



POWERGRID

Fastest Growing Electric Utility in Asia
An S&P BSE SENSEX Company

Q1 FY 2016-17

Press & Analysts' Meet

Mumbai

August 17, 2016

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Transmission – A Paradigm Shift

POWERGRID Today

- | | |
|----------------------|---------------|
| Performance (Q1FY17) | ▪ Financial |
| | ▪ Operational |
| Performance (Q1FY17) | ▪ Consultancy |
| | ▪ Telecom |
-

Projects in FY17

Investment Programme & Outlook

Investors' Response to Company's Growth

Recent Accolades

**PARADIGM
SHIFT**

**in
Transmission**

**From Building Evacuation Systems
to
Market Enabler**

Hon'ble PM on Independence Day referred

➤ Importance of Transmission

- Expressed satisfaction over laying of 50,000 km of transmission lines

➤ One Nation – One Grid – One Price

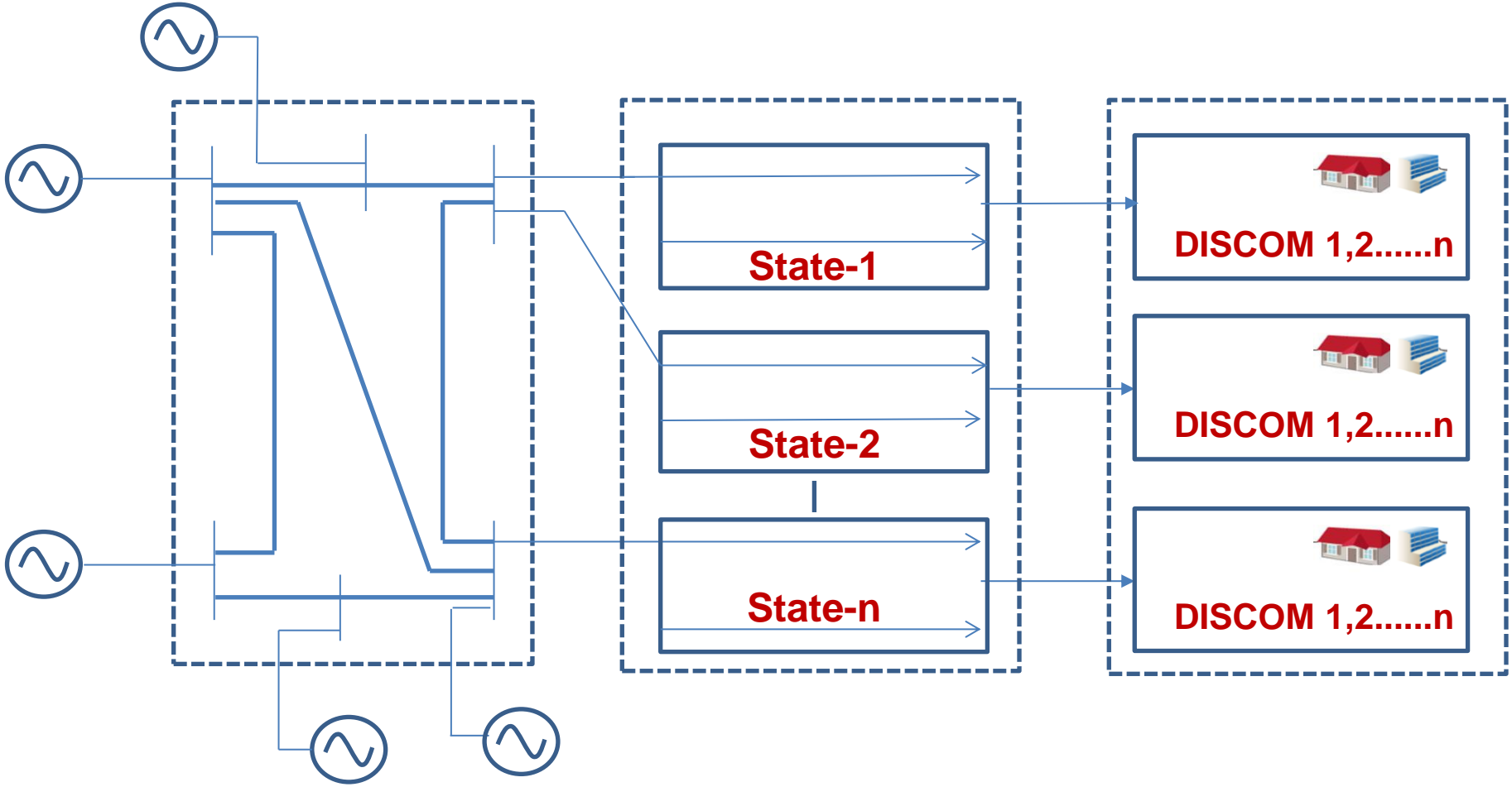
- Due to One Nation One Grid and availability of transmission, there is free flow of power from surplus to deficit zones

Power Delivery Chain

Transmission

Sub-Transmission

Distribution



Inter-State

- POWERGRID, Pvt.
- Few Intra-State

Intra-State (STU)

