



POWER GRID CORPORATION OF INDIA LIMITED

FY 2013-14



PRESS MEET
Mumbai
30 May, 2014

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FY14: Major Highlights

POWERGRID Overview

Power Sector Overview

FY14- Financial Results

Highlights- Financial, Projects, Operations and Grid Management

Highlights- Diversifications

Investment & Funding Programme

New Initiatives- Updates

Highlights- CSR & Sustainability

Power Transmission- Outlook

FY14: Major Highlights



Synchronized National Grid



Indo-Bangladesh Power Exchange commences



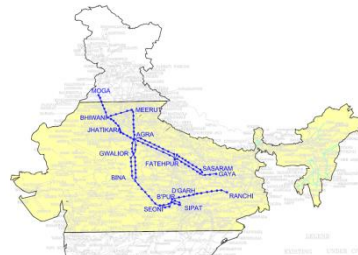
Highest ever IR Capacity Enhancement in a year



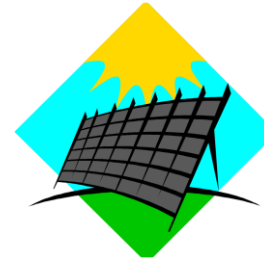
NTAMC Operation commenced



765kV Delhi ring completed



765kV/800kV Central Grid completed



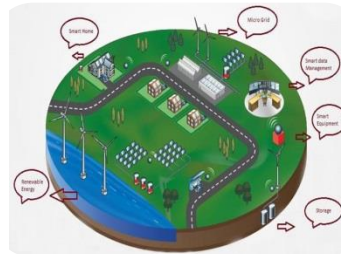
MOU for TS of Sambhar Solar UMPP signed



Work for R&D Center and Leadership Academy (PAL) commenced



1st Management Contract secured



Smart Grid Pilot completed. Smart Grid in Trans. Commenced.



Work commenced in Bihar JV & Indo-Nepal JVs



Successful FPO

POWERGRID Today

A 'NAVRATNA'
ENTERPRISE

CENTRAL
TRANSMISSION
UTILITY

LISTED
COMPANY
since 2007

GOVT.
SHAREHOLDING
57.90%

PAYING
DIVIDEND SINCE
1993-94

Vision

*World Class, Integrated, Global Transmission Company With Dominant Leadership in Emerging Power Markets
Ensuring Reliability, Safety and Economy*

Tr. Lines (as on 29-5-2014)

107,574 ckm

894 Nos.

MVA & S/S (as on 29-5-2014)

206,338 MVA

185 Nos.

Operating Parameters (FY13-14)

