



Dated: June 15, 2018

**The Manager
BSE Limited
Corporate Relationship Department
Phiroze Jeejeebhoy Towers
Dalal Street
Mumbai- 400001**

**The Manager
National Stock Exchange of India Ltd
Listing Department
Exchange Plaza, 5th Floor, Plot no C/1
G Block, Bandra Kurla Complex
Bandra (E), Mumbai-400 051**

Scrip Code: BSE- 540750; NSE- IEX

Subject: Investors Presentation

Dear Sir / Madam,

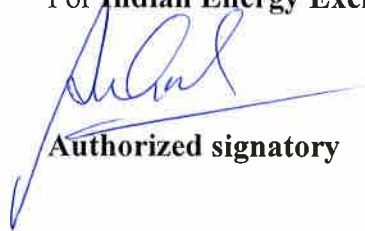
Pursuant to Regulation 30 of the SEBI (LODR) Regulations, 2015, please find attached updated Investor presentation to be discussed during investor/Analyst meetings.

This is for your information and records.

Thanking You

Yours faithfully,

For **Indian Energy Exchange Limited**


Authorized signatory



Investor Presentation

June 2018

Exchange: A Competitive 'Market'

- Exchanges provide a **transparent, competitive and efficient platform** for transactions in any market – Stock or commodity. Same is true for power sector.
- The concept of Exchanges in Power Sector was initially **introduced in 1990-91 in Europe.**
- **Now, worldwide Power Exchanges are operating in almost 40 countries.**
- Power Exchanges are **most preferred option for sale and purchase of Power.**
- In India, **after Electricity Act, 2003 market framework for Exchange operations was put in place.**
- Exchanges in India started operations from 2008.

IEX, India's leading Power Exchange



- **Inception in June 2008**
- Operating under the Regulatory oversight of Central Electricity Regulatory Commission (CERC)
- Transparent online market platform for **delivery based trading**
- **Flexible trading** with separate price discovery for 96 time-blocks of **15 min each for Day-Ahead Market**
- **Technology buy out:** On May 16, 2017, IEX acquired trading software along with the team
- **IEX became publically listed on 23rd October 2017**

Company Snapshot



➤ Market Share: **97%**

➤ Average daily trade: **5000+ MW**

➤ High Participation: **6200+**

3900+ Industries | **50** Discoms (all) | **100+** ESCert Entities

400+ Generators | **1500+** RE Generators & Obligated entities

Transparency

Liquidity

Competition

Market Share-FY 18 (DAM & TAM)
Average Daily Trade- FY18

IEX Market Segments

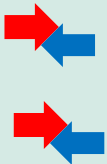
Day-Ahead Market
since June,08

- *Delivery for next day*
- *Price discovery: Closed , Double-sided Auction*



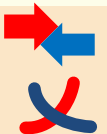
Intraday Market & Day-Ahead Contingency
Round the clock since Jul'15

- *Intraday: For Delivery within the same day*
- *Day Ahead Contingency: Another window for next day*
- *Gate closure : 3 hours*



Term-Ahead Contracts
since Sep'09

- *For delivery up to 11 days*
- *Daily Contracts, Weekly Contracts*



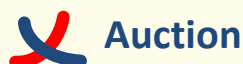
Renewable Energy Certificates
since Feb'11

- ***Green Attributes as Certificates***
- ***Sellers : RE generators not under feed in tariffs***
- ***Buyers: Obligated entities; 1MWh equivalent to 1 REC***

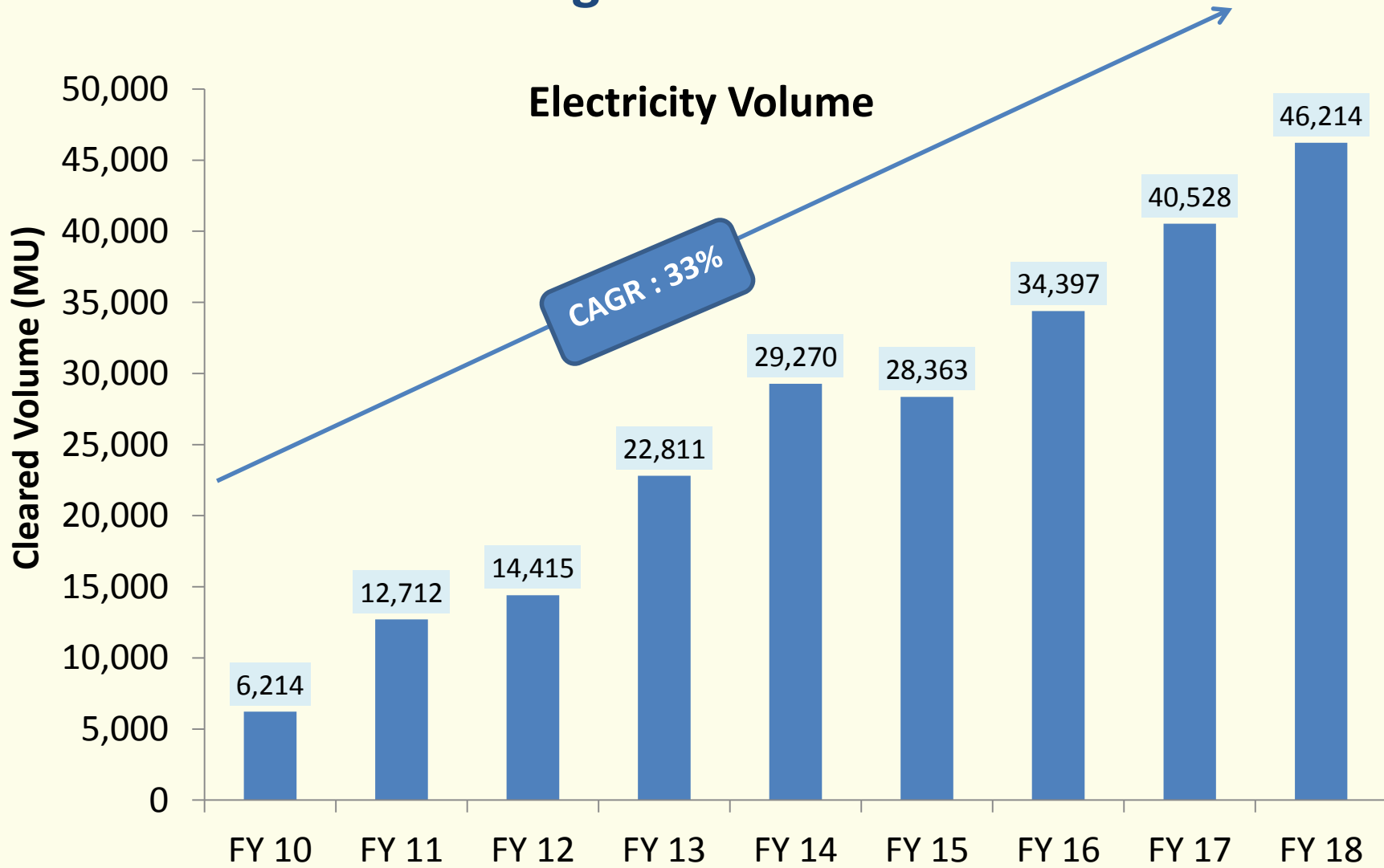


Energy Saving Certificates
since 27th Sept'17

- ***1 ESCert = 1 mtoe (metric Tonne of Oil Equivalent)***
- ***Trading Session on every Tuesday of the Week***
- ***Trading time 1300 hrs to 1500 hrs***



IEX Volume Growth : Strong trend line



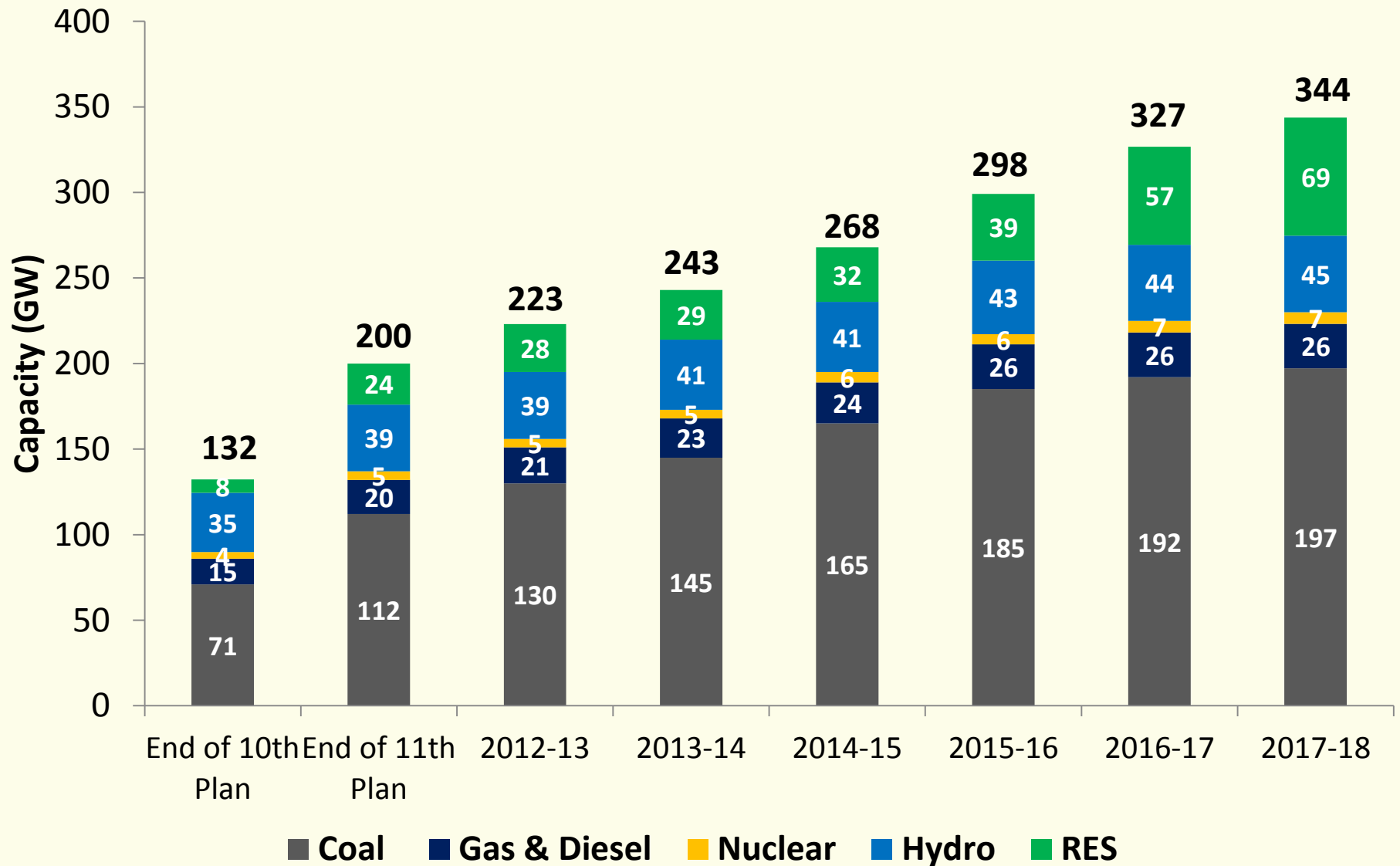
SECTOR OVERVIEW & IMPACT ON POWER EXCHANGE

Generation

Transmission

Distribution

Installed Generation Capacity of India



Installed Capacity (March 2018) & Generation (FY 2017-18)

