



Dated: February 21, 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,

With reference to above captioned subject, please find attached updated Investor presentation.

This is for your information and records.

Thanking You

Yours faithfully,

For Indian Energy Exchange Limited


Vineet Harlalka
Company Secretary & Compliance Officer



Investor Presentation

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**

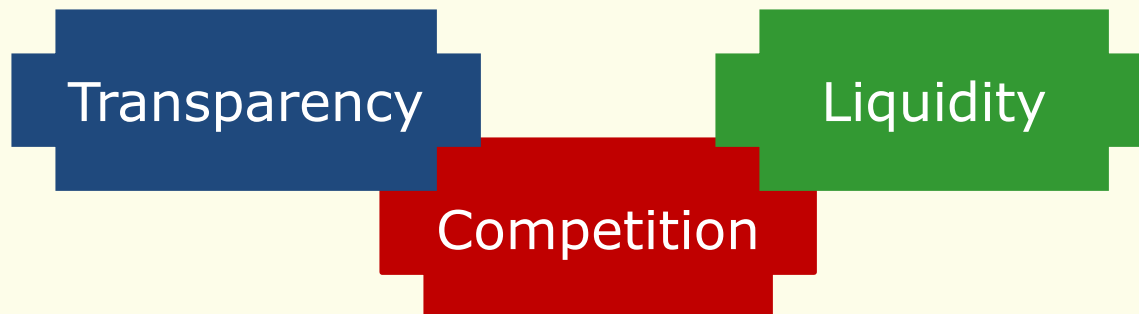
Company Snapshot



- Market Share: **98%**
- Average daily trade: **~6000 MW**
- High Participation: **6100+**

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

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



Market Share-FY 17 (All Products)
 Average Daily Trade- FY17
 Participation-as on 31 Dec 2017

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***



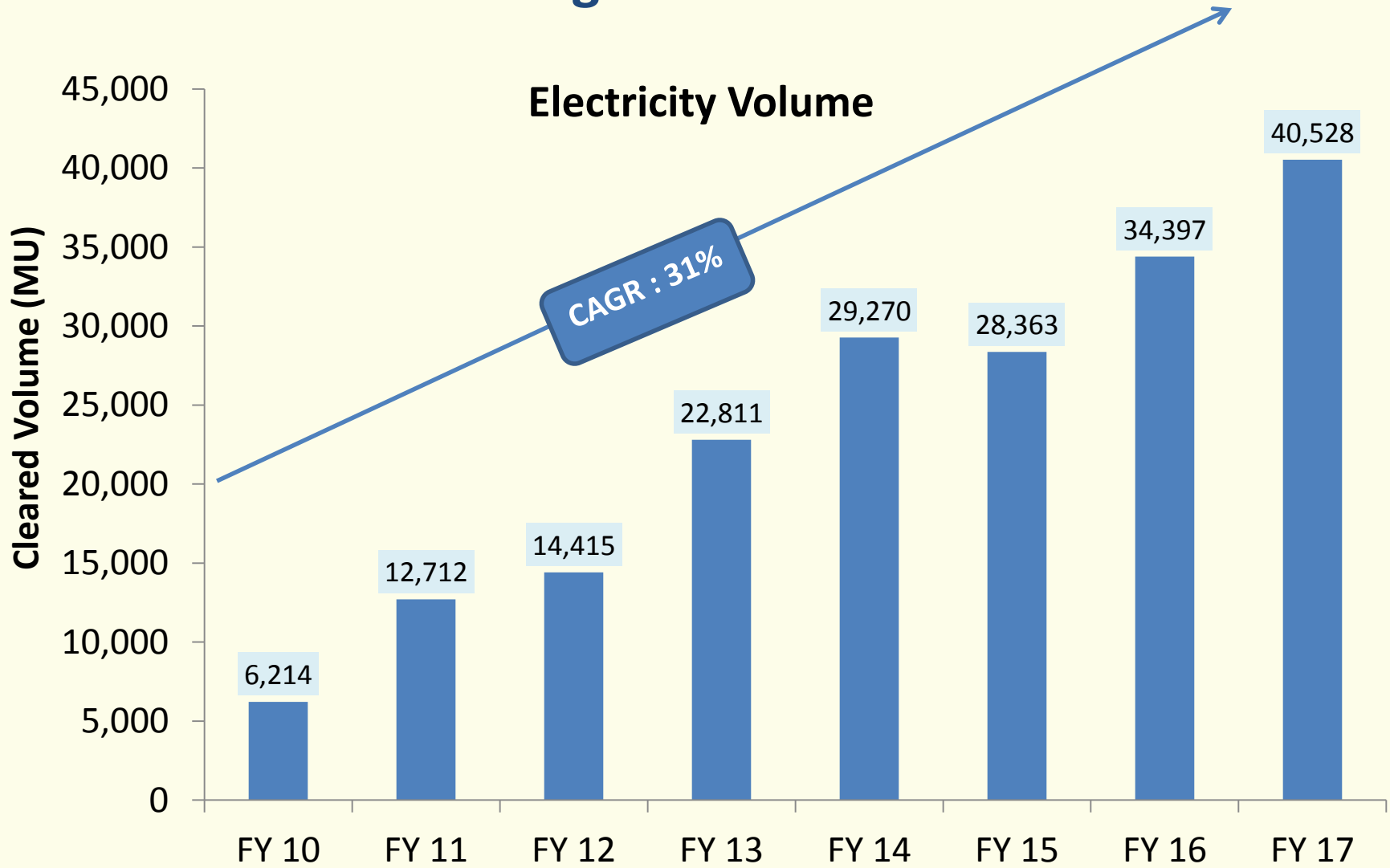
Energy Saving Certificates

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



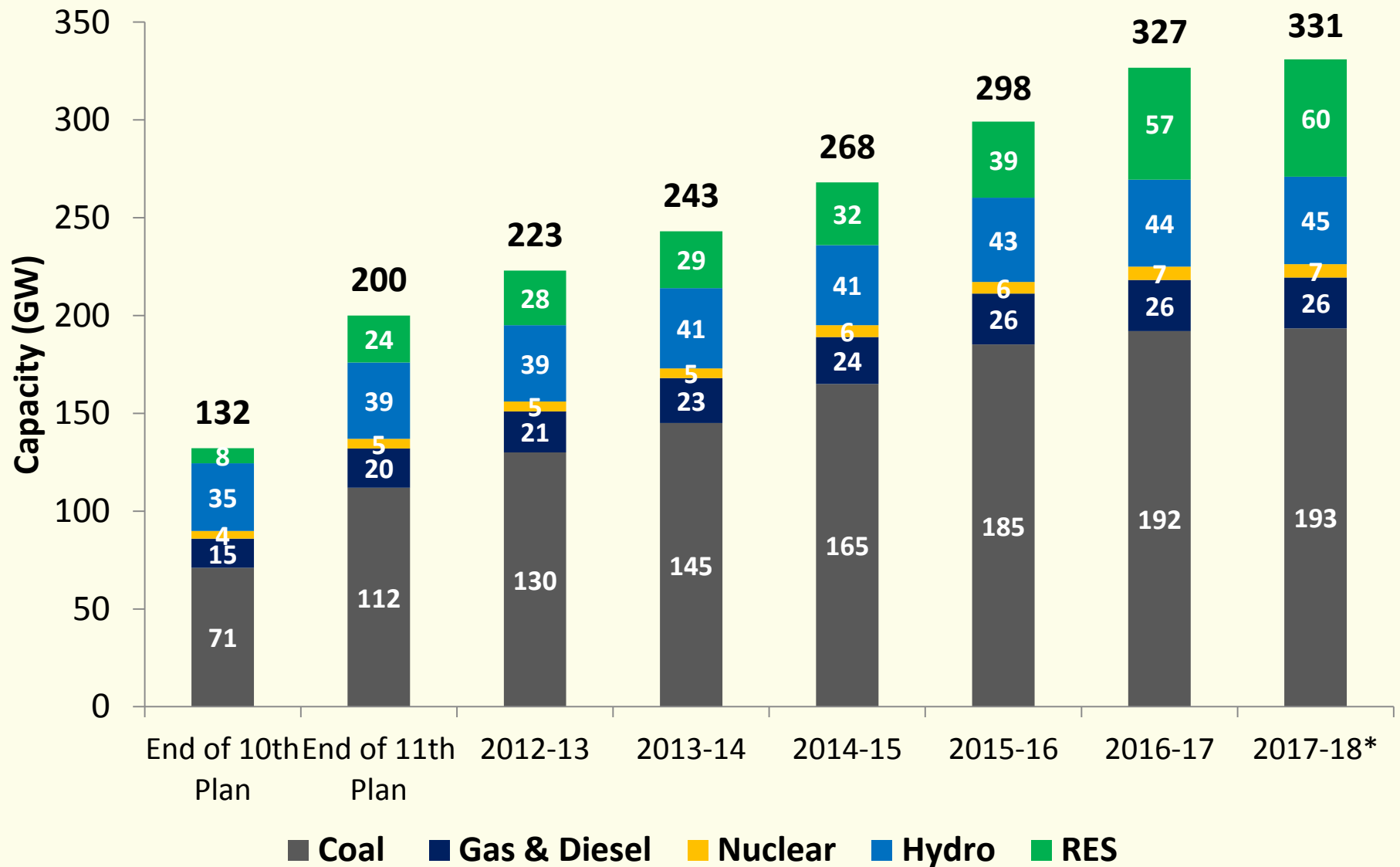
SECTOR OVERVIEW & IMPACT ON POWER EXCHANGE

