount is included in the value of plan assets in respect of the reporting enterprise's own financial instruments for the year ended 31 March 2017 & 31 March 2016.

Actual return on plan assets is ₹ 819.90 crore (31 March 2016: ₹ 693.45 crore).

## F. Defined benefit obligations

### i. Actuarial assumptions

The following were the principal actuarial assumptions at the reporting date:

	31 March 2017	31 March 2016	1 April 2015
Discount rate	7.50%	8.00%	8.00%
Expected return on plan assets			
Gratuity	7.50%	8.00%	8.00%
Pension	7.50%	8.00%	7.50%
PRMF	-	-	-
Annual increase in costs	6.00%	6.00%	6.00%
Salary escalation rate	6.00%	6.00%	6.00%

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.

	31 March 2017		31 March 2016	
	Increase	Decrease	Increase	Decrease
Discount rate (0.5% movement)	(167.12)	176.25	(130.80)	137.92
Annual increase in costs (0.5% movement)	86.49	(84.46)	67.04	(66.11)
Salary escalation rate (0.5% movement)	90.96	(84.38)	71.26	(66.06)

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 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' bond 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 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 in 2017 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				
	Less than 1 year	Between 1-2 years	Between 2-5 years	Over 5 years	Total
<b>31 March 2017</b>					
Gratuity & pension	248.81	304.77	713.17	1,239.15	2,505.90
Post-retirement medical facility (PRMF)	36.23	40.89	151.37	930.91	1,159.40
Provident fund	683.19	2,516.99	2,299.17	2,036.28	7,535.63
Other post-employment benefit plans	13.07	10.48	38.64	75.99	138.18
<b>Total</b>	<b>981.30</b>	<b>2,873.13</b>	<b>3,202.35</b>	<b>4,282.33</b>	<b>11,339.11</b>
<b>31 March 2016</b>					
Gratuity & Pension	154.99	148.43	456.44	1,063.67	1,823.53
Post-retirement medical facility (PRMF)	30.62	31.38	116.16	711.62	889.78
Provident fund	530.71	2,184.85	2,021.13	2,096.20	6,832.89
Other post-employment benefit plans	12.70	12.73	34.06	67.00	126.49
<b>Total</b>	<b>729.02</b>	<b>2,377.39</b>	<b>2,627.79</b>	<b>3,938.49</b>	<b>9,672.69</b>
<b>1 April 2015</b>					
Gratuity & Pension	143.41	140.27	425.33	1,074.64	1,783.65
Post-retirement medical facility (PRMF)	26.12	25.66	94.98	580.73	727.49
Provident fund	439.88	1,792.89	1,629.08	2,281.74	6,143.59
Other post-employment benefit plans	11.25	11.69	35.81	62.22	120.97
<b>Total</b>	<b>620.66</b>	<b>1,970.51</b>	<b>2,185.20</b>	<b>3,999.33</b>	<b>8,775.70</b>



Expected contributions to post-employment benefit plans for the year ending 31 March 2018 are ₹ 500.70 crore. The weighted average duration of the defined benefit plan obligation at the end of the reporting period is **15.08 years** (31 March 2016: 15.26 years, 1 April 2015: 15.37 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. A provision of ₹ **260.32 crore** (31 March 2016: ₹ 76.50 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.

**B. Other employee benefits**

Provision for long service award and family economic rehabilitation scheme amounting to ₹ **7.73 crore** (31 March 2016: ₹ 5.05 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.

**57. Disclosure as per Ind AS 24 'Related Party Disclosures'**

**a) List of Related parties:**

**i) Subsidiaries:**

1. Bhartiya Rail Bijlee Company Ltd.
2. Kanti Bijlee Utpadan Nigam Ltd.
3. NTPC Vidyut Vyapar Nigam Ltd.
4. NTPC Electric Supply Company Ltd.
5. Patratu Vidyut Utpadan Nigam Ltd.

**ii) Joint ventures:**

1. Utility Powertech Ltd.
2. NTPC-GE Power Services Private Ltd. (Previously NTPC-Alstom Power Services Private Ltd.)
3. NTPC-SAIL Power Company Ltd. (Previously NTPC-SAIL Power Company Private Ltd.)
4. NTPC-Tamil Nadu Energy Company Ltd.
5. Ratnagiri Gas & Power Private Ltd.
6. Aravali Power Company Private Ltd.
7. NTPC BHEL Power Projects Private Ltd.
8. Meja Urja Nigam Private Ltd.
9. BF-NTPC Energy Systems Ltd.
10. Nabinagar Power Generating Company Private Ltd.
11. Transformers and Electricals Kerala Ltd.
12. National High Power Test Laboratory Private Ltd.
13. Energy Efficiency Services Ltd.
14. CIL NTPC Urja Private Ltd.
15. Anushakti Vidhyut Nigam Ltd.
16. Hindustan Urvarak & Rasayan Ltd.
17. Trincomalee Power Company Ltd.
18. Bangladesh-India Friendship Power Company Pvt.Ltd.

**iii) Key Managerial Personnel (KMP):**

Shri Gurdeep Singh	Chairman and Managing Director
Shri A.K.Jha	Director (Technical)
Shri S.C.Pandey	Director (Projects)
Shri K.Biswal	Director (Finance)
Shri K.K.Sharma	Director (Operations)
Shri Saptarishi Roy <sup>1</sup>	Director (Human Resources)
Shri A.K.Gupta <sup>2</sup>	Director (Commercial)
Shri U.P.Pani <sup>3</sup>	Director (Human Resources)
Dr.Pradeep Kumar	Non-executive Director
Shri Aniruddha Kumar	Non-executive Director
Dr.Gauri Trivedi	Non-executive Director
Shri Rajesh Jain	Non-executive Director
Shri Seethapathy Chander <sup>4</sup>	Non-executive Director
Shri Prashant Mehta <sup>5</sup>	Non-executive Director
Shri K.P.Gupta <sup>6</sup>	Company Secretary
Shri A.K.Rastogi <sup>7</sup>	Company Secretary

1. W.e.f. 1 November 2016, 2. W.e.f. 3 February 2017, 3. Upto 31 October 2016, 4. W.e.f. 22 June 2016, 5. Upto 29 July 2016, 6. W.e.f. 22 March 2017 and 7. Upto 28 February 2017

**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 majority of shares (refer Note 21). Pursuant to Paragraph 25 & 26 of Ind AS 24, entities over which the same government has control or joint control of, or significant influence, then the reporting entity and other entities shall be regarded as related parties. The Company has applied the exemption available for government related entities and have made limited disclosures in the financial statements. Such entities with which the Company has significant transactions include but not limited to Coal India Limited, Singareni Coalfields Ltd., GAIL (India) Ltd., BHEL Ltd., SAIL Ltd., Indian Oil Corporation Ltd., Bharat Petroleum Corporation Ltd.

**vi) Others:**

1. NTPC Education and Research Society
2. NTPC Foundation



b) Transactions with the related parties are as follows:

₹ Crore

Subsidiaries and Joint Venture Companies	Subsidiaries		Joint Venture Companies	
Particulars	2016-17	2015-16	2016-17	2015-16
i) Sales/purchase of goods and services during the year				
- Contracts for works/services for services received by the Company	-	-	1,091.97	1,190.93
- Contracts for works/services for services provided by the Company	150.87	2.64	52.68	36.45
- Sale/purchase of goods	2,073.67	1,812.91	10.55	0.26
ii) Deputation of employees	30.21	16.41	72.09	70.64
iii) Dividend received	20.00	-	143.09	131.76
iv) Equity contributions made	507.66	87.73	1,201.63	714.61
v) Loans granted	154.25	-	-	-
vi) Guarantees received	-	-	28.16	27.75

Note:- Refer Note 71 for other commitments with Subsidiaries and Joint Venture Companies

₹ Crore

	2016-17	2015-16
<b>Transactions with post employment benefit plans</b>		
- Contributions made during the year	827.76	628.12
<b>Compensation to Key management personnel</b>		
- Short term employee benefits	3.89	3.18
- Post employment benefits	0.49	0.47
- Other long term benefits	0.35	0.47
- Termination benefits	-	-
- Sitting fee	0.19	0.14
Total Compensation to Key management personnel	4.92	4.26

₹ Crore

Transactions with the related parties under the control of the same government				
Sl. No.	Name of the Company	Nature of transaction	2016-17	2015-16
1	Bharat Coking Coal Ltd.	Purchase of coal	739.67	472.16
2	Central Coalfields Ltd		2,642.61	2,355.76
3	Eastern Coalfields Ltd		7,839.67	6,716.15
4	Mahanadi Coalfields Ltd		3,780.12	2,856.86
5	Northern Coalfields Ltd.		8,134.83	7,611.72
6	South Eastern Coalfields Ltd		5,638.30	4,481.23
7	Western Coalfields Ltd.		273.39	77.47
8	Singareni Coalfields Ltd		4,404.41	3,351.76
9	Bharat Heavy Electricals Ltd.	Purchase of equipments & erection services	4,661.92	4,660.38
		Purchase of spares	579.37	568.57
		Maintenance services	1,075.29	739.84



Transactions with the related parties under the control of the same government				
Sl. No.	Name of the Company	Nature of transaction	2016-17	2015-16
10	GAIL (I) Ltd.	Supply of natural gas	1,173.64	1,310.07
11	Indian Oil Corporation Ltd.	Supply of oil products	465.95	521.33
12	Bharat Petroleum Corporation Ltd.	Supply of natural gas and oil products	96.26	139.61
13	Steel Authority of India Ltd.	Supply of steel and iron products	409.30	641.94
14	Rural Electrification Corporation Ltd.	Consultancy assignments	510.96	234.04
15	Other entities	Purchase of equipments & erection services	105.38	46.98
		Purchase of spares	15.26	13.03
		Maintenance services	714.58	584.04

₹ Crore

Transactions with others listed at (a)(vi) above	2016-17	2015-16
Transactions during the year		
- Contracts for works/services for services received by the Company	2.94	5.67

c) Outstanding balances with related parties are as follows:

₹ Crore

Particulars	31 March 2017	31 March 2016	1 April 2015
<b>Amount recoverable towards loans</b>			
- From Subsidiaries	154.25	1.71	3.43
- From Key Managerial personnel	0.12	0.10	0.15
- From Others	0.60	0.60	0.60
<b>Amount recoverable other than loans</b>			
- From Subsidiaries	398.54	438.56	447.18
- From Joint Ventures	43.54	70.84	60.20
- From post employment benefit plans	22.40	39.31	33.45
<b>Amount payable</b>			
- To Joint Ventures	308.30	250.96	184.68
- To post employment benefit plans	154.94	67.23	63.73

d) Individually significant transactions

₹ Crore

Particulars	Nature of relationship	Amount	
		2016-17	2015-16
Contracts for works/services for services received by the Company			
Utility Powertech Ltd.	Joint Venture	659.64	592.18
NTPC BHEL Power Projects Private Ltd.	Joint Venture	387.34	542.42
NTPC-GE Power Services Private Ltd. (Previously NTPC-Alstom Power Services Private Ltd.)	Joint Venture	42.21	55.10

## 41<sup>st</sup> Annual Report 2016-17

Standalone Financial Statements



₹ Crore

Particulars	Nature of relationship	Amount	
		2016-17	2015-16
<b>Contracts for works/services for services provided by the Company</b>			
Patratu Vidyut Utpadan Nigam Ltd.	Subsidiary	41.37	-
Nabinagar Power Generating Company Private Ltd.	Joint Venture	27.99	12.78
<b>Dividend received</b>			
NTPC-SAIL Power Company Ltd. (Previously NTPC-SAIL Power Company Private Ltd.)	Joint Venture	70.00	60.00
Aravali Power Company Private Ltd.	Joint Venture	66.60	63.48
NTPC Vidyut Vyapar Nigam Ltd.	Subsidiary	20.00	-
Energy Efficiency Services Ltd.	Joint Venture	3.39	0.68
Utility Powertech Ltd.	Joint Venture	2.50	7.00
NTPC-GE Power Services Private Ltd. (Previously NTPC-Alstom Power Services Private Ltd.)	Joint Venture	0.60	0.60
<b>Equity contributions made</b>			
Bhartiya Rail Bijlee Company Ltd.	Subsidiary	232.29	15.64
Kanti Bijlee Utpadan Nigam Ltd.	Subsidiary	241.87	71.02
Patratu Vidyut Utpadan Nigam Ltd.	Subsidiary	33.50	1.08
Nabinagar Power Generating Company Private Ltd.	Joint Venture	590.00	252.17
Meja Urja Nigam Private Ltd.	Joint Venture	325.00	300.09
Energy Efficiency Services Ltd.	Joint Venture	99.00	25.00
Aravali Power Company Private Ltd.	Joint Venture	66.51	53.15
Bangladesh-India Friendship Power Company Pvt.Ltd.	Joint Venture	64.52	38.25
NTPC-Tamil Nadu Energy Company Ltd.	Joint Venture	44.39	40.00
National High Power Test Laboratory Private Ltd.	Joint Venture	6.50	-
Hindustan Urvarak & Rasayan Ltd.	Joint Venture	5.03	-
BF-NTPC Energy Systems Ltd.	Joint Venture	0.69	-
Trincomalee Power Company Ltd.	Joint Venture	-	5.94
<b>Loans granted</b>			
Kanti Bijlee Utpadan Nigam Ltd.	Subsidiary	121.00	-
Patratu Vidyut Utpadan Nigam Ltd.	Subsidiary	33.25	-
<b>Guarantees received</b>			
Utility Powertech Ltd.	Joint Venture	12.05	12.67
NTPC-GE Power Services Private Ltd. (Previously NTPC-Alstom Power Services Private Ltd.)	Joint Venture	16.11	15.09

**e) Terms and conditions of transactions with the related parties**

- Transactions with the related parties are made on normal commercial terms and conditions and at market rates.
- The Company is assigning jobs on contract basis, for sundry works in plants/stations/offices to M/s Utility Powertech Ltd (UPL), a 50:50 joint venture between the Company and Reliance Infrastructure Ltd. UPL inter-alia undertakes jobs such as overhauling, repair, refurbishment of various mechanical and electrical equipments 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.

- iii) The Company is seconding its personnel to Subsidiaries 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) The loan given to Kanti Bijlee Utpadan Nigam Ltd., a subsidiary of the Company, is at SBAR (State Bank Advance Rate) adjusted to half yearly rest presently 14.41 % repayable in 14 half-yearly installments starting from 3 April 2010 and last installment repaid on 31 March 2017. The loan of ₹ 33.25 crore given to PVUNL, a subsidiary of the Company, is at 10 % p.a. (quarterly rest) repayable in two installments on 30 September 2017 and 30 September 2018. Another loan to Kanti Bijlee Utpadan Nigam Ltd. has been given during the year amounting to ₹ 121.00 crore at 10 % p.a. (quarterly rest) repayable in two installments on 30 June 2019 and 31 December 2019.
- v) Consultancy services provided by the Company to Subsidiaries and Joint Ventures are generally on nomination basis at the terms, conditions and principles applicable for consultancy services provided to other parties.
- vi) Outstanding balances of subsidiaries and joint ventures at the year-end are unsecured and settlement occurs through banking transaction. These balances other than loans are interest free. For the year ended 31 March 2017 and 31 March 2016, the Company has not recorded any impairment of receivables relating to amounts owed by related parties. This assessment is undertaken each financial year through examining the financial position of the related party and the market in which the related party operates.
- vii) Refer Note 60 in respect of impairment loss on investment in Ratnagiri Gas & Power Private Ltd.(a JV Company).

#### 58. Disclosure as per Ind AS 27 'Separate financial statements'

##### a) Investment in Subsidiaries:\*

Company Name	Country of incorporation	Proportion of ownership interest		
		31 March 2017	31 March 2016	1 April 2015
NTPC Electric Supply Company Ltd.	India	100.00	100.00	100.00
NTPC Vidyut Vyapar Nigam Ltd.	India	100.00	100.00	100.00
Kanti Bijlee Utpadan Nigam Ltd.	India	65.00	65.00	65.00
Bhartiya Rail Bijlee Company Ltd.	India	74.00	74.00	74.00
Patratu Vidyut Utpadan Nigam Ltd.	India	74.00	74.00	-

##### b) Investment in Joint Venture Entities:\*

Company Name	Country of incorporation	Proportion of ownership interest		
		31 March 2017	31 March 2016	1 April 2015
Utility Powertech Ltd.	India	50.00	50.00	50.00
NTPC-GE Power Services Private Ltd. (Previously NTPC-Alstom Power Services Private Ltd.)	India	50.00	50.00	50.00
NTPC-SAIL Power Company Ltd. (Previously NTPC-SAIL Power Company Private Ltd.)	India	50.00	50.00	50.00
NTPC-Tamil Nadu Energy Company Ltd.	India	50.00	50.00	50.00
Ratnagiri Gas & Power Private Ltd.	India	25.51	25.51	28.91
Aravali Power Company Private Ltd.	India	50.00	50.00	50.00
NTPC-SCCL Global Ventures Private Ltd.**	India	-	-	50.00
NTPC BHEL Power Projects Private Ltd.	India	50.00	50.00	50.00
Meja Urja Nigam Private Ltd.	India	50.00	50.00	50.00
BF-NTPC Energy Systems Ltd.	India	49.00	49.00	49.00
National Power Exchange Ltd.**	India	-	-	16.67

## 41<sup>st</sup> Annual Report 2016-17

### Standalone Financial Statements



Company Name	Country of incorporation	Proportion of ownership interest		
		31 March 2017	31 March 2016	1 April 2015
Nabinagar Power Generating Company Private Ltd.	India	50.00	50.00	50.00
Transformers and Electricals Kerala Ltd.	India	44.60	44.60	44.60
National High Power Test Laboratory Private Ltd.	India	20.00	21.63	21.63
Energy Efficiency Services Ltd.	India	31.70	28.80	25.00
CIL NTPC Urja Private Ltd.	India	50.00	50.00	50.00
Anushakti Vidhyut Nigam Ltd.	India	49.00	49.00	49.00
Pan-Asian Renewables Private Ltd.**	India	-	-	50.00
Hindustan Urvarak and Rasayan Ltd.	India	33.28	-	-
Trincomalee Power Company Ltd.	Srilanka	50.00	50.00	50.00
Bangladesh-India Friendship Power Company Pvt.Ltd.	Bangladesh	50.00	50.00	50.00

\* Equity investments in subsidiaries and joint ventures are measured at cost as per the provisions of Ind AS 27 on 'Separate Financial Statements'.

\*\* Not considered as JV as at 31 March 2017 and 31 March 2016 due to non existence of control and accounted for as equity instruments in the financial statements of 31 March 2017 & 31 March 2016 (Refer Note 7).

#### 59. Disclosure as per Ind AS 33 'Earnings per Share'

##### (i) Basic and diluted earnings per share (in ₹)

	31 March 2017	31 March 2016
From operations including regulatory deferral account balances (a)	11.38	13.06
From regulatory deferral account balances (b)	0.32	0.01
From operations excluding regulatory deferral account balances (a)-(b)	11.06	13.05
Nominal value per share	10.00	10.00

##### (ii) Profit attributable to equity shareholders (used as numerator) (₹ Crore)

	31 March 2017	31 March 2016
From operations including regulatory deferral account balances (a)	9,385.26	10,769.60
From regulatory deferral account balances (b)	263.92	9.51
From operations excluding regulatory deferral account balances (a)-(b)	9,121.34	10,760.09

##### (iii) Weighted average number of equity shares (used as denominator) (Nos.)

	31 March 2017	31 March 2016
Opening balance of issued equity shares	8,245,464,400	8,245,464,400
Effect of shares issued during the year, if any	-	-
Weighted average number of equity shares for Basic and Diluted EPS	8,245,464,400	8,245,464,400

#### 60. 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:

- Due to decrease in value in use in respect of plant and equipment of a Solar PV Station of the Company which is under 'Generation of energy Segment', an impairment loss of ₹ Nil (31 March 2016: ₹ 4.48 crore) was recognised in 'Depreciation/amortisation and impairment expense' in the Statement of Profit and Loss. Also Refer Note 2 (j) in this regard.

During the year ended 31 March 2017, an amount of ₹ 0.73 crore towards the impairment loss has been reversed due to increase in the value in use as compared to the carrying value of the Solar PV station.



For the Company, the recoverable amount of the PPE & intangible assets of the CGUs is value in use and amounts to ₹ 1,42,042.78 crore (31 March 2016: ₹ 1,40,717.96 crore). The discount rate used for the computation of value in use for the generating plant is 9.13% (31 March 2016: 8.98%) and for solar plant is 7.95% (31 March 2016: 7.83%).

- b) The Company has an investment of ₹ 974.30 crore (31 March 2016 and 1 April 2015: ₹ 974.30 crore) in the equity shares of M/s Ratnagiri Gas & Power Pvt.Ltd. (RGPPL), a joint venture of the Company. RGPPL has incurred losses during last few years which has resulted in erosion of net worth of the Company. Also, value of RGPPL's assets has declined during the period significantly more than would be expected as a result of the passage of time or normal use. Further, neither Power Block nor LNG Terminal (CGUs) of RGPPL are operating at their installed capacity from last many years. The recoverable amount of this investment has been assessed at ₹ 191.35 crore and accordingly the Company has recognized an impairment loss of ₹ 782.95 crore in respect of such investment and disclosed the same as 'Exceptional items - Impairment loss on investments' in the Statement of Profit and Loss.

Recoverable amount is based on the value in use as its fair value less cost of disposals cannot be estimated. Value in use of RGPPL has been arrived at by an independent expert after considering the proposed demerger scheme of LNG Terminal and Power Block which has been approved by its Board of Directors with effective date of 1 January 2016 and awaiting approval of NCLT, New Delhi. RGPPL is committed for implementing the plan pursuant to receipt of necessary approvals and has communicated the restructuring scheme to all stake holders.

The recoverable amount is based on the present value of future cash flows expected to be derived from the LNG terminal till 31 March 2037 and Power block till 31 March 2039. These periods has been considered based on the estimated useful lives of the respective CGU's.

For LNG Terminal, following are the key assumptions which are based on the past experience and expected completion of breakwater facility in 2021 :

Capacity : FY 2018 till 2021 – 30 ships/year; FY 2022 onwards: 80 ships per year

Utilisation : FY 2018-21 - 80%  
FY 2022-25 – 55%  
FY 2026 – 65%  
FY 2027 and beyond – 70%  
Annual escalation of tariff - 5%

For Power Plant, no growth rates has been assumed and the past experience has been considered for future cash flows which are expected to be derived from this CGU

The post tax discount rates used for the future cash flows are in the range of 9.4% to 11%.

Also Refer Note 6(h) in this regard.

#### 61. Disclosure as per Ind AS 37 'Provisions, Contingent Liabilities and Contingent Assets'

Movements in provisions:

₹ Crore

Particulars	Provision for obligations incidental to land acquisition		Provision for tariff adjustment		Others		Total	
	31 March 2017	31 March 2016	31 March 2017	31 March 2016	31 March 2017	31 March 2016	31 March 2017	31 March 2016
Carrying amount at the beginning of the year	3,736.84	3,098.72	1,234.41	1,243.64	563.66	505.02	5,534.91	4,847.38
Additions during the year	429.68	965.37	98.88	145.28	156.03	259.12	684.59	1,369.77
Amounts used during the year	(440.19)	(274.14)	-	-	(6.69)	(48.86)	(446.88)	(323.00)
Reversal/adjustments during the year	(30.55)	(53.11)	(162.50)	(154.51)	(2.70)	(151.62)	(195.75)	(359.24)
Carrying amount at the end of the year	3,695.78	3,736.84	1,170.79	1,234.41	710.30	563.66	5,576.87	5,534.91

## 41<sup>st</sup> Annual Report 2016-17

Standalone Financial Statements



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**

The Company aggrieved over many of the issues considered by the CERC in the tariff orders for its stations for the period 2004-09 had filed appeals with the Appellate Tribunal for Electricity (APTEL). The APTEL disposed off the appeals favourably directing the CERC to revise the tariff orders as per directions and methodology given. Some of the issues decided in favour of the Company by the APTEL were challenged by the CERC in the Hon'ble Supreme Court of India. Subsequently, the CERC has issued revised tariff orders for all the stations except one for the period 2004-09, considering the judgment of APTEL subject to disposal of appeals pending before the Hon'ble Supreme Court of India. Towards the above and other anticipated tariff adjustments, provision of ₹ **98.88 crore** (31 March 2016: ₹ 145.28 crore, 1 April 2015: ₹ 148.10 crore) has been made during the year and in respect of some of the stations, an amount of ₹ **162.49 crore** (31 March 2016: ₹ 154.51 crore, 1 April 2015: ₹ 180.16 crore) has been written back.

iii) **Others**

Provision for others comprise ₹ **68.24 crore** (31 March 2016: ₹ 65.35 crore, 1 April 2015: ₹ 58.64 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 63 (b)], ₹ **640.25 crore** (31 March 2016: ₹ 496.44 crore, 1 April 2015: ₹ 440.35 crore) towards provision for cases under litigation and ₹ **1.81 crore** (31 March 2016: ₹ 1.87 crore, 1 April 2015: ₹ 6.03 crore) towards provision for shortage in property, plant and equipment on physical verification pending investigation.

iv) In respect of provision for cases under litigation, outflow of economic benefits is dependent upon the final outcome of such cases.

v) In all these cases, outflow of economic benefits is expected within next one year.

vi) **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 assumptions and estimates made in recognizing these provisions.

vii) **Contingent liabilities and contingent assets**

Disclosure with respect to claims against the Company not acknowledged as debts and contingent assets are made in Note 71.

## 62. First-time adoption of Ind AS

These are the Company's first financial statements in accordance with Ind AS. For periods up to and including the year ended 31 March 2016, the Company prepared its financial statements in accordance with previous GAAP, including accounting standards notified under the Companies (Accounting Standards) Rules, 2006 (as amended). The effective date for Company's Ind AS Opening Balance Sheet is 1 April 2015 (the date of transition to Ind AS).

The accounting policies set out in Note 1 have been applied in preparing the financial statements for the year ended 31 March 2017, the comparative information presented in these financial statements for the year ended 31 March 2016 and in the preparation of an opening Ind AS Balance Sheet at 1 April 2015 (the Company's date of transition). According to Ind AS 101, the first Ind AS financial statements must use recognition and measurement principles that are based on standards and interpretations that are effective at 31 March 2017, the date of first-time preparation of financial statements according to Ind AS. These accounting principles and measurement principles must be applied retrospectively to the date of transition to Ind AS and for all periods presented within the first Ind AS financial statements.

Any resulting differences between carrying amounts of assets and liabilities according to Ind AS 101 as of 1 April 2015 compared with those presented in the previous GAAP Balance Sheet as of 31 March 2015, were recognized in equity under retained earnings within the Ind AS Balance Sheet.



An explanation of how the transition from previous GAAP to Ind AS has affected the Company's financial position, financial performance and cash flows is set out in the following tables and notes.

#### **Optional exemptions availed and mandatory exceptions**

In the Ind AS Opening Balance Sheet as at 1 April 2015, the carrying amounts of assets and liabilities from the previous GAAP as at 31 March 2015 are generally recognized and measured according to Ind AS in effect as on 31 March 2017. However for certain individual cases, Ind AS 101 provides for optional exemptions and mandatory exceptions to the general principles of retrospective application of Ind AS. The Company has made use of the following exemptions and exceptions in preparing its Ind AS Opening Balance Sheet:

##### **i) Property, plant and equipment & Intangible assets**

Ind AS 101 permits a first-time adopter to elect to continue with the carrying value for all of its property, plant and equipment and intangible assets as recognised in the financial statements as at the date of transition to Ind AS, measured as per the previous GAAP and use that as its deemed cost as at the date of transition after making necessary adjustments for de-commissioning liabilities.

Accordingly, the Company has elected to measure all of its property, plant and equipment and intangible assets at their previous GAAP carrying value.

##### **ii) Borrowings**

Ind AS 101 permits that if it is impracticable for an entity to apply retrospectively the effective interest method in Ind AS 109 'Financial Instruments', the fair value of the financial liability at the date of transition to Ind AS shall be the new amortised cost of that financial liability at the date of transition to Ind AS.

The borrowings outstanding as at the transition date, consists of loans drawn more than fifteen years back, some draws with multiple tranches in different financial years with varying interest rates. In some cases, the rate of interest on the loans was both fixed and floating in nature and drawl of the loans have been made in multiple installments with each drawl to be treated as a separate transaction for the purpose of computing the amortised cost. In case of some loans the drawl period stretches beyond 3-4 years and in case of loans with floating interest rate, the rates have been reset at frequent intervals and reset rates are also applicable for previous draws from that date onwards. Implementing the requirement of amortised cost retrospectively is impracticable and also the amount is expected to be immaterial and hence the Company has amortised the transaction costs as an adjustment of interest expense of the term of the related loan w.e.f. the transition date to Ind AS i.e. 1 April 2015.

##### **iii) Business combinations**

Ind AS 101 provides the option to apply Ind AS 103 prospectively from the transition date or from a specific date prior to the transition date. This provides relief from full retrospective application that would require restatement of all business combinations prior to the transition date.

Accordingly, the Company has elected to apply Ind AS 103 prospectively to business combinations occurring after its transition date. Business combinations occurring prior to the transition date have not been restated.

##### **iv) Designation of previously recognised financial instruments**

Ind AS 101 allows an entity to designate investments in equity instruments at FVTOCI on the basis of the facts and circumstances at the date of transition to Ind AS.

The Company has elected to apply this exemption for its investment in equity instruments in PTC (India) Limited .

##### **v) Arrangements containing a lease**

Appendix C, Ind AS 17 requires an entity to assess whether an arrangement contains a lease at its inception. However, Ind AS 101 provides an option to make this assessment on the basis of facts and circumstances existing at the date of transition to Ind AS. The Company has elected to apply this exemption for such contracts/ arrangements.

##### **vi) Long term foreign currency monetary items**

The Company has elected to continue the policy adopted for accounting for exchange differences arising from translation of long-term foreign currency monetary items recognised in the financial statements for the period ending immediately before the beginning of the first Ind AS financial reporting period as per the previous GAAP.



## vii) Estimates

An entity's estimates in accordance with Ind AS at the date of transition to Ind AS shall be consistent with estimates made for the same date in accordance with previous GAAP (after adjustments to reflect any difference in accounting policies), unless there is objective evidence that those estimates were in error.

Ind AS estimates as at 1 April 2015 are consistent with the estimates as at the same date made in conformity with previous GAAP. The Company made estimates for following items in accordance with Ind AS at the date of transition as these were not required under previous GAAP:

- Investment in equity instruments carried at FVTPL or FVTOCI;
- Investment in debt instruments carried at FVTPL; and
- Impairment of financial assets based on expected credit loss model.

## viii) Classification and measurement of financial assets

The Company has also elected the option under Ind AS 101 by not applying the requirement of Ind AS 109 in case of employee loans which requires that these shall be recognized initially at fair value and subsequently at amortized cost. As per the exemption, if an entity finds impracticable to apply retrospectively effective interest method, the fair value of the financial asset at the date of transition to Ind AS shall be the new amortized cost of that financial asset at the date of transition to Ind AS.

### Reconciliation of equity as at 1 April 2015 and as at 31 March 2016

₹ Crore

Particulars	Note	1 April 2015			31 March 2016		
		Previous GAAP*	Adjustments	Ind AS	Previous GAAP*	Adjustments	Ind AS
<b>ASSETS</b>							
<b>Non-current assets</b>							
Property, plant and equipment	a,c,d,e	78,586.91	(433.53)	78,153.38	91,355.82	143.54	91,499.36
Capital work in progress	a,b,d	56,463.11	-	56,463.11	66,216.04	(10.45)	66,205.59
Other Intangible assets		262.16	-	262.16	273.99	(0.10)	273.89
Intangible assets under development		30.38	-	30.38	217.61	-	217.61
<b>Financial assets</b>							
Investments	f	7,154.07	85.08	7,239.15	7,949.52	64.80	8,014.32
Trade Receivable		-	-	-	71.18	-	71.18
Loans	g	646.09	(177.63)	468.46	619.46	(178.53)	440.93
Other financial assets	c	466.29	515.19	981.48	510.99	511.20	1,022.19
Other non-current assets	g	16,183.39	160.46	16,343.85	17,479.58	157.22	17,636.80
<b>Current Assets</b>							
Inventories	a	7,453.00	(155.94)	7,297.06	7,192.53	(182.16)	7,010.37
<b>Financial assets</b>							
Investments		1,983.34	-	1,983.34	378.72	-	378.72
Trade receivables	n	7,604.37	-	7,604.37	7,772.81	(40.59)	7,732.22
Cash and cash equivalents		280.65	-	280.65	1,372.40	-	1,372.40



Particulars	Note	1 April 2015			31 March 2016		
		Previous GAAP*	Adjustments	Ind AS	Previous GAAP*	Adjustments	Ind AS
Other bank balances		12,994.35	-	12,994.35	3,088.38	-	3,088.38
Loans		272.63	-	272.63	251.78	-	251.78
Other financial assets	c	2,905.66	24.72	2,930.38	5,213.24	32.79	5,246.03
Other current assets	g	3,848.33	17.18	3,865.51	4,655.21	21.34	4,676.55
<b>Total Assets</b>		<b>197,134.73</b>	<b>35.53</b>	<b>197,170.26</b>	<b>214,619.26</b>	<b>519.06</b>	<b>215,138.32</b>
<b>EQUITY &amp; LIABILITIES</b>							
<b>Equity</b>							
Equity Share capital		8,245.46	-	8,245.46	8,245.46	-	8,245.46
Other equity	l	73,411.89	2,172.75	75,584.64	80,536.54	2,511.70	83,048.24
<b>Liabilities</b>							
<b>Non-current liabilities</b>							
Financial liabilities							
Borrowings	b,e	78,532.33	32.18	78,564.51	85,083.26	13.69	85,096.95
Trade payables		3.47	-	3.47	8.37	-	8.37
Other financial liabilities	d	2,625.37	(411.65)	2,213.72	3,381.65	(382.38)	2,999.27
Provisions		1,115.71	-	1,115.71	436.41	-	436.41
Deferred tax liabilities (Net)		979.07	-	979.07	1,152.21	-	1,152.21
Other non-current liabilities		0.01	-	0.01	49.68	-	49.68
<b>Current liabilities</b>							
Financial liabilities							
Borrowings		-	-	-	1,299.50	-	1,299.50
Trade payables		5,953.15	-	5,953.15	5,311.64	-	5,311.64
Other financial liabilities	e	16,434.18	3.14	16,437.32	17,437.06	7.96	17,445.02
Other current liabilities		373.45	-	373.45	775.59	-	775.59
Provisions	i	7,758.75	(1,736.71)	6,022.04	8,508.32	(1,732.63)	6,775.69
Current Tax Liabilities (Net)		-	-	-	151.30	-	151.30
<b>Deferred revenue</b>	c, o	<b>1,394.15</b>	<b>(24.18)</b>	<b>1,369.97</b>	<b>1,946.62</b>	<b>100.72</b>	<b>2,047.34</b>
<b>Rate regulated liabilities</b>		<b>307.74</b>	<b>-</b>	<b>307.74</b>	<b>295.65</b>	<b>-</b>	<b>295.65</b>
<b>Total equity and liabilities</b>		<b>197,134.73</b>	<b>35.53</b>	<b>197,170.26</b>	<b>214,619.26</b>	<b>519.06</b>	<b>215,138.32</b>

\* The previous GAAP figures have been reclassified to conform to Ind AS presentation requirements for the purposes of this note.

## 41<sup>st</sup> Annual Report 2016-17

Standalone Financial Statements



# Reconciliation of total comprehensive income for the year ended 31 March 2016

₹ Crore

Particulars	Note	Previous GAAP*	Adjustments	Ind AS
<b>INCOME</b>				
Revenue	a,c,j	70,506.80	337.01	70,843.81
Other income	g	1,189.27	(23.92)	1,165.35
<b>Total Income</b>		<b>71,696.07</b>	<b>313.09</b>	<b>72,009.16</b>
<b>EXPENDITURE</b>				
Fuel cost		43,793.25	5.34	43,798.59
Employee benefits expense	g,k	3,609.32	(27.67)	3,581.65
Finance expenses	b,d	3,230.36	66.05	3,296.41
Depreciation and amortization	a,b,c,d,e	5,425.32	(252.98)	5,172.34
Other expenses	a,d,j	5,591.24	(14.75)	5,576.49
<b>Total Expenses</b>		<b>61,649.49</b>	<b>(224.01)</b>	<b>61,425.48</b>
<b>Profit before tax and Rate Regulated Activities(RRA)</b>		<b>10,046.58</b>	<b>537.10</b>	<b>10,583.68</b>
Add: Movements in regulatory deferral account balances		12.09	-	12.09
<b>Profit before tax</b>		<b>10,058.67</b>	<b>537.10</b>	<b>10,595.77</b>
<b>Current tax</b>				
Current year		2,093.51	10.41	2,103.92
Earlier years		(2,453.48)	-	(2,453.48)
Tax expense/(saving) pertaining to RRA		2.58	-	2.58
<b>Deferred tax</b>		<b>226.88</b>	<b>-</b>	<b>226.88</b>
Less: Deferred asset for deferred tax liability		53.73	-	53.73
		(184.24)	10.41	(173.83)
<b>Profit after tax</b>		<b>10,242.91</b>	<b>526.69</b>	<b>10,769.60</b>
<b>Other comprehensive income</b>				
<b>Items that will not be reclassified to profit or loss (net of tax)</b>				
- Net actuarial gains/(losses) on defined benefit plans	k	-	(38.35)	(38.35)
- Net gains/(losses) on fair value of equity instruments through other comprehensive income	f	-	(20.28)	(20.28)
<b>Other comprehensive income for the year, net of income tax</b>		<b>-</b>	<b>(58.63)</b>	<b>(58.63)</b>
<b>Total comprehensive income for the year</b>		<b>10,242.91</b>	<b>468.06</b>	<b>10,710.97</b>

\* The previous GAAP figures have been reclassified to conform to Ind AS presentation requirements for the purposes of this note.

## Reconciliation of total equity as at 31 March 2016 and 1 April 2015

₹ Crore

Particulars	Note	31 March 2016	1 April 2015
Total equity (shareholder's funds) as per previous GAAP		88,782.00	81,657.35
<b>Adjustments:</b>			
Proposed dividend and tax	i	1,732.64	1,736.71
Capitalisation of major overhaul & spares	a	468.54	-
Recognition of financial assets/liabilities at amortised cost	d,g	349.20	411.65
Depreciation and amortization	a,b,c,d,e	99.28	(49.55)
Fair valuation of investments	f	64.80	85.08
Recognition of government grant as deferred revenue	o	(125.33)	(0.30)
Provision of rebate to customers	n	(40.59)	-
Impact of embedded leases	c	(1.52)	24.48
Recognition of liabilities on leasehold land		(35.32)	(35.32)
<b>Total adjustments</b>		<b>2,511.70</b>	<b>2,172.75</b>
<b>Total equity as per Ind AS</b>		<b>91,293.70</b>	<b>83,830.10</b>

## Reconciliation of total comprehensive income for the year ended 31 March 2016

₹ Crore

Particulars	Note	31 March 2016
Profit after tax as per previous GAAP		10,242.91
<b>Adjustments:</b>		
Capitalisation of major overhaul & spares	a	468.54
Depreciation and amortization	a,b,c,d,e	148.83
Actuarial loss on defined benefit plans recognised in OCI (net of tax)	k	38.35
Recognition of financial assets/liabilities at amortised cost	d,g	(62.44)
Provision of rebate to customers		(40.59)
Impact of embedded leases	c	(26.00)
<b>Total adjustments</b>		<b>526.69</b>
<b>Profit after tax as per Ind AS</b>		<b>10,769.60</b>
<b>Other comprehensive income (net of tax):</b>		
Actuarial loss on defined benefit plans	k	(38.35)
Fair valuation of investments	f	(20.28)
<b>Total comprehensive income as per Ind AS</b>		<b>10,710.97</b>

### Notes to first-time adoption:

#### (a) Property, plant & equipment

On the transition date, the Company has capitalised certain items of spare parts which are meeting definition of property, plant & equipment as per Ind AS 16 as PPE. Under previous GAAP, these spare parts were recognised as Inventories. As a result, Company has recognised an amount of ₹ 155.94 crore from inventories to PPE as at the transition date on which an amount of ₹ 49.55 crore has been charged as depreciation with corresponding adjustment in retained earnings. For the year ended 31 March 2016, an amount of ₹ 79.79 crore has been recognised from inventories to PPE. During the year ended 31 March 2016, value of inventory has increased by an amount of ₹ 53.57 crore with corresponding increase in profit due to reversal of repair and maintenance expenses.

## 41<sup>st</sup> Annual Report 2016-17

### Standalone Financial Statements



In addition to above, Ind AS 16 requires significant component parts of an item of property, plant and equipment to be depreciated separately. As explained in Note 1.C.1, the cost of major inspections/overhauls is capitalised and depreciated separately over the period to the next major inspection/overhaul. For the year ended on 31 March 2016, an amount of ₹ 404.81 crore and ₹ 10.17 crore has been capitalised under PPE and CWIP respectively, resulting in corresponding increase in profit due to reversal of repair and maintenance expenses. Depreciation on this asset was charged in the statement of profit and loss of ₹ 106.04 crore.

Further, there was increase in net block as on 31 March 2016 to the extent of ₹ 264.46 crore and decrease of ₹ 0.10 crore in intangible assets due to capitalisation of spares & providing depreciation thereon with revised life, depreciation on spares capitalised from inventory, transaction cost adjustment, unwinding of discount on vendor liabilities, amortisation of leased land treated as finance lease, etc.

**(b) Borrowings**

Under previous GAAP, the Company has followed the policy of charging the transaction costs to the income statement or capitalized to property, plant and equipment as and when incurred. Under Ind AS, transaction costs are amortized as an adjustment of interest expense over the term of the related loan using effective interest rate method. The Company has raised foreign currency bonds/Notes, secured and unsecured loans from banks and financial institutions and other foreign currency term loans on which it has incurred transaction costs. The above resulted in reduction in borrowings as at 31 March 2016 by ₹ 29.33 crore with corresponding reduction in profit or loss and CWIP by ₹ 1.36 crore and ₹ 27.97 crores respectively.

**(c) Application of Appendix C, Ind AS 17**

The Company has entered into power purchase agreements (PPAs or arrangements) with beneficiaries for generation and supply of electricity. Under the arrangements, beneficiaries pay fixed capacity charges primarily for recovery of capital cost, return on investment, fixed operations and maintenance expense and interest on working capital and variable energy charge primarily for recovery of fuel cost.

Under Ind AS, the amounts receivable under these arrangements have the substance of a lease under the provisions of Appendix C to Ind AS 17 as these arrangements are dependent on use of specific assets and convey the right to use those assets. The evaluation of the arrangements is based on the facts and circumstances existing at the date of transition of the lease. Based on these evaluations, the Company has identified that the arrangements entered into with its customer for one of the station (Stage I) and two stations are to be treated as leases, and analyzed with reference to Ind AS 17 for classification as either finance or operating leases. Accordingly, the arrangement in case of one of the Stage of a station is classified as finance lease and of two stations as operating lease.

Under previous GAAP, the respective power plants were capitalized as fixed assets and the amounts receivable from the beneficiaries were recognized as revenue from sale of electricity.

Under Ind AS, one stage of a station is treated as assets given on finance lease and the amounts receivable from beneficiary has been segregated into finance income, repayment of principal and service income and accounted for accordingly.

On transition date the carrying value of property, plant and equipment has been reduced by ₹ 539.92 crore with corresponding increase in other non-current financial assets (finance lease receivable) by ₹ 515.19 crore & other current financial assets by ₹ 24.72 crore. Further, an amount of ₹ 24.48 crore has been transferred from deferred revenue to retained earnings. During the year ended 31 March 2016, property, plant and equipment has been reduced by ₹ 27.03 crore with corresponding increase in other current & non current financial assets (finance lease receivable). Further, revenue from sale of energy was reduced by ₹ 110.38 crore with corresponding recognition of interest income on assets on finance lease under 'Other operating income' by ₹ 84.25 crore and reduction in value of finance lease receivable by ₹ 26.13 crore.

For stations treated as assets given on operating lease, the amount receivable from beneficiary has been segregated into lease income and service income and lease income is to be recognized in income on a straight line basis over the lease term.

During the year ending 31 March 2016, this adjustment has resulted in a decrease in revenue from sale of electricity by ₹ 223.25 crore and corresponding recognition of Lease rentals on assets on operating lease under 'Other operating revenue'.

**(d) Financial liabilities**

Under previous GAAP, liabilities such as payable for capital expenditure, retention money etc. are recorded at cost.

However, under Ind AS, liabilities in which the Company has a contractual obligation to deliver cash are classified as financial liabilities and recorded at amortized cost. Therefore, such financial liabilities have been discounted to present value since they do not carry any interest. The upfront benefit on transition date due to the discounting has



been adjusted against the retained earnings. Further, interest cost on unwinding of discount has been capitalized to the cost of property, plant and equipment where such interest cost can be capitalized in accordance with Ind AS 23 'Borrowing cost' otherwise charged off to statement of profit or loss.

The effect of the adjustments resulted in reduction of the value of other non current financial liabilities by ₹ 411.65 crore along with corresponding increase in retained earnings as on the transition date. During the year ended 31 March 2016, value of financial liabilities was increased by ₹ 29.27 crore by corresponding increase/(reduction) in statement of profit and loss, property, plant and equipment and CWIP by ₹ 72.80 crore, (-) ₹ 52.08 crore and ₹ 8.55 crore respectively.

**(e) Land under finance lease**

Under previous GAAP, leasehold land was capitalized at an amount equal to the upfront payments made at the time of lease. However, under Ind AS, such leases are capitalised at the present value of the total minimum lease payments to be paid over the lease term. Accordingly, future lease rentals have now been recognised as 'finance lease obligation' at their present values. The effect of the adjustment has resulted in reduction in retained earnings by ₹ 35.32 crore with corresponding increase in non current financial liabilities by ₹ 32.18 crore and current financial liabilities by ₹ 3.14 crore towards finance lease obligation as at 1 April 2015. During financial year 2015-16 there was increase in PPE by ₹ 13.16 crore, reduction in CWIP by ₹ 1.19 crore and increase in non current financial liabilities by ₹ 7.68 crore and current financial liabilities by ₹ 4.29 crore towards finance lease obligations. There was insignificant impact on profits.

**(f) Fair valuation of Investments**

Under previous GAAP, the company accounted for long term investments in unquoted and quoted equity shares as investment measured at cost less provision for other than temporary diminution in the value of investments. Under Ind-AS, the Company has designated quoted investments as FVTOCI investments. Ind-AS requires FVTOCI investments to be measured at fair value. The resulting fair value changes in these investments have been recognised in a separate component of equity (FVTOCI reserve) as at the date of transition and subsequently in other comprehensive income.

This has resulted in increase in retained earnings by ₹ 85.08 crore with corresponding increase in value of financial assets - investments as at the date of transition. As at 31 March 2016, other comprehensive has decreased by ₹ 20.28 crore with corresponding decrease in financial assets - Investments.

**(g) Financial assets**

Under previous GAAP, employee loans and other long term advances to be settled in cash or another financial asset are recorded at cost.

However, under Ind AS, certain assets covered under Ind AS 32 meet the definition of financial assets which include employee loans and long term advances to be settled in cash or another financial asset are classified as financial assets at amortized cost. Thus in case interest rate on such financial assets is lower than market rate, these financial assets have been discounted to present value.

The effect of the adjustments resulted in reduction in the value of financial assets - loans by ₹ 177.63 crore and increase in value of other non-current assets by ₹ 160.46 crore & other current assets by ₹ 17.18 crore (towards the deferred payroll expenses) on transition date. During the year ended 31 March 2016, the value of financial assets - loans reduced by ₹ 0.90 crore with corresponding increase in other non-current and current assets by ₹ 0.92 crore and credited the statement of Profit and Loss by ₹ 0.02 crore.

**(h) Deferred taxes**

Previous GAAP requires deferred tax accounting using the income statement approach, which focuses on differences between taxable profits and accounting profits for the period. Ind-AS 12 - Income taxes requires entities to account for deferred taxes using the balance sheet approach, which focuses on temporary differences between the carrying amount of an asset or liability in the balance sheet and its tax base. The application of Ind-AS 12 approach has resulted in insignificant amount of deferred tax on new temporary differences and accordingly not recognised.

**(i) Proposed Dividend**

Under previous GAAP, the Company had accounted for proposed dividends relating to year ended 31 March 2015 in that year, though the approval of that dividend took place after the reporting date. Under Ind AS, proposed dividends do not meet the definition of liability until they have been approved by shareholders at the Annual General Meeting. Therefore, the Company has not recognized a liability for dividend that has been proposed but will not be approved until after the reporting date.

The effect of the adjustment is to increase the retained earnings by ₹ 1,736.71 crores with corresponding decrease in provisions as at 1 April 2015 and ₹ 1,732.63 crore as at 31 March 2016.

## 41<sup>st</sup> Annual Report 2016-17

### Standalone Financial Statements



**(j) Electricity duty**

Under previous GAAP, sale of electricity was presented as net of electricity duty. Electricity duty was separately presented on the face of statement of profit and loss. However, under Ind AS, sale of electricity is presented inclusive of electricity duty. Thus sale of electricity under Ind AS has increased by ₹ 729.20 crore with a corresponding increase in other expenses due to this change.

**(k) Employee benefits**

Both under previous GAAP and Ind-AS, the Company recognised costs related to its post-employment defined benefit plan on an actuarial basis. Under previous GAAP, the entire cost, including actuarial gains and losses, are charged to profit or loss. Under Ind-AS, remeasurements [comprising of actuarial gains and losses, the effect of the asset ceiling, excluding amounts included in net interest on the net defined benefit liability and the return on plan assets excluding amounts included in net interest on the net defined benefit liability] are recognised in Other Comprehensive Income.

As a result, profit for the year ended 31 March 2016 increased by ₹ 38.35 crore (net of tax) with corresponding decrease in Other comprehensive income during the year.

**(l) Other equity**

Retained earnings as at 1 April 2015 has been adjusted consequent to the above Ind AS transition adjustments. Refer 'Reconciliation of total equity as at 31 March 2016 and 1 April 2015' as given above for details.

**(m) Other comprehensive income**

Under previous GAAP, the Company has not presented other comprehensive income (OCI) separately. Items that have been reclassified from statement of profit and loss to other comprehensive income includes remeasurement of defined benefit plans and fair value gain/loss on FVTOCI equity instruments. Hence, previous GAAP profit or loss is reconciled to total comprehensive income as per Ind AS.

**(n) Rebate to customers**

During the year ending 31 March 2016, Trade receivable has been reduced to the extent of ₹ 508.46 crores towards rebate to customers.

**(o) Deferred Revenue**

On transition date an amount of ₹ 24.48 crore has been transferred from deferred revenue to retained earnings and ₹0.30 crore has been transferred from capital reserve to deferred revenue towards Government grant received. Further during the year ending 31 March 2016 an amount of ₹125.03 crore has been transferred from capital reserve to deferred revenue towards Government grants received and ₹ 0.13 crore transferred from deferred revenue to retained earnings.

**(p) Impact of Ind AS adoption on the Statement of Cash Flows for the year ended 31 March 2016:**

₹ Crore

Particulars	Previous GAAP	Adjustments	Ind AS
Net cash flow from operating activities	14,503.53	9,483.85	23,987.38
Net cash flow from investing activities	(18,422.65)	76.56	(18,346.09)
Net cash flow from financing activities	(4,436.38)	(113.24)	(4,549.62)
<b>Net increase/ (decrease) in cash and cash equivalents during the year</b>	<b>(8,355.50)</b>	<b>9,447.17</b>	<b>1,091.67</b>
Cash and cash equivalents at the beginning of the year	13,105.41	(12,824.76)	280.65
Effect of exchange rate changes on cash and cash equivalent held in foreign currency	0.08	-	0.08
<b>Cash and cash equivalent at the end of the year</b>	<b>4,749.99</b>	<b>(3,377.59)</b>	<b>1,372.40</b>

Cash flow from operating activities under Ind AS has increased mainly due to reclassification of other bank balances from cash and cash equivalents to working capital changes and reclassification of cash flow from investing activities as a result of recognition of certain property, plant & equipment as finance lease receivables, capitalisation of overhauling cost and capital spares as property, plant & equipment and reclassification of certain capital advances to other advances. Further, cash flow from financing activities increased mainly due to reclassification of grants received to deferred revenue.

### 63. Disclosure as per Ind AS 106, 'Exploration for and Evaluation of Mineral Resources'

- a) The Company along-with some public sector undertakings has 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 KG-OSN-2009/1 & AN-DWN-2009/13, the Company along-with the consortium partners has decided to relinquish both the blocks and Oil and Natural Gas Commission (ONGC), the operator has submitted an application to Directorate General of Hydrocarbons (DGH) in this regard.

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 as at 31 March 2017 and income and expenses for the year is as under:

₹ Crore			
Particulars	31 March 2017 (Unaudited)	31 March 2016 (Unaudited)	1 April 2015 (Unaudited)
Assets	0.02	0.03	0.62
Liabilities	1.35	3.15	2.41
Capital commitments [Unfinished Minimum Work Programme (MWP)]	0.29	30.69	92.54

₹ Crore		
Particulars	31 March 2017 (Unaudited)	31 March 2016 (Unaudited)
Expenses	14.81	7.05

For the year 31 March 2017 and 31 March 2016, there are no income and operating/investing cash flow from exploration activities.

The exploration activities in block KG-OSN-2009/4 were suspended w.e.f. 11 January 2012 due to non-clearance by the Ministry of Defence, GOI. Subsequently, DGH vide letter dated 29 April 2013 has informed ONGC that the block is cleared conditionally wherein block area is segregated between No Go zone, High-risk zone and Permitted zone. As the permitted area is only 38% of the total block area the consortium has submitted proposal to DGH for downward revision of MWP of initial exploration period. DGH has agreed for drilling of one well and have instructed to carry out airborne Full Tensor Gravity Gradiometer (FTG) survey in conditionally and partial cleared area in lieu of MoD proportionate reduced 317 Sq KM 3D survey, 589 LKM of 2D survey and drilling of two wells.

ONGC has completed drilling of one well. Airborne Full Tensor Gravity Gradiometer (FTG) survey work is under progress.

- b) Exploration activities in the block AA-ONN-2003/2 were abandoned in January 2011 due to unforeseen geological conditions & 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 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 ₹ 68.24 crore from ₹ 65.35 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 ₹ 0.07 crore (previous year ₹ 0.06 crore) towards the establishment expenses 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 as at 31 March 2017 and income and expenses for the year is as under:



₹ Crore

Particulars	31 March 2017 (Unaudited)	31 March 2016 (Unaudited)	1 April 2015 (Unaudited)
Assets	9.19	9.19	9.19
Liabilities	70.19	67.73	59.25

₹ Crore

Particulars	31 March 2017 (Unaudited)	31 March 2016 (Unaudited)
Expenses	0.07	0.06

For the year 31 March 2017 and 31 March 2016, there are no income and operating/investing cash flow from exploration activities.

- c) The Company has 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.

Minimum Work Program (MWP) for the block has been completed. No oil or gas of commercial value was observed in any of the wells. Accordingly, proposal for relinquishment of the block has been submitted to GOI.

Based on the audited statement of the account for the above block, Company's assets and liabilities as at 31 March 2017 and expenditure for the year are given below:

₹ Crore

Particulars	31 March 2017	31 March 2016	1 April 2015
Assets	6.17	83.92	46.40
Liabilities	9.70	16.95	23.43
Capital commitments (Unfinished MWP)	-	35.94	140.27

₹ Crore

Particulars	31 March 2017	31 March 2016
Expenses	99.53	30.02
Operating cash flows from exploration activities	28.97	74.02

Expenses charged off during the year ended 31 March 2017 include opening capital work-in-progress of ₹ 74.40 crore as at 1 April 2016.

For the year 31 March 2017 and 31 March 2016, there are no income and investing cash flow from exploration activities.