DISCOMs

Need of Transmission

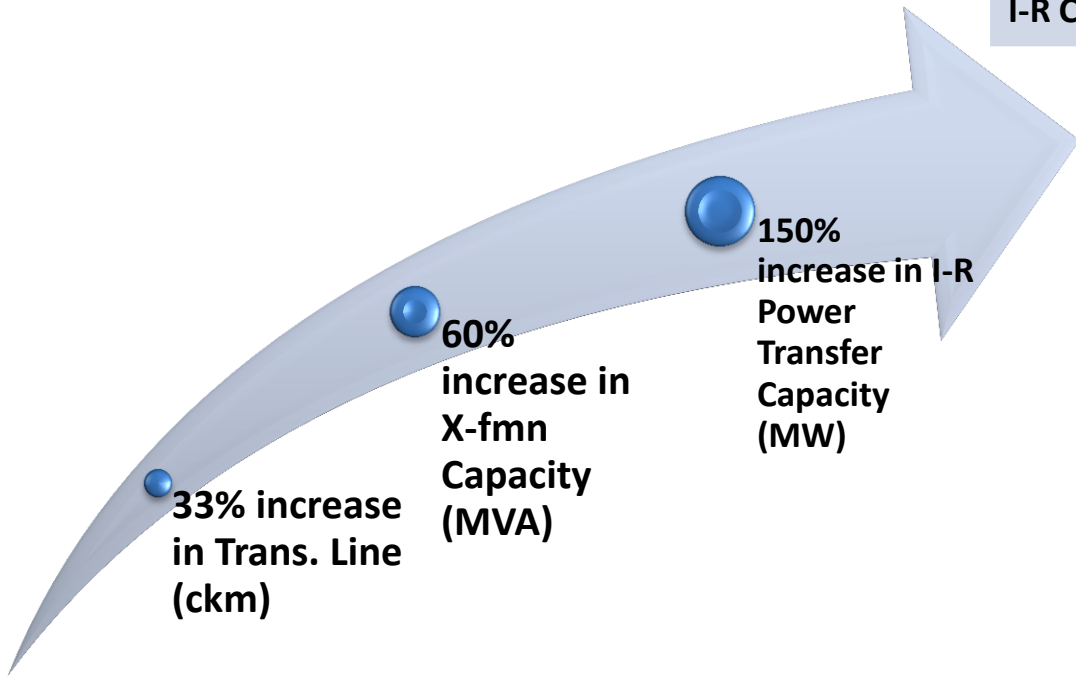
- **Demand centers and sources of energy are polarised**
 - Uneven disposition of primary energy resources – coal (ER/Central India) & hydro (NER/NR)
 - Demand at far-off locations in WR/SR/NR
- **Transportation of coal difficult & costly, especially Indian coal have 30-40% ash content**
- **Laying of rail infrastructure difficult than laying transmission**
- **Provide reliability**
- **Integration of renewable energy sources**
- **Merchant power market**
- **Access to cheaper power**

All-India Growth in Transmission - XII Plan (4 years)

765kV lines
5,250 ckm to 24,245 ckm
(4.6x in 4 years)

As on Mar-16

TL	341,551 ckm
X-fmn Cap.	658,949 MVA
I-R Cap.	59,050# MW



7% lines at 765kV

As on Mar-12

TL	257,481 ckm
X-fmn Cap.	411,001 MVA
I-R Cap.	27,750 MW

2% lines at 765kV

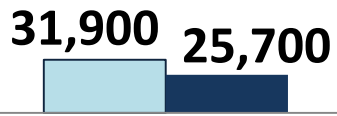
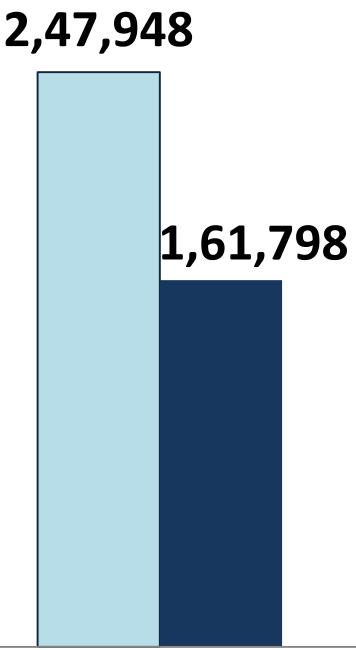
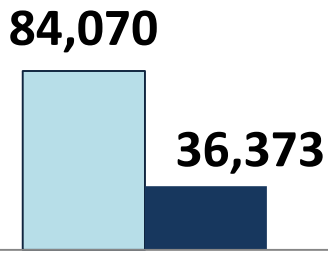
POWERGRID role in Txn. Growth - XII Plan (4 years)

Addition during XII Plan (4 yrs: Apr12-Mar16)

TL: 43%

X-fmn Cap.: 65%

I-R Cap.: 81%



ckm

MVA

I-R Capacity

■ All-India (incl. POWERGRID)
 ■ POWERGRID

Trans. Growth – Enabling Cost Optimization

	FY12	FY16	Growth	CAGR
Generation (MU)	876,888	1,107,386	230,498	6.01%
I-R Energy Transfer (MU)	58,999	117,000	58,001	18.67%
I-R Energy Transfer as % of Generation	6.73%	10.57%		
STOA – Energy (MU)	66,987	98,000	31,013	9.98%
STOA (Energy) as % of Generation	7.64%	8.85%		