Generation

Transmission

Distribution

Installed Generation Capacity of India



*As on 31st December 2017

*As on 31st December 2017

Power Situation in the Country

Year	Installed Capacity (at the end of FY) (MW)	Peak Met (MW)	Energy Available (Excluding RE Gen.) (MU)
2011-12	1,99,877	1,16,191	8,57,886
2012-13	2,23,344	1,23,294	9,11,209
2013-14	2,43,029	1,29,815	9,59,829
2014-15	2,67,367	1,41,160	10,30,785
2015-16	2,98,060	1,48,463	1,090,713
2016-17	3,26,848	1,56,934	11,35,332

- During the last 5 years, **capacity has increased at a CAGR of 10 %** i.e. from 199 GW to 327 GW, **peak demand met increased at a CAGR of only 6.2%** and **energy supply has grown at 5.8% CAGR**

Installed capacity has grown at a faster pace compared to demand

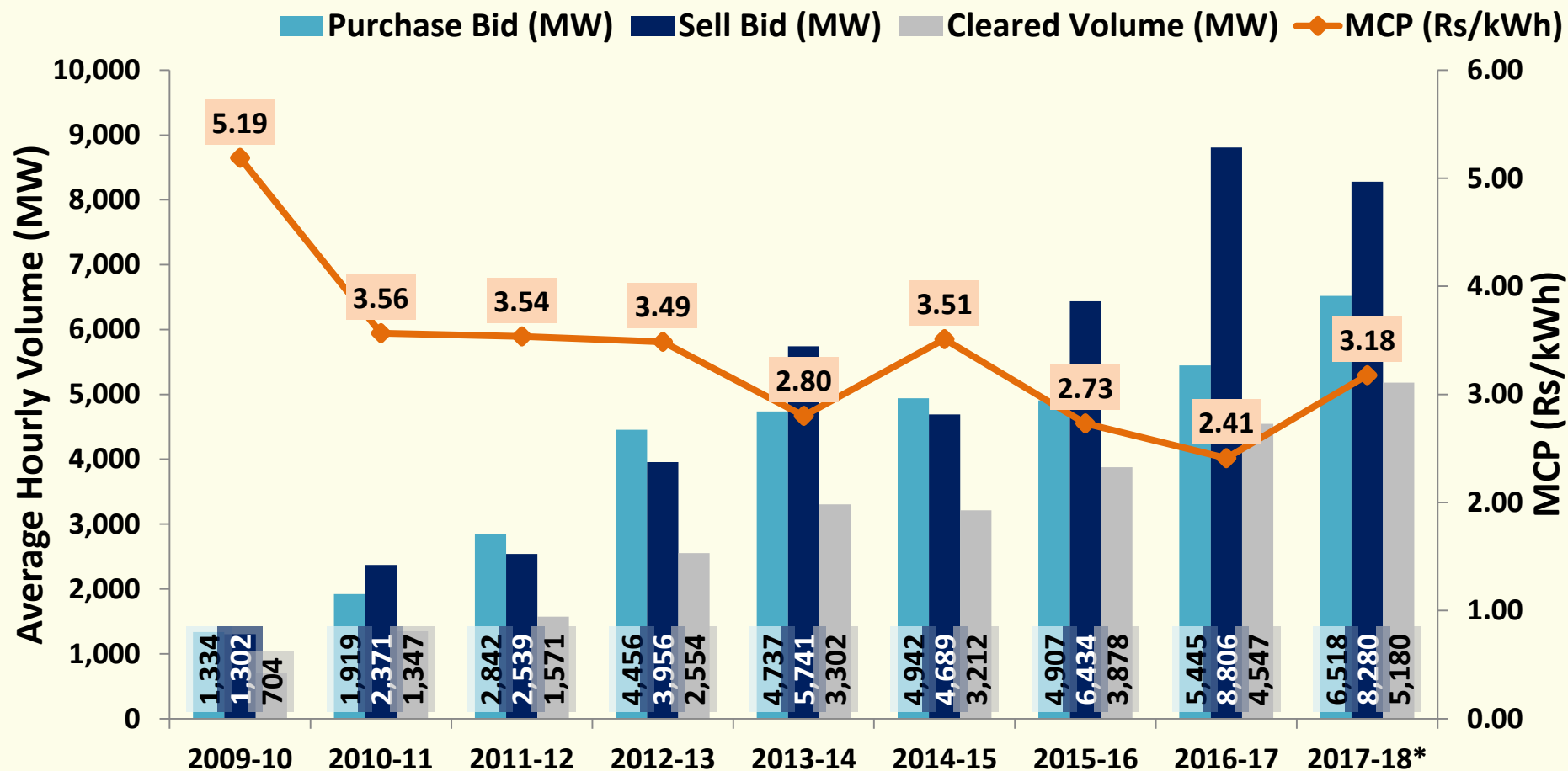
Installed Capacity (December 2017) & Generation (FY 2016-17)

Category	Installed Capacity (MW)	PLF	Generation (BUs) 16-17	Feasible PLF	Possible Generation (BUs)
Coal	192972	60%	944	80%	1,356
Gas	25,150	22%	49	20%	44
Diesel	838	3.5%	0.26	0%	0
Hydro	44,936	33%	122	35%	137
Nuclear	6,780	74%	38	80%	48
RE	60,157	16%	81	18%	92
Total	330,861		1,236		1,676

- Present installed capacity is enough to meet the demand of next 5 years at a growth rate of 6%
- Further capacity addition of 70,000 MW of conventional power and more than 1,00,000 MW of Renewable power expected during 13th Plan

High generation capability with the present and planned capacity addition, surplus situation expected to continue for next 8-10 years

High generation, increased competition : Pushed prices down at Exchange



Higher coal production has led to increased generation, and competitive prices for Exchange

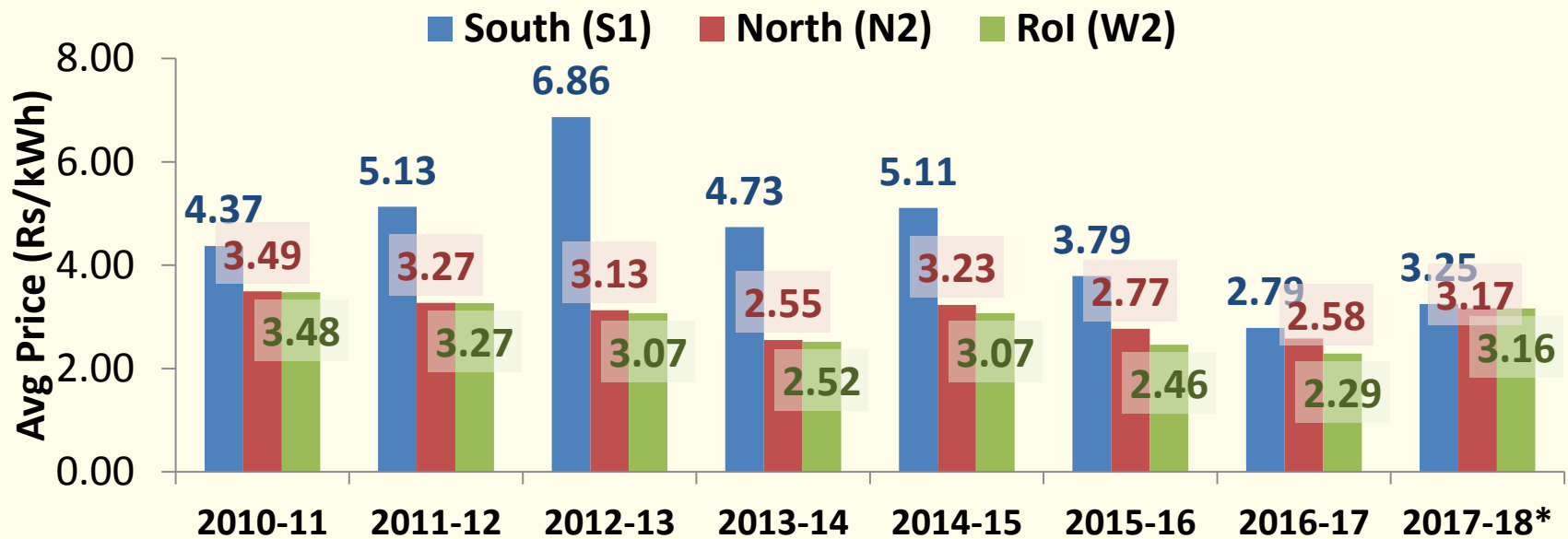
*2017-18 data till 31th December 2017

Transmission capacity addition in the Country: Impact on Exchange

- For efficient Power Market development, **transmission system** is the basic need for **free flow of electricity across country**.
- There is **large generation capacity in MP, Chhattisgarh, Orissa**, and **load centers are located in Southern and Northern Region** of the country.
- Due to **transmission congestion**, there have been frequent instances of market splitting resulting in **stranded generation capacity** and **unmet demand** and further leading to **distortion in prices**, high price in deficit areas and low prices in surplus area.
- Congestion also leads to uncertainty in the minds of the buyers that they might not get power when required from the Exchanges and therefore prefer to contract power under bilateral mode.
- In the last 3-4 years, **inter-regional transmission capacity has increased from 27,750 MW in 2012 to 78,050 MW on 30th Sep 2017**.