#### 64. 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.

Other operations : It includes providing consultancy, project management & supervision, 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 reconciliation to amounts reflected in the financial statements:

₹ Crore

Particulars	Generation of energy		Others		Total	
	31 March 2017	31 March 2016	31 March 2017	31 March 2016	31 March 2017	31 March 2016
<b>Segment revenue</b>						
Sale of energy/ consultancy, project management and supervision fee *	77,311.54	70,184.87	163.70	117.04	77,475.24	70,301.91
Other income	1,550.38	902.28	2.27	3.35	1,552.65	905.63
	78,861.92	71,087.15	165.97	120.39	79,027.89	71,207.54
Unallocated corporate interest and other income					314.41	801.62
<b>Total</b>	78,861.92	71,087.15	165.97	120.39	79,342.30	72,009.16
<b>Segment result**</b>	17,765.47	14,212.77	(64.51)	(16.43)	17,700.96	14,196.34
Unallocated corporate interest and other income					314.41	801.62
Unallocated corporate expenses, interest and finance charges					5,627.47	4,402.19
<b>Profit before tax</b>					12,387.90	10,595.77
Income tax (net)					3,002.64	(173.83)
<b>Profit after tax</b>					9,385.26	10,769.60
Depreciation/ amortisation/ impairment***	5,868.38	5,108.06	0.26	0.32	5,868.64	5,108.38
Non-cash expenses other than depreciation	136.00	174.45	2.96	6.71	138.96	181.16
Capital expenditure	27,040.16	27,864.61	1,220.97	1,166.98	28,261.13	29,031.59



₹ Crore

Particulars	Generation of energy			Others			Total		
	31 March 2017	31 March 2016	1 April 2015	31 March 2017	31 March 2016	1 April 2015	31 March 2017	31 March 2016	1 April 2015
Segment assets	126,728.63	118,667.36	102,743.68	3,518.96	2,501.19	1,530.67	130,247.59	121,168.55	104,274.35
Unallocated corporate and other assets							106,329.90	93,969.77	92,895.91
<b>Total assets</b>	<b>126,728.63</b>	<b>118,667.36</b>	<b>102,743.68</b>	<b>3,518.96</b>	<b>2,501.19</b>	<b>1,530.67</b>	<b>236,577.49</b>	<b>215,138.32</b>	<b>197,170.26</b>
Segment liabilities	14,531.36	14,154.98	13,621.38	2,159.92	1,577.65	710.58	16,691.28	15,732.63	14,331.96
Unallocated corporate and other liabilities							123,654.98	108,111.99	99,008.20
<b>Total liabilities</b>	<b>14,531.36</b>	<b>14,154.98</b>	<b>13,621.38</b>	<b>2,159.92</b>	<b>1,577.65</b>	<b>710.58</b>	<b>140,346.26</b>	<b>123,844.62</b>	<b>113,340.16</b>

\* Includes ₹ 995.59 crore (31 March 2016: (-) ₹ 1,642.91 crore) for sales related to earlier years.

\*\* Generation segment result would have been ₹ 16,769.88 crore (31 March 2016: ₹ 15,855.68 crore) without including the sales related to earlier years.

\*\*\* Includes (-) ₹ 0.73 crore (31 March 2016: ₹ 4.48 crore) towards impairment loss/(reversal) recognised in the profit or loss, in generation of energy segment.

The Company has not disclosed geographical segments as operations of the Company are mainly carried out within the country.

#### C. Information about major customers

Revenue from two major customers under 'generation of energy' segment is ₹ 8,556.66 crore (31 March 2016: ₹ 8,631.32 crore) and ₹ 8,214.91 crore (31 March 2016: ₹ 6,632.01 crore) which is more than 10% of the Company's total revenues.

## 65. 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 borrowings, trade & 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, derivative financial instruments, financial assets measured at amortised cost and cash & 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 & interest rate swaps and principal only swaps
Market risk – interest rate risk	Long-term borrowings at variable rates	Sensitivity analysis	Different kinds of loan arrangements with varied terms (eg. fixed, floating, rupee, foreign currency, 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, loans & advances, cash & cash equivalents and deposits with banks and financial institutions.

### Trade receivables

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 was valid till October 2016. Govt of India has approved the extension of these TPAs for another period of 10 years. Most of the States have signed these 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 sixty days from the date of bill and levy of surcharge @ 18% p.a. on delayed payment beyond sixty days.

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.

#### 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, subsidiaries 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 secured by 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 ₹ 157.12 crore (31 March 2016: ₹ 1,372.40 crore, 1 April 2015: ₹ 280.65 crore). The cash and cash equivalents are held with banks with high rating.

#### Deposits with banks and financial institutions

The Company held deposits with banks and financial institutions of ₹ 2,773.37 crore (31 March 2016: ₹ 3,088.38 crore, 1 April 2015: ₹ 12,994.35 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	31 March 2017	31 March 2016	1 April 2015
<b>Financial assets for which loss allowance is measured using 12 months Expected Credit Losses (ECL)</b>			
Non-current investments	113.48	79.60	98.48
Non-current loans	530.59	440.93	468.46
Other non-current financial assets	1,164.26	1,022.19	981.48
Current investments	-	378.72	1,983.34
Cash and cash equivalents	157.12	1,372.40	280.65
Bank balances other than cash and cash equivalents	2,773.37	3,088.38	12,994.35
Current loans	236.92	251.78	272.63
Other current financial assets	6,053.32	5,246.03	2,930.38
	11,029.06	11,880.03	20,009.77
<b>Financial assets for which loss allowance is measured using Life time Expected Credit Losses (ECL)</b>			
Trade receivables	8,173.51	7,803.40	7,604.37
<b>Total</b>	<b>19,202.57</b>	<b>19,683.43</b>	<b>27,614.14</b>



(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**

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.

(iii) **Ageing analysis of trade receivables**

The ageing analysis of the trade receivables is as below:

₹ Crore

Ageing	Not due	0-30 days past due	31-60 days past due	61-90 days past due	91-120 days past due	More than 120 days past due	Total
Gross carrying amount as 31.3.2017	6,620.03	600.79	244.61	386.85	160.11	161.12	8,173.51
Gross carrying amount as 31.3.2016	6,581.25	806.24	164.22	108.44	126.59	16.66	7,803.40
Gross carrying amount as 01.4.2015	7,002.36	246.40	137.65	128.02	3.90	86.04	7,604.37

(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	Trade receivables	Advances	Claims recoverable	Total
Balance as at 1 April 2015	0.20	0.04	0.62	0.86
Impairment loss recognised	-	-	-	-
Amounts written off	-	-	0.08	0.08
<b>Balance as at 31 March 2016</b>	<b>0.20</b>	<b>0.04</b>	<b>0.54</b>	<b>0.78</b>
Impairment loss recognised	-	-	-	-
Amounts written off	-	-	0.42	0.42
<b>Balance as at 31 March, 2017</b>	<b>0.20</b>	<b>0.04</b>	<b>0.12</b>	<b>0.36</b>

Based on historic default rates, the Company believes that no impairment allowance is necessary in respect of any other assets as the amounts are insignificant.

**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 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 fuel cost, 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	31 March 2017	31 March 2016	1 April 2015
<b>Fixed-rate borrowings</b>			
Bank overdraft	-	1,000.00	-
Foreign currency loans	297.74	918.85	1,404.42
<b>Floating-rate borrowings</b>			
Bank overdraft	2,000.00	875.00	200.00
Term loans	8,615.00	17,160.00	21,110.00
Foreign currency loans	88.84	338.92	456.58
<b>Total</b>	<b>11,001.58</b>	<b>20,292.77</b>	<b>23,171.00</b>

**(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 2017

₹ Crore

Contractual maturities of financial liabilities	Contractual cash flows					Total
	3 months or less	3-12 months	1-2 years	2-5 years	More than 5 years	
<b>Non-derivative financial liabilities</b>						
Secured bonds	496.03	958.60	2,209.00	4,518.50	26,334.83	34,516.96
Rupee term loans from banks	218.48	1,919.57	2,009.89	7,135.72	18,695.80	29,979.46
Rupee term loans from others	460.94	947.70	1,183.38	2,695.57	2,853.44	8,141.03
Finance lease obligations	5.02	20.57	25.59	80.07	430.21	561.46
Foreign currency notes	49.93	163.92	-	5,286.50	13,384.50	18,884.85
Unsecured foreign currency loans from banks and financial institutions	656.17	1,581.40	1,154.21	5,279.17	2,586.08	11,257.03
Unsecured foreign currency loans (guaranteed by GOI)	-	173.78	171.32	517.75	1,236.32	2,099.17
Commercial paper & cash credit	3,000.56	-	-	-	-	3,000.56
Trade and other payables	14,207.07	2,187.11	1,846.07	664.44	4.06	18,908.75
<b>Derivative financial liabilities</b>						
Full currency swaps	-	16.62	15.36	14.10	-	46.08

31 March 2016

₹ 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
<b>Non-derivative financial liabilities</b>						
Secured bonds	357.40	758.04	650.00	5,533.00	18,661.83	<b>25,960.27</b>
Rupee term loans from banks	197.46	2,426.61	2,675.78	7,016.85	15,996.73	<b>28,313.43</b>
Rupee term loans from others	477.86	1,124.95	1,359.38	2,980.42	3,751.98	<b>9,694.59</b>
Finance lease obligations	5.37	20.66	26.03	76.10	407.76	<b>535.92</b>
Foreign currency notes	50.81	54.07	-	-	13,380.00	<b>13,484.88</b>
Unsecured foreign currency loans from banks and financial institutions	652.43	1,196.30	2,143.47	5,311.59	3,364.30	<b>12,668.09</b>
Unsecured foreign currency loans (guaranteed by GOI)	-	176.80	172.61	524.21	1,429.96	<b>2,303.58</b>
Cash credit	1,299.50	-	-	-	-	<b>1,299.50</b>
Trade and other payables	14,268.53	982.06	1,964.58	1,418.91	5.02	<b>18,639.10</b>
<b>Derivative financial liabilities</b>						
Full currency swaps	-	17.74	17.74	31.65	-	<b>67.13</b>

1 April 2015

₹ 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
<b>Non-derivative financial liabilities</b>						
Secured bonds	362.30	684.87	628.00	4,641.00	17,748.83	<b>24,065.00</b>
Rupee term loans from banks	180.05	2,402.27	2,523.89	7,280.87	11,031.08	<b>23,418.16</b>
Rupee term loans from others	513.98	1,164.46	1,584.38	3,591.28	6,742.99	<b>13,597.09</b>
Finance lease obligations	3.87	15.04	18.91	77.34	338.73	<b>453.89</b>
Foreign currency notes	48.00	1,942.68	-	-	9,478.50	<b>11,469.18</b>
Unsecured foreign currency loans from banks and financial institutions	134.65	584.84	1,666.58	5,525.19	3,931.49	<b>11,842.75</b>
Unsecured foreign currency loans (guaranteed by GOI)	-	156.26	152.36	460.45	1,416.81	<b>2,185.88</b>
Trade and other payables	13,548.95	648.06	152.77	2,465.52	10.56	<b>16,825.86</b>
<b>Derivative financial liabilities</b>						
Full currency swaps	-	15.96	15.96	44.52	-	<b>76.44</b>

#### 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.

## 41<sup>st</sup> Annual Report 2016-17

Standalone Financial Statements



### 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 2017, 31 March 2016 and 1 April 2015 are as below:

31 March 2017					₹ Crore
Particulars	USD	EURO	JPY	Others	Total
<b>Financial assets</b>					
Trade and other receivables	0.18	-	-	0.32	0.50
Cash and cash equivalents	1.45	-	-	0.44	1.89
Other financial assets	4.49	1.81	0.10	0.62	7.02
	<b>6.12</b>	<b>1.81</b>	<b>0.10</b>	<b>1.38</b>	<b>9.41</b>
<b>Financial liabilities</b>					
Foreign currency bonds	13,249.05	3,541.16	-	2,094.64*	18,884.85
Unsecured foreign currency loans from banks and financial institutions	9,096.54	1,808.42	2,497.32	-	13,402.28
Trade payables and other financial liabilities	2,163.43	845.61	69.12	10.02	3,088.18
	<b>24,509.02</b>	<b>6,195.19</b>	<b>2,566.44</b>	<b>2,104.66</b>	<b>35,375.31</b>

\* ₹ 2,000.00 crore - ₹ denominated USD settled Green Masala Bonds.

31 March 2016					₹ Crore
Particulars	USD	EURO	JPY	Others	Total
<b>Financial assets</b>					
Trade and other receivables	1.75	-	-	0.83	2.58
Cash and cash equivalents	1.55	-	-	0.01	1.56
Other financial assets	-	-	-	0.05	0.05
	<b>3.30</b>	<b>-</b>	<b>-</b>	<b>0.89</b>	<b>4.19</b>
<b>Financial liabilities</b>					
Foreign currency bonds	13,484.88	-	-	-	13,484.88
Unsecured foreign currency loans from banks and financial institutions	10,470.74	1,817.78	2,750.28	-	15,038.80
Trade payables and other financial liabilities	1,833.73	811.69	31.12	16.50	2,693.04
	<b>25,789.35</b>	<b>2,629.47</b>	<b>2,781.40</b>	<b>16.50</b>	<b>31,216.72</b>

1 April 2015					₹ Crore
Particulars	USD	EURO	JPY	Others	Total
<b>Financial assets</b>					
Trade and other receivables	1.70	-	-	0.73	2.43
Cash and cash equivalents	1.41	-	-	0.03	1.44
	<b>3.11</b>	<b>-</b>	<b>-</b>	<b>0.76</b>	<b>3.87</b>
<b>Financial liabilities</b>					
Foreign currency bonds	11,469.18	-	-	-	11,469.18
Unsecured foreign currency loans from banks and financial institutions	10,100.88	1,418.58	2,585.61	-	14,105.07
Trade payables and other financial liabilities	2,388.58	629.38	67.65	17.48	3,103.09
	<b>23,958.64</b>	<b>2,047.96</b>	<b>2,653.26</b>	<b>17.48</b>	<b>28,677.34</b>



### Sensitivity analysis

As per the CERC regulations, the gain/loss on account of exchange rate variations on all long term and short term foreign currency monetary items (up to COD) is recoverable from beneficiaries. Hence, the impact of strengthening or weakening of Indian rupee 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.

### Interest rate risk

The Company is exposed to interest rate risk arising mainly from long term 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 (eg. fixed, floating, rupee, foreign currency, etc.).

At the reporting date the interest rate profile of the Company's interest-bearing financial instruments is as follows:

₹ Crore			
Particulars	31 March 2017	31 March 2016	1 April 2015
<b>Financial Assets:</b>			
Investments - Bonds	-	35.09	1,756.74
Loans to related parties	154.97	2.42	4.04
Loans to others	55.34	106.10	156.35
Bank deposits	2,751.09	4,369.00	12,998.06
<b>Total</b>	<b>2,961.40</b>	<b>4,512.61</b>	<b>14,915.19</b>
<b>Financial Liabilities:</b>			
<b>Fixed-rate instruments</b>			
Bonds	34,513.63	25,958.36	24,065.00
Foreign currency loans/notes	24,685.77*	19,523.41	16,834.89
Rupee term loans	983.15	1,666.50	2,349.00
Commercial paper and cash credit	3,000.56	1,299.50	-
Finance lease obligations	145.02	140.37	103.46
	63,328.13	48,588.14	43,352.35
<b>Variable-rate instruments</b>			
Foreign currency loans/notes	7,535.66	8,972.85	8,739.36
Rupee term loans	37,137.34	36,341.52	34,666.25
	44,673.00	45,314.37	43,405.61
<b>Total</b>	<b>108,001.13</b>	<b>93,902.51</b>	<b>86,757.96</b>

\* Includes ₹ 2000.00 crore - ₹ denominated USD settled Green 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
<b>31 March 2017</b>		
Foreign currency loans/notes	(36.89)	36.89
Rupee term loans	(158.89)	158.89
	<b>(195.78)</b>	<b>195.78</b>
<b>31 March 2016</b>		
Foreign currency loans/notes	(44.35)	44.35
Rupee term loans	(165.80)	165.80
	<b>(210.15)</b>	<b>210.15</b>

Of the above mentioned increase in the interest expense, an amount of ₹ 111.69 crore (31 March 2016: ₹ 118.07 crore) is expected to be capitalised and recovered from beneficiaries.

## 66. Fair Value Measurements

### a) Financial instruments by category

₹ Crore

Particulars	31 March 2017			31 March 2016			1 April 2015		
	FVTPL	FVTOCI	Amortised Cost	FVTPL	FVTOCI	Amortised Cost	FVTPL	FVTOCI	Amortised Cost
<b>Financial assets</b>									
Investments									
- Equity instruments	1.40	112.08	-	2.80	76.80	-	1.40	97.08	-
- Bonds	-	-	-	-	-	35.09	-	-	1,756.74
- Mutual funds	-	-	-	343.63	-	-	226.60	-	-
Trade Receivables	-	-	8,173.51	-	-	7,803.40	-	-	7,604.37
Loans	-	-	767.51	-	-	692.71	-	-	741.09
Cash and cash equivalents	-	-	157.12	-	-	1,372.40	-	-	280.65
Other bank balances	-	-	2,773.37	-	-	3,088.38	-	-	12,994.35
Finance lease receivables	-	-	555.06	-	-	540.32	-	-	539.92
Derivative financial assets	-	-	-	3.66	-	-	-	-	-
Other financial assets	-	-	6,662.52	-	-	5,724.24	-	-	3,371.94
	<b>1.40</b>	<b>112.08</b>	<b>19,089.09</b>	<b>350.09</b>	<b>76.80</b>	<b>19,256.54</b>	<b>228.00</b>	<b>97.08</b>	<b>27,289.06</b>
<b>Financial liabilities</b>									
Borrowings	-	-	104,855.55	-	-	92,462.64	-	-	86,654.51
Commercial paper and cash credit	-	-	3,000.56	-	-	1,299.50	-	-	-
Finance lease obligations	-	-	145.02	-	-	140.37	-	-	103.46
Trade payables	-	-	4,889.25	-	-	5,320.01	-	-	5,956.62
Payable for capital expenditure	-	-	11,578.01	-	-	10,560.74	-	-	8,633.42
Derivative financial liabilities	1.60	-	-	0.04	-	-	4.59	-	-
Other financial liabilities	-	-	2,185.63	-	-	2,377.45	-	-	1,819.58
	<b>1.60</b>	<b>-</b>	<b>126,654.02</b>	<b>0.04</b>	<b>-</b>	<b>112,160.71</b>	<b>4.59</b>	<b>-</b>	<b>103,167.59</b>

**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 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 2017	Level 1	Level 2	Level 3	Total
<b>Financial assets:</b>				
Investments in quoted equity instruments - PTC India Ltd.	112.08	-	-	112.08
Investments in unquoted equity instruments	-	-	1.40	1.40
	<b>112.08</b>	<b>-</b>	<b>1.40</b>	<b>113.48</b>
<b>Financial liabilities:</b>				
<b>Derivative financial liabilities:</b>				
- Currency and interest rate swaps	-	-	0.12	0.12
- Principal only swaps	-	-	1.48	1.48
	<b>-</b>	<b>-</b>	<b>1.60</b>	<b>1.60</b>

₹ Crore

Financial assets and liabilities measured at fair value As at 31 March 2016	Level 1	Level 2	Level 3	Total
<b>Financial assets:</b>				
Investments in quoted equity instruments - PTC India Ltd.	76.80	-	-	76.80
Investments in unquoted equity instruments	-	-	2.80	2.80
Investments in mutual funds	-	343.63	-	343.63
<b>Derivative financial assets:</b>				
- Currency and interest rate swaps	-	-	-	-
- Principal only swaps	-	-	3.66	3.66
	<b>76.80</b>	<b>343.63</b>	<b>6.46</b>	<b>426.89</b>
<b>Financial liabilities:</b>				
<b>Derivative financial liabilities:</b>				
- Currency and interest rate swaps	-	-	0.04	0.04
- Principal only swaps	-	-	-	-
	<b>-</b>	<b>-</b>	<b>0.04</b>	<b>0.04</b>



₹ Crore

Financial assets and liabilities measured at fair value As at 1 April 2015	Level 1	Level 2	Level 3	Total
<b>Financial assets:</b>				
Investments in quoted equity instruments - PTC India Ltd.	97.08	-	-	97.08
Investments in unquoted equity instruments	-	-	1.40	1.40
Investments in mutual funds	-	226.60	-	226.60
<b>Derivative financial assets:</b>				
- Currency and interest rate swaps	-	-	-	-
- Principal only swaps	-	-	-	-
	97.08	226.60	1.40	325.08
<b>Financial liabilities:</b>				
<b>Derivative financial liabilities:</b>				
- Currency and interest rate swaps	-	-	1.15	1.15
- Principal only swaps	-	-	3.44	3.44
	-	-	4.59	4.59

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.

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 observable current market transactions and dealer quotes of similar instruments. This level includes derivative MTM assets/liabilities. Fair value of derivative assets/liabilities such as Interest rate swaps and foreign exchange forward contracts are valued using valuation techniques, which employs the use of market observable inputs. The most frequently applied valuation techniques include forward pricing and swap models & present value calculations.

There have been no transfers in either direction for the years ended 31 March 2017, 2016 and 2015.

**c) Valuation technique used to determine fair value:**

Specific valuation techniques used to fair value of financial instruments include:

- For financial instruments other than at ii), iii) and iv) - the use of quoted market prices
- For investments in mutual funds - Closing NAV is used.
- For financial liabilities (vendor liabilities, debentures, 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	31 March 2017		31 March 2016		1 April 2015	
		Carrying amount	Fair value	Carrying amount	Fair value	Carrying amount	Fair value
<b>Financial assets</b>							
Loans	3	767.51	670.74	692.71	574.96	741.09	618.57
Finance lease receivables	3	555.06	555.06	540.32	540.32	539.92	539.92
Claims recoverable	3	638.97	638.97	510.99	510.99	466.28	466.28
Trade receivables	3	35.59	35.59	71.18	71.18	-	-
		1,997.13	1,900.36	1,815.20	1,697.45	1,747.29	1,624.77
<b>Financial liabilities</b>							
Bonds/Debentures	1	4,727.09	4,735.64	-	-	11,556.65	11,785.21
	2	22,655.40	24,510.07	25,571.53	27,102.13	12,508.35	13,707.95
	3	7,131.14	7,797.27	386.83	400.38	-	-
Foreign currency notes	1	-	-	-	-	3,197.51	3,651.74
	2	13,223.72	14,152.08	13,457.46	14,540.79	6,367.00	6,827.73
	3	5,595.43	5,848.55	-	-	1,904.67	1,985.15
Foreign currency loans	3	13,402.28	13,646.82	15,038.80	15,362.60	14,105.07	14,332.05
Rupee term loans	3	38,120.49	38,137.70	38,008.02	38,031.14	37,015.26	37,056.35
Trade payables & payable for capital expenditure	3	2,012.94	1,812.03	2,642.88	2,337.51	2,215.16	1,885.67
Other financial liabilities	3	247.36	247.36	364.76	364.76	2.03	2.03
		107,115.85	110,887.52	95,470.28	98,139.31	88,871.70	91,233.88

The carrying amounts of short term trade receivables, trade payables, capital creditors, investment in bonds, 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 capital creditors 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.

For financial assets and liabilities that are measured at fair value, the carrying amounts are equal to the fair values.

## 67. 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 result from operating activities divided by total shareholders' equity. The Board of Directors also monitors the level of dividends to equity shareholders.

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 1.25:1 and account receivable ratio not exceeding 3:1 (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 long term and short term 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	31 March 2017	31 March 2016	1 April 2015
Borrowings	108,001.13	93,902.51	86,757.97
Less: Cash and cash equivalent	157.12	1,372.40	280.65
Net Debt	107,844.01	92,530.11	86,477.32
Total Equity	96,231.23	91,293.70	83,830.10
Net Debt to Equity ratio	1.12	1.01	1.03

#### 68. 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 customers 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.

The Company is eligible to apply Ind AS 114, Regulatory Deferral Accounts. The standard permits an eligible entity to continue previous GAAP (Guidance Note on accounting for Rate Regulated Activities) accounting policy for its regulatory deferral account balances. Hence, Company has opted to continue with its previous GAAP accounting policy for such balances.

##### (ii) Recognition and measurement

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 difference arising during the construction period is 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 'Movements in Regulatory deferral account balances' during construction period and adjusted from the year in which the same becomes recoverable from or payable to the beneficiaries.

Revision of pay scales of employees of PSEs are due w.e.f. 1 January 2017 (Refer Note 33). The recommendations of the constituted committee to the Government inter-alia includes 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 and the enhanced amount from ₹ 0.10 crore to ₹ 0.20 crore will be borne by the Company. 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 proposed increase in gratuity from ₹ 0.10 crore to ₹ 0.20 crore falls under the category of 'Change in law'.

CERC Tariff Regulations provide truing up of capital expenditure, subject to prudence check, considering inter-alia change in laws. Considering the methodology followed by the CERC in the previous pay revision and the provisions of CERC Tariff Regulations, 2014, a regulatory asset has been created (Regulatory deferral account debit balance) towards the increase in O&M expenditure due to the pay revision. This will be claimed upon implementation of revision of pay scales and discharge of related liabilities.

(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 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 credit balance - Note 36**

₹ Crore		
Particulars	31 March 2017	31 March 2016
A. Opening balance	295.65	307.74
B. Addition during the year	193.38	(8.45)
C. Amount collected/refunded during the year	6.29	3.64
D. Regulatory deferral account balances recognized in the Statement of Profit & Loss (B-C)	187.09	(12.09)
E. Closing balance (A+D)	482.74	295.65

b) **Regulatory deferral account debit balance - Note 20**

The regulated assets/liability recognized in the books to be recovered from or payable to beneficiaries in future periods are as follows:

₹ Crore		
Particulars	31 March 2017	31 March 2016
A. Opening balance	-	-
B. Addition during the year	522.83	-
C. Amount collected/refunded during the year	-	-
D. Regulatory deferral account balances recognized in the Statement of Profit & Loss (B-C)	522.83	-
E. Closing balance (A+D)	522.83	-

c) <b>Total amount recognized in the Statement of Profit &amp; Loss during the year</b>	<b>335.74</b>	12.09
---	---------------	-------

The Company expects to recover the carrying amount of regulatory deferral account debit balance over a period of 4-5 years.



**69. Information in respect of micro and small enterprises as at 31 March 2017 as required by Micro, Small and Medium Enterprises Development Act, 2006**

₹ Crore

Particulars	31 March 2017	31 March 2016	1 April 2015
a) Amount remaining unpaid to any supplier:			
Principal amount	347.87	174.77	89.06
Interest due thereon	0.11	0.09	0.13
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.	-	0.01	0.02
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.	0.01	0.09	0.01
d) Amount of interest accrued and remaining unpaid	0.01	0.05	0.07
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	-	-	-

**70. 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		
	31 March 2017	31 March 2016	1 April 2015	31 March 2017	31 March 2016	1 April 2015
Kanti Bijlee Utpadan Nigam Ltd.	121.00	1.71	3.43	121.86	3.43	8.00
Patratu Vidyut Utpadan Nigam Ltd.	33.25	-	-	33.25	-	-

2. To Firms/companies in which directors are interested : Nil

**B. Investment by the loanee (as detailed above) in the shares of NTPC : Nil**

**71. Contingent liabilities and commitments**

**A. Contingent liabilities**

**a. Claims against the company not acknowledged as debts**

**(i) Capital works**

Some of the contractors for supply and installation of equipments and execution of works at our projects have lodged claims on the Company for ₹ 12,753.91 crore (31 March 2016: ₹ 8,768.55 crore, 1 April 2015: ₹ 7,660.88 crore) 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**

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 ₹ **349.31 crore** (31 March 2016: ₹ 332.34 crore & 1 April 2015: ₹ 312.37 crore) has been estimated.

(iii) **Fuel suppliers**

a) Pending resolution of the issues with the coal companies, an amount of ₹ **2,570.55 crore** (31 March 2016: ₹ 1,646.17 crore, 1 April 2015: ₹ Nil) towards grade slippage pursuant to third party sampling has been estimated by the Company as contingent liability. Further, an amount of ₹ **661.50 crore** (31 March 2016: ₹ 209.89 crore, 1 April 2015: ₹ 567.22 crore) towards surface transportation charges, custom duty on service margin on imported coal etc. has been estimated by the Company as contingent liability.

b) Pending resolution of the issues with a fuel company for supply of RLNG, an amount of ₹ **4,173.57 crore** (31 March 2016: ₹ 323.87 crore, 1 April 2015: ₹ Nil) towards the take or pay claim has been 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**

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, contingent liability of ₹ **253.15 crore** (31 March 2016: ₹ 312.94 crore, 1 April 2015: ₹ 896.34 crore) has been estimated.

(v) **Possible reimbursement**

The contingent liabilities referred to in (i) above, include an amount of ₹ **919.33 crore** (31 March 2016: ₹ 1,298.80 crore, 1 April 2015: ₹ 1,172.56 crore) relating to the hydro power project stated in Note 10 (a) - Other financial assets, for which Company envisages possible reimbursement from the GOI in full. In respect of balance claims included in (i) and in respect of the claims mentioned at (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 ₹ **7,373.54 crore** (31 March 2016: ₹ 2,051.77 crore, 1 April 2015: ₹ 423.36 crore).

b. **Disputed tax matters**

Disputed income tax/Sales tax/Excise and other tax matters pending before various Appellate Authorities amount to ₹ **6,934.90 crore** (31 March 2016: ₹ 7,499.37 crore, 1 April 2015: ₹ 4,161.87 crore). 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 ₹ **3,302.47 crore** (31 March 2016: ₹ 3,602.24 crore, 1 April 2015: ₹ 1,508.46 crore). The amount paid under dispute/adjusted by the authorities in respect of the cases amounts to ₹ **6,499.22 crore** (31 March 2016: ₹ 6,548.66 crore, 1 April 2015: ₹ 3,254.52 crore).

c. **Others**

Other contingent liabilities amount to ₹ **213.92 crore** (31 March 2016: ₹ 164.55 crore, 1 April 2015: ₹ 309.36 crore).

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**

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.



### C. Commitments

- a) Estimated amount of contracts remaining to be executed on capital account (property, plant & equipment and intangible assets) and not provided for as at 31 March 2017 is ₹ **48,607.62 crore** (31 March 2016: ₹ 55,449.01 crore, 1 April 2015: ₹ 58,398.91 crore). Details of the same are as under:

	31.03.2017	31.03.2016	01.04.2015
Property, plant & equipment	48,401.83	55,109.78	58,158.71
Intangible assets	205.79	339.23	240.20

₹ Crore

- b) In respect of investments of ₹ **2,418.01 crore** (31 March 2016: ₹ 1,910.35 crore, 1 April 2015: ₹ 1,822.61 crore) in subsidiary Companies, the Company has restrictions for their disposal as at 31 March 2017 as under:

Name of the Subsidiary	Period of restrictions for disposal of investments as per related agreements	Amount invested		
		31 March 2017	31 March 2016	1 April 2015
Bhartiya Rail Bijlee Company Ltd.	5 years from the date of commercial operation.	1,420.54	1,188.25	1,172.61
Kanti Bijlee Utpadan Nigam Ltd.	5 years from the date of commercial operation. Further, as per loan agreement, minimum equity of 51% shall be maintained at all times untill final settlement of loan i.e., 4 years moratorium period and subsequently 11 years for repayment.	962.89	721.02	650.00
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.	34.58	1.08	-
<b>Total</b>		<b>2,418.01</b>	<b>1,910.35</b>	<b>1,822.61</b>

₹ Crore

- c) In respect of investments of ₹ **2,785.99 crore** (31 March 2016: ₹ 1,794.94 crore, 1 April 2015: ₹ 1,692.48 crore) in the joint venture entities, the Company has restrictions for their disposal as at 31 March 2017 as under:

Name of the Joint Venture Company	Period of restrictions for disposal of investments as per related agreements	Amount invested		
		31 March 2017	31 March 2016	1 April 2015
Pan-Asian Renewables Private Ltd.	2 years from the date of commercial operation of the project having minimum capacity of 100 MW of renewable energy project or 5 years from the date of incorporation (i.e. 14.10.2011) whichever is earlier. Also refer Note 6 (g).	-	-	1.50

₹ Crore

₹ Crore

Name of the Joint Venture Company	Period of restrictions for disposal of investments as per related agreements	Amount invested		
		31 March 2017	31 March 2016	1 April 2015
NTPC-SCCL Global Ventures Private Ltd.	5 years from the date of incorporation (i.e. 31.07.2007) or commercial operation whichever is later. Also refer Note 6 (b).	-	-	0.05
National Power Exchange Ltd.	5 years from the date of commencement of business i.e. trading operation or Company issues shares to public at large (IPO) whichever is earlier. Also refer Note 6 (e).	-	-	2.19
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	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 (c).	50.00	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.	30.40	23.90	23.90
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	0.08
Trincomalee Power Company Ltd.	12 years from the initial operation date.	15.20	15.20	9.26
Bangladesh-India Friendship Power Company Private Ltd.	15 years from the date of commercial operation date.	134.20	69.68	31.43
Meja Urja Nigam Private Ltd.	5 years from the date of incorporation (i.e. 02.04.2008) or commercial operation whichever is later. Further, NTPC shall hold atleast 50% of equity and voting rights until final settlement of loan i.e., 5 years moratorium period and subsequently 10 years for repayment.	1,166.44	841.44	541.35

## 41<sup>st</sup> Annual Report 2016-17

Standalone Financial Statements



₹ Crore

Name of the Joint Venture Company	Period of restrictions for disposal of investments as per related agreements	Amount invested		
		31 March 2017	31 March 2016	1 April 2015
Nabinagar Power Generating Company Private Ltd.	5 years from the date of incorporation (09.09.2008) or commercial operation whichever is later. Further, NTPC shall not transfer/assign or pledge shares of the JV until final settlement of loan i.e. 5 years moratorium and subsequently 15 years for repayment.	1,353.30	763.30	511.13
NTPC-SAIL Power Company Ltd. (formerly NTPC-SAIL Power Company Private Ltd.)	3 years from the date of allotment (last allotment made on 30.09.2012)	-	-	490.25
Hindustan Urvarak and Rasayan Ltd.	5 years from the date of incorporation 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.	5.03	-	-
<b>Total</b>		<b>2,785.99</b>	<b>1,794.94</b>	<b>1,692.48</b>

- d) In respect of other investments of ₹ 1.40 crore (31 March 2016: ₹ 5.14 crore, 1 April 2015: ₹ 1.40 crore), the Company has restrictions for their disposal as at 31 March 2017 as under:

₹ Crore

Name of the Company	Period of restrictions for disposal of investments as per related agreements	Amount invested		
		31 March 2017	31 March 2016	1 April 2015
Pan-Asian Renewables Private Ltd.	2 years from the date of commercial operation of the project having minimum capacity of 100 MW of renewable energy project or 5 years from the date of incorporation (i.e.14.10.2011) whichever is earlier. Also refer Note 6 (g).	-	1.50	-
NTPC-SCCL Global Ventures Private Ltd.	5 years from the date of incorporation (i.e. 31.07.2007) or commercial operation whichever is later. Also refer Note 6 (b).	-	0.05	-
National Power Exchange Ltd.	5 years from the date of commencement of business i.e trading operation or Company issues shares to public at large (IPO) whichever is earlier. Also refer Note 6 (e).	-	2.19	-



₹ Crore

Name of the Company	Period of restrictions for disposal of investments as per related agreements	Amount invested		
		31 March 2017	31 March 2016	1 April 2015
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. Also refer Note 7(c).	1.40	1.40	1.40
Total		1.40	5.14	1.40

- e) The Company has commitments of ₹ **1,162.56 crore** (31 March 2016: ₹ 1,145.14 crore, 1 April 2015: ₹ 131.82 crore) towards further investment in the subsidiary companies as at 31 March 2017.
- f) The Company has commitments of ₹ **3,082.90 crore** (31 March 2016: ₹ 2,759.91 crore, 1 April 2015: ₹ 3,139.80 crore) towards further investment in the joint venture entities as at 31 March 2017.
- g) The Company has commitments of ₹ **498.60 crore** (31 March 2016: ₹ 498.60 crore, 1 April 2015: ₹ 498.60 crore) towards further investment in other investments as at 31 March 2017.
- h) The Company has commitments of bank guarantee of 0.50 % of total contract price to be undertaken by NTPC-BHEL Power Projects Private Ltd. to a cumulative amount of ₹ **75.00 crore** (31 March 2016: ₹ 75.00 crore, 1 April: 2015: ₹ 75.00 crore).
- i) Company's commitment towards the minimum work programme in respect of oil exploration activity of Cambay Block (100% owned by the Company) is ₹ **Nil** (31 March 2016: ₹ 35.94 crore (USD 5.42 million), 1 April 2015: ₹ 140.27 crore (USD 22.41 million).
- j) Company's commitment towards the minimum work programme in respect of oil exploration activities of joint venture operations has been disclosed in Note 63.
- k) S.O. 254 (E) dated 25 January 2016 issued by the Ministry of Environment, Forest and Climate Change (MOEF), GOI provides that the cost of transportation of ash for road construction projects or for manufacturing of ash based products or use as soil conditioner in agricultural activity within a radius of hundred kilometres from a coal based thermal power plant shall be borne by such coal based thermal power plant and the cost of transportation beyond the radius of hundred kilometres and up to three hundred kilometres shall be shared equally between the user and the coal based thermal power plant. Further, the coal or lignite based thermal power plants shall within a radius of three hundred kilometres bear the entire cost of transportation of ash to the site of road construction projects under Pradhan Mantri Gramin Sadak Yojna and asset creation programmes of the Government involving construction of buildings, road, dams and embankments. Accordingly, the Company has commitment to bear/share the cost of transportation of fly ash from its coal based stations on lifting of the fly ash by the users. Based on an independent expert opinion, the Company's obligation towards the transportation cost of fly ash will arise only on lifting & transportation of the fly ash. Further, the Company's liability on this account, if any shall be first met from the 'Fly Ash Utilization Reserve Fund' maintained by the Company in terms of MOEF Notification dated 3 November 2009.
- l) Company's commitment in respect of lease agreements has been disclosed in Note 55.

## 72. 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:

## 41<sup>st</sup> Annual Report 2016-17

Standalone Financial Statements



₹ Crore

Particulars	31 March 2017	31 March 2016
A. Amount required to be spent during the year	227.85	271.35
B. Shortfall amount of previous year	-	78.30
C. Total (A+B)	227.85	349.65
D. Amount spent during the year on:		
- Construction/acquisition of any asset	4.46	1.96
- On purposes other than above	273.35	489.46
<b>Total</b>	<b>277.81</b>	<b>491.42</b>
Shortfall amount appropriated to CSR reserve	-	-

a) Amount spent during the year ended 31 March 2017:

₹ Crore

Particulars	In cash	Yet to be paid in cash	Total
Construction/acquisition of any asset	4.44	0.02	4.46
On purposes other than above	250.31	23.04	273.35

b) Amount spent during the year ended 31 March 2016:

₹ Crore

Particulars	In cash	Yet to be paid in cash	Total
Construction/acquisition of any asset	1.96	-	1.96
On purposes other than above	457.46	32.00	489.46

E. Break-up of the CSR expenses under major heads is as under:

₹ Crore

Particulars	31 March 2017	31 March 2016
1. Swachh vidyalaya abhiyan	35.73	278.32
2. Healthcare and sanitation	55.52	39.76
3. Education and skill development	60.45	54.49
4. Rural development	51.30	44.21
5. Environment	35.33	33.85
6. Drinking water	9.36	9.27
7. Sports	1.90	1.89
8. Capacity building	11.39	13.57
9. Protection of national heritage, art and culture	0.82	3.17
10. Other CSR activities	16.01	12.89
<b>Total</b>	<b>277.81</b>	<b>491.42</b>

**73. Details of Specified Bank Notes (SBN) held and transacted during the period 8 November 2016 to 30 December 2016: Pursuant to MCA Notification No. GSR 308(E) dated 30 March 2017.**

in ₹

Particulars	Specified Bank Notes	Other denomination notes	Total
Closing cash in hand as on 08.11.2016*	374,500.00	72,754.00	447,254.00
Add: Permitted receipts *	-	9,222,260.00	9,222,260.00
Non permitted receipts**	3,944,500.00	-	3,944,500.00
Less: Permitted payments	-	-	-
Less: Amount deposited in Banks	4,319,000.00	9,146,921.00	13,465,921.00
<b>Closing cash in hand as on 30.12.2016*</b>	-	148,093.00	148,093.00

\* Balance available and receipts at hospitals, guest houses etc. of the Company, as per separate records maintained at the respective projects/stations/offices.

\*\* Includes an amount of ₹ 30,99,500/- collected at hospitals & guest houses etc. situated at projects/stations of the Company which are mostly located in remote areas. The Company's hospitals usually have all modern health care facilities and there are no other good hospitals near the Company's projects/stations. The local residents, mostly villagers, vendors and executing contractors, avail health care facilities from these hospitals by paying nominal charges. Similarly, vendors visiting project/stations of the Company from outside places, use the guest house/ transit camp facilities of the Company for stay on payment. Further, employees of the Company have drawn imprest/staff advance prior to 8 November 2016 total amounting to ₹ 8,45,000/- for meeting official expenditure, subsequently deposited the same in the Company's bank accounts. This disclosure has been added so as to arrive at the closing cash in hand as on 30 December 2016.

**74. Recent accounting pronouncements**

**Standards issued but not yet effective:**

In March 2017, the Ministry of Corporate Affairs issued the Companies (Indian Accounting Standards) (Amendments) Rules, 2017, notifying amendments to Ind AS 7, 'Statement of cash flows'. The amendments are applicable to the Company from 1 April 2017.

The amendment to Ind AS 7 requires the entities to provide disclosures that enable users of financial statements to evaluate changes in liabilities arising from financing activities, including both changes arising from cash flows and non-cash changes, suggesting inclusion of a reconciliation between the opening and closing balances in the balance sheet for liabilities arising from financing activities, to meet the disclosure requirement.

The Company is evaluating the requirements of the amendment and the effect on the financial statements is being evaluated.

For and on behalf of the Board of Directors

(K.P. Gupta)  
Company Secretary

(K.Biswal)  
Director (Finance)

(Gurdeep Singh)  
Chairman & Managing Director

These are the notes referred to in Balance Sheet and Statement of Profit and Loss

For T.R. Chadha & Co LLP  
Chartered Accountants  
Firm Reg. No. 006711N/N500028

For PSD & Associates  
Chartered Accountants  
Firm Reg. No. 004501C

For Sagar & Associates  
Chartered Accountants  
Firm Reg. No. 003510S

(Neena Goel)  
Partner  
M. No. 057986

(Thalendra Sharma)  
Partner  
M. No. 079236

(D. Manohar)  
Partner  
M. No.029644

For Kalani & Co.  
Chartered Accountants  
Firm Reg. No. 000722C

For P. A. & Associates  
Chartered Accountants  
Firm Reg. No. 313085E

For S. K. Kapoor & Co.  
Chartered Accountants  
Firm Reg. No. 000745C

For B M Chatrath & Co. LLP  
Chartered Accountants  
Firm Reg. No. 301011E/E300025

(Vikas Gupta)  
Partner  
M. No. 077076

(S. S. Poddar)  
Partner  
M. No.051113

(V. B. Singh)  
Partner  
M. No. 073124

(P. R. Paul)  
Partner  
M. No. 051675

Place: New Delhi  
Date: 29 May 2017

## 41<sup>st</sup> Annual Report 2016-17

Standalone Financial Statements



## INDEPENDENT AUDITORS' REPORT

To

The Members of NTPC Limited

### Report on the Standalone Ind AS Financial Statements

We have audited the accompanying Standalone Ind AS financial statements of NTPC Limited ("the Company"), which comprise the Balance Sheet as at 31 March 2017, and the Statement of Profit and Loss (including Other Comprehensive Income), the Statement of Cash Flows and the Statement of Changes in Equity for the year then ended, and a summary of the significant accounting policies and other explanatory information.

### Management's Responsibility for the Standalone Ind AS Financial Statements

The Company's Board of Directors is responsible for the matters stated in Section 134(5) of the Companies Act, 2013 ("the Act") with respect to the preparation of these Standalone Ind AS financial statements that give a true and fair view of the state of affairs (financial position), profit or loss (financial performance including other comprehensive income), cash flows and changes in equity 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 Ind AS financial statements, that give a true and fair view and are free from material misstatement, whether due to fraud or error.

### Auditor's Responsibility

Our responsibility is to express an opinion on these Standalone Ind AS financial statements based on our audit. We have taken into account the provisions of the Act, the accounting and auditing standards and matters which are required to be included in the audit report under the provisions of the Act and the Rules made there under. We conducted our audit of the Standalone Ind AS financial statements in accordance with the Standards on Auditing specified under Section 143(10) of the Act. Those Standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the Standalone Ind AS financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and the disclosures in the Standalone Ind AS financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the Standalone Ind AS financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal financial control relevant to the Company's preparation of the Standalone Ind AS financial statements that give a true and fair view in order to design audit procedures that are appropriate in the circumstances. An audit also includes evaluating the appropriateness of the accounting policies used and the reasonableness of the accounting estimates made by the Company's Directors, as well as evaluating the overall presentation of the Standalone Ind AS financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion on the Standalone Ind AS financial statements.

### Opinion

In our opinion and to the best of our information and according to the explanations given to us, the aforesaid Standalone Ind AS financial statements give the information required by the Act in the manner so required and give a true and fair view in conformity with the accounting principles generally accepted in India including the Ind AS, of the state of affairs (financial position) of the Company as at 31 March, 2017, and its profit (financial performance including other comprehensive income), its cash flows and the changes in equity for the year ended on that date.

### Emphasis of Matter

We draw attention to the following matters in the Notes to the financial statements:

- (a) Note No. 37 a) & b) regarding billing & recognition of sales on provisional basis and measurement of GCV of coal on 'as received' basis after secondary crusher till 30 September 2016 and GCV measured on wagon top at the unloading



point w.e.f. 1 October 2016 in respect of most of the stations pending disposal of petition by CERC and ratification by Hon'ble Delhi High Court and related matters as mentioned in the said note.

- (b) Note No. 47 in respect of a Company's ongoing project where the order of NGT has been stayed by the Hon'ble Supreme Court of India and the matter is sub-judice.
- (c) Note No. 60 regarding recognition of an impairment loss of ₹ 782.95 crore in respect of investment in joint venture Ratnagiri Gas & Power Private Limited (RGPP) as 'Exceptional items - impairment loss on investment' in the Statement of Profit and Loss based on recoverable amount of these investments arrived at by an independent expert after considering the proposed demerger scheme awaiting approval of NCLT, New Delhi.

Our opinion is not modified in respect of these matters.

#### Other Matters

The comparative financial information of the Company for the year ended 31 March 2016 and the transition date opening balance sheet as at 1 April 2015 included in these Standalone Ind AS financial statements, are based on the previously issued statutory financial statements prepared in accordance with the Companies (Accounting Standards) Rules, 2006 audited by us/the predecessor auditors, whose audit report for the year ended 31 March 2016 and 31 March 2015 dated 30 May 2016 and 29 May 2015 respectively expressed an unmodified opinion on those Standalone financial statements, as adjusted for the differences in the accounting principles adopted by the Company on transition to the Ind AS, which have been audited by us.

Our opinion is not modified in respect of above matter.

#### Report on Other Legal and Regulatory Requirements

1. As required by the Companies (Auditor's Report) Order, 2016 ("the Order") issued by the Central Government 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.
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 and sub-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 Cash Flows and the Statement of Changes in Equity dealt with by this Report are in agreement with the books of account.
  - (d) In our opinion, the aforesaid Standalone Ind AS 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 over financial reporting of the Company and the operating effectiveness of such controls, refer to our separate report in "Annexure 3".
  - (g) With respect to the other matters to be included in the Auditor's Report in accordance with Rule 11 of the Companies (Audit and Auditors) Rules, 2014, 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 Ind AS financial statements. Refer Note No. 71 to the 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;

## 41<sup>st</sup> Annual Report 2016-17

Independent Auditors' Report on Standalone Financial Statements



- iii. There has been no delay in transferring amounts, required to be transferred, to the Investor Education and Protection Fund by the Company.
- iv. The Company has provided requisite disclosures in Note No. 73 of its financial statements as to holdings as well as dealings in Specified Bank Notes (SBN) during the period from 8 November 2016 to 30 December 2016. Based on the audit procedures and relying on the management representation, we report that the disclosures are in accordance with the books of accounts and records maintained by the Company. However, as stated in the said note, SBN aggregating to ₹ 39,44,500/- have been received during the period from transactions at hospitals/guest houses etc. and from deposit of imprest/staff advance by employees of the company at project stations, which were not permitted.

For T.R. Chadha & Co LLP  
Chartered Accountants  
Firm Reg. No. 006711N/N500028

(Neena Goel)  
Partner  
M. No. 057986

For PSD & Associates  
Chartered Accountants  
Firm Reg. No. 004501C

(Thalendra Sharma)  
Partner  
M. No. 079236

For Sagar & Associates  
Chartered Accountants  
Firm Reg. No. 003510S

(D. Manohar)  
Partner  
M. No.029644

For Kalani & Co.  
Chartered Accountants  
Firm Reg. No. 000722C

(Vikas Gupta)  
Partner  
M. No. 077076

For P. A. & Associates  
Chartered Accountants  
Firm Reg. No. 313085E

(S. S. Poddar)  
Partner  
M. No.051113

For S. K. Kapoor & Co.  
Chartered Accountants  
Firm Reg. No. 000745C

(V. B. Singh)  
Partner  
M. No. 073124

For B M Chatrath & Co. LLP  
Chartered Accountants  
Firm Reg. No. 301011E/E300025

(P. R. Paul)  
Partner  
M. No. 051675

Place: New Delhi  
Date: 29 May 2017

## ANNEXURE 1 TO THE INDEPENDENT AUDITORS' REPORT

Referred to in our report of even date to the members of NTPC LIMITED on the accounts for the year ended 31 March 2017

- (i) (a) The Company has generally maintained proper records showing full particulars including quantitative details and situation of fixed assets (Property, Plant & Equipment).
- (b) There is a regular programme of physical verification of all fixed assets (Property, Plant & Equipment) over a period of two 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) The title deeds of all the immovable properties are held in the name of the Company except as follows:

Description of Asset	No. of cases	Area in acres	Gross block as on 31.03.2017 (₹ crore)	Net block as on 31.03.2017 (₹ crore)	Remarks (If Any)
Land					The Company is taking appropriate steps for completion of legal formalities
- Freehold	920	9,235	1,940.44	1,940.44	
- Leasehold	589	12,570	1,869.67	1,735.89	
Building & Structures	2	-	4.97	3.14	

- (ii) The inventory has been physically verified by the management at reasonable intervals. No material discrepancies were noticed on such physical verification.
- (iii) The Company has not granted any loans, secured or unsecured to any companies, firms, limited liability partnership or other parties covered in the register maintained under Section 189 of the Act.

In view of the above, clause 3 (iii)(a), 3 (iii)(b) and 3 (iii)(c) of the Order are not applicable.

- (iv) The Company has complied with the provisions of Section 185 and 186 of the Act in respect of loans advanced to subsidiary companies and investments made in the subsidiary and joint venture companies. The Company has not given any guarantee or provided any security to any party covered under Section 185 and 186 of the Act.
- (v) The Company has not accepted deposits from the public. 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 there under are not applicable to the Company. The Company has obtained deposits from the dependants of employees 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 58 A of the Companies Act, 1956, which is still awaited (refer Note 31 c) of the 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 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) Undisputed statutory dues including provident fund, income tax, sales-tax, wealth tax, service tax, duty of customs, duty of excise, value added tax, cess and other statutory dues have generally been regularly deposited with the appropriate authorities and there are no undisputed statutory dues outstanding as on 31 March 2017 for a period of more than six months from the date they became payable. We have been informed that employees' state insurance is not applicable to the Company.
- (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 amounts to ₹ 9,759.85 crore in aggregate as on 31 March 2017, out of which ₹ 9,564.74 crore has been deposited under protest/adjusted by tax authorities and the balance of ₹ 195.10 crore of dues have not been deposited on account of matters pending before appropriate authorities as detailed below:

## 41<sup>st</sup> Annual Report 2016-17

Independent Auditors' Report on Standalone Financial Statements



Sl. No.	Name of Statute	Nature of the disputed statutory dues	Period to which the amount relates (FY)	Forum where the dispute is pending	Gross disputed amount (₹ crore)	Amount deposited under protest/ adjusted by tax authorities (₹ crore)	Amount not deposited (₹ crore)
1	Income Tax Act, 1961	Income Tax/ Penalty/ TDS	2006-07, 2009-10	ITO (TDS)/AO	0.79	0.78	0.01
			2013-14	Asst. Commissioner of Income Tax	0.12	0.12	-
			2005-06, 2007-08, 2009-10 to 2013-14	Commissioner of Income Tax (Appeals)	2,296.70	2,158.36	138.34
			2001-02, 2003-04 to 2011-12	Income Tax Appellate Tribunal	7,326.56	7,326.52	0.04
			2004-05	High Court	68.63	68.63	-
			1978-79	Supreme Court	0.45	0.45	-
2	Income Tax Ordinance of Bangladesh, 1984	Income Tax	2012-13, 2013-14	Commissioner of Taxes (Appeal), Dhaka, Bangladesh	2.74	-	2.74
3	Central Sales Tax and VAT Acts of various States	Central Sales Tax/VAT	1988-89 to 1997-98, 2000-01, 2002-03, 2004-05, 2006-07, 2011-12	Additional Commissioner of Sales Tax*	6.50	1.52	4.98
			2001-02 to 2006-07	Deputy Commissioner of Sales Tax	11.66	-	11.66
			2000-01, 2005-06	Joint Commissioner of Sales Tax**	1.04	0.36	0.68
			2004-05 to 2007-08	Commissioner of Sales Tax ***	16.80	6.17	10.63
			1985-86, 2000-01 to 2010-11	Appellate Tribunal/ Board of Revenue	16.10	1.69	14.41
			1997-98 2000-01	High Court	2.18	-	2.18



Sl. No.	Name of Statute	Nature of the disputed statutory dues	Period to which the amount relates (FY)	Forum where the dispute is pending	Gross disputed amount (₹ crore)	Amount deposited under protest/ adjusted by tax authorities (₹ crore)	Amount not deposited (₹ crore)
4	Finance Act, 1994	Service Tax	2011-12 to 2015-16	Appeal yet to be filed (within 3 months from date of order of 30.3.17)	0.38	-	0.38
			2012-13 to 2014-15	Additional Commissioner of CEST	0.70	0.01	0.69
			2009-10 to 2013-14	Commissioner (Appeals)	0.74	0.02	0.72
			2005-06 to 2015-16	CESTAT****	2.23	0.05	2.18
5	Customs Act, 1962	Duty of Customs	1999-2000, 2010-11	Assistant Commissioner of CEST	4.50	-	4.50
			2005-06 to 2015-16	Additional Commissioner of CEST	0.28	0.02	0.26
6	Central Excise Act, 1944	Duty of Excise	2011-12 to 2014-15	Commissioner (Appeals)	0.74	0.04	0.70
<b>Total</b>					<b>9,759.84</b>	<b>9,564.74</b>	<b>195.10</b>

\* Includes ₹ 5.01 crore towards the demand for VAT and CST raised by Sales tax authority, which has been stayed by Commissioner/Additional Commissioner of Sales Tax.

\*\* Includes ₹ 1.02 crore towards the demand for CST raised by Sales tax officer, which has been stayed by the Hon'ble High Court.

\*\*\* Includes ₹ 2.08 crore and ₹ 0.29 crore towards the demand for VAT raised by Sales tax officer, which has been stayed by the Hon'ble High Court and Commissioner of Sales tax respectively.

\*\*\*\* Includes ₹ 0.30 crore towards the demand for service tax raised by Commissioner, Central Excise Customs and Service Tax which has been stayed by CESTAT.

- (viii) In our opinion and according to the information and explanations given to us, the Company has not defaulted in repayment of dues to financial institutions, banks or debenture holders.
- (ix) The Company has not raised any money by way of initial public offer or further public offer (including debt instruments). According to the information and explanations given to us, the money raised by the Company by way of term loans have been applied for the purpose for which they were obtained.
- (x) 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 frauds by the Company or any fraud on the Company by its officers or employees has been noticed or reported during the year.
- (xi) 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, provisions of clause 3 (xi) of the Order are not applicable to the Company.

## 41<sup>st</sup> Annual Report 2016-17

Independent Auditors' Report on Standalone Financial Statements



- (xii) The provisions of clause 3 (xii) of the Order, for Nidhi Company, are not applicable to the Company.
- (xiii) The Company has complied with the provisions of Section 177 and 188 of the Act w.r.t. transactions with the related parties, wherever applicable. Details of the transactions with the related parties have been disclosed in the financial statements as required by the applicable Indian accounting standards.
- (xiv) The Company has not made any preferential allotment or private placement of shares or fully or partly convertible debentures during the year under review. Accordingly, provisions of clause 3 (xiv) of the Order are not applicable to the Company.
- (xv) The Company has not entered into any non-cash transactions with the directors or persons connected with them as covered under Section 192 of the Act.
- (xvi) According to information and explanation given to us, the Company is not required to be registered u/s 45-IA of Reserve Bank of India Act, 1934. Accordingly, provision of clause 3(xvi) of the Order is not applicable to the Company.