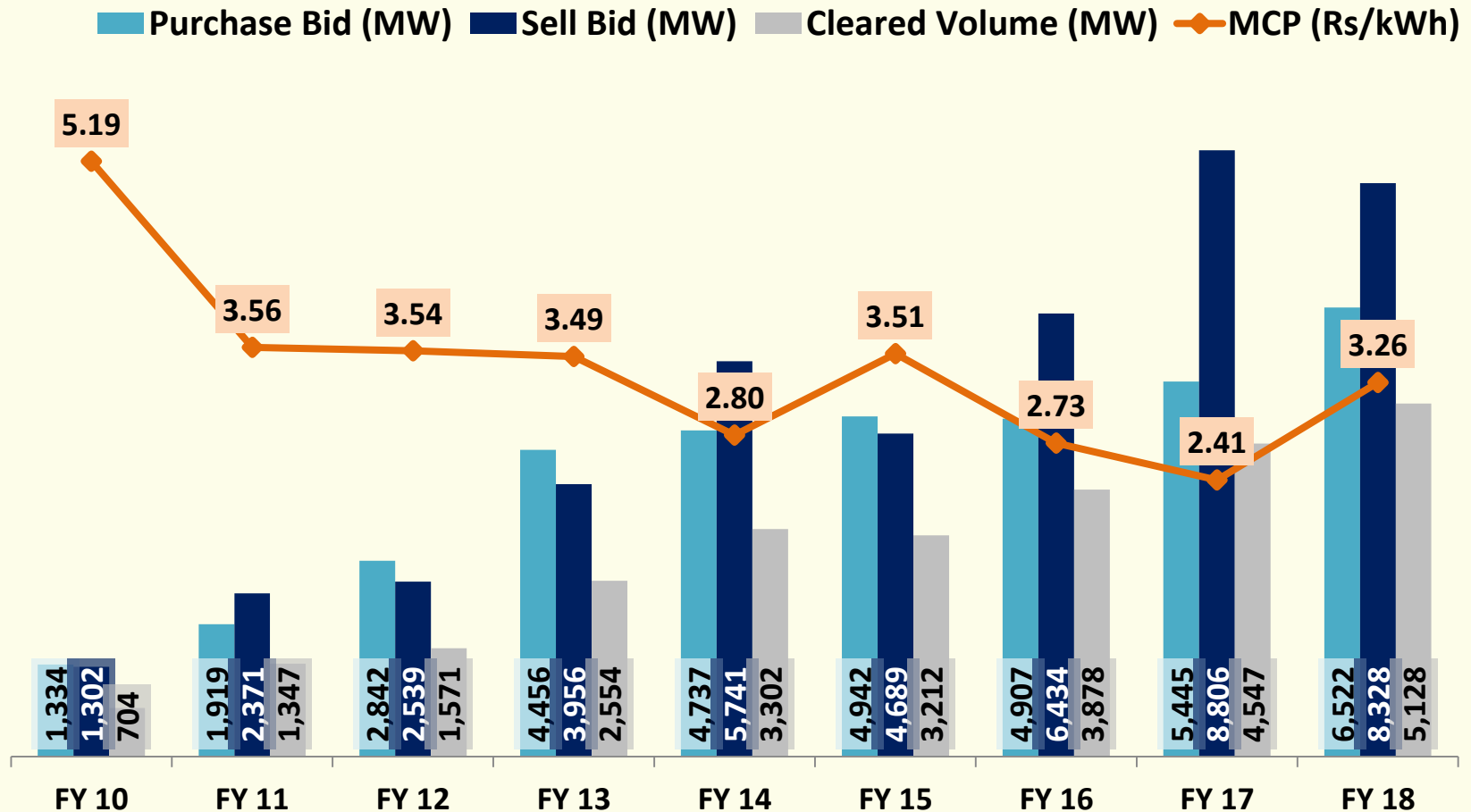
Generation

Category	Installed Capacity (MW)	PLF	Generation (BUs) FY-18	Feasible PLF	Possible Generation (BUs)
Coal	197172	60%	986	80%	1382
Gas	24897	23%	50	20%	44
Diesel	838	3%	0.24	0%	0
Hydro	45293	32%	126	33%	131
Nuclear	6,780	64.5%	38	80%	48
RE	69022	17%	102	18%	109
Total	344,002		1302		1713

- **Installed capacity** has increased at a CAGR of 9.5 % i.e. from 199 GW in FY 12 to 344 GW in FY 18.; enough to meet the demand of next 5 years at a growth rate of 6%
- In last 6 years, **Peak demand** met increased at a CAGR of 5.6 % and **energy supply** has grown at 5.8% CAGR which is much below growth of capacity addition.
- Above has resulted into surplus capacity, PLF for thermal power plants for FY 18 is 60% only.
- Further capacity addition of 50,000 MW of conventional power and more than 1,00,000 MW of Renewable power expected during 13th Plan

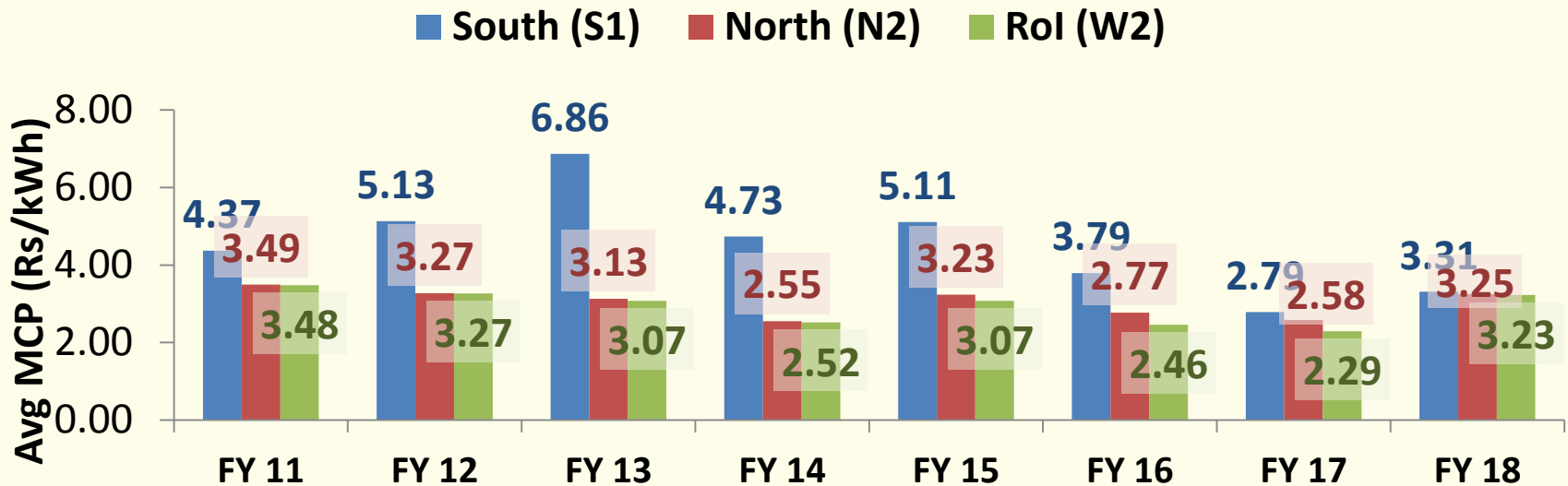
Installed capacity has grown at a faster pace compared to demand

High generation, increased competition : Pushed prices down at Exchange



Increase in generation capacity pushed the prices down except FY 18 when prices increased primarily due to coal shortage

Volume Lost due to Congestion lowered and price convergence in regions



	Market Clearing Volume (MU)	Cleared volume (MU)	Curtailed Volume (MU)	Curtailement (%)
FY13-14	34,230	28,925	5,306	15%
FY14-15	31,227	28,131	3,096	10%
FY15-16	36,210	34,067	2,144	6%
FY 16-17	41,310	39,784	1,526	3.7%
FY 17-18	45121	44925	83	0.4%

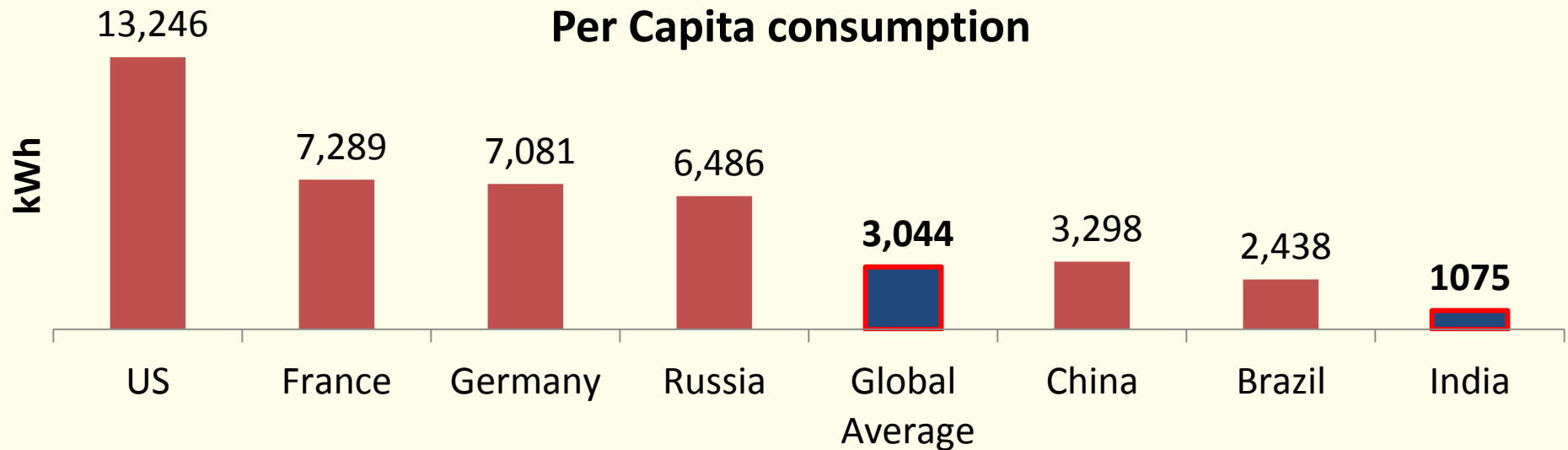
With transmission augmentation, congestion has reduced and ONE NATION ONE GRID ONE PRICE achieved on 90% days in the FY 18. Reduced congestion has increased reliability in sourcing power from exchanges

New Schemes by the GoI

- Government of India initiatives like 'Saubhagya', '24*7 Power Supply' and 'Rural Electrification' has boosted power demand in the Country
- Another major initiative UDAY is helping DISCOMs to achieve financial stability and increase power purchase capability
- These initiatives have resulted in increase in overall electricity demand by 6.1% in last fiscal
- In last fiscal some states witnessed very high growth in demand like Telangana – 14%, DVC – 14%, UP – 12%, Chhattisgarh – 9%, Maharashtra, AP, Odisha, J&K – 8%.