As a result of this capacity addition, congestion has significantly reduced and prices in different regions has also started converging

Volume Lost due to Congestion lowered and price convergence in regions 13



	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 (Dec 31 '17)	34,436	34,185	250	0.7%

With transmission augmentation, congestion has reduced and **ONE NATION ONE GRID ONE PRICE** achieved on 90% days in the month of July & Sept

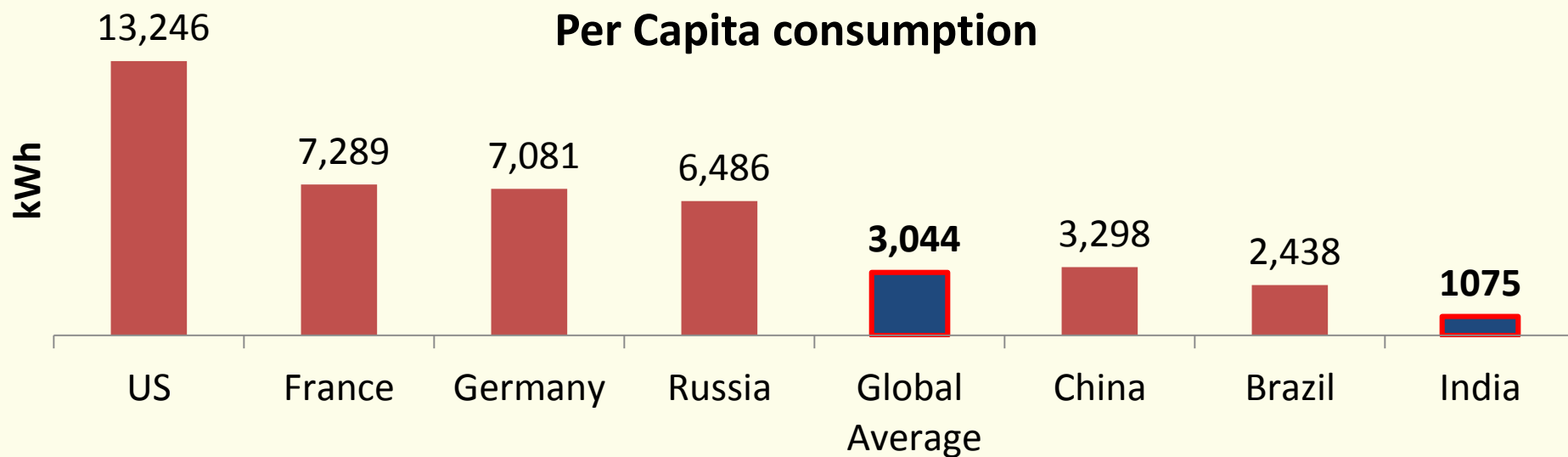
*FY 17-till 31th Dec'17

New Schemes by the Govt

➤ Saubhagya Scheme:

- The Hon'ble Prime minister on 25th September 2017 announced the **SAUBHAGYA Scheme**
- **The government aims to provide access to electricity to all villages by December 2017.**
- **Electricity supply to each household by December 2018.**
- This is expected to accelerate the process of rural electrification and increase the overall electricity demand in the country.

Demand is expected to boost with Saubhagya Scheme of Govt. of India



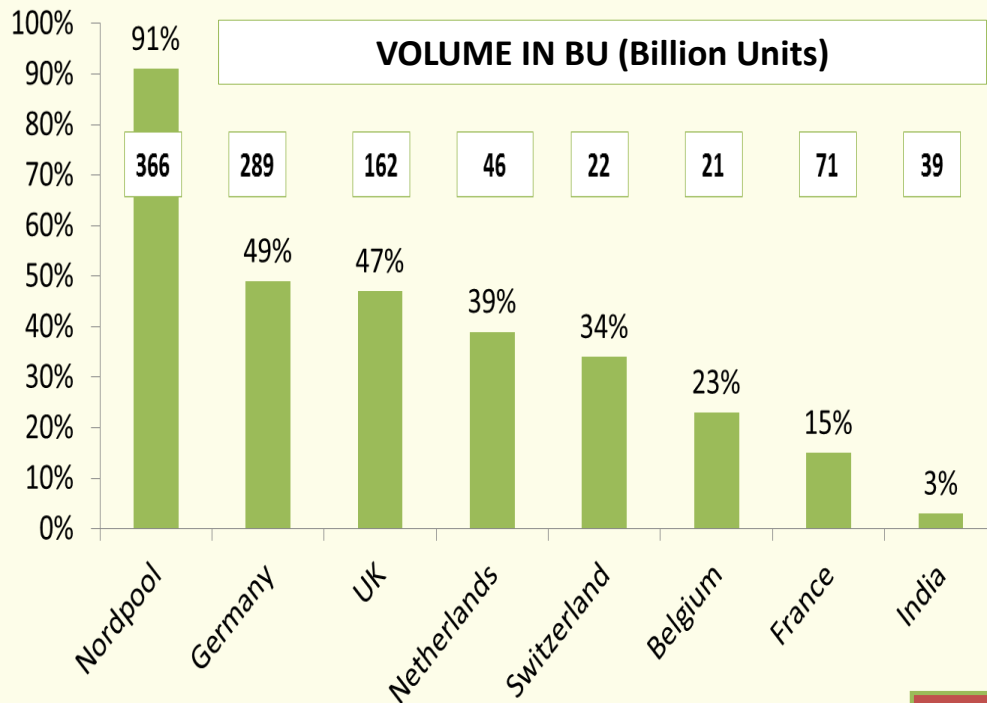
- With expected thrust on economic and industrial development and 24/7 power supply, Per Capita consumption bound to increase

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

Power Exchange across Globe:

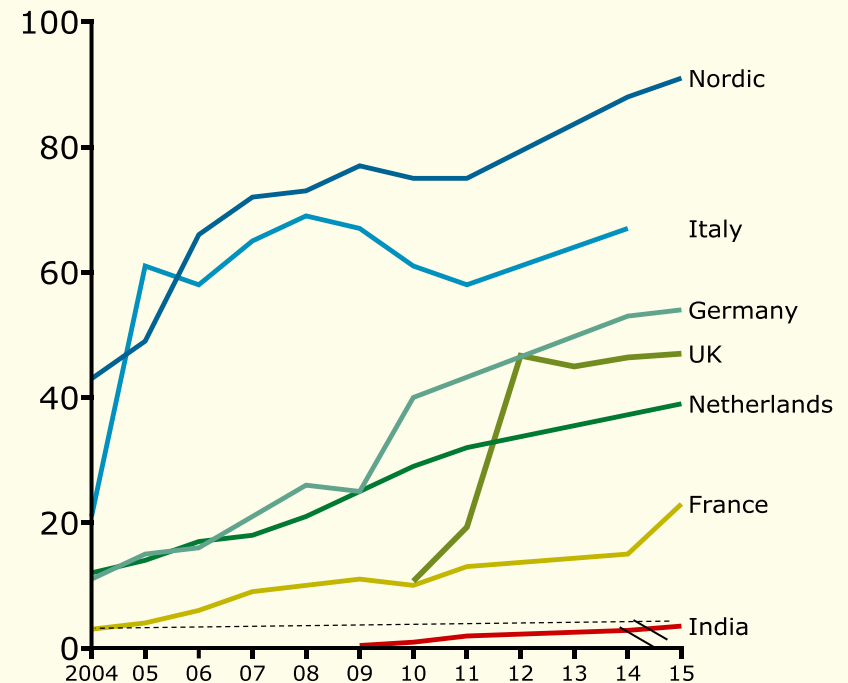
Enormous potential to grow for India compared to international benchmarks