For T.R. Chadha & Co LLP  
Chartered Accountants  
Firm Reg. No. 006711N/N500028

For PSD & Associates  
Chartered Accountants  
Firm Reg. No. 004501C

For Sagar & Associates  
Chartered Accountants  
Firm Reg. No. 003510S

(Neena Goel)  
Partner  
M. No. 057986

(Thalendra Sharma)  
Partner  
M. No. 079236

(D. Manohar)  
Partner  
M. No.029644

For Kalani & Co.  
Chartered Accountants  
Firm Reg. No. 000722C

For P. A. & Associates  
Chartered Accountants  
Firm Reg. No. 313085E

For S. K. Kapoor & Co.  
Chartered Accountants  
Firm Reg. No. 000745C

For B M Chatrath & Co. LLP  
Chartered Accountants  
Firm Reg. No. 301011E/E300025

(Vikas Gupta)  
Partner  
M. No. 077076

(S. S. Poddar)  
Partner  
M. No.051113

(V. B. Singh)  
Partner  
M. No. 073124

(P. R. Paul)  
Partner  
M. No. 051675

Place: New Delhi  
Date: 29 May 2017

## ANNEXURE 2 TO THE INDEPENDENT AUDITORS' REPORT

Referred to in our report of even date to the members of NTPC LIMITED on the accounts for the year ended 31 March 2017

Sl. No.	Directions u/s 143(5) of the Companies Act, 2013	Auditor's reply on action taken on the directions	Impact on financial statement
1	Whether the Company has clear title/lease deeds for freehold and leasehold land respectively? If not, please state the area of the freehold and leasehold land for which title/lease deeds are not available.	The Company is having clear title/lease deeds for entire freehold and leasehold land except 9,235 acres of freehold land valuing ₹1,940.44 crore and 12,570 acres of leasehold land valuing ₹1,735.89 crore. According to information and explanation given to us, reasonable steps have been taken by the Company for getting the titles of these lands in its favour.	Nil
2	Whether there are any cases of waiver/write off of debts/loans/ interest etc., if yes, the reasons thereof and the amount involved.	According to information and explanations given to us, there are no cases of waiver/write off of debts/ loans/interest etc.	Nil
3	Whether proper records are maintained for inventories lying with third parties & assets received as gift from Govt. or other authorities?	Proper records are maintained for inventories lying with third parties and also for assets received as gift from Government or other authorities.	Nil

For T.R. Chadha & Co LLP  
Chartered Accountants  
Firm Reg. No. 006711N/N500028

(Neena Goel)  
Partner  
M. No. 057986

For PSD & Associates  
Chartered Accountants  
Firm Reg. No. 004501C

(Thalendra Sharma)  
Partner  
M. No. 079236

For Sagar & Associates  
Chartered Accountants  
Firm Reg. No. 003510S

(D. Manohar)  
Partner  
M. No.029644

For Kalani & Co.  
Chartered Accountants  
Firm Reg. No. 000722C

(Vikas Gupta)  
Partner  
M. No. 077076

For P. A. & Associates  
Chartered Accountants  
Firm Reg. No. 313085E

(S. S. Poddar)  
Partner  
M. No.051113

For S. K. Kapoor & Co.  
Chartered Accountants  
Firm Reg. No. 000745C

(V. B. Singh)  
Partner  
M. No. 073124

For B M Chatrath & Co. LLP  
Chartered Accountants  
Firm Reg. No. 301011E/E300025

(P. R. Paul)  
Partner  
M. No. 051675

Place: New Delhi  
Date: 29 May 2017



## ANNEXURE 3 TO THE AUDITORS' REPORT

Referred to in our report of even date to the members of NTPC LIMITED on the accounts for the year ended 31 March 2017

**Report on the Internal Financial Controls under Clause (i) of Sub-section 3 of Section 143 of the Companies Act, 2013 ("the Act")**

We have audited the internal financial controls over financial reporting of NTPC Limited ("the Company") as of 31 March 2017 in conjunction with our audit of the Standalone Ind AS 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 control 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 over financial reporting 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 the 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 over financial reporting 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 system over financial reporting and their operating effectiveness. Our audit of internal financial control over financial reporting included obtaining an understanding of internal financial control over financial reporting, 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 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 audit opinion on the Company's internal financial controls system over financial reporting.

### Meaning of Internal Financial Controls over Financial Reporting

A Company's internal financial control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A Company's internal financial control over financial reporting 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 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 financial statements.

### Inherent Limitations of Internal Financial Controls over Financial Reporting

Because of the inherent limitations of internal financial controls over financial reporting, 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 over financial reporting to future periods are subject to the risk that the internal financial controls over financial reporting may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.



### Opinion

In our opinion, the Company has, in all material respects, an adequate internal financial controls system over financial reporting and such internal financial controls over financial reporting were operating effectively as at 31 March 2017, 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.

For T.R. Chadha & Co LLP  
Chartered Accountants  
Firm Reg. No. 006711N/N500028

(Neena Goel)  
Partner  
M. No. 057986

For PSD & Associates  
Chartered Accountants  
Firm Reg. No. 004501C

(Thalendra Sharma)  
Partner  
M. No. 079236

For Sagar & Associates  
Chartered Accountants  
Firm Reg. No. 003510S

(D. Manohar)  
Partner  
M. No.029644

For Kalani & Co.  
Chartered Accountants  
Firm Reg. No. 000722C

(Vikas Gupta)  
Partner  
M. No. 077076

For P. A. & Associates  
Chartered Accountants  
Firm Reg. No. 313085E

(S. S. Poddar)  
Partner  
M. No.051113

For S. K. Kapoor & Co.  
Chartered Accountants  
Firm Reg. No. 000745C

(V. B. Singh)  
Partner  
M. No. 073124

For B M Chatrath & Co. LLP  
Chartered Accountants  
Firm Reg. No. 301011E/E300025

(P. R. Paul)  
Partner  
M. No. 051675

Place: New Delhi  
Date: 29 May 2017

### COAL HANDLING UNIT AT NTPC POWER STATION



## COMMENTS OF THE COMPTROLLER AND AUDITOR GENERAL OF INDIA UNDER SECTION 143(6)(b) OF THE COMPANIES ACT, 2013 ON THE FINANCIAL STATEMENTS OF NTPC LIMITED, NEW DELHI FOR THE YEAR ENDED 31 MARCH 2017

The preparation of financial statements of NTPC Limited, New Delhi for the year ended 31 March 2017 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 29 May 2017.

I, on behalf of the Comptroller and Auditor General of India, have conducted a supplementary audit under Section 143(6) (a) of the Act of the financial statements of NTPC Limited for the year ended 31 March 2017. 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. On the basis of my audit nothing significant has come to my knowledge which would give rise to any comment upon or supplement to statutory auditors' report.

For and on behalf of the  
Comptroller & Auditor General of India

(Ritika Bhatia)  
Principal Director of Commercial Audit & Ex-officio Member,  
Audit Board - III, New Delhi

Place: New Delhi  
Dated: 14 July, 2017

### CULTURAL PRESENTATION BY NTPC FAMILY





## EMPLOYEE COST SUMMARY

₹ Crore

Description	2012-13	2013-14	2014-15	2015-16	2016-17
A. Salary, Wages and benefits (Incl. Provident fund and other contributions)	3774.64	4323.07	4043.06	4105.52	5114.83
B. Other Benefits					
1. Welfare Expenses	193.40	248.30	369.95	324.16	210.75
2. Township	136.33	163.53	194.85	218.16	226.19
3. Educational and School facilities	11.99	12.98	13.33	28.61	24.66
4. Medical Facilities	130.24	160.27	168.76	178.79	185.40
5. Subsidised Transport	7.55	6.08	7.51	8.26	12.25
6. Social and Cultural activities	7.51	13.06	12.77	8.72	9.70
7. Subsidised Canteen	32.91	35.22	39.29	40.78	47.62
Total (B)	519.93	639.44	806.46	807.48	716.57
<b>Total (A+B)</b>	<b>4294.57</b>	<b>4962.51</b>	<b>4849.52</b>	<b>4913.00</b>	<b>5831.40</b>
8. Year end No. of Employees	23,865	23,411	22,496	21,633	20,593
9. Average No. of Employees	23,938	23,638	22,954	22,065	21,113
10. Average Salary, wages and benefits per employee per annum (₹)	1,576,840	1,828,865	1,761,375	1,860,648	2,422,597
11. Average Cost of Other Benefits per employee per annum (₹)	217,199	270,514	351,337	365,955	339,398
12. Average cost of employees remuneration and benefits per annum (₹)	1,794,039	2,099,379	2,112,712	2,226,603	2,761,995

Note: 1. Welfare expenses are net of amounts included in Sl. no. 2 to Sl. no. 7.

Note: 2. Information for 2016-17 is based on accounts prepared as per Ind AS. Information for the previous years is as per the erstwhile applicable Accounting Standard (AS).



## 41<sup>st</sup> Annual Report 2016-17

### Employee Cost Summary



## REVENUE EXPENDITURE ON SOCIAL OVERHEADS FOR THE YEAR ENDED 31 MARCH 2017

₹ Crore

S. No	Particulars	Township	Educational & School Facilities	Medical Facilities	Subsidised Transport	Social and Cultural Activities	Subsidised Canteen	Total	Previous Year
1	Payment to Employees	54.44	-	167.32	-	-	-	221.76	198.71
2	Materials Consumed	18.23	-	8.53	-	-	-	26.76	30.47
3	Rates & Taxes	1.97	-	0.02	0.01	-	-	2.00	1.93
4	Welfare Expenses	3.41	16.25	154.50	8.85	9.08	47.25	239.34	225.72
5	Others incl. Repairs & Maintenance	177.14	5.46	25.56	4.12	-	0.07	212.35	206.53
6	Depreciation	48.48	2.96	2.75	-	0.62	0.30	55.11	55.33
7	Sub Total (1 To 6)	303.67	24.67	358.68	12.98	9.70	47.62	757.32	718.69
8	Less: Recoveries	23.04	0.01	5.96	0.73	-	-	29.74	36.66
9	Net Expenditure (7-8)	280.63	24.66	352.72	12.25	9.70	47.62	727.58	682.03
10	Previous Year	269.78	28.61	325.26	8.88	8.72	40.78	682.03	-

TOWNSHIP IN NTPC ANTA AMIDST LUSH GREENERY





## CONSOLIDATED BALANCE SHEET

Particulars	Note No.	₹ Crore		
		As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
<b>ASSETS</b>				
<b>Non-current assets</b>				
Property, plant & equipment	2	104,238.54	92,655.34	79,205.63
Intangible assets	3	293.12	274.02	262.28
Capital work-in-progress	4	86,681.17	74,827.92	63,731.45
Intangible assets under development	5	214.54	217.61	30.38
Investments in joint ventures	6	7,688.83	6,015.04	5,289.16
Financial assets				
Investments	7	113.48	79.60	98.48
Trade receivables	8	35.59	71.18	-
Loans	9	401.34	440.07	465.89
Other financial assets	10	1,164.26	1,022.19	981.48
Other non-current assets	11	17,133.91	18,084.05	16,744.59
<b>Total non-current assets</b>		<b>217,964.78</b>	<b>193,687.02</b>	<b>166,809.34</b>
<b>Current assets</b>				
Inventories	12	6,586.13	7,050.61	7,325.24
Financial assets				
Investments	13	-	378.72	1,983.34
Trade receivables	14	8,963.89	8,288.79	8,187.16
Cash and cash equivalent	15	363.83	1,539.44	475.45
Bank balances other than cash and cash equivalent	16	2,937.63	3,398.88	13,821.93
Loans	17	211.92	250.92	271.77
Other financial assets	18	6,128.92	5,253.17	2,934.06
Other current assets	19	4,817.43	4,723.57	3,938.52
<b>Total current assets</b>		<b>30,009.75</b>	<b>30,884.10</b>	<b>38,937.47</b>
Regulatory deferral account debit balances	20	522.83	-	-
<b>TOTAL ASSETS</b>		<b>248,497.36</b>	<b>224,571.12</b>	<b>205,746.81</b>
<b>EQUITY AND LIABILITIES</b>				
<b>Equity</b>				
Equity share capital	21	8,245.46	8,245.46	8,245.46
Other equity	22	89,592.56	83,330.12	75,835.71
<b>Total equity attributable to owners of the parent</b>		<b>97,838.02</b>	<b>91,575.58</b>	<b>84,081.17</b>
Non-controlling interests		803.26	793.30	774.46
<b>Total equity</b>		<b>98,641.28</b>	<b>92,368.88</b>	<b>84,855.63</b>
<b>Liabilities</b>				
<b>Non-current liabilities</b>				
Financial liabilities				
Borrowings	23	104,071.29	91,205.49	83,456.16
Trade payables	24	13.17	8.38	3.47
Other financial liabilities	25	2,355.69	3,133.81	2,396.96

## 41<sup>st</sup> Annual Report 2016-17

Consolidated Financial Statements



## CONSOLIDATED BALANCE SHEET

₹ Crore

Particulars	Note No.	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
Provisions	26	463.15	436.41	1,115.71
Deferred tax liabilities (net)	27	1,484.86	1,153.08	996.61
Other non-current liabilities	28	17.49	49.68	0.01
<b>Total non-current liabilities</b>		<b>108,405.65</b>	<b>95,986.85</b>	<b>87,968.92</b>
<b>Current liabilities</b>				
Financial liabilities				
Borrowings	29	3,119.54	1,487.27	148.51
Trade payables	30	5,572.70	5,693.81	6,425.60
Other financial liabilities	31	20,395.20	18,492.67	17,186.37
Other current liabilities	32	1,264.69	784.91	950.78
Provisions	33	8,120.73	6,928.62	6,155.71
Current tax liabilities (net)	34	81.40	154.23	10.42
<b>Total current liabilities</b>		<b>38,554.26</b>	<b>33,541.51</b>	<b>30,877.39</b>
Deferred revenue	35	2,406.84	2,373.16	1,735.91
Regulatory deferral account credit balances	36	489.33	300.72	308.96
<b>TOTAL EQUITY AND LIABILITIES</b>		<b>248,497.36</b>	<b>224,571.12</b>	<b>205,746.81</b>
Significant accounting policies	1			

The accompanying notes 1 to 73 form an integral part of these financial statements.

For and on behalf of the Board of Directors

(K.P. Gupta)  
Company Secretary

(K.Biswal)  
Director (Finance)

(Gurdeep Singh)  
Chairman & Managing Director

This is the Consolidated Balance Sheet referred to in our report of even date

For T.R. Chadha & Co LLP  
Chartered Accountants  
Firm Reg. No. 006711N/N500028

For PSD & Associates  
Chartered Accountants  
Firm Reg. No. 004501C

For Sagar & Associates  
Chartered Accountants  
Firm Reg. No. 003510S

(Neena Goel)  
Partner  
M No. 057986

(Prakash Sharma)  
Partner  
M No. 072332

(D. Manohar)  
Partner  
M No. 029644

For Kalani & Co.  
Chartered Accountants  
Firm Reg. No. 000722C

For P. A. & Associates  
Chartered Accountants  
Firm Reg. No. 313085E

For S. K. Kapoor & Co.  
Chartered Accountants  
Firm Reg. No. 000745C

For B M Chatrath & Co. LLP  
Chartered Accountants  
Firm Reg. No. 301011E/E300025

(Varun Bansal)  
Partner  
M No. 402856

(P.S.Panda)  
Partner  
M No.051092

(Sanjiv Kapoor)  
Partner  
M.No. 070487

(P. R. Paul)  
Partner  
M.No. 051675

Place: New Delhi  
Date: 29 May 2017

## CONSOLIDATED STATEMENT OF PROFIT AND LOSS

		₹ Crore	
Particulars	Note No.	For the year ended 31.03.2017	For the year ended 31.03.2016
<b>Revenue</b>			
Revenue from operations	37	82,080.82	73,426.44
Other income	38	966.82	1,057.56
<b>Total revenue</b>		<b>83,047.64</b>	<b>74,484.00</b>
<b>Expenses</b>			
Fuel		47,947.77	44,112.86
Electricity purchased		3,037.88	2,123.83
Employee benefits expense	39	4,413.87	3,620.66
Finance costs	40	3,651.08	3,313.65
Depreciation, amortization and impairment expense	41	6,009.91	5,224.02
Other expenses	42	5,185.51	5,620.46
<b>Total expenses</b>		<b>70,246.02</b>	<b>64,015.48</b>
<b>Profit before tax and Rate Regulated Activities (RRA)</b>		<b>12,801.62</b>	<b>10,468.52</b>
<b>Add: Movements in Regulatory deferral account balances</b>	68	<b>334.22</b>	<b>8.24</b>
<b>Profit before share of net profits of investments accounted for using equity method and tax</b>		<b>13,135.84</b>	<b>10,476.76</b>
<b>Add: Share of net profits of joint ventures accounted for using equity method</b>		<b>624.71</b>	<b>141.16</b>
<b>Profit before tax</b>		<b>13,760.55</b>	<b>10,617.92</b>
<b>Tax expense</b>	54		
Current tax			
Current year		2,750.85	2,131.61
Earlier years		(107.54)	(2,453.48)
Tax expense/(saving) pertaining to RRA		71.51	2.58
Deferred tax		1,284.47	210.21
Less: Deferred asset for deferred tax liability		952.68	53.73
<b>Total tax expense</b>		<b>3,046.61</b>	<b>(162.81)</b>
<b>Profit for the year</b>		<b>10,713.94</b>	<b>10,780.73</b>
<b>Other comprehensive income</b>			
Items that will not be reclassified to profit or loss (net of tax)			
- Net actuarial gains/(losses) on defined benefit plans		(238.66)	(38.35)
- Net gains/(losses) on fair value of equity instruments		35.28	(20.28)
- Share of other comprehensive income of joint ventures accounted for using the equity method		(1.41)	0.07
Items that will be reclassified to profit or loss (net of tax)			
- Exchange differences on translation of foreign operations		(8.06)	3.26
<b>Other comprehensive income for the year, net of income tax</b>		<b>(212.85)</b>	<b>(55.30)</b>
<b>Total comprehensive income for the year</b>		<b>10,501.09</b>	<b>10,725.43</b>

### 41<sup>st</sup> Annual Report 2016-17

Consolidated Financial Statements



## CONSOLIDATED STATEMENT OF PROFIT AND LOSS

Particulars	Note No.	₹ Crore	
		For the year ended 31.03.2017	For the year ended 31.03.2016
Profit is attributable to:			
Owners of the parent		10,719.64	10,801.15
Non-controlling interests		(5.70)	(20.42)
		<u>10,713.94</u>	<u>10,780.73</u>
Other comprehensive income is attributable to:			
Owners of the parent		(212.85)	(55.30)
Non-controlling interests		-	-
		<u>(212.85)</u>	<u>(55.30)</u>
Total comprehensive income is attributable to:			
Owners of the parent		10,506.79	10,745.85
Non-controlling interests		(5.70)	(20.42)
		<u>10,501.09</u>	<u>10,725.43</u>
Significant accounting policies	1		
Expenditure during construction period (net)	43		
Earnings per equity share (Par value ₹ 10/- each)	58		
Basic & Diluted (₹) (from operations including regulatory deferral account balances)		13.00	13.10
Basic & Diluted (₹) (from operations excluding regulatory deferral account balances)		12.68	13.09

The accompanying notes 1 to 73 form an integral part of these financial statements.

For and on behalf of the Board of Directors

(K.P. Gupta)  
Company Secretary

(K.Biswal)  
Director (Finance)

(Gurdeep Singh)  
Chairman & Managing Director

This is the Consolidated Statement of Profit and Loss referred to in our report of even date

For T.R. Chadha & Co LLP  
Chartered Accountants  
Firm Reg. No. 006711N/N500028

For PSD & Associates  
Chartered Accountants  
Firm Reg. No. 004501C

For Sagar & Associates  
Chartered Accountants  
Firm Reg. No. 003510S

(Neena Goel)  
Partner  
M No. 057986

(Prakash Sharma)  
Partner  
M No. 072332

(D. Manohar)  
Partner  
M No. 029644

For Kalani & Co.  
Chartered Accountants  
Firm Reg. No. 000722C

For P. A. & Associates  
Chartered Accountants  
Firm Reg. No. 313085E

For S. K. Kapoor & Co.  
Chartered Accountants  
Firm Reg. No. 000745C

For B M Chatrath & Co. LLP  
Chartered Accountants  
Firm Reg. No. 301011E/E300025

(Varun Bansal)  
Partner  
M No. 402856

(P.S.Panda)  
Partner  
M No.051092

(Sanjiv Kapoor)  
Partner  
M.No. 070487

(P. R. Paul)  
Partner  
M.No. 051675

Place: New Delhi  
Date: 29 May 2017



## CONSOLIDATED STATEMENT OF CASH FLOWS

Particulars	For the year ended 31.03.2017	₹ Crore For the year ended 31.03.2016
<b>A. CASH FLOW FROM OPERATING ACTIVITIES</b>		
Profit before tax	13,760.55	10,617.92
Adjustment for:		
Depreciation/amortisation & impairment expense	6,009.91	5,224.02
Provisions	139.39	184.07
Share of net profits of joint ventures accounted for using equity method	(624.71)	(141.16)
Deferred revenue on account of advance against depreciation	(32.92)	(129.26)
Deferred revenue on account of government grants	332.00	84.90
Deferred foreign currency fluctuation asset	336.11	(88.30)
Deferred income from foreign currency fluctuation	(102.30)	797.66
Regulatory deferral account credit balances	188.61	(8.24)
Regulatory deferral account debit balances	(522.83)	-
Fly ash utilisation reserve fund	78.47	77.07
Exchange differences on translation of foreign currency cash and cash equivalents	0.06	(0.08)
Finance costs	3,569.08	3,241.15
Unwinding of discount on vendor liabilities	82.00	72.50
Interest/income on term deposits/bonds/investments	(106.08)	(572.21)
Dividend income	(3.00)	(52.44)
Provisions written back	(176.84)	(176.42)
Profit on disposal of fixed assets	(10.36)	(1.66)
Loss on disposal of fixed assets	82.94	143.87
	<b>9,239.53</b>	<b>8,655.47</b>
<b>Operating profit before working capital changes</b>	<b>23,000.08</b>	<b>19,273.39</b>
Adjustment for:		
Trade receivables	(639.51)	(172.81)
Inventories	804.18	596.51
Trade payables, provisions and other liabilities	657.05	(1,109.37)
Loans, advances and other assets	(1,028.99)	(3,153.53)
Bank balances other than cash & cash equivalents	433.70	10,076.69
	<b>226.43</b>	<b>6,237.49</b>
<b>Cash generated from operations</b>	<b>23,226.51</b>	<b>25,510.88</b>
Direct taxes paid	(2,626.25)	(1,386.01)
<b>Net cash from operating activities - A</b>	<b>20,600.26</b>	<b>24,124.87</b>
<b>B. CASH FLOW FROM INVESTING ACTIVITIES</b>		
Purchase of fixed assets	(24,417.11)	(21,137.95)
Disposal of fixed assets	72.01	122.83
Purchase of investments	-	(117.03)
Sale of investments	343.63	1,651.46
Investment in joint ventures	(1,200.24)	(714.60)
Interest/income on term deposits/bonds/investments received	168.72	988.76
Income tax paid on interest income	(44.12)	(139.29)
Dividend received from joint ventures	143.09	131.76
Dividend received from other investments	3.00	52.44
<b>Net cash used in investing activities - B</b>	<b>(24,931.02)</b>	<b>(19,161.62)</b>

### 41<sup>st</sup> Annual Report 2016-17

Consolidated Financial Statements



## CONSOLIDATED STATEMENT OF CASH FLOWS

Particulars	For the year ended 31.03.2017	₹ Crore For the year ended 31.03.2016
<b>C. CASH FLOW FROM FINANCING ACTIVITIES</b>		
Proceeds from long term borrowings	24,522.81	13,018.11
Repayment of long term borrowings	(11,108.46)	(7,700.74)
Proceeds from short term borrowings	1,632.27	1,338.76
Security premium received	-	0.12
Interest paid	(7,564.52)	(7,227.03)
Dividend paid	(3,595.03)	(2,762.24)
Tax on dividend	(731.86)	(566.32)
<b>Net cash used in financing activities - C</b>	<b>3,155.21</b>	<b>(3,899.34)</b>
<b>D. Exchange differences on translation of foreign currency cash and cash equivalents</b>	<b>(0.06)</b>	<b>0.08</b>
<b>Net increase/(decrease) in cash and cash equivalents (A+B+C+D)</b>	<b>(1,175.61)</b>	<b>1,063.99</b>
<b>Cash and cash equivalents at the beginning of the year (see Note 1&amp;2 below)</b>	<b>1,539.44</b>	<b>475.45</b>
<b>Cash and cash equivalents at the end of the period (see Note 1&amp;2 below)</b>	<b>363.83</b>	<b>1,539.44</b>
<b>NOTES:</b>		
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-15	363.83	1,539.44
3. Previous year figures have been regrouped/rearranged wherever considered necessary.		

For and on behalf of the Board of Directors

(K.P. Gupta)  
Company Secretary

(K.Biswal)  
Director (Finance)

(Gurdeep Singh)  
Chairman & Managing Director

This is the Consolidated Statement of Cash Flows referred to in our report of even date

For T.R. Chadha & Co LLP  
Chartered Accountants  
Firm Reg. No. 006711N/N500028

For PSD & Associates  
Chartered Accountants  
Firm Reg. No. 004501C

For Sagar & Associates  
Chartered Accountants  
Firm Reg. No. 003510S

(Neena Goel)  
Partner  
M No. 057986

(Prakash Sharma)  
Partner  
M No. 072332

(D. Manohar)  
Partner  
M No. 029644

For Kalani & Co.  
Chartered Accountants  
Firm Reg. No. 000722C

For P. A. & Associates  
Chartered Accountants  
Firm Reg. No. 313085E

For S. K. Kapoor & Co.  
Chartered Accountants  
Firm Reg. No. 000745C

For B M Chatrath & Co. LLP  
Chartered Accountants  
Firm Reg. No. 301011E/E300025

(Varun Bansal)  
Partner  
M No. 402856

(P.S.Panda)  
Partner  
M No.051092

(Sanjiv Kapoor)  
Partner  
M.No. 070487

(P. R. Paul)  
Partner  
M.No. 051675

Place: New Delhi  
Date: 29 May 2017



# CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

For the year ended 31 March 2016

₹ Crore

Particulars	Attributable to owners of the parent										Total equity attributable to owners of the parent	Non-controlling interests	Total
	Capital reserve	Securities premium account	Bonds/Debt redemption reserve	Fly ash utilisation reserve fund	Corporate social responsibility (CSR) reserve	General reserve	Retained earnings	Equity instruments through OCI	Share of OCI of joint ventures accounted for using the equity method	Foreign currency translation reserve			
Balance as at 1 April 2015	50.08	2,928.34	3,694.60	401.14	78.93	66,525.63	2,996.93	-	-	0.76	75,835.71	774.46	76,610.17
Profit for the year						10,801.15	10,801.15				10,801.15	(90.42)	10,780.73
Other comprehensive income							(38.35)			3.26	(55.30)		(55.30)
Total comprehensive income													
Equity contribution by Non Controlling Interest	-	-	-	-	-	-	10,762.80	(90.28)	0.07	3.26	10,745.85	(90.42)	10,795.43
Transactions with owners in their capacity as owners:												39.26	39.26
Amount received during the year	0.12										0.12		0.12
Transfer to retained earnings			(300.00)				378.93				-		-
Transfer from retained earnings			1,284.13			6,026.00	(7,310.87)				-		-
Transfer to fly ash utilisation reserve fund				77.07							77.07		77.07
Final dividend 2014-15 (refer note 21)							(1,442.96)				(1,442.96)		(1,442.96)
Tax on final dividend							(993.75)				(993.75)		(993.75)
Interim dividend 2015-16 (refer note 21)							(1,319.28)				(1,319.28)		(1,319.28)
Tax on interim dividend							(272.64)				(272.64)		(272.64)
Balance as at 31 March 2016	50.08	2,928.46	4,608.73	478.21	0.74	79,551.63	3,498.46	(90.28)	0.07	4.02	83,330.12	793.30	84,123.42

For and on behalf of the Board of Directors

(K.P. Gupta)  
Company Secretary

(K.Biswal)  
Director (Finance)

(Gurdeep Singh)  
Chairman & Managing Director

This is the Consolidated Statement of Changes in Equity referred to in our report of even date

For T.R. Chadha & Co LLP  
Chartered Accountants  
Firm Reg. No. 006711N/N5000028

For PSD & Associates  
Chartered Accountants  
Firm Reg. No. 004501C

For Sagar & Associates  
Chartered Accountants  
Firm Reg. No. 003510S

(Neena Goel)  
Partner  
M No. 057986

(Prakash Sharma)  
Partner  
M No. 072332

(D. Manohar)  
Partner  
M No. 029644

For Kalani & Co.  
Chartered Accountants  
Firm Reg. No. 000729C

For P. A. & Associates  
Chartered Accountants  
Firm Reg. No. 313085E

For B M Chatrath & Co. LLP  
Chartered Accountants  
Firm Reg. No. 301011E/E3000025

(Varun Bansal)  
Partner  
M No. 402856

(P.S.Panda)  
Partner  
M No.051092

(Sanjiv Kapoor)  
Partner  
M.No. 070487

(P. R. Paul)  
Partner  
M.No. 051675

Place: New Delhi  
Date: 29 May 2017



## Notes forming part of Consolidated Financial Statements

### 1. Group 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 publicly traded on the National Stock Exchange of India Limited and BSE Limited. The address of the Company's registered office is NTPC Bhawan, SCOPE Complex, 7 Institutional Area, Lodi 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 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 accrual basis of accounting and comply with the Indian Accounting Standards (Ind AS) notified under the Companies (Indian Accounting Standards) Rules, 2015 and subsequent amendments thereto, the Companies Act, 2013 (to the extent notified and applicable), applicable provisions of the Companies Act, 1956, and the provisions of the Electricity Act, 2003 to the extent applicable. These are the Group's first Ind AS compliant financial statements and Ind AS 101 'First Time Adoption of Indian Accounting Standards' has been applied.

For all the periods upto and including 31 March 2016, the Group prepared its financial statements in accordance with Generally Accepted Accounting Principles (GAAP) in India, accounting standards specified under Section 133 of the Companies Act, 2013, the Companies Act, 2013 (to the extent notified and applicable), applicable provisions of the Companies Act, 1956, and the provisions of the Electricity Act, 2003 to the extent applicable. The Group followed the provisions of Ind AS 101 in preparing its opening Ind AS Balance Sheet as of the date of transition, viz. 1 April 2015. Some of the Group's Ind AS accounting policies used in the opening Balance Sheet are different from its previous GAAP policies applied as at 31 March 2015, and accordingly the adjustments were made to restate the opening balances as per Ind AS. The resulting adjustments arose from events and transactions before the date of transition to Ind AS. Therefore, as required by Ind AS 101, those adjustments were recognized directly through retained earnings as at 1 April 2015. This is the effect of the general rule of Ind AS 101 which is to apply Ind AS retrospectively.

An explanation of how the transition to Ind AS has affected the reported financial position, financial performance and cash flows of the Group is provided in note 61.

These financial statements were authorized for issue by Board of Directors on 29 May 2017.

##### 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 accounting policy regarding financial instruments). The methods used to measure fair values are discussed further in notes to financial statements.

##### 3. Functional and presentation currency

These consolidated financial statements are presented in Indian Rupees (INR), which is the Company's functional currency. All financial information presented in INR has been rounded to the nearest crore (upto two decimals), except as stated 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 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.

## 41<sup>st</sup> Annual Report 2016-17

### Consolidated Financial Statements



All other assets are classified as non-current.

A liability is 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.

### 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 by not applying the provisions of Ind AS 16 & Ind AS 38 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. 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 ventures 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 entity. Subsidiaries are fully consolidated from the date on which control is transferred to the group. They are deconsolidated from the date that 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 unrealised gains on transactions between group companies are eliminated. Unrealised losses are also eliminated unless the transaction provides evidence of an impairment of the transferred asset. Accounting policies of subsidiaries have been changed where necessary to ensure consistency with the policies adopted by the group.

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.

NCI are measured at their proportionate share of the acquiree's net identifiable assets at the date of acquisition. 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 derecognises 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 recognised in profit or loss.

##### 1.2 Joint arrangements

Under Ind AS 111 'Joint Arrangements', investments in joint arrangements are classified as either joint operations or joint ventures. The classification depends on the contractual rights and obligations of each investor, rather than the legal structure of the joint arrangement. The Group has both joint operations and joint ventures.

##### Joint operation

The Group recognises its direct right to the assets, liabilities, revenues and expenses of joint operations and its share of any jointly held or incurred assets, liabilities, revenues and expenses. These have been incorporated in the financial statements under the appropriate headings. Details of the joint operation are set out in note 62.



## Joint Ventures

Interests in joint ventures are accounted for using the equity method (see C.1.3 below), after initially being recognised at cost in the consolidated balance sheet.

### 1.3 Equity Method

Under the equity method of accounting, the investments are initially recognised at cost and adjusted thereafter to recognise 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 of the investee in other comprehensive income. Dividends received or receivable from joint ventures are recognised 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, including any other unsecured long-term receivables, the group does not recognise further losses, unless it has incurred obligations or made payments on behalf of the other entity.

Unrealised gains on transactions between the group and its joint ventures are eliminated to the extent of the group's interest in these entities. Unrealised losses are also eliminated unless the transaction provides evidence of an impairment of the asset transferred. Accounting policies of equity accounted material investees have been changed where necessary to ensure consistency with the policies adopted by the group.

The carrying amount of equity accounted as investments are tested for impairment in accordance with the policy described in D.20 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 recognised in profit or loss. In addition, any amounts previously recognised in other comprehensive income 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 recognised in other comprehensive income 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 recognised in other comprehensive income are reclassified to profit or loss where appropriate.

## 2 Property, plant and equipment

### 2.1 Initial recognition and measurement

Items of property, plant and equipment are measured at cost. Subsequent measurement is done at cost less accumulated depreciation/ amortization and accumulated impairment losses. Cost includes expenditure that is 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.

When parts of an item of property, plant and equipment have different useful lives, they are recognized separately.

Deposits, payments/liabilities made provisionally towards compensation, rehabilitation and other expenses relating 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.

Expenditure on major inspection and overhauls of generating unit is capitalized, when it meets the asset recognition criteria.

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 in the statement of profit and loss on consumption.

### 2.2 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.



The cost of replacing 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. The costs of the day-to-day servicing of property, plant and equipment are recognized in profit or loss as 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 Derecognition

Property, plant and equipment is derecognized when no future economic benefits are expected from their use or upon their disposal. Gains and losses on disposal of an item of property, plant and equipment are determined by comparing the proceeds from disposal with the carrying amount of property, plant and equipment, and are recognized in the statement of profit and loss.

### 2.5 Depreciation/amortization

Depreciation is recognized in statement of profit and loss on a straight-line basis over the estimated useful lives of each part of an item of property, plant and equipment. Leased assets are depreciated over the shorter of the lease term and their useful lives unless it is reasonably certain that the Group will obtain ownership by the end of the lease term.

Depreciation on the assets of the generation of electricity business and on the assets of Corporate & other offices is charged on straight line method following the rates and methodology notified by the CERC Tariff Regulations in accordance with Schedule II of the Companies Act, 2013.

Depreciation on the assets of the coal mining, oil & gas exploration 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 in policy no. C.7.

Depreciation on the following assets is provided on their estimated useful life ascertained on technical evaluation:

a) Kutchha roads	02 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.	05 years
c) Personal computers & laptops including peripherals	03 years
d) Photocopiers, fax machines, water coolers and refrigerators	05 years
e) Temporary erections including wooden structures	01 year
f) Telephone exchange	15 years
g) Wireless systems, VSAT equipments, display devices viz. projectors, screens, CCTV, audio video conferencing systems and other communication equipments	06 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.

Leasehold land and buildings relating to generation of electricity business are fully amortized over lease period or life of the related plant whichever is lower following the rates and methodology notified by the CERC Tariff Regulations.

Leasehold land and buildings relating to Corporate and other offices are fully amortized over lease period or twenty-five years whichever is lower following the rates and methodology notified by the CERC Tariff Regulations.



Land acquired for mining business under Coal Bearing Areas (Acquisition & Development) Act, 1957 is amortized on the basis of balance useful life of the project. Other leasehold land acquired for mining business is amortized over the lease period or balance life of the project whichever is less.

Depreciation on additions to/deductions from property, plant & equipment during the year is charged on pro-rata basis from/up to the month in which the asset is available for use/disposed.

Where the cost of depreciable assets has undergone a change during the year due to increase/decrease in long term liabilities on account of exchange fluctuation, 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 cost incurred will flow to the enterprise and the cost of the item can be measured reliably, subsequent expenditure on a PPE along-with its unamortized depreciable amount is charged off prospectively over the revised useful life determined by technical assessment.

In circumstance, where a property is abandoned, the cumulative capitalized costs relating to the property are written off in the same period.

### 3 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 borrowing costs.

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

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 includes any directly attributable incidental expenses necessary to make the assets ready for its intended use.

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 Derecognition

An intangible asset is derecognized when no future economic benefits are expected from their use or upon their disposal. Gains and losses on disposal of an item of intangible assets are determined by comparing the proceeds from disposal with the carrying amount of intangible assets and are recognized in the statement of profit and loss.

#### 4.3 Amortisation

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.

### 5 Regulatory deferral account balances

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 accounts balances are adjusted from the year in which the same become recoverable from or payable to the beneficiaries.



## 6 Oil and gas exploration costs

### 6.1 Interest in Joint Operations

The Group has entered into 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.

### 6.2 Intangible assets under development – Exploratory wells in progress

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' till the time these are either transferred to Oil and Gas Assets on completion 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 as per the policy of the Group.

Survey costs - Cost of surveys and prospecting activities conducted in the search of oil and gas are expensed in the year in which these are incurred.

## 7 Development of coal mines

The costs of mining properties, which include the costs of acquiring and developing mining properties and mineral rights, are capitalized as 'Mining properties' in the year in which they are incurred.

### 7.1 Mine development expenditure

Pre-production primary development expenditure (including stripping costs as mentioned below) other than land, buildings, plant & equipment is capitalized as capital work-in-progress as and when incurred until the mining property is capable of commercial production and then capitalised as part of the cost of the mining property. Development costs incurred after the commencement of production are capitalised to the extent they are expected to give rise to a future economic benefit.

Mines under development are capitalised on occurrence of earliest of the following milestones except when commercial readiness is stated in the project report -

- From the beginning of the financial year immediately after the year in which the project achieves physical output of 25% of rated capacity as per approved project report; or
- From the beginning of the financial year in which the value of production is more than total expenses; or
- 2 years of touching of coal.

### 7.2 Stripping costs

Expenditure incurred on removal of overburden and other waste material necessary to extract the coal reserves is referred to as stripping cost.

### 7.3 Decommissioning costs

Decommissioning costs – Costs to decommission the mines are estimated at their present value based on approved mine closure plan of the Group and included in 'Tangible assets - Mining properties'.

### 7.4 Amortisation

Mining properties are amortized over the life of the mine on a unit of production basis on stripping ratio. The stripping ratio for the life of the mine is obtained by dividing the estimated quantity of overburden by the estimated quantity of mineable coal reserve to be extracted over the life of the mine. This ratio is periodically reviewed and changes, if any, are accounted for prospectively.

## 8 Borrowing 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 take a 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 general borrowing that are outstanding during the period and used for the acquisition, construction/exploration or erection of the qualifying asset.

Capitalization of borrowing costs ceases when substantially all the activities necessary to prepare the qualifying assets for their intended uses are complete. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds. Income earned on temporary investment of the borrowings pending their expenditure on the qualifying assets is deducted from the borrowing costs eligible for capitalization. Borrowing costs include exchange differences arising from foreign currency borrowings to the extent that they are regarded as an adjustment to interest costs.

Other borrowing costs are recognized as an expense in the year in which they are incurred.

## 9 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 and discounts. 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 and surplus stores & spares is ascertained on review and provided for.

## 10 Cash and cash equivalents

Cash and cash equivalents in the balance sheet comprise cash at banks and on hand and short-term deposits with an original maturity of three months or less, which are subject to an insignificant risk of changes in value.

## 11 Government grants

Government grants are recognized initially as deferred income 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 an asset are recognized in profit or loss on a systematic basis over the useful life of the related asset. Grants that compensate the Group for expenses incurred are recognized over the period in which the related costs are incurred and deducted from the related expenses.

## 12 Fly ash utilization reserve fund

Proceeds from sale of ash/ash products along-with income on investment of such proceeds 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.

## 13 Provisions and contingent liabilities

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 any reimbursement.

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.

#### 14 Foreign currency transactions and translation

Transactions in foreign currencies are initially recorded at the functional currency spot rates at the date the transaction first qualifies for recognition.

Monetary assets and liabilities denominated in foreign currencies are translated at the functional currency spot rates of exchange at the reporting date. Exchange differences arising on settlement or translation of monetary items are recognized in profit or 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 & equipment recognized upto 31 March 2016 are adjusted to carrying cost of property, plant & equipment.

Non-monetary items are measured in terms of historical cost in a foreign currency are translated using the exchange rate at the date of the transaction.

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 recognised in other comprehensive income.

On consolidation, exchange differences arising from the translation of any net investment in foreign entities are recognised in other comprehensive income. When a foreign operation is sold, the associated exchange differences are reclassified to profit or loss, as part of the gain or loss on sale.

#### 15 Revenue

Group's revenues arise from sale of energy, consultancy, project management & supervision services, energy trading and other income. Revenue from sale of energy is mostly regulated and governed by the applicable CERC Tariff Regulations under Electricity Act, 2003. Certain revenue from sale of energy is recognized based on the rates & terms and conditions mutually agreed with the beneficiaries and trading of power through power exchanges. Revenue from other income comprises interest from banks, employees, contractors etc., dividend from investments in joint venture and subsidiary companies, dividend from mutual fund investments, surcharge received from customers for delayed payments, sale of scrap, other miscellaneous income, etc.

##### 15.1 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.

Revenue from the sale of energy is measured at the fair value of the consideration received or receivable. Revenue is recognized when the significant risks and rewards of ownership have been transferred to the buyer, recovery of the consideration is probable, the associated costs can be estimated reliably, there is no continuing management involvement, and the amount of revenue can be measured reliably.

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 customer and is measured through a regular review of usage meters. Customers 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 customers but not yet billed i.e. unbilled revenue.





The incentives/disincentives are accounted for based on the norms notified/approved by the CERC as per principles enunciated in Ind AS 18. 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 sale of energy is recognized based on the rates & terms and conditions mutually agreed with the beneficiaries and trading of power through power exchanges.

Rebates allowed to beneficiaries as early payment incentives are deducted from the amount of revenue.

Advance against depreciation considered as deferred revenue in earlier years is included in sales, to the extent depreciation recovered in tariff during the year is lower than the corresponding depreciation charged.

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 adjusted from the year in which the same becomes recoverable/payable.

Exchange differences on account of translation of foreign currency borrowings recognized upto 31 March 2016, recoverable from or payable to the beneficiaries in subsequent periods as per the CERC Tariff Regulations are accounted as 'Deferred foreign currency fluctuation asset'. The increase or decrease in depreciation for the year due to the accounting of such exchange differences as mentioned above is adjusted in depreciation. Fair value changes in respect of forward exchange contracts of derivative contracts recoverable from/payable to the beneficiaries as per the CERC Tariff Regulations, are recognized in sales.

### 15.2 Revenue from services

Revenue from consultancy, project management and supervision services rendered is recognized in profit or loss in proportion to the stage of completion of the transaction at the reporting date. The stage of completion is assessed by reference to actual progress/technical assessment of work executed, in line with the terms of the respective consultancy contracts. Claims for reimbursement of expenses are recognized as other income, as per the terms of the consultancy service contracts.

### 15.3 Other income

Interest income is recognized, when no significant uncertainty as to measurability or collectability exists, on a time proportion basis taking into account the amount outstanding and the applicable interest rate, using the effective interest rate method (EIR).

Scrap other than steel scrap is accounted for as and when sold.

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.

For debt instruments measured either at amortized cost or at fair value through other comprehensive income (OCI), interest income is recorded using the EIR. 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.

The interest/surcharge on late payment/overdue sundry debtors for sale of energy is recognized when no significant uncertainty as to measurability or collectability exists.

Interest/surcharge recoverable on advances to 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 on the date that the Group's right to receive payment is established, which in the case of quoted securities is the ex-dividend date.



## 16 Employee benefits

### 16.1 Defined contribution plans

A defined contribution plan is a post-employment benefit plan under which an entity pays fixed contributions into 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 profit or 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 contributions to the fund for the year are recognized as an expense and charged to the statement of profit and loss.

### 16.2 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, 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 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 profit or 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 (GoI).

The gratuity is funded by the Group and is managed by separate trust. Pension scheme at one of the taken over projects is also funded by the Group and is managed by separate trust. The Group has Post-Retirement Medical Facility (PRMF), under which retired employee and the spouse 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 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. Any unrecognized past service costs and the fair value of any plan assets are 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 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 total of any unrecognized past service costs and 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. Any actuarial gains or losses are recognized in OCI in the period in which they arise.

When the benefits of a plan are improved, the portion of the increased benefit relating to past service by employees is recognized in profit or loss on a straight-line basis over the average period until the benefits become vested. To the extent that the benefits vest immediately, the expense is recognized immediately in profit or loss.

### 16.3 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 leave encashment is 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. The calculation is performed using the projected unit credit method. Any actuarial gains or losses are recognized in profit or loss in the period in which they arise.

As per the Group's economic rehabilitation scheme which is optional, the nominee of the deceased employee is paid a fixed amount based on the last salary drawn by the employee till the date of superannuation of the employee by depositing the final provident fund and gratuity amount which will be interest free.

#### 16.4 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.

### 17 Other expenses

Expenses on ex-gratia payments under voluntary retirement scheme, training & recruitment and research & development are charged to the Statement of Profit and Loss in the year incurred.

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.

Voluntary community development expenditure is charged to Statement of Profit & Loss in the year incurred.

### 18 Income tax

Income tax expense comprises current and deferred tax. Current tax expense is recognized in profit or loss except to the extent that it relates to items recognized directly in other comprehensive income or equity, in which case it is recognized in OCI or equity.

Current tax is the expected tax payable on the taxable income for the year, using tax rates enacted or substantively enacted and as applicable at the reporting date, and any adjustment to tax payable in respect of previous years.

Deferred tax is recognized using the balance sheet method, providing for temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. Deferred tax is measured at the tax rates that are expected to be applied to temporary differences when they reverse, 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 liabilities and assets, and they relate to income taxes levied by the same tax authority.

Deferred tax is recognized in profit or 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.

A deferred tax asset is recognized to the extent that it is probable that future taxable profits will be available against which the 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 related tax benefit will be realized.

Deferred tax liabilities are not recognised for temporary differences between the carrying amount and tax bases of investments in subsidiaries and interest in joint arrangements where the group is able to control the timing of the reversal of the temporary differences and it is probable that the differences will not reverse in the foreseeable future.

Deferred tax assets are not recognised for 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 and taxable profit will not be available against which the temporary difference can be utilised.

Additional income taxes that arise from the distribution of dividends are recognized at the same time that the liability to pay the related dividend is recognized.



## 19 Leases

### 19.1 As lessee

#### Accounting for finance leases

Leases of property, plant and equipment where the Group, as lessee has substantially all risks and rewards of ownership are classified as finance lease. On initial recognition, assets held under finance leases are recorded as property, plant and equipment and the related liability is recognized under borrowings. At inception of the lease, finance leases are recorded at amounts equal to the fair value of the leased asset or, if lower, the present value of the minimum lease payments. Minimum lease payments made under finance leases are apportioned between the finance expense and the reduction of the outstanding liability.

The finance expense is allocated to each period during the lease term so as to produce a constant periodic rate of interest on the remaining balance of the liability.

#### Accounting for operating leases

Leases in which a significant portion of the risks and rewards of ownership are not transferred to the Group as lessee are classified as operating lease. Payments made under operating leases are recognized as an expense over the lease term. Lease incentives received are recognized as an integral part of the total lease expense, over the term of the lease.

### 19.2 As lessor

At 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 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 of 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 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 to 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 profit or 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 depreciation or amortization, if no impairment loss had been recognized.

## 21 Operating segments

In accordance with Ind AS 108, 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 expenses and income tax expenses.

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, and intangible assets other than goodwill.

Segment assets comprise property, plant and equipment, intangible assets, trade and other receivables, inventories and other assets that can be directly or reasonably allocated to segments. For the purpose of segment reporting for the year, property, plant and equipment have been allocated to segments based on the extent of usage of assets for operations attributable to the respective segments. Segment assets do not include investments, income tax assets, capital work in progress, capital advances, corporate assets and other current assets that cannot reasonably be allocated to segments.

Segment liabilities include all operating liabilities in respect of a segment and consist principally of trade and other payables, employee benefits and provisions. Segment liabilities do not include equity, income tax liabilities, loans and borrowings and other liabilities and provisions that cannot reasonably be allocated to segments.

## 22 Dividends

Dividends and interim dividends payable to a Group's shareholders are recognized as changes in equity in the period in which they are approved by the shareholders' meeting and the Board of Directors respectively.

## 23 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.

## 24 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.

Basic and diluted earnings per equity share are also computed using the earnings amounts excluding the movements in regulatory deferral account balances.



## 25 Cash flow statement

Cash flow statement is prepared in accordance with the indirect method prescribed in Ind AS 7 'Statement of Cash Flows'.

## 26 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.

### 26.1 Financial assets

#### Initial recognition and measurement

All financial assets are recognized initially at fair value plus, in the case of financial assets not recorded at fair value through profit or loss, transaction costs that are attributable to the acquisition or issue of the financial asset.

#### 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 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 profit or loss. The losses arising from impairment are recognized in the profit or 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 profit and loss. On derecognition of the asset, cumulative gain or loss previously recognized in OCI is reclassified from the equity to 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 profit and loss.

#### Equity investments

All equity investments in entities other than joint ventures 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 P&L, even on sale of investment. However, the group may transfer the cumulative gain or loss within equity.

Equity instruments included within the FVTPL category are measured at fair value with all changes recognized in the profit and loss.

#### **Derecognition**

A financial asset (or, where applicable, a part of a financial asset or part of a Group of similar financial assets) is primarily derecognised (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.

#### **Impairment of financial assets**

In accordance with Ind AS 109, 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, trade receivables and bank balance.
- (b) Financial assets that are debt instruments and are measured as at FVTOCI.
- (c) Lease receivables under Ind AS 17.
- (d) Trade receivables under Ind AS 18.
- (e) Loan commitments which are not measured as at FVTPL.
- (f) Financial guarantee contracts which are not measured as at FVTPL.

For recognition of impairment loss on other financial assets and risk exposure, 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 entity reverts to recognizing impairment loss allowance based on 12-month ECL.

## **26.2 Financial liabilities**

#### **Initial recognition and measurement**

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through profit or loss, borrowings, payables, or as derivatives designated as hedging instruments in an effective hedge, as appropriate. All financial liabilities are recognized initially at fair value and, in the case of borrowings and payables, net of directly attributable transaction costs. 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 profit or 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 profit or 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 profit or 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 are 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. All other changes in fair value of such liability are recognized in the statement of profit or loss. The Group has not designated any financial liability as at fair value through profit and loss.

#### **Derecognition**

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 derecognition 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 or loss.

#### **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.

#### **D. Use of estimates and management judgments**

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, income, 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 and 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 recognised 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 recognised in the financial statements is as under:

##### **1. Useful life of property, plant and equipment**

The estimated useful life of property, plant and equipment 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 is determined by the CERC Tariff Regulations in accordance with Schedule II of the Companies Act, 2013.

The Group reviews at the end of each reporting date the useful life of property, plant and equipment, other than the assets of generation of electricity business which are governed by CERC Regulations, and are adjusted prospectively, if appropriate.

##### **2. Recoverable amount of property, plant and equipment**

The recoverable amount of plant and equipment 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.





### 3. Post-employment benefit plans

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.

### 4. 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 18. However, in cases where tariff rates are yet to be approved, provisional rates are adopted considering the applicable CERC Tariff Regulations.

### 5. Leases not in legal form of lease

Significant judgment is required to apply lease accounting rules under Appendix C to Ind AS 17 'Determining whether an arrangement contains a lease'. In assessing the applicability to 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 needs the criteria under Appendix C to Ind AS 17.

### 6. 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.

### 7. 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 has required best judgment by management regarding the probability of exposure to potential loss. Should circumstances change following unforeseeable developments, this likelihood could alter.

### 8. Classification of joint arrangements

Group's joint arrangements in the nature of joint operations and joint ventures require unanimous consent from all parties for all 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'.

### 9. Impairment test of non-financial assets

The recoverable amount of investment in joint ventures 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.