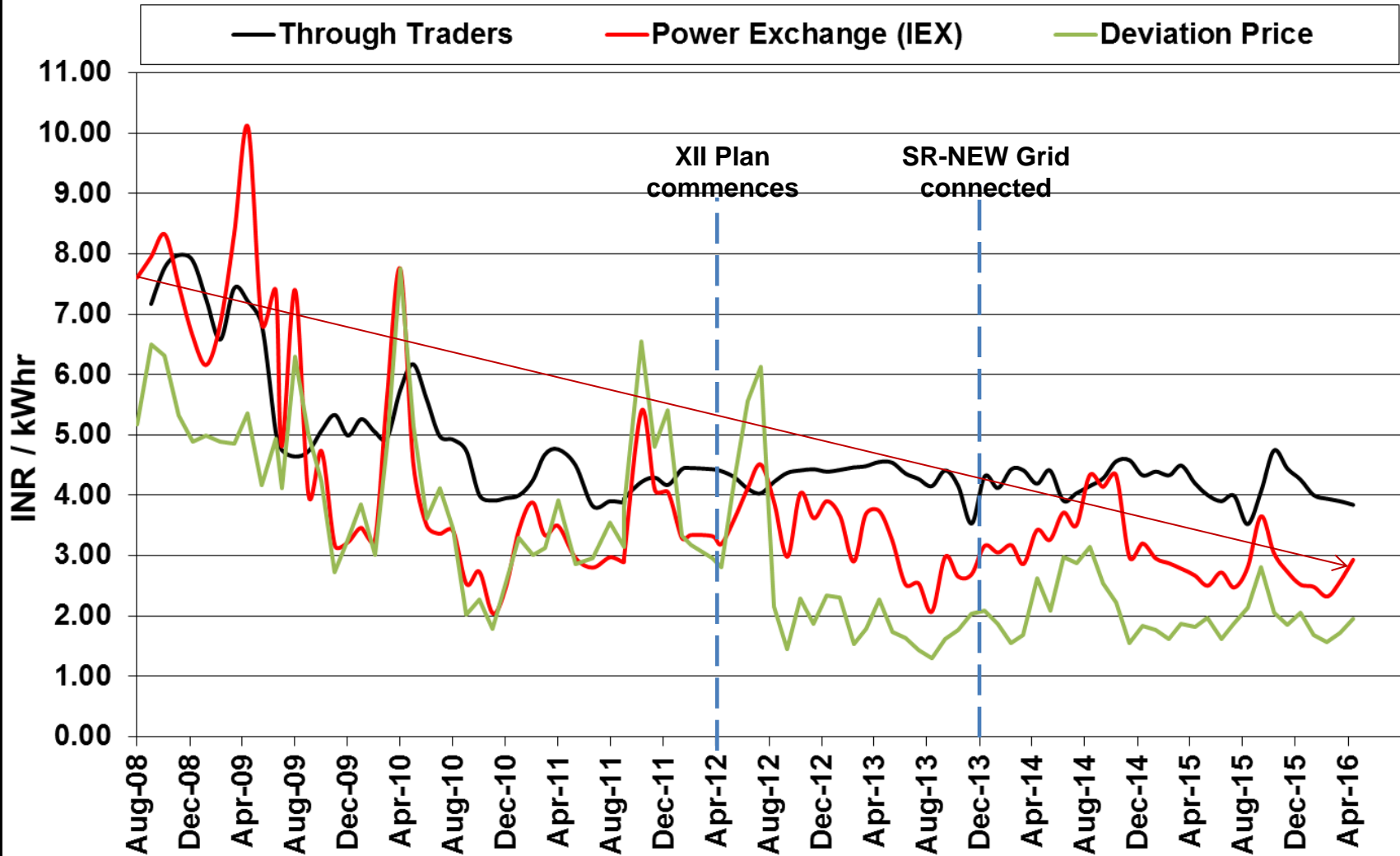
- ✓ **I-R Power Transfer grew at ~19%**
- ✓ **Availability of Transmission encouraged enhanced market operations leading to reduced prices for buyers**

Transmission Growth has led to:

- **Reduced power prices for buyers**
(Discoms, Distribution Open Access Customers)
- **Net gains for Buyers - even after buying power from distant sources and paying for transmission**
- **Cheaper power sourced from far away places, economically**
- **Consistent Reduction in congestion**

Trans. Growth – Enabling Cost Optimization

Movement of Weighted Average Prices



National Grid Synchronized from Jan'14

Source: CERC MMC Data

Consistent Reduction in Congestion

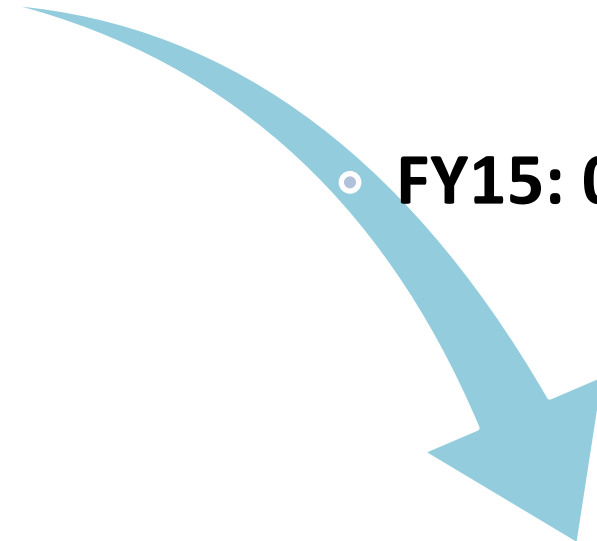
	Total Electricity Generated (BU)	Electricity that could not be cleared due to congestion (BU)
FY14	967	5.59
FY15	1,048	3.14
FY16	1,107	2.16

Electricity that could not be cleared due to congestion as % of total electricity generated

FY14: 0.58%

FY15: 0.30%

FY16: 0.20%



- **Continued momentum in Transmission Development**
 - **Rising need for flexibility in the grid**
 - **Optimal utilisation of uneven distribution of energy resources**
 - **About 20-21GW of excess capacity available – lot of potential to access of cheaper power; demands Inter- regional links**
 - **Demand levelling**