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



GLOBAL BENCHMARKS ON PENETRATION OF ST MARKETS

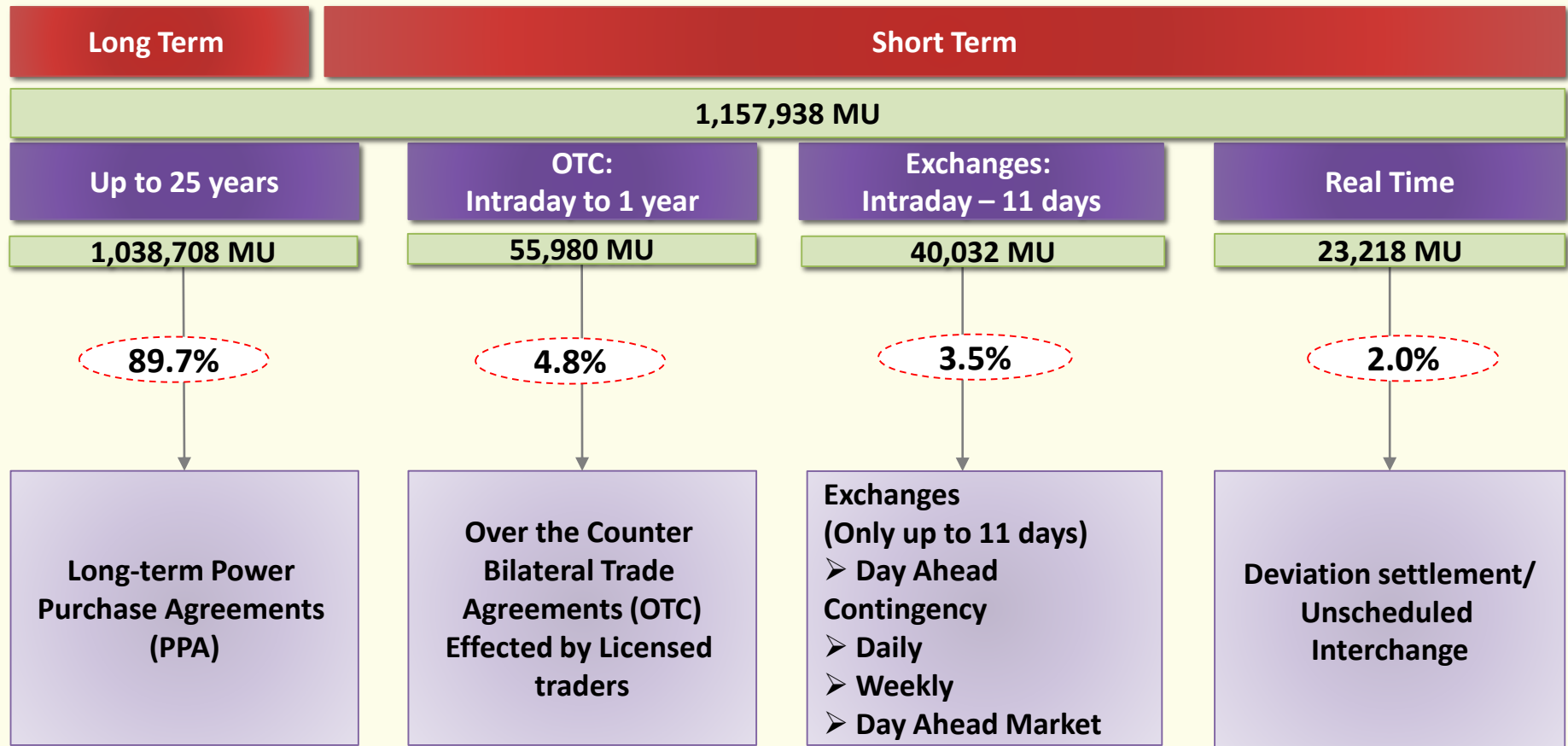
Exchange traded (% total consumption)



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

MARKET SNAPSHOT

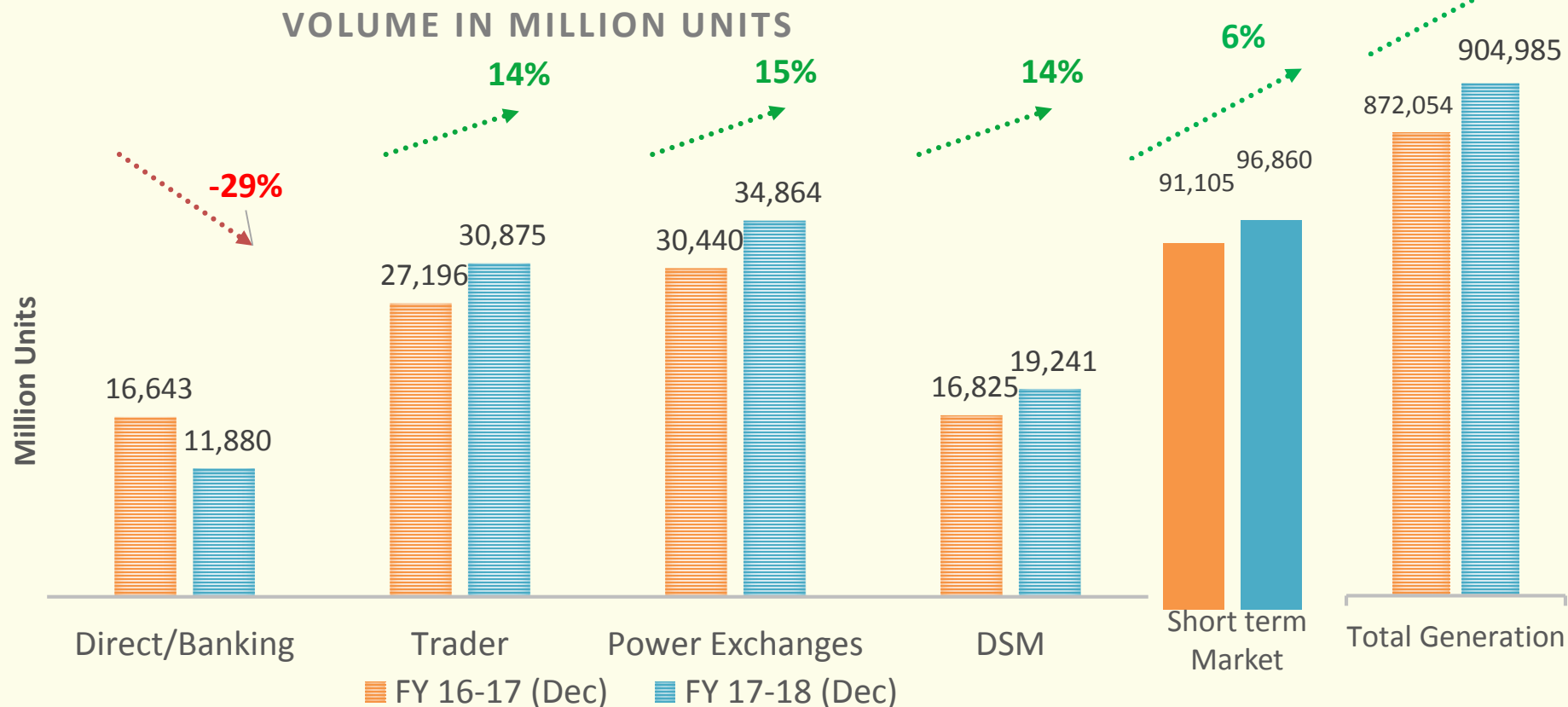
India Power Sector | Key Market Segments



Short Term Power market is at ~10%, Power Exchange volume in the segment have been growing significantly