Increase in demand is helping short term market grow

Per capita consumption very low compared to world average



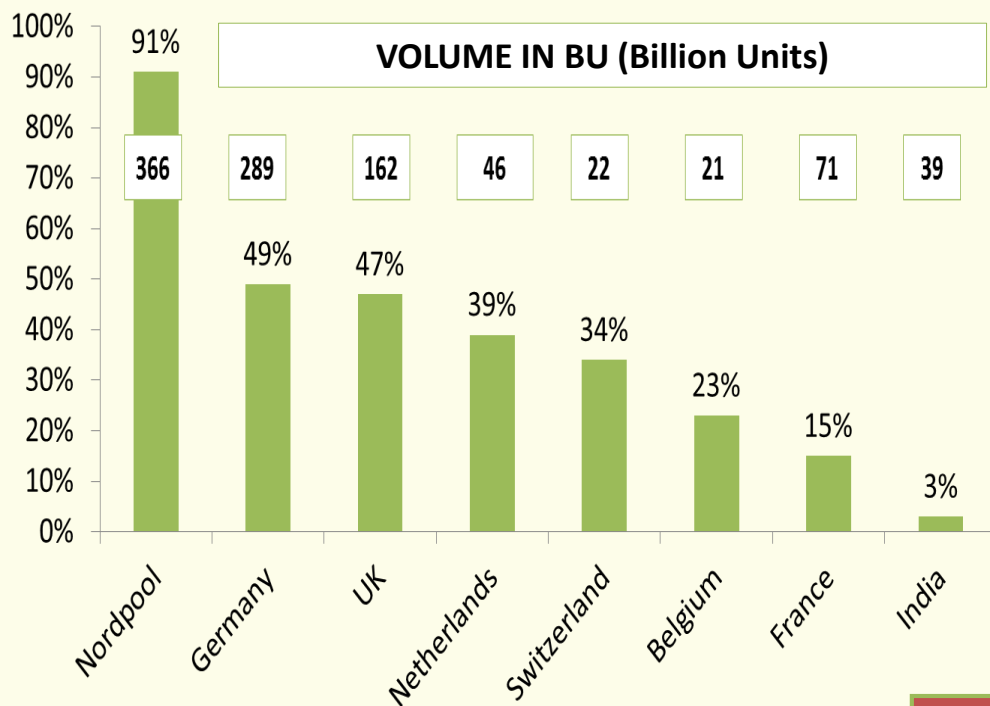
- With expected thrust on economic and industrial development and 24/7 power supply, Per Capita consumption bound to increase

To bring per capita close to global average, 3X power generation will be required : POTENTIAL FOR GROWTH

Power Exchange across Globe:

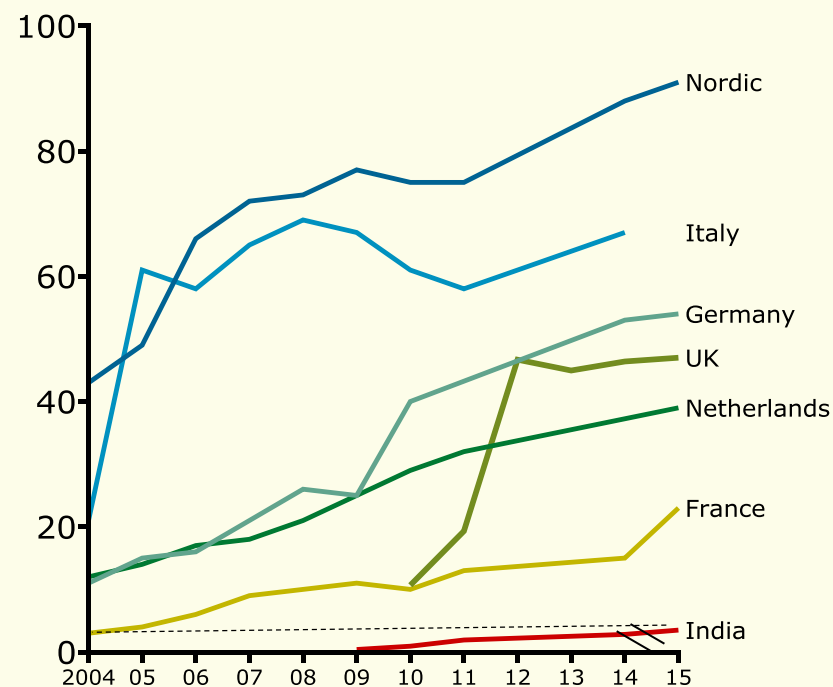
Enormous potential to grow for India compared to international benchmarks

**INDIA TRADES ~3% OF ITS OVERALL CONSUMPTION ON EXCHANGE
MARKETS COMPARED TO 15-91% GLOBALLY**



GLOBAL BENCHMARKS ON PENETRATION OF ST MARKETS

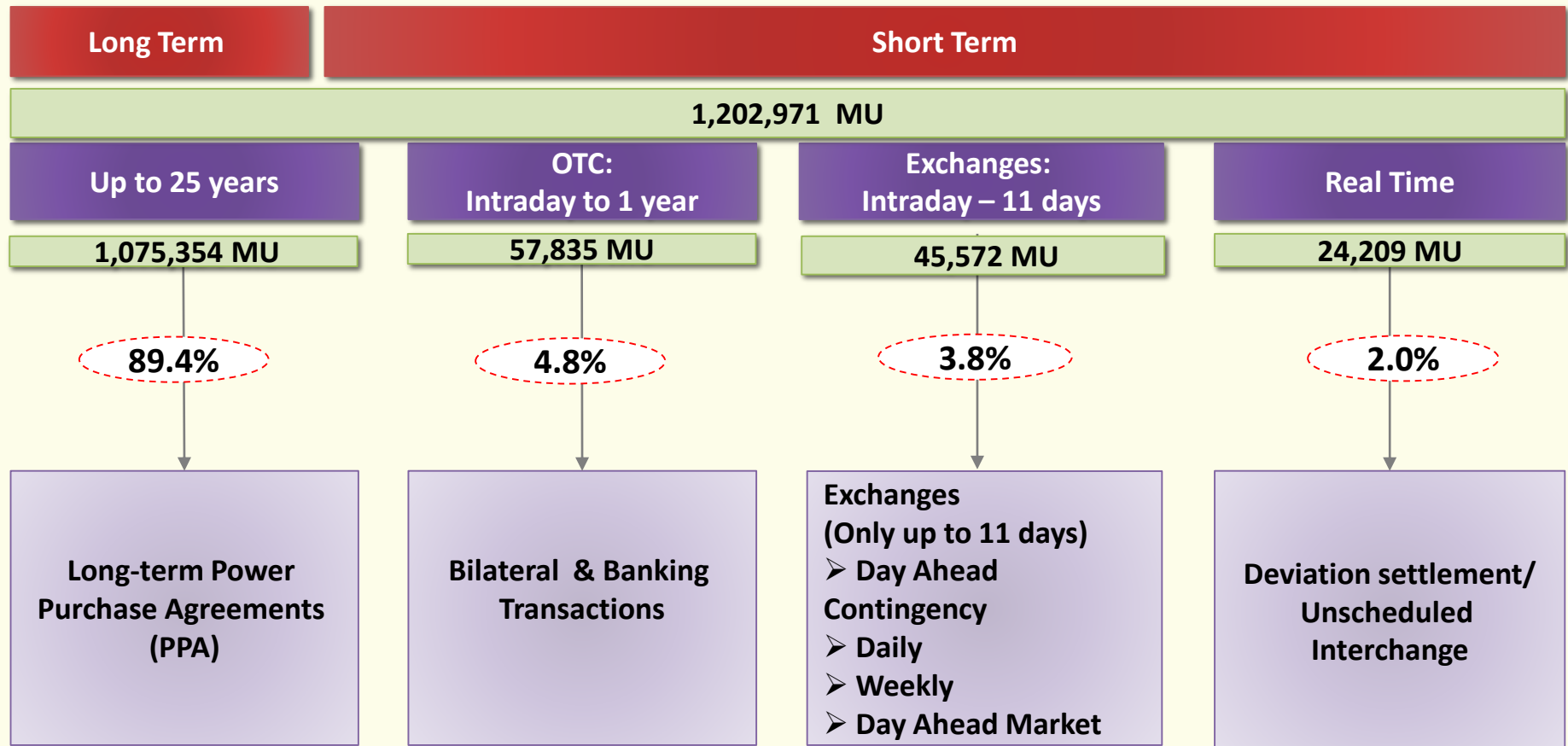
Exchange traded (% total consumption)



Indian markets still at a nascent stage and high potential for growth for the Indian Power Exchanges

MARKET SNAPSHOT

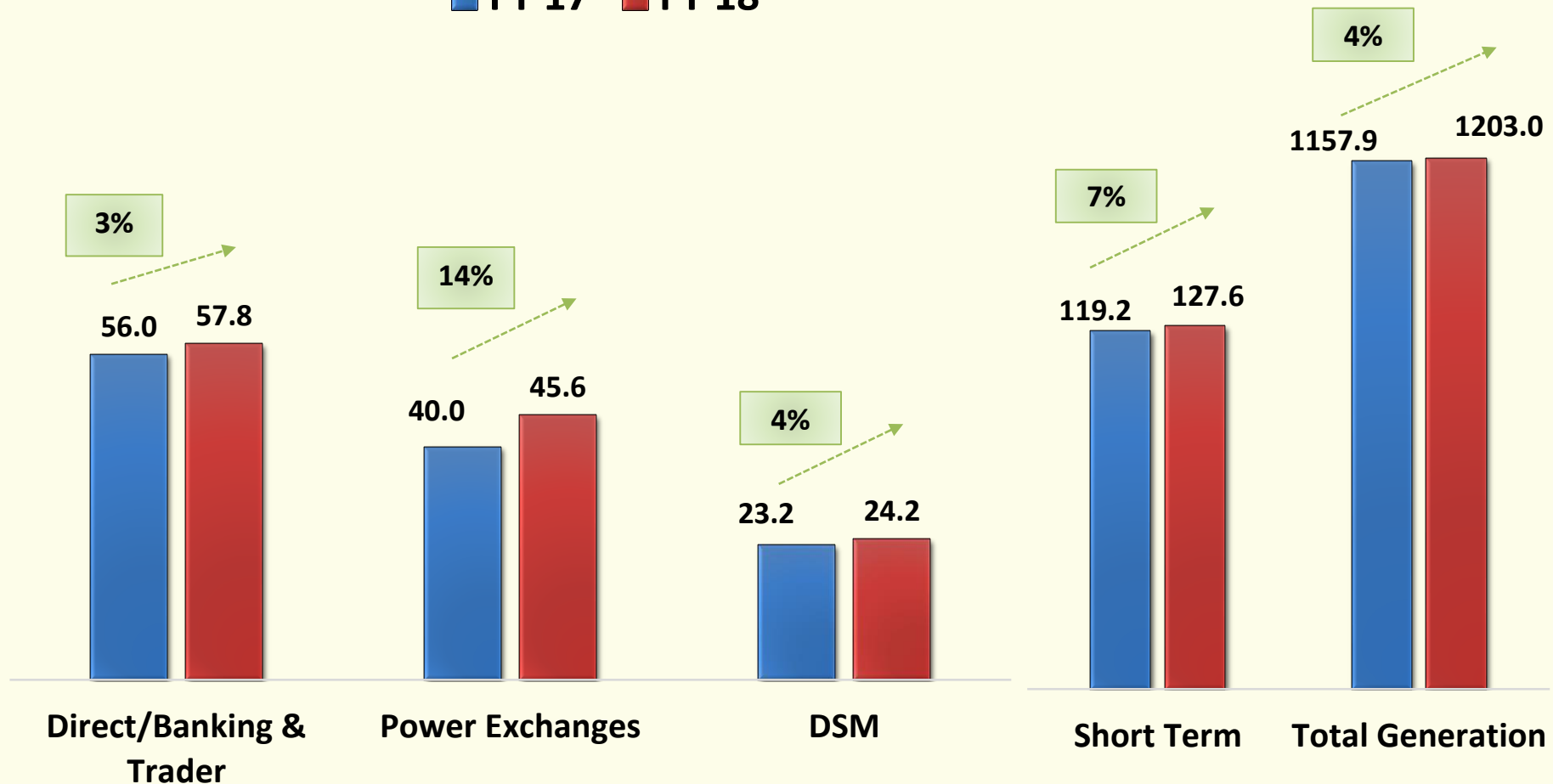
India Power Sector | Key Market Segments