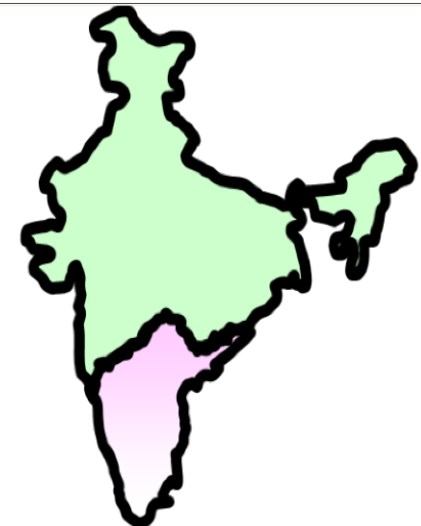


WR - NR

- Present: 7,900MW
- Envisaged by 2020: 20,000MW

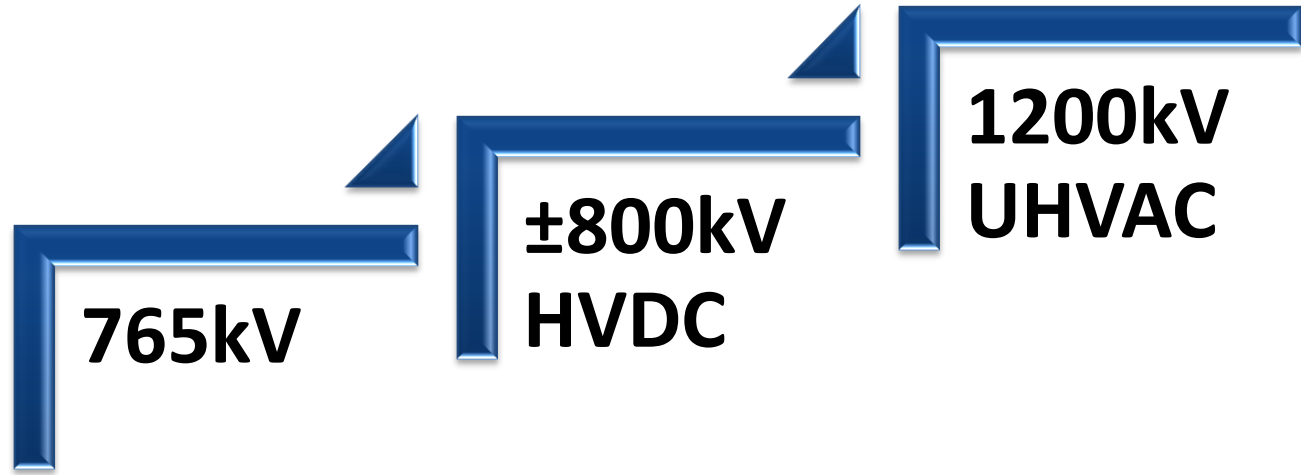
NEW Grid – SR

- Present: 5,900 MW
- Envisaged by 2020: 18,400 MW



New Technology in Transmission

Adoption
of Higher
Voltages



STATCOM

Smart Grid
(WAMS-PMU)

Reconductoring



**Use of Unmanned
Aerial Vehicles
(Drones)**



**Aerial Patrolling using
Helicopters**

Use of New Technology in Transmission



Hot Line Maintenance



**Emergency
Restoration System
(ERS)**

POWERGRID Today

POWERGRID Today

A 'NAVRATNA' ENTERPRISE

CENTRAL TRANSMISSION UTILITY

LISTED COMPANY since 2007

GOVT. SHAREHOLDING 57.90%

PAYING DIVIDEND SINCE 1993-94

Market Capitalization ₹ 92,887 crore¹

- ✓ **>90% ISTS Transmission Network owned by POWERGRID**
 - ✓ **Trans. Lines: 1055 Nos. - 131,728 ckm**
 - ✓ **Sub-stations: 213 Nos. - 265,663 MVA**
- } 400kV & above: >90%
- ✓ **State-of-the-art technologies like HVDC, SVC, FACTS etc.**
 - ✓ **>45% power generated in India transmitted through POWERGRID**

CREDIT RATINGS



Physical parameters as on 31st July, 2016

Performance in Q1FY17 (Apr16-Jun16)

Performance- Financial (Q1FY17)



(₹ in crore)

Description	Year ended	Quarter ended	
	31.03.2016 as per IGAAP	30.06.2015 As per Ind AS	30.06.2016 As per Ind AS
Revenue			
- Transmission Charges	19,945	4,513	5,889
- Consultancy Income: Services	465	89	120
- Telecom	392	88	111
- Other Income	479	103	139
Total Income	21,281	4,793	6,259
-Operating Expenses(including prior period adjustment)	2,456	555	700
EBITDA-Gross Margin	18,825	4,238	5,559
Depreciation	6,183	1,378	1,757
Interest	5,023	1,142	1,518
Tax	1,592	362	482
Profit after Tax	6,027	1,356	1,802
Other Comprehensive Income/ (Exp) – net of Tax		(13)	17
Total Comprehensive Income	6,027	1,343	1,819

Growth in Income: 31%

Growth in Profit After Tax: 33%

Performance – Financial (Q1FY17)

	(₹ in crore)		
	As on 31.03.2016 As Per IGAAP	As on 30.06.2015 As per Ind AS	As on 30.06.2016 As per Ind AS
Gross Fixed Assets	1,50,052	1,22,578	1,52,249
Capital Work-in-Progress	46,830	56,878	48,831
Debt	1,06,321	99,412	1,09,789
Net Worth	42,598	40,408	45,470
Earning Per Share (₹)	11.52	2.59#	3.44#
Book Value per Share (₹)	81.43	77.24	86.91
Key Financial Ratios			
Debt : Equity	71:29	71:29	71:29
Return on Net Worth	14.15%	3.36%#	3.96%#

Not Annualized

Performance - Financial (Billing & Realization)

As on 30.06.2016

Total Outstanding:

~ ₹ 3,718 crore
(53 days billing#)

Billed but not outstanding
(<60 days allowed as per CERC)