## 2. Non-current assets - Property, plant & equipment

As at 31 March 2017

₹ Crore

Particulars	Gross block				Depreciation/amortisation and impairment				Net block	
	As at 01.04.2016	Additions	Deductions/ adjustments	As at 31.03.2017	Upto 01.04.2016	For the year	Deductions/ adjustments	Upto 31.03.2017	As at 31.03.2017	As at 31.03.2016
Land										
(including development expenses)										
Freehold	7,397.70	188.86	(44.29)	7,630.85	-	-	-	-	7,630.85	7,397.70
Leasehold	4,450.70	355.01	(173.54)	4,979.25	61.14	141.10	1.89	200.35	4,778.90	4,389.56
Under submergence (refer footnote e)	719.69	56.15	43.01	732.83	25.10	27.94	3.78	49.26	683.57	694.59
Roads, bridges, culverts & helipads	750.55	103.35	(51.74)	905.64	33.58	38.48	2.38	69.68	835.96	716.97
Building										
Freehold										
Main plant	3,907.53	747.20	(18.59)	4,673.32	155.97	172.71	-	328.68	4,344.64	3,751.56
Others	2,469.44	352.40	(71.52)	2,893.36	131.84	150.18	3.18	278.84	2,614.52	2,337.60
Leasehold	18.91	-	-	18.91	1.85	1.85	-	3.70	15.21	17.06
Temporary erection	5.68	11.40	(1.02)	18.10	4.14	9.83	-	13.97	4.13	1.54
Water supply, drainage & sewerage system	379.56	88.50	(5.58)	473.64	23.48	25.95	-	49.43	424.21	356.08
Hydraulic works, barrages, dams, tunnels and power channel	4,120.98	-	(9.93)	4,130.91	163.19	218.52	-	381.71	3,749.20	3,957.79
MGR track and signalling system	954.29	83.66	(53.61)	1,091.56	59.35	66.33	-	125.68	965.88	894.94
Railway siding	649.75	64.97	(42.86)	757.58	34.99	45.15	-	80.14	677.44	614.76
Earth dam reservoir	161.68	44.76	(4.92)	211.36	10.28	12.11	-	22.39	188.97	151.40
Plant and equipment										
Owned	71,288.66	14,568.45	(682.88)	86,539.99	5,005.60	5,605.88	32.37	10,579.11	75,960.88	66,283.06
Leased	85.77	-	-	85.77	4.62	4.75	-	9.37	76.40	81.15
Furniture and fixtures	268.95	75.20	(21.48)	365.63	22.26	26.16	0.07	48.35	317.28	246.69
Vehicles including speedboats										
Owned	7.46	3.39	0.26	10.59	0.92	1.04	0.07	1.89	8.70	6.54
Leased	2.19	1.23	0.17	3.25	0.33	0.75	0.08	1.00	2.25	1.86
Office equipment	132.83	34.32	1.32	165.83	24.78	20.10	0.33	44.55	121.28	108.05
EDP, WP machines and satcom equipment	144.30	137.67	5.48	276.49	75.07	48.02	6.10	116.99	159.50	69.23
Construction equipments	116.49	29.08	0.51	145.06	12.32	13.21	0.54	24.99	120.07	104.17
Electrical installations	363.43	89.58	(8.16)	461.17	22.25	25.61	0.72	47.14	414.03	341.18
Communication equipments	58.96	10.11	0.29	68.78	16.95	8.02	0.15	24.82	43.96	42.01
Hospital equipments	24.27	1.74	0.10	25.91	1.52	1.61	0.01	3.12	22.79	22.75
Laboratory and workshop equipments	70.81	15.38	(0.45)	86.64	3.71	5.01	-	8.72	77.92	67.10
Assets for ash utilisation	22.56	3.66	-	26.22	-	-	-	-	26.22	22.56
Less: Adjusted from fly ash utilisation reserve fund	22.56	3.66	-	26.22	-	-	-	-	26.22	22.56
<b>Total</b>	<b>98,550.58</b>	<b>17,062.41</b>	<b>(1,139.43)</b>	<b>116,752.42</b>	<b>5,895.24</b>	<b>6,670.31</b>	<b>51.67</b>	<b>12,513.88</b>	<b>104,238.54</b>	<b>92,655.34</b>

As at 31 March 2016

₹ Crore

Particulars	Gross block				Depreciation/amortisation and impairment				Net block	
	As at	Additions	Deductions/	As at	Upto	For	Deductions/	Upto	As at	As at
	01.04.2015		adjustments	31.03.2016	01.04.2015	the year	adjustments	31.03.2016	31.03.2016	01.04.2015
Land										
(including development expenses)										
Freehold	6,981.12	560.32	143.74	7,397.70	-	-	-	-	7,397.70	6,981.12
Leasehold	2,666.35	1,639.20	(145.15)	4,450.70	-	63.49	2.35	61.14	4,389.56	2,666.35
Under submergence (refer footnote e)	-	-	(719.69)	719.69	-	22.65	(2.45)	25.10	694.59	-
Roads, bridges, culverts & helipads	592.49	125.11	(32.95)	750.55	-	32.92	(0.66)	33.58	716.97	592.49
Building										
Freehold										
Main plant	3,395.87	417.20	(94.46)	3,907.53	-	159.07	3.10	155.97	3,751.56	3,395.87
Others	1,986.43	409.01	(74.00)	2,469.44	-	130.77	(1.07)	131.84	2,337.60	1,986.43
Leasehold	18.91	-	-	18.91	-	1.85	-	1.85	17.06	18.91
Temporary erection	1.12	7.49	2.93	5.68	-	4.89	0.75	4.14	1.54	1.12
Water supply, drainage & sewerage system	357.27	21.40	(0.89)	379.56	-	23.47	(0.01)	23.48	356.08	357.27
Hydraulic works, barrages, dams, tunnels and power channel	-	4,103.50	(17.48)	4,120.98	-	163.22	0.03	163.19	3,957.79	-
MGR track and signalling system	826.54	75.17	(52.58)	954.29	-	59.35	-	59.35	894.94	826.54
Railway siding	513.12	110.07	(26.56)	649.75	-	34.99	-	34.99	614.76	513.12
Earth dam reservoir	151.02	10.40	(0.26)	161.68	-	10.28	-	10.28	151.40	151.02
Plant and equipment										
Owned	60,651.29	8,182.07	(2,455.30)	71,288.66	-	4,858.83	(146.77)	5,005.60	66,283.06	60,651.29
Leased	55.77	30.00	-	85.77	-	4.62	-	4.62	81.15	55.77
Furniture and fixtures	209.41	56.92	(2.62)	268.95	-	22.02	(0.24)	22.26	246.69	209.41
Vehicles including speedboats										
Owned	6.83	0.99	0.36	7.46	-	0.95	0.03	0.92	6.54	6.83
Leased	-	2.13	(0.06)	2.19	-	0.33	-	0.33	1.86	-
Office equipment	100.60	32.76	0.53	132.83	-	24.63	(0.15)	24.78	108.05	100.60
EDP, WP machines and satcom equipment	110.50	37.17	3.37	144.30	-	77.26	2.19	75.07	69.23	110.50
Construction equipments	94.16	30.52	8.19	116.49	-	12.58	0.26	12.32	104.17	94.16
Electrical installations	298.20	52.39	(12.84)	363.43	-	21.52	(0.73)	22.25	341.18	298.20
Communication equipments	45.83	12.59	(0.54)	58.96	-	16.95	-	16.95	42.01	45.83
Hospital Equipments	21.17	3.25	0.15	24.27	-	1.53	0.01	1.52	22.75	21.17
Laboratory and workshop equipments	50.87	20.05	0.11	70.81	-	3.71	-	3.71	67.10	50.87
Assets under 5 KM scheme of the GOI	70.76	-	70.76	-	-	-	-	-	-	70.76
Assets for ash utilisation	17.30	4.29	(0.97)	22.56	-	-	-	-	22.56	17.30
Less: Adjusted from fly ash utilisation reserve fund	17.30	5.26	-	22.56	-	-	-	-	22.56	17.30
<b>Total</b>	<b>79,205.63</b>	<b>15,938.74</b>	<b>(3,406.21)</b>	<b>98,550.58</b>	<b>-</b>	<b>5,751.88</b>	<b>(143.36)</b>	<b>5,895.24</b>	<b>92,655.34</b>	<b>79,205.63</b>

## 41<sup>st</sup> Annual Report 2016-17

### Consolidated Financial Statements



- a) The conveyancing of the title to **9,375 acres** of freehold land of value ₹ **2,001.29 crore** (31 March 2016: 11,015 acres of value ₹ 2,312.14 crore, 1 April 2015: 9,926 acres of value ₹ 2,035.40 crore), buildings of value ₹ **4.97 crore** (31 March 2016: ₹ 4.97 crore, 1 April 2015: ₹ 4.97 crore) and also execution of lease agreements for **12,570 acres** of land of value ₹ **1,869.67 crore** (31 March 2016: 15,717 acres of value ₹ 2,917.00 crore, 1 April 2015: 13,716 acres of value ₹ 1,390.08 crore) in favour of the Company are awaiting completion of legal formalities.
- b) Land does not include value of **34 acres** (31 March 2016: 33 acres, 1 April 2015: 33 acres) of land in possession of the Company. This will be accounted for on settlement of the price thereof by the State Government Authorities.
- c) Land includes **1,295 acres** of value ₹ **155.37 crore** (31 March 2016: 1,306 acres of value ₹ 234.94 crore, 1 April 2015: 1,302 acres of value ₹ 72.36 crore) not in possession of the Company. The Company is taking appropriate steps for repossession of the same.
- d) Land includes an amount of ₹ **262.91 crore** (31 March 2016: ₹ 262.91 crore, 1 April 2015: ₹ 179.65 crore) deposited with various authorities in respect of land in possession which is subject to adjustment on final determination of price.
- e) Gross block of land under submergence represents ₹ **552.52 crore** (31 March 2016: ₹ 496.37 crore, 1 April 2015: ₹ Nil) of freehold land and ₹ **180.31 crore** (31 March 2016: ₹ 223.32 crore, 1 April 2015: ₹ Nil) of leasehold land. The land has been amortised 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.
- f) Possession of land measuring **98 acres** (31 March 2016: 98 acres, 1 April 2015: 98 acres) consisting of **79 acres** of freehold land (31 March 2016: 79 acres, 1 April 2015: 79 acres) and **19 acres** of lease hold land (31 March 2016: 19 acres, 1 April 2015: 19 acres) of value ₹ **0.21 crore** (31 March 2016: ₹ 0.21 crore, 1 April 2015: ₹ 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 -31 - 'Current liabilities- Other financial liabilities' - as other liabilities.
- g) Ministry of Power, GOI vide letter dated 27 April 2010 notified the Scheme for providing electricity in 5 KM area of all existing and upcoming power plants by CPSUs. The Scheme provided that expenditure incurred under this scheme will be booked by the CPSU under project cost and will be included in the tariff by the appropriate commission. Keeping in view the above, the expenditure incurred by the Company under the scheme was capitalised as a separate asset and was being depreciated over the remaining useful life of the related plant. The CERC while giving the tariff orders for some of the stations has directed that the actual expenditure should be reimbursed by the beneficiaries w.e.f. 1 April 2016 in equal monthly installments in the remaining three years of tariff period till March 2019 along-with interest instead of servicing the same as part of the capital cost. Consequently, cost of such tangible assets of ₹ 116.87 crore has been charged off as expenditure for the year ended 31 March 2016 and corresponding depreciation of ₹ 46.11 crore charged till 31 March 2015 has been written back. Consequently, revenue from operations of ₹ 108.19 crore (including interest of ₹ 3.05 crore) has been recognised during the year 2015-16.
- h) In line with Para D13AA of Ind AS 101, the Company has adopted the existing policy for capitalisation of exchange differences arising from translation of long-term foreign currency monetary items recognised in the financial statements for the period ending immediately before the beginning of the first Ind AS financial reporting period as per the previous GAAP i.e. the year 2015-16. (Refer Note 61)
- i) Refer Note 55 (b) regarding property, plant and equipment under finance lease.
- j) Based on assessment, reversal of an impairment loss of ₹ **0.73 crore** (31 March 2016: ₹ Nil) has been carried out during the year in respect of plant and equipment of a Solar PV Station of the Company. The impairment loss of ₹ 4.48 crore was recognised in 31 March 2016. Refer Note 59.
- k) Refer Note 23 for information on property, plant and equipments pledged as security by the Company.
- l) Refer Note 70 for disclosure of contractual commitments for the acquisition of property, plant and equipments.



m) Deduction/adjustments from gross block and depreciation/amortisation/impairment for the year includes:

	₹ Crore			
	Gross block		Depreciation/ amortisation/impairment	
	31.03.2017	31.03.2016	31.03.2017	31.03.2016
Disposal of assets	76.36	26.59	10.34	24.65
Retirement of assets	102.99	519.93	24.42	256.83
Cost adjustments including exchange differences	(1,200.64)	(3,225.79)	-	-
Assets capitalised with retrospective effect/write back of excess capitalisation	(152.58)	(270.85)	(8.63)	58.04
Others incl. Ind AS Adjustments	34.44	(456.09)	25.54	(482.88)
	<b>(1,139.43)</b>	<b>(3,406.21)</b>	<b>51.67</b>	<b>(143.36)</b>

n) Exchange differences capitalised are disclosed in the 'Addition' column of CWIP and allocated to various heads of CWIP in the year of capitalisation through 'Deductions/Adjustment' column of CWIP. Exchange differences in respect of assets already capitalised are disclosed in the 'Deductions/Adjustments' column of PPE. Asset-wise details of exchange differences and borrowing costs included in the cost of major heads of PPE and CWIP through 'Addition' or 'Deductions/Adjustments' column are given below:

	₹ Crore			
	For the year ended 31 March 2017		For the year ended 31 March 2016	
	Exchange Difference included in PPE/ CWIP	Borrowing costs incl in PPE/ CWIP	Exchange Difference included in PPE/ CWIP	Borrowing costs incl in PPE/ CWIP
Building				
Main plant	(4.52)	273.35	25.45	239.58
Others	(0.25)	96.01	3.23	54.83
Hydraulic works, barrages, dams, tunnels and power channel	(5.62)	183.06	22.99	202.71
MGR track and signalling system	-	18.32	0.21	25.80
Railway siding	(0.06)	45.16	0.01	19.13
Plant and equipment	(172.18)	3,672.59	1,466.46	3,270.91
Others including pending allocation	(232.66)	493.40	438.26	507.19
<b>Total</b>	<b>(415.29)</b>	<b>4,781.89</b>	<b>1,956.61</b>	<b>4,320.15</b>



- o) Information regarding gross block of Property, plant and equipments and accumulated depreciation/amortisation under previous GAAP is as follows:

₹ Crore

Particulars	Gross block as at 01.04.2015	Accumulated depreciation as at 01.04.2015	Net block as at 01.04.2015 (Deemed Cost)	Ind AS adjustments as at 01.04.2015	Opening balance as at 01.04.2015
Land					
(including development expenses)					
Freehold	6,981.12	-	6,981.12	-	6,981.12
Leasehold	3,166.04	499.69	2,666.35	-	2,666.35
Roads, bridges, culverts & helipads	853.29	258.17	595.12	2.63	592.49
Building					
Freehold					
Main plant	5,012.04	1,608.07	3,403.97	8.10	3,395.87
Others	3,213.45	1,191.41	2,022.04	35.61	1,986.43
Leasehold	50.00	31.09	18.91	-	18.91
Temporary erection	41.28	40.16	1.12	-	1.12
Water supply, drainage & sewerage system	721.03	357.19	363.84	6.57	357.27
MGR track and signalling system	1,551.01	724.47	826.54	-	826.54
Railway siding	750.73	231.46	519.27	6.15	513.12
Earth dam reservoir	290.10	136.22	153.88	2.86	151.02
Plant and equipment					
Owned	104,402.39	43,379.14	61,023.25	371.96	60,651.29
Leased	60.00	4.23	55.77	-	55.77
Furniture and fixtures	488.62	279.32	209.30	(0.11)	209.41
Vehicles including speedboats					
Owned	12.79	5.95	6.84	0.01	6.83
Office equipment	198.01	97.48	100.53	(0.07)	100.60
EDP, WP machines and satcom equipment	427.12	316.83	110.29	(0.21)	110.50
Construction equipments	198.65	104.47	94.18	0.02	94.16
Electrical installations	495.22	197.02	298.20	-	298.20
Communication equipments	107.35	61.51	45.84	0.01	45.83
Hospital Equipments	39.78	18.61	21.17	-	21.17
Laboratory and workshop equipments	70.10	19.23	50.87	-	50.87
Assets under 5 KM scheme of the GOI	116.87	46.11	70.76	-	70.76
Assets for ash utilisation	17.30	-	17.30	-	17.30
Less: Adjusted from fly ash utilisation reserve fund	17.30	-	17.30	-	17.30
<b>Total</b>	<b>129,246.99</b>	<b>49,607.83</b>	<b>79,639.16</b>	<b>433.53</b>	<b>79,205.63</b>

### 3. Non-current assets - Intangible assets

As at 31 March 2017

Particulars	Gross block				Amortisation				Net block	
	As at 01.04.2016	Additions	Deductions/ adjustments	As at 31.03.2017	Upto 01.04.2016	For the year	Deductions/ adjustments	Upto 31.03.2017	As at 31.03.2017	As at 31.03.2016
Software	16.57	10.03	(0.54)	27.14	6.36	8.03	(0.42)	14.81	12.33	10.21
Right of use- Land	73.20	28.36	(3.05)	104.61	2.78	4.11	-	6.89	97.72	70.42
- Others	203.71	-	-	203.71	10.32	10.32	-	20.64	183.07	193.39
<b>Total</b>	<b>293.48</b>	<b>38.39</b>	<b>(3.59)</b>	<b>335.46</b>	<b>19.46</b>	<b>22.46</b>	<b>(0.42)</b>	<b>42.34</b>	<b>293.12</b>	<b>274.02</b>

As at 31 March  
2016

Particulars	Gross block				Amortisation				Net block	
	As at 01.04.2015	Additions	Deductions/ adjustments	As at 31.03.2016	Upto 01.04.2015	For the year	Deductions/ adjustments	Upto 31.03.2016	As at 31.03.2016	As at 01.04.2015
Software	12.90	3.57	(0.10)	16.57	-	6.26	(0.10)	6.36	10.21	12.90
Right of use - Land	45.67	14.33	(13.20)	73.20	-	2.78	-	2.78	70.42	45.67
- Others	203.71	-	-	203.71	-	10.32	-	10.32	193.39	203.71
<b>Total</b>	<b>262.28</b>	<b>17.90</b>	<b>(13.30)</b>	<b>293.48</b>	<b>-</b>	<b>19.36</b>	<b>(0.10)</b>	<b>19.46</b>	<b>274.02</b>	<b>262.28</b>

- a) The right of use of land & 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 ₹ **203.71 crore** (31 March 2016: ₹ 203.71 crore, 1 April 2015: ₹ 203.71 crore) is included under intangible assets – Right of use - Others.
- c) Deduction/adjustments from gross block and amortisation for the year includes:

	₹ Crore			
	Gross Block		Amortisation	
	31.03.2017	31.03.2016	31.03.2017	31.03.2016
Cost adjustments	(3.16)	(13.20)	-	-
Others	(0.43)	(0.10)	(0.42)	(0.10)
<b>Total</b>	<b>(3.59)</b>	<b>(13.30)</b>	<b>(0.42)</b>	<b>(0.10)</b>

- d) Information regarding gross block of intangible assets and accumulated amortisation under previous GAAP is as follows:

Particulars	₹ Crore				
	Gross block as at 01-04-2015	Accumulated amortisation as at 01.04.2015	Net Block as at 01.04.2015 (Deemed cost)	Ind AS adjustments as at 01.04.2015	Opening balance as at 01.04.2015
Software	111.79	98.89	12.90	-	12.90
Right of use - Land	56.46	10.79	45.67	-	45.67
- Others	248.08	44.37	203.71	-	203.71
<b>Total</b>	<b>416.33</b>	<b>154.05</b>	<b>262.28</b>	<b>-</b>	<b>262.28</b>

## 41<sup>st</sup> Annual Report 2016-17

Consolidated Financial Statements



#### 4. Non-current assets - Capital work-in-progress

As at 31 March 2017

₹ Crore

Particulars	As at 01.04.2016	Additions	Deductions/ adjustments	Capitalised	As at 31.03.2017
Development of land	918.46	193.49	91.50	75.89	944.56
Roads, bridges, culverts & helipads	77.48	108.57	(21.40)	103.35	104.10
Piling and foundation	675.70	31.84	51.61	-	655.93
Buildings					
Main plant	4,189.74	1,465.29	876.22	747.20	4,031.61
Others	1,508.27	845.75	234.79	352.37	1,766.86
Temporary erection	37.62	11.51	(0.17)	11.15	38.15
Water supply, drainage and sewerage system	77.70	46.60	(19.08)	81.81	61.57
Hydraulic works, barrages, dams, tunnels and power channel	1,982.10	341.31	3.64	-	2,319.77
MGR track and signalling system	390.94	159.35	243.10	83.66	223.53
Railway siding	454.92	811.67	57.37	64.98	1,144.24
Earth dam reservoir	106.99	9.53	(17.70)	44.77	89.45
Plant and equipment	54,849.75	24,704.63	(26.15)	13,416.82	66,163.71
Furniture and fixtures	12.85	30.30	(18.78)	38.46	23.47
Office equipment	2.03	5.66	0.19	1.93	5.57
EDP/WP machines & satcom equipment	29.35	2.32	(0.97)	30.72	1.92
Construction equipments	0.17	0.04	0.05	-	0.16
Electrical installations	591.03	203.19	21.20	79.13	693.89
Communication equipments	2.35	1.23	0.01	0.62	2.95
Hospital equipments	0.07	0.47	0.01	0.03	0.50
Laboratory and workshop equipments	2.96	11.34	0.32	8.07	5.91
Development of coal mines	1,301.30	457.39	0.18	-	1,758.51
	67,211.78	29,441.48	1,475.94	15,140.96	80,036.36
<b>Expenditure pending allocation</b>					
Survey, investigation, consultancy and supervision charges	242.68	38.95	88.83	-	192.80
Difference in exchange on foreign currency loans	1,920.69	35.13	457.69	-	1,498.13
Pre-commissioning expenses (net)	113.35	387.01	223.39	-	276.97
Expenditure during construction period (net)*	1,048.28	6,073.39	13.79	-	7,107.88
Other expenditure directly attributable to project construction	493.57	99.79	72.89	-	520.47
Less: Allocated to related works	-	6,709.29	-	-	6,709.29
	71,030.35	29,366.46	2,332.53	15,140.96	82,923.32
Less: Provision for unserviceable works	99.39	0.03	0.66	-	98.76
<b>Construction stores (net of provision)</b>	3,896.96	(40.35)	-	-	3,856.61
<b>Total</b>	<b>74,827.92</b>	<b>29,326.08</b>	<b>2,331.87</b>	<b>15,140.96</b>	<b>86,681.17</b>



As at 31 March 2016

₹ Crore

Particulars	Deemed cost as at 01.04.2015	Additions	Deductions/ adjustments	Capitalised	As at 31.03.2016
Development of land	848.12	277.70	207.36	-	918.46
Roads, bridges, culverts & helipads	116.65	64.50	(21.45)	125.12	77.48
Piling and foundation	641.51	34.82	0.63	-	675.70
Buildings					
Main plant	3,601.34	1,375.03	369.43	417.20	4,189.74
Others	1,186.53	783.82	54.65	407.43	1,508.27
Temporary erection	46.53	66.19	70.21	4.89	37.62
Water supply, drainage and sewerage system	68.13	33.23	2.81	20.85	77.70
Hydraulic works, barrages, dams, tunnels and power channel	5,268.97	797.68	(1.01)	4,085.56	1,982.10
MGR track and signalling system	329.28	189.42	52.59	75.17	390.94
Railway siding	324.54	291.88	51.43	110.07	454.92
Earth dam reservoir	76.80	40.86	0.27	10.40	106.99
Plant and equipment	42,948.66	20,297.91	758.74	7,638.08	54,849.75
Furniture and fixtures	23.16	15.75	(9.48)	35.54	12.85
Office equipment	1.61	5.90	0.44	5.04	2.03
EDP/WP machines & satcom equipment	3.06	29.54	0.33	2.92	29.35
Construction equipments	1.97	0.02	0.01	1.81	0.17
Electrical installations	456.43	325.13	145.17	45.36	591.03
Communication equipments	2.19	2.40	0.71	1.53	2.35
Hospital equipments	0.13	0.07	-	0.13	0.07
Laboratory and workshop equipments	0.06	2.94	0.01	0.03	2.96
Development of coal mines	1,086.49	214.81	-	-	1,301.30
	57,032.16	24,849.60	1,682.85	12,987.13	67,211.78
<b>Expenditure pending allocation</b>					
Survey, investigation, consultancy and supervision charges	314.01	14.88	86.21	-	242.68
Difference in exchange on foreign currency loans	1,528.42	893.96	501.69	-	1,920.69
Pre-commissioning expenses (net)	54.75	181.73	123.13	-	113.35
Expenditure during construction period (net)*	725.88	5,451.51	126.73	-	6,050.66
Other expenditure directly attributable to project construction	100.04	447.01	53.08	0.40	493.57
Less: Allocated to related works	-	5,002.38	-	-	5,002.38
	59,755.26	26,836.31	2,573.69	12,987.53	71,030.35
Less: Provision for unserviceable works	105.99	4.22	10.82	-	99.39
<b>Construction stores (net of provision)</b>	4,082.18	(185.22)	-	-	3,896.96
<b>Total</b>	<b>63,731.45</b>	<b>26,646.87</b>	<b>2,562.87</b>	<b>12,987.53</b>	<b>74,827.92</b>

\* Brought from expenditure during construction period (net) - Note 43

## 41<sup>st</sup> Annual Report 2016-17

Consolidated Financial Statements



- a) Construction stores are net of provision for shortages pending investigation amounting to ₹ 14.61 crore (31 March 2016: ₹ 9.07 crore, 1 April 2015: ₹ 5.68 crore).
- b) Pre-commissioning expenses for the year amount to ₹ 442.91 crore (31 March 2016: ₹ 336.71 crore, 1 April 2015: ₹ 292.74 crore) and after adjustment of pre-commissioning sales of ₹ 55.89 crore (31 March 2016: ₹ 154.98 crore, 1 April 2015: ₹ 50.04 crore) resulted in net pre-commissioning expenditure of ₹ 387.02 crore (31 March 2016: ₹ 181.73 crore, 1 April 2015: ₹ 242.70 crore).
- c) Additions to the development of coal mines include expenditure during construction period (net) of ₹ 353.95 crore (31 March 2016: ₹ 214.75 crore, 1 April 2015: ₹ 153.90 crore).

#### 5. Non-current assets - Intangible assets under development

As at 31 March 2017					₹ Crore
Particulars	As at 01.04.2016	Additions	Deductions/ Adjustments	Capitalised	As at 31.03.2017
Right of use - others	140.19	-	(74.34)	-	214.53
Exploratory wells-in-progress	85.06	20.45	97.86	-	7.65
	225.25	20.45	23.52	-	222.18
Less: Provision for unserviceable works	7.64	-	-	-	7.64
<b>Total</b>	<b>217.61</b>	<b>20.45</b>	<b>23.52</b>	<b>-</b>	<b>214.54</b>

As at 31 March 2016					₹ Crore
Particulars	Deemed cost as at 01.04.2015	Additions	Deductions/ Adjustments	Capitalised	As at 31.03.2016
Software	0.10	-	-	0.10	-
Right of use - others	-	140.19	-	-	140.19
Exploratory wells-in-progress	37.92	69.24	22.10	-	85.06
	38.02	209.43	22.10	0.10	225.25
Less: Provision for unserviceable works	7.64	-	-	-	7.64
<b>Total</b>	<b>30.38</b>	<b>209.43</b>	<b>22.10</b>	<b>0.10</b>	<b>217.61</b>

**6. Non-current assets - Investments in joint ventures**  
(Accounted for using the equity method)

			₹ Crore		
Particulars			As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
	Number of shares/ bonds/ securities Current year/ (previous year)/ [date of transition]	Face value per share/ bond/ security Current year/ (previous year)/ [date of transition] (₹)			
<b>Equity instruments- Unquoted (fully paid up - unless otherwise stated)</b>					
<b>Joint venture companies</b>					
Utility Powertech Ltd. (includes 1000000 bonus shares)	2000000 (2000000) [2000000]	10 (10) [10]	<b>40.83</b>	34.41	32.69
NTPC-GE Power Services Private Ltd. (formerly NTPC-Alstom Power Services Private Ltd.)	3000000 (3000000) [3000000]	10 (10) [10]	<b>11.75</b>	12.20	12.00
NTPC-SAIL Power Company Ltd. (formerly NTPC-SAIL Power Company Pvt. Ltd.)	490250050 (490250050) [490250050]	10 (10) [10]	<b>986.76</b>	877.62	824.51
NTPC-Tamil Nadu Energy Company Ltd.	1385606112 (1345606112) [1325606112]	10 (10) [10]	<b>1,269.39</b>	1,129.85	1,243.48
Ratnagiri Gas & Power Private Ltd.	974308300 (974308300) [974308300]	10 (10) [10]	-	47.03	237.26
Aravali Power Company Private Ltd.	1398508200 (1332008200) [1257508200]	10 (10) [10]	<b>2,364.61</b>	1,970.78	1,617.51
NTPC BHEL Power Projects Private Ltd.	50000000 (50000000) [50000000]	10 (10) [10]	<b>21.32</b>	59.78	66.32
Meja Urja Nigam Private Ltd.	1166439800 (841439800) [412429800]	10 (10) [10]	<b>1,193.04</b>	868.08	439.13
BF-NTPC Energy Systems Ltd.	6570900 (5880000) [5880000]	10 (10) [10]	<b>2.83</b>	2.26	2.46
Nabinagar Power Generating Company Private Ltd.	1189300000 (713300000) [511125000]	10 (10) [10]	<b>1,212.15</b>	736.29	534.12
Transformers and Electricals Kerala Ltd.	19163438 (19163438) [19163438]	10 (10) [10]	<b>38.96</b>	38.48	38.33
National High Power Test Laboratory Private Ltd.	30400000 (23900000) [23900000]	10 (10) [10]	<b>29.97</b>	23.43	23.43
Energy Efficiency Services Ltd.	146500000 (47500000) [22500000]	10 (10) [10]	<b>184.12</b>	59.91	28.73

**41<sup>st</sup> Annual Report 2016-17**

Consolidated Financial Statements



6. Non-current assets - Investments in joint ventures  
(Accounted for using the equity method)

			₹ Crore		
Particulars			As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
	Number of shares/ bonds/ securities Current year/ (previous year)/ [date of transition]	Face value per share/ bond/ security Current year/ (previous year)/ [date of transition] (₹)			
CIL NTPC Urja Private Ltd.	76900 (76900) [25000]	10 (10) [10]	0.02	0.03	-
Anushakti Vidhyut Nigam Ltd.	49000 (49000) [49000]	10 (10) [10]	0.01	0.01	0.01
NTPC-SCCL Global Ventures Private Ltd.	- (-) [50000]	- (-) [10]	-	-	0.05
National Power Exchange Ltd.	- (-) [2188325]	- (-) [10]	-	-	1.14
Pan-Asian Renewables Private Ltd.	- (-) [1500000]	- (-) [10]	-	-	0.19
Hindustan Urvarak and Rasayan Ltd.	5025000 (-) [-]	10 (-) [-]	3.42	-	-
Kinesco Power and Utilities Private Ltd.	- (-) [50000]	- (-) [10]	-	-	0.47
Trincomalee Power Company Ltd. (* Srilankan rupees)	3286061 (3286061) [2036061]	100* (100)* [100]*	8.99	10.81	5.10
Bangladesh-India Friendship Power Company Pvt. Ltd. (* Bangladeshi Taka)	16250000 (8750000) [2000000]	100* (100)* [100]*	132.27	74.07	16.02
			7,500.44	5,945.04	5,122.95
Share application money pending allotment in					
NTPC-Tamil Nadu Energy Company Ltd.			24.39	20.00	-
Nabinagar Power Generating Company Private Ltd.			164.00	50.00	-
Aravali Power Company Private Ltd.			-	-	21.34
Meja Urja Nigam Private Ltd.			-	-	128.92
CIL NTPC Urja Private Ltd.			-	-	0.05
Bangladesh-India Friendship Power Company Pvt. Ltd.			-	-	15.90
			188.39	70.00	166.21
<b>Total</b>			<b>7,688.83</b>	<b>6,015.04</b>	<b>5,289.16</b>
<b>Aggregate amount of unquoted investments</b>			<b>7,688.83</b>	<b>6,015.04</b>	<b>5,289.16</b>

a) Restrictions for the disposal of investments held by the Company and commitments towards certain Joint Venture entities are disclosed in Note 67.



## 7. Non-current financial assets - Investments

₹ Crore

Particulars			As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
	Number of shares/ bonds/ securities Current year/ (previous year)/ [date of transition]	Face value per share/bond/ security Current year/ (previous year)/ [date of transition] (₹)			
<b>Equity instruments (fully paid up - unless otherwise stated)</b>					
<b>Quoted (designated at fair value through other comprehensive income)</b>					
PTC India Ltd.	12000000 (12000000) [12000000]	10 (10) [10]	<b>112.08</b>	76.80	97.08
			<b>112.08</b>	76.80	97.08
<b>Unquoted (measured at fair value through profit or loss)</b>					
NTPC-SCCL Global Ventures Private Ltd.	- (50000) [-]	- (10) [-]	-	0.05	-
National Power Exchange Ltd.	- (2188325) [-]	- (10) [-]	-	1.13	-
Pan-Asian Renewables Private Ltd.	- (1500000) [-]	- (10) [-]	-	0.22	-
International Coal Ventures Private Ltd.	1400000 (1400000) [1400000]	10 (10) [10]	<b>1.40</b>	1.40	1.40
			<b>1.40</b>	2.80	1.40
<b>Cooperative societies</b>			<b>#</b>	<b>#</b>	<b>#</b>
<b>Total</b>			<b>113.48</b>	<b>79.60</b>	<b>98.48</b>
<b>Aggregate amount of quoted investments and market value thereof</b>			<b>112.08</b>	<b>76.80</b>	<b>97.08</b>
<b>Aggregate amount of unquoted investments</b>			<b>1.40</b>	<b>2.80</b>	<b>1.40</b>

# Equity shares of ₹ 30,200/- (31 March 2016: ₹ 30,200/-, 1 April 2015: ₹ 30,200/-) held in various employee co-operative societies.

- Investments have been valued as per accounting policy no. C.26.1 (Note 1).
- 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 is awaited for exit by NTPC Limited.
- 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). As the Company was formed by a directive from the GOI, approval of the GOI is awaited for exit by NTPC Limited. Pending withdrawal, company had lost the joint control over the entity and accordingly, has classified the investment in ICVPL as 'Investment in unquoted equity instruments'. Pending withdrawal, no provision for impairment in the value of investment in ICVPL is required to be made.
- No strategic investments in equity instruments measured at FVTOCI were disposed during 2016-17, and there were no transfers of any cumulative gain or loss within equity relating to these investments.

## 41<sup>st</sup> Annual Report 2016-17

Consolidated Financial Statements



## 8. Non-current financial assets - Trade receivables

₹ Crore

Particulars	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
Trade receivables			
Unsecured, considered good	<u>35.59</u>	<u>71.18</u>	<u>-</u>

## 9. Non-current financial assets - Loans

₹ Crore

Particulars	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
<b>Loans</b>			
Related parties			
Unsecured	0.67	0.62	0.60
Employees (including accrued interest)			
Secured	252.52	236.88	234.73
Unsecured	97.81	149.34	127.08
Loan to state government in settlement of dues from customers (Unsecured)	-	-	47.86
Others			
Secured	50.34	53.23	55.62
<b>Total</b>	<u>401.34</u>	<u>440.07</u>	<u>465.89</u>

### a) Loans to related parties include:

NTPC Education and Research Society

0.60      0.60      0.60

### b) Other loans represent loan of ₹ 50.34 crore (31 March 2016 : ₹ 53.23 crore, 1 April 2015 : ₹ 55.62 crore) given to Andhra Pradesh Industrial Infrastructure Corporation Ltd. (APIIC).

### c) Details of collateral held as security:

- 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.
- Loan to APIIC is secured by a guarantee given by the Government of Andhra Pradesh vide GO dated 3 April 2003.

## 10. Non-current assets - Other financial assets

₹ Crore

Particulars	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
Claims recoverable	638.97	510.99	466.28
Finance lease receivables [Refer Note 55(b)]	525.29	511.20	515.20
<b>Total</b>	<u>1,164.26</u>	<u>1,022.19</u>	<u>981.48</u>

- a) Claims recoverable includes ₹ 619.34 crore (31 March 2016: ₹ 469.73 crore, 1 April 2015: ₹ 466.28 crore) towards the cost incurred upto 31 March 2017 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 ₹ 332.38 crore (31 March 2016: ₹ 185.41 crore, 1 April 2015: ₹ 214.34 crore) in respect of arbitration awards challenged by the Company before hon'ble High Court. In the event the High Court grants relief to the Company, the amount would be adjusted against Current liabilities-Provisions- Provision for others (Note 33). 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) Keeping in view the provisions of Appendix C to Ind AS-17 on 'Leases' w.r.t. determining whether an arrangement contains a lease, the Company has 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 has been derecognized from PPE and accounted for as Finance Lease Receivable (FLR). Recovery of capacity charges towards depreciation (including AAD), interest on loan capital & return on equity (pre-tax) components from the beneficiary are 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 recognised as 'Interest income on Assets under finance lease' under Note-37-'Revenue from operations'.

#### 11. Other non-current assets

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
<b>Capital advances</b>			
Secured	16.23	17.34	16.48
Unsecured			
Covered by bank guarantee	3,370.66	3,836.24	4,233.29
Others	3,142.74	3,323.48	3,719.82
Considered doubtful	5.74	1.92	2.06
Less: Allowance for bad & doubtful advances	5.74	1.92	2.06
	<b>6,529.63</b>	<b>7,177.06</b>	<b>7,969.59</b>
<b>Advances other than capital advances</b>			
Security deposits	89.65	147.94	156.16
Advances to related parties	20.95	20.95	20.95
Advances to contractors & suppliers	2,296.71	2,273.47	2,257.53
Advance tax & tax deducted at source	11,650.95	16,451.26	11,879.48
Less: Provision for tax	4,633.38	9,512.63	6,980.06
	<b>7,017.57</b>	<b>6,938.63</b>	<b>4,899.42</b>
Deferred foreign currency fluctuation asset	1,032.68	1,368.79	1,280.49
Deferred payroll expenditure	146.72	157.21	160.45
<b>Total</b>	<b>17,133.91</b>	<b>18,084.05</b>	<b>16,744.59</b>

- a) In line with accounting policy no. 15.1 (Note 1), deferred foreign currency fluctuation asset has been accounted and (-) ₹ 233.80 crore (31 March 2016: (-) ₹ 709.35 crore) being exchange fluctuations on account of foreign currency loans has been recognised in energy sales in Note-37-'Revenue from operations'.
- 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. (Previously NTPC-Alstom Power Services Private Ltd.) | 48.42  | 5.11   | 17.96  |
| NTPC BHEL Power Projects Private Ltd.  | 117.03 | 154.10 | 162.24 |
- c) Capital advances include ₹ 224.29 crore (31 March 2016: ₹ 224.48 crore, 1 April 2015: ₹ 268.72 crore), paid to a contractor pending settlement of certain claims which are under arbitration. The amount will be adjusted in the cost of related work or recovered from the party, depending upon the outcome of the arbitration proceedings.



- d) Advances to contractors & suppliers include payments to Railways amounting to ₹ 2,226.22 crore (31 March 2016: ₹ 2,226.16 crore, 1 April 2015 ₹ 2,210.22 crore) under Customer funding model as per policy on 'Participative model for rail-connectivity and capacity augmentation projects' issued by Ministry of Railways, GOI. As per the 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 & 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 recovered along-with 5% interest on the fund provided by the Company after COD of the railway projects. The railway projects as per the agreement are yet to achieve the COD.
- e) Capital advance are secured against the hypothecation of the construction equipment/material supplied by the contractors/parties.
- f) Loans given to employees are measured at amortised cost. The deferred payroll expenditure represent benefits accruing to the employees. The same is amortised on a straight line basis over the remaining period of the loan.

## 12. Current assets - Inventories

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
Coal	2,636.13	3,505.12	3,829.16
Fuel oil	278.30	250.58	345.44
Naphtha	112.64	118.54	139.81
Stores & spares	2,937.61	2,612.36	2,492.29
Chemicals & consumables	99.61	79.47	68.46
Loose tools	7.47	7.96	7.35
Steel scrap	22.40	26.00	24.14
Others	595.43	544.52	505.24
	<b>6,689.59</b>	<b>7,144.55</b>	<b>7,411.89</b>
Less: Provision for shortages	5.69	6.66	5.35
Provision for obsolete/unserviceable items/diminution in value of surplus inventory	97.77	87.28	81.30
<b>Total</b>	<b>6,586.13</b>	<b>7,050.61</b>	<b>7,325.24</b>
Inventories include material-in-transit			
Coal	187.14	323.71	421.24
Stores & spares	46.80	38.71	36.63
Chemicals & consumables	0.78	1.17	0.39
Loose tools	0.08	0.07	0.04
Others	0.91	0.63	0.84

- a) Inventory items, other than steel scrap have been valued as per accounting policy no. C.9 (Note 1). Steel scrap has been valued at estimated realisable value.
- b) Inventories - Others includes steel, cement, ash bricks etc.



### 13. Current financial assets - Investments

			₹ Crore		
Particulars			As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
	Number of shares/ bonds/ securities Current year/ (previous year)/ [date of transition]	Face value per share/bond/ security Current year/ (previous year)/ [date of transition]			
<b>Current maturities of long term investments</b>					
<b>Bonds (fully-paid up) (measured at amortised cost)</b>					
<b>Unquoted</b>					
<b>8.50 % Tax-Free State Government Special Bonds of the Government of Andhra Pradesh</b>					
	-	-	-	2.68	134.11
	(-)	(-)			
	[1260650]	[1000]			
Assam	-	-	-	0.11	5.48
	(-)	(-)			
	[51464]	[1000]			
Bihar	-	-	-	4.03	201.52
	(-)	(-)			
	[1894400]	[1000]			
Chattisgarh	-	-	-	1.03	51.40
	(-)	(-)			
	[483220]	[1000]			
Gujarat	-	-	-	1.78	89.07
	(-)	(-)			
	[837240]	[1000]			
Haryana	-	-	-	2.28	114.35
	(-)	(-)			
	[1075000]	[1000]			
Himachal Pradesh	-	-	-	0.07	3.55
	(-)	(-)			
	[33388]	[1000]			
Jammu and Kashmir	-	-	-	0.78	39.08
	(-)	(-)			
	[367360]	[1000]			
Jharkhand	-	-	-	2.04	102.13
	(-)	(-)			
	[960136]	[1000]			
Kerala	-	-	-	2.13	106.63
	(-)	(-)			
	[1002400]	[1000]			
Madhya Pradesh	-	-	-	1.77	88.38
	(-)	(-)			
	[830840]	[1000]			



₹ Crore

Particulars			As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
	Number of shares/ bonds/ securities Current year/ (previous year)/ [date of transition]	Face value per share/bond/ security Current year/ (previous year)/ [date of transition]			
Maharashtra	- (-) [381400]	- (-) [1000]	-	0.81	40.57
Orissa	- (-) [1102874]	- (-) [1000]	-	2.34	117.32
Punjab	- (-) [346230]	- (-) [1000]	-	0.73	36.83
Rajasthan	- (-) [290000]	- (-) [1000]	-	0.62	30.85
Sikkim	- (-) [34196]	- (-) [1000]	-	0.07	3.64
Uttar Pradesh	- (-) [3989900]	- (-) [1000]	-	8.48	424.42
Uttaranchal	- (-) [399650]	- (-) [1000]	-	0.85	42.51
West Bengal	- (-) [1174248]	- (-) [1000]	-	2.49	124.90
			-	35.09	1,756.74
<b>Investment in mutual funds (measured at fair value through profit or loss)</b>					
UTI Liquid Cash Plan-IP-Direct-DDR*			-	159.58	151.36
IDBI Liquid Fund-Direct-DDR *			-	79.30	75.24
SBI Premier Liquid Fund - Direct - DDR*			-	104.75	-
			-	343.63	226.60
<b>Total</b>			-	378.72	1,983.34
<b>Aggregate amount of unquoted investments</b>			-	378.72	1,983.34

\* Investments out of fly ash utilization reserve fund.

- Investments have been valued as per accounting policy no. C.26.1 (Note 1).
- The above investments are unquoted and hence market value is not applicable.
- Investments in 8.50 % Tax-Free State Government Special Bonds of the Government of various states as at 31 March 2016 represent accrued interest amount as these bonds have been redeemed during the financial year 2015-16.

#### 14. Current financial assets - Trade receivables

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
<b>Trade receivables</b>			
Unsecured, considered good	8,963.89	8,288.79	8,187.16
Considered doubtful	0.22	0.22	0.22
	<u>8,964.11</u>	<u>8,289.01</u>	<u>8,187.38</u>
Less: Allowance for bad & doubtful receivables	0.22	0.22	0.22
<b>Total</b>	<u><u>8,963.89</u></u>	<u><u>8,288.79</u></u>	<u><u>8,187.16</u></u>

#### 15. Current financial assets - Cash and cash equivalents

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
<b>Balances with banks</b>			
Current accounts	339.14	140.69	236.16
Deposits with original maturity upto three months (including interest accrued)	21.49	1,398.34	148.02
Cheques & drafts on hand	3.13	0.32	59.69
Balance with Reserve Bank of India (including interest accrued)	-	-	31.46
Others (stamps on hand)	0.07	0.09	0.12
<b>Total</b>	<u><u>363.83</u></u>	<u><u>1,539.44</u></u>	<u><u>475.45</u></u>

#### 16. Current financial assets -Bank balances other than cash and cash equivalents

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
Deposits with original maturity of more than three months and maturing within one year (including interest accrued)*	1,437.47	2,583.80	13,479.58
Earmarked balances with banks #	1,500.16	815.08	342.35
<b>Total</b>	<u><u>2,937.63</u></u>	<u><u>3,398.88</u></u>	<u><u>13,821.93</u></u>
# Earmarked balances with banks towards:			
Redemption of bonds due for repayment within one year	101.04	107.49	108.32
Fly ash utilisation reserve fund**	556.68	136.77	193.84
DDUGJY Scheme of the GOI***	802.05	527.52	-
Public deposit repayment reserve	-	-	0.08
Unpaid dividend account balance	17.61	15.05	14.95
Amount deposited as per court orders	19.75	26.06	24.81
Unpaid interest/refund account balance - Bonds	2.97	2.15	0.30
Unpaid interest on public deposit	0.03	0.03	0.03
Security with government authorities	0.03	0.01	0.02
<b>Total</b>	<u><u>1,500.16</u></u>	<u><u>815.08</u></u>	<u><u>342.35</u></u>

\* Includes deposits of ₹ Nil (31 March 2016: ₹ Nil, 1 April 2015: ₹ 2,750 crore) with more than twelve months maturity from the date of deposit.

\*\* Refer Note 22 regarding fly ash utilization reserve fund.

\*\*\* Out of advance for DDUGJY Scheme of the GOI. Refer Note 32 (a).

## 41<sup>st</sup> Annual Report 2016-17

### Consolidated Financial Statements



## 17. Current financial assets - Loans

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
<b>Loans (including interest accrued)</b>			
Related parties			
Unsecured	0.05	0.08	0.01
Employees			
Secured	72.55	75.99	76.41
Unsecured	134.32	121.98	94.62
State Government in settlement of dues from customers			
Unsecured	-	47.87	95.73
Others			
Secured	5.00	5.00	5.00
<b>Total</b>	<b>211.92</b>	<b>250.92</b>	<b>271.77</b>

a) Other loans represent loans of ₹ 5.00 crore (31 March 2016: ₹ 5.00 crore, 1 April 2015: ₹ 5.00 crore) given to APIIC.

b) Details of collateral held as security:

- 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.
- Loan to APIIC is secured by a guarantee given by the Government of Andhra Pradesh vide GO dated 3 April 2003.

## 18. Current assets - Other financial assets

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
<b>Advances</b>			
Related parties			
Unsecured	53.50	81.26	71.22
Employees			
Unsecured	5.78	6.04	6.95
Considered doubtful	0.04	0.04	0.04
Others			
Unsecured	14.86	11.51	1.26
Less: Allowance for bad & doubtful advances	0.04	0.04	0.04
	74.14	98.81	79.43
<b>Claims recoverable</b>			
Unsecured, considered good	94.63	58.03	109.65
Considered doubtful	0.12	0.54	0.62
Less: Allowance for doubtful claims	0.12	0.54	0.62
	94.63	58.03	109.65
Unbilled revenue	5,919.03	5,056.14	2,700.04
Hedging cost recoverable from beneficiaries	1.60	0.04	4.59
Derivative MTM asset	-	3.66	-
Finance lease receivables	29.77	29.12	24.72
Others	9.75	7.37	15.63
<b>Total</b>	<b>6,128.92</b>	<b>5,253.17</b>	<b>2,934.06</b>



- a) Unbilled revenue is net of credits to be passed to beneficiaries at the time of billing and includes ₹ **8,046.92 crore** (31 March 2016: ₹ 6,935.53 crore, 1 April 2015: ₹ 6,728.01 crore) billed to the beneficiaries after 31 March for energy sales.
- b) Advance to related parties include:
- |                         | 45.55 | 52.70 | 38.96 |
|-------------------------|-------|-------|-------|
| Joint venture companies |       |       |       |
- c) Advances include amounts due from the following private companies in which one or more directors of the Company are directors:
- |  | 0.37 | 0.44 | 0.53 |
|--|------|------|------|
| NTPC-GE Power Services Private Ltd. (previously NTPC-Alstom Power Services Private Ltd.) |      |      |      |
| NTPC-SAIL Power Company Ltd. (previously NTPC-SAIL Power Company Private Ltd.)           | -    | 1.74 | 1.96 |
| Aravali Power Company Private Ltd.   | 9.03 | 4.24 | 1.98 |
| NTPC BHEL Power Projects Private Ltd.  | 4.80 | 3.77 | 2.62 |
| Meja Urja Nigam Private Limited  | 3.50 | 3.25 | 8.54 |
| Nabinagar Power Generating Company Private Ltd.  | 2.61 | 3.04 | 0.71 |
| Pan-Asian Renewables Private Ltd.  | -    | -    | 0.04 |
| Bangladesh India Friendship Power Company Pvt. Ltd.                                      | 9.34 | 8.97 | 4.58 |
- d) Other financial assets - Others include amount recoverable from contractors and other parties towards hire charges, rent/electricity etc.

#### 19. Current assets - Other current assets

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
<b>Security deposits (unsecured)</b>	<b>1,033.02</b>	903.03	756.78
<b>Advances</b>			
Related parties			
Unsecured	79.70	410.85	672.51
Employees			
Unsecured	5.16	6.32	4.58
Contractors & suppliers			
Secured	1.51	1.38	-
Unsecured	979.50	689.94	379.37
Considered doubtful	1.90	1.66	1.59
Others			
Unsecured	116.61	108.70	73.27
Considered doubtful	0.05	-	-
Less: Allowance for bad & doubtful advances	1.95	1.66	1.59
	<b>1,182.48</b>	1,217.19	1,129.73
<b>Interest accrued on</b>			
Advance to contractors	41.76	30.69	16.13

## 41<sup>st</sup> Annual Report 2016-17

### Consolidated Financial Statements



₹ Crore

Particulars	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
<b>Claims recoverable</b>			
Unsecured, considered good	2,369.11	2,544.44	2,011.46
Considered doubtful	11.96	12.59	12.78
Less: Allowance for doubtful claims	11.96	12.59	12.78
	2,369.11	2,544.44	2,011.46
Assets held for disposal	156.57	1.94	2.13
Deferred payroll expenses	21.53	21.35	17.18
Others	12.96	4.93	5.11
<b>Total</b>	<b>4,817.43</b>	<b>4,723.57</b>	<b>3,938.52</b>

a) Security deposits (unsecured) include ₹ 63.31 crore (31 March 2016: ₹ 32.60 crore, 1 April 2015: ₹ 224.15 crore) towards sales tax deposited with sales/commercial tax authorities, ₹ 346.30 crore (31 March 2016: ₹ 346.30 crore, 1 April 2015: ₹ 306.30 crore) deposited with Courts, ₹ 177.06 crore (31 March 2016: ₹ 165.51 crore, 1 April 2015: ₹ 160.97 crore) deposited with LIC for making annuity payments to the land oustees and ₹ 275.05 crore (31 March 2016: ₹ 275.05 crore, 1 April 2015: ₹ Nil) towards the amount deposited with the Water Resource Department, Govt. of Chhattisgarh for drawl of water.

b) Other advances include prepaid expenses amounting to ₹ 90.40 crore (31 March 2016: ₹ 85.39 crore, 1 April 2015: ₹ 70.64 crore) and unamortized discount on commercial paper amounting to ₹ 21.89 crore (31 March 2016: ₹ Nil, 1 April 2015: ₹ Nil).

c) Advances 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. (Previously NTPC-Alstom Power Services Private Ltd.)	0.07	0.09	-
NTPC BHEL Power Projects Private Ltd.	0.22	-	-

d) Assets held for disposal includes an amount of ₹ 154.84 crore (31 March 2016: ₹ Nil, 1 April 2015: ₹ Nil) of M/s Patratu Vidyut Utpadan Nigam Ltd., a subsidiary, accounted at fair realisable value net of decommissioning cost based on assessment made by the subsidiary. 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 Jharkhand (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 25 Jan 2017. It has been further agreed that consideration of these assets shall be the amount realised from sale of scrap, net of cost. Accordingly these transferred assets are accounted as such with corresponding liability as payable to GoJ.

e) Loans given to employees are measured at amortised cost. The deferred payroll expenditure represent benefits accruing to the employees. The same is amortised on a straight line basis over the remaining period of the loan.

## 20. Regulatory deferral account debit balances

₹ Crore

Particulars	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
On account of employee benefits expense	522.83	-	-

Regulatory deferral account balances have been accounted in line with Accounting policy no. C.5. Refer Note 68 for detailed disclosures.

## 21. Equity share capital

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
<b>Equity share capital</b>			
<b>Authorised</b>			
10,00,00,00,000 shares of par value ₹10/- each (10,00,00,00,000 shares of par value ₹10/- each as at 31 March 2016 and 1 April 2015)	<b>10,000.00</b>	10,000.00	10,000.00
<b>Issued, subscribed and fully paid up</b>			
8,24,54,64,400 shares of par value ₹ 10/- each (8,24,54,64,400 shares of par value ₹10/- each as at 31 March 2016 and 1 April 2015)	<b>8,245.46</b>	8,245.46	8,245.46

### a) Movements in equity share capital:

During the year, the Company has neither issued nor bought back any shares.

### 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	2016-17	2015-16
<b>(i) Equity shares - Dividend paid during the year</b>		
Final dividend for the year ended 31 March 2016 of ₹ 1.75 (31 March 2015: ₹ 1.75) per fully paid share	<b>1,442.96</b>	1,442.96
Interim dividend for the year ended 31 March 2017 of ₹ 2.61 (31 March 2016: ₹ 1.60) per fully paid share	<b>2,152.07</b>	1,319.28
<b>(ii) Equity shares - Dividends not recognised at the end of the reporting period</b>		
In addition to the above dividends, since year end the directors have recommended the payment of a final dividend of ₹ <b>2.17</b> (31 March 2016: ₹ 1.75) per fully paid equity share. This proposed dividend is subject to the approval of shareholders in the ensuing annual general meeting.	<b>1,789.27</b>	1,442.96

### d) Details of shareholders holding more than 5% shares in the Company:

Particulars	31.03.2017		31.03.2016		01.04.2015	
	No. of shares	% age holding	No. of shares	% age holding	No. of shares	% age holding
- President of India	<b>5,750,759,170</b>	<b>69.74</b>	5,768,341,760	69.96	6,180,614,980	74.96
- Life Insurance Corporation of India (including shares held in various Funds/ Schemes)	<b>998,258,968</b>	<b>12.11</b>	1,070,530,189	12.98	817,585,952	9.92



## 22. Other equity

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
Capital reserve	50.08	50.08	50.08
Securities premium account	2,228.46	2,228.46	2,228.34
Bonds/debentures redemption reserve	5,961.81	4,608.73	3,624.60
Fly ash utilisation reserve fund	556.68	478.21	401.14
Corporate social responsibility (CSR) reserve	0.22	0.74	78.93
General reserve	77,130.63	72,551.63	66,525.63
Retained earnings	3,653.72	3,428.53	2,926.23
Other reserves	10.96	(16.26)	0.76
<b>Total</b>	<b>89,592.56</b>	<b>83,330.12</b>	<b>75,835.71</b>

	For the year ended	
	31.03.2017	31.03.2016
<b>(a) Capital reserve</b>		
Opening balance	50.08	50.08
Less: Adjustments during the year	-	-
<b>Closing balance</b>	<b>50.08</b>	<b>50.08</b>
Capital reserve represents amount received by the parent company during 2001-02 as consideration under settlement for withdrawal from a erstwhile JV project.		
<b>(b) Securities premium account</b>		
Opening balance	2,228.46	2,228.34
Add : Received during the year	-	0.12
<b>Closing balance</b>	<b>2,228.46</b>	<b>2,228.46</b>
Securities premium account is used to record the premium on issue of shares/securities. This amount is utilised in accordance with the provisions of the Companies Act, 2013.		
<b>(c) Bonds/Debentures redemption reserve</b>		
Opening balance	4,608.73	3,624.60
Add : Transfer from retained earnings	1,667.08	1,284.13
Less: Transfer to retained earnings	314.00	300.00
<b>Closing balance</b>	<b>5,961.81</b>	<b>4,608.73</b>
In accordance with applicable provisions of the Companies Act, 2013 read with Rules and as per decision of Board of Directors, the Group has created Debenture Redemption Reserve (DRR) out of profits of the Company @ 50% of the value of debentures on a prudent basis, every year in equal installments till the year prior to the year of redemption of debentures/bonds for the purpose of redemption of bonds/debentures.		
<b>(d) Fly ash utilisation reserve fund</b>		
Opening balance	478.21	401.14
Add: Transfer from		
Revenue from operations	108.42	113.37
Other income	27.63	26.27
Less: Utilised during the year		
Capital expenditure	3.66	5.26



₹ Crore

	For the year ended	
	31.03.2017	31.03.2016
Employee benefits expense	20.80	16.87
Other administration expenses	33.12	40.44
<b>Closing balance</b>	<b>556.68</b>	478.21

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.

During the year, proceeds of ₹ 108.42 crore (31 March 2016: ₹ 113.37 crore) from sale of ash/ash products, ₹ 27.63 crore (31 March 2016: ₹ 26.27 crore) towards income on investment have been transferred to fly ash utilisation reserve fund. An amount of ₹ 57.58 crore (31 March 2016: ₹ 62.57 crore) has been utilized from the fly ash utilisation reserve fund on expenses incurred for activities as specified in the aforesaid notification of MOEF.

Out of fund balance of ₹ 556.68 crore (31 March 2016: ₹ 478.21 crore), ₹ Nil (31 March 2016: ₹ 343.63 crore) is invested in mutual funds (Note 13). Further, the balance amount has been kept in Bank balances other than cash and cash equivalents (Note 16).

**(e) Corporate social responsibility (CSR) reserve**

Opening balance	0.74	78.93
Add : Transfer from retained earnings	0.11	0.74
Less: Transfer to retained earnings	0.63	78.93
<b>Closing balance</b>	<b>0.22</b>	0.74

In terms of Section 135 of the Companies Act, 2013 read with guidelines on corporate social responsibility issued by Department of Public Enterprises (DPE), GOI, the companies in the Group wherever applicable are required to spend, in every financial year, at least two per cent of the average net profits of the respective companies made during the three immediately preceding financial years in accordance with their CSR Policy. The Group has spent an amount of ₹ 280.05 crore during the year (31 March 2016: ₹ 492.97 crore). The amount equivalent to unspent CSR expenditure transferred in the previous year to CSR reserve from retained earnings, has been transferred back to retained earnings on actual expenditure. Further, amount equivalent to unspent CSR expenditure has been transferred from retained earnings to CSR reserve.

**(f) General reserve**

Opening balance	72,551.63	66,525.63
Add : Transfer from retained earnings	4,579.00	6,026.00
<b>Closing balance</b>	<b>77,130.63</b>	72,551.63

**(g) Retained earnings**

Opening balance	3,428.53	2,926.23
Add: Profit for the year as per Statement of Profit and Loss	10,719.64	10,801.15
Transfer from bonds/debentures redemption reserve	314.00	300.00
Transfer from CSR reserve	0.63	78.93
Less: Transfer to bonds/debentures redemption reserve	1,667.08	1,284.13
Transfer to CSR reserve	0.11	0.74
Transfer to general reserve	4,579.00	6,026.00
Final dividend paid	1,442.96	1,442.96
Tax on final dividend paid	289.68	293.75
Interim dividend paid	2,152.07	1,319.28
Tax on interim dividend paid	438.11	272.64
	<b>3,893.79</b>	3,466.81

## 41<sup>st</sup> Annual Report 2016-17

Consolidated Financial Statements



₹ Crore

Items of other comprehensive income recognised directly in retained earnings:

- Net actuarial gains/(losses) on defined benefit plans, net of tax
- Share of Joint ventures - Share of other comprehensive income of joint ventures accounted for using the equity method, net of tax

Closing balance

For the year ended	
31.03.2017	31.03.2016
(238.66)	(38.35)
(1.41)	0.07
3,653.72	3,428.53

(h) Other reserves

(i) FVTOCI reserve

Opening balance

Add: Fair value gain/(loss) on equity instruments for the year

Closing balance

(20.28)	-
35.28	(20.28)
15.00	(20.28)

The Group has elected to recognise changes in the fair value of certain investments in equity securities in other comprehensive income. These changes are accumulated within FVTOCI reserve within equity. The Group transfers amounts from this reserve to retained earnings when the relevant equity securities are derecognised.

(ii) Foreign currency translation reserve

Opening balance

Add: Currency translation of foreign operations for the year

Closing balance

4.02	0.76
(8.06)	3.26
(4.04)	4.02
10.96	(16.26)

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 is reclassified to profit or loss when the net investment is disposed-off.