Short Term Power market is at 10.6 %, Power Exchange volume in the segment have been growing significantly

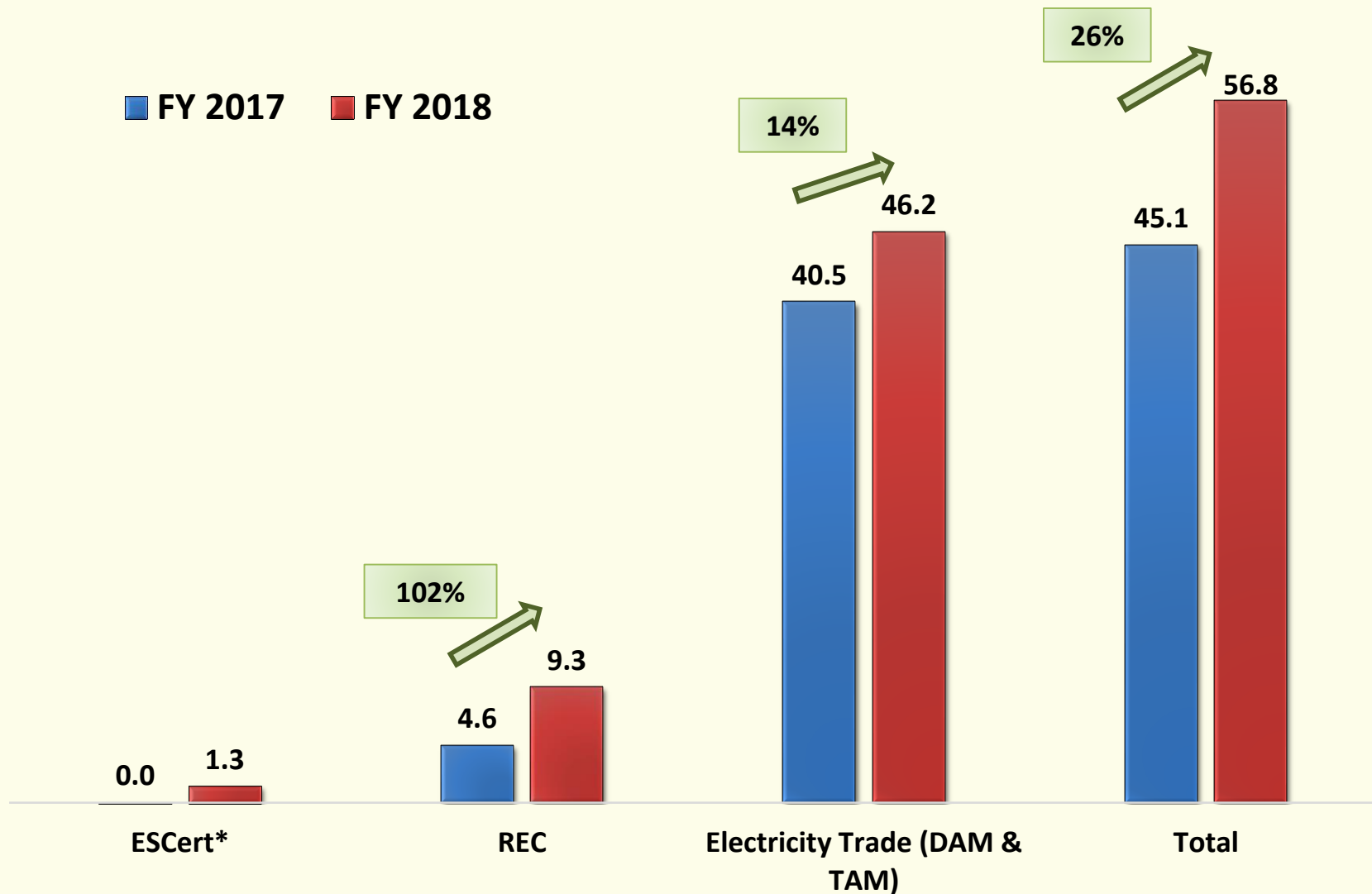
Short term market snapshot (Billion Units)

■ FY 17 ■ FY 18



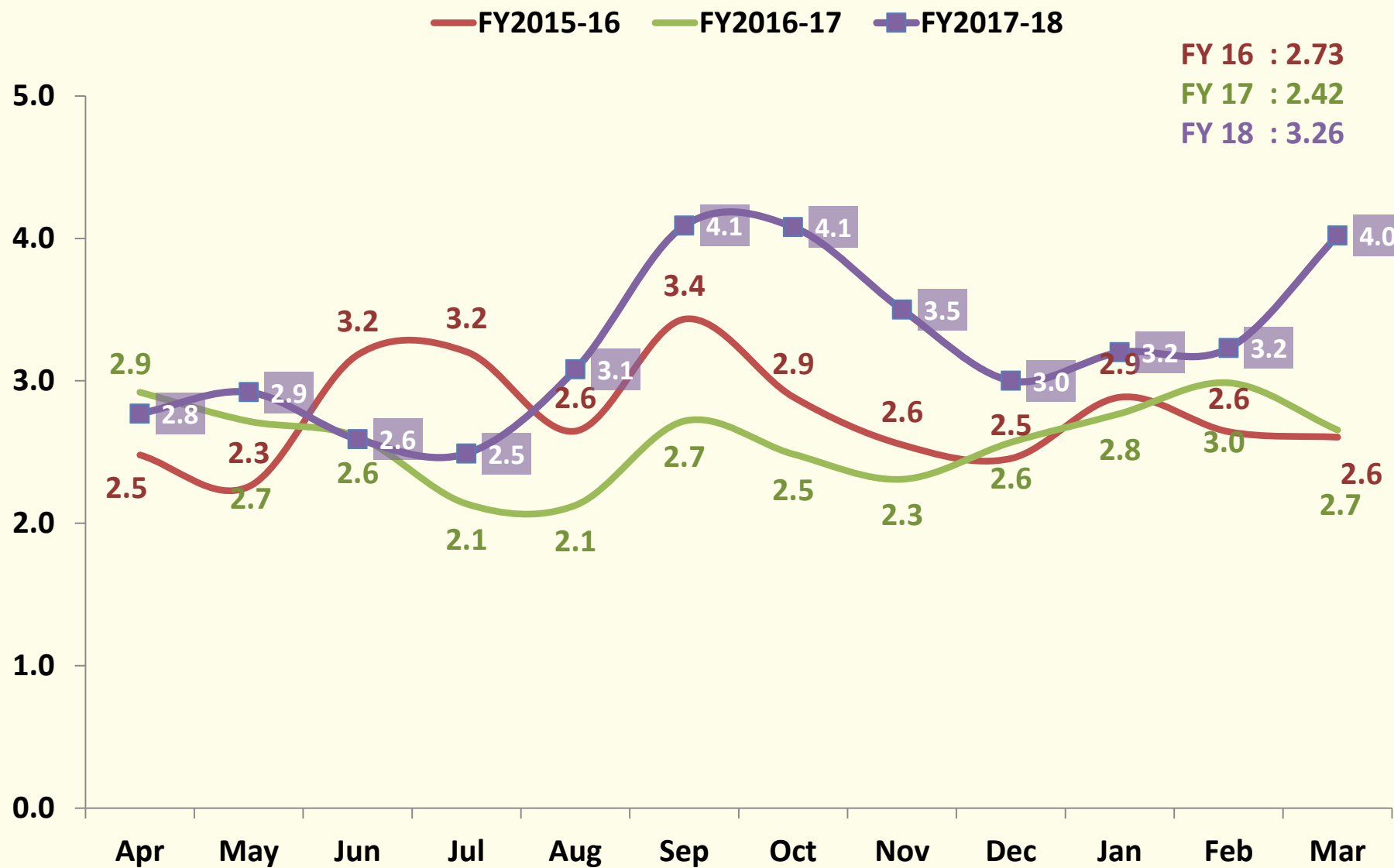
Overall generation in the country, increased by 5.32% in FY 18

FY18_Product Wise IEX's Volume Growth (Billion Units)



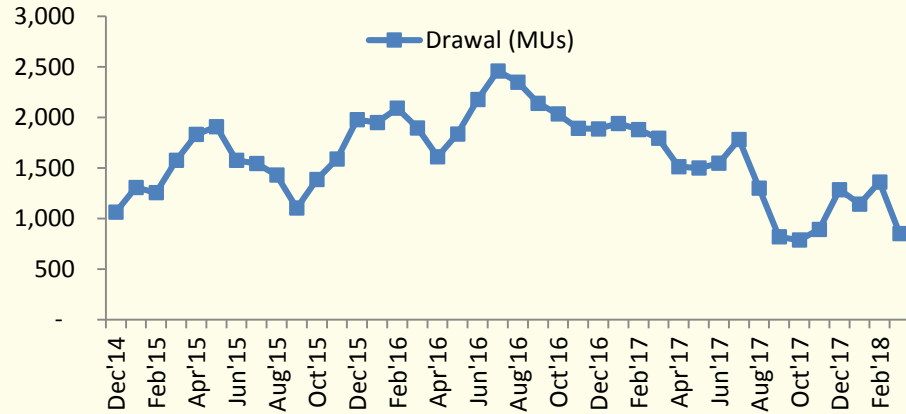
*Note – Energy Saving Certificates (Escerts) trading started from September 2017 on IEX

Monthly Price Trend (Avg. MCP) (Rs./unit)

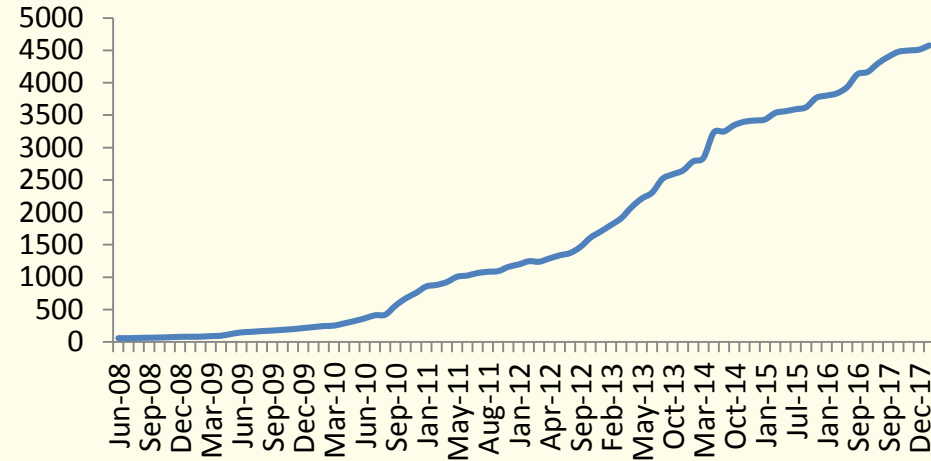


Strong and Growing Base of Participants

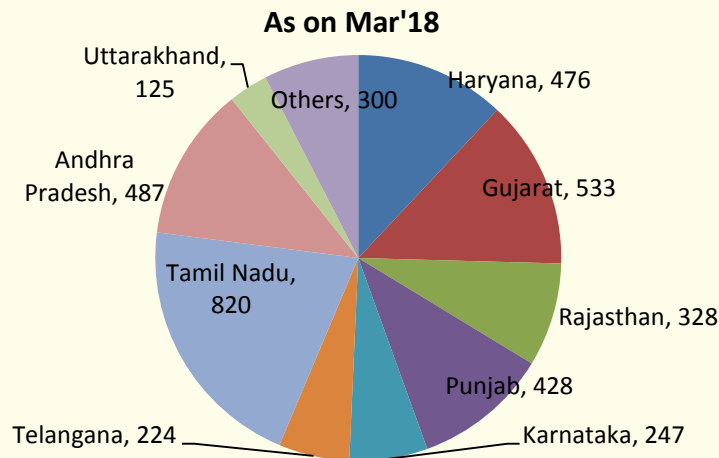
Open Access Volumes have shown rapid growth