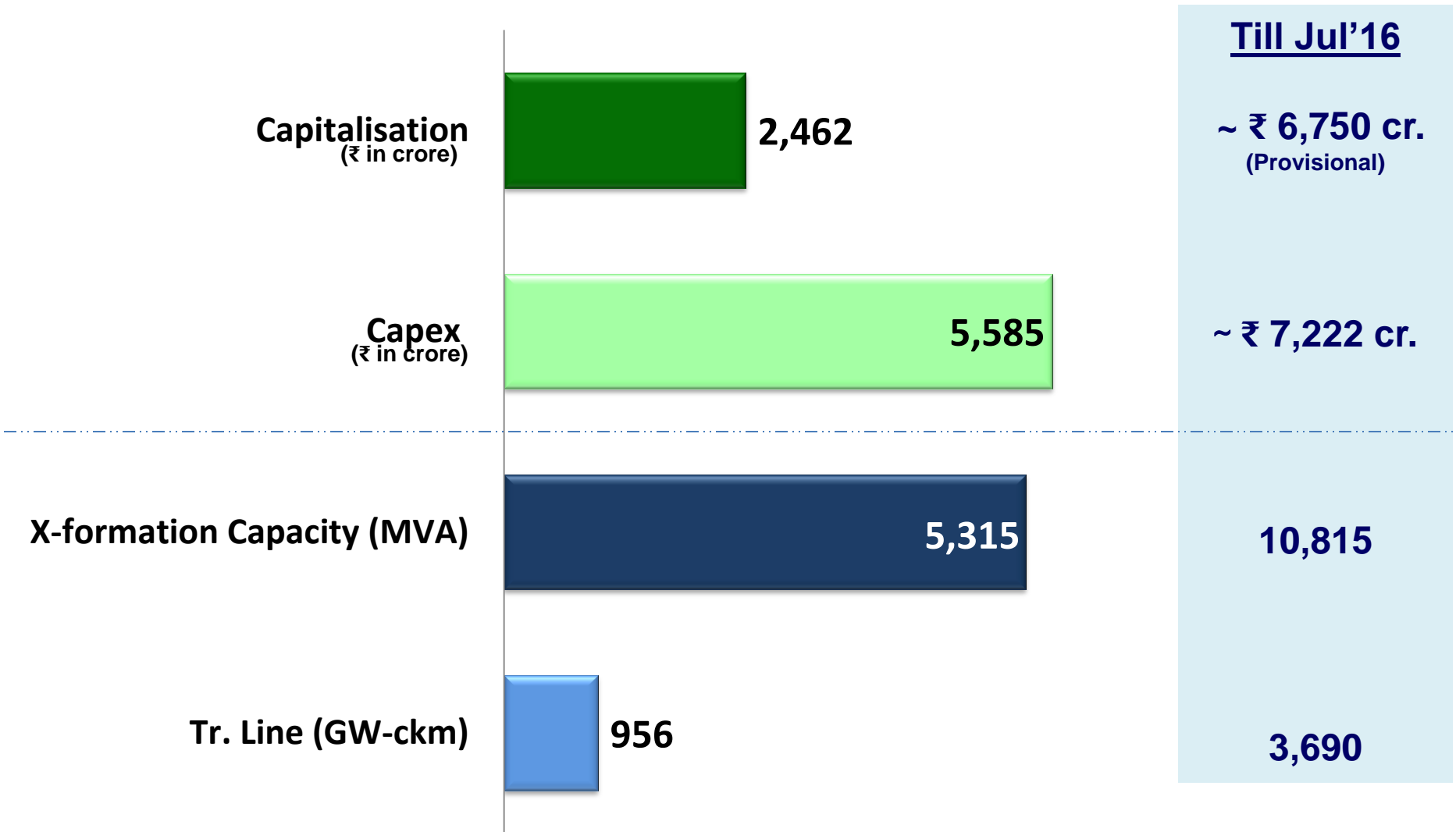
~ ₹ 3,199 crore
(46 days billing#)

Transmission Outstanding
(beyond 60 days)

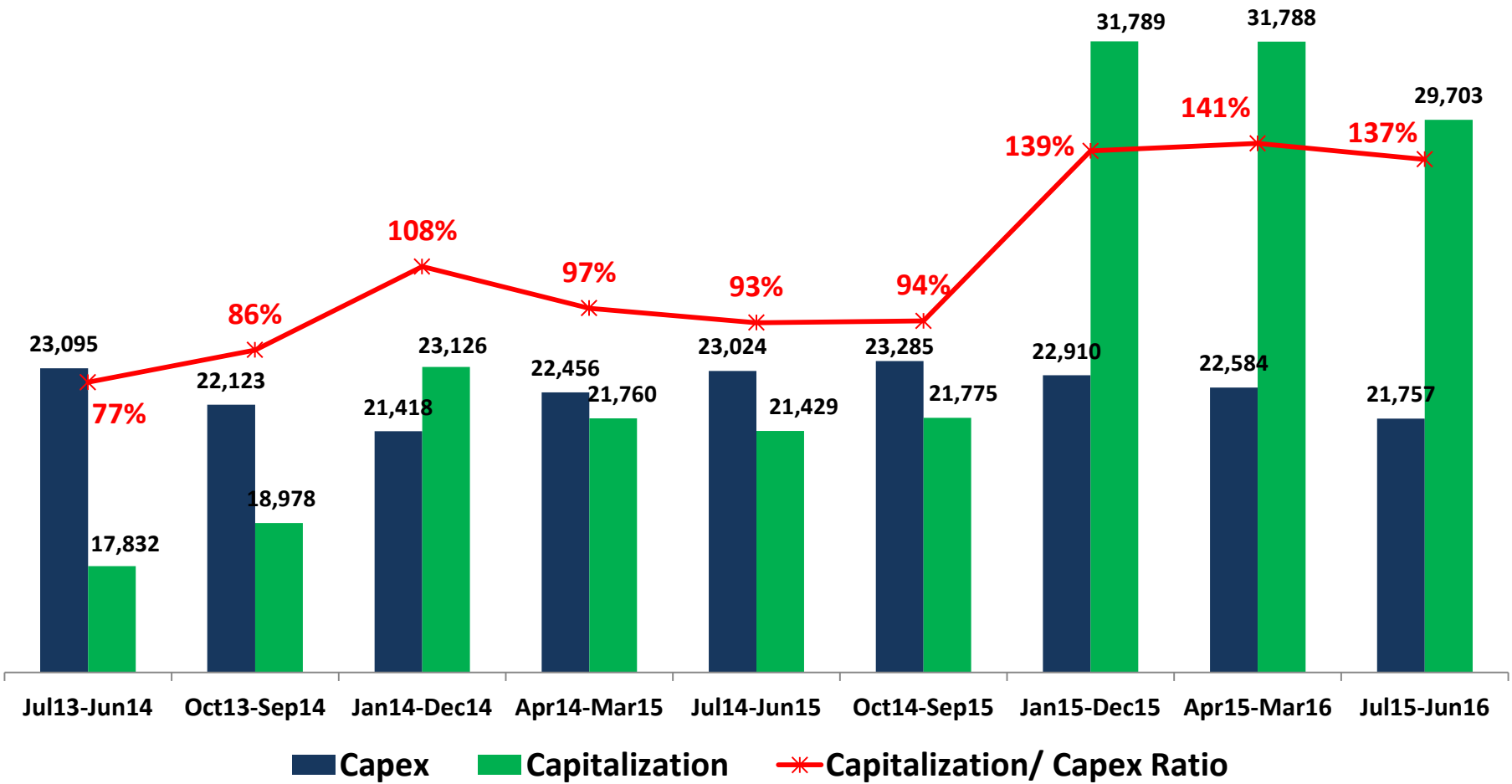
~ ₹ 519 crore
(7 days billing#)