23. Non current financial liabilities -Borrowings

₹ Crore

Particulars	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
<b>Bonds/debentures</b>			
<b>Secured</b>			
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) <sup>xi</sup>	188.94	188.96	-
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) <sup>xi</sup>	171.71	171.72	-
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) <sup>iii</sup>	322.11	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) <sup>vii</sup>	319.87	319.93	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) <sup>vii</sup>	410.32	410.39	410.32

₹ Crore

Particulars	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
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) <sup>xiii</sup>	4,010.34	-	-
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) <sup>xii</sup>	720.58	-	-
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) <sup>xi</sup>	133.44	133.45	-
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) <sup>xi</sup>	49.88	49.88	-
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) <sup>iii</sup>	105.70	105.70	105.69
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) <sup>vii</sup>	256.10	256.14	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) <sup>vii</sup>	93.71	93.73	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) <sup>xii</sup>	696.77	-	-
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) <sup>xii</sup>	836.47	-	-
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) <sup>xii</sup>	1,072.76	-	-
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) <sup>xii</sup>	511.77	511.83	-
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) <sup>xi</sup>	111.96	111.95	-
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) <sup>xi</sup>	68.15	68.15	-
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) <sup>ix</sup>	313.05	313.13	-
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) <sup>ix</sup>	1,047.99	1,048.10	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) <sup>iii</sup>	751.54	751.54	751.53

## 41<sup>st</sup> Annual Report 2016-17

Consolidated Financial Statements



₹ Crore

Particulars	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
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) <sup>iii</sup>	75.47	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) <sup>vii</sup>	499.95	500.03	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) <sup>vii</sup>	213.89	213.92	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 11 year and in annual installments thereafter upto the end of 15 year respectively commencing from 04 May 2023 and ending on 04 May 2027 (Forty Fourth Issue - Private Placement) <sup>vii</sup>	542.07	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) <sup>i</sup>	50.01	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) <sup>vii</sup>	217.46	217.46	217.46
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 8 <sup>th</sup> year, 9 <sup>th</sup> year and 10 <sup>th</sup> year on 25 March 2023, 25 March 2024 and 25 March 2025 respectively (Fifty Fourth Issue - Bonus Debentures) <sup>x</sup>	10,318.82	10,316.42	10,323.57
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) <sup>vii</sup>	301.79	301.79	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 11 <sup>th</sup> year and in annual installments thereafter upto the end of 15 <sup>th</sup> year respectively commencing from 25 January 2023 and ending on 25 January 2027 (Forty Second Issue - Private Placement) <sup>iii</sup>	508.14	508.24	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) <sup>vii</sup>	406.91	406.96	406.91
6.72% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 24 November 2021 (Sixty Fifth Issue - Private Placement) <sup>xii</sup>	716.26	-	-
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 5 <sup>th</sup> year, 10 <sup>th</sup> year & 15 <sup>th</sup> year on 27 May 2021, 27 May 2026 and 27 May 2031 respectively (Sixty first issue - Private Placement) <sup>xi</sup>	1,145.94	-	-
8.33% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 24 February 2021 (Fifty Ninth Issue - Private Placement) <sup>xii</sup>	660.18	660.27	-

## 41<sup>st</sup> Annual Report 2016-17

Consolidated Financial Statements



₹ Crore

Particulars	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
8.93% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 19 January 2021 (Thirty Seventh Issue - Private placement) <sup>iii</sup>	317.17	317.17	317.17
8.18% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 31 December 2020 (Fifty Eight Issue - Private Placement) <sup>xii</sup>	305.92	305.92	-
8.73% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 31 March 2020 (Thirty Third Issue- Private Placement) <sup>iii</sup>	209.97	209.97	209.97
8.78% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 9 March 2020 (Thirty First Issue- Private Placement) <sup>iii</sup>	531.27	531.27	531.27
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) <sup>iii</sup>	368.12	368.12	368.12
7.89% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 5 May 2019 (Thirtieth Issue - Private Placement) <sup>iii</sup>	701.82	701.82	701.82
8.65% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 4 February 2019 (Twenty Ninth Issue - Private Placement) <sup>iii</sup>	552.87	552.87	552.87
7.50% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 12 January 2019 (Nineteenth Issue - Private Placement) <sup>ii</sup>	50.92	50.92	50.92
11.00% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 21 November 2018 (Twenty Eighth Issue - Private Placement) <sup>iii</sup>	1,027.42	1,027.42	1,027.42
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 6 <sup>th</sup> year and in annual installments thereafter upto the end of 20 <sup>th</sup> year respectively commencing from 20 July 2018 and ending on 20 July 2032 (Forty Sixth Issue - Private Placement) <sup>vii</sup>	80.07	80.10	80.09
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 6 <sup>th</sup> year and in annual installments thereafter upto the end of 20 <sup>th</sup> year respectively commencing from 16 May 2018 and ending on 16 May 2032 (Forty Fifth Issue - Private Placement) <sup>vii</sup>	80.12	80.14	80.14
8.00% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 10 April 2018 (Sixteenth Issue -Private Placement) <sup>i</sup>	103.33	103.33	103.33
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 6 <sup>th</sup> year and in annual installments thereafter upto the end of 20 <sup>th</sup> year respectively commencing from 2 March 2018 and ending on 2 March 2032 (Forty Third Issue - Private Placement) <sup>iii</sup>	80.02	80.05	80.04

## 41<sup>st</sup> Annual Report 2016-17

Consolidated Financial Statements



₹ Crore

Particulars	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
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 6 <sup>th</sup> year and in annual installments thereafter upto the end of 20 <sup>th</sup> year respectively commencing from 23 December 2017 and ending on 23 December 2031 (Forty First Issue - Private Placement) <sup>iii</sup>	80.25	80.27	80.27
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 6 <sup>th</sup> year and in annual installments thereafter upto the end of 20 <sup>th</sup> year respectively commencing from 29 July 2017 and ending on 29 July 2031 (Fortieth Issue - Private Placement) <sup>iii</sup>	80.18	80.20	80.20
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 6 <sup>th</sup> year and in annual installments thereafter upto the end of 20 <sup>th</sup> year respectively commencing from 9 June 2017 and ending on 9 June 2031 (Thirty Ninth Issue - Private Placement) <sup>iii</sup>	112.13	112.16	112.16
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 6 <sup>th</sup> year and in annual installments thereafter upto the end of 20 <sup>th</sup> year respectively commencing from 22 March 2017 and ending on 22 March 2031 (Thirty Eighth Issue - Private Placement) <sup>iii</sup>	74.64	79.99	79.99
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 6 <sup>th</sup> year and in annual installments thereafter upto the end of 20 <sup>th</sup> year respectively commencing from 15 December 2016 and ending on 15 December 2030 (Thirty Sixth Issue - Private Placement) <sup>iii</sup>	74.46	79.80	79.80
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 6 <sup>th</sup> year and in annual installments thereafter upto the end of 20 <sup>th</sup> year respectively commencing from 15 September 2016 and ending on 15 September 2030 (Thirty Fifth Issue - Private Placement) <sup>iii</sup>	119.12	127.65	127.65
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 6 <sup>th</sup> year and in annual installments thereafter upto the end of 20 <sup>th</sup> year respectively commencing from 10 June 2016 and ending on 10 June 2030 (Thirty Fourth Issue - Private Placement) <sup>iii</sup>	148.82	159.49	159.49
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 6 <sup>th</sup> year and in annual installments thereafter upto the end of 20 <sup>th</sup> year respectively commencing from 25 March 2016 and ending on 25 March 2030 (Thirty Second Issue - Private Placement) <sup>iii</sup>	96.82	104.30	111.75

₹ Crore

Particulars	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
9.37% Secured non-cumulative non-convertible redeemable taxable bonds of ₹70,00,000/- each with fourteen separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 4 June 2012 and ending on 4 December 2018 (Twenty Fifth Issue - Private Placement) <sup>III</sup>	146.78	220.43	294.07
9.06% Secured non-cumulative non-convertible redeemable taxable bonds of ₹70,00,000/- each with fourteen separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 4 June 2012 and ending on 4 December 2018 (Twenty Sixth Issue - Private Placement) <sup>III</sup>	146.64	220.21	293.79
8.6077% Secured non-cumulative non-convertible redeemable taxable bonds of ₹20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 9 September 2011 and ending on 9 March 2021 (Twenty Fourth Issue - Private Placement) <sup>IV</sup>	204.24	255.31	306.37
8.3796% Secured non-cumulative non-convertible redeemable taxable bonds of ₹20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 5 August 2011 and ending on 5 February 2021 (Twenty Third Issue - Private Placement) <sup>IV</sup>	204.13	255.16	306.20
8.1771% Secured non-cumulative non-convertible redeemable taxable bonds of ₹20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 2 July 2011 and ending on 2 January 2021 (Twenty Second Issue - Private Placement) <sup>IV</sup>	204.03	255.04	306.05
7.7125% Secured non-cumulative non-convertible redeemable taxable bonds of ₹20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 2 August 2010 and ending on 2 February 2020 (Twenty First Issue - Private Placement) <sup>V</sup>	305.71	407.61	509.51
7.552% Secured non-cumulative non-convertible redeemable taxable bonds of ₹20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 23 September 2009 and ending on 23 March 2019 (Twentieth Issue - Private Placement) <sup>VI</sup>	101.86	152.79	203.72
9.55% Secured non-cumulative non-convertible taxable redeemable bonds of ₹10,00,000/- each with ten equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of the 6 <sup>th</sup> year and in annual installments thereafter upto the end of 15 <sup>th</sup> year respectively from 30 April 2002 (Thirteenth Issue - Part B - Private Placement) <sup>VIII</sup>	77.37	154.75	232.12
9.55% Secured non-cumulative non-convertible taxable redeemable bonds of ₹10,00,000/- each redeemable at par in ten equal annual installments commencing from the end of 6 <sup>th</sup> year and upto the end of 15 <sup>th</sup> year respectively from 18 April 2002 (Thirteenth Issue -Part A - Private Placement) <sup>VIII</sup>	77.38	154.75	232.12
	<b>34,513.63</b>	<b>25,958.36</b>	<b>24,065.00</b>

## 41<sup>st</sup> Annual Report 2016-17

Consolidated Financial Statements



₹ Crore

Particulars	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
<b>Foreign currency notes</b>			
<b>Unsecured</b>			
2.750 % Fixed rate notes due for repayment on 1 February 2027	3,529.38	-	-
4.250 % Fixed rate notes due for repayment on 26 February 2026	3,274.75	3,331.41	-
4.375 % Fixed rate notes due for repayment on 26 November 2024	3,336.43	3,395.81	3,207.50
4.750 % Fixed rate notes due for repayment on 3 October 2022	3,286.50	3,345.00	3,159.50
7.375 % Fixed green global INR denominated bonds due on 10 August 2021	2,066.05	-	-
5.625 % Fixed rate notes due for repayment on 14 July 2021	3,326.04	3,385.24	3,197.51
5.875 % Fixed rate notes due for repayment on 2 March 2016	-	-	1,904.67
<b>Term loans</b>			
<b>From Banks</b>			
<b>Secured</b>			
Rupee loans <sup>XIV</sup>	6,313.31	5,659.38	4,595.49
<b>Unsecured</b>			
Foreign currency loans	7,782.47	9,068.32	8,679.23
Rupee loans	29,979.46	28,313.44	23,418.16
<b>From Others</b>			
<b>Secured</b>			
Rupee loans <sup>XIV</sup>	533.05	502.23	340.88
<b>Unsecured</b>			
Foreign currency loans (guaranteed by GOI)	2,102.96	2,309.97	2,193.77
Other foreign currency loans	3,516.85	3,660.51	3,232.07
Rupee loans	8,173.24	9,694.58	13,597.10
<b>Finance lease obligations</b>			
Secured	2.40	1.94	-
Unsecured	142.62	138.43	103.46
	111,879.14	98,764.62	91,694.34
Less:			
Current Maturities of			
Bonds- secured	650.00	628.00	600.00
5.875 % Fixed rate notes	-	-	1,895.70
Rupee loans from banks- secured	73.70	-	-
Foreign currency loans from banks- unsecured	1,681.74	1,328.91	281.82
Rupee loans from others- secured	4.47	-	-
Rupee loans from banks- unsecured	2,111.00	2,573.75	2,540.48
Foreign currency loans from other- unsecured (guaranteed by GOI)	172.58	175.16	154.61
Other foreign currency loans from others- unsecured	507.52	474.99	406.03
Rupee loans from others- unsecured	1,359.38	1,534.38	1,584.38
Finance lease obligations- secured	0.78	0.48	-
Finance lease obligations- unsecured	17.37	15.12	3.15
Interest accrued but not due on borrowings	1,229.31	828.34	772.01
<b>Total</b>	<b>104,071.29</b>	<b>91,205.49</b>	<b>83,456.16</b>



#### 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 AAA bond yield rate plus agreed margin or fixed interest rate of 9.36% p.a. These loans are repayable in installments as per the terms of the respective loan agreements. The repayment period extends from a period of eleven to fifteen years after 6 months from the date of COD or from the date specified in the loan agreements.
- ii) 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 19 to 28 semi annual installments as of 31 March 2017.
- iii) Unsecured foreign currency loans – Banks include loans of ₹ **463.02 crore** (31 March 2016: ₹ 590.36 crore, 1 April 2015: ₹ 645.70 crore) which carry fixed rate of interest of 1.88% p.a. to 4.31% p.a. and loans of ₹ **7,319.45 crore** (31 March 2016: ₹ 8,477.96 crore, 1 April 2015: ₹ 8,033.53 crore) which carry floating rate of interest linked to 6M LIBOR. These loans are repayable in 2 to 23 semi annual installments as of 31 March 2017, commencing after moratorium period if any, as per the terms of the respective loan agreements.
- iv) Unsecured foreign currency loans – Others include loans of ₹ **3,300.64 crore** (31 March 2016: ₹ 3,165.62 crore, 1 April 2015: ₹ 2,526.24 crore) which carry fixed rate of interest ranging from 1.88% p.a. to 4.31% p.a. and loans of ₹ **216.21 crore** (31 March 2016: ₹ 494.89 crore, 1 April 2015: ₹ 705.83 crore) which carry floating rate of interest linked to 6M LIBOR/6M EURIBOR. These loans are repayable in 1 to 24 semi annual installments as of 31 March 2017, commencing after moratorium period if any, as per the terms of the respective loan agreements.
- v) Unsecured rupee term loans carry interest rate ranging from 6.571% p.a. to 11.00% p.a. with monthly/half-yearly rests. These loans are repayable in quarterly/half-yearly/yearly installments as per the terms of the respective loan agreements. The repayment period extends from a period of seven years to sixteen years after a moratorium period of two years to six years.

Unsecured rupee term loans include ₹ **32.21 crore** (31.03.2016: ₹ Nil, 01.04.2015: ₹ Nil) from Government of Jharkhand to M/s Patratu Vidyut Utpadan Nigam Ltd., a Subsidiary of the 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 proposed to be utilised as consideration for subsequent issue and allotment of shares in its % ownership as prescribed in the related JV agreement.

- b) The finance lease obligations are repayable in installments as per the terms of the respective lease agreements generally over a period of four to ninety-nine years.
- c) There has been no default in repayment of any of the loans or interest thereon as at the end of the year.

#### Details of securities

- I Secured by (I) English mortgage, on first pari-passu charge basis, of the office premises of the Parent 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 (I) English mortgage, on first pari-passu charge basis, of the office premises of the Parent Company at Mumbai and (II) Hypothecation of all the present and future movable assets (excluding receivables) of Singrauli Super Thermal Power Station, Anta Gas Power Station, Auraiya Gas Power Station, Barh Super Thermal Power Project, Farakka Super Thermal Power Station, Kahalgaon Super Thermal Power Station, Koldam Hydel Power Project, Simhadri Super Thermal Power Project, Sipat Super Thermal Power Project, Talcher Thermal Power Station, Talcher Super Thermal Power Project, Tanda Thermal Power Station, Vindhyachal Super Thermal Power Station, National Capital Power Station, Dadri Gas Power Station, Feroze Gandhi Unchahar Power Station and Tapovan-Vishnugad Hydro Power Project as first charge, ranking pari-passu with charge, if any, already created in favour of the Parent Company's Bankers on such movable assets hypothecated to them for working capital requirement.
- III Secured by (I) English mortgage, on first pari-passu charge basis, of the office premises of the Parent 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 (I) English mortgage, on first pari-passu charge basis, of the office premises of the Parent Company at Mumbai and (II) Equitable mortgage, by way of first charge, by deposit of the title deeds of the immovable properties pertaining to Sipat Super Thermal Power Project.

## 41<sup>st</sup> Annual Report 2016-17

### Consolidated Financial Statements



- V Secured by (I) English mortgage, on first pari-passu charge basis, of the office premises of the Company at Mumbai, (II) Hypothecation of all the present and future movable assets (excluding receivables) of Barh Super Thermal Power Project on first pari-passu charge basis, ranking pari passu with charge already created in favour of Trustee for other Series of Bonds and (III) Equitable mortgage of the immovable properties, on first pari-passu charge basis, pertaining to Ramagundam Super Thermal Power Station by extension of charge already created.
- VI Secured by (I) English mortgage, on first pari-passu charge basis, of the office premises of the Parent Company at Mumbai and (II) Equitable mortgage, by way of first charge, by deposit of title deeds of the immovable properties pertaining to Ramagundam Super Thermal Power Station.
- VII Secured by (I) English mortgage, on first pari-passu charge basis, of the office premises of the Parent 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.
- VIII Secured by (I) English mortgage, on first pari-passu charge basis, of the office premises of the Parent Company at Mumbai, (II) Hypothecation of all the present and future movable assets (excluding receivables) of Singrauli Super Thermal Power Station, Anta Gas Power Station, Auraiya Gas Power Station, Barh Super Thermal Power Project, Farakka Super Thermal Power Station, Kahalgaon Super Thermal Power Station, Koldam Hydel Power Project, Simhadri Super Thermal Power Project, Sipat Super Thermal Power Project, Talcher Thermal Power Station, Talcher Super Thermal Power Project, Tanda Thermal Power Station, Vindhyachal Super Thermal Power Station, National Capital Power Station, Dadri Gas Power Station, Feroze Gandhi Unchahar Power Station and Tapovan-Vishnugad Hydro Power Project as first charge, ranking pari-passu with charge, if any, already created in favour of the Company's Bankers on such movable assets hypothecated to them for working capital requirement and (III) Equitable mortgage of the immovable properties, on first pari-passu charge basis, pertaining to Singrauli Super Thermal Power Station by extension of charge already created.
- IX Secured by English mortgage of the immovable properties pertaining to Solapur Super Thermal Power Project on first charge basis.
- X Secured by Equitable mortgage of the immovable properties pertaining to Barh Super Thermal Power Project on first charge basis.
- XI Secured by English mortgage, on pari-passu charge basis, of the immovable properties pertaining to Solapur Super Thermal Power Project.
- XII Secured by Equitable mortgage, on pari-passu charge basis, of the immovable properties pertaining to Barh Super Thermal Power Project.
- XIII Secured by Equitable mortgage of the immovable properties pertaining to Vindhyachal Super Thermal Power Station on first charge basis.
- XIV (i) Secured by a first priority charge on all assets of the Project, present & future, movable & immovable and land of 987.9293 acres, in respect of loan from consortium led by SBI for Kanti Bijlee Utpadan Nigam Ltd. expansion project. The security will rank pari-pasu with all term lenders of the project. The charge has been created in favor of Security trustee i.e. SBI Cap Trustee Co. Ltd. Legal mortgage of land in favor of security trustee has been executed for 877.18 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 with charge already created with PFC for 60% of total debts and balance 40% with REC.
- XV Security cover mentioned at Sl. No. I to XIV is above 100% of the debt securities outstanding.

#### 24. Non-current financial liabilities - Trade payables

₹ Crore

Particulars	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
Trade payable	13.17	8.38	3.47

#### 25. Non-current liabilities- Other financial liabilities

₹ Crore

Particulars	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
<b>Other liabilities</b>			
Payable for capital expenditure	2,108.33	2,769.05	2,394.93
Deposits from contractors and others	1.72	1.79	2.03
Others	245.64	362.97	-
<b>Total</b>	<b>2,355.69</b>	<b>3,133.81</b>	<b>2,396.96</b>

Other liabilities - others mainly include amount payable to the Department of Water Resource, Government of Odisha pursuant to the Resolution No. 11011 dated 18 May 2015.

#### 26. Non-current liabilities - Provisions

₹ Crore

Particulars	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
Provision for employee benefits	463.15	436.41	1,115.71

Disclosure as per Ind AS 19 on 'Employee benefits' is made in Note 56.

#### 27. Non-current liabilities - Deferred tax liabilities (net)

₹ Crore

Particulars	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
Deferred tax liability			
Difference in book depreciation and tax depreciation	10,065.79	8,153.38	7,779.70
Less: Deferred tax assets			
Provisions	1,025.12	713.02	544.97
Statutory dues	492.37	174.44	129.64
Leave encashment	430.69	342.45	332.41
Others	95.08	106.99	156.30
	8,022.53	6,816.48	6,616.38
Less: Deferred asset for deferred tax liability	6,537.67	5,663.40	5,619.77
<b>Total</b>	<b>1,484.86</b>	<b>1,153.08</b>	<b>996.61</b>

- Deferred tax assets and deferred tax liabilities have been offset as they relate to the same governing laws.
- CERC Regulations, 2014 provide for recovery of deferred tax liability as on 31 March 2009 from the beneficiaries. Accordingly, deferred tax liability as on 31 March 2009 is recoverable on materialisation from the beneficiaries. For the period commencing from 1 April 2014, Regulations, 2014 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. Deferred asset for deferred tax liability for the year will be reversed in future years when the related deferred tax liability forms part of current tax.

## 41<sup>st</sup> Annual Report 2016-17

Consolidated Financial Statements



## Movement in deferred tax balances

31 March 2017

₹ Crore

Particulars	Net balance 1 April 2016	Recognised in profit or loss	Recognised in OCI	Other	Net balance 31 March 2017
Difference in book depreciation and tax depreciation	8,153.38	1,912.41	-	-	10,065.79
Provisions	713.02	312.10	-	-	1,025.12
Statutory dues	174.44	317.93	-	-	492.37
Leave encashment	342.45	88.24	-	-	430.69
Others	106.99	(11.91)	-	-	95.08
<b>Tax assets/(liabilities)</b>	<b>6,816.48</b>	<b>1,206.05</b>	<b>-</b>	<b>-</b>	<b>8,022.53</b>
Less: Deferred asset for deferred tax liability	5,663.40	874.27	-	-	6,537.67
<b>Net tax assets/(liabilities)</b>	<b>1,153.08</b>	<b>331.78</b>	<b>-</b>	<b>-</b>	<b>1,484.86</b>

31 March 2016

₹ Crore

Particulars	Net balance 1 April 2015	Recognised in profit or loss	Recognised in OCI	Other	Net balance 31 March 2016
Difference in book depreciation and tax depreciation	7,779.70	373.68	-	-	8,153.38
Provisions	544.97	168.05	-	-	713.02
Statutory dues	129.64	44.80	-	-	174.44
Leave encashment	332.41	10.04	-	-	342.45
Others	156.30	(49.31)	-	-	106.99
<b>Tax assets/(liabilities)</b>	<b>6,616.38</b>	<b>200.10</b>	<b>-</b>	<b>-</b>	<b>6,816.48</b>
Less: Deferred asset for deferred tax liability	5,619.77	43.63	-	-	5,663.40
<b>Net tax assets/(liabilities)</b>	<b>996.61</b>	<b>156.47</b>	<b>-</b>	<b>-</b>	<b>1,153.08</b>

## 28. Non-current liabilities - Other non-current liabilities

₹ Crore

Particulars	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
Advances from customers and others	17.49	49.68	0.01

Represents deposits received from the contractors, customers and other parties for Deen Dayal Upadhyay Gram Jyoti Yojna. Refer Note 32 (a).

## 29. Current financial liabilities - Borrowings

₹ Crore

Particulars	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
<b>Loans repayable on demand</b>			
<b>From banks</b>			
<b>Secured</b>			
Cash credit	118.98	187.77	148.51
<b>Unsecured</b>			
Cash credit	0.56	1,299.50	-
<b>Other Loans</b>			
<b>Unsecured</b>			
Commercial paper	3,000.00	-	-
<b>Total</b>	<b>3,119.54</b>	<b>1,487.27</b>	<b>148.51</b>



- a) Secured cash credit includes cash credit secured by hypothecation of stock in trade, book debts of Stage-I of M/s Kanti Bijlee Utpadan Nigam Ltd. with floating rate of interest linked to the bank's base rate.
- b) There has been no default in servicing of loan as at the end of the year.

### 30. Current financial liabilities - Trade payables

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
For goods and services	<b>5,572.70</b>	<b>5,693.81</b>	<b>6,425.60</b>

### 31. Current liabilities - Other financial liabilities

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
Current maturities of long term borrowings			
Bonds - Secured	<b>650.00</b>	628.00	600.00
5.875% Foreign currency fixed rate notes - Unsecured	-	-	1,895.70
From Banks			
Secured			
Rupee term loans	<b>73.70</b>	-	-
Unsecured			
Foreign currency loans	<b>1,681.74</b>	1,328.91	281.82
Rupee term loans	<b>2,111.00</b>	2,573.75	2,540.48
From Others			
Secured			
Rupee term loans	<b>4.47</b>	-	-
Unsecured			
Foreign currency loans (guaranteed by GOI)	<b>172.58</b>	175.16	154.61
Other foreign currency loans	<b>507.52</b>	474.99	406.03
Rupee term loans	<b>1,359.38</b>	1,534.38	1,584.38
	<b>6,560.39</b>	6,715.19	7,463.02
Current maturities of finance lease obligations -Secured	<b>0.78</b>	0.48	-
Current maturities of finance lease obligations -Unsecured	<b>17.37</b>	15.12	3.15
Interest accrued but not due on borrowings	<b>1,229.31</b>	828.34	772.01
Unpaid dividends	<b>17.61</b>	15.05	14.95
Unpaid matured deposits and interest accrued thereon	<b>0.19</b>	0.19	0.21
Unpaid matured bonds and interest accrued thereon	<b>3.29</b>	2.28	0.72
Unpaid bond refund money-Tax free bonds	<b>0.26</b>	0.45	0.16
Payable to customers	<b>795.95</b>	763.99	374.45
Book overdraft	<b>0.70</b>	400.00	546.01
Payable for capital expenditure	<b>10,377.60</b>	8,575.33	6,877.20
Hedging cost payable to beneficiaries	-	3.66	-
Derivative MTM liability	<b>1.60</b>	0.04	4.59

## 41<sup>st</sup> Annual Report 2016-17

### Consolidated Financial Statements



₹ Crore

Particulars	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
Other payables			
Deposits from contractors and others	127.35	142.96	127.16
Payable to employees	528.88	274.96	325.19
Retention on account of encashment of bank guarantee (solar)	233.62	187.65	199.12
Others	500.30	566.98	478.43
<b>Total</b>	<b>20,395.20</b>	<b>18,492.67</b>	<b>17,186.37</b>

- a) Details in respect of rate of interest and terms of repayment of current maturities of secured and unsecured long term borrowings indicated above are disclosed in Note 23.
- b) 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 has been transferred.
- 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 payable - 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. The Company has been advised that the amount accepted under the Scheme is not 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 29.06.2012 and clarifications thereafter.
- e) Other payables - Others mainly include amount payable to the Department of Water Resource, Government of Odisha, payable to hospitals, parties for stale cheques etc.

### 32. Current liabilities - Other current liabilities

₹ Crore

Particulars	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
Advances from customers and others	684.83	468.46	639.54
Other payables			
Statutory dues	407.49	304.71	297.52
Others	172.37	11.74	13.72
<b>Total</b>	<b>1,264.69</b>	<b>784.91</b>	<b>950.78</b>

- a) Implementation of Deen Dayal Upadhyay Gram Jyoti Yojana (DDUGJY) of the GOI is 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. Advance received for the DDUGJY (including interest thereon) of ₹ 597.75 crore (31 March 2016: ₹ 388.87 crore, 1 April 2015 : ₹ 531.55 crore) is included in 'Advance from customers and others'.
- b) Others include an amount ₹ 154.84 crore (31 March 2016: Nil, 1 April 2015 : Nil) payable to Government of Jharkand on disposal of the assets held for sale. Also Refer Note 19 d).

### 33. Current liabilities - Provisions

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
Provision for			
Employee benefits	2,388.05	1,240.78	1,174.66
Tax on dividend	-	4.07	4.00
Obligations incidental to land acquisition	3,833.24	3,868.52	3,228.37
Tariff adjustment	1,170.79	1,234.41	1,243.64
Others	728.65	580.84	505.04
<b>Total</b>	<b>8,120.73</b>	<b>6,928.62</b>	<b>6,155.71</b>

- a) Disclosures required by Ind AS 19 'Employee Benefits' is made in Note 56.
- b) Disclosure required by Ind AS 37 'Provisions, Contingent Liabilities and Contingent Assets' is made in Note 60.
- c) The pay revision of the employees of the Company is due w.e.f. 1 January 2017. Department of Public Enterprises, GOI (DPE) has constituted the 3<sup>rd</sup> Pay Revision Committee to review the structure of pay scales and allowances/benefits of various categories of Central Public Sector Enterprises and suggest changes after taking in to account 7<sup>th</sup> Central Pay Commission recommendations applicable to central government employees. The recommendations of the committee have been submitted and guidelines are yet to be issued by DPE. Pending issuance of the same, provision for the year amounting to ₹ 260.24 crore has been made towards pay revision on an estimated basis having regard to the recommendations of the committee.
- Further, the 3<sup>rd</sup> Pay Revision Committee appointed by the GOI has enhanced the ceiling of gratuity limit from ₹ 0.10 crore to ₹ 0.20 crore. Accordingly, provision for gratuity as at 31 March 2017 has been made for ₹ 614.25 crore considering the enhanced ceiling based on the actuarial report.
- d) The Company aggrieved over many of the issues considered by the CERC in the tariff orders for its stations for the period 2004-09 had filed appeals with the Appellate Tribunal for Electricity (APTEL). The APTEL disposed off the appeals favourably directing the CERC to revise the tariff orders as per directions and methodology given. Some of the issues decided in favour of the Company by the APTEL were challenged by the CERC in the Hon'ble Supreme Court of India. Subsequently, the CERC has issued revised tariff orders for all the stations except one for the period 2004-09, considering the judgment of APTEL subject to disposal of appeals pending before the Hon'ble Supreme Court of India. Towards the above and other anticipated tariff adjustments, provision of ₹ 98.88 crore (31 March 2016: ₹ 145.28 crore, 1 April 2015: ₹ 148.10 crore) has been made during the year and in respect of some of the stations, an amount of ₹ 162.49 crore (31 March 2016: ₹ 154.51 crore, 1 April 2015: ₹ 180.16 crore) has been written back.
- e) Provision for others comprise ₹ 68.24 crore (31 March 2016: ₹ 65.35 crore, 1 April 2015: ₹ 58.64 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 62], ₹ 640.25 crore (31 March 2016: ₹ 496.44 crore, 1 April 2015: 440.35 crore) towards provision for cases under litigation and ₹ 20.16 crore (31 March 2016: ₹ 19.06 crore, 1 April 2015: ₹ 6.05 crore) towards provision for shortage in property, plant & equipment on physical verification pending investigation.

### 34. Current liabilities - Current tax liabilities (net)

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
Current tax (net of advance tax)	81.40	154.23	10.42

## 41<sup>st</sup> Annual Report 2016-17

### Consolidated Financial Statements



### 35. Deferred revenue

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
On account of advance against depreciation	247.02	279.94	409.20
On account of income from foreign currency fluctuation	1,376.67	1,642.07	960.46
On account of government grants	783.15	451.15	366.25
<b>Total</b>	<b>2,406.84</b>	<b>2,373.16</b>	<b>1,735.91</b>

- 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) In line with significant accounting policy no. C.14 (Note 1), an amount of ₹ 32.92 crore (31 March 2016: ₹ 129.26 crore, 1 April 2015: ₹ 75.03 crore) has been recognized during the year from the AAD and included in energy sales (Note 37).
- c) 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 fixed assets, 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 shareholder's funds and liabilities.
- d) Government grants include ₹ 497.14 crore (31 March 2016: ₹ 125.00 crore, 1 April 2015: ₹ Nil) received from Solar Energy Corporation of India under MNRE Scheme for setting up 1,000 MW of grid connected solar PV power projects of the parent company and grant received from GOI through Government of Bihar for renovation & modernisation of Kanti Bijlee Utpadan Nigam Ltd. amounting to ₹ 285.70 crore (31 March 2016: ₹ 325.82 crore, 1 April 2015: ₹ 365.94 crore).

### 36. Regulatory deferral account credit balances

Particulars	₹ Crore		
	As at 31.03.2017	As at 31.03.2016	As at 01.04.2015
Exchange differences	489.33	300.72	308.96

Regulatory deferral account balances have been accounted in line with Accounting policy no. C.5. Refer Note 68 for detailed disclosures.



### 37. Revenue from operations

Particulars	₹ Crore	
	For the year ended 31.03.2017	For the year ended 31.03.2016
Energy sales (including electricity duty)	80,823.10	72,497.33
Consultancy, project management and supervision fee	163.71	117.04
Lease rentals on assets on operating lease	240.42	223.25
Commission - energy trading business	4.60	1.52
	<b>81,231.83</b>	<b>72,839.14</b>
Sale of fly ash/ash products	108.42	113.37
Less: Transferred to fly ash utilisation reserve fund	108.42	113.37
	-	-
<b>Other operating revenues</b>		
Interest from beneficiaries	401.84	221.29
Energy internally consumed	74.85	87.10
Interest income on assets under finance lease	154.31	84.25
Recognised from deferred revenue - government grant	55.50	40.15
Provisions for tariff adjustments written back	162.49	154.51
	<b>848.99</b>	<b>587.30</b>
<b>Total</b>	<b>82,080.82</b>	<b>73,426.44</b>

- a) The CERC notified the Tariff Regulations, 2014 in February 2014 (Regulations, 2014). The CERC has issued tariff orders for some of the stations for the period 2014-19 under Regulations 2014, and beneficiaries are billed based on such tariff orders issued by the CERC. For other stations, beneficiaries are billed in accordance with the principles given in the Regulations 2014. The energy charges in respect of the coal based stations are provisionally billed based on the GCV of coal 'as received', measured after the secondary crusher till 30 September 2016 and on wagon top w.e.f. 1 October 2016 in respect of most of the stations barring a few on the grounds of safety issues, for the quantity supplied through conveyors/road and other difficulties. The amount provisionally billed is ₹ **74,710.65 crore** (31 March 2016: ₹ 69,616.43 crore).
- b) The Company has filed a writ petition before the Hon'ble Delhi High Court contesting certain provisions of the Regulations, 2014. As per directions from the Hon'ble High Court on the issue of point of sampling for measurement of GCV of coal on 'as received' basis, CERC has issued an order dated 25 January 2016 (subject to final decision of the Hon'ble High Court) that samples for measurement of coal on 'as received' basis should be collected from wagon top at the generating stations. The Company's review petition before the CERC in respect of the above order was dismissed vide their order dated 30 June 2016. Vide order dated 10 November 2016, the Hon'ble Delhi High Court has permitted the company to approach the CERC with the difficulties being faced in implementation of the order of CERC in this regard. Accordingly, the Company has filed a petition with CERC, hearing of the same was held on 31 January 2017. Pending disposal of the petition by CERC and ratification by the Hon'ble Delhi High Court, measurement of GCV of coal from wagon top samples at the unloading point has started with effect from 1 October 2016 in respect of most of the stations barring a few on the grounds of safety issues, for the quantity supplied through conveyors/road and other difficulties.
- Sales has been provisionally recognized at ₹ **79,552.54 crore** (31 March 2016: ₹ 73,891.38 crore) on the basis of said Regulations 2014, wherein energy charges included in sales, in respect of the coal based stations have been recognized based on the GCV of coal 'as received' measured after secondary crusher till 30 September, 2016 and GCV measured on wagon top w.e.f. 1 October, 2016 in respect of most of the stations barring a few on the grounds of safety issues, for the quantity supplied through conveyors/road and other difficulties.
- c) Sales include ₹ **995.59 crore** (31 March 2016: ₹ 50.74 crore) pertaining to previous years recognized based on the orders issued by the CERC/Appellate Tribunal for Electricity (APTEL).

## 41<sup>st</sup> Annual Report 2016-17

### Consolidated Financial Statements



- d) Sales include ₹ Nil (31 March 2016: (-) ₹ 1,693.65 crore) on account of income-tax refundable to the beneficiaries as per Regulations, 2004. Sales also include ₹ 46.04 crore (31 March 2016: ₹ 28.12 crore) on account of deferred tax materialized which is recoverable from beneficiaries as per Regulations, 2014.
- e) Energy sales include electricity duty amounting to ₹ 697.99 crore (31 March 2016: 729.20 crore).
- f) Energy sales are net of rebate to beneficiaries amounting to ₹ 517.91 crore (31 March 2016: 543.02 crore).
- g) Other operating revenue includes ₹ 74.85 crore (31 March 2016: ₹ 87.10 crore) towards energy internally consumed, valued at variable cost of generation and the corresponding amount is included in power charges in Note 42.
- h) 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/pay from/to the beneficiaries the under/over recovered amount along-with simple interest. Accordingly, the interest recoverable from the beneficiaries amounting to ₹ 401.84 crore (31 March 2016: ₹ 221.29 crore) has been accounted as 'Interest from beneficiaries'. Further, the amount payable to the beneficiaries has been accounted as 'Interest to beneficiaries' in Note 42.
- i) One of the power stations of the Company, having 3 units of 95 MW each and two units of 210 MW each, was issued consent to operate (Renewal) order by Delhi Pollution Control Committee (DPCC) on 2 January 2014 which was valid till 31 January 2018 with a condition that particulate emission level shall not exceed 150 mg/Nm3. In a volte-face on 8 July 2015, DPCC issued a show cause notice to the station as to why four units out of five units of plant ought not to be closed down for failing to bring down its particulate emission level below 50 mg/Nm3. Further, vide order dated 31 December 2015, DPCC directed that four units out of five units of plant shall not operate. On 11 February 2016, DPCC modified the norms for particulate emission level of the consent to operate from 150 mg/Nm3 to 50 mg/Nm3. Further, vide order dated 21 March 2016, DPCC allowed operation of 2 units of 210 MW subject to meeting the SPM of 50 mg/Nm3. Company's petition to direct beneficiaries for payment of fixed charges from 31 December 2015 under change in law is pending disposal before the CERC. Further, in view of severe pollution level in Delhi, DPCC vide order dated 6 November 2016, directed not to operate all units of station for 10 days which was subsequently extended till further orders. DPCC, vide order dated 14 March 2017 has allowed operation of two units of 210 MW each for the period from 15 March 2017 to 15 October 2017. NTPC filed a fresh petition before CERC to direct beneficiaries for payment of fixed charges for the closure from 7 November 2016 under change in law which is pending disposal before the CERC.
- j) Keeping in view the provisions of Appendix C to Ind AS-17 on Leases w.r.t. determining whether an arrangement contains a lease, the Company has ascertained that the PPA entered into for two of the power stations of the Company fall under operating lease. Recovery of capacity charges towards depreciation (including AAD), interest on loan capital & return on equity (pre-tax) components from the beneficiaries are considered as lease rentals on the assets which are on operating lease.
- k) Keeping in view the provisions of Appendix C to Ind AS-17 on Leases w.r.t. determining whether an arrangement contains a lease, the Company has 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 has been derecognized from PPE and accounted as Finance Lease Receivable (FLR). Recovery of capacity charges towards depreciation (including AAD), interest on loan capital & return on equity (pre-tax) components from the beneficiary are 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 recognised as 'Interest income on Assets under finance lease'.

### 38. Other income

Particulars	₹ Crore	
	For the year ended 31.03.2017	For the year ended 31.03.2016
<b>Interest from</b>		
Financial assets at amortized cost		
Long-term investments - Government securities (8.5% tax free bonds)	-	105.28
Loan to state government in settlement of dues from customers (8.5% tax free)	2.03	10.17
Loan to employees	58.92	51.31

## 41<sup>st</sup> Annual Report 2016-17

Consolidated Financial Statements

Particulars	₹ Crore	
	For the year ended 31.03.2017	For the year ended 31.03.2016
Deposits with banks/Reserve Bank of India	79.24	440.42
Deposits with banks out of fly ash utilisation reserve fund	23.92	9.24
Less : Transferred to fly ash utilisation reserve fund	23.92	9.24
	-	-
Deposits with banks - DDUGJY funds	36.27	29.40
Less : Transferred to DDUGJY advance from customers	36.27	29.40
	-	-
Advance to contractors	49.22	54.23
Others	24.06	20.06
<b>Dividend from</b>		
Equity instruments designated at fair value through OCI	3.00	2.64
Mutual funds measured at fair value through profit or loss	-	49.80
Mutual funds out of fly ash utilisation reserve fund	3.71	17.03
Less : Transferred to fly ash utilisation reserve fund	3.71	17.03
	-	-
<b>Other non-operating income</b>		
Surcharge received from beneficiaries	467.15	149.58
Hire charges for equipment	3.38	2.09
Gain on option contract	-	5.07
Derivative MTM Gain	-	8.22
Sale of scrap	84.43	58.69
Profit on redemption of current investments	24.81	16.34
Miscellaneous income	228.79	150.55
Profit on disposal of property, plant & equipment	10.36	1.66
Provisions written back		
Unservicable capital works	4.62	10.69
Others	9.73	11.22
	1,049.74	1,148.02
Less: Transferred to expenditure during construction period (net) - Note 43	81.32	80.38
Transferred to development of coal mines	1.60	1.86
Transferred to hedging cost recoverable/(payable) from/to beneficiaries	-	8.22
<b>Total</b>	<b>966.82</b>	<b>1,057.56</b>

- 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) Provisions written back - Others include provision for doubtful loans, advances, claims, debts and provision for shortage/obsolescence in stores and shortage in fixed assets.

## 41<sup>st</sup> Annual Report 2016-17

### Consolidated Financial Statements



### 39. Employee benefits expense

Particulars	₹ Crore	
	For the year ended 31.03.2017	For the year ended 31.03.2016
Salaries and wages	4,150.74	3,651.41
Contribution to provident and other funds	1,077.89	595.55
Staff welfare expenses	447.18	447.25
	<b>5,675.81</b>	<b>4,694.21</b>
Less: Allocated to fuel cost	264.65	218.87
Transferred to development of coal mines-Note 4	57.26	46.99
Transferred to fly ash utilisation reserve fund	20.80	16.87
Transferred to CSR expenses	54.90	50.23
Reimbursements for employees on deputation	54.20	49.58
Transferred to expenditure during construction period (net)- Note 43	810.13	691.01
<b>Total</b>	<b>4,413.87</b>	<b>3,620.66</b>

- a) Disclosures as per Ind AS 19 in respect of provision made towards various employee benefits are made in Note 56.
- b) Salaries and wages include special allowance paid by the Company to eligible employees serving in difficult and far flung areas w.e.f. 26 November 2008. As per the Office Memorandum dated 26 November 2008 of DPE relating to revision of pay scales w.e.f 1 January 2007, special allowance can be paid to such employees upto 10% of basic pay as approved by concerned administrative ministry. In line with the office memorandum dated 22 June 2010 of DPE, Board of Directors has approved the special allowance (Difficult and Far Flung Areas) to eligible employees. The approval of MOP for the same is awaited.
- c) The pay revision of the employees of the Company is due w.e.f. 1 January 2017. The required provision towards revision of pay scales and gratuity has been made during the year. Refer Note 33 (c).

### 40. Finance costs

Particulars	₹ Crore	
	For the year ended 31.03.2017	For the year ended 31.03.2016
<b>Finance charges on financial liabilities measured at amortised cost</b>		
Bonds	2,492.45	1,963.21
Foreign currency term loans	354.19	315.69
Rupee term loans	4,178.88	4,202.63
Foreign currency bonds/notes	763.41	701.61
Cash credit	21.35	19.14
Unwinding of discount on vendor liabilities	507.17	379.78
Discount on commercial papers	63.00	-
Others	5.92	2.31
	<b>8,386.37</b>	<b>7,584.37</b>
<b>Other borrowing costs</b>		
Guarantee fee	31.68	26.28
Management/arrangers fee	-	5.81



Particulars	₹ Crore	
	For the year ended 31.03.2017	For the year ended 31.03.2016
Foreign currency bonds/notes expenses	0.57	0.04
Others	14.35	17.30
	<b>46.60</b>	<b>49.43</b>
<b>Sub-Total</b>	<b>8,432.97</b>	<b>7,633.80</b>
Less: Transferred to expenditure during construction period (net) - Note 43	4,662.14	4,206.99
Transferred to development of coal mines -Note 4	119.75	113.16
<b>Total</b>	<b>3,651.08</b>	<b>3,313.65</b>

- a) Other borrowing costs - Others include bond issue & service expenses, commitment charges, exposure premium and insurance premium & legal expenses on foreign currency loans.

#### 41. Depreciation, amortisation and impairment expense

Particulars	₹ Crore	
	For the year ended 31.03.2017	For the year ended 31.03.2016
On property, plant and equipments-Note-2	6,670.31	5,751.88
On intangible assets-Note-3	22.46	19.36
	<b>6,692.77</b>	<b>5,771.24</b>
Less: Allocated to fuel cost	349.97	330.20
Transferred to development of coal mines-Note 4	14.20	2.60
Transferred to expenditure during construction period (net)- Note 43	155.59	98.37
Adjustment with deferred revenue from deferred foreign currency fluctuation	163.10	116.05
<b>Total</b>	<b>6,009.91</b>	<b>5,224.02</b>

#### 42. Other expenses

Particulars	₹ Crore	
	For the year ended 31.03.2017	For the year ended 31.03.2016
Power charges	284.90	270.27
Less: Recovered from contractors & employees	27.65	23.99
	<b>257.25</b>	<b>246.28</b>
Water charges	574.24	515.12
Cost of captive coal	33.72	-
Contribution to water conservation fund	-	303.72
Stores consumed	60.32	55.79
Rent	41.07	43.14
Less: Recoveries	11.50	10.50
	<b>29.57</b>	<b>32.64</b>

## 41<sup>st</sup> Annual Report 2016-17

Consolidated Financial Statements



₹ Crore

Particulars	For the year ended 31.03.2017	For the year ended 31.03.2016
Load dispatch centre charges	28.74	3.09
Repairs & maintenance		
Buildings	247.48	241.45
Plant & machinery	1,867.80	1,680.39
Others	248.64	217.01
	2,363.92	2,138.85
Insurance	122.31	117.83
Interest to beneficiaries	101.72	52.38
Rates and taxes	47.56	37.30
Water cess & environment protection cess	25.94	30.12
Training & recruitment expenses	33.70	32.69
Less: Receipts	0.98	1.34
	32.72	31.35
Communication expenses	60.71	60.43
Travelling expenses	206.46	214.59
Tender expenses	27.12	34.27
Less: Receipt from sale of tenders	1.87	2.05
	25.25	32.22
Payment to auditors	5.46	4.42
Advertisement and publicity	19.07	17.40
Electricity duty	699.59	729.20
Security expenses	635.49	523.03
Entertainment expenses	27.70	25.56
Expenses for guest house	29.33	26.16
Less: Recoveries	2.76	2.79
	26.57	23.37
Education expenses	42.97	39.51
Donation	-	0.05
Ash utilisation & marketing expenses	21.78	27.44
Directors sitting fee	0.21	0.18
Professional charges and consultancy fee	117.52	40.70
Legal expenses	44.15	47.91
EDP hire and other charges	18.62	20.51
Printing and stationery	15.97	15.27
Oil & gas exploration expenses	110.58	32.77
Hiring of vehicles	91.30	83.63
Reimbursement of LC charges on sales realization	1.36	0.36
Net loss/(gain) in foreign currency transactions & translations	(200.56)	30.24
Cost of hedging	5.27	6.26

## 41<sup>st</sup> Annual Report 2016-17

Consolidated Financial Statements

₹ Crore

Particulars	For the year ended 31.03.2017	For the year ended 31.03.2016
Derivatives MTM loss/(gain) (net)	5.22	-
Horticulture expenses	39.79	33.94
Hire charges of helicopter/aircraft	17.02	14.93
Hire charges of construction equipments	9.42	9.58
Transport vehicle running expenses	7.01	6.76
Demurrage charges	-	2.81
Loss on disposal/write-off of fixed assets	82.94	143.87
Miscellaneous expenses	109.71	227.90
	<b>5,924.59</b>	<b>5,979.31</b>
Less: Allocated to fuel cost	<b>424.86</b>	<b>391.75</b>
Transferred to development of coal mines-Note 4	144.24	34.52
Transferred to hedging cost recoverable/(payable) from/to beneficiaries	5.22	-
Transferred to Corporate Social Responsibility (CSR) expense	42.17	33.36
Transferred to fly ash utilisation reserve fund	33.12	40.44
Transferred to expenditure during construction period (net) - Note 43	504.45	533.86
	<b>4,770.53</b>	<b>4,945.38</b>
<b>Corporate Social Responsibility (CSR) expense</b>	<b>275.59</b>	<b>491.01</b>
<b>Provisions for</b>		
Tariff adjustments	98.88	145.28
Obsolescence in stores	12.04	8.89
Unserviceable capital works	4.78	4.22
Unfinished minimum work programme for oil and gas exploration	2.89	6.71
Others	20.80	18.97
	<b>139.39</b>	<b>184.07</b>
<b>Total</b>	<b>5,185.51</b>	<b>5,620.46</b>

a) During the development stage of mine, transfer price of coal extracted from Company's captive mine has been determined considering the notified price of Coal India Ltd. for equivalent grade of coal. The same has been netted from the cost of captive coal and carried to 'Development of coal mines (Note 4) through 'Transferred to development of coal mines'.

b) Contribution to water conservation fund represents the amount payable by the Company pursuant to the Resolution No. 11011 dated 18 May 2015 of Department of Water Resource, Government of Odisha.

c) Details in respect of payment to auditors:

As auditor

Audit fee	1.75	1.22
Tax audit fee	0.60	0.41
Limited review	0.95	0.70

In other capacity

Other services (certification fee)	0.71	0.70
Reimbursement of expenses	0.86	0.95
Reimbursement of service tax	0.59	0.44

**Total**

**5.46**      **4.42**

Payment to the auditors includes ₹ 0.67 crore (31 March 2016: ₹ 0.50 crore) relating to earlier year.

## 41<sup>st</sup> Annual Report 2016-17

Consolidated Financial Statements



- d) 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 ₹ 101.72 crore (31 March 2016: ₹ 52.38 crore) has been accounted and disclosed as 'Interest to beneficiaries'.
- e) Miscellaneous expenses include expenditure on books & periodicals, workshops, operating expenses of DG sets, brokerage & commission, bank charges, furnishing expenses etc.
- f) Provisions - Others include provision for doubtful loans, advances & claims, debts, arbitration cases and shortage in stores & PPE.

#### 43. Expenditure during construction period (net)

Particulars	₹ Crore	
	For the year ended 31.03.2017	For the year ended 31.03.2016
<b>A. Employee benefits expense</b>		
Salaries and wages	619.56	558.55
Contribution to provident and other funds	139.98	80.31
Staff welfare expenses	50.59	52.15
<b>Total (A)</b>	<b>810.13</b>	<b>691.01</b>
<b>B. Finance costs</b>		
Finance charges on financial liabilities measured at amortised cost		
Bonds	1,335.26	1,066.58
Foreign currency term loans	191.67	151.95
Rupee term loans	2,271.41	2,361.94
Foreign currency bonds/notes	434.08	309.31
Unwinding of discount on vendor liabilities	425.17	307.28
Other borrowing costs		
Management/arrangers fee	-	5.81
Foreign currency bonds/notes expenses	0.57	0.04
Others	3.98	4.08
<b>Total (B)</b>	<b>4,662.14</b>	<b>4,206.99</b>
<b>C. Depreciation and amortisation</b>	<b>155.59</b>	<b>98.37</b>
<b>D. Generation, administration &amp; other expenses</b>		
Power charges	181.87	176.27
Less: Recovered from contractors & employees	3.33	2.92
	178.54	173.35
Water charges	12.03	10.14
Rent	3.86	5.03
Repairs & maintenance		
Buildings	7.54	12.49
Plant and machinery	3.01	0.79
Others	36.79	49.91
	47.34	63.19



Particulars	₹ Crore	
	For the year ended 31.03.2017	For the year ended 31.03.2016
Insurance	1.07	1.89
Rates and taxes	13.38	12.94
Communication expenses	8.18	8.74
Travelling expenses	44.92	48.98
Tender expenses	4.29	6.24
Advertisement and publicity	1.97	2.36
Security expenses	84.96	87.48
Entertainment expenses	5.68	6.15
Expenses for guest house	3.81	4.86
Professional charges and consultancy fee	8.08	6.09
Legal expenses	11.48	10.71
EDP hire and other charges	2.15	2.59
Printing and stationery	1.95	2.49
Miscellaneous expenses	70.76	80.63
<b>Total (D)</b>	<b>504.45</b>	<b>533.86</b>
<b>E. Less: Other income</b>		
Interest from contractors	37.57	42.00
Interest others	15.21	16.31
Hire charges for equipment	2.67	1.31
Sale of scrap	2.57	0.73
Miscellaneous income	23.30	20.03
<b>Total (E)</b>	<b>81.32</b>	<b>80.38</b>
<b>F. Net actuarial gain/loss - OCI</b>	<b>22.40</b>	<b>1.66</b>
<b>Grand total (A+B+C+D-E+F)</b>	<b>6,073.39*</b>	<b>5,451.51*</b>

\* Carried to Capital work-in-progress - (Note 4)

44. Amount in the financial statements are presented in ₹ crore (upto two decimals) except for per share data and as other-wise stated. Certain amounts, which do not appear due to rounding off, are disclosed separately. Previous years' figures have been regrouped /rearranged wherever considered necessary.

45. 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 sale of energy, 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 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

## 41<sup>st</sup> Annual Report 2016-17

Consolidated Financial Statements



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 equipments 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.
46. 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 subjudice at various courts. In case the Group gets refund/demand from fuel suppliers/tax authorities on settlement of these cases, the same will be passed on to respective beneficiaries.
47. The environmental clearance ("clearance") granted by the Ministry of Environment and Forest, Government of India (MoEF) for one of the Group's ongoing project was challenged before the National Green Tribunal (NGT). The NGT disposed the appeal, 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 judgment of the NGT and for referring the matter to the Expert Appraisal Committee ("Committee") for its re-scrutiny, which shall complete the process within six months from the date of NGT order. NGT also directed that the environmental clearance shall be kept in abeyance and the Group 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 Group 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. Aggregate cost incurred on the project upto 31 March 2017 is ₹ 14,461.59 crore (31 March 2016: ₹ 11,748.50 crore, 1 April 2015: ₹ 8,728.42 crore). Management is confident that the approval for proceeding with the project shall be granted, hence no provision is considered necessary.
48. The Group 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 Group. In the proceedings, Hon'ble Supreme Court is examining to allow few projects which have all clearances which includes the project of the Group where the work has been stopped. Aggregate cost incurred on the project up to 31 March 2017 is ₹ 160.75 crore (31 March 2016: ₹ 157.19 crore, 1 April 2015 ₹ 157.47 crore). Management is confident that the approval for proceeding with the project shall be granted, hence no provision is considered necessary.

#### 49. Disclosure as per Ind AS 2 'Inventories'

Amount of inventories recognised as expense during the year is as under:

Particulars	₹ Crore	
	For the year ended 31.03.2017	For the year ended 31.03.2016
Fuel	47,947.77	44,112.86
Others (included in Note 42 - Other expenses)	1,117.27	1,099.99
<b>Total</b>	<b>49,065.04</b>	<b>45,212.85</b>

#### 50. 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 & Loss is (-) ₹ 5.66 crore (31 March 2016: debit of ₹ 22.55 crore).

#### 51. Disclosure as per Ind AS 23 'Borrowing Costs'

Borrowing costs capitalised during the year is ₹ 4,781.89 crore (31 March 2016: ₹ 4,320.15 crore).

## 52. Disclosure as per Ind AS 38 'Intangible Assets'

Research expenditure charged to revenue during the year is ₹ **80.40 crore** (31 March 2016: ₹ 108.00 crore).