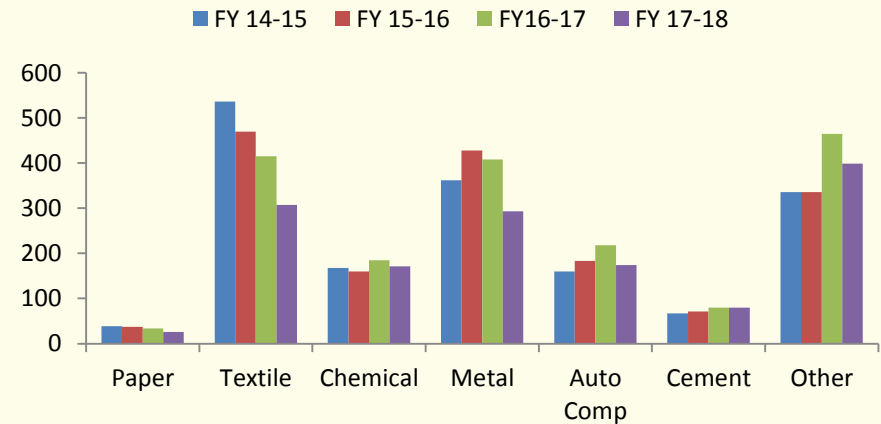
Average registered participants has been growing



Open Access Consumers Present Across States



And Spread Across Industries



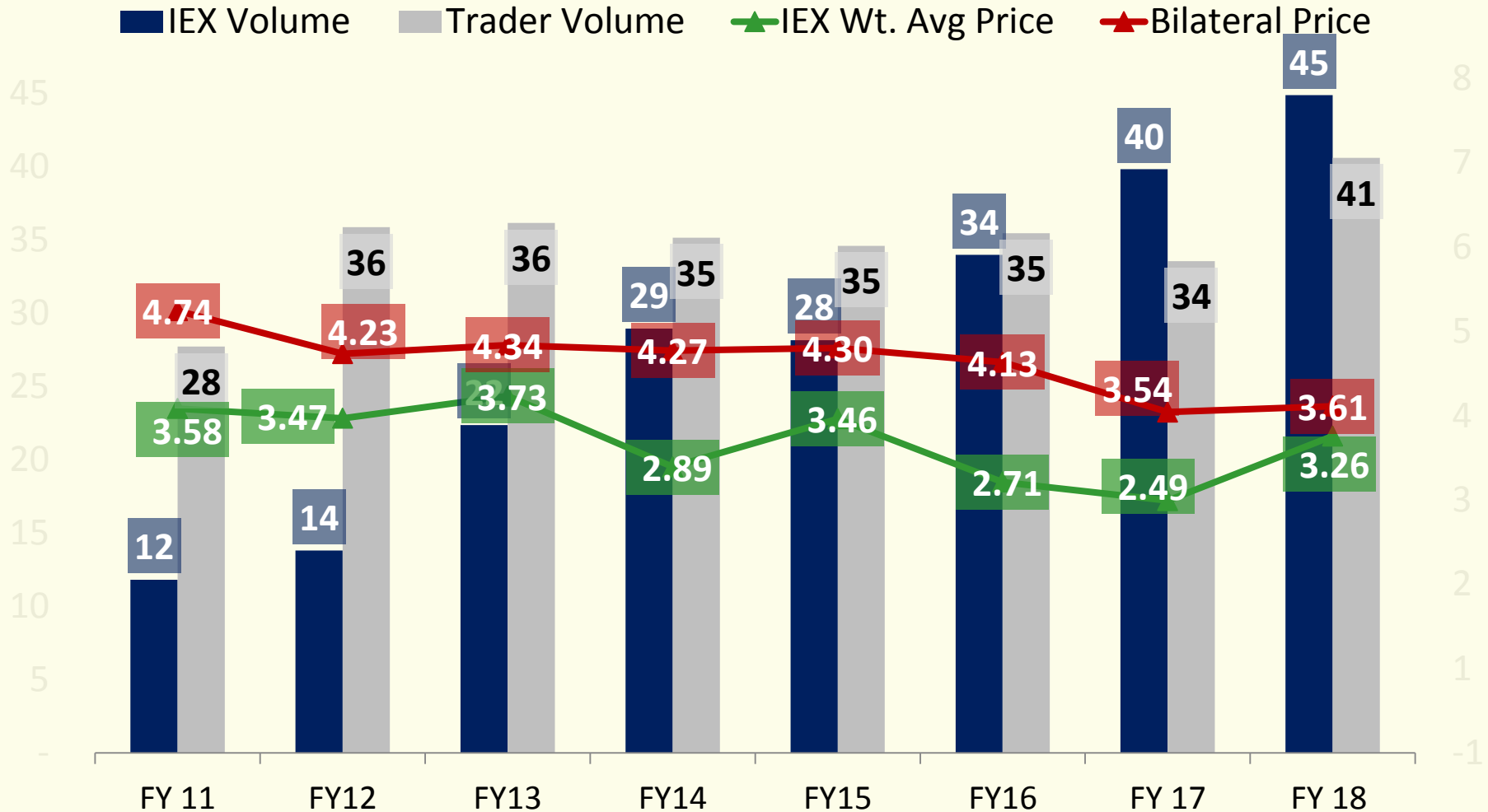
Participation has shown significant growth over the years

OPPORTUNITIES & CHALLENGES FOR EXCHANGE OPERATIONS

Efficient Price discovery

Efficient price discovery has been the biggest growth driver for exchanges in the past

- ◆ Discoms can source cheaper power through Exchange to meet shortages
- ◆ Industries can source competitive power to reduce their input costs
- ◆ Prices at Exchange always lower than Bilateral contracts