Avg. Monthly Billing: ₹ 2,097 => 2 months 60 days) billing = ₹ 4,194 crore

Performance – Project Execution (Q1FY17)



Project Execution- Increasing Capitalization, consistently



(₹ in crore)

Projects in FY17

Transmission Lines

15,000 GW-ckm



Major Lines

1. **Gaya-Varanasi, Varanasi-Kanpur-Jhatikara**
2. **Ranchi-Chandwa-Gaya**
3. **Pachkula-Patiala; Sikar-Jaipur**
4. **Roorkee-Saharanpur, Dehradun-Baghat, Dehradun-Abdullapur**
5. **Aurangabad-Boisar; Navsari-Boisar; Kala-Kudus**
6. **Raipur PS - Wardha(2nd line), Wardha-Aurangabad**
7. **Pasighat – Roing – Tezu - Namsai**
8. **±800kV Champa-Kurukshetra HVDC**
9. **Aurangabad-Padghe**
10. **Mauda-Betul-Khandwa-Indore**
11. **Wardha-Aurangabad (1200kV tower)**
12. **Tiurnelveli-Tuticorin; Tuticorin-Salem-Madhugiri; Salem-Somnahalli; Madhugiri-Yelhanka**
13. **Jabalpur-Orai-Aligarh**
14. **Wardha-Nizamabad-Hyderabad**
15. **Angul-Srikakulam;**
16. **Dulhasti-Kishenpur-New Wanpoh**
17. **Rajarhat-Purnea**
18. **Singrauli-Allhabad-Kanpur; Lucknow-Kanpur**
19. **LILOs- Pandiabil (Baripada-Mendhasal); Navi Mumbai (Lonikhand-Kalwa); NP Kunta (Kadapa-Kolar; Kadapa-Hindupur)**

Sub-Stations

20 Nos.



Sub-stations

1. **NP Kunta**
2. **Pandiabil (GIS)**
3. **Saharanpur**
4. **Bagpat (GIS)**
5. **Chandwa (GIS)**
6. **Kanpur (GIS)**
7. **Salem (Dharmapuri)**
8. **Navi Mumbai (GIS)**
9. **Rajarhat (GIS)**
10. **Dehradun**
11. **Betul (GIS)**
12. **Vemagiri (GIS)**
13. **Srikakulam (GIS)**
14. **Nizamabad**
15. **Roing**
16. **Tezu**
17. **Namsai**
18. **Alipurduar HVDC**
19. **Champa HVDC**
20. **Kurukshetra HVDC**

Initially envisaged as part of HVDC

Inter-Regional Capacity

12,300 MW



Inter-Regional

1. **Gaya-Varanasi**
2. **Champa-Kurukshetra**
3. **Angul-Srikakulam-Vemagiri**
4. **Raipur-Wardha-Nizamabad-Hyderabad**
5. **Biswanath Chariyali-Alipurduar-Agra Pole-II, Pole-III, Pole-IV**

Green font indicates assets commissioned in FY17 (till Jul-16)

Status of TBCB Projects (upto Jun'16)



SPV & Date of Incorporation	Completion	Current Status
POWERGRID Vizag Trans. Ltd.	Aug-16	1st element commissioned in Dec-15. Construction under Progress
POWERGRID Unchahar Trans. Ltd.	Sep-16	Construction under Progress
POWERGRID NM Trans. Ltd.	Oct-16	Construction under Progress
POWERGRID Kala Amb Trans. Ltd.	Jul-17	Construction under Progress
POWERGRID Warora Trans. Ltd.	Nov-17	Construction under Progress
POWERGRID Parli Trans. Ltd.	Jan-18	Construction under Progress
POWERGRID Jabalpur Trans. Ltd.	Jul-18	Construction under Progress
POWERGRID Southern I/C Trans. Ltd.	Apr-19	Construction under Progress
POWERGRID Vemagiri Trans. Ltd.	---	Project discontinued

Assets as on Jun-16

- **Trans. Lines : 1046 Nos. - 130,197 ckm**
- **Sub-stations : 211 Nos. - 260,123 MVA
(120 sub-stations remotely operated)**

Performance during Q1FY17

- **Availability: 99.78%**
- **Reliability: 0.215 Trippings/ line**

Grid Management¹ – Q1FY17 (Apr16-Jun16)



I-R Energy
Transfer

31.14 BU

**28% increase w.r.t.
Q1FY16**

Cross-Border
Power
Exchange

2.6 BU

Bhutan: Import ~1 BU

Nepal: Export: ~0.5 BU

Bangladesh: Export ~1.1 BU

Myanmar: Export (0.0006 BU)

Source: NLDC Report Jun'16

STOA

Energy Txn. : **24.73 BU**

8% increase w.r.t Q1FY16

No. of Txns. **13,451**

21% increase w.r.t Q1FY16

Source: NLDC Report Jun'16

New Orders recd.:

10

- Major Orders
Smart Grid related assignments in Ahmedabad (Sub Divn.: Naroda) & Gurgaon (Sub Divn.: DLF)

Assignments in Hand:

117 Nos.

(~ ₹ 19,000 cr.- Bal. Cost)

- Major Assignments
 - NER PSIP; T&D System Strengthening in Sikkim-Arunachal; TS to Leh-Kargil; Lalitpur TPP Evacuation; IPDS at Old Kashi

Orders under Development

- **Assignments from Railways, Tamil Nadu; Bihar**

Footprints in 18 countries

13 nos.