Source: CERC MMC Report

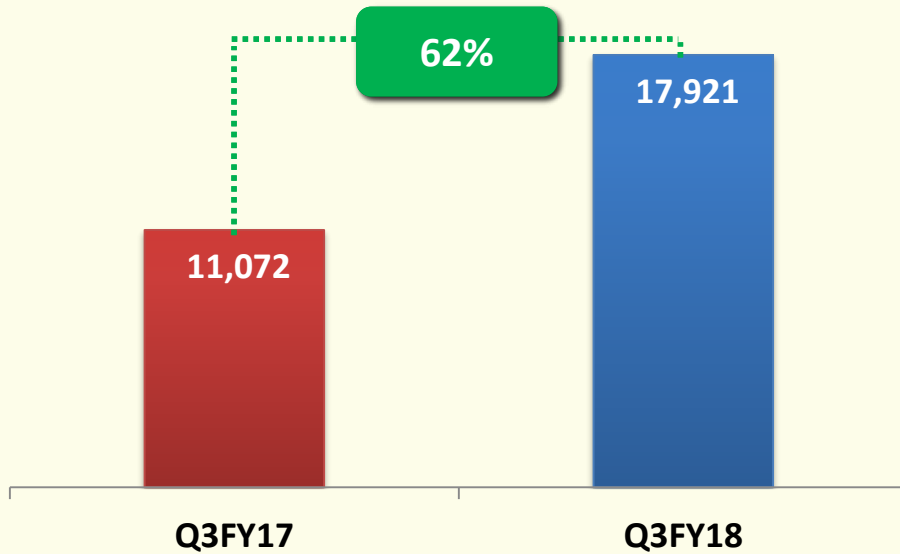
Short term market snapshot



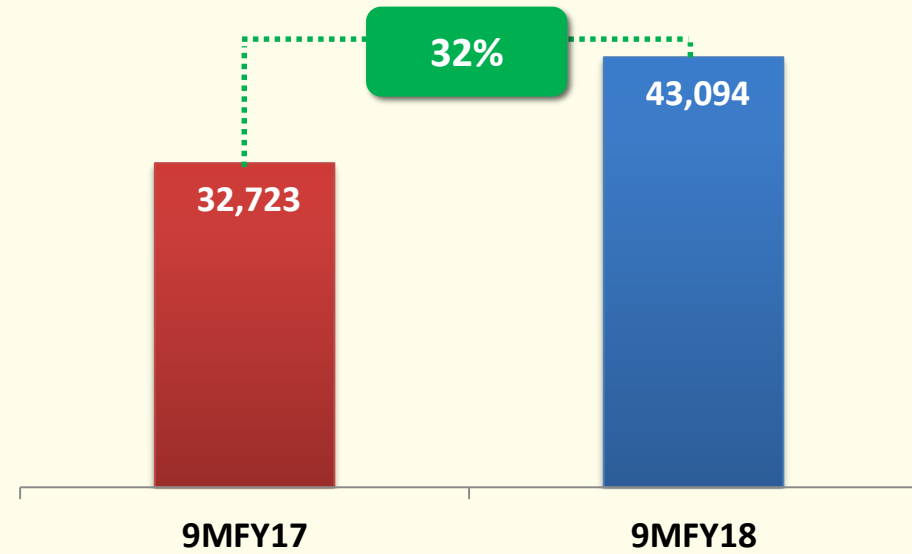
- Overall generation in the country, **increased by 3.80%** from Apr-Dec period
- Short Term market share in generation, increased from 10.4% to 10.7% in FY 17-18
- Banking transactions volumes have **reduced by 29%**
- Transactions through traders have **increased by 14%**
- Exchange volumes have **increased by 15%**
- DSM volumes have **increased by 14%**

Robust Volume Growth (Million Units)

Quarterly

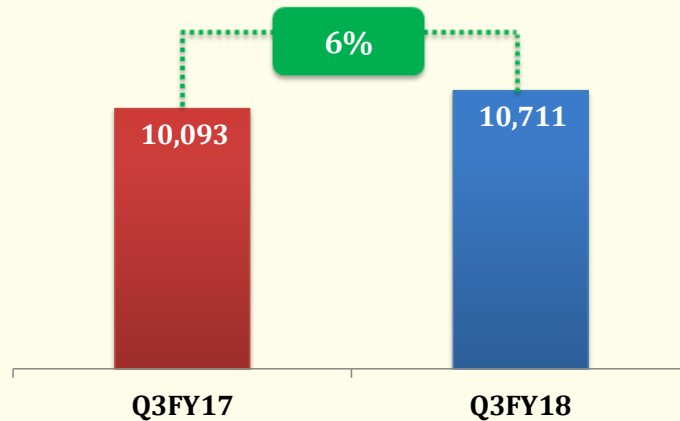


9 Months

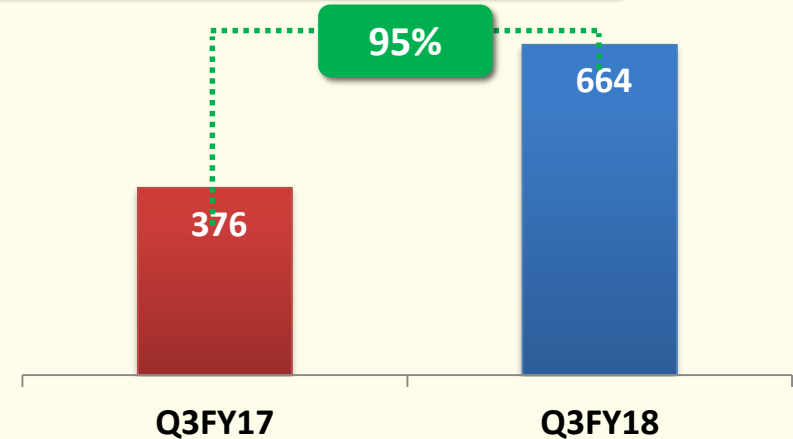


Quarterly Product Wise Volume Growth (Million Units)

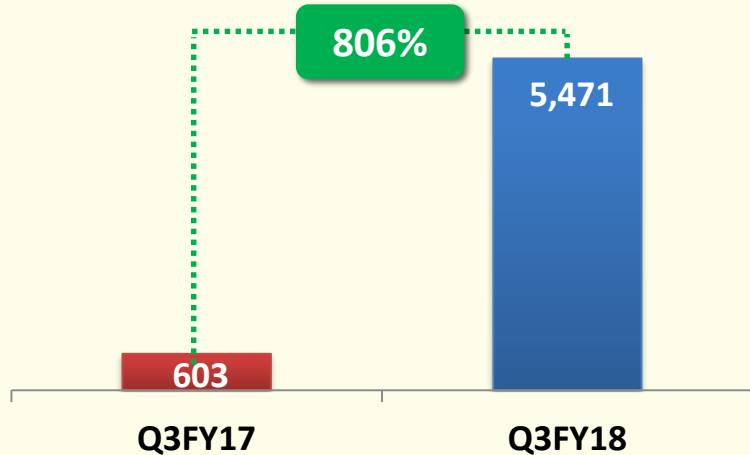
Day-Ahead Market



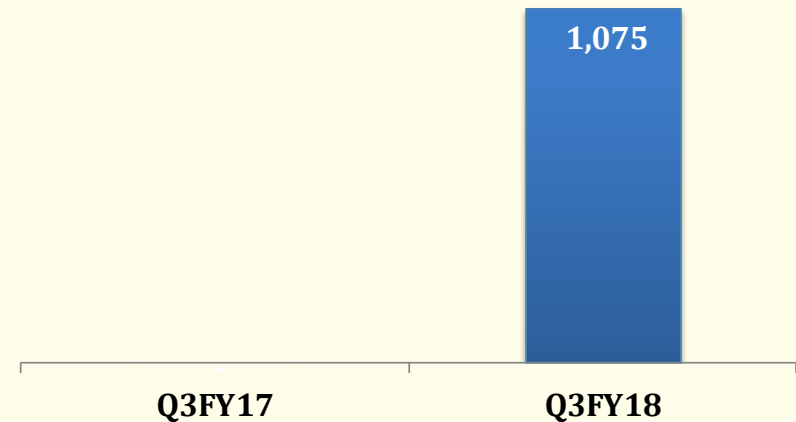
Term-Ahead Market



Renewable Energy Certificates

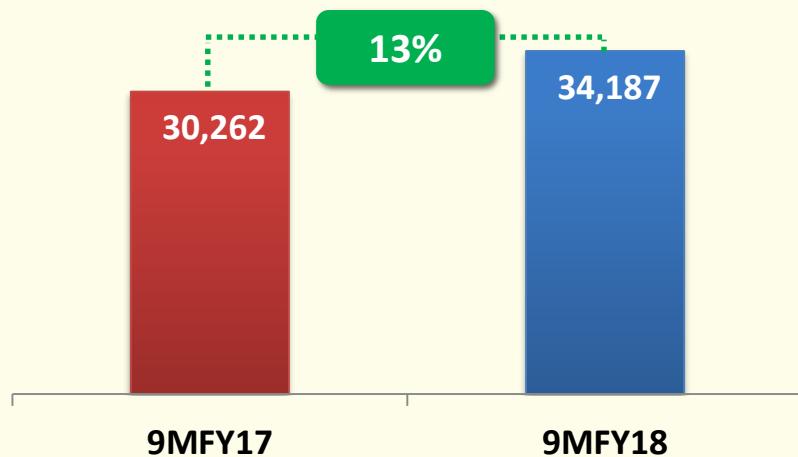


Energy Saving Certificates

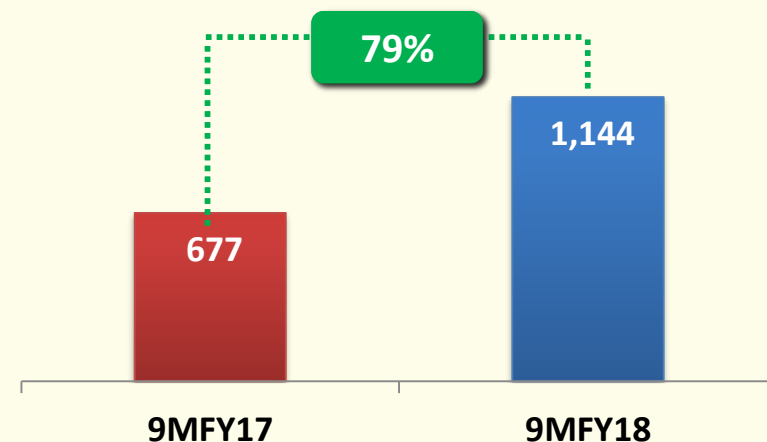


9M Product Wise Volume Growth (Million Units)