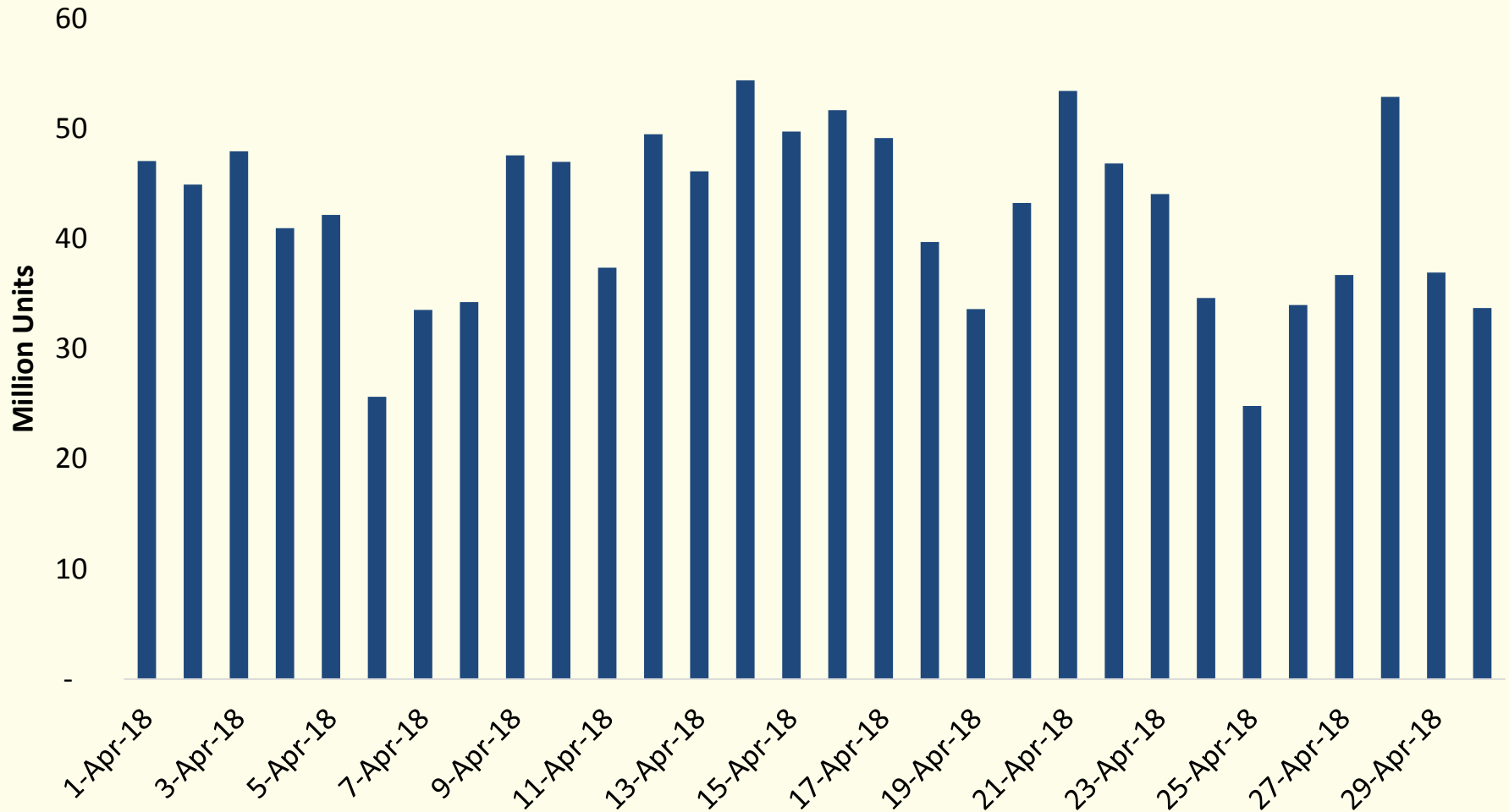


Flexibility

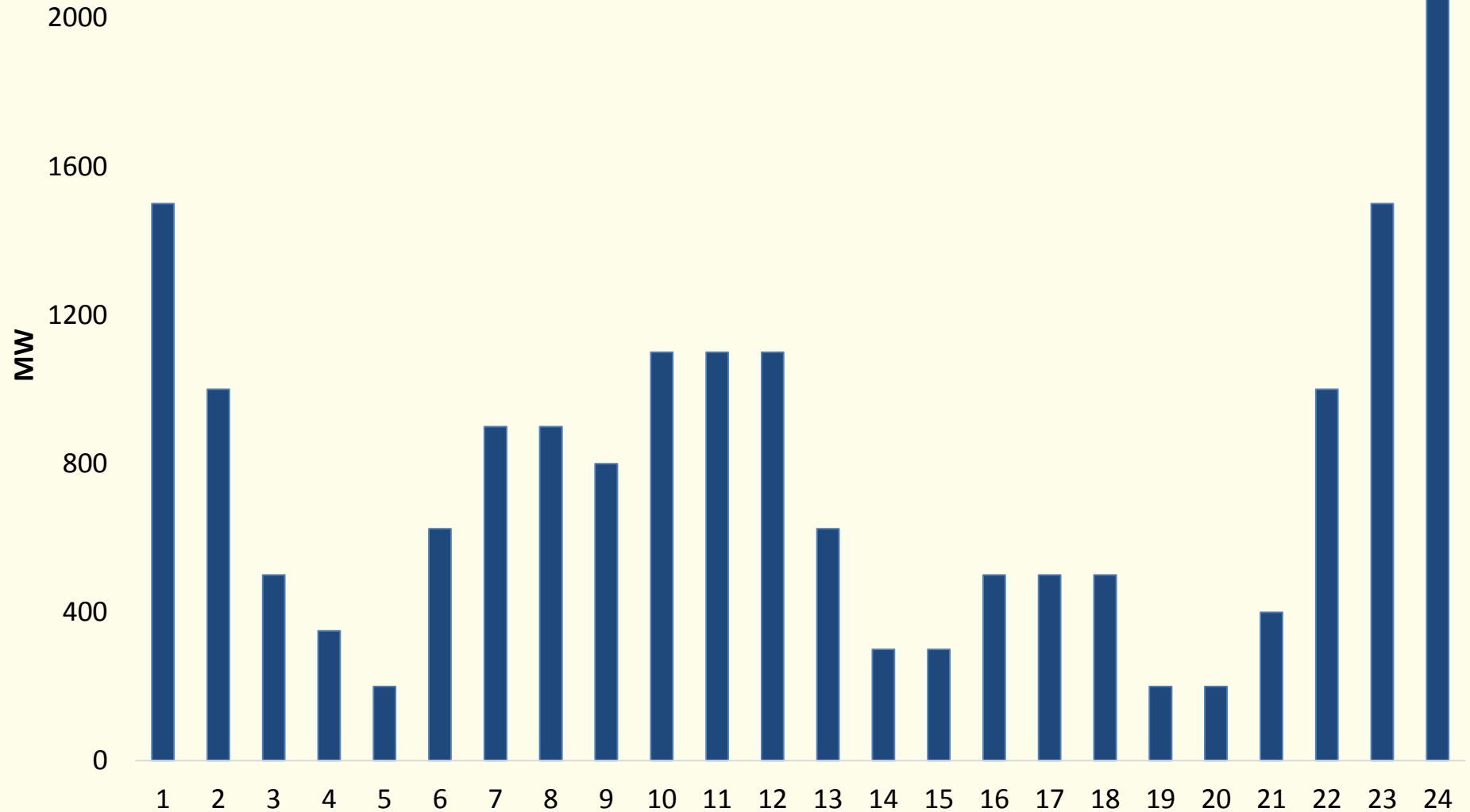
Exchange provides flexibility to purchase power as per requirement throughout the year

Option available to Buy/Sell different quantum for each 15 mins time block. Minimum bid quantum can be as low as 0.1 MW