## 53. Disclosure as per Ind AS 11 - 'Construction contracts'

The net balance sheet position for ongoing construction contracts is as follows:

Particulars	₹ Crore	
	For the year ended	
	31 March 2017	31 March 2016
Contract revenue recognised during the year	117.42	79.13
Aggregate amount of contract costs incurred and recognised profits (less recognised losses, if any) upto the Balance Sheet date for all contracts in progress as at that date	768.35	472.60

Particulars	₹ Crore		
	31 March 2017	31 March 2016	1 April 2015
Amount of customers' advances outstanding for contracts in progress as at Balance Sheet date	637.58	468.78	306.64
Retention amounts by customer for contract work in progress as at the end of the financial year	1.21	1.50	-
Gross amount due from customer for contract work- presented as an assets	56.28	40.60	42.13
Gross amount due to customer for contract work - presented as liability	23.56	31.73	43.76

## 54. Disclosure as per Ind AS 12 'Income taxes'

### (a) Income tax expense

#### i) Income tax recognised in Statement of Profit and Loss

Particulars	₹ Crore	
	31 March 2017	31 March 2016
<b>Current tax expense</b>		
Current year	2,750.85	2,131.61
Adjustment for earlier years	(107.54)	(2,453.48)
Pertaining to regulatory deferral account balances	71.51	2.58
<b>Total current tax expense</b>	<b>2,714.82</b>	<b>(319.29)</b>
<b>Deferred tax expense</b>		
Origination and reversal of temporary differences	1,284.47	210.21
Less: Deferred asset for deferred tax liability	952.68	53.73
<b>Total deferred tax expense</b>	<b>331.79</b>	<b>156.48</b>
<b>Total income tax expense</b>	<b>3,046.61</b>	<b>(162.81)</b>



ii) Income tax recognised in other comprehensive income

₹ Crore

Particulars	31 March 2017			31 March 2016		
	Before tax	Tax expense/ (benefit)	Net of tax	Before tax	Tax expense/ (benefit)	Net of tax
- Net actuarial gains/(losses) on defined benefit plans	(303.42)	(64.76)	(238.66)	(48.76)	(10.41)	(38.35)
- Net gains/(losses) on fair value of equity instruments	35.28	-	35.28	(20.28)	-	(20.28)
- Share of other comprehensive income of associates and joint ventures accounted for using the equity method	(1.41)	-	(1.41)	0.07	-	0.07
- Exchange differences on translation of foreign operations	(8.06)	-	(8.06)	3.26	-	3.26
	(277.61)	(64.76)	(212.85)	(65.71)	(10.41)	(55.30)

iii) Reconciliation of tax expense and the accounting profit multiplied by India's domestic tax rate

₹ Crore

	31 March 2017	31 March 2016
Profit before tax	13,760.55	10,617.92
Tax using the Group's domestic tax rate of 34.6081% (31 March 2016 - 34.6081%)	4,762.26	3,674.66
Tax effect of:		
Non-deductible tax expenses	(284.01)	(87.95)
Tax-exempt income	(35.88)	(63.95)
Foreign exchange differences	0.13	0.44
Previous year tax liability	(107.54)	(2,453.48)
Minimum alternate tax adjustments	(1,288.35)	(1,232.53)
Total tax expense in the Statement of Profit and Loss	3,046.61	(162.81)

(b) Tax losses carried forward

₹ Crore

Particulars	31 March 2017	Expiry date	31 March 2016	Expiry date
Unused tax losses for which no deferred tax asset has been recognised	-	-	39.01	31.03.2017

Deferred tax assets have not been recognised in respect of the tax losses incurred by the Company that is not likely to generate taxable income in the foreseeable future.

(c) Dividend distribution tax on proposed dividend not recognised at the end of the reporting period

Since year end, the directors have recommended the payment of final dividend amounting to ₹ 1,789.27 crore (31 March 2016: ₹ 1,442.96 crore). The dividend distribution tax on this proposed dividend amounting to ₹ 364.25 crore (31 March 2016: ₹ 289.68 crore) has not been recognised since this proposed dividend is subject to the approval of shareholders in the ensuing annual general meeting.



(d) MAT Credit available to the Group in future but not recognised in the books:

₹ Crore				
Financial years	31 March 2017	Expiry date	31 March 2016	Expiry date
For the year 2016-17	1,864.23	31.03.2027	-	-
For the year 2015-16	1,708.82	31.03.2026	1,708.82	31.03.2026
For the year 2014-15	883.58	31.03.2025	883.58	31.03.2025

## 55. Disclosure as per Ind AS 17 'Leases'

### A) Operating leases

#### i. Leases as lessee

- The Group's significant leasing arrangements are in respect of operating leases of premises for residential use of employees, offices and guest houses/transit camps for a period of one to two years. These leasing arrangements are usually renewable on mutually agreed terms but are not non-cancellable. An amount of ₹ 30.79 crore (31 March 2016: ₹ 36.50 crore) towards lease payments (net of recoveries) in respect of premises for residential use of employees is included under 'Salaries and wages' in Note 39. Lease payments in respect of premises for offices and guest house/transit camps amounting ₹ 29.57 crore (net of recoveries) (31 March 2016: ₹ 32.64 crore) are included under 'Rent' in Note 42.
- The Group has taken a helicopter on wet lease basis for a period of eleven years and the amount of lease charges of ₹ 17.02 crore (31 March 2016: ₹ 14.93 crore) is included under 'Hire charges of helicopter/ aircraft' in Note 42. The lease is renewable on mutually agreed terms but not non-cancellable.
- Ministry of Power, Government of India vide its notification no. 2/38/99-BTPS (Volume VII) dated 22 September 2006 transferred land of a power station to the Group on operating lease of 50 years. Lease rent for the year amounting to ₹ 6.26 crore (31 March 2016: ₹ 6.25 crore) has been charged to the Statement of Profit and Loss and included under 'Rates and taxes' in Note 42.

#### ii. Leases as lessor

- The Group has classified the arrangement with its customer for two power stations (one thermal and one gas) 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. The future minimum lease payments (MLPs) under non-cancellable leases in respect of the same are as follows:

##### (i) Thermal Power Station

PPA signed with the beneficiary was operative for a period of five years from the date of take over of the plant and the agreement may be mutually extended, renewed or replaced by another agreement on such terms and conditions for such further period as the parties may mutually agree.

##### (ii) 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.

₹ Crore		
	31 March 2017	31 March 2016
Less than one year	229.91	222.82
Between one and five years	667.67	782.57
More than five years	263.27	355.32
	1,160.85	1,360.71



B) Finance leases

i Leases as lessee

- a) The Group has taken on lease certain vehicles as per terms of the lease agreements, details of which are as under:

	₹ Crore					
	31 March 2017		31 March 2016		1 April 2015	
	MLPs	Present value of MLP	MLPs	Present value of MLP	MLPs	Present value of MLP
Less than one year	1.05	0.78	0.71	0.48	-	-
Between one and five years	1.83	1.62	1.71	1.46	-	-
More than five years	-	-	-	-	-	-
<b>Total minimum lease payments</b>	<b>2.88</b>	<b>2.40</b>	<b>2.42</b>	<b>1.94</b>	<b>-</b>	<b>-</b>
Less amounts representing finance charges	0.48	-	0.48	-	-	-
<b>Present value of minimum lease payments</b>	<b>2.40</b>	<b>2.40</b>	<b>1.94</b>	<b>1.94</b>	<b>-</b>	<b>-</b>

- b) The Group has entered into a lease agreement for coal movement through inland waterways transport. As per the agreement, the operator shall design, build, operate and maintain the unloading infrastructure and material handling system ("facility"), and transfer the same to the Group after expiry of 7 years at ₹ 1/-. The facility has been completed and is under operation. Fair value of the entire facility is ₹ 90.00 crore (31 March 2016: ₹ 90.00 crore). The total contingent rents recognised as expense during the year is ₹ 0.82 crore (31 March 2016: ₹ 9.52 crore)

	₹ Crore					
	31 March 2017		31 March 2016		1 April 2015	
	MLPs	Present value of MLP	MLPs	Present value of MLP	MLPs	Present value of MLP
Less than one year	18.89	12.12	20.60	10.83	15.45	7.83
Between one and five years	82.41	64.79	82.41	57.88	82.41	52.31
More than five years	5.15	3.39	24.04	22.42	46.36	39.51
<b>Total minimum lease payments</b>	<b>106.45</b>	<b>80.30</b>	<b>127.05</b>	<b>91.13</b>	<b>144.22</b>	<b>99.65</b>
Less amounts representing finance charges	26.15	-	35.92	-	44.57	-
<b>Present value of minimum lease payments</b>	<b>80.30</b>	<b>80.30</b>	<b>91.13</b>	<b>91.13</b>	<b>99.65</b>	<b>99.65</b>

- c) 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 'Finance lease obligation' at their present values. The leasehold land is amortised considering the significant accounting policies of the Company.

₹ Crore

	31 March 2017		31 March 2016		1 April 2015	
	MLPs	Present value of MLP	MLPs	Present value of MLP	MLPs	Present value of MLP
Less than one year	5.66	5.19	4.72	4.32	3.46	3.15
Between one and five years	21.42	15.69	18.01	13.14	13.84	10.04
More than five years	425.06	40.06	383.72	29.85	292.37	22.15
<b>Total minimum lease payments</b>	<b>452.14</b>	<b>60.94</b>	<b>406.45</b>	<b>47.31</b>	<b>309.67</b>	<b>35.34</b>
Less amounts representing finance charges	391.20	-	359.14	-	274.33	-
<b>Present value of minimum lease payments</b>	<b>60.94</b>	<b>60.94</b>	<b>47.31</b>	<b>47.31</b>	<b>35.34</b>	<b>35.34</b>

ii **Leases as lessor**

The Group has 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.

The PPA 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.

₹ Crore

	31 March 2017		31 March 2016		1 April 2015	
	MLPs	Present value of MLP	MLPs	Present value of MLP	MLPs	Present value of MLP
Less than one year	119.42	29.77	99.67	29.12	94.73	24.72
Between one and five years	477.70	182.65	388.61	151.24	369.35	126.77
More than five years	456.72	342.64	489.96	360.46	560.79	388.43
<b>Total minimum lease payments</b>	<b>1,053.84</b>	<b>555.06</b>	<b>978.24</b>	<b>540.82</b>	<b>1,024.87</b>	<b>539.92</b>
Less amounts representing unearned finance income	498.78	-	437.42	-	484.95	-
<b>Present value of minimum lease payments</b>	<b>555.06</b>	<b>555.06</b>	<b>540.82</b>	<b>540.82</b>	<b>539.92</b>	<b>539.92</b>

**56. 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. An amount of ₹ **237.34 crore** (31 March 2016: ₹ 223.24 crore) for the year is recognized as expense on this account and charged to the Statement of Profit and Loss.

(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 employee pension scheme is paid to the appropriate authorities.

**41<sup>st</sup> Annual Report 2016-17**



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	31 March 2017	31 March 2016	1 April 2015
Net defined benefit (asset)/liability	(53.17)	(59.48)	(54.26)
Non-current	-	-	-
Current	(53.17)	(59.48)	(54.26)

**Movement in net defined benefit (asset)/liability**

	₹ Crore					
Particulars	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset) liability	
	31 March 2017	31 March 2016	31 March 2017	31 March 2016	31 March 2017	31 March 2016
Opening balance	6,832.89	6,143.59	6,892.37	6,197.85	(59.48)	(54.26)
Current service cost recognized in Statement of Profit and Loss	252.12	242.04	-	-	252.12	242.04
Interest cost (income)	546.63	491.49	(551.39)	(495.83)	(4.76)	(4.34)
<b>Total</b>	<b>798.75</b>	<b>733.53</b>	<b>(551.39)</b>	<b>(495.83)</b>	<b>247.36</b>	<b>237.70</b>
Remeasurement loss (gain):						
Actuarial loss (gain) arising from:						
Financial assumptions	0.62	-	-	-	0.62	-
Experience adjustment	71.22	69.00	-	-	71.22	69.00
Return on plan assets excluding interest income	-	-	(60.77)	(69.88)	(60.77)	(69.88)
<b>Total</b>	<b>71.84</b>	<b>69.00</b>	<b>(60.77)</b>	<b>(69.88)</b>	<b>11.07</b>	<b>(0.88)</b>
<b>Other</b>						
Contribution by participants	485.54	474.81	485.54	474.81	-	-
Contribution by employer	-	-	252.12	242.04	(252.12)	(242.04)
Benefits paid	653.39	588.04	653.39	588.04	-	-
<b>Closing balance</b>	<b>7,535.63</b>	<b>6,832.89</b>	<b>7,588.80</b>	<b>6,892.37</b>	<b>(53.17)</b>	<b>(59.48)</b>

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 ₹ 53.17 crore determined through actuarial valuation. Accordingly, Company 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 company.



## B. Gratuity & 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 ₹ 0.10 crore on superannuation, resignation, termination, disablement or on death. The maximum ceiling of ₹ 0.10 crore has been recommended for enhancement to ₹ 0.20 crore by the Report of the 3<sup>rd</sup> Pay Revision Committee appointed by the GOI. The Group has carried out actuarial valuation of gratuity benefit considering the enhanced ceiling.
- b) The Group has pension schemes at two of its stations in respect of employees taken over from erstwhile state government power utilities.

The existing schemes stated at (a) and at one of the power stations at (b) above are funded by the Group and are managed by separate trusts. Pension scheme of another power station in respect of employees taken from erstwhile State Government Power Utility is unfunded. The liability for gratuity and the pension schemes as above 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		
	31 March 2017	31 March 2016	1 April 2015
Net defined benefit (asset)/liability :			
Gratuity (funded)	627.71	(19.27)	(16.09)
Pension (funded)	125.13	118.93	108.28
Pension (non-funded)	271.71	258.18	242.04
	1,024.55	357.84	334.23
Non-current	19.83	17.93	16.47
Current	1,004.72	339.91	317.76

### Movement in net defined benefit (asset)/liability

	₹ Crore					
Particulars	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset) liability	
	31 March 2017	31 March 2016	31 March 2017	31 March 2016	31 March 2017	31 March 2016
Opening balance	1,823.53	1,783.65	1,465.69	1,449.42	357.84	334.23
Included in profit or loss:						
Current service cost	96.29	72.07	-	-	96.29	72.07
Past service cost	433.24	-	-	-	433.24	-
Interest cost (income)	145.88	142.69	(117.26)	(115.96)	28.62	26.73
<b>Total amount recognised in profit or loss</b>	<b>675.41</b>	<b>214.76</b>	<b>(117.26)</b>	<b>(115.96)</b>	<b>558.15</b>	<b>98.80</b>
Included in OCI:						
Remeasurement loss (gain):						
Actuarial loss (gain) arising from:						
Financial assumptions	85.23	-	-	-	85.23	-
Experience adjustment	57.14	(40.58)	-	-	57.14	(40.58)
Return on plan assets excluding interest income	-	-	(10.10)	(11.79)	(10.10)	(11.79)
<b>Total amount recognised in other comprehensive income</b>	<b>142.37</b>	<b>(40.58)</b>	<b>(10.10)</b>	<b>(11.79)</b>	<b>132.27</b>	<b>(52.37)</b>
<b>Other</b>						
Benefits paid	135.41	134.30	111.70	111.48	23.71	22.82
<b>Closing balance</b>	<b>2,505.90</b>	<b>1,823.53</b>	<b>1,481.35</b>	<b>1,465.69</b>	<b>1,024.55</b>	<b>357.84</b>



### 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's 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 during 2015-16 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		
	31 March 2017	31 March 2016	1 April 2015
Net defined benefit (asset)/liability	97.44	(0.22)	727.49
Non-current	-	-	-
Current	97.44	(0.22)	727.49

### Movement in net defined benefit (asset)/liability

Particulars	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset) liability	
	31 March 2017	31 March 2016	31 March 2017	31 March 2016	31 March 2017	31 March 2016
Opening balance	889.78	727.49	890.00	-	(0.22)	727.49
Included in profit or loss:						
Current service cost	29.41	21.93	-	-	29.41	21.93
Past service cost	-	-	-	-	-	-
Interest cost (income)	71.18	58.20	(71.20)	-	(0.02)	58.20
<b>Total amount recognised in profit or loss</b>	<b>100.59</b>	<b>80.13</b>	<b>(71.20)</b>	<b>-</b>	<b>29.39</b>	<b>80.13</b>
Included in OCI:						
Remeasurement loss (gain):						
Actuarial loss (gain) arising from:						
Demographic assumptions	-	-	-	-	-	-
Financial assumptions	86.06	-	-	-	86.06	-
Experience adjustment	119.03	110.00	-	-	119.03	110.00
Return on plan assets excluding interest income	-	-	(9.18)	-	(9.18)	-
<b>Total amount recognised in other comprehensive income</b>	<b>205.09</b>	<b>110.00</b>	<b>(9.18)</b>	<b>-</b>	<b>195.91</b>	<b>110.00</b>
<b>Other</b>						
Contribution by employer	-	-	121.83	890.00	(121.83)	(890.00)
Contributions by participants	-	-	5.81	-	(5.81)	-
Benefits paid	36.06	27.84	36.06	-	-	27.84
<b>Closing balance</b>	<b>1,159.40</b>	<b>889.78</b>	<b>1,061.96</b>	<b>890.00</b>	<b>97.44</b>	<b>(0.22)</b>

### D. Other retirement benefit plans

Other retirement benefit plans include baggage allowance for settlement at home town for employees & 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		
	31 March 2017	31 March 2016	1 April 2015
Net defined benefit (asset)/liability :	<b>138.18</b>	126.49	120.97
Non-current	<b>125.11</b>	113.79	109.71
Current	<b>13.07</b>	12.70	11.26

**Movement in net defined benefit (asset)/liability**

	₹ Crore	
	Defined benefit obligation	
	31 March 2017	31 March 2016
Opening balance	<b>126.49</b>	120.97
Included in profit or loss:		
Current service cost	<b>6.36</b>	5.58
Past service cost	-	-
Interest cost (income)	<b>10.11</b>	9.68
<b>Total amount recognised in profit or loss</b>	<b>16.47</b>	15.26
Included in OCI:		
Remeasurement loss (gain):		
Actuarial loss (gain) arising from:		
Financial assumptions	<b>4.25</b>	-
Experience adjustment	<b>(6.59)</b>	(7.07)
Return on plan assets excluding interest income	-	-
<b>Total amount recognised in other comprehensive income</b>	<b>(2.34)</b>	(7.07)
<b>Other</b>		
Contributions paid by the employer	-	-
Benefits paid	<b>2.44</b>	2.67
<b>Closing balance</b>	<b>138.18</b>	126.49

**E. Plan assets**

**Plan assets comprise the following**

	₹ Crore								
	31 March 2017			31 March 2016			1 April 2015		
	Quoted	Unquoted	Total	Quoted	Unquoted	Total	Quoted	Unquoted	Total
State government securities	<b>2,144.63</b>	-	<b>2,144.63</b>	1,666.50	-	1,666.50	1,284.23	-	1,284.23
Central government securities	<b>1,884.84</b>	-	<b>1,884.84</b>	1,906.60	-	1,906.60	1,931.19	-	1,931.19
Corporate bonds/debentures	<b>3,281.34</b>	<b>94.95</b>	<b>3,376.29</b>	3,135.36	94.95	3,230.31	3,124.53	94.95	3,219.48
Money market instruments/liquid mutual fund	-	<b>39.33</b>	<b>39.33</b>	-	17.72	17.72	2.50	-	2.50
Equity & equity linked investments	<b>115.32</b>	-	<b>115.32</b>	47.52	-	47.52	-	-	-
Investments with insurance companies	-	<b>2,382.65</b>	<b>2,382.65</b>	-	1,306.32	1,306.32	-	1,051.92	1,051.92
<b>Total (excluding accrued interest)</b>	<b>7,426.13</b>	<b>2,516.93</b>	<b>9,943.06</b>	6,755.98	1,418.99	8,174.97	6,342.45	1,146.87	7,489.32

Plan assets of ₹ 890.00 crore towards the post retirement medical benefit trust has been invested after 31 March 2016.

No amount is included in the value of plan assets in respect of the reporting enterprise's own financial instruments for the year ended 31 March 2017 and 31 March 2016.

Actual return on plan assets is ₹ **819.90 crore** (31 March 2016: ₹ 693.45 crore).

## 41<sup>st</sup> Annual Report 2016-17



## F. Defined benefit obligations

### i. Actuarial assumptions

The following were the principal actuarial assumptions at the reporting date:

	31 March 2017	31 March 2016	1 April 2015
Discount rate	7.50%	8.00%	8.00%
Expected return on plan assets			
Gratuity	7.50%	8.00%	8.00%
Pension	7.50%	8.00%	7.50%
PRMF			
Annual increase in costs	6.00%	6.00%	6.00%
Salary escalation rate	6.00%	6.00%	6.00%

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.

	31 March 2017		31 March 2016	
	Increase	Decrease	Increase	Decrease
Discount rate (0.5% movement)	(167.12)	176.25	(130.80)	137.92
Annual increase in costs (0.5% movement)	86.49	(84.46)	67.04	(66.11)
Salary escalation rate (0.5% movement)	90.96	(84.38)	71.26	(66.06)

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 Group 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' bond 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 in 2017 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				
	Less than 1 year	Between 1-2 years	Between 2-5 years	Over 5 years	Total
<b>31 March 2017</b>					
Gratuity & pension	248.81	304.77	713.17	1,239.15	2,505.90
Post-retirement medical facility (PRMF)	36.23	40.89	151.37	930.91	1,159.40
Provident Fund	683.19	2,516.99	2,299.17	2,036.28	7,535.63
Other post-employment benefit plans	13.07	10.48	38.64	75.99	138.18
<b>Total</b>	<b>981.30</b>	<b>2,873.13</b>	<b>3,202.35</b>	<b>4,282.33</b>	<b>11,339.11</b>
<b>31 March 2016</b>					
Gratuity & Pension	154.99	148.43	456.44	1,063.67	1,823.53
Post-retirement medical facility (PRMF)	30.62	31.38	116.16	711.62	889.78
Provident Fund	530.71	2,184.85	2,021.13	2,096.20	6,832.89
Other post-employment benefit plans	12.70	12.73	34.06	67.00	126.49
<b>Total</b>	<b>729.02</b>	<b>2,377.39</b>	<b>2,627.79</b>	<b>3,938.49</b>	<b>9,672.69</b>
<b>1 April 2015</b>					
Gratuity & Pension	143.41	140.27	425.33	1,074.64	1,783.65
Post-retirement medical facility (PRMF)	26.12	25.66	94.98	580.73	727.49
Provident Fund	439.88	1,792.89	1,629.08	2,281.74	6,143.59
Other post-employment benefit plans	11.25	11.69	35.81	62.22	120.97
<b>Total</b>	<b>620.66</b>	<b>1,970.51</b>	<b>2,185.20</b>	<b>3,999.33</b>	<b>8,775.70</b>

Expected contributions to post-employment benefit plans for the year ending 31 March 2018 are ₹ 500.70 crore.

The weighted average duration of the defined benefit plan obligation at the end of the reporting period is 15.08 years (31 March 2016: 15.26 years, 1 April 2015: 15.37 years).

## 41<sup>st</sup> Annual Report 2016-17

### Consolidated Financial Statements



(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 Group 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. A provision of ₹ 260.32 crore (31 March 2016: ₹ 76.50 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.

B. Other employee benefits

Provision for long service award and family economic rehabilitation scheme amounting to ₹ 7.73 crore (31 March 2016: ₹ 5.05 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.

57. Disclosure as per Ind AS 24 'Related Party Disclosures'

a) List of Related parties:

i) Joint ventures:

1. Utility Powertech Ltd.
2. NTPC-GE Power Services Private Ltd. (Previously NTPC-Alstom Power Services Private Ltd.)
3. NTPC-SAIL Power Company Ltd. (Previously NTPC-SAIL Power Company Private Ltd.)
4. NTPC-Tamil Nadu Energy Company Ltd.
5. Ratnagiri Gas & Power Private Ltd.
6. Aravali Power Company Private Ltd.
7. NTPC BHEL Power Projects Private Ltd.
8. Meja Urja Nigam Private Ltd.
9. BF-NTPC Energy Systems Ltd.
10. Nabinagar Power Generating Company Private Ltd.
11. Transformers and Electricals Kerala Ltd.
12. National High Power Test Laboratory Private Ltd.
13. Energy Efficiency Services Ltd.
14. CIL NTPC Urja Private Ltd.
15. Anushakti Vidhyut Nigam Ltd.
16. Hindustan Urvarak & Rasayan Ltd.
17. Trincomalee Power Company Ltd.
18. Bangladesh-India Friendship Power Company Pvt.Ltd.

ii) Key Managerial Personnel (KMP):

Shri Gurdeep Singh	Chairman and Managing Director
Shri A.K.Jha	Director (Technical)
Shri S.C. Pandey	Director (Projects)
Shri K. Biswal	Director (Finance)
Shri K.K.Sharma	Director (Operations)
Shri Saptarishi Roy <sup>1</sup>	Director (Human Resources)
Shri A.K.Gupta <sup>2</sup>	Director (Commercial)
Shri U.P. Pani <sup>3</sup>	Director (Human Resources)
Dr. Pradeep Kumar	Non-executive Director

Shri Aniruddha Kumar	Non-executive Director
Dr. Gauri Trivedi	Non-executive Director
Shri Rajesh Jain	Non-executive Director
Shri Seethapathy Chander <sup>4</sup>	Non-executive Director
Shri Prashant Mehta <sup>5</sup>	Non-executive Director
Shri K.P.Gupta <sup>6</sup>	Company Secretary
Shri A.K.Rastogi <sup>7</sup>	Company Secretary

1. W.e.f. 1 November 2016, 2. W.e.f. 3 February 2017, 3. Upto 31 October 2016, 4. W.e.f. 22 June 2016, 5. Upto 29 July 2016, 6. W.e.f. 22 March 2017 and 7. Upto 28 February 2017

**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

**iv) Entities under the control of the same government:**

The parent is a Central Public Sector Undertaking (CPSU) controlled directly or indirectly by Central Government by holding majority of shares (refer Note 21). Pursuant to Paragraph 25 & 26 of Ind AS 24, entities over which the same government has control or joint control of, or significant influence, then the reporting entity and other entities shall be regarded as related parties. The Group has applied the exemption available for government related entities and have made limited disclosures in the financial statements. Such entities with which the Group has significant transactions include but not limited to Coal India Limited, Singareni Coalfields Ltd., GAIL (India) Ltd., BHEL Ltd., SAIL Ltd., Indian Oil Corporation Ltd., Bharat Petroleum Corporation Ltd.

**v) Others:**

1. NTPC Education and Research Society
2. NTPC Foundation

**b) Transactions with the related parties are as follows:**

₹ Crore

Particulars	Joint Venture Companies	
	2016-17	2015-16
i) Sales/purchase of goods and services during the year		
- Contracts for works/services for services received by the Company	1,143.50	1,204.95
- Contracts for works/services for services provided by the Company	52.68	36.45
- Purchase of goods	42.62	0.26
ii) Deputation of employees	72.09	70.64
iii) Dividend received	143.09	131.76
iv) Equity contributions made	1,201.63	714.61
v) Guarantees received	28.16	27.75

Note:- Refer Note no. 67 for commitments with Joint Venture Companies.



₹ Crore

Particulars	2016-17	2015-16
<b>Transactions with post employment benefit plans</b>		
- Contributions made during the year	827.76	628.12
<b>Compensation to Key management personnel</b>		
- Short term employee benefits	3.89	3.18
- Post employment benefits	0.49	0.47
- Other long term benefits	0.35	0.47
- Termination benefits	-	-
- Sitting fee	0.19	0.14
<b>Total Compensation to Key management personnel</b>	<b>4.92</b>	<b>4.26</b>

Transactions with the related parties under the control of the same government:

₹ Crore

Sl. No.	Name of the Company	Nature of transaction	2016-17	2015-16
1	Bharat Coking Coal Ltd.	Purchase of coal	755.04	485.19
2	Central Coalfields Ltd		2,787.86	2,355.76
3	Eastern Coalfields Ltd		7,975.60	6,933.63
4	Mahanadi Coalfields Ltd		3,780.12	2,856.86
5	Northern Coalfields Ltd.		8,134.83	7,611.72
6	South Eastern Coalfields Ltd		5,638.30	4,481.23
7	Western Coalfields Ltd.		273.39	77.47
8	Singareni Coalfields Ltd		4,404.41	3,351.76
9	Bharat Heavy Electricals Ltd.	Purchase of equipments & erection services	4,840.12	4,885.10
		Purchase of spares	588.82	577.18
		Maintenance services	1,075.29	739.84
10	GAIL (I) Ltd.	Supply of natural gas	1,173.64	1,310.07
11	Indian Oil Corporation Ltd.	Supply of oil products	472.14	521.33
12	Bharat Petroleum Corporation Ltd.	Supply of natural gas and oil products	120.39	151.90
13	Steel Authority of India Ltd.	Supply of steel and iron products	410.05	641.94
14	Rural Electrification Corporation Ltd.	Consultancy assignments	510.96	234.04
15	Other entities	Purchase of equipments & erection services	248.36	121.00
		Purchase of spares	15.26	13.03
		Maintenance services	753.65	627.10

₹ Crore

<b>Transactions with others listed at (a)(v) above</b>	<b>2016-17</b>	<b>2015-16</b>
Transactions during the year		
- Contracts for works/services for services received by the Company	2.94	5.67



c) Outstanding balances with related parties are as follows:

₹ Crore

Particulars	31 March 2017	31 March 2016	1 April 2015
<b>Amount recoverable towards loans</b>			
- From Key Management personnel	0.12	0.10	0.15
- From Others	0.60	0.60	0.60
<b>Amount recoverable - other than loans</b>			
- From Joint Ventures	54.58	73.36	63.46
- From post employment benefit plans	22.40	39.31	33.45
<b>Amount payable</b>			
- To Joint Ventures	308.30	250.96	184.68
- To post employment benefit plans	154.94	67.23	63.73

d) Individually significant transactions

₹ Crore

Particulars	Nature of relationship	Amount	
		2016-17	2015-16
<b>Contracts for works/services for services received by the Company</b>			
Utility Powertech Ltd.	Joint Venture	711.17	606.20
NTPC BHEL Power Projects Private Ltd.	Joint Venture	387.34	542.42
NTPC-GE Power Services Private Ltd. (Previously NTPC-Alstom Power Services Private Ltd.)	Joint Venture	42.21	55.10
<b>Contracts for works/services for services provided by the Company</b>			
Nabinagar Power Generating Company Private Ltd.	Joint Venture	27.99	12.78
<b>Dividend received</b>			
NTPC-SAIL Power Company Ltd. (Previously NTPC-SAIL Power Company Pvt.Ltd.)	Joint Venture	70.00	60.00
Aravali Power Company Private Ltd.	Joint Venture	66.60	63.48
Energy Efficiency Services Ltd.	Joint Venture	3.39	0.68
Utility Powertech Ltd.	Joint Venture	2.50	7.00
NTPC-GE Power Services Private Ltd. (Previously NTPC-Alstom Power Services Private Ltd.)	Joint Venture	0.60	0.60
<b>Equity contributions made</b>			
Nabinagar Power Generating Company Private Ltd.	Joint Venture	590.00	252.18
Meja Urja Nigam Private Ltd.	Joint Venture	325.00	300.09
Energy Efficiency Services Ltd.	Joint Venture	99.00	25.00
Aravali Power Company Private Ltd.	Joint Venture	66.50	53.16
Bangladesh-India Friendship Power Company Pvt.Ltd.	Joint Venture	64.52	38.25
NTPC-Tamil Nadu Energy Company Ltd.	Joint Venture	44.39	40.00
National High Power Test Laboratory Private Ltd.	Joint Venture	6.50	-
Hindustan Urvarak & Rasayan Ltd.	Joint Venture	5.03	-
BF-NTPC Energy Systems Ltd.	Joint Venture	0.69	-
Trincomalee Power Company Ltd.	Joint Venture	-	5.93
<b>Guarantees received</b>			
Utility Powertech Ltd.	Joint Venture	12.05	12.67
NTPC-GE Power Services Private Ltd. (Previously NTPC-Alstom Power Services Private Ltd.)	Joint Venture	16.11	15.09

## 41<sup>st</sup> Annual Report 2016-17

### Consolidated Financial Statements



**e) Terms and conditions of transactions with the related parties**

- (1) Transactions with the related parties are made on normal commercial terms and conditions and at market rates.
- (2) The Group is assigning jobs on contract basis, for sundry works in plants/stations/offices to M/s Utility Powertech Ltd (UPL), a 50:50 joint venture between the parent company and Reliance Infrastructure Ltd. UPL inter-alia undertakes jobs such as overhauling, repair, refurbishment of various mechanical and electrical equipments 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.
- (3) 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.
- (4) Consultancy services provided by the Group to Joint Ventures are generally on nomination basis at the terms, conditions and principles applicable for consultancy services provided to other parties.
- (5) Outstanding balances of Joint ventures at the year-end, are unsecured and interest free and settlement occurs through banking transaction. For the year ended 31 March 2017 and 31 March 2016, the Group has not recorded any impairment of receivables relating to amounts owed by related parties. This assessment is undertaken each financial year through examining the financial position of the related party and the market in which the related party operates.

**58. Disclosure as per Ind AS 33 'Earnings per Share'**

**Basic and diluted earnings per share (in ₹)**

	31 March 2017	31 March 2016
From operations including regulatory deferral account balances (a)	13.00	13.10
From regulatory deferral account balances (b)	0.32	0.01
From operations excluding regulatory deferral account balances (a)-(b)	12.68	13.09
Nominal value per share	10.00	10.00
<b>(a) Profit attributable to equity shareholders (used as numerator) (₹ crore)</b>		
From operations including regulatory deferral account balances (a)	10,719.64	10,801.15
From regulatory deferral account balances (b)	262.71	5.66
From operations excluding regulatory deferral account balances (a)-(b)	10,456.93	10,795.49
<b>(b) Weighted average number of equity shares (used as denominator) (in Nos.)</b>		
Opening balance of issued equity shares	8,245,464,400	8,245,464,400
Effect of shares issued during the year, if any	-	-
<b>Weighted average number of equity shares for Basic and Diluted EPS</b>	<b>8,245,464,400</b>	<b>8,245,464,400</b>

**59. 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 Group has accounted impairment losses as under:

- (a) Due to decrease in value in use in respect of plant and equipment of a Solar PV Station of the Group which is under 'Generation of energy Segment', an impairment loss of ₹ Nil (31 March 2016: ₹ 4.48 crore) was recognised in 'Depreciation/amortisation and impairment expense' in the Statement of Profit and Loss. Also Refer Note 2 (j) in this regard.

During the year ended 31 March 2017, an amount of ₹ 0.73 crore towards the impairment loss has been reversed due to increase in the value in use as compared to the carrying value of the Solar PV station.

The recoverable amount of PPE and Intangible assets of CGUs of the parent is value in use and amounts to ₹ 1,42,042.78 crore (31 March 2016: ₹ 1,40,717.96 crore). The discount rate used for the computation of value in use for the generating plant is 9.13% (31 March 2016: 8.98%) and for solar plant is 7.95% (31 March 2016: 7.83%).

#### 60. Disclosure as per Ind AS 37 'Provisions, Contingent Liabilities and Contingent Assets'

##### Movements in provisions:

₹ Crore

Particulars	Provision for obligations incidental to land acquisition		Provision for tariff adjustment		Others		Total	
	31 March 2017	31 March 2016	31 March 2017	31 March 2016	31 March 2017	31 March 2016	31 March 2017	31 March 2016
Carrying amount at the beginning of the year	3,868.52	3,228.37	1,234.41	1,243.64	580.84	505.04	5,683.77	4,977.05
Additions during the year	436.69	967.99	98.88	145.28	157.20	276.28	692.77	1,389.55
Amounts used during the year	(441.43)	(274.72)	-	-	(6.69)	(48.86)	(448.12)	(323.58)
Reversal / adjustments during the year	(30.54)	(53.12)	(162.50)	(154.51)	(2.70)	(151.62)	(195.74)	(359.25)
Carrying amount at the end of the year	3,833.24	3,868.52	1,170.79	1,234.41	728.65	580.84	5,732.68	5,683.77

##### i) Provision for obligations incidental to land acquisition (Note 33)

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 Group 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 (Note 33)

The Group aggrieved over many of the issues considered by the CERC in the tariff orders for its stations for the period 2004-09 had filed appeals with the Appellate Tribunal for Electricity (APTEL). The APTEL disposed off the appeals favourably directing the CERC to revise the tariff orders as per directions and methodology given. Some of the issues decided in favour of the Group by the APTEL were challenged by the CERC in the Hon'ble Supreme Court of India. Subsequently, the CERC has issued revised tariff orders for all the stations except one for the period 2004-09, considering the judgment of APTEL subject to disposal of appeals pending before the Hon'ble Supreme Court of India. Towards the above and other anticipated tariff adjustments, provision of ₹ 98.88 crore (31 March 2016: ₹ 145.28 crore, 1 April 2015: ₹ 148.10 crore) has been made during the year and in respect of some of the stations, an amount of ₹ 162.49 crore (31 March 2016: ₹ 154.51 crore, 1 April 2015: ₹ 180.16 crore) has been written back.

##### iii) Others (Note 33)

Provision for others comprise ₹ 68.24 crore (31 March 2016: ₹ 65.35 crore, 1 April 2015: ₹ 58.64 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 62 (b)], ₹ 658.57 crore (31 March 2016: ₹ 513.59 crore, 1 April 2015: ₹ 440.35 crore) towards provision for cases under litigation and ₹ 1.84 crore (31 March 2016: ₹ 1.91 crore, 1 April 2015: ₹ 6.05 crore) towards provision for shortage in PPE on physical verification pending investigation.

iv) In respect of provision for cases under litigation, outflow of economic benefits is dependent upon the final outcome of such cases.

v) In all these cases, outflow of economic benefits is expected within next one year.

## 41<sup>st</sup> Annual Report 2016-17

### Consolidated Financial Statements



vi) **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.

vii) **Contingent liabilities and contingent assets**

Disclosure with respect to claims against the Company not acknowledged as debts and contingent assets are made in Note 70.

**61. First-time Adoption of Ind AS**

These are the Group's first Financial Statements in accordance with Ind AS. For periods up to and including the year ended 31 March 2016, the Group prepared its financial statements in accordance with previous GAAP, including accounting standards notified under the Companies (Accounting Standards) Rules, 2006 (as amended). The effective date for Group's Ind AS Opening Balance Sheet is 1 April 2015 (the date of transition to Ind AS).

The accounting policies set out in Note 1 have been applied in preparing the financial statements for the year ended 31 March 2017, the comparative information presented in these financial statements for the year ended 31 March 2016 and in the preparation of an opening Ind AS Balance Sheet at 1 April 2015 (the Group's date of transition). According to Ind AS 101, the first Ind AS Financial Statements must use recognition and measurement principles that are based on standards and interpretations that are effective at 31 March 2017, the date of first-time preparation of Financial Statements according to Ind AS. These accounting principles and measurement principles must be applied retrospectively to the date of transition to Ind AS and for all periods presented within the first Ind AS Financial Statements.

Any resulting differences between carrying amounts of assets and liabilities according to Ind AS 101 as of 1 April 2015 compared with those presented in the previous GAAP Balance Sheet as of 31 March 2015, were recognized in equity under retained earnings within the Ind AS Balance Sheet.

An explanation of how the transition from previous GAAP to Ind AS has affected the group's financial position, financial performance and cash flows is set out in the following tables and notes.

**Optional exemptions availed and mandatory exceptions**

In the Ind AS Opening Balance Sheet as at 1 April 2015, the carrying amounts of assets and liabilities from the previous GAAP as at 31 March 2015 are generally recognized and measured according to Ind AS in effect as on 31 March 2017. For certain individual cases, however, Ind AS 101 provides for optional exemptions and mandatory exceptions to the general principles of retrospective application of Ind AS. The Group has made use of the following exemptions and exceptions in preparing its Ind AS Opening Balance Sheet:

i) **Property, plant and equipment & Intangible assets**

Ind AS 101 permits a first-time adopter to elect to continue with the carrying value for all of its property, plant and equipment and intangible assets as recognised in the financial statements as at the date of transition to Ind AS, measured as per the previous GAAP and use that as its deemed cost as at the date of transition after making necessary adjustments for de-commissioning liabilities.

Accordingly, the Group has elected to measure all of its property, plant and equipment and intangible assets at their previous GAAP carrying value.

ii) **Borrowings**

Ind AS 101 permits that if it is impracticable for an entity to apply retrospectively the effective interest method in Ind AS 109 'Financial Instruments', the fair value of the financial liability at the date of transition to Ind ASs shall be the new amortised cost of that financial liability at the date of transition to Ind ASs.

The borrowings outstanding as at the transition date, consists of loans drawn more than fifteen years back, some draws with multiple tranches in different financial years with varying interest rates. In some cases, the rate of interest on the loans was both fixed and floating in nature and drawl of the loans have been made in multiple installments with each drawl to be treated as a separate transaction for the purpose of computing the amortised cost. In case of some loans the drawl period stretches beyond 3-4 years and in case of loans with floating interest rate, the rates have been reset at frequent intervals and reset rates are also applicable for previous draws from that date onwards. Implementing the requirement of amortised cost retrospectively is impracticable and also the amount is expected to be immaterial and hence the Company has amortised the transaction costs as an adjustment of interest expense of the term of the related loan w.e.f. the transition date to Ind AS i.e. 1 April 2015.



### iii) Business combinations

Ind AS 101 provides the option to apply Ind AS 103 prospectively from the transition date or from a specific date prior to the transition date. This provides relief from full retrospective application that would require restatement of all business combinations prior to the transition date.

Accordingly, the Group has elected to apply Ind AS 103 prospectively to business combinations occurring after its transition date. Business combinations occurring prior to the transition date have not been restated.

### iv) Designation of previously recognised financial instruments

Ind AS 101 allows an entity to designate investments in equity instruments at FVTOCI on the basis of the facts and circumstances at the date of transition to Ind AS.

The Group has elected to apply this exemption for its investment in equity instruments in PTC (India) Limited.

### v) Arrangements containing a lease

Appendix C, Ind AS 17 requires an entity to assess whether an arrangement contains a lease at its inception. However, Ind AS 101 provides an option to make this assessment on the basis of facts and circumstances existing at the date of transition to Ind AS. The Group has elected to apply this exemption for such contracts/arrangements.

### vi) Long term foreign currency monetary items

The Group has elected to continue the policy adopted for accounting for exchange differences arising from translation of long-term foreign currency monetary items recognised in the financial statements for the period ending immediately before the beginning of the first Ind AS financial reporting period as per the previous GAAP.

### vii) Estimates

An entity's estimates in accordance with Ind AS at the date of transition to Ind AS shall be consistent with estimates made for the same date in accordance with previous GAAP (after adjustments to reflect any difference in accounting policies), unless there is objective evidence that those estimates were in error.

Ind AS estimates as at 1 April 2015 are consistent with the estimates as at the same date made in conformity with previous GAAP. The Group made estimates for following items in accordance with Ind AS at the date of transition as these were not required under previous GAAP:

- Investment in equity instruments carried at FVTPL or FVTOCI;
- Investment in debt instruments carried at FVTPL; and
- Impairment of financial assets based on expected credit loss model.

### viii) Classification and measurement of financial assets

The Group has also elected the option under Ind AS 101 by not applying the requirement of Ind AS 109 in case of employee loans which requires that these shall be recognized initially at fair value and subsequently at amortized cost. As per the exemption, if an entity finds impracticable to apply retrospectively effective interest method, the fair value of the financial asset at the date of transition to Ind ASs shall be the new amortized cost of that financial asset at the date of transition to Ind AS.

#### Reconciliation of equity as at 1 April 2015 and as at 31 March 2016

Particulars	Note	1 April 2015			31 March 2016		
		Previous GAAP*	Adjustments	Ind ASs	Previous GAAP*	Adjustments	Ind ASs
<b>ASSETS</b>							
<b>Non-current assets</b>							
Goodwill		0.62	(0.62)	-	-	-	-
Property, plant and equipment	a,b,c,d,e	91,579.48	(12,373.85)	79,205.63	1,04,211.88	(11,556.54)	92,655.34

₹ Crore



₹ Crore

Particulars	Note	1 April 2015			31 March 2016		
		Previous GAAP*	Adjustments	Ind ASs	Previous GAAP*	Adjustments	Ind ASs
Capital work in progress	a,b,c,d	67,524.31	(3,792.86)	63,731.45	81,331.66	(81,057.64)	274.02
Other Intangible assets		272.92	(10.64)	262.28	284.06	74,543.86	74,827.92
Intangible assets under development		30.38	-	30.38	218.03	(0.42)	217.61
Investment in joint ventures	f	-	5,289.16	5,289.16	-	6,015.04	6,015.04
Financial assets							
Investments	g	14.12	84.36	98.48	14.80	64.80	79.60
Trade Receivable		32.96	(32.96)	-	66.66	4.52	71.18
Loans	h	632.30	(166.41)	465.89	16,097.85	(15,657.78)	440.07
Other financial assets	c	466.28	515.20	981.48	511.00	511.19	1,022.19
Other non-current assets	h	17,185.74	(441.15)	16,744.59	3,066.21	15,017.84	18,084.05
<b>Current Assets</b>							
Inventories	a	7,972.46	(647.22)	7,325.24	7,959.16	(908.55)	7,050.61
Financial assets					-		
Investments		1,992.67	(9.33)	1,983.34	378.72	-	378.72
Trade receivables		9,249.92	(1,062.76)	8,187.16	10,173.98	(1,885.19)	8,288.79
Cash and cash equivalents		659.22	(183.77)	475.45	1,844.50	(305.06)	1,539.44
Other bank balances		14,016.70	(194.77)	13,821.93	3,611.56	(212.68)	3,398.88
Loans		491.89	(220.12)	271.77	541.71	(290.79)	250.92
Other financial assets	c	5,394.43	(2,460.37)	2,934.06	8,207.25	(2,954.08)	5,253.17
Other current assets	h	2,014.33	1,924.19	3,938.52	1,839.69	2,883.88	4,723.57
<b>Total Assets</b>		<b>2,19,530.73</b>	<b>(13,783.92)</b>	<b>2,05,746.81</b>	<b>2,40,358.72</b>	<b>(15,787.60)</b>	<b>2,24,571.12</b>
<b>EQUITY &amp; LIABILITIES</b>							
<b>Equity</b>							
Equity Share capital		8,245.46	-	8,245.46	8,245.46	-	8,245.46
Other equity	m	73,848.52	1,987.19	75,835.71	80,951.05	2,379.07	83,330.12
Non-controlling interests	o	887.94	(113.48)	774.46	892.79	(99.49)	793.30
<b>Liabilities</b>							

## 41<sup>st</sup> Annual Report 2016-17

Consolidated Financial Statements

₹ Crore

Particulars	Note	1 April 2015			31 March 2016		
		Previous GAAP*	Adjustments	Ind ASs	Previous GAAP*	Adjustments	Ind ASs
<b>Non-current liabilities</b>							
Financial liabilities							
Borrowings	b	93,362.92	(9,906.76)	83,456.16	1,02,238.28	(11,032.79)	91,205.49
Trade payables		9.22	(5.75)	3.47	9.94	(1.56)	8.38
Other financial liabilities	d	3,179.44	(782.48)	2,396.96	3,829.10	(695.29)	3,133.81
Provisions		1,143.37	(27.66)	1,115.71	469.42	(33.01)	436.41
Deferred tax liabilities (Net)		1,171.54	(174.93)	996.61	1,319.07	(165.99)	1,153.08
Other non-current liabilities		33.29	(33.28)	0.01	69.26	(19.58)	49.68
<b>Current liabilities</b>							
Financial liabilities							
Borrowings		640.15	(491.64)	148.51	2,141.39	(654.12)	1,487.27
Trade payables		7,107.63	(682.03)	6,425.60	6,826.55	(1,132.74)	5,693.81
Other financial liabilities	e	18,516.32	(1,329.95)	17,186.37	20,281.47	(1,788.80)	18,492.67
Other current liabilities		1,685.82	(735.04)	950.78	1,907.53	(1,122.62)	784.91
Provisions	j	7,972.40	(1,816.69)	6,155.71	8,732.69	(1,804.07)	6,928.62
Current Tax Liabilities (Net)		24.01	(13.59)	10.42	200.54	(46.31)	154.23
Deferred revenue	c,p	1,394.15	341.76	1,735.91	1,946.62	426.54	2,373.16
Rate regulated liabilities		308.55	0.41	308.96	297.56	3.16	300.72
<b>Total equity and liabilities</b>		<b>2,19,530.73</b>	<b>(13,783.92)</b>	<b>2,05,746.81</b>	<b>2,40,358.72</b>	<b>(15,787.60)</b>	<b>2,24,571.12</b>

\* The previous GAAP figures have been reclassified to conform to Ind AS presentation requirements for the purposes of this note.

**Reconciliation of total comprehensive income for the year ended 31 March 2016**

₹ Crore

Particulars	Note	Previous GAAP*	Adjustments	Ind ASs
<b>INCOME</b>				
Revenue	c,k	78,705.50	(5,279.06)	73,426.44
Other income	h	1,234.06	(176.50)	1,057.56

## 41<sup>st</sup> Annual Report 2016-17

Consolidated Financial Statements



₹ Crore

Particulars	Note	Previous GAAP*	Adjustments	Ind ASs
<b>Total Income</b>		79,939.56	(5,455.56)	74,484.00
<b>EXPENDITURE</b>				
Fuel cost		46,496.08	(2,383.22)	44,112.86
Electricity purchased		2,174.90	(51.07)	2,123.83
Employee benefits expense	h,l	3,836.43	(215.77)	3,620.66
Cost of material and services		1,005.87	(1,005.87)	
Changes in inventories of finished goods, work-in-progress		(41.47)	41.47	
Finance expenses	b,d	4,151.26	(837.61)	3,313.65
Depreciation and amortization	a,b,c,d,e	6,153.41	(929.39)	5,224.02
Other expenses	a,d,k	6,070.53	(450.07)	5,620.46
<b>Total Expenses</b>		69,847.01	(5,831.53)	64,015.48
<b>Profit before exceptional items, tax and Rate Regulated Activities (RRA)</b>		10,092.55	375.97	10,468.52
Add: Movements in regulatory deferral account balances		10.99	(2.75)	8.24
<b>Profit before share of net profits of investments accounted for using equity method and tax</b>		10,103.54	373.22	10,476.76
Add: Share of net profits of joint ventures accounted for using equity method		-	141.16	141.16
<b>Profit before exceptional items and tax</b>		10,103.54	514.38	10,617.92
Exceptional items - impairment loss on investment		-	-	-
<b>Profit before tax</b>		10,103.54	514.38	10,617.92
Current tax				
Current year	l	2,263.57	(131.96)	2,131.61
Earlier years		(2,453.03)	(0.45)	(2,453.48)
Tax expense/(saving) pertaining to RRA		2.57	0.01	2.58
Deferred tax		242.57	(32.36)	210.21
Less: Deferred asset for deferred tax liability/MAT credit recoverable		114.57	(60.84)	53.73
		(58.89)	(103.92)	(162.81)
<b>Profit after tax</b>		10,162.43	618.30	10,780.73
<b>Other comprehensive income</b>				
<b>Items that will not be reclassified to profit or loss (net of tax)</b>				
- Net actuarial gains/(losses) on defined benefit plans	l	-	(38.35)	(38.35)
- Net gains/(losses) on fair value of equity instruments through other comprehensive income	g	-	(20.28)	(20.28)
- Share of other comprehensive income of joint ventures accounted for using the equity method		-	0.07	0.07
<b>Items that will be reclassified to profit or loss (net of tax)</b>				
- Exchange differences on translation of foreign operations			3.26	3.26
<b>Other comprehensive income for the year, net of income tax</b>		-	(55.30)	(55.30)
<b>Total comprehensive income for the year</b>		<b>10,162.43</b>	<b>563.00</b>	<b>10,725.43</b>

\* The previous GAAP figures have been reclassified to conform to Ind AS presentation requirements for the purposes of this note.

## 41<sup>st</sup> Annual Report 2016-17

Consolidated Financial Statements

### Reconciliation of total equity as at 31 March 2016 and 1 April 2015

₹ Crore

Particulars	Note	31 March 2016	1 April 2015
Total equity (shareholder's funds) as per previous GAAP		89,196.51	82,093.98
<b>Adjustments:</b>			
Proposed dividend and tax	j	1,732.64	1,736.71
Capitalisation of major overhaul & spares	a	468.54	-
Recognition of financial assets/liabilities at amortised cost	d,h	400.97	463.04
Depreciation and amortization	a,b,c,d,e	99.29	(49.54)
Fair valuation of investments	g	64.80	85.08
Recognition of government grant as deferred revenue		(491.27)	(366.24)
Provision of rebate to customers		(38.09)	-
Impact of embedded leases	c	(1.89)	24.49
Recognition of liabilities on leasehold land		(35.34)	(35.34)
Impact on non-controlling interest	o	99.49	113.48
Impact of equity method accounting of joint ventures	f	79.93	15.51
<b>Total adjustments</b>		<b>2,379.07</b>	<b>1,987.19</b>
<b>Total equity as per Ind AS</b>		<b>91,575.58</b>	<b>84,081.17</b>

### Reconciliation of total comprehensive income for the year ended 31 March 2016

₹ Crore

	Note	31 March 2016
Profit after tax as per previous GAAP		10,162.43
<b>Adjustments:</b>		
Capitalisation of major overhaul & spares	a	468.54
Depreciation and amortization	a,b,c,d,e	148.83
Actuarial loss on defined benefit plans recognised in OCI (net of tax)	l	38.35
Recognition of financial assets/liabilities at amortised cost	d,h	(62.06)
Provision of rebate to customers		(38.09)
Impact of embedded leases	c	(26.38)
Impact of equity method accounting of joint ventures	f	89.11
<b>Total adjustments</b>		<b>618.30</b>
<b>Profit after tax as per Ind AS</b>		<b>10,780.73</b>
<b>Other comprehensive income (net of tax):</b>		
Actuarial loss on defined benefit plans	l	(38.28)
Fair valuation of investments	g	(20.28)
Exchange differences on translation of foreign operations		3.26
<b>Total comprehensive income as per Ind AS</b>		<b>10,725.43</b>

#### Notes to first-time adoption:

##### (a) Property, plant & equipment

On the transition date, the Group has capitalised certain items of spare parts which are meeting definition of property, plant & equipment as per Ind AS 16 as PPE. Under previous GAAP, these spare parts were recognised as Inventories. As a result, Group has recognised an amount of ₹ 155.94 crore from inventories

## 41<sup>st</sup> Annual Report 2016-17

### Consolidated Financial Statements





to PPE as at the transition date on which an amount of ₹ 49.55 crore has been charged as depreciation with corresponding adjustment in retained earnings. For the year ended 31 March 2016, an amount of ₹ 79.79 crore has been recognised from inventories to PPE. During the year ended 31 March 2016, value of inventory has increased by an amount of ₹ 53.57 crore with corresponding increase in profit due to reversal of repair and maintenance expenses.

In addition to above, Ind AS 16 requires significant component parts of an item of property, plant and equipment to be depreciated separately. As explained in Note 1.C.2, the cost of major inspections/overhauls is capitalised and depreciated separately over the period to the next major inspection/overhaul. For the year ended on 31 March 2016, an amount of ₹ 404.81 crore and ₹ 10.17 crore has been capitalised under PPE and CWIP respectively, resulting in corresponding increase in profit due to reversal of repair and maintenance expenses. Depreciation on this asset was charged in the statement of profit and loss of ₹ 106.04 crore.

#### (b) Borrowings

Under previous GAAP, the Group has followed the policy of charging the transaction costs to the income statement or capitalized to property, plant and equipment as and when incurred. Under Ind AS, transaction costs are amortized as an adjustment of interest expense over the term of the related loan using effective interest rate method. The Group has raised foreign currency bonds/Notes, secured and unsecured loans from banks and financial institutions and other foreign currency term loans on which it has incurred transaction costs. The above resulted in reduction in borrowings as at 31 March 2016 by ₹ 29.33 crore with corresponding reduction in profit or loss and CWIP by ₹ 1.36 crore and ₹ 27.97 crores respectively.

#### (c) Application of Appendix C, Ind AS 17

The Group has entered into power purchase agreements (PPAs or arrangements) with beneficiaries for generation and supply of electricity. Under the arrangements, beneficiaries pay fixed capacity charges primarily for recovery of capital cost, return on investment, fixed operations and maintenance expense and interest on working capital and variable energy charge primarily for recovery of fuel cost.

Under Ind AS, the amounts receivable under these arrangements have the substance of a lease under the provisions of Appendix C to Ind AS 17 as these arrangements are dependent on use of specific assets and convey the right to use those assets. The evaluation of the arrangements is based on the facts and circumstances existing at the date of transition of the lease. Based on these evaluations, the Group has identified that the arrangements entered into with its customer for one of the stations (Stage-I) and two stations are to be treated as leases, and analyzed with reference to Ind AS 17 for classification as either finance or operating leases. Accordingly, the arrangement in case of one of the Stage of a station is classified as finance lease and of two stations as operating lease.

Under previous GAAP, the respective power plants were capitalized as fixed assets and the amounts receivable from the beneficiaries were recognized as revenue from sale of electricity.

Under Ind AS, one stage of a station is treated as assets given on finance lease and the amounts receivable from beneficiary has been segregated into finance income, repayment of principal and service income and accounted for accordingly.

On transition date the carrying value of property, plant and equipment has been reduced by ₹ 539.92 crore with corresponding increase in other non-current financial assets (finance lease receivable) by ₹ 515.20 crore & other current financial assets by ₹ 24.72 crore. Further, an amount of ₹ 24.48 crore has been transferred from deferred revenue to retained earnings. During the year ended 31 March 2016, property, plant and equipment has been reduced by ₹ 27.03 crore with corresponding increase in other current & non current financial assets (Finance lease receivable). Further, revenue from sale of energy was reduced by ₹ 110.38 crore with corresponding recognition of interest income on assets on finance lease under 'Other operating income' by ₹ 84.25 crore and reduction in value of finance lease receivable by ₹ 26.13 crore.