Availability: 99.92%

Reliability: 0.56 Trippings per line

CREDIT RATINGS

• AAA
• Stable
CRISIL

ICRA
• AAA
• Stable

• AAA
CARE

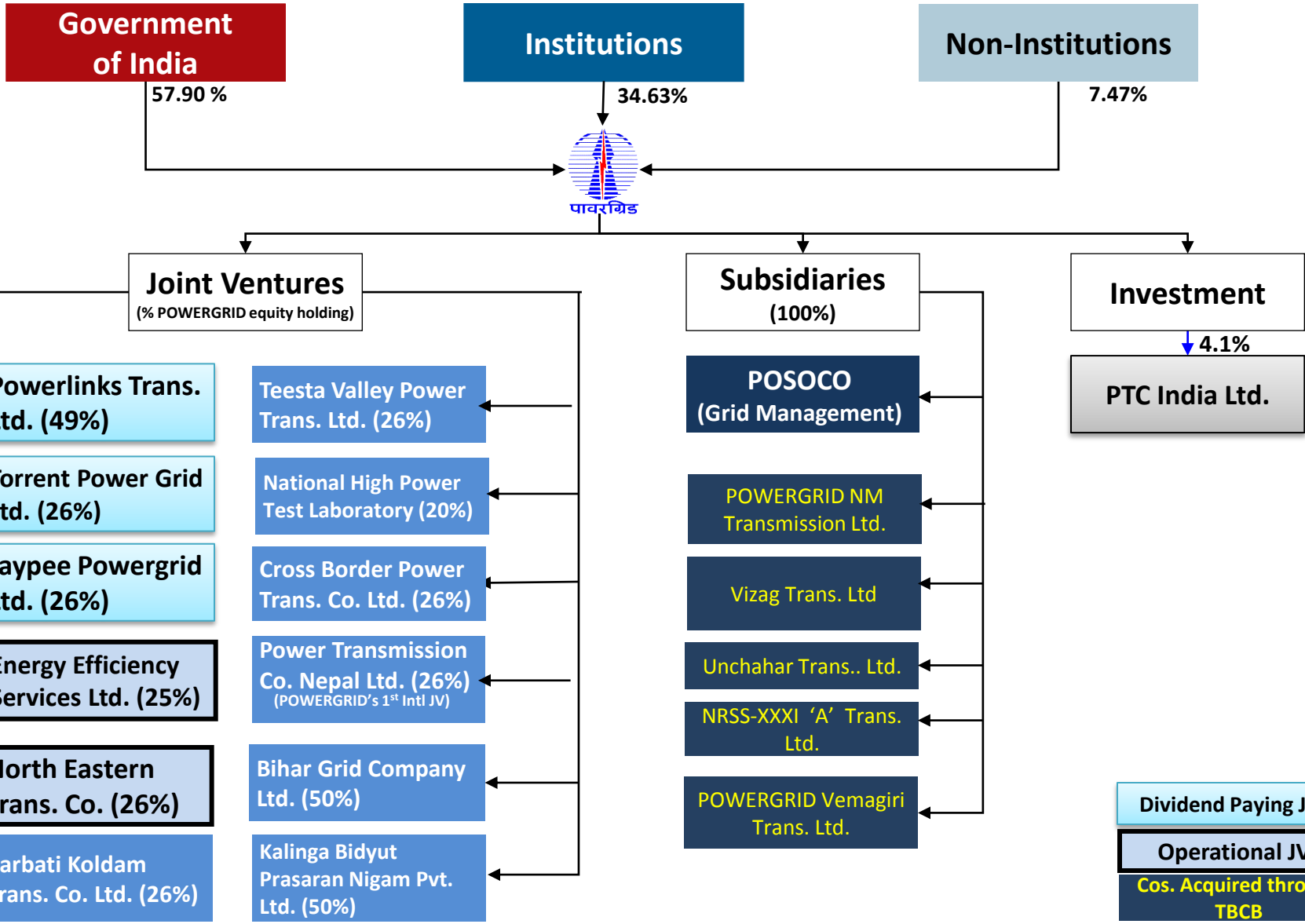
Domestic

International

• BBB (-)
• Negative
Outlook
S&P

Fitch
• BBB (-)
• Stable
Outlook

POWERGRID Group



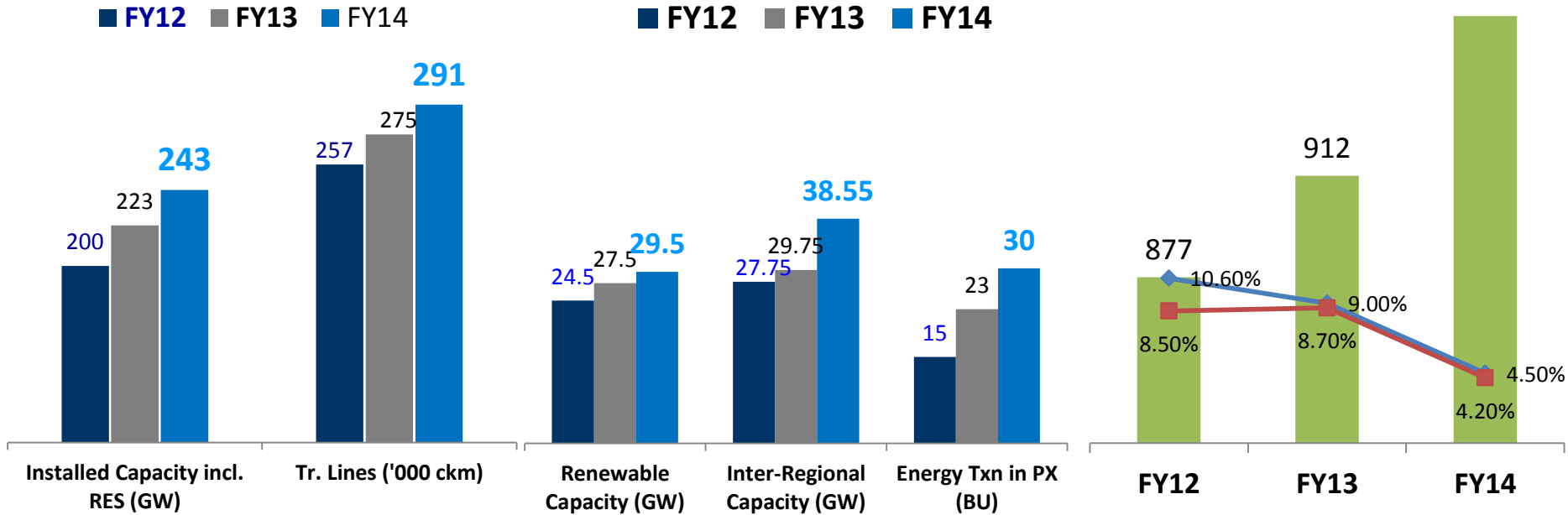
* Note: Shareholding pattern as of 31st March, 2014