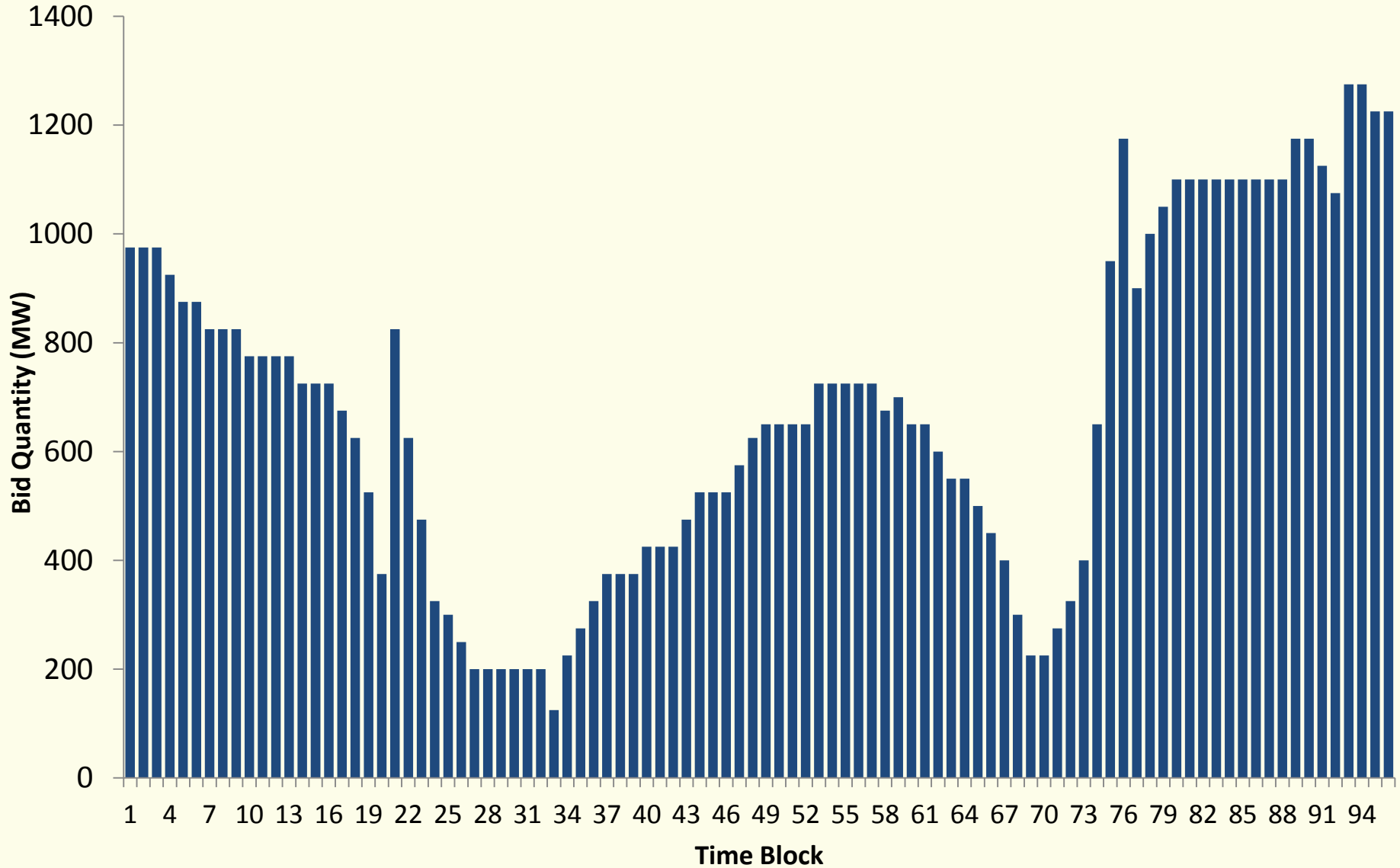
Gujarat Buy Volume for April-18



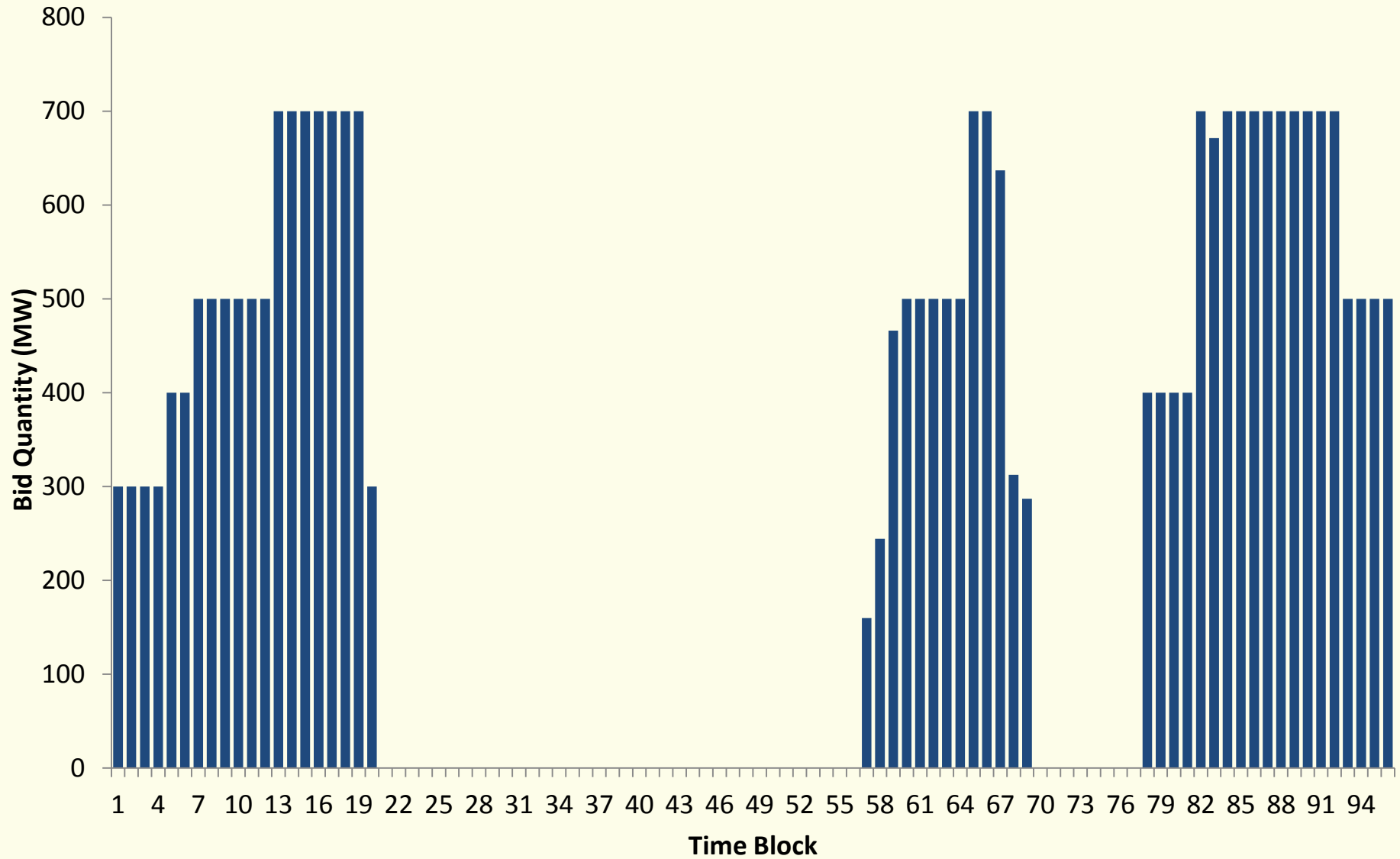
Gujarat Buy Volume on 1st May, 2018

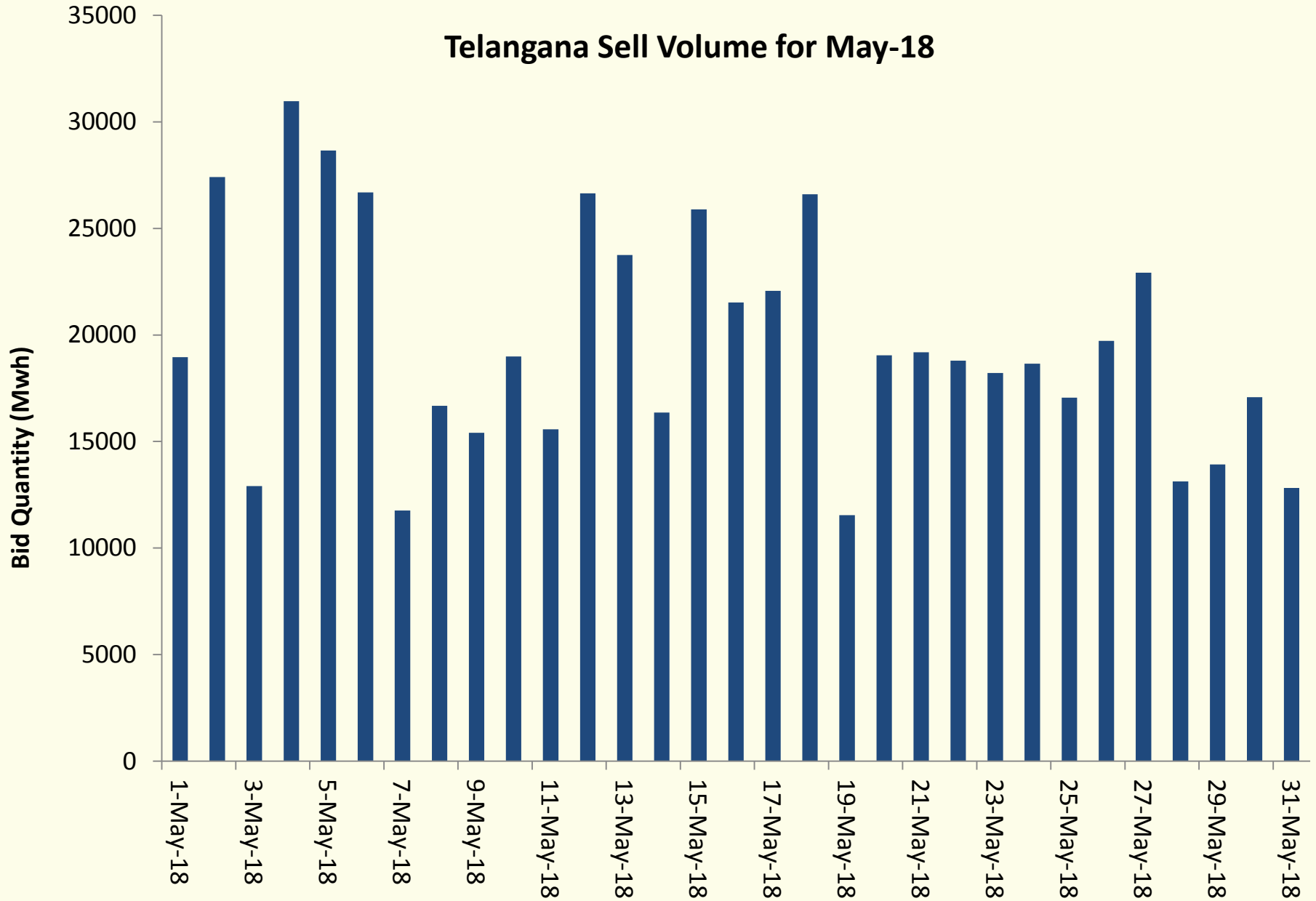


Bihar Buy Volume on 3rd June, 2018

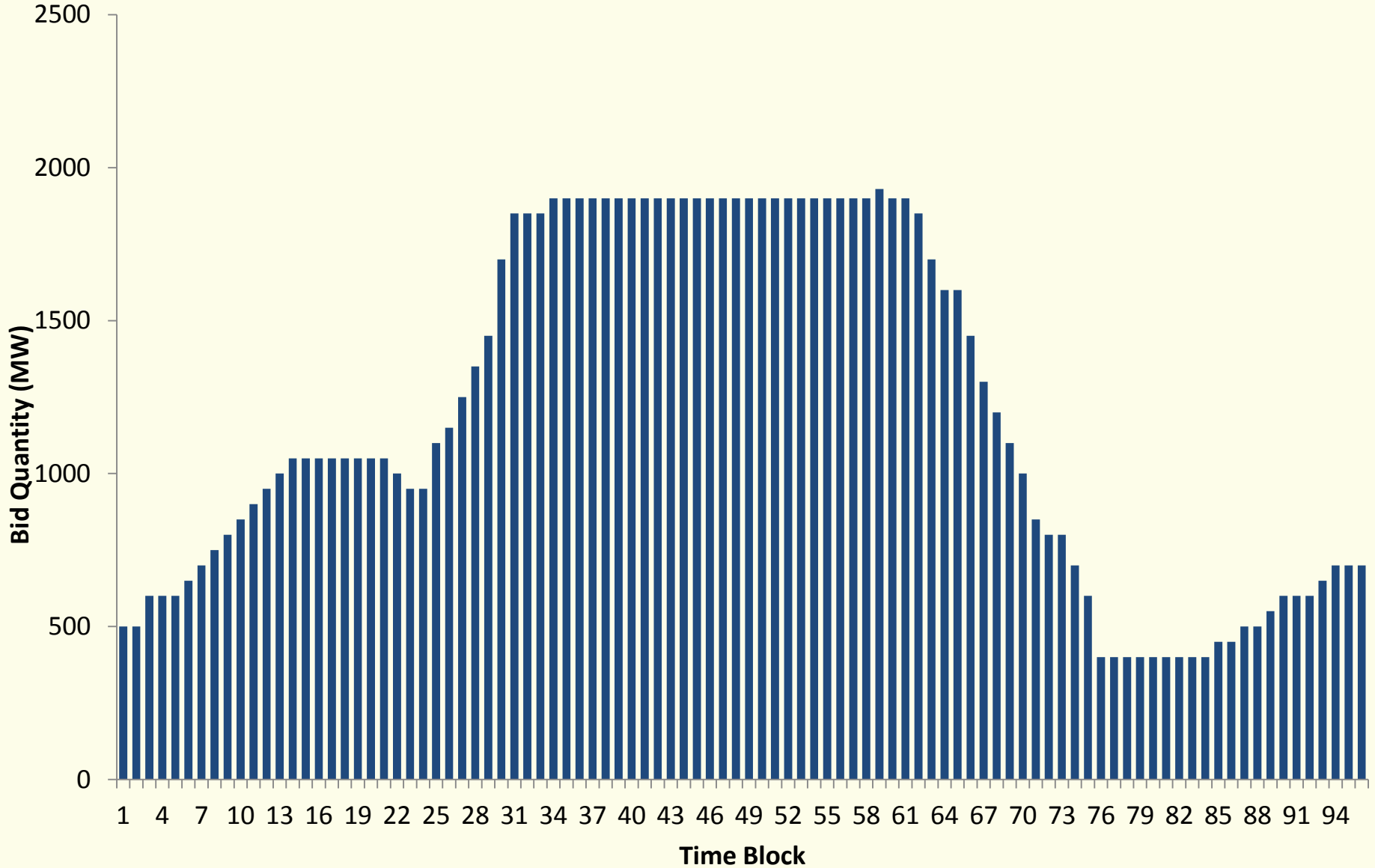


Uttar Pradesh Buy Volume 3rd June, 2018

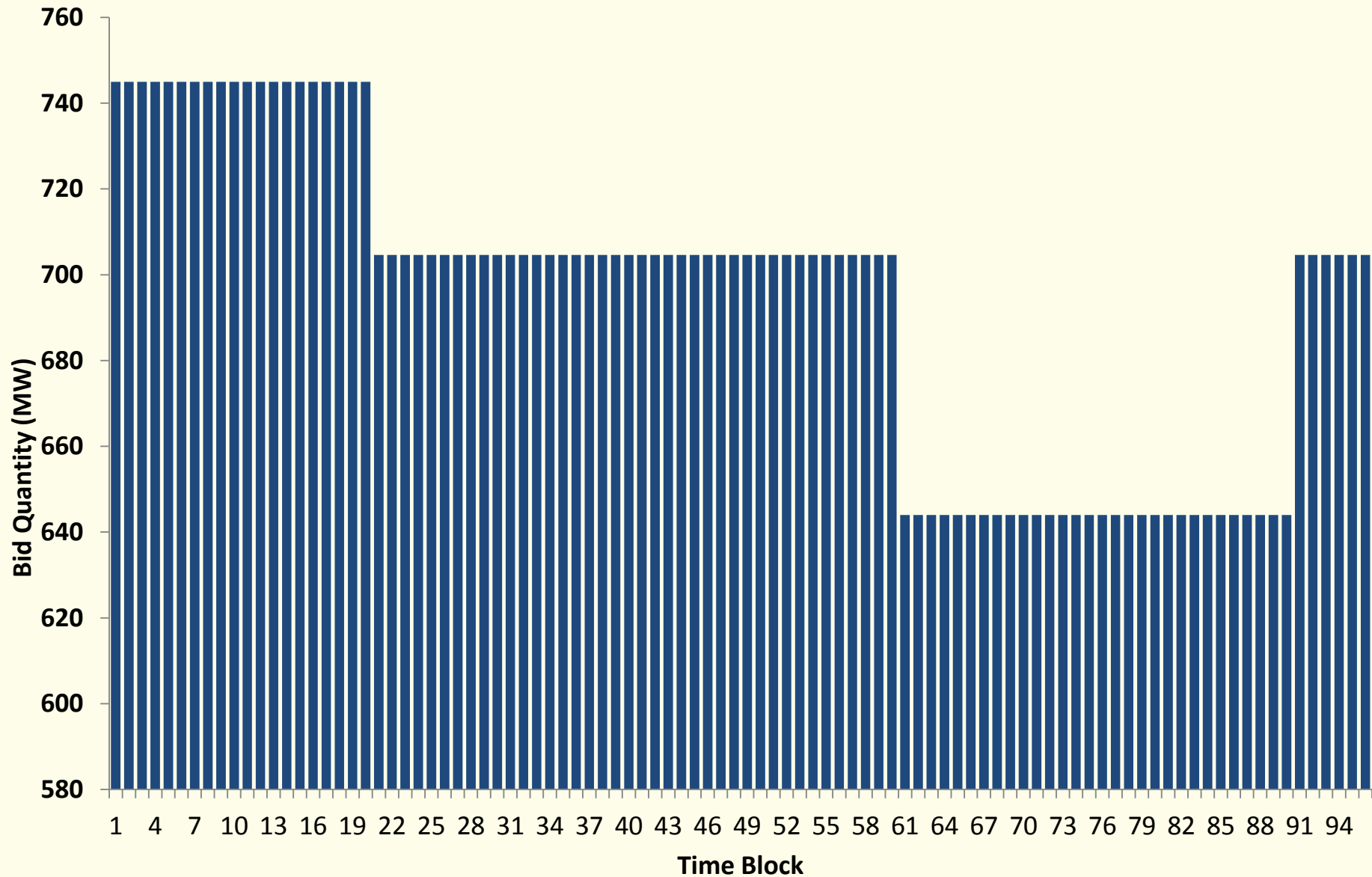




Telangana Sell Volume on 5th May,18



Sembcorp IPP Sell Volume on 9th Oct,17



Cross Border Trade

- ◆ Guidelines of Ministry of Power and CERC draft regulations allow for grid connected neighboring countries like Bhutan, Nepal and Bangladesh to trade power through the Term Ahead Market of the Exchanges

Improvement in transmission infrastructure

- ◆ With more transmission capacity augmentation, the loss in volume due to congestion is expected to be further reduced
- ◆ Congested volume reduced from 11% in FY 12 to 0.4% in FY 18
- ◆ This gives comfort that power can be purchased when required and will result in less dependence on bilateral agreement. **Bilateral volumes can shift to IEX**

Portfolio Optimization by Discoms

- ◆ Exchange also gives an option to replace costly PPAs (Portfolio Optimization) and flexibility in procurement of power
- ◆ Discoms can replace high variable cost power under PPA with Exchange power and achieve savings

Phasing out of Old plants

- ◆ Phasing out of all vintage and inefficient plants' will shift demand to the short term market

Increased demand will push Discoms to harness short term and exchange markets

GAS Exchange

- MoPNG Minister Mr Dharmendra Pradhan announced intent of the govt. to have a gas trading platform this year.
- **OIDB (Oil India Development Board) awarded KPMG the consultancy assignment to develop a framework for gas trading hub.**
- **On the direction of the Ministry, PNGRB (Petroleum and Natural Gas Board) has appointed CRISIL to assist in developing market rules and regulation for a gas trading hub/exchange in India.**
- **Considering the similarity between Electricity and Natural Gas as commodity, IEX is best placed to offer this platform for the Gas Sector.**
- IEX will be working with the top consulting firms to ensure we are launch ready once conducive framework is in place.