For stations treated as assets given on operating lease, the amount receivable from beneficiary has been segregated into lease income and service income and lease income is to be recognized in income on a straight line basis over the lease term.

During the year ending 31 March 2016, this adjustment has resulted in a decrease in revenue from sale of electricity by ₹ 223.25 crore and corresponding recognition of Lease rentals on assets on operating lease under 'Other operating revenue'.



**(d) Financial liabilities**

Under previous GAAP, liabilities such as payable for capital expenditure, retention money etc. are recorded at cost.

However, under Ind AS, liabilities in which the Group has a contractual obligation to deliver cash are classified as financial liabilities and recorded at amortized cost. Therefore, such financial liabilities have been discounted to present value since they do not carry any interest. The upfront benefit on transition date due to the discounting has been adjusted against the retained earnings. Further, interest cost on unwinding of discount has been capitalized to the cost of property, plant and equipment where such interest cost can be capitalized in accordance with Ind AS 23 'Borrowing cost' otherwise charged off to statement of profit or loss.

The effect of the adjustments resulted in reduction of the value of other non current financial liabilities by ₹ 463.04 crore along with corresponding increase in retained earnings as on the transition date. During the year ended 31 March 2016, value of financial liabilities was increased by ₹ 53.85 crore by corresponding increase/(reduction) in statement of profit and loss, property plant and equipment and CWIP by ₹ 72.80 crore, (-) ₹ 27.50 crore and ₹ 8.55 crore respectively.

**(e) Land under finance lease**

Under previous GAAP, leasehold land was capitalized at an amount equal to the upfront payments made at the time of lease. However, under Ind AS, such leases are capitalised at the present value of the total minimum lease payments to be paid over the lease term. Accordingly, future lease rentals have now been recognised as 'finance lease obligation' at their present values. The effect of the adjustment has resulted in reduction in retained earnings by ₹35.32 crore with corresponding increase in non current financial liabilities by ₹ 32.18 crore and current financial liabilities by ₹ 3.14 crore towards finance lease obligation as at 1 April 2015. During financial year 2015-16 there was increase in PPE by ₹ 13.16 crore, reduction in CWIP by ₹ 1.19 crore and increase in non current financial liabilities by ₹ 7.68 crore and current financial liabilities by ₹ 4.29 crore towards finance lease obligations. There was insignificant impact on profits.

**(f) Joint Ventures**

Under the previous GAAP, the investments in joint ventures were classified as 'jointly controlled entites' and accordingly, accounted for using proportionate consolidation method. On transition to Ind AS, such investments have been classified as joint ventures and consolidated using equity method as per Ind AS 28, 'Investments in Associates and Joint Ventures'.

The proportionately consolidated amounts of assets and liabilities of joint ventures under the previous GAAP were as below:

Particulars	₹ Crore	
	31 March 2016	1 April 2015
Property, plant and equipment	11,700.52	11,918.55
Capital Work in progress	6,517.90	3,814.63
Loan & Advances	613.15	947.23
Inventories	725.95	491.27
Trade receivables	1,619.88	1,014.78
Cash and cash equivalents	510.58	371.22
Others	371.56	482.01
Trade payables	595.08	558.45
Borrowings	11,700.59	10,430.57
Other liabilities	3,731.99	2,790.64
<b>Total net assets</b>	<b>6,031.88</b>	<b>5,260.03</b>



The proportionately consolidated amounts of income and expenses under the previous GAAP were as below:

₹ Crore	
Particulars	31 March 2016
Revenue from operations	5,534.55
Other Income	152.42
Fuel	2,388.56
Cost of materials consumed	964.41
Employee benefit expenses	188.11
Other expenses	1,978.65
Tax Expenses	115.22
<b>Net profit after tax</b>	<b>52.02</b>

Analysis of changes in cash and cash equivalents for the purpose of consolidated statement of cash flows under Ind AS is as under:

₹ Crore		
Particulars	31 March 2016	1 April 2015
Cash and cash equivalent as per previous GAAP	5,736.95	14,487.54
Joint venture – Equity accounting	(510.58)	(367.94)
Reclassification of Other bank balances and investment in mutual funds	(4,862.54)	(12,580.16)
<b>Cash and cash equivalents for the purpose of statement of cash flows under Ind AS</b>	<b>363.83</b>	<b>1,539.44</b>

**(g) Fair valuation of Investments**

Under previous GAAP, the Group accounted for long term investments in unquoted and quoted equity shares as investment measured at cost less provision for other than temporary diminution in the value of investments. Under Ind-AS, the Group has designated quoted investments as FVTOCI investments. Ind-AS requires FVTOCI investments to be measured at fair value. The resulting fair value changes in these investments have been recognised in a separate component of equity (FVTOCI reserve) as at the date of transition and subsequently in other comprehensive income. This has resulted in increase in retained earnings by ₹ 85.08 crore with corresponding increase in value of financial assets-Investments as at the date of transition. As at 31 March 2016, other comprehensive income has decreased by ₹ 20.28 crore with corresponding decrease in financial assets-Investments."

**(h) Financial assets**

Under previous GAAP, employee loans and other long term advances to be settled in cash or another financial asset are recorded at cost.

However, under Ind AS, certain assets covered under Ind AS 32 meet the definition of financial assets which include employee loans and long term advances to be settled in cash or another financial asset are classified as financial assets at amortized cost. Thus in case interest rate on such financial assets is lower than market rate, these financial assets have been discounted to present value.

The effect of the adjustments resulted in reduction in the value of financial assets - loans by ₹ 177.63 crore and increase in value of other non-current assets by ₹ 160.45 crore & other current assets by ₹ 17.18 crore (towards deferred payroll expenses) on transition date. During the year ended 31 March 2016, the value of financial assets - loans reduced by ₹ 0.90 crore with corresponding increase in other non-current and current assets by ₹ 0.92 crore and credited the statement of Profit and Loss by ₹ 0.02 crore.

**(i) Deferred taxes**

Previous GAAP requires deferred tax accounting using the income statement approach, which focuses on differences between taxable profits and accounting profits for the period. Ind-AS 12 : Income Taxes requires entities to account

for deferred taxes using the balance sheet approach, which focuses on temporary differences between the carrying amount of an asset or liability in the balance sheet and its tax base. The application of Ind-AS 12 approach has resulted in insignificant amount of deferred tax on new temporary differences and accordingly not recognised.

**(j) Proposed Dividend**

Under previous GAAP, the Group had accounted for proposed dividends relating to year ended 31 March 2015 in that year, though the approval of that dividend took place after the reporting date. Under Ind AS, proposed dividends do not meet the definition of liability until they have been approved by shareholders at the Annual General Meeting. Therefore, the Group has not recognized a liability for dividend that has been proposed but will not be approved until after the reporting date.

The effect of the adjustment is to increase the retained earnings by ₹ 1,736.71 crores with corresponding decrease in provisions as at 1 April 2015 and ₹ 1,732.64 crore as at 31 March 2016.

**(k) Electricity duty**

Under previous GAAP, sale of electricity was presented as net of electricity duty. Electricity duty was separately presented on the face of statement of profit and loss. However, under Ind AS, sale of electricity is presented inclusive of electricity duty. Thus sale of electricity under Ind AS has increased by ₹ 729.20 crore with a corresponding increase in other expenses due to this change.

**(l) Employee benefits**

Both under previous GAAP and Ind-AS, the Group recognised costs related to its post-employment defined benefit plan on an actuarial basis. Under previous GAAP, the entire cost, including actuarial gains and losses, are charged to profit or loss. Under Ind-AS, remeasurements [comprising of actuarial gains and losses, the effect of the asset ceiling, excluding amounts included in net interest on the net defined benefit liability and the return on plan assets excluding amounts included in net interest on the net defined benefit liability] are recognised in Other Comprehensive Income.

As a result, profit for the year ended 31 March 2016 increased by ₹ 38.35 crore (net of tax) with corresponding decrease in Other comprehensive income during the year.

**(m) Other equity**

Retained earnings as at 1 April 2015 has been adjusted consequent to the above Ind AS transition adjustments. Refer 'Reconciliation of total equity as at 31 March 2016 and 1 April 2015' as given above for details.

**(n) Other comprehensive income**

Under previous GAAP, the Group has not presented other comprehensive income (OCI) separately. Items that have been reclassified from statement of profit and loss to other comprehensive income includes remeasurement of defined benefit plans and fair value gain/loss on FVTOCI equity instruments. Hence, previous GAAP profit or loss is reconciled to total comprehensive income as per Ind AS.

**(o) Non-controlling interests**

Under previous GAAP, Group had recognised minority interest on the reserves and surplus including capital reserve in a subsidiary company. Under Ind AS, the capital reserve has been reclassified to deferred revenue. Also, amount of retained earnings of subsidiary companies has changed as result of Ind AS adjustments.

This has resulted in decrease in non-controlling interest by an amount of ₹ 113.48 crores as on the transition date and by ₹ 99.49 crore as on 31 March 2016.

**(p) Deferred Revenue**

On transition date an amount of ₹ 24.48 crore has been transferred from deferred revenue to retained earnings and ₹366.24 crore has been transferred from capital reserve to deferred revenue towards Government grant received. Further, during the year ending 31 March 2016 an amount of ₹125.03 crore has been transferred from capital reserve to deferred revenue towards Government grants received and ₹ 0.13 crore transferred from deferred revenue to retained earnings.



(q) Impact of Ind AS adoption on the Statement of Cash Flows for the year ended 31 March 2016:

₹ Crore			
Particulars	Previous GAAP	Adjustments	Ind AS
Net cash flow from operating activities	15,410.61	8,714.26	24,124.87
Net cash flow from investing activities	(20,640.65)	1,479.03	(19,161.62)
Net cash flow from financing activities	(3,520.63)	(378.71)	(3,899.34)
<b>Net increase/ (decrease) in cash and cash equivalents during the year</b>	<b>(8,750.67)</b>	<b>9,814.58</b>	<b>1,063.91</b>
Cash and cash equivalents at the beginning of the year	14,487.54	(14,012.09)	475.45
Effect of exchange rate changes on cash and cash equivalent held in foreign currency	0.08	-	0.08
<b>Cash and cash equivalent at the end of the year</b>	<b>5,736.95</b>	<b>(4,197.51)</b>	<b>1,539.44</b>

Cash flow from operating activities under Ind AS has increased mainly due to reclassification of other bank balances from cash and cash equivalents to working capital changes and reclassification of cash flow from investing activities as a result of recognition of certain property, plant & equipment as finance lease receivables, capitalisation of overhauling cost and capital spares as property, plant & equipment and reclassification of certain capital advances to other advances. Further, cash flow from financing activities decreased mainly due to reclassification of grants received to deferred revenue. In addition, cash flow from respective activities and cash and cash equivalents have decreased as a result of change of proportionate consolidation accounting of investments in joint ventures to equity accounting.

62. Disclosure as per Ind AS 106, 'Exploration for and Evaluation of Mineral Resources'

- a) The Group along-with some public sector undertakings has 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 KG-OSN-2009/1 & AN-DWN-2009/13, the Group along-with the consortium partners has decided to relinquish both the blocks and Oil and Natural Gas Commission (ONGC), the operator has submitted an application to Directorate General of Hydrocarbons (DGH) in this regard.

Based on the un-audited statement of the accounts for the above blocks forwarded by ONGC, the operator, the Group's share in the assets and liabilities as at 31 March 2017 and income and expenses for the year is as under:

₹ Crore			
Particulars	31 March 2017 (Unaudited)	31 March 2016 (Unaudited)	1 April 2015 (Unaudited)
Assets	0.02	0.03	0.62
Liabilities	1.35	3.15	2.41
Capital commitments [Unfinished Minimum Work Programme (MWP)]	0.29	30.69	92.54

₹ Crore		
Particulars	31 March 2017 (Unaudited)	31 March 2016 (Unaudited)
Expenses	14.81	7.05

For the year 31 March 2017 and 31 March 2016, there are no income and operating/investing cash flow from exploration activities.



The exploration activities in block KG-OSN-2009/4 were suspended w.e.f. 11 January 2012 due to non-clearance by the Ministry of Defence, GOI. Subsequently, DGH vide letter dated 29 April 2013 has informed ONGC that the block is cleared conditionally wherein block area is segregated between No Go zone, High-risk zone and Permitted zone. As the permitted area is only 38% of the total block area the consortium has submitted proposal to DGH for downward revision of MWP of initial exploration period. DGH has agreed for drilling of one well and have instructed to carry out airborne Full Tensor Gravity Gradiometer (FTG) survey in conditionally and partial cleared area in lieu of MoD proportionate reduced 317 Sq KM 3D survey, 589 LKM of 2D survey and drilling of two wells.

ONGC has completed drilling of one well. Airborne Full Tensor Gravity Gradiometer (FTG) survey work is under progress.

- b) Exploration activities in the block AA-ONN-2003/2 were abandoned in January 2011 due to unforeseen geological conditions & 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 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 ₹ 68.24 crore from ₹ 65.35 crore along-with interest. The Group has sought waiver of the claim citing force majeure conditions at site leading to discontinuation of exploratory activities.

The Group has accounted for expenditure of ₹ **0.07 crore** (previous year ₹ 0.06 crore) towards the establishment expenses of M/s Geopetrol International, the operator to complete the winding up activities of the Block. The Group's share in the assets and liabilities as at 31 March 2017 and income and expenses for the year is as under:

₹ Crore			
Particulars	31 March 2017 (Unaudited)	31 March 2016 (Unaudited)	1 April 2015 (Unaudited)
Assets	9.19	9.19	9.19
Liabilities	70.19	67.73	59.25

₹ Crore		
Particulars	31 March 2017 (Unaudited)	31 March 2016 (Unaudited)
Expenses	0.07	0.06

For the year 31 March 2017 and 31 March 2016, there are no income and operating/investing cash flow from exploration activities.

- c) The Group has 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.

Minimum Work Program (MWP) for the block has been completed. No oil or gas of commercial value was observed in any of the wells. Accordingly, proposal for relinquishment of the block has been submitted to GOI.

Based on the audited statement of the account for the above block, Group's assets and liabilities as at 31 March 2017 and expenditure for the year are given below:

₹ Crore			
Particulars	31 March 2017	31 March 2016	1 April 2015
Assets	6.16	83.92	40.40
Liabilities	9.70	19.65	23.43
Capital commitments (Unfinished MWP)	-	35.94	140.27

₹ Crore		
Particulars	31 March 2017	31 March 2016
Expenses	99.53	30.02
Operating cash flows from exploration activities	28.97	74.02

## 41<sup>st</sup> Annual Report 2016-17

### Consolidated Financial Statements



Expenses charged off during the year ended 31 March 2017 includes opening capital work-in-progress of ₹74.40 crore as at 1 April 2016.

For the year 31 March 2017 and 31 March 2016, there are no income and investing cash flow from exploration activities.

### 63. 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.

**Other operations:** 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		Total	
	31 March 2017	31 March 2016	31 March 2017	31 March 2016	31 March 2017	31 March 2016
<b>Segment revenue</b>						
Sale of energy/consultancy, project management and supervision fee *	77,968.75	70,560.39	3,313.87	2,324.15	81,282.62	72,884.54
Other income	1,579.17	904.37	39.60	24.76	1,618.77	929.13
	79,547.92	71,464.76	3,353.47	2,348.91	82,901.39	73,813.67
Unallocated corporate interest and other income					146.25	670.33
<b>Total</b>	<b>79,547.92</b>	<b>71,464.76</b>	<b>3,353.47</b>	<b>2,348.91</b>	<b>83,047.64</b>	<b>74,484.00</b>
<b>Segment result**</b>	<b>17,805.74</b>	<b>14,154.64</b>	<b>60.06</b>	<b>64.33</b>	<b>17,865.80</b>	<b>14,218.97</b>
Unallocated corporate interest and other income					146.25	670.33
Unallocated corporate expenses, interest and finance charges					4,876.21	4,412.54
<b>Profit before share of net profits of investments accounted for using equity method and tax</b>					<b>13,135.84</b>	<b>10,476.76</b>
Add: Share of net profits of joint ventures accounted for using equity method					624.71	141.16
<b>Profit before tax</b>					<b>13,760.55</b>	<b>10,617.92</b>
Income tax (net)					3,046.61	(162.81)
<b>Profit after tax</b>					<b>10,713.94</b>	<b>10,780.73</b>

₹ Crore

Particulars	Generation of energy		Others		Total	
	31 March 2017	31 March 2016	31 March 2017	31 March 2016	31 March 2017	31 March 2016
Depreciation/amortisation/impairment***	5,957.37	5,159.61	0.36	0.45	5,957.73	5,160.06
Non-cash expenses other than depreciation	136.40	176.29	3.04	6.71	139.44	183.00
Capital expenditure	28,564.40	29,115.80	1,220.93	1,166.60	29,785.33	30,282.40

₹ Crore

Particulars	Generation of energy			Others			Total		
	31 March 2017	31 March 2016	1 April 2015	31 March 2017	31 March 2016	1 April 2015	31 March 2017	31 March 2016	1 April 2015
Segment assets	1,32,682.79	1,20,150.07	1,04,281.80	5,001.20	3,833.40	3,341.14	1,37,683.99	1,23,983.47	1,07,622.94
Unallocated corporate and other assets							1,10,813.37	1,00,587.65	98,123.87
Total assets	1,32,682.79	1,20,150.07	1,04,281.80	5,001.20	3,833.40	3,341.14	2,48,497.36	2,24,571.12	2,05,746.81
Segment liabilities	16,460.69	15,707.41	15,124.12	3,327.83	2,629.63	2,272.52	19,788.52	18,337.04	17,396.64
Unallocated corporate and other liabilities							1,30,870.82	1,14,658.50	1,04,269.00
Total liabilities	16,460.69	15,707.41	15,124.12	3,327.83	2,629.63	2,272.52	1,50,659.34	1,32,995.54	1,21,665.64

\* Includes ₹ 995.59 crore (31 March 2016: (-) ₹ 1,642.91 crore) for sales related to earlier years.

\*\* Generation segment result would have been ₹ 16,810.15 crore (31 March 2016: ₹ 15,797.55 crore) without including the sales related to earlier years.

\*\*\* Includes (-) ₹ 0.73 crore (31 March 2016: ₹ 4.48 crore) towards impairment loss/(reversal) recognised in the profit or loss, in generation of energy segment.

The Group has not disclosed geographical segments as operations of the Group are mainly carried out within the country.

#### C. Information about major customers

Revenue from two major customers under 'generation of energy' segment is ₹ 8,556.66 crore (31 March 2016: ₹ 8,631.32 crore) and ₹ 8,214.91 crore (31 March 2016: ₹ 6,632.01 crore) which is more than 10% of the Group's total revenues.

#### 64. 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 borrowings, trade & 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.

## 41<sup>st</sup> Annual Report 2016-17

### Consolidated Financial Statements



Risk	Exposure arising from	Measurement	Management
Credit Risk	Trade receivables, 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 & interest rate swaps and principal only swaps
Market risk – interest rate risk	Long-term borrowings at variable rates	Sensitivity analysis	Different kinds of loan arrangements with varied terms (eg. fixed, floating, rupee, foreign currency, 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 Group'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, loans & advances, cash & cash equivalents and deposits with banks and financial institutions.

#### Trade receivables

The Group primarily sells electricity to bulk customers comprising mainly state utilities owned by State Governments. The Group has a robust payment security mechanism in the form of Letters of Credit (LC) backed by the Tri-Partite Agreement (TPA). The TPA 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 was valid till October 2016. Govt of India has approved the extension of these TPAs for another period of 10 years. Most of the States have signed these 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 sixty days from the date of bill and levy of surcharge @ 18% p.a. on delayed payment beyond sixty days.

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 Group 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.

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.

#### 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 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 Group. Loan to APIIC is secured by 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 ₹ 363.83 crore (31 March 2016: ₹ 1,539.44 crore, 1 April, 2015: ₹ 475.45 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 ₹ 2,937.63 crore (31 March 2016: ₹ 3,398.88 crore, 1 April 2015: ₹ 13,821.93 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:

Particulars	₹ Crore		
	31 March 2017	31 March 2016	1 April 2015
<b>Financial assets for which loss allowance is measured using 12 months Expected Credit Losses (ECL)</b>			
Non-current investments	113.48	79.60	98.48
Non-current loans	401.34	440.07	465.89
Other non-current financial assets	1,164.26	1,022.19	981.48
Current investments	-	378.72	1,983.34
Cash and cash equivalents	363.83	1,539.44	475.45
Bank balances other than cash and cash equivalents	2,937.63	3,398.88	13,821.93
Current loans	211.92	250.92	271.77
Other current financial assets	6,128.92	5,253.17	2,934.06
	11,321.38	12,362.99	21,032.40
<b>Financial assets for which loss allowance is measured using Life time Expected Credit Losses (ECL)</b>			
Trade receivables	8,999.48	8,359.97	8,187.16

#### (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.

## 41<sup>st</sup> Annual Report 2016-17

### Consolidated Financial Statements





(b) Financial assets for which loss allowance is measured using life time expected credit losses

The Group's major customers are 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.

(iii) Ageing analysis of trade receivables

The ageing analysis of the trade receivables is as below:

₹ Crore							
Ageing	Not due	0-30 days past due	31-60 days past due	61-90 days past due	91-120 days past due	More than 120 days past due	Total
Gross carrying amount as 31 March 2017	6,591.27	738.82	477.87	432.79	311.97	446.76	8,999.48
Gross carrying amount as 31 March 2016	6,459.27	966.93	388.21	149.86	223.85	171.85	8,359.97
Gross carrying amount as April 2015	17,046.61	407.49	340.17	160.50	6.81	225.58	8,187.16

(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	Trade receivables	Advances	Claims recoverable	Total
Balance as at 1 April 2015	0.22	0.04	0.62	0.88
Impairment loss recognised	-	-	-	-
Amounts written off	-	-	0.08	0.08
Balance as at 31 March 2016	0.22	0.04	0.54	0.80
Impairment loss recognised	-	-	-	-
Amounts written off	-	-	0.42	0.42
Balance as at 31 March, 2017	0.22	0.04	0.12	0.38

Based on historic default rates, the Company believes that no impairment allowance is necessary in respect of any other assets as the amounts are insignificant.

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 fuel cost, 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 2017	31 March 2016	1 April 2015
<b>Fixed-rate borrowings</b>			
Bank overdraft	-	1,000.00	-
Term loans	813.70	-	-
Foreign currency loans	297.74	918.85	1,404.42
<b>Floating-rate borrowings</b>			
Bank overdraft	2,000.00	875.00	200.00
Term loans	10,746.24	18,496.67	23,416.95
Foreign currency loans	88.84	338.92	456.58
<b>Total</b>	<b>13,946.52</b>	<b>21,629.44</b>	<b>25,477.95</b>

(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 2017						
₹ 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
<b>Non-derivative financial liabilities</b>						
Secured bonds	496.03	958.60	2,209.00	4,518.50	26,334.83	34,516.96
Rupee term loans from banks	337.46	1,919.57	2,009.89	7,135.72	18,695.80	30,098.44
Rupee term loans from others	541.50	1,025.87	1,325.86	4,174.11	8,073.25	15,140.59
Finance lease obligations	5.02	20.57	25.59	80.07	430.21	561.46
Foreign currency notes	49.93	163.92	-	5,286.50	13,384.50	18,884.85
Unsecured foreign currency loans from banks and financial institutions	656.17	1,581.40	1,154.21	5,279.17	2,586.08	11,257.03
Commercial paper and cash credit	3,000.56	-	-	-	-	3,000.56
Unsecured foreign currency loans (guaranteed by GOI)	-	173.78	171.32	517.75	1,236.32	2,099.17
Trade and other payables	16,333.13	2,340.22	1,961.03	664.44	4.06	21,302.88
<b>Derivative financial liabilities</b>						
Full currency swaps	-	16.62	15.36	14.10	-	46.08



31 March 2016

₹ 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
<b>Non-derivative financial liabilities</b>						
Secured bonds	357.40	758.04	650.00	5,533.00	18,661.83	25,960.27
Rupee term loans from banks	385.23	2,426.61	2,675.78	7,016.85	15,996.73	28,501.20
Rupee term loans from others	530.93	1,125.80	1,438.41	3,945.16	8,817.62	15,857.92
Finance lease obligations	5.37	20.66	26.03	76.10	407.76	535.92
Foreign currency notes	50.81	54.07	-	-	13,380.00	13,484.88
Unsecured foreign currency loans from banks and financial institutions	652.43	1,196.30	2,143.47	5,311.59	3,364.30	12,668.09
Cash credit	1,299.50	-	-	-	-	1,299.50
Unsecured foreign currency loans (guaranteed by GOI)	-	176.80	172.61	524.21	1,429.96	2,303.58
Trade and other payables	16,053.35	1,047.33	2,099.62	1,437.27	5.02	20,642.59
<b>Derivative financial liabilities</b>						
Full currency swaps	-	17.74	17.74	31.65	-	67.13

1 APRIL 2015

₹ 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
<b>Non-derivative financial liabilities</b>						
Secured bonds	362.30	684.87	628.00	4,641.00	17,748.83	24,065.00
Rupee term loans from banks	328.56	2,402.27	2,523.89	7,280.87	11,031.08	23,566.67
Rupee term loans from others	558.70	1,165.32	1,586.09	4,161.15	11,065.63	18,536.89
Finance lease obligations	3.87	15.04	18.91	77.34	338.73	453.89
Foreign currency notes	48.00	1,942.68	-	-	9,478.50	11,469.18
Unsecured foreign currency loans from banks and financial institutions	134.65	584.84	1,666.58	5,525.19	3,931.49	11,842.75
Unsecured foreign currency loans (guaranteed by GOI)	-	156.26	152.36	460.45	1,416.81	2,185.88
Trade and other payables	15,107.12	683.75	288.85	2,550.30	10.56	18,640.58
<b>Derivative financial liabilities</b>						
Full currency swaps	-	15.96	15.96	44.52	-	76.44

#### 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 March 31, 2017, March 31, 2016 and April 1, 2015 are as below:

31 March 2017

₹ Crore

Particulars	USD	EURO	JPY	Others	Total
<b>Financial assets</b>					
Trade and other receivables	0.18	-	-	0.32	0.50
Cash and cash equivalents	1.45	-	-	0.44	1.89
Other financial assets	4.49	1.81	0.10	0.62	7.02
	<b>6.12</b>	<b>1.81</b>	<b>0.10</b>	<b>1.38</b>	<b>9.41</b>
<b>Financial liabilities</b>					
Foreign currency bonds	13,146.00	3,525.00	-	2,000.00 *	18,671.00
Unsecured foreign currency loans from banks and financial institutions	9,040.97	1,804.17	2,491.01	-	13,336.15
Trade payables and other financial liabilities	2,164.49	934.83	69.49	10.02	3,178.83
	<b>24,351.46</b>	<b>6,264.00</b>	<b>2,560.50</b>	<b>2,010.02</b>	<b>35,185.98</b>

₹ 2000.00 crore - ₹ denominated USD settled Green Masala Bonds

31 March 2016

₹ Crore

Particulars	USD	EURO	JPY	Others	Total
<b>Financial assets</b>					
Trade and other receivables	1.75	-	-	0.83	2.58
Cash and cash equivalents	1.55	-	-	0.01	1.56
Other financial assets	-	-	-	0.05	0.05
	<b>3.30</b>	<b>-</b>	<b>-</b>	<b>0.89</b>	<b>4.19</b>
<b>Financial liabilities</b>					
Foreign currency bonds	13,380.00	-	-	-	13,380.00
Unsecured foreign currency loans from banks and financial institutions	10,417.96	1,813.46	2,743.18	-	14,974.60
Trade payables and other financial liabilities	1,848.89	1,811.17	31.50	16.50	3,708.06
	<b>25,646.85</b>	<b>3,624.63</b>	<b>2,774.68</b>	<b>16.50</b>	<b>32,062.66</b>

1 April 2015

₹ Crore

Particulars	USD	EURO	JPY	Others	Total
<b>Financial assets</b>					
Trade and other receivables	1.70	-	-	0.73	2.43
Cash and cash equivalents	1.41	-	-	0.03	1.44
	<b>3.11</b>	<b>-</b>	<b>-</b>	<b>0.76</b>	<b>3.87</b>
<b>Financial liabilities</b>					
Foreign currency bonds	11,374.20	-	-	-	11,374.20
Unsecured foreign currency loans from banks and financial institutions	10,060.73	1,415.03	2,580.06	-	14,055.82
Trade payables and other financial liabilities	2,396.14	9,318.75	68.66	17.48	11,801.03
	<b>23,831.07</b>	<b>10,733.78</b>	<b>2,648.72</b>	<b>17.48</b>	<b>37,231.05</b>

## 41<sup>st</sup> Annual Report 2016-17

Consolidated Financial Statements



### Sensitivity analysis

As per the CERC regulations, the gain/loss on account of exchange rate variations on all long term and short term foreign currency monetary items (up to COD) is recoverable from beneficiaries. Hence, the impact of strengthening or weakening of Indian rupee 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 ICB (International competitive bidding) which are denominated in third currency (i.e. a currency which not the functional currency of any of the parties to the contract) are falling under the purview of guidance provided as per Ind AS 109, 'Financial instruments' on derivatives and embedded derivatives. Parent Company has sought opinion from the Expert Advisory Committee (EAC) constituted by The Institute of Chartered Accountants of India on the above matter vide letter no NTPC/EAC/ICAI dated 29 September 2016. On receipt of opinion / clarification from EAC, Group will account for such contracts.

### Interest rate risk

The Group is exposed to interest rate risk arising mainly from long term 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 (eg. fixed, floating, rupee, foreign currency, etc.).

At the reporting date the interest rate profile of the Group's interest-bearing financial instruments is as follows:

	₹ Crore		
Particulars	31 March 2017	31 March 2016	1 April 2015
<b>Financial Assets:</b>			
Investments - Bonds	-	35.09	1,756.74
Loan to related parties	0.72	0.70	0.61
Loans to others	55.34	106.10	204.21
Bank deposits	2,918.73	4,753.92	13,961.22
<b>Total</b>	<b>2,974.79</b>	<b>4,895.81</b>	<b>15,922.78</b>
<b>Financial Liabilities:</b>			
<b>Fixed-rate instruments</b>			
Bonds	34,513.63*	25,958.36	24,065.00
Foreign currency loans/notes	24,685.77*	19,523.41	16,834.89
Rupee term loans	1,027.78	1,631.52	2,415.00
Finance lease obligations	145.02	140.37	103.46
	60,372.20	47,253.66	43,418.35
<b>Variable-rate instruments</b>			
Foreign currency loans/notes	7,488.76	8,928.76	8,706.84
Rupee term loans	39,388.74	38,477.88	36,357.84
	46,877.50	47,406.64	45,064.68
<b>Total</b>	<b>107,249.70</b>	<b>94,660.30</b>	<b>88,483.03</b>

\* Includes ₹ 2000.00 crore - ₹ denominated USD settled Green 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
<b>31 March 2017</b>		
Foreign currency loans/notes	(36.89)	36.89
Rupee term loans	(191.12)	191.12
	<b>(228.01)</b>	<b>228.01</b>
<b>31 March 2016</b>		
Foreign currency loans/notes	(44.35)	44.35
Rupee term loans	(194.87)	194.87
	<b>(239.22)</b>	<b>239.22</b>

Of the above mentioned increase in the interest expense, an amount of ₹ **132.46 crore** (31 March 2016: ₹ 136.80 crore) is expected to be capitalised and recovered from beneficiaries.

## 65. Fair Value Measurements

### (a) Financial instruments by category

₹ Crore

Particulars	31 March 2017			31 March 2016			1 April 2015		
	FVTPL	FVTOCI	Amortised Cost	FVTPL	FVTOCI	Amortised Cost	FVTPL	FVTOCI	Amortised Cost
<b>Financial assets</b>									
Investments									
- Equity instruments	1.40	112.08	-	2.80	76.80	-	1.40	97.08	-
- Bonds	-	-	-	-	-	35.09	-	-	1,756.74
- Mutual funds	-	-	-	343.63	-	-	226.60	-	-
Trade Receivables	-	-	8,999.48	-	-	8,359.97	-	-	8,187.16
Loans	-	-	613.26	-	-	690.99	-	-	737.66
Cash and cash equivalents	-	-	363.83	-	-	1,539.44	-	-	475.45
Other bank balances	-	-	2,937.63	-	-	3,398.88	-	-	13,821.93
Finance lease receivables	-	-	555.06	-	-	540.32	-	-	539.92
Derivative financial assets	-	-	-	3.66	-	-	-	-	-
Other financial assets	-	-	6,738.12	-	-	5,731.38	-	-	3,375.62
	1.40	112.08	20,207.38	350.09	76.80	20,296.07	228.00	97.08	28,894.48
<b>Financial liabilities</b>									
Borrowings	-	-	1,14,853.66	-	-	1,00,111.52	-	-	91,739.39
Finance lease obligations	-	-	145.02	-	-	140.37	-	-	103.46
Trade payables	-	-	5,585.87	-	-	5,702.19	-	-	6,429.07
Payable for capital expenditure	-	-	12,485.93	-	-	3,533.04	-	-	9,272.13
Derivative financial liabilities	-	-	-	3.66	-	-	-	-	-
Other financial liabilities	-	-	2,457.11	-	-	10,530.65	-	-	2,073.02
	-	-	1,35,527.59	3.66	-	1,20,017.77	-	-	1,09,617.07

## 41<sup>st</sup> Annual Report 2016-17

Consolidated Financial Statements



(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- requiring fair value measurement As at 31 March 2017	Level 1	Level 2	Level 3	Total
<b>Financial assets:</b>				
Investments in quoted equity instruments - PTC India Ltd.	112.08			112.08
Investments in unquoted equity instruments			1.40	1.40
	112.08	-	1.40	113.48
<b>Financial liabilities:</b>				
Derivative financial liabilities:				
- Currency and interest rate swaps			0.12	0.12
- Principal only swaps			1.48	1.48
	-	-	1.60	1.60

₹ Crore				
Financial assets and liabilities measured at fair value As at 31 March 2016	Level 1	Level 2	Level 3	Total
<b>Financial assets:</b>				
Investments in quoted equity instruments - PTC India Ltd.	76.80			76.80
Investments in unquoted equity instruments			2.80	2.80
Investments in mutual funds		343.63		343.63
Derivative financial assets:				-
- Principal only swaps			3.66	3.66
	76.80	343.63	6.46	426.89
<b>Financial liabilities:</b>				
Derivative financial liabilities:				
- Currency and interest rate swaps			0.04	0.04
	-	-	0.04	0.04

₹ Crore				
Financial assets and liabilities measured at fair value As at 1 April 2015	Level 1	Level 2	Level 3	Total
<b>Financial assets:</b>				
Investments in quoted equity instruments - PTC India Ltd.	97.08			97.08
Investments in unquoted equity instruments			1.40	1.40
Investments in mutual funds		226.60		226.60
	97.08	226.60	1.40	325.08
<b>Financial liabilities:</b>				
Derivative financial liabilities:				
- Currency and interest rate swaps			1.15	1.15
- Principal only swaps			3.44	3.44
	-	-	4.59	4.59

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 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 observable current market transactions and dealer quotes of similar instruments. This level includes derivative MTM assets/liabilities. Fair value of derivative assets/liabilities such as Interest rate swaps and foreign exchange forward contracts are valued using valuation techniques, which employs the use of market observable inputs. The most frequently applied valuation techniques include forward pricing and swap models & present value calculations.

There have been no transfers in either direction for the years ended 31 March 2017, 2016 and 2015.

**(c) Valuation technique used to determine fair value:**

Specific valuation techniques used to fair value of financial instruments include:

- For financial instruments other than at ii), iii) and iv) - the use of quoted market prices
- For investments in mutual funds - Closing NAV is used.
- For financial liabilities (vendor liabilities, debentures, 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.
- 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	31 March 2017		31 March 2016		1 April 2015	
		Carrying amount	Fair value	Carrying amount	Fair value	Carrying amount	Fair value
<b>Financial assets</b>							
Loans	3	401.34	304.57	440.07	322.32	465.89	343.37
Claims recoverable	3	638.97	638.97	510.99	510.99	466.28	466.28
Finance lease receivables	3	555.06	555.06	540.32	540.32	539.92	539.92
Other financial assets	3	18,305.46	18,305.46	18,460.65	18,460.65	25,284.23	25,284.23
		19,900.83	19,804.06	19,952.03	19,834.28	26,756.32	26,633.80



₹ Crore

Particulars	Level	31 March 2017		31 March 2016		1 April 2015	
		Carrying amount	Fair value	Carrying amount	Fair value	Carrying amount	Fair value
<b>Financial liabilities</b>							
Bonds/Debentures	1	4,727.09	4,735.64	-	-	11,556.65	11,785.21
	2	22,655.40	24,510.07	25,571.53	27,102.13	12,508.35	13,707.95
	3	7,131.14	7,797.27	386.83	400.38	-	-
Foreign currency notes	1	-	-	-	-	3,197.51	3,651.74
Foreign currency loans	2	13,223.72	14,152.08	13,457.46	14,540.79	6,367.00	6,827.73
	3	5,595.43	5,848.55	-	-	1,904.67	1,985.15
	3	13,402.28	13,646.82	15,038.80	15,362.60	14,105.07	14,332.05
Rupee term loans	2	6,735.83	7,310.41	6,108.54	6,346.78	4,891.65	5,077.81
	3	38,263.23	38,280.44	38,061.09	38,084.21	37,059.98	37,101.07
Finance lease obligations	3	145.02	145.02	140.37	140.37	103.46	103.46
Trade payables & payable for capital expenditure	2	108.57	106.62	134.54	129.67	183.24	180.31
	3	2,121.50	1,920.59	2,777.43	2,472.06	2,398.40	2,068.91
Other financial liabilities	3	2,521.67	2,521.67	2,775.14	2,775.14	2,117.55	2,117.55
		1,16,630.88	1,20,975.18	1,04,451.73	1,07,354.13	96,393.53	98,938.94

The carrying amounts of short term trade receivables, trade payables, capital creditors investments in bonds, 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 capital creditors 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.

For financial assets and liabilities that are measured at fair value, the carrying amounts are equal to the fair values.

## 66. 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 result from operating activities divided by total shareholders' equity. The Board of Directors also monitors the level of dividends to equity shareholders.

Under the terms of major borrowing facilities, the Group is required to comply with the following financial covenants:

- Total liability to networth ranges between 2:1 to 3:1.
- 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 1.25:1 and account receivable ratio not exceeding 3:1 (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 long term and short term 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	31 March 2017	31 March 2016	1 April 2015
Borrowings	1,11,734.12	98,624.25	91,590.88
Less: Cash and cash equivalent	363.83	1,539.44	475.45
Net Debt	1,11,370.29	97,084.81	91,115.43
Total Equity	98,641.28	92,368.88	84,855.63
Net Debt to Equity ratio	1.13	1.05	1.07

#### 67. Disclosure as per Ind AS 112 'Disclosure of Interest in Other Entities'

##### (a) Subsidiaries

The group's subsidiaries at 31 March 2017 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 entity	Place of business/ country of incorporation	Ownership interest held by the group			Ownership interest held by non- controlling interests			Principal activities
		31 March 2017	31 March 2016	1 April 2015	31 March 2017	31 March 2016	1 April 2015	
NTPC Vidyut Vyapar Nigam Ltd. (NVVN)	India	100.00	100.00	100.00	-	-	-	Trading of energy
NTPC Electric Supply Company Ltd. (NESCL)	India	100.00	100.00	100.00	-	-	-	Consultancy & Distribution of energy
Kanti Bijlee Utpadan Nigam Ltd. (KBUNL)	India	65.00	65.00	65.00	35.00	35.00	35.00	Generation of energy
Bhartiya Rail Bijlee Company Ltd. (BRBCL)	India	74.00	74.00	74.00	26.00	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

- (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 the company together with all assets and liabilities relating to such operations to NTPC Limited, the holding company, with effect from 1 April, 2015. After obtaining the aforesaid approval, an agreement was entered into with the holding company to implement such transfer. In pursuance of the above, all the transactions have been carried out at their carrying value in the books of the NESCL as on 1 April 2015 and it does not have any operations w.e.f 1 April 2015.
- (2) Patratu Vidyut Utpadan Nigam Limited has been incorporated on 15 October 2015 in Joint Venture with Jharkhand Bijli Vitran Nigam Limited (JBVNL) to acquire, establish, operate, maintain, revive, refurbish, renovate and modernize the performing existing units and further expand capacity of Patratu Thermal Power Station, District Ramgarh, Jharkhand. NTPC holds 74% of the equity share capital in PVUNL and balance 26% of the equity share capital is held by JBVNL.

## 41<sup>st</sup> Annual Report 2016-17

### Consolidated Financial Statements





The Government of Jharkhand (GoJ), vide its notification No. 888 dated 1 April 2016, notified 'The Jharkhand State Electricity Reforms (Transfer of Patratu Thermal Power Station) Scheme 2015' for the transfer of the specified assets to the Company for performance improvement of the existing plant and capacity expansion. Due to higher cost of the generation, GoJ proposed for closure of all the existing units having already reached end of life, which were transferred to the Company on 1 April 2016 and accordingly a meeting was held between GoJ and the subsidiary in December 2016, wherein it was agreed that the existing units shall be closed, dismantled and scrapped and the value realised from sale of the Scrap, net of cost of dismantling shall be transferred to GoJ or its assign or affiliates by the Company in lieu of Specified Assets Transfer consideration. Based on the above, the plant was shut down with effect from 24 Jan 2017. However, work on expansion phase is in progress.

The value of Current Assets transferred by GoJ has been accounted based on valuation report of M/s MECON under major component like Coal, LDO, HFO, Scrap and Stores & Spares. The Stores included many of the old and unserviceable items, which is valued by applying discounting technique to arrive at its current realizable value, of which item wise value and quantity has not been provided therefore accounting of same carried out on consolidated basis and accounting effects of consumption of items given on appropriate basis. Consideration payable towards current assets transferred and accounted as deemed loan. Further, land proposed for expansion project not yet transferred to the Company therefore specified asset consideration towards the land has not been accounted. The revenue from sale of electricity recognised to the extent of cost of generation of the electricity, direct and indirect including all other incidental expenditure incurred by the company towards generation and performance improvement.

**(b) Details of significant restrictions**

In respect of investments in subsidiary companies, the Company has restrictions for their disposal as under:

Name of the Subsidiary	Period of restrictions for disposal of investments as per related agreements	Amount invested		
		31 March 2017	31 March 2016	1 April 2015
Bhartiya Rail Bijlee Company Ltd.	5 years from the date of commercial operation.	1,420.54	1,188.25	1,172.61
Kanti Bijlee Utpadan Nigam Ltd.	5 years from the date of commercial operation. Further, as per loan agreement, minimum equity of 51% shall be maintained at all times untill final settlement of loan i.e., 4 years moratorium period and subsequently 11 years for repayment.	962.89	721.02	650.00
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.	34.58	1.08	-
<b>Total</b>		<b>2,418.01</b>	<b>1,910.35</b>	<b>1,822.61</b>

**(c) 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 62.

**(d) Interests in joint ventures**

The Group does not have interest in joint ventures which are material to the group. However, list of all joint ventures in which the group has interest is as below:

₹ Crore

Name of entity	Place of business	Ownership interest held by the group (in %)			Accounting method	Carrying amount		
		31 March 2017	31 March 2016	1 April 2015		31 March 2017	31 March 2016	1 April 2015
Utility Powertech Ltd.	India	50.00	50.00	50.00	Equity method	40.83	34.41	32.69
NTPC-GE Power Services Private Ltd. (Previously NTPC-Alstom Power Services Private Ltd.)\$	India	50.00	50.00	50.00	Equity method	11.75	12.20	12.00
NTPC-SAIL Power Company Ltd. (Previously NTPC-SAIL Power Company Pvt Ltd.)	India	50.00	50.00	50.00	Equity method	986.76	877.62	824.51
NTPC-Tamil Nadu Energy Company Ltd. \$	India	50.00	50.00	50.00	Equity method	1,269.39	1,129.85	1,243.48
Ratnagiri Gas & Power Private Ltd.\$	India	25.51	25.51	28.91	Equity method	-	47.03	237.26
Aravali Power Company Private Ltd.	India	50.00	50.00	50.00	Equity method	2,364.61	1,970.78	1,617.51
NTPC BHEL Power Projects Private Ltd.*\$	India	50.00	50.00	50.00	Equity method	21.32	59.78	66.32
Meja Urja Nigam Private Ltd.	India	50.00	50.00	50.00	Equity method	1,193.04	868.08	439.13
BF-NTPC Energy Systems Ltd.**	India	49.00	49.00	49.00	Equity method	2.83	2.26	2.46
Nabinagar Power Generating Company Private Ltd.	India	50.00	50.00	50.00	Equity method	1,212.15	736.29	534.12
Transformers and Electricals Kerala Ltd.***\$	India	44.60	44.60	44.60	Equity method	38.96	38.48	38.33
National High Power Test Laboratory Private Ltd.\$	India	20.00	21.63	21.63	Equity method	29.97	23.43	23.43
Energy Efficiency Services Ltd.\$	India	31.70	28.80	25.00	Equity method	184.12	59.91	28.73
CIL NTPC Urja Private Ltd.\$	India	50.00	50.00	50.00	Equity method	0.02	0.03	-
Anushakti Vidhyut Nigam Ltd.	India	49.00	49.00	49.00	Equity method	0.01	0.01	0.01
NTPC-SCCL Global Ventures Private Ltd.****	India	-	-	50.00	Equity method	-	-	0.05
National Power Exchange Ltd.****	India	-	-	16.67	Equity method	-	-	1.14
Pan-Asian Renewables Private Ltd.****	India	-	-	50.00	Equity method	-	-	0.19
Hindustan Urvarak and Rasayan Ltd.\$	India	33.28	-	-	Equity method	3.42	-	-
Kinesco Power and Utilities Private Ltd.!	India	-	-	50.00	Equity method	-	-	0.47
Trincomalee Power Company Ltd.\$	Srilanka	50.00	50.00	50.00	Equity method	8.99	10.81	5.10
Bangladesh-India Friendship Power Company Pvt.Ltd.\$	Bangladesh	50.00	50.00	50.00	Equity method	132.27	74.07	16.02

\$ 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 NTPC Limited in its meeting held on 28 April 2016 accorded in principle approval for withdrawal from NTPC BHEL Power Projects Private Ltd. (a Joint Venture of the Company).

\*\* 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. (a joint venture of the Company).

\*\*\* The Board of Directors of NTPC Limited in its meeting held on 28 April 2016 accorded in principle approval for withdrawal from Transformers and Electricals Kerala Ltd. (a Joint Venture of the Company).

## 41<sup>st</sup> Annual Report 2016-17

### Consolidated Financial Statements



\*\*\*\*Not considered as JV due to non existence of control. Accounted as equity instruments in 31 March 2017 & 31 March 2016 (Refer Note 6).

- ! A Joint Venture of NESCL, a wholly owned Subsidiary, withdrawn by the subsidiary during the year 2015-16.
- The company is of the view that the provisions of Ind AS 24 'Related Party Disclosures' and Ind AS 111- 'Joint arrangements' are not applicable to the investment made in PTC India Ltd. and the same has been accounted for as per the provisions of Ind AS-109-'Financial instruments' in the consolidated financial statements.
  - During the year 2015-16, the company has reviewed the investments made in NTPC SCCL Global Ventures Pvt. Ltd., National Power Exchange Ltd., Pan Asian Renewable Pvt. Ltd. and International Coal Ventures Pvt. Ltd., Joint Ventures of the Company, considering the provisions of Ind AS 111- 'Joint arrangements'. The company is of the view that the provisions of Ind AS-111 are not applicable to the investments made in these JV companies and hence accounted for as per Ind AS-109-'Financial instruments' in the consolidated financial statements.
  - As per the Joint Venture Agreement (JVA) dated 24 July 2008, KINESCO Power & Utilities Pvt.Ltd. (KINESCO) was incorporated as a 50:50 JV of KINFRA, a statutory body of Government of Kerala, & NTPC Electric Supply Company Ltd (NESCL), a wholly owned subsidiary of NTPC. KINFRA and NESCL collectively held the entire paid-up capital of ₹ 10,00,000/- in the ratio of 50:50 in accordance with the terms of the JVA. The financial statements of KINESCO were hitherto included in the consolidated financial statements considering the provisions of Ind AS-27 and Ind AS-111. During the year 2015-16, NESCL has withdrawn from the JV and accordingly, KINESCO has not been considered for consolidation for the year 2015-16 & 2016-17.
  - RGPP (joint venture) has incurred losses during past few years due to which the Group has recognised accumulated losses equal to the cost of investments of RGPP as at 31 March 2017. The Group has unrecognised share of losses in respect of RGPP amounting to ₹ 738.97 crore as at 31 March 2017 (31 March 2016: Nil, 1 April 2015: Nil) as per their unaudited financial statements for the year ended 31 March 2017.
  - Hindustan Urvarak & Rasayan Limited (HURL) has been incorporated on 15 June 2016 in Joint Venture with Coal India Limited, Indian Oil Corporation Limited, Fertilizer Corporation of India Limited (FCIL) and Hindustan Fertilizer Corporation Limited to establish and operate fertilizer & chemical complexes at Gorakhpur and Sindhri units of FCIL. NTPC holds 33.28% of the equity share capital in HURL.
  - Individually immaterial joint ventures**  
Financial information regarding group's interest in individually immaterial joint ventures that are accounted for using the equity method is as below:

	₹ Crore		
Particulars	31 March 2017	31 March 2016	1 April 2015
Aggregate carrying amount of individually immaterial joint ventures	7,500.44	5,945.04	5,122.95

	₹ Crore	
Particulars	31 March 2017	31 March 2016
Aggregate amounts of the group's share of:		
Profit for the year	624.71	141.16
Other comprehensive income	(1.41)	0.07
<b>Total comprehensive income</b>	<b>623.30</b>	<b>141.23</b>

(vii) **Commitments and contingent liabilities in respect of joint ventures**

The Company has commitments of ₹ 3,082.90 crores (31 March 2016: ₹ 2,759.91 crore, 1 April 2015: ₹ 3,139.80 crore) towards further investment in the joint venture entities as at 31 March 2017.

The Company 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 2016: ₹ 75.00 crore, 1 April 2015: ₹ 75.00 crore).

	₹ Crore		
Particulars	31 March 2017	31 March 2016	1 April 2015
<b>Contingent liabilities</b>			
Share of contingent liabilities incurred jointly with other investors of the joint ventures	509.57	295.66	114.98
Possible reimbursements	19.41	20.98	19.80
<b>Capital Commitments</b>	<b>2,824.48</b>	<b>2,505.45</b>	<b>2,490.27</b>

**(viii) Details of significant restrictions**

In respect of investments in joint ventures, the Company has restrictions for their disposal as under:

Name of the joint venture	Period of restrictions for disposal of investments as per related agreements	Amount invested (₹ Crore)		
		31 March 2017	31 March 2016	1 April 2015
Pan-Asian Renewables Private Ltd.	2 years from the date of commercial operation of the project having minimum capacity of 100 MW of renewable energy project or 5 years from the date of incorporation (i.e. 14.10.2011) whichever is earlier.	-	-	1.50
NTPC-SCCL Global Ventures Private Ltd.	5 years from the date of incorporation (i.e. 31.07.2007) or commercial operation whichever is later.	-	-	0.05
National Power Exchange Ltd.	5 years from the date of commencement of business i.e. trading operation or Company issues shares to public at large (IPO) whichever is earlier.	-	-	2.19
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.	31.34	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.	50.00	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.	30.40	23.90	23.90
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	0.08
Trincomalee Power Company Ltd.	12 years from the initial operation date.	15.20	15.20	9.26
Bangladesh-India Friendship Power Company Private Ltd.	15 years from the date of commercial operation date.	134.20	69.68	31.43
Meja Urja Nigam Private Ltd.	5 years from the date of incorporation (i.e. 02.04.2008) or commercial operation whichever is later. Further, NTPC shall hold atleast 50% of equity and voting rights until final settlement of loan i.e., 5 years moratorium period and subsequently 10 years for repayment.	1,166.44	841.44	541.35
Nabinagar Power Generating Company Private Ltd.	5 years from the date of incorporation (09.09.2008) or commercial operation whichever is later. Further, NTPC shall not transfer/assign or pledge shares of the JV until final settlement of loan i.e. 5 years moratorium and subsequently 15 years for repayment.	1,353.30	763.30	511.13
NTPC SAIL Power Company Ltd.	3 years from the date of allotment (last allotment made on 30.09.2012)	-	-	490.25
Hindustan Urvarak & Rasayan Ltd.	5 years from the date of incorporation 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.	5.03	-	-
<b>Total</b>		<b>2,785.99</b>	<b>1,794.94</b>	<b>1,692.48</b>

**68. 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 customers is determined by the Central Electricity Regulatory Commission (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.

The Group is eligible to apply Ind AS 114, Regulatory Deferral Accounts. The standard permits an eligible entity to continue previous GAAP (Guidance Note on accounting for Rate Regulated Activities) accounting policy for its regulatory deferral account balances. Hence, Group has opted to continue with its previous GAAP accounting policy for such balances.

**41<sup>st</sup> Annual Report 2016-17**

**Consolidated Financial Statements**



(ii) **Recognition and measurement**

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 declaration of Commercial Operation Date (COD) to be considered for calculation of tariff. 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 difference arising during the construction period is 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 'Movements in Regulatory deferral account balances' during construction period and adjusted from the year in which the same becomes recoverable from or payable to the beneficiaries.

Revision of pay scales of employees of PSEs are due w.e.f. 1 January 2017 (Refer Note 33). The recommendations of the constituted committee to the Government inter-alia includes 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 and the enhanced amount from ₹ 0.10 crore to ₹ 0.20 crore will be borne by the group. 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 proposed increase in gratuity from ₹ 0.10 crore to ₹ 0.20 crore falls under the category of 'Change in law'.

CERC Tariff Regulations provide truing up of capital expenditure, subject to prudence check, considering inter-alia change in laws. Considering the methodology followed by the Regulator in the previous pay revision and the provisions of CERC Tariff Regulations, 2014, a Regulatory Asset has been created (Regulatory deferral account debit balance) towards the increase in O&M expenditure due to the pay revision. This will be claimed upon implementation of revision of pay scales and discharge of related liabilities.

(iii) **Risks associated with future recovery/reversal of regulatory deferral account balances:**

- demand risk due to changes in consumer attitudes, the availability of alternative sources of supply
- regulatory risk on account of submission or approval of a rate-setting application or the entity's assessment of the expected future regulatory actions
- 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 credit balance - Note 36**

Particulars	₹ Crore	
	31 March 2017	31 March 2016
A. Opening balance	300.72	308.96
B. Addition during the year	194.90	(4.60)
C. Amount collected/refunded during the year	6.29	3.64
D. Regulatory deferral account balances recognized in the Statement of Profit & Loss (B-C)	188.61	(8.24)
E. Closing balance (A+D)	489.33	300.72

b) **Regulatory deferral account debit balance - Note 20**

Particulars	₹ Crore	
	31 March 2017	31 March 2016
A. Opening balance	-	-
B. Addition during the year	522.83	-
C. Amount collected/refunded during the year	-	-
D. Regulatory deferral account balances recognized in the Statement of Profit & Loss (B-C)	522.83	-
E. Closing balance (A+D)	522.83	-

c) **Total amount recognized in the Statement of Profit & Loss during the year** 334.22 8.24

The Group expects to recover the carrying amount of regulatory deferral account debit balance over a period of 4-5 years.