Power Sector Overview

XII Plan Addn. (till Apr'14) : 45GW

IR Cap: XII Plan Addn. (till Apr'14) : 10.8GW

Energy Generated (BU) Peak Deficit (%)
Energy Deficit (%)



Peak Load (GW)

- FY14: 136
- FY17: 200
- FY22: 283

Peak Energy Requirement (BU)

- FY14: 1002
- FY17: 1355
- FY22: 1905

Capacity Additions

XII Plan
88 GW
(38GW till Apr-14)

XIII Plan
79 GW

Renewables
XII Plan: 30GW
(7GW till Apr-14)
XIII Plan: 31GW

I-R Capacity

- By end XII Plan: 65.55 GW
- Till Apr-14: 38.55 GW

Financial Highlights FY14

(₹ in crore)				
Description	Quarter ended		Year ended	
	31.03.2014	31.03.2013	31.03.2014	31.03.2013
Income				
- Transmission Charges	3752	3198	14327	12212
- Consultancy – Services	147	35	333	228
- Consultancy – Sale of Products	22	87	294	87
-Telecom	65	61	276	231
- Other Income	197	235	491	571
Total Income	4183	3616	15721	13329
Operating Expenses (including prior period adjustment)	603	532	2295	1797
EBITDA-Gross Margin	3580	3084	13426	11532
Depreciation	1075	905	3996	3352
Interest	819	680	3167	2609
FERV: Loss / (Gain)	0	(5)	0	(74)
Tax	510	395	1766	1410
Profit after Tax	1176	1109*	4497	4235**

* Includes one time item net of tax ₹ 125 crore

** Includes one time item net of tax ₹ 313 crore

Financial Highlights FY14

(₹ in crore)		
Description	As on 31.03.2014	As on 31.03.2013
Gross Fixed Assets	96504*	80600
Capital Work-in-Progress	53330 **	40153
Debt	80470	66188
Net Worth	34413	26213
Earning Per Share (₹)	9.36	9.15
Book Value per Share (₹)	65.78	56.62
Key Financial Ratios		
Debt : Equity	70:30	72:28
Return on Net Worth	13.07%	16.15%

* Excluding 765 KV Assets of approx. ₹ 1850 cr completed in March 2014 to be capitalized in April 2014.