Ongoing Assignments (as on Jun-16)

1 no.

New Order recd.

- From Bhutan for Distribution Management System

9 nos.

Eols/ Techno-commercial proposals submitted

- Myanmar, Bangladesh, Kenya, Uganda, Georgia, Liberia

Recent highlight - Participation in EPC commences

**43 New Clients
added**

[(Pvt. (28), Govt(15))]

**Total Order Book
> ₹ 2200 crore**

➤ Infrastructure:

- **Fiber Optic Network** : ~ 36,500km
- **Points of Presence** : 595
- **Backbone Availability** : 100%

➤ Major Projects:

- **National Knowledge Network (NKN):** Project completed & Under Operation
- **National Optic Fiber Backbone (NOFN):** Work in progress
 - ✓ Scope of work enhanced to connect 9,372 Gram Panchayats - 4,743 Gram Panchayats connected

Investment Programme & Outlook

**Planned
Capital
Outlay***

Annual Capex Plan

[*Projects: Ongoing Projects; Tariff Based Bidding Projects; Projects assigned by Gol; Green Energy Corridors; Intra-State Projects; Transnational Interconnections]

**₹ 110,000
crore**

FY12-13:

**₹20,037
cr.**

(Achieved)

FY13-14:

**₹23,158
cr.**

(Achieved)

FY14-15:

**₹ 22,456
cr.**

(Achieved)

FY15-16:

**₹ 22,584
cr.**

(Achieved)

FY16-17:

**₹22,550
cr.**

**[Achieved
₹ 5,585 cr.]**

More than ₹ 93,820 crore achieved in XII Plan (Apr12 till Jun16)

**Contracts
awarded**

~ ₹ 11,433 crore in Q1FY17

**Investments
Approved**

~ ₹ 22,874 crore in Q1FY17

Ongoing Projects	approx. ₹ 1,13,000 crore
New Projects	approx. ₹ 15,000 crore
TBCB Projects	approx. ₹ 16,000 crore (as per Empowered Committee Estimate)

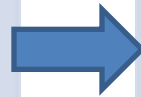
Total Works in Hand: ₹ 1,44,000 crore (approx.)

Investors' Response to Company's Growth

FPO (Dec-13) Price



₹ 85-90 per share



Current Price[#]