#### 69. Disclosure as per Schedule III to the Companies Act, 2013

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 % of consolidated net assets	Amount	As % of consolidated profit or loss	Amount	As % of consolidated other comprehensive income	Amount	As % of total comprehensive income	Amount
<b>Parent</b>								
<b>NTPC Limited</b>								
31 March 2017	89.31%	88096.66	93.55%	10,022.42	99.34%	(211.44)	93.43%	9,810.98
31 March 2016	90.39%	83496.71	98.59%	10,629.02	100.13%	(55.37)	98.58%	10,573.65
1 April 2015	90.57%	76856.4						
<b>Subsidiaries (Indian)</b>								
<b>Bhartiya Rail Bijlee Company Ltd.</b>								
31 March 2017	1.22%	1,205.50	0.05%	5.67	0.00%	-	0.05%	5.67
31 March 2016	1.30%	1,199.84	0.00%	(0.02)	0.00%	-	0.00%	(0.02)
1 April 2015	1.41%	1,199.86						
<b>Kanti Bijlee Utpadan Nigam Ltd.</b>								
31 March 2017	0.69%	682.73	-0.13%	(14.25)	0.00%	-	-0.14%	(14.25)
31 March 2016	0.71%	657.51	-0.35%	(37.84)	0.00%	-	-0.35%	(37.84)
1 April 2015	0.77%	655.36						
<b>NTPC Vidyut Vyapar Nigam Ltd.</b>								
31 March 2017	0.31%	310.21	0.71%	76.44	0.00%	-	0.73%	76.44
31 March 2016	0.25%	233.78	0.48%	51.96	0.00%	-	0.48%	51.96
1 April 2015	0.24%	205.89						
<b>NTPC Electric Supply Company Ltd.</b>								
31 March 2017	0.04%	42.47	0.00%	(0.18)	0.00%	-	0.00%	(0.18)
31 March 2016	0.05%	42.65	0.01%	1.13	0.00%	-	0.01%	1.13
1 April 2015	0.05%	41.52						
<b>Patratu Vidyut Utpadan Nigam Ltd.</b>								
31 March 2017	0.00%	0.02	0.00%	(0.05)	0.00%	-	0.00%	(0.05)
31 March 2016	0.00%	0.07	0.00%	(0.01)	0.00%	-	0.00%	(0.01)
1 April 2015	0.00%	-						
<b>Non-controlling interests in all subsidiaries</b>								
31 March 2017	0.81%	803.26	-0.05%	(5.70)	0.00%	-	-0.05%	(5.70)
31 March 2016	0.86%	793.30	-0.19%	(20.42)	0.00%	-	-0.19%	(20.42)
1 April 2015	0.91%	774.46						
<b>Joint ventures (Investment as per equity method)</b>								
<b>Indian</b>								
<b>Utility Powertech Ltd.</b>								
31 March 2017	0.04%	40.83	0.09%	9.73	0.14%	(0.30)	0.09%	9.43
31 March 2016	0.04%	34.41	0.09%	10.05	-0.17%	0.10	0.09%	10.15
1 April 2015	0.04%	32.69						

## 41<sup>st</sup> Annual Report 2016-17

### Consolidated Financial Statements



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 % of consolidated net assets	Amount	As % of consolidated profit or loss	Amount	As % of consolidated other comprehensive income	Amount	As % of total comprehensive income	Amount
<b>NTPC-GE Power Services Private Ltd. (Previously NTPC-Alstom Power Services Private Ltd.)</b>								
31 March 2017	0.01%	11.74	0.00%	0.27	0.00%	-	0.00%	0.27
31 March 2016	0.01%	12.20	0.01%	0.92	0.00%	-	0.01%	0.92
1 April 2015	0.01%	12.00						
<b>NTPC-SAIL Power Company Ltd. (Previously NTPC-SAIL Power Company Private Ltd.)</b>								
31 March 2017	1.00%	986.76	1.81%	194.44	0.49%	(1.04)	1.84%	193.40
31 March 2016	0.95%	877.62	1.17%	125.98	0.02%	(0.01)	1.17%	125.97
1 April 2015	0.97%	823.89						
<b>NTPC-Tamil Nadu Energy Company Ltd.</b>								
31 March 2017	1.29%	1,269.40	0.92%	98.97	0.00%	-	0.94%	98.97
31 March 2016	1.22%	1,129.85	-1.24%	(133.63)	0.00%	-	-1.25%	(133.63)
1 April 2015	1.47%	1,243.48						
<b>Ratnagiri Gas &amp; Power Private Ltd.</b>								
31 March 2017	0.00%	-	-0.44%	(47.03)	0.00%	-	-0.45%	(47.03)
31 March 2016	0.05%	47.03	-1.76%	(190.23)	0.00%	-	-1.77%	(190.23)
1 April 2015	0.28%	237.26						
<b>Aravali Power Company Private Ltd.</b>								
31 March 2017	2.40%	2,364.60	3.67%	393.60	0.03%	(0.07)	3.75%	393.53
31 March 2016	2.13%	1,970.77	3.20%	344.55	0.03%	(0.02)	3.21%	344.53
1 April 2015	1.91%	1,617.51						
<b>NTPC-SCCL Global Ventures Private Ltd.</b>								
31 March 2017	0.00%	-	0.00%	-	0.00%	-	0.00%	-
31 March 2016	0.00%	-	0.00%	-	0.00%	-	0.00%	-
1 April 2015	0.00%	0.05						
<b>NTPC BHEL Power Projects Private Ltd.</b>								
31 March 2017	0.02%	21.32	-0.36%	(38.46)	0.00%	-	-0.37%	(38.46)
31 March 2016	0.06%	59.78	-0.06%	(6.54)	0.00%	-	-0.06%	(6.54)
1 April 2015	0.08%	66.32						
<b>Meja Urja Nigam Private Ltd.</b>								
31 March 2017	1.21%	1,193.04	0.00%	(0.04)	0.00%	-	0.00%	(0.04)
31 March 2016	0.94%	868.08	0.00%	(0.06)	0.00%	-	0.00%	(0.06)
1 April 2015	0.52%	439.13						
<b>BF-NTPC Energy Systems Ltd.</b>								
31 March 2017	0.00%	2.83	0.00%	(0.12)	0.00%	-	0.00%	(0.12)

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 % of consolidated net assets	Amount	As % of consolidated profit or loss	Amount	As % of consolidated other comprehensive income	Amount	As % of total comprehensive income	Amount
31 March 2016	0.00%	2.26	0.00%	(0.20)	0.00%	-	0.00%	(0.20)
1 April 2015	0.00%	2.46						
<b>National Power Exchange Ltd.</b>								
31 March 2017	0.00%	-	0.00%	-	0.00%	-	0.00%	-
31 March 2016	0.00%	-	0.00%	-	0.00%	-	0.00%	-
1 April 2015	0.00%	1.14						
<b>Nabinagar Power Generating Company Private Ltd.</b>								
31 March 2017	1.23%	1,212.15	0.00%	(0.15)	0.00%	-	0.00%	(0.15)
31 March 2016	0.80%	736.29	0.00%	-	0.00%	-	0.00%	-
1 April 2015	0.63%	534.12						
<b>Transformers and Electricals Kerala Ltd.</b>								
31 March 2017	0.04%	38.96	0.00%	0.47	0.00%	-	0.00%	0.47
31 March 2016	0.04%	38.48	-0.04%	(4.46)	0.00%	-	-0.04%	(4.46)
1 April 2015	0.05%	38.33						
<b>National High Power Test Laboratory Private Ltd.</b>								
31 March 2017	0.03%	29.97	0.00%	-	0.00%	-	0.00%	-
31 March 2016	0.03%	23.43	0.00%	-	0.00%	-	0.00%	-
1 April 2015	0.03%	23.43						
<b>Energy Efficiency Services Ltd.</b>								
31 March 2017	0.19%	184.12	0.18%	19.41	0.00%	-	0.18%	19.41
31 March 2016	0.06%	59.91	0.10%	10.25	0.00%	-	0.10%	10.25
1 April 2015	0.03%	28.73						
<b>CIL NTPC Urja Private Ltd.</b>								
31 March 2017	0.00%	0.03	0.00%	-	0.00%	-	0.00%	-
31 March 2016	0.00%	0.03	0.00%	-	0.00%	-	0.00%	-
1 April 2015	0.00%	-						
<b>Anushakti Vidhyut Nigam Ltd.</b>								
31 March 2017	0.00%	0.01	0.00%	-	0.00%	-	0.00%	-
31 March 2016	0.00%	0.01	0.00%	-	0.00%	-	0.00%	-
1 April 2015	0.00%	0.01						
<b>Hindustan Urvarak and Rasayan Ltd.</b>								
31 March 2017	0.00%	3.42	-0.01%	(1.60)	0.00%	-	-0.02%	(1.60)
31 March 2016	0.00%	-	0.00%	-	0.00%	-	0.00%	-
1 April 2015	0.00%	-						
<b>Pan-Asian Renewables Private Ltd.</b>								
31 March 2017	0.00%	-	0.00%	-	0.00%	-	0.00%	-

## 41<sup>st</sup> Annual Report 2016-17

### Consolidated Financial Statements



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 % of consolidated net assets	Amount	As % of consolidated profit or loss	Amount	As % of consolidated other comprehensive income	Amount	As % of total comprehensive income	Amount
31 March 2016	0.00%	-	0.00%	-	0.00%	-	0.00%	-
1 April 2015	0.00%	0.20						
<b>Kinesco</b>								
31 March 2017	0.00%	-	0.00%	-	0.00%	-	0.00%	-
31 March 2016	0.00%	-	0.00%	-	0.00%	-	0.00%	-
1 April 2015	0.00%	0.47						
<b>Foreign</b>								
<b>Trincomalee Power Company Ltd.</b>								
31 March 2017	0.01%	8.99	0.00%	0.12	0.00%	-	0.00%	0.12
31 March 2016	0.01%	10.81	0.00%	0.29	0.00%	-	0.00%	0.29
1 April 2015	0.01%	5.10						
<b>Bangladesh-India Friendship Power Company Pvt.Ltd.</b>								
31 March 2017	0.13%	132.26	0.00%	-	0.00%	-	0.00%	-
31 March 2016	0.08%	74.07	0.00%	-	0.00%	-	0.00%	-
1 April 2015	0.02%	16.02						
<b>Total</b>								
31 March 2017	100%	98,641.28	100%	10,713.94	100%	(212.85)	100%	10,501.09
31 March 2016	100%	92,368.88	100%	10,780.73	100%	(55.30)	100%	10,725.43
1 April 2015	100%	84,855.63						

## 70. Contingent liabilities and commitments

### A. Contingent liabilities

#### a. Claims against the group not acknowledged as debts

##### (i) Capital works

Some of the contractors for supply and installation of equipments and execution of works at our projects have lodged claims on the Group for ₹ 13,022.40 crore (31 March 2016: ₹ 9,011.45 crore, 1 April 2015: ₹ 7,813.16 crore) 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

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 ₹ 349.31 crore (31 March 2016: ₹ 332.34 crore & 1 April 2015: ₹ 312.37 crore) has been estimated.

##### (iii) Fuel suppliers

a) Pending resolution of the issues with the coal companies, an amount of ₹ 2,570.55 crore (31 March 2016: ₹ 1,646.17 crore, 1 April 2015: ₹ Nil) towards grade slippage pursuant to third party sampling has been estimated by the Group as contingent liability. Further, an amount of ₹ 661.50 crore (31 March 2016: ₹ 209.89 crore, 1 April 2015: ₹ 567.22 crore) towards surface transportation charges, custom duty on service margin on imported coal etc. has been estimated by the Group as contingent liability.

- b) Pending resolution of the issues with a fuel company for supply of RLNG, an amount of ₹ 4,173.57 crore (31 March 2016: ₹ 323.87 crore, 1 April 2015: ₹ Nil) towards the take or pay claim has been 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**

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 ₹ 253.85 crore (31 March 2016: ₹ 313.20 crore, 1 April 2015: ₹ 896.34 crore) has been estimated.

(v) **Possible reimbursement**

The contingent liabilities referred to in (i) above, include an amount of ₹ 919.33 crore (31 March 2016: ₹ 1,298.80 crore, 1 April 2015: ₹ 1,172.56 crore) relating to the hydro power project stated in Note 10 - Other financial assets, for which Group envisages possible reimbursement from GOI in full. In respect of balance claims included in (i) and in respect of the claims mentioned at (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 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 ₹ 7,373.54 crore (31 March 2016: ₹ 2,051.77 crore, 1 April 2015: ₹ 423.36 crore).

b. **Disputed tax matters**

Disputed income tax/Sales tax/Excise and other tax matters pending before various Appellate Authorities amount to ₹ 8,118.14 crore (31 March 2016: ₹ 8,590.97 crore, 1 April 2015: ₹ 5,132.36 crore). 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 estimates possible reimbursement of ₹ 4,362.11 crore (31 March 2016: ₹ 4,585.88 crore, 1 April 2015: ₹ 2,410.90 crore). The amount paid under disputes / adjusted by the authorities in respect of cases amounts to ₹ 6,499.22 crore (31 March 2016: ₹ 6,548.66 crore, 1 April 2015: ₹ 3,254.52 crore).

c. **Others**

Other contingent liabilities amount to ₹ 598.51 crore (31 March 2016: ₹ 490.61 crore, 1 April 2015: ₹ 309.36 crore).

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**

While determining the tariff for some of the power stations, CERC has disallowed certain capital expenditure incurred by the group. The group aggrieved over such issues has filed appeals with the Appellate Tribunal for Electricity (APTEL)/Supreme Court against the tariff orders issued by CERC. Based on past experience, group 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.

**C. Commitments**

- a. Estimated amount of contracts remaining to be executed on capital account (property, plant & equipment and intangible assets) and not provided for as at 31 March 2017 is ₹ 51,524.90 crore (31 March 2016: ₹ 57,549.13 crore, 1 April 2015: ₹ 60,305.43 crore). Details of the same are as under:

Particulars	₹ Crore		
	31 March 2017	31 March 2016	1 April 2015
Property, plant & equipment	51,319.11	57,209.90	60,065.23
Intangible assets	205.79	339.23	240.20





- b. In respect the following investments of ₹ 1.40 crore (31 March 2016: ₹ 5.14 crore, 1 April 2015: ₹ 1.40 crore), the Group has restrictions for their disposal as at 31 March 2017 as under:

₹ Crore

Name of the Company	Period of restrictions for disposal of investments as per related agreements	Amount invested (Refer Note 7)		
		31 March 2017	31 March 2016	1 April 2015
Pan-Asian Renewables Private Ltd.	2 years from the date of commercial operation of the project having minimum capacity of 100 MW of renewable energy project or 5 years from the date of incorporation (i.e. 14.10.2011) whichever is earlier.	-	1.50	-
NTPC-SCCL Global Ventures Private Ltd.	5 years from the date of incorporation (i.e. 31.07.2007) or commercial operation whichever is later.	-	0.05	-
National Power Exchange Ltd.	5 years from the date of commencement of business i.e trading operation or Company issues shares to public at large (IPO) whichever is earlier.	-	2.19	-
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.	1.40	1.40	1.40
<b>Total</b>		<b>1.40</b>	<b>5.14</b>	<b>1.40</b>

Further, the Group has commitments of ₹ 498.60 crore (31 March 2016: ₹ 498.60 crore, 1 April 2015: ₹ 498.60 crore) towards further investment in the above investments as at 31 March 2017.

- c. Group's commitment towards the minimum work programme in respect of oil exploration activity of Cambay Block (100% owned by the Parent Company) is ₹ Nil (31 March 2016: ₹ 35.94 crore (USD 5.42 million), 1 April 2015: ₹ 140.27 crore (USD 22.41 million).
- d. Group's commitment towards the minimum work programme in respect of oil exploration activities of joint venture operations has been disclosed in Note 62.
- e. S.O. 254 (E) dated 25 January 2016 issued by the Ministry of Environment, Forest and Climate Change (MOEF), GOI provides that the cost of transportation of ash for road construction projects or for manufacturing of ash based products or use as soil conditioner in agricultural activity within a radius of hundred kilometres from a coal based thermal power plant shall be borne by such coal based thermal power plant and the cost of transportation beyond the radius of hundred kilometres and up to three hundred kilometres shall be shared equally between the user and the coal based thermal power plant. Further, the coal or lignite based thermal power plants shall within a radius of three hundred kilometres bear the entire cost of transportation of ash to the site of road construction projects under Pradhan Mantri Gramin Sadak Yojna and asset creation programmes of the Government involving construction of buildings, road, dams and embankments. Accordingly, the Group has commitment to bear/share the cost of transportation of fly ash from its coal based stations on lifting of the fly ash by the users. Based on an independent expert opinion, the Group's obligation towards the transportation cost of fly ash will arise only on lifting & transportation of the fly ash. Further, the Group's liability on this account, if any shall be first met from the 'Fly Ash Utilization Reserve Fund' maintained by the Group in terms of MOEF Notification dated 3 November 2009.
- f. Group's commitment in respect of lease agreements has been disclosed in Note 55.

**71. Details of Specified Bank Notes (SBN) held and transacted during the period 8 November 2016 to 30 December 2016: Pursuant to MCA Notification No. GSR 308(E) dated 30 March 2017.**

(in ₹)

Particulars	Specified Bank Notes	Other denomination notes	Total
Closing cash in hand as on 08.11.2016*	3,74,500.00	72,754.00	4,47,254.00
Add: Permitted receipts *	-	92,22,260.00	92,22,260.00
Non permitted receipts**	39,44,500.00	-	39,44,500.00
Less: Permitted payments	-	-	-
Less: Amount deposited in Banks	43,19,000.00	91,46,921.00	1,34,65,921.00
<b>Closing cash in hand as on 30.12.2016*</b>	<b>-</b>	<b>1,48,093.00</b>	<b>1,48,093.00</b>

\* Balance available and receipts at hospitals, guest houses etc. of the Group, as per separate records maintained at the respective projects/stations/offices.

\*\* Includes an amount of ₹ 30,99,500/- collected at hospitals & guest houses etc. situated at projects/stations of the Group which are mostly located in remote areas. The Group's hospitals usually have all modern health care facilities and there are no other good hospitals near the Group's projects/stations. The local residents, mostly villagers, vendors and executing contractors, avail health care facilities from these hospitals by paying nominal charges. Similarly, vendors visiting project/stations of the Group from outside places, use the guest house/transit camp facilities of the Group for stay on payment. Further, employees of the Group have drawn imprest/staff advance prior to 8 November 2016 total amounting to ₹ 8,45,000/- for meeting official expenditure, subsequently deposited the same in the Group's bank accounts. This disclosure has been added so as to arrive at the closing cash in hand as on 30 December 2016.

**72. Recent accounting pronouncements**

Standards issued but not yet effective:

In March 2017, the Ministry of Corporate Affairs issued the Companies (Indian Accounting Standards) (Amendments) Rules, 2017, notifying amendments to Ind AS 7, 'Statement of cash flows'. The amendments are applicable to the Group from 1 April, 2017.

The amendment to Ind AS 7 requires the entities to provide disclosures that enable users of financial statements to evaluate changes in liabilities arising from financing activities, including both changes arising from cash flows and non-cash changes, suggesting inclusion of a reconciliation between the opening and closing balances in the balance sheet for liabilities arising from financing activities, to meet the disclosure requirement.

The Group is evaluating the requirements of the amendment and the effect on the financial statements is being evaluated.



73. 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

(K.P. Gupta)  
Company Secretary

(K.Biswal)  
Director (Finance)

(Gurdeep Singh)  
Chairman & Managing Director

These are the notes referred to in Consolidated Balance Sheet and Consolidated Statement of Profit and Loss

For T.R. Chadha & Co LLP  
Chartered Accountants  
Firm Reg. No. 006711N/N500028

For PSD & Associates  
Chartered Accountants  
Firm Reg. No. 004501C

For Sagar & Associates  
Chartered Accountants  
Firm Reg. No. 003510S

(Neena Goel)  
Partner  
M No. 057986

(Prakash Sharma)  
Partner  
M No. 072332

(D. Manohar)  
Partner  
M No. 029644

For Kalani & Co.  
Chartered Accountants  
Firm Reg. No. 000722C

For P. A. & Associates  
Chartered Accountants  
Firm Reg. No. 313085E

For S. K. Kapoor & Co.  
Chartered Accountants  
Firm Reg. No. 000745C

For B M Chatrath & Co. LLP  
Chartered Accountants  
Firm Reg. No. 301011E/E300025

(Varun Bansal)  
Partner  
M No. 402856

(P.S.Panda)  
Partner  
M No.051092

(Sanjiv Kapoor)  
Partner  
M.No. 070487

(P. R. Paul)  
Partner  
M.No. 051675

Place: New Delhi  
Date: 29 May 2017

## 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

1.	Sl. No.	1	2	3	4	5
2.	Name of the Subsidiary	NTPC Electric Supply Company Ltd.	NTPC Vidyut Vyapar Nigam Ltd.	Kanti Bijlee Utpadan Nigam Ltd.	Bhartiya Rail Bijlee Company Ltd.	Patratu Vidyut Utpadan Nigam Ltd.
3.	The date since when subsidiary was acquired	21.08.2002	01.11.2002	06.09.2006	22.11.2007	15.10.2015
4.	Reporting period for the subsidiary concerned, if different from the holding company's reporting period	Same as that of Holding Company (1.04.2016 -31.03.2017)	Same as that of Holding Company (1.04.2016 -31.03.2017)	Same as that of Holding Company (1.04.2016 -31.03.2017)	Same as that of Holding Company (1.04.2016 -31.03.2017)	Same as that of Holding Company (1.04.2016 -31.03.2017)
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
6.	Share capital	0.08	20.00	1,122.24	1,584.61	0.10
7.	Reserves & surplus	42.39	290.22	(71.90)	44.45	(0.07)
8.	Total assets	77.75	1,442.86	4,660.36	7,122.77	475.68
9.	Total liabilities	35.28	1,132.64	3,610.02	5,493.71	475.65
10.	Investments	-	-	-	-	-
11.	Turnover	-	5,223.84	388.25	86.87	182.09
12.	Profit before taxation	(0.16)	118.31	(21.93)	9.65	-
13.	Provision for taxation	0.02	41.88	-	1.99	0.07
14.	Profit after taxation	(0.18)	76.43	(21.93)	7.66	(0.07)
15.	Proposed dividend	-	-	-	-	-
16.	% of Shareholding	100%	100%	65%	74%	74%

#### Notes:

1.	Subsidiaries which are yet to commence operations.	Nil
2.	Subsidiaries which have been liquidated or sold during the year.	Nil



Part "B": Associates and Joint Ventures  
Statement pursuant to Section 129 (3) of the Companies Act, 2013

Sl. No.	Name of Joint Ventures	Latest Audited Balance Sheet Date	Utility Powertech Ltd.	NTPC - GE Power Services Pvt. Ltd.	NTPC SAIL Power Company Ltd.	NTPC Tamilnadu Energy Company Ltd.	Ratnagiri Gas and Power Pvt. Ltd.	Aravali Power Company Pvt. Ltd.	Mega Uja Nigam Pvt. Ltd.	NTPC-BHEL Power Projects Pvt. Ltd.	BF-NTPC Energy Systems Ltd.	Nabinagar Power Generating Co. Pvt. Ltd.	National High Power Test Laboratory Pvt. Ltd.	Transformers & Electricals Kerala Ltd.	Energy Efficiency Services Ltd.	CIL NTPC Uja Pvt. Ltd.	Anushakti Vidyut Nigam Ltd.	Tincomalee Power Company Ltd.	Bangladesh-India Friendship Power Company Pvt. Ltd.	Hindustan Uranak & Rasayan Limited
1.			31.03.2017	31.03.2016	31.03.2017	31.03.2016	31.03.2016	31.03.2017	31.03.2017	31.03.2016	31.03.2017	31.03.2017	31.03.2016	31.03.2016	31.03.2016	31.03.2016	31.03.2017	31.03.2016	30.06.2016	NA
2.			23.11.1995	27.09.1999	08.02.1999	23.05.2003	08.07.2005	21.12.2006	02.04.2008	28.04.2008	19.06.2008	09.09.2008	22.05.2009	19.06.2009	10.12.2009	27.04.2010	27.01.2011	26.09.2011	31.10.2012	15.06.2016
3.																				
			2,000,000	3,000,000	490,950,050	1,385,606,112	974,308,300	1,398,508,800	1,166,439,800	50,000,000	6,570,900	1,189,300,000	30,400,000	19,163,438	146,500,000	76,900	49,000	3,986,061	16,950,000	5,025,000
			1.00	3.00	490.25	1,385.61	974.30	1,398.51	1,166.44	50.00	6.57	1,189.30	30.40	31.34	146.50	0.08	0.05	15.90	134.90	5.03
			50.00%	50.00%	50.00%	50.00%	95.51%	50.00%	50.00%	50.00%	49.00%	50.00%	20.00%	44.60%	31.70%	50.00%	49.00%	50.00%	50.00%	33.98%
4.			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5.			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6.			40.83	11.80	986.76	1,125.84	64.36	2,364.60	1,193.03	59.78	2.83	1,212.15	21.64	38.49	65.94	0.03	0.01	10.74	63.00	NA
7.																				
i.			9.43	0.27	193.39	98.97	(47.03)	393.53	(0.04)	(38.46)	(0.12)	(0.15)	-	0.47	19.41	-	-	0.12	-	(1.60)
ii.			NA	NA	NA	NA	(738.97)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA



**Notes:**

**A. Names of Joint Ventures which are yet to commence operations.**

- 1 Meja Urja Nigam Private Ltd.
- 2 BF - NTPC Energy Systems Ltd.
- 3 Nabinagar Power Generating Company Private Ltd.
- 4 National High Power Test Laboratory Private Ltd.
- 5 CIL NTPC Urja Private Ltd.
- 6 Anushakti Vidyut Nigam Ltd.
- 7 Hindustan Urvarak & Rasayan Ltd.
- 8 Trincomalee Power Company Ltd. (incorporated in Srilanka)
- 9 Bangladesh-India Friendship Power Company Private Ltd. (incorporated in Bangladesh)

**B. Names of Associates or Joint Ventures which have been liquidated or sold during the year.**

No Joint Venture or Associate has been liquidated or sold during the year. However, M/s NTPC SCCL Global Ventures Pvt.Ltd., M/s National Power Exchange Ltd. and M/s Pan-Asian Renewables Pvt. Ltd are in the process of voluntary winding up.

For and on behalf of the Board of Directors

(K.P. Gupta)  
Company Secretary

(K.Biswal)  
Director (Finance)

(Gurdeep Singh)  
Chairman & Managing Director

For T.R. Chadha & Co LLP  
Chartered Accountants  
Firm Reg. No. 006711N/N500028

For PSD & Associates  
Chartered Accountants  
Firm Reg. No. 004501C

For Sagar & Associates  
Chartered Accountants  
Firm Reg. No. 003510S

(Neena Goel)  
Partner  
M No. 057986

(Prakash Sharma)  
Partner  
M No. 072332

(D. Manohar)  
Partner  
M No. 029644

For Kalani & Co.  
Chartered Accountants  
Firm Reg. No. 000722C

For P. A. & Associates  
Chartered Accountants  
Firm Reg. No. 313085E

For S. K. Kapoor & Co.  
Chartered Accountants  
Firm Reg. No. 000745C

For B M Chatrath & Co. LLP  
Chartered Accountants  
Firm Reg. No. 301011E/E300025

(Varun Bansal)  
Partner  
M No. 402856

(P.S.Panda)  
Partner  
M No.051092

(Sanjiv Kapoor)  
Partner  
M.No. 070487

(P. R. Paul)  
Partner  
M.No. 051675

Place: New Delhi  
Date: 29 May 2017



## INDEPENDENT AUDITORS' REPORT

### TO THE MEMBERS OF NTPC LIMITED

#### Report on the Consolidated Ind AS Financial Statements

We have audited the accompanying Consolidated Ind AS 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, comprising of the Consolidated Balance Sheet as at 31 March, 2017, the Consolidated Statement of Profit and Loss (including other comprehensive income), the Consolidated Statement of Cash Flows, the Consolidated Statement of Changes in Equity, for the year then ended, and a summary of the significant accounting policies and other explanatory information (hereinafter referred to as "the consolidated Ind AS financial statements").

#### Management's Responsibility for the Consolidated Ind AS Financial Statements

The Holding Company's Board of Directors is responsible for the preparation of these consolidated Ind AS financial statements in terms of the requirements of the Companies Act, 2013 (hereinafter referred to as "the Act") that give a true and fair view of the consolidated financial position, consolidated financial performance (including other comprehensive income), consolidated cash flows and consolidated changes in equity of the Group including its Joint ventures in accordance with the accounting principles generally accepted in India, including Indian 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 the accuracy and completeness of the accounting records, relevant to the preparation and presentation of the Ind AS 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 Ind AS financial statements by the Directors of the Holding Company, as aforesaid.

#### Auditors' Responsibility

Our responsibility is to express an opinion on these consolidated Ind AS financial statements based on our audit. While conducting the audit, we have taken into account the provisions of the Act, the accounting and auditing standards and matters which are required to be included in the audit report under the provisions of the Act and the Rules made there under.

We conducted our audit in accordance with the Standards on Auditing specified under Section 143(10) of the Act. Those Standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated Ind AS financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and the disclosures in the consolidated Ind AS financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the consolidated Ind AS financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal financial control relevant to the Holding Company's preparation of the consolidated Ind AS financial statements that give a true and fair view in order to design audit procedures that are appropriate in the circumstances. An audit also includes evaluating the appropriateness of the accounting policies used and the reasonableness of the accounting estimates made by the Holding Company's Board of Directors, as well as evaluating the overall presentation of the consolidated Ind AS financial statements.

We believe that the audit evidence obtained by us and the audit evidence obtained by the other auditors in terms of their reports referred to in sub-paragraph (a) of the Other Matters paragraph below, is sufficient and appropriate to provide a basis for our audit opinion on the consolidated Ind AS financial statements.

#### Opinion

In our opinion and to the best of our information and according to the explanations given to us and based on the consideration of reports of other auditors on separate Ind AS financial statements and on the other financial information of the subsidiaries and joint ventures, the aforesaid consolidated Ind AS financial statements give the information required by 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, 2017, and their consolidated net profit (financial performance including other comprehensive income), their consolidated cash flows and consolidated changes in equity for the year ended on that date.

### Emphasis of Matter

We draw attention to the following matters in the Notes to the consolidated Ind AS financial statements:

- Note No.37 (a) and (b) regarding billing & recognition of sales on provisional basis and measurement of GCV of coal on 'as received' basis after secondary crusher till 30 September 2016 and GCV measured on wagon top w.e.f. 1 October 2016 pending final decision of the matter by Hon'ble Delhi High Court, in line with the CERC order, and related matters as mentioned in said note;
- Note No. 47 in respect of Company's ongoing project where the order of NGT has been stayed by the Hon'ble Supreme Court of India and the matter is sub-judice.

Our opinion is not modified in respect of these matters.

### Other Matters

- The comparative financial information of the Group and its joint ventures for the year ended 31 March 2016 and the transition date opening balance sheet as at 1 April 2015 included in these consolidated Ind AS financial statements, are based on the previously issued statutory financial statements prepared in accordance with the Companies (Accounting Standards) Rules, 2006 audited by us/the predecessor auditors, whose audit report for the year ended 31 March 2016 and 31 March 2015 dated 30 May 2016 and 29 May 2015 respectively expressed an unmodified opinion on those consolidated Ind AS financial statements, as adjusted for the differences in the accounting principles adopted by the Group and its joint ventures on transition to the Ind AS, which have been audited by us with respect to Holding Company and by other auditors with respect to its audited subsidiaries and joint ventures.
- We did not audit the financial statements/ financial information of the following subsidiaries whose financial statements reflect the details given below of total assets and net assets as at 31 March 2017, total revenues and net cash flows for the year ended on that date to the extent to which they are reflected in the consolidated Ind AS financial statements:

(₹ Crore)

Name of the Subsidiaries	Total Assets	Net Assets	Total Revenues	Net Cash Inflows/ (Outflows)
1) NTPC Electric Supply Company Ltd	77.75	42.47	-	-
2) NTPC Vidyut Vyapar Nigam Ltd.	1442.87	310.22	5261.16	159.45
3) Kanti Bijlee Utpadan Nigam Ltd.	4660.36	1283.77	416.30	(4.08)
4) Bhartiya Rail Bijlee Company Ltd.	7122.77	1876.99	88.79	(116.67)
5) Patratu Vidyut Utpadan Nigam Ltd.	475.68	46.65	182.41	1.04
<b>Total</b>	<b>13779.43</b>	<b>3560.10</b>	<b>5948.66</b>	<b>39.74</b>

The consolidated Ind AS financial statements also include the Group's share of net profit/loss (including Other Comprehensive Income) for the year ended 31 March 2017 as considered in the consolidated Ind AS financial statements in respect of following joint ventures whose financial statements/ financial information have not been audited by us:

(₹ Crore)

Name of Joint Ventures	Group's share net profit/(loss)
1) Utility Powertech Ltd.	9.43
2) NTPC-SAIL Power Company Ltd. (Previously NTPC-SAIL Power Company Pvt. Ltd.)	193.39
3) Aravali Power Company Pvt. Ltd.	393.53
4) Meja Urja Nigam Pvt. Ltd.	(0.04)
5) Nabinagar Power Generating Company Pvt. Ltd.	(0.15)
6) Anushakti Vidyut Nigam Ltd.	-
7) BF-NTPC Energy Systems Ltd.	(0.12)
<b>Total</b>	<b>596.04</b>

## 41<sup>st</sup> Annual Report 2016-17

Independent Auditors' Report on Consolidated Financial Statements



These financial statements/ financial information of subsidiaries and joint ventures have been audited by other auditors whose reports have been furnished to us by the Holding Company's Management upto 25 May 2017 and our opinion on the consolidated Ind AS financial statements, in so far as it relates to the amounts and disclosures included in respect of these subsidiaries and joint ventures, and our report in terms of sub-section (3) of Section 143 of the Act, insofar as it relates to the aforesaid subsidiaries and joint ventures is based solely on the reports of the other auditors after considering the requirement of Standard on Auditing (SA 600) on 'Using the work of Another Auditor' including materiality.

- (c) The consolidated Ind AS financial statements also include the Group's share of net profit/loss (including Other Comprehensive Income) for the year ended 31 March 2017 as considered in the consolidated Ind AS financial statements in respect of following joint ventures whose financial statements/ financial information are unaudited:-

(₹ Crore)

Name of Joint Ventures	Group's share of net profit/(loss)
1) NTPC- GE Power Services Private Ltd. (Previously NTPC Alstom Power Services Pvt. Ltd)	0.27
2) NTPC Tamil Nadu Energy Company Ltd.	98.97
3) Ratnagiri Gas & Power Pvt. Ltd.	(47.03)
4) NTPC-BHEL Power Project Pvt. Ltd.	(38.46)
5) National High Power Test Laboratory Pvt. Ltd.	-
6) Transformers and Electricals Kerala Ltd.	0.47
7) Energy Efficiency Services Ltd.	19.41
8) CIL NTPC Urja Pvt. Ltd.	-
9) Hindustan Urvarak and Rasayan Ltd.	(1.60)
10) Trincomalee Power Company Ltd. *	0.12
11) Bangladesh India Friendship Power Company Pvt. Ltd. *	-
<b>Total</b>	<b>32.15</b>

\* Located Outside India

These financial statements/ financial information have been furnished to us by the Holding Company's Management and our opinion on the consolidated Ind AS financial statements, in so far as it relates to the amounts 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 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 Ind AS 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) & (c) above, with respect to our reliance on the work done and the reports of the other auditors and the financial statements / financial information certified by the Holding Company's Management.

#### Report on Other Legal and Regulatory Requirements

- 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 noted in the other matter paragraph, we report, to the extent applicable, that:
  - 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 Ind AS financial statements.
  - In our opinion, proper books of account as required by law relating to preparation of the aforesaid consolidated Ind AS 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 Cash Flows and the Consolidated Statement of Changes in Equity dealt with by this Report are in agreement with the relevant books of account maintained for the purpose of preparation of the Consolidated Ind AS financial statements.
- d) In our opinion, the aforesaid consolidated Ind AS 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 5<sup>th</sup> 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. Further, on the basis of the reports of the auditors of seven joint ventures incorporated in India, none of the directors of the joint ventures incorporated in India is disqualified as on 31 March, 2017 from being appointed as a director in terms of Section 164 (2) of the Act.
- f) With respect to the adequacy of the internal financial controls over financial reporting 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.
- g) 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, 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 as also the other financial information of the subsidiaries and joint ventures, as noted in the 'Other Matters' paragraph:
- The consolidated Ind AS financial statements disclose the impact of pending litigations on the consolidated financial position of the Group (Refer Note No. 70 to the consolidated Ind AS financial statements).
  - Provision has been made in the consolidated Ind AS financial statements, as required under the applicable law or Indian Accounting Standards, for material foreseeable losses, on long-term contracts including derivative contracts.
  - There has been no delay in transferring amounts, required to be transferred, to the Investor Education and Protection Fund by the Group.
  - Requisite disclosure has been provided in Note No. 71 of consolidated Ind AS financial statements as to holdings as well as dealings in Specified Bank Notes (SBN) during the period from 8 November 2016 to 30 December 2016 by the Group. Based on the audit procedures, audit report submitted by other auditors and relying on the management representation, we report that the disclosures are in accordance with the books of accounts and records maintained by the Group. However, as stated in the said note, SBN aggregating to ₹ 39,44,500/- have been received during the period from transactions at Hospitals/Guest houses etc. and from deposit of imprest /staff advance by employees of the Group at project stations, which were not permitted.

For T.R. Chadha & Co LLP  
Chartered Accountants  
Firm Reg. No. 006711N/N500028

(Neena Goel)  
Partner  
M No. 057986

For PSD & Associates  
Chartered Accountants  
Firm Reg. No. 004501C

(Prakash Sharma)  
Partner  
M No. 072332

For Sagar & Associates  
Chartered Accountants  
Firm Reg. No. 003510S

(D. Manohar)  
Partner  
M No. 029644

For Kalani & Co.  
Chartered Accountants  
Firm Reg. No. 000722C

(Varun Bansal)  
Partner  
M No. 402856

For P. A. & Associates  
Chartered Accountants  
Firm Reg. No. 313085E

(P.S.Panda)  
Partner  
M No.051092

For S. K. Kapoor & Co.  
Chartered Accountants  
Firm Reg. No. 000745C

(Sanjiv Kapoor)  
Partner  
M.No. 070487

For B M Chatrath & Co. LLP  
Chartered Accountants  
Firm Reg. No. 301011E/E300025

(P. R. Paul)  
Partner  
M.No. 051675

Place: New Delhi  
Date: 29 May 2017

## 41<sup>st</sup> Annual Report 2016-17

Independent Auditors' Report on Consolidated Financial Statements





## **ANNEXURE TO THE INDEPENDENT AUDITOR'S REPORT OF EVEN DATE ON THE CONSOLIDATED IND-AS FINANCIAL STATEMENTS OF NTPC LIMITED**

### **Report on the Internal Financial Controls 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 Ind AS financial statements of the Company as of and for the year ended 31 March 2017, we have audited the internal financial controls over financial reporting 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 control over financial reporting criteria established by the Company considering the 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 over financial reporting 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") issued by the ICAI and the Standards on Auditing, issued by ICAI and deemed to be prescribed under section 143(10) of the Companies Act, 2013, to the extent applicable to an audit of internal financial controls, both issued by the Institute of Chartered Accountants of India. 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 over financial reporting 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 controls system over financial reporting and their operating effectiveness. Our audit of internal financial controls over financial reporting included obtaining an understanding of internal financial controls over financial reporting, 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 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 audit opinion on the Company's internal financial controls system over financial reporting.

#### **Meaning of Internal Financial Controls Over Financial Reporting**

A company's internal financial control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal financial control over financial reporting 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 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 financial statements.



### Inherent Limitations of Internal Financial Controls Over Financial Reporting

Because of the inherent limitations of internal financial controls over financial reporting, 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 over financial reporting to future periods are subject to the risk that the internal financial control over financial reporting may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

### Opinion

In our opinion to the best of our information and according to explanations given to us, the Holding Company, its subsidiaries and joint ventures, which are companies incorporated in India, have, in all material respects, an adequate internal financial controls system over financial reporting and such internal financial controls over financial reporting were operating effectively as at 31 March 2017, based on the internal control 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.

### Other Matters

Our aforesaid report under Section 143(3)(i) of the Act on the adequacy and operating effectiveness of the internal financial controls over financial reporting insofar as it relates to five 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 over financial reporting insofar as it relates to 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 over financial reporting of the Group is not affected as these financial statements / financial information are not material to the Group.

For T.R. Chadha & Co LLP  
Chartered Accountants  
Firm Reg. No. 006711N/N500028

(Neena Goel)  
Partner  
M No. 057986

For PSD & Associates  
Chartered Accountants  
Firm Reg. No. 004501C

(Prakash Sharma)  
Partner  
M No. 072332

For Sagar & Associates  
Chartered Accountants  
Firm Reg. No. 003510S

(D. Manohar)  
Partner  
M No. 029644

For Kalani & Co.  
Chartered Accountants  
Firm Reg. No. 000722C

(Varun Bansal)  
Partner  
M No. 402856

For P. A. & Associates  
Chartered Accountants  
Firm Reg. No. 313085E

(P.S.Panda)  
Partner  
M No.051092

For S. K. Kapoor & Co.  
Chartered Accountants  
Firm Reg. No. 000745C

(Sanjiv Kapoor)  
Partner  
M.No. 070487

For B M Chatrath & Co. LLP  
Chartered Accountants  
Firm Reg. No. 301011E/E300025

(P. R. Paul)  
Partner  
M.No. 051675

Place: New Delhi  
Date: 29 May 2017



## COMMENTS OF 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 2017

The preparation of consolidated financial statements of NTPC Limited for the year ended 31 March 2017 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 29 May 2017.

I, on behalf of the Comptroller and Auditor General of India, have conducted a supplementary audit under Section 143(6) (a) read with Section 129(4) of the Act of the consolidated financial statements of NTPC Limited for the year ended 31 March 2017. We conducted a supplementary audit of the financial statements of NTPC Limited, NTPC Vidyut Vyapar Nigam Limited, Kanti Bijlee Utpadan Nigam Limited, Patratu Vidyut Utpadan Limited, Aravali Power Company Private Limited, Meja Urja Nigam Private Limited, Nabinagar Power Generating Company Private Limited, Anushakti Vidyut Nigam Limited, NTPC-SAIL Power Company Private Limited and Hindustan Urvarak and Rasayan Limited but did not conduct supplementary audit of the financial statements of subsidiaries, associate companies and jointly controlled entities listed in Annexure-1 for the year ended on that date. Further, Section 139(5) and 143(6)(b) of the Act are not applicable to Utility Powertech Limited, NTPC Alstom Power Services Private Limited and BF-NTPC Energy Systems Limited being private entities and Trincomalee Power Company Limited and Bangladesh-India Friendship Power Company Private Limited being entities incorporated in Foreign countries under the respective laws, for appointment of their Statutory Auditor or for conduct of supplementary audit. Accordingly, C&AG 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. On the basis of my audit nothing significant has come to my knowledge which would give rise to any comment upon or supplement to statutory auditors' report.

For and on behalf of the  
Comptroller & Auditor General of India

(Ritika Bhatia)  
Principal Director of Commercial Audit & Ex-officio Member,  
Audit Board - III, New Delhi

Place: New Delhi  
Dated: 24 July, 2017

### ANNEXURE-I

List of subsidiaries, associate companies and jointly controlled entities of NTPC Limited whose financial statements for the year 2016-17 were not audited by the Comptroller and Auditor General of India

#### A. Subsidiaries incorporated in India

1. NTPC Electric Supply Company Limited
2. Bhartiya Rail Bijlee Company Limited

#### B. Joint Ventures incorporated in India

1. Ratnagiri Gas & Power Pvt. Ltd.
2. NTPC Tamilnadu Energy Company Limited
3. NTPC-BHEL Power Projects Pvt. Ltd.
4. Transformers & Electricals Kerala Ltd.
5. CIL NTPC Urja Pvt. Ltd.
6. Energy Efficiency Services Ltd.
7. National High Power Test Laboratory Private Limited

[illegible]

## Notes



## NTPC Limited

CIN: L40101DL1975GOI007966

Regd. Office : NTPC Bhawan, SCOPE Complex, 7, Institutional Area, Lodhi Road, New Delhi-110003

Tel : 011-24369034 Fax: 011-24360241 Web : www.ntpc.co.in Email: csntpc@ntpc.co.in

### ATTENDANCE SLIP

**41<sup>ST</sup> ANNUAL GENERAL MEETING TO BE HELD ON WEDNESDAY, 20<sup>TH</sup> SEPTEMBER, 2017 AT 10:30 A.M.**

NAME OF THE ATTENDING MEMBER (IN BLOCK LETTERS)	
*Folio No.	
DP ID No.	
Client ID No.	
No. of shares held	
NAME OF PROXY (IN BLOCK LETTERS, TO BE FILLED IN IF THE PROXY ATTENDS INSTEAD OF THE MEMBER)	

I, hereby record my presence at 41<sup>st</sup> Annual General Meeting of the Company held on Wednesday, 20<sup>th</sup> September, 2017 at Manekshaw Centre, Parade Road, New Delhi – 110 010.

Signature of Member/ Proxy

\*Applicable in case of shares held in Physical Form.

#### NOTES:

1. The attendance slip should be signed as per the specimen signature registered with Karvy Computershare Private Limited, Registrar & Transfer Agent (RTA)/ Depository Participant (DP). Such duly completed and signed Attendance Slip(s) should be handed over at the RTA counter(s) at the venue against which RTA will provide admission card. Entry to the hall will be strictly on the basis of admission card as provided by RTA. Members in person and Proxy holders may please carry photo-ID card for identification/verification purposes.
2. Shareholder(s) present in person or through registered proxy shall only be entertained.
3. Due to strict security reasons mobile phones, brief cases, eatables and other belongings are not allowed inside the Auditorium. Shareholder(s)/proxy holder(s) will be required to take care of their belonging(s).
4. No gifts will be distributed at the Annual General Meeting.

\*\*\*\*\*





[illegible]

## Notes



## NTPC Limited

CIN: L40101DL1975GOI007966

Regd. Office : NTPC Bhawan, SCOPE Complex, 7, Institutional Area, Lodhi Road, New Delhi-110 003  
Tel : 011-24369034 Fax: 011-2436 0241 Web: www.ntpc.co.in Email : csntpc@ntpc.co.in

### FORM OF PROXY

Name of the member(s):	
Registered address:	
Folio No/ DP ID-Client Id:	
Email ID	
No. of Shares held	

I/We, being the member (s) of ..... shares of the above named company, hereby appoint:

1.	Name:		
	Address:		
	E-mail Id:		
		Signature:	
		Or failing him	
2.	Name:		
	Address:		
	E-mail Id:		
		Signature:	
		Or failing him	
3.	Name:		
	Address:		
	E-mail Id:		
		Signature:	

as my/our proxy to attend and vote (on a poll) for me/us and on my/our behalf at the Annual General Meeting of the company, to be held on Wednesday, 20<sup>th</sup> September, 2017 at Manekshaw Centre, Parade Road, New Delhi – 110 010 and at any adjournment thereof in respect of such resolutions as are indicated below:

Sr. No.	Resolution	For	Against
<b>Ordinary Business</b>			
1.	Adoption of audited standalone financial statements and consolidated financial statement of the Company for the year ended March 31, 2017, the reports of the Board of Directors and Auditors thereon.		
2.	Confirmation of payment of interim dividend and to declare final dividend for the year 2016-17.		
3.	Re-appointment of Shri K.K. Sharma (DIN: 03014947), who retires by rotation		
4.	Fixation of remuneration of Statutory Auditors		
<b>Special Business</b>			
5.	Appointment of Shri Saptarshi Roy (DIN: 03584600), as Director (Human Resources)		
6.	Appointment of Shri Anand Kumar Gupta (DIN: 07269906), as Director (Commercial)		
7.	Ratification of remuneration of the Cost Auditors for the financial year 2017-18		
8.	Raising of funds upto ₹ 15,000 Crore through issue of Bonds/Debt Securities on Private Placement basis		
9.	Amending Articles of Association of the Company to insert provision regarding Consolidation and re-issuance of debt Securities		

Signed this ..... day of ..... 2017

Affix Revenue  
Stamp of  
₹ 1/-

Signature of shareholder \_\_\_\_\_ Signature of Proxy holder(s) \_\_\_\_\_

#### NOTES:

- This form of proxy in order to be effective should be duly completed and deposited at the Registered Office of the Company, not less than 48 hours before the commencement of the meeting.
- The Proxy Form should be signed across the stamp as per specimen signature registered with the RTA/Depository Participant (DP).
- Please put 'X' in the appropriate column against the resolutions indicated in the Box. If you leave the 'For' or 'Against' column blank against any or all the resolutions, your Proxy will be entitled to vote in the manner as he/she thinks appropriate.
- Appointing a proxy does not prevent a member from attending the meeting in person if he so wishes.
- In the case of joint holders, the signature of any one holder will be sufficient, but names of all the joint holders should be stated.

ELECTRONIC VOTING PARTICULARS		
EVEN (Remote e-voting Event Number)	USER ID	PASSWORD / PIN

Note: Please read instructions given overleaf carefully before voting electronically.

**41<sup>st</sup> Annual Report 2016-17**

Form of Proxy

## PROCEDURE AND INSTRUCTIONS FOR REMOTE E-VOTING & WEB CHECK-IN

- I. Remote e-voting:** In compliance with the provisions of Section 108 of the Companies Act, 2013, read with Rule 20 of the Companies (Management and Administration) Rules, 2014, as amended and the provisions of Regulation 44 of the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015, the Members are provided with the facility to cast their vote electronically, through the e-voting services provided by Karvy Computershare Private Limited (Karvy) on all resolutions set forth in this Notice, from a place other than the venue of the Meeting (Remote e-voting).

**(A) In case a Member receives an email from Karvy [for Members whose email IDs are registered with the Company/Depository Participant (s)]:**

- i. Launch internet browser by typing the URL: <https://evoting.karvy.com>.
- ii. Enter the login credentials (i.e. User ID and password). In case of physical folio, User ID will be EVEN (E-Voting Event Number) xxxx followed by folio number. In case of Demat account, User ID will be your DP ID and Client ID. However, if you are already registered with Karvy for e-voting, you can use your existing User ID and password for casting your vote.
- iii. After entering these details appropriately, click on "LOGIN".
- iv. You will now reach password change Menu wherein you are required to mandatorily change your password. The new password shall comprise minimum 8 characters with at least one upper case (A- Z), one lower case (a-z), one numeric value (0-9) and a special character (@, #, \$, etc.). The system will prompt you to change your password and update your contact details like mobile number, email ID etc. on first login. You may also enter a secret question and answer of your choice to retrieve your password in case you forget it. It is strongly recommended that you do not share your password with any other person and that you take utmost care to keep your password confidential.
- v. You need to login again with the new credentials.
- vi. On successful login, the system will prompt you to select the "EVENT" i.e., "Name of the Company"
- vii. On the voting page, enter the number of shares (which represents the number of votes) as on the Cut-off Date under "FOR/ AGAINST" or alternatively, you may partially enter any number in "FOR" and partially "AGAINST" but the total number in "FOR/ AGAINST" taken together shall not exceed your total shareholding as mentioned herein above. You may also choose the option ABSTAIN. If the Member does not indicate either "FOR" or "AGAINST" it will be treated as "ABSTAIN" and the shares held will not be counted under either head.
- viii. Members holding multiple folios/demat accounts shall choose the voting process separately for each folio/demat accounts.
- ix. Voting has to be done for each item of the notice separately. In case you do not desire to cast your vote on any specific item, it will be treated as abstained.
- x. You may then cast your vote by selecting an appropriate option and click on "Submit".
- xi. A confirmation box will be displayed. Click "OK" to confirm else "CANCEL" to modify. Once you have voted on the resolution (s), you will not be allowed to modify your vote. During the voting period, Members can login any number of times till they have voted on the Resolution(s).
- xii. Corporate/Institutional Members (i.e. other than Individuals, HUF, NRI etc.) are also required to send scanned certified true copy (PDF Format) of the Board Resolution/Authority Letter etc., together with attested specimen signature(s) of the duly authorised representative(s), to the Scrutinizer at email [aka\\_pcs@yahoo.com](mailto:aka_pcs@yahoo.com) with a copy marked to [evoting@karvy.com](mailto:evoting@karvy.com). The scanned image of the above mentioned documents should be in the naming format " Corporate Name\_Event No."

**(B) In case of Members receiving physical copy of Notice [for Members whose email IDs are not registered with the Company/ Depository Participant (s)]:**

- i. Remote E-Voting Event Number – XXXX (EVEN), User ID and Password is provided in the Attendance Slip.
- ii. Please follow all steps from Sl. No. (i) to (xii) above to cast your vote by electronic means.

- II. Voting at AGM:** The Members, who have not cast their vote through Remote e-voting can exercise their voting rights at the AGM. The Company will make necessary arrangements in this regard at the AGM Venue. The facility for voting through ballot shall be made available at the Meeting. Members who have already cast their votes by Remote e-voting are eligible to attend the Meeting; however those Members are not entitled to cast their vote again in the Meeting.

A Member can opt for only single mode of voting i.e. through Remote e-voting or voting at the AGM. If a Member casts votes by both modes then voting done through Remote e-voting shall prevail and vote at the AGM shall be treated as invalid.

## 41<sup>st</sup> Annual Report 2016-17



## OTHER INSTRUCTIONS

- In case of any query and/or grievance, in respect of voting by electronic means, Members may refer to the Help & Frequently Asked Questions (FAQs) and E-voting user manual available at the download section of <https://evoting.karvy.com> (Karvy Website) or contact Shri Suresh Babu D (Unit: NTPC Limited) of Karvy Computershare Private Limited, Karvy Selenium Tower B, Plot 31-32, Gachibowli, Financial District, Nanakramguda, Hyderabad - 500 032 or at [evoting@karvy.com](mailto:evoting@karvy.com) or phone no. +91 040 6716 1518 or call Karvy's toll free No. 1800-34-54-001 for any further clarifications.
- You can also update your mobile number and e-mail id in the user profile details of the folio which may be used for sending future communication(s).
- The remote e-voting period commences on **Saturday, September 16, 2017 (9:00 A.M. IST)** and ends on **Tuesday, September 19, 2017 (5:00 P.M. IST)**. During this period, Members of the Company, holding shares either in physical form or in dematerialized form, as on the cut-off date of September 13, 2017, may cast their votes electronically. A person who is not a Member as on the cut-off date should treat this Notice for information purposes only. The remote e-voting module shall be disabled for voting thereafter. Once the vote on a resolution(s) is cast by the Member, the Member shall not be allowed to change it subsequently.
- The voting rights of Members shall be in proportion to their share of the paid up equity share capital of the Company as on the cut-off date i.e. September 13, 2017.
- In case a person has become a Member of the Company after dispatch of AGM Notice but on or before the cut-off date for Remote E-voting i.e. September 13, 2017, he/she may obtain the User ID and Password in the manner as mentioned below :
  - If the mobile number of the member is registered against Folio No./ DP ID Client ID, the member may send **SMS: MYEPWD <space> E-Voting Event Number+Folio No. or DP ID Client ID to 9212993399**  
 Example for NSDL:  
 MYEPWD <SPACE> IN12345612345678  
 Example for CDSL:  
 MYEPWD <SPACE> 1402345612345678  
 Example for Physical:  
 MYEPWD <SPACE> XXXX1234567890
  - If e-mail address or mobile number of the member is registered against Folio No. / DP ID Client ID, then on the home page of <https://evoting.karvy.com>, the member may click "Forgot Password" and enter Folio No. or DP ID Client ID and PAN to generate a password.
  - Member may call Karvy's toll free number 1800-3454-001.
  - Member may send an e-mail request to [evoting@karvy.com](mailto:evoting@karvy.com). However, Karvy shall endeavour to send User ID and Password to those new Members whose mail ids are available.

## PROCEDURE AND INSTRUCTIONS FOR ATTENDANCE REGISTRATION/ WEB CHECK-IN

**Attendance Registration/ Web Check-in:** Members are requested to tender their attendance slips at the registration counters at the venue of the AGM and seek registration before entering the meeting hall. Alternatively, to facilitate hassle free and quick registration/entry at the venue of the AGM, the Company has provided a Web-Check in facility through Karvy's website. Web Check-in on the Karvy's website enables the Members to register attendance online in advance and generate Attendance Slip without going through the registration formalities at the registration counters.

Procedure of Web Check-in is as under:

- Log on to <https://karisma.karvy.com> and click on "Web Check-in for General Meetings (AGM/EGM/CCM)".
- Select the name of the company: NTPC Limited
- Pass through the security credentials viz., DP ID/Client ID/Folio no., PAN No. & "CAPTCHA" as directed by the system and click on the submission button.
- The system will validate the credentials. Then click on the "Generate my attendance slip" button that appears on the screen.
- The attendance slip in PDF format will appear on the screen. Select the "PRINT" option for direct printing or download and save for the printing.
- A separate counter will be available for the online registered Members at the AGM Venue for faster and hassle free entry and to avoid standing in the queue.
- After registration, a copy will be returned to the Member.
- The Web Check-in (Online Registration facility) is available for AGM during e-voting period only i.e. **Saturday, September 16, 2017 (9:00 A.M. IST) and ends on Tuesday, September 19, 2017 (5:00 P.M. IST)**.
- The Members are requested to carry their valid photo identity along with the above attendance slip for verification purpose.

\*\*\*



## 41<sup>st</sup> Annual Report 2016-17

Location Map





# Achievements & Accolades



Shri K. Biswal, Director (Finance) receiving leading Infra Company Award for Excellent Financial and Operational performance from Shri Anil Swarup, the then Secretary (Coal) Government of India.



Business Standard Star PSU Award presented by Shri Arun Jaitley, Hon'ble Union Finance Minister to Shri Gurdeep Singh, CMD, NTPC Limited.



Shri S. Roy, Director (HR) receiving SCOPE Corporate Communication Excellence Award-2016 bestowed on NTPC for Brand Building.



Shri K.K. Sharma, Director (Operations) and Chairman NSPCL, receiving SCOPE Gold Trophy from Shri Pranab Mukherjee, the then Hon'ble President of India.



**CMD and Directors of NTPC Limited**



A Maharatna Company

***NTPC Limited***

(A Govt. of India Enterprise)

(CIN: L40101DL1975GOI007966)

**Regd. Office :** NTPC Bhawan, SCOPE Complex, 7, Institutional Area,  
Lodhi Road, New Delhi- 110003. **Tel No :** 011-24387333, **Fax No :** 011-24361018,  
**E- Mail :** ntpccc@ntpc.co.in; **Website :** www.ntpc.co.in