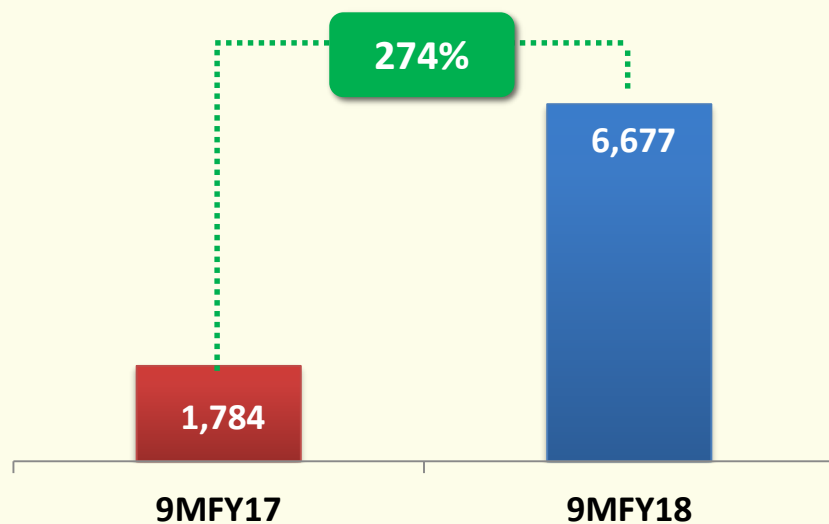
Day-Ahead Market



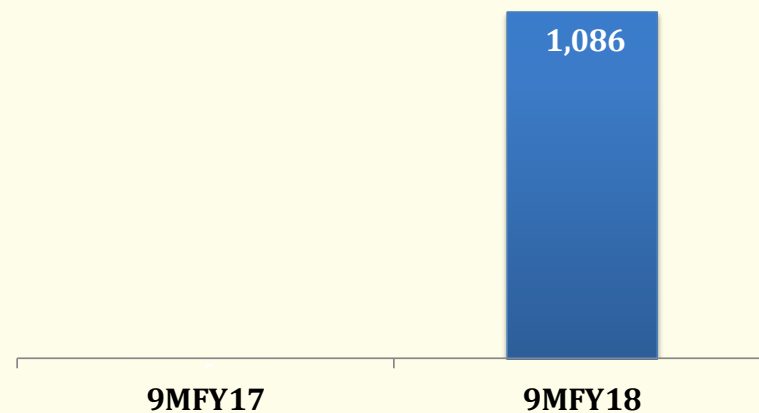
Term-Ahead Market



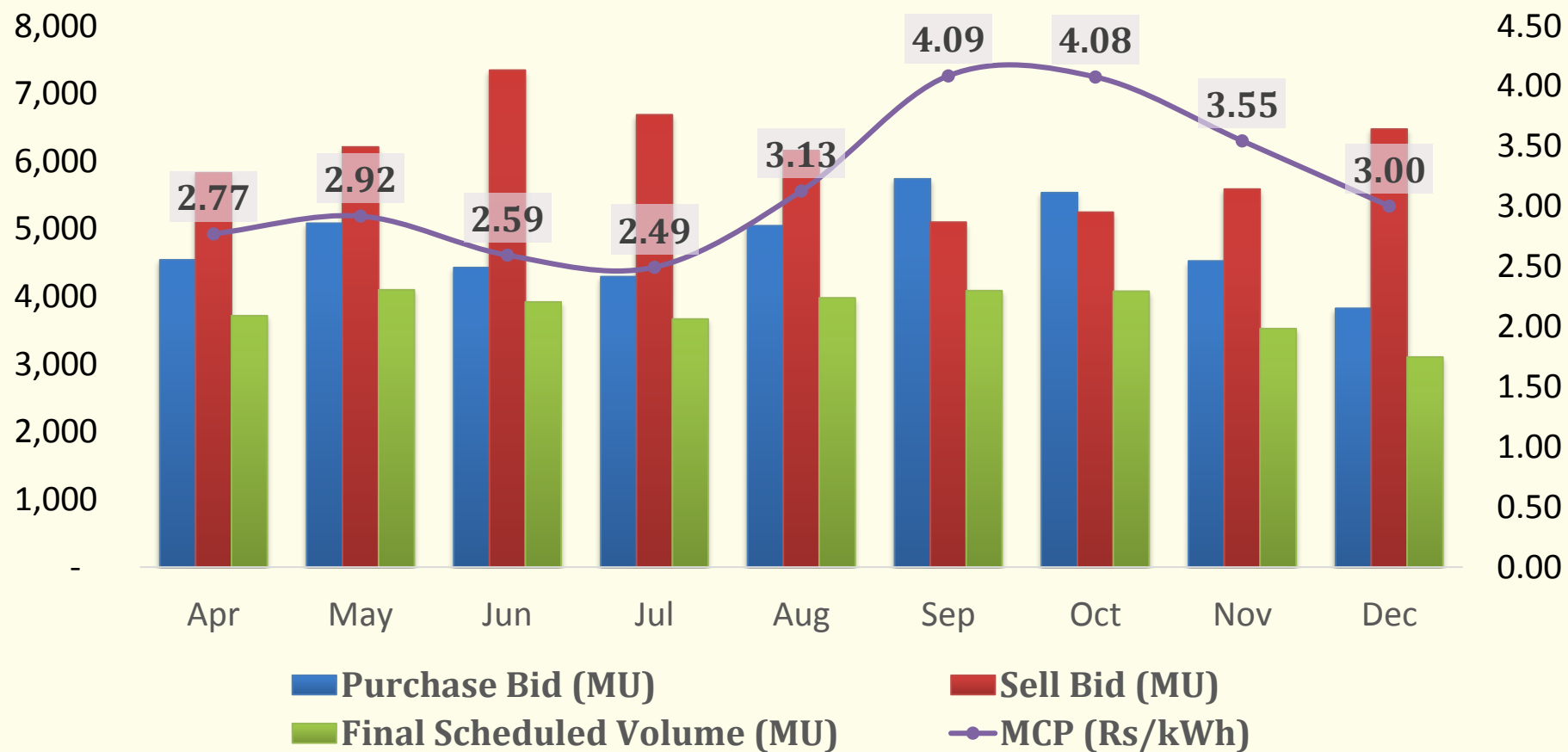
Renewable Energy Certificates



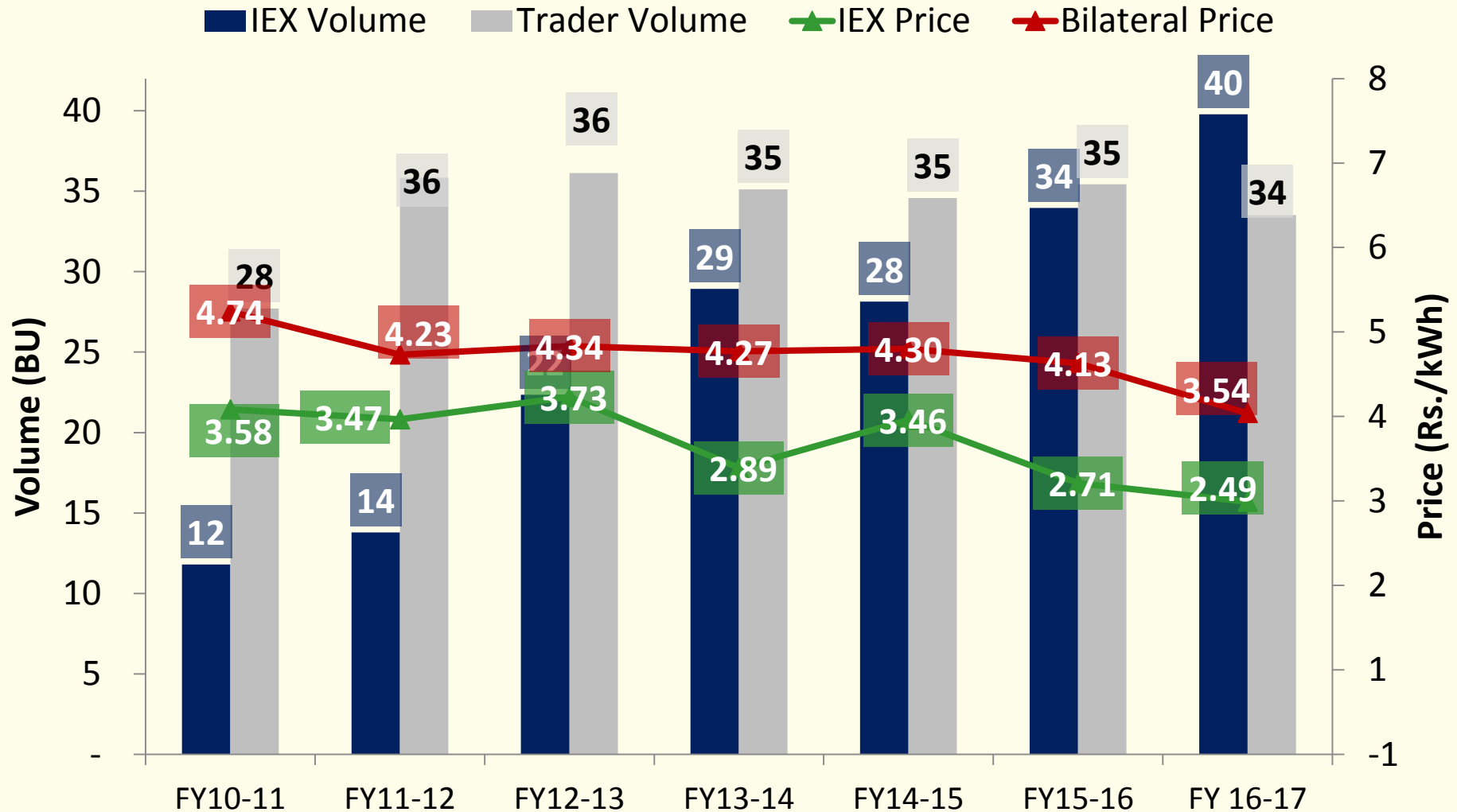
Energy Saving Certificates



Day Ahead Market Volume trend (MU)



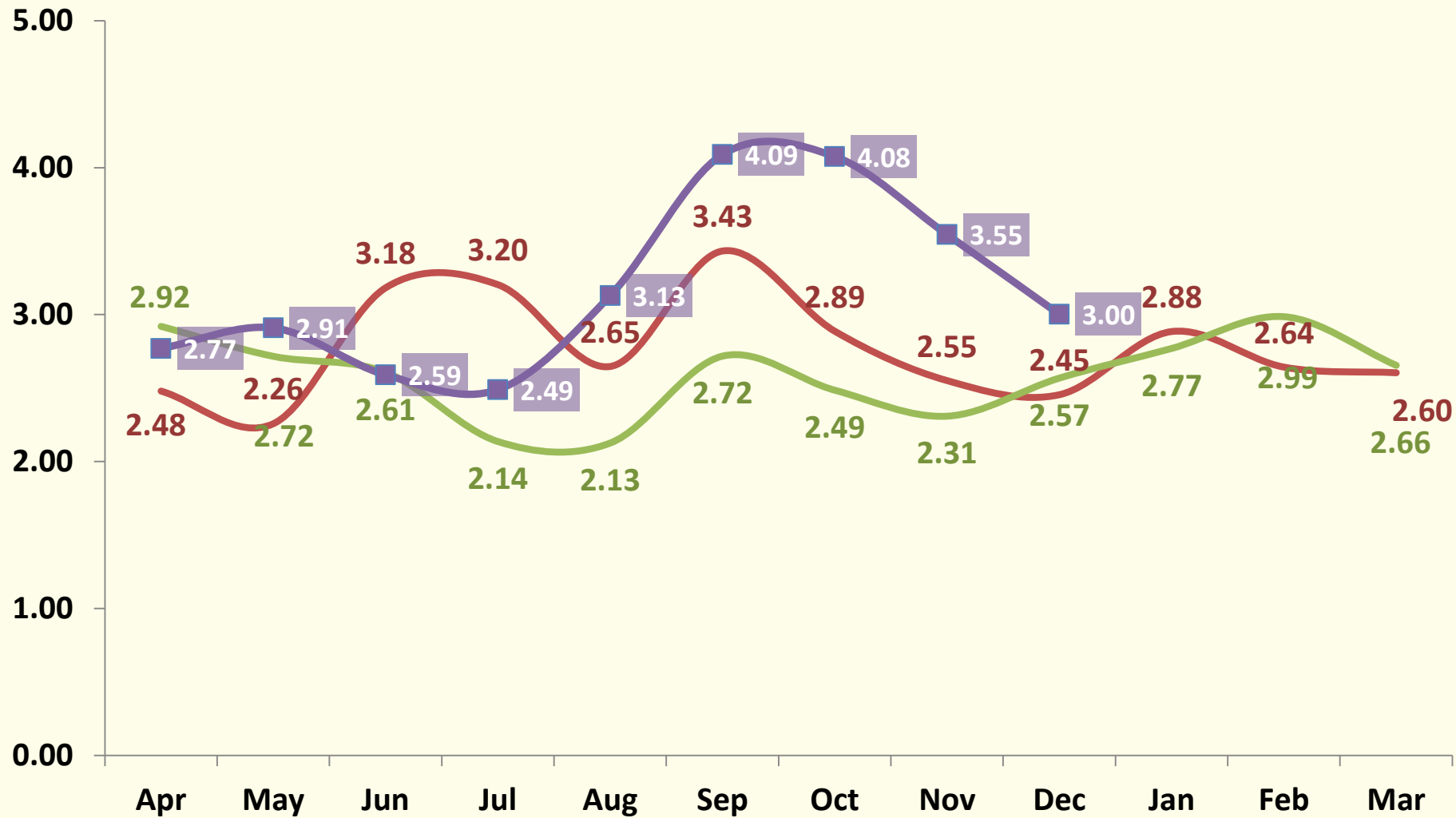
Price and Volume: Bilateral vs. IEX DAM