** includes dues for capital expenditure ₹ 5063 crore.

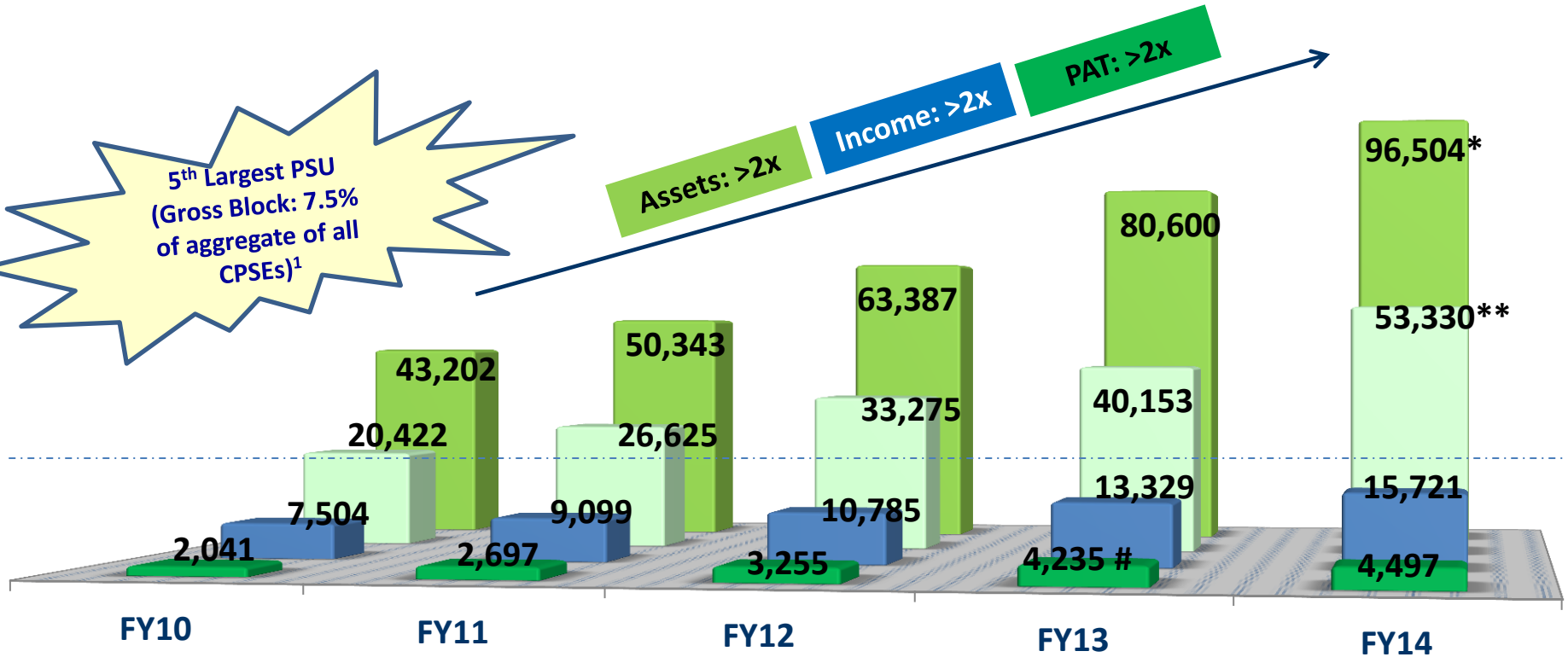
Financial Highlights – 4 years

Accelerated Asset Creation

.... has led to increased profits ...

■ PAT ■ Income ■ CWIP ■ Gross Fixed Assets

5th Largest PSU
(Gross Block: 7.5%
of aggregate of all
CPSEs)¹



* Excluding 765kV Assets of approx. ₹ 1850 cr. Completed in Mar'14, to be capitalized in Apr'14

** Includes dues for capital expenditure ₹ 5063 cr.

includes one time item net of tax ₹ 313 cr.

(₹ in crore)

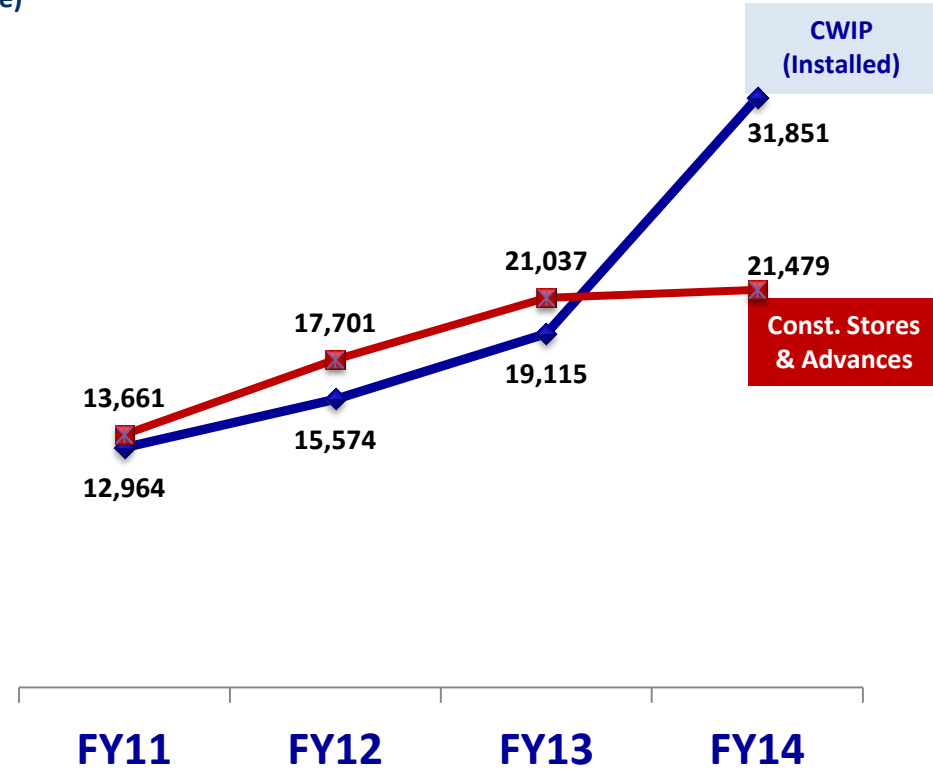