India to launch gas trading hub by Oct

PRESS TRUST OF INDIA
New Delhi, April 16

THE GOVERNMENT PLANS to launch a natural gas trading hub by October, creating an Indian gas benchmark which will spark a surge in consumption of the cleaner-burning fuel.

Oil regulator PNGRB has sought bids to hire a consultant to help develop a regulatory framework for operationalising the gas trading/exchange hub.

"In order to further boost the consumption of natural gas in the country, government is considering the establishment of a Gas Trading Hub / Exchange (GTHE), where natural gas can be traded, and supplied through a market-based mechanism instead of multiple formula driven prices," PNGRB said in the tender floated for hiring the consultant.

Currently, the government fixes the price of the bulk of domestically produced natural gas. The rate, arrived at using price prevalent in gas-surplus nations of US, Canada, UK, and Russia, is \$3.06 per million British thermal unit for six month period beginning April 1. In comparison, the cost of imported LNG into India is around \$7.5.

"The government has envisaged ushering into a gas-based economy by increasing the share of natural gas in the



primary energy mix of the country from current level of about 6% to 15% by 2030," PNGRB said.

For this, the thrust is on increasing the availability of natural gas by enhancing the domestic production, encouraging the import of Liquefied Natural Gas (LNG), completion of national pipeline grid and speedier roll out of City Gas Distribution network in the country.

The Petroleum and Natural Gas Regulatory Board (PNGRB) said the oil ministry has asked it to initiate steps for framing of necessary regulatory framework to enable the establishment and operation of a GTHE.

The regulator said it wants to hire a consultancy firm to provide assistance in carrying out a detailed study on various pre-requisites.

India to Build Natural Gas Trading Platform: Pradhan

Move to encourage investment in the sector and boost pricing transparency

Our Bureau

New Delhi: India will soon build a natural gas trading platform, which will help lead to transparent pricing and encourage investment in the sector; Oil Minister Dharmendra Pradhan has said.

Most gas produced in India today is governed by a government-set price formula and certain sectors such as fertilizer and city gas get priority over others as gas consumers, mainly because local production is low and half of the gas requirement is met by imported liquefied natural gas (LNG).

Some of the top oil industry executives who met Prime Minister Narendra Modi on Monday also raised the long-standing demand of the industry to fast move towards market pricing for natural gas

produced in the country.

Termining the proposed platform as the "next biggest reform in the gas sector", Pradhan said it would help bring transparency in the market discovery of price and certainty on investment return to companies. "Until unless we give certainty to the investor, he will not invest," Pradhan said. India needs huge investment in exploration and production, import terminals and pipelines and needs massive private and foreign capital for that.

Pradhan said a proposal for setting up a natural gas exchange will soon be taken to the Cabinet. The government-set formula for natural gas will not disappear immediately as there are some priority gas-consuming sectors but the country will "gradually" move towards transparent mechanism, Pradhan said.

This would help boost gas consumption in the country, where gas's contribution in the energy mix is barely 6-7%, compared to world average of 24%, Pradhan said, adding that there was huge potential of gas consumption in several sectors of the economy including power; transportation and manufacturing.

Price decontrol and building a gas hub is about moving towards a competitive gas market that will help draw investments, said Daniel Yergin, vice chairman, IHS Markit, an energy intelligence group.

The proposed exchange would help trade both domestic and imported LNG.

Open access to LNG terminals as well as to gas pipelines would be essential to build a functional natural gas hub, GAIL chairman B C Tripathi said. GAIL is the biggest gas marketer and transporter of the country.



Oil Minister Dharmendra Pradhan

ET ARCHIVES

New products and market segments

Forward and Future Contracts

- Participants on Power Exchanges in India currently lack hedging options in the form of futures & forwards which are common in global markets.
- With increased liquidity in the spot market, GoI & regulators have started discussing introduction of forward & future market in electricity. This will be a business opportunity for IEX in the future.

Intraday & Ancillary Market

- Introduction of better intraday regulations & ancillary service market, for balancing closer to real time, will also help Power Exchanges gain share of the UI electricity volumes

➤ States blocking Open Access

- Increasing CSS by some States
- Additional surcharge introduced in few states such as Rajasthan, HP, Punjab and DNH reducing viability for OA consumers, Non-issuance of NoC (UP, WB)

With separation of content and carriage as expected in EA Amendment, tariff and non tariff barriers on Open Access are expected to reduce

➤ DEEP Platform offering competitive prices

- E-bidding portal (DEEP) launched by Gol to facilitate short term procurement of power by DISCOMS

IEX prices still more competitive, there is more flexibility on Exchange for power purchase

➤ Low liquidity in Term Ahead Products at IEX.

- Volumes traded in Intra Day, DAC and other TAM products is low. In last fiscal year, the growth in TAM was 85% Y-o-Y

At present gate closure is 3 hours. Internationally, gate closure is half hour. We are working with CERC to reduce gate closure time. Liquidity will increase with reduced gate closure

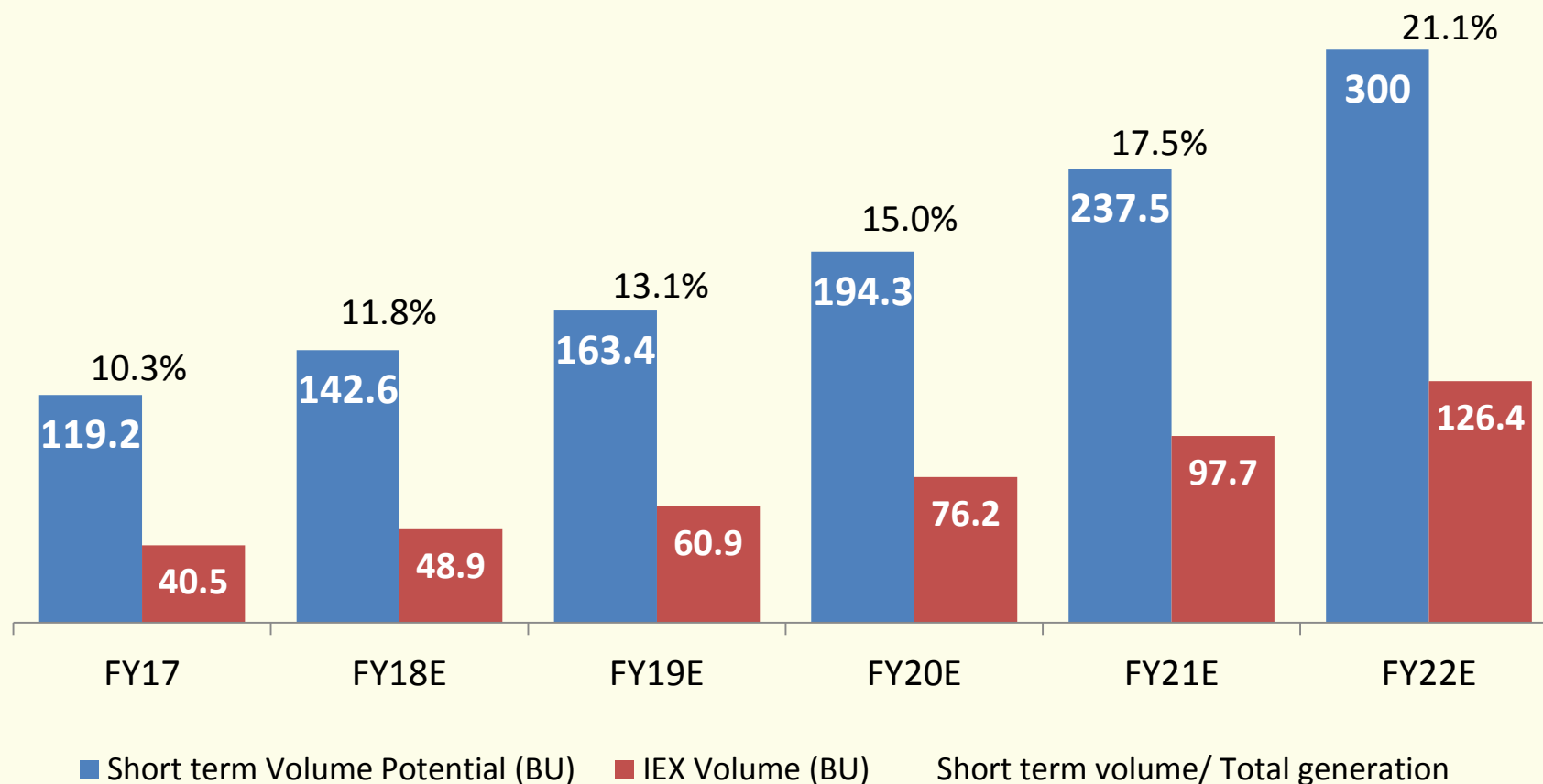
➤ Coal Price and Availability

- High international coal prices and low domestic coal availability has resulted reduced sell bids

Buy bid increased by 20% and sell bid decreased by 5%

Short Term Market Volumes on a rise

CRISIL Short-term power market forecast (in billion units / percentage)



Product Category	Apr-Mar – Million Units		
	FY 16-17	FY 17-18	% change
Day Ahead Market	39783	44,842	13%
Term Ahead Market	744	1,372	85%
Total Electricity	40527	46214	14%
REC	4619	9328	102%
ESCert	Nil	1299	
Total	45146	56841	26%

Value in INR Crores

Particular	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
Revenue	71	138	174	177	200	233	256
Operating Expenditure	19	33	38.5	41	50	55	46
Operating Profit (EBITDA)	52	105	135.5	136	150	178	210
EBITDA %	73%	76%	78%	77%	75%	76%	82%
PBT	48	93	133	133	147	174	200
PAT	34	66	92	90	100	114	132

- **Financials results up to FY 2015-16 are audited as per I-GAAP and FY 2016-17 & FY 2017-18 are audited as per Ind AS.**
- **Dividend of RS 22/ share declared for the FY 18 ; Cash outflow is 61% (incl. DDT) of total profit**

SL No.	Name of Shareholder	% of Total Equity Share Capital
1	TVS SHRIRAM GROWTH FUND	15.00%
2	DCB POWER VENTURES LIMITED	10.00%
3	AGRI POWER AND ENGINEERING SOLUTIONS PRIVATE LIMITED	4.99%
4	WESTBRIDGE CROSSOVER FUND, LLC	4.75%
5	RIMCO (MAURITIUS) LIMITED	4.50%
6	RURAL ELECTRIFICATION CORPORATION LTD	4.12%
7	ADANI TRADEX LLP	4.12%
8	SIGULER GUFF NJDM INVESTMENT HOLDINGS LTD	3.02%
9	LIGHTSPEED VENTURE PARTNERS VIII MAURITIUS	3.00%
10	INDIA BUSINESS EXCELLENCE FUND - IIA	2.68%
	Others	43.82%
	TOTAL	100.0%

- ✓ **“Investor Relations Award 2018 - Best IPO in Mid Cap Segment”**
IR Society of India
- ✓ **“Best CFO Award in 100-500 turnover category”- 2018**
The Financial Express
- ✓ **“Leaders in Power Market Development”- 2014 | 2015**
Council of Power Utilities
- ✓ **“Exchange of the Year”- 2014**
Power Business View, a First View Group Venture
- ✓ **“Best Performing Power Exchange - 2014**
India Power Award
- ✓ **“Best Power Exchange in India” – 2012 | 2013 | 2014 | 2015**
Enertia Foundation –
- ✓ **“Best Performing Power Trading Company/Exchange” – 2012 | 2013 | 2014**
Power line
- ✓ **“Innovators in Product and Technology”- 2013 | 2014**
Inc. India
- ✓ **“Best E- Enabled Consumer Platform” - 2009**
Inc. India



THANK YOU