Prices at the Exchange always remained lower than Bilateral Contracts

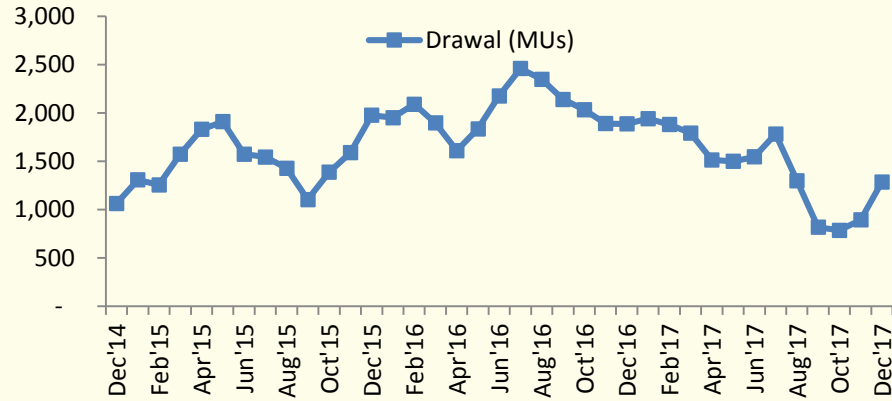
Monthly Price Trend (MCP)

— FY2015-16 — FY2016-17 — FY2017-18

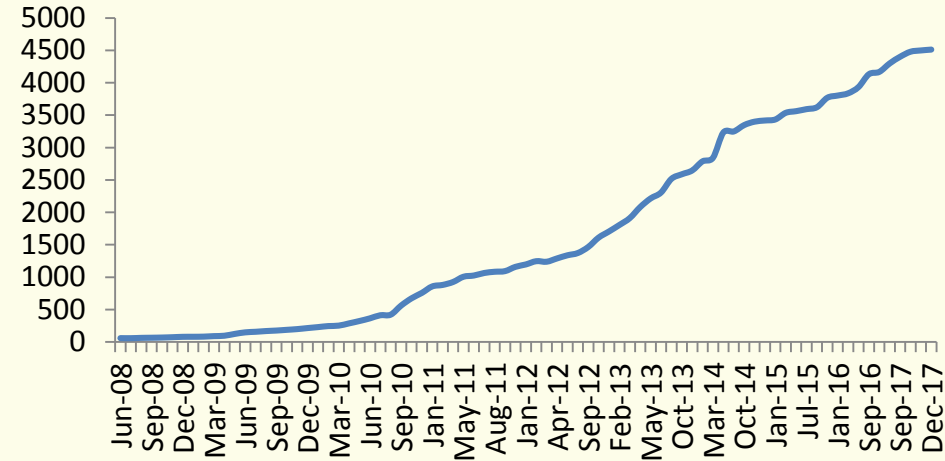


Strong and Growing Base of Participants

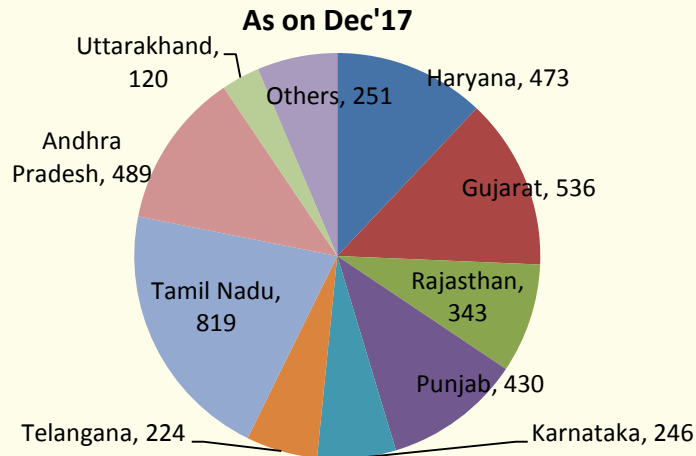
Open Access Volumes have shown rapid growth