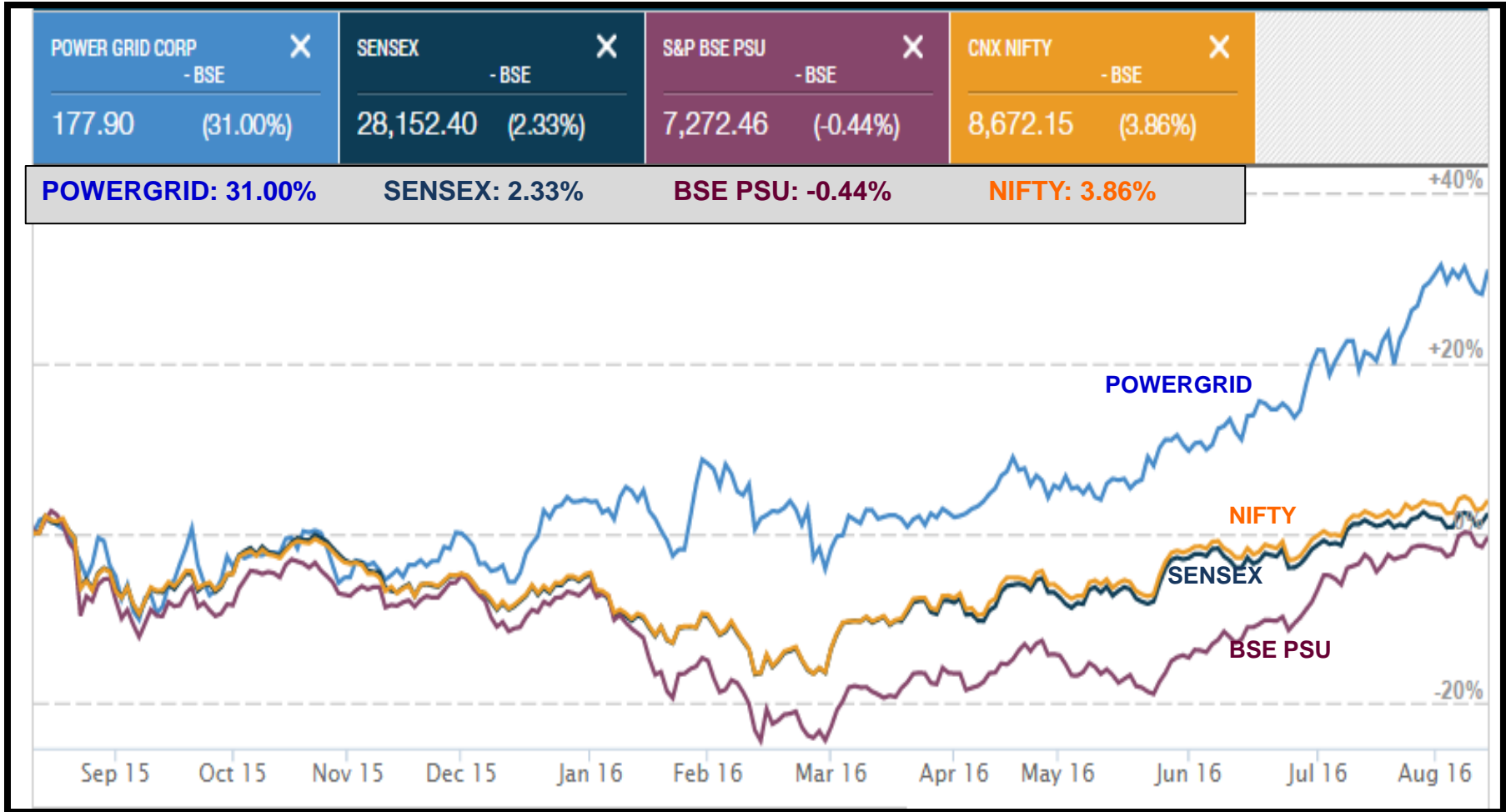


₹ 176.25 - 183.05 per share

More than doubled since 2nd FPO

Price range of POWERGRID Stock on 16.08.2016 in BSE

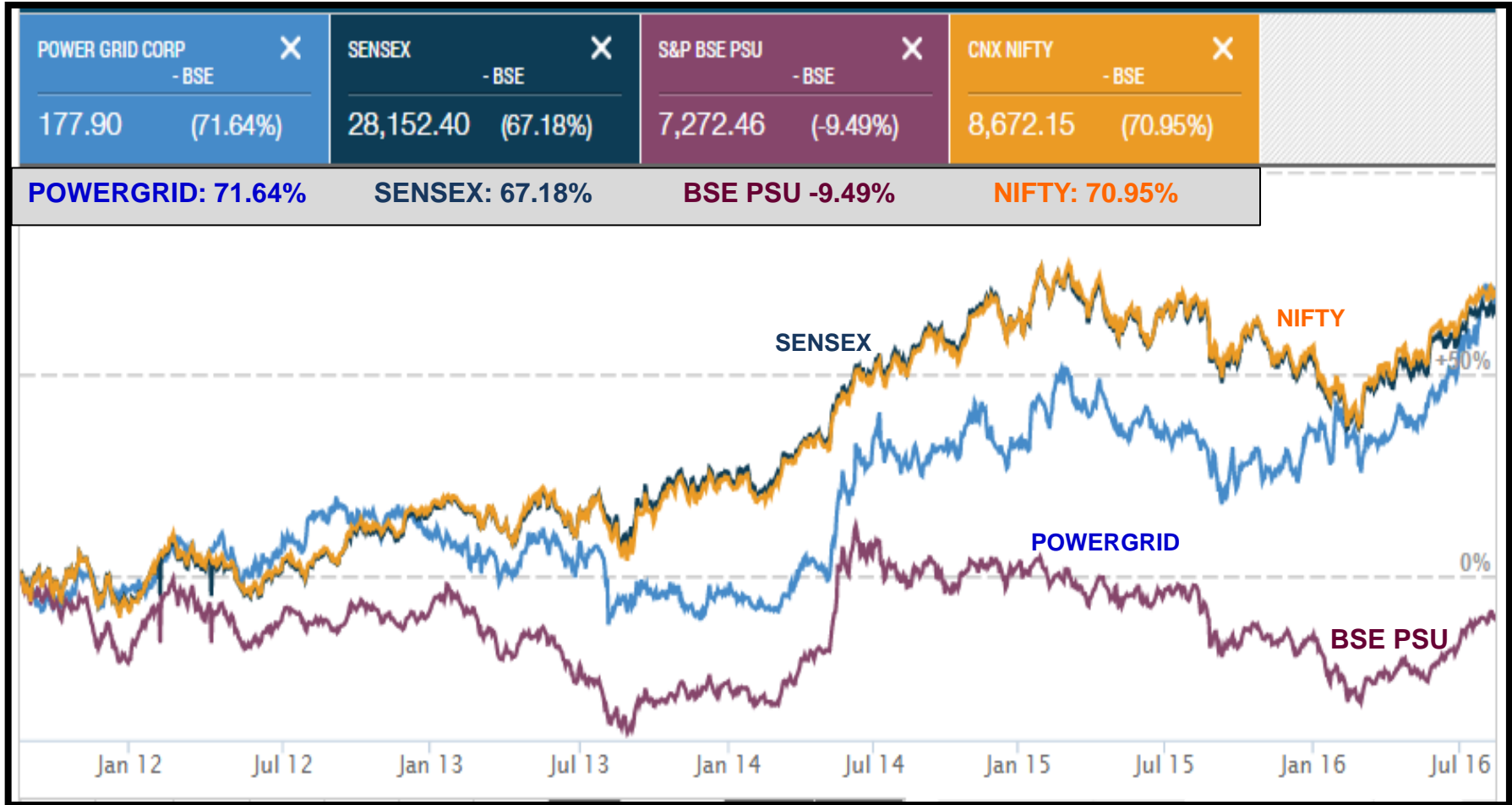
.... For the past 1 year...



One year Relative Performance of POWERGRID Stock as compared to SENSEX, BSE PSU and NIFTY

Source: www.moneycontrol.com

.... For the past 5 years...



Five years Relative Performance of POWERGRID Stock as compared to SENSEX, BSE PSU and NIFTY

Source: www.moneycontrol.com

Recent Accolades



**‘Best PSU Pavilion’ Award to
POWERGRID Pavilion at International
Industrial Trade Fair, INNOPROM
2016, held at Russia in Jul’16**

Recent Accolades



GREAT PLACE TO WORK®

has recognised

POWERGRID

AS ONE OF **INDIA'S**
BEST COMPANIES
TO WORK FOR

2016

Empowering people

For the 1st time,
POWERGRID makes it
to the prestigious list of
'Great Place to Work'

Thank You