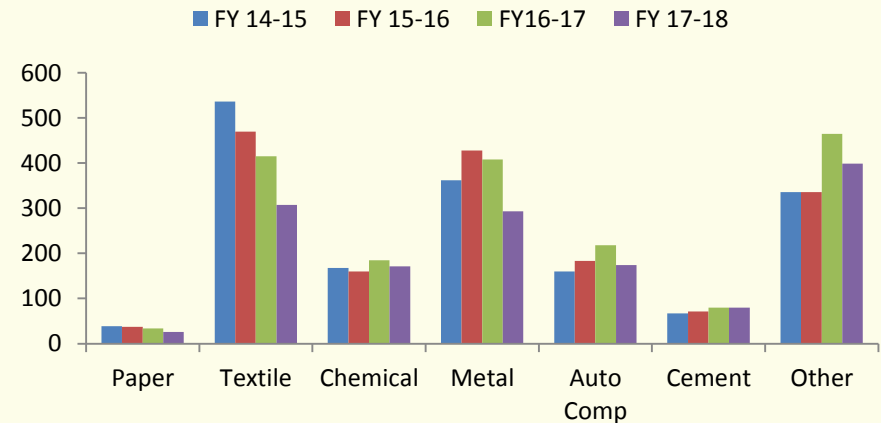
Average registered participants has been growing



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

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 3.4% in FY 17
- ◆ 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**

Improving Health of Discoms- UDAY Scheme

- ◆ Cash strapped Discoms prefer load shedding than buying energy
- ◆ Tariff increases, ATC loss reduction and clearing of balancing sheet under UDAY Scheme to help with financial stability & increase power purchase capacity of Discom

Portfolio Optimisation 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**

Gov Schemes to improve supply

- ◆ Government of India schemes like **'Saubhagya'**, **'24*7 Power Supply'** and **'Rural Electrification'** expected to increase demand of Power in the Country

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

New products and market segments

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

GAS Exchange

- Gas exchange can facilitate trading in Gas and enable transparent pricing
- Recently, oil minister announced that India to build a natural gas trading platform

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 (Maharashtra, 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 GoI to facilitate short term procurement of power by DISCOMS

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

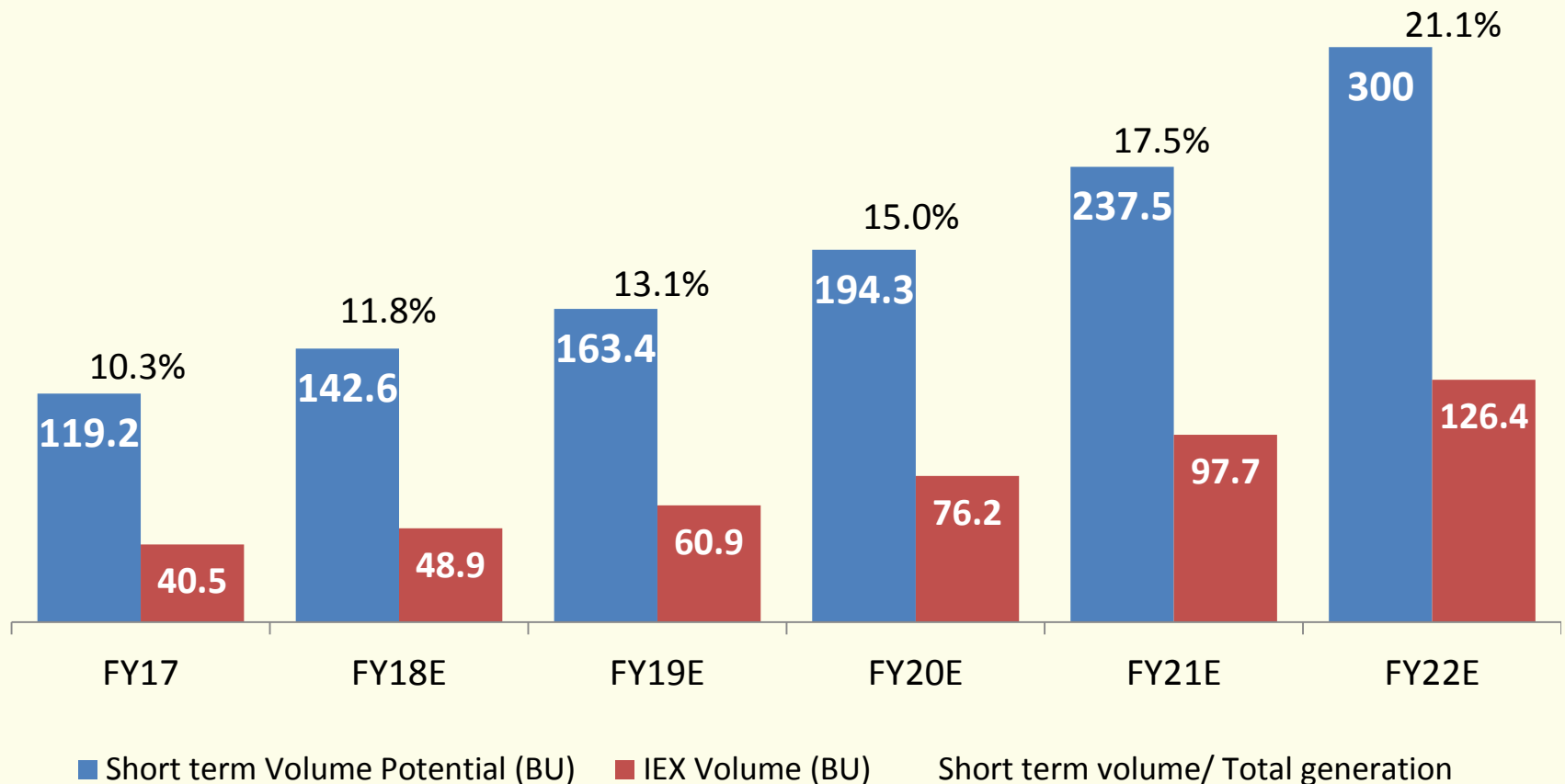
➤ Low liquidity in Term Ahead Products at IEX

- Volumes traded in Intra Day, DAC and other TAM products is low

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

Short Term Market Volumes on a rise

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



IEX Volume update for all current product segments vis-à-vis last year

Product Category	Apr-Dec – Million Units		
	FY 16-17	FY 17-18	% change
Day Ahead Market	30,262	34,187	13%
Term Ahead Market	677	1,144	69%
Total Electricity	30,939	35,311	14%
REC	1,784	6,677	274%
ESCert	Nil	1,086	
Total	32,723	43,074	32%

Value in INR Crores

Particular	FY 11 - 12	FY 12 - 13	FY 13-14	FY 14-15	FY 15-16	FY 16-17	FY16-17	FY 17-18
							YTD Dec'16	YTD Dec'17
Revenue	71	138	174	177	200	237	174	193
Operating Expenditure	19	33	38.5	41	50	61	40	34
Operating Profit	52	105	135.5	136	150	177	134	159
EBITDA %	73%	76%	78%	77%	75%	74%	77%	82%
PBT	48	93	133	133	147	173	132	152
PAT	34	66	92.5	90.4	100	113	87	100

Financials results up to FY 2016-17 are audited as per I-GAAP and for YTD Dec -16 & Dec 17 are un audited as per Ind AS

Top 10 shareholders of IEX (As on 31st December)

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%

✓ **“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 Power Exchange in India” – 2012 | 2013 | 2014**
Enertia Foundation –

✓ **“Best Performing Power Trading Company/Exchange” – 2012 | 2013**
Power line

✓ **“Innovators in Product and Technology”- 2013**
Inc. India

✓ **“Best E- Enabled Consumer Platform” - 2009**
Inc. India



THANK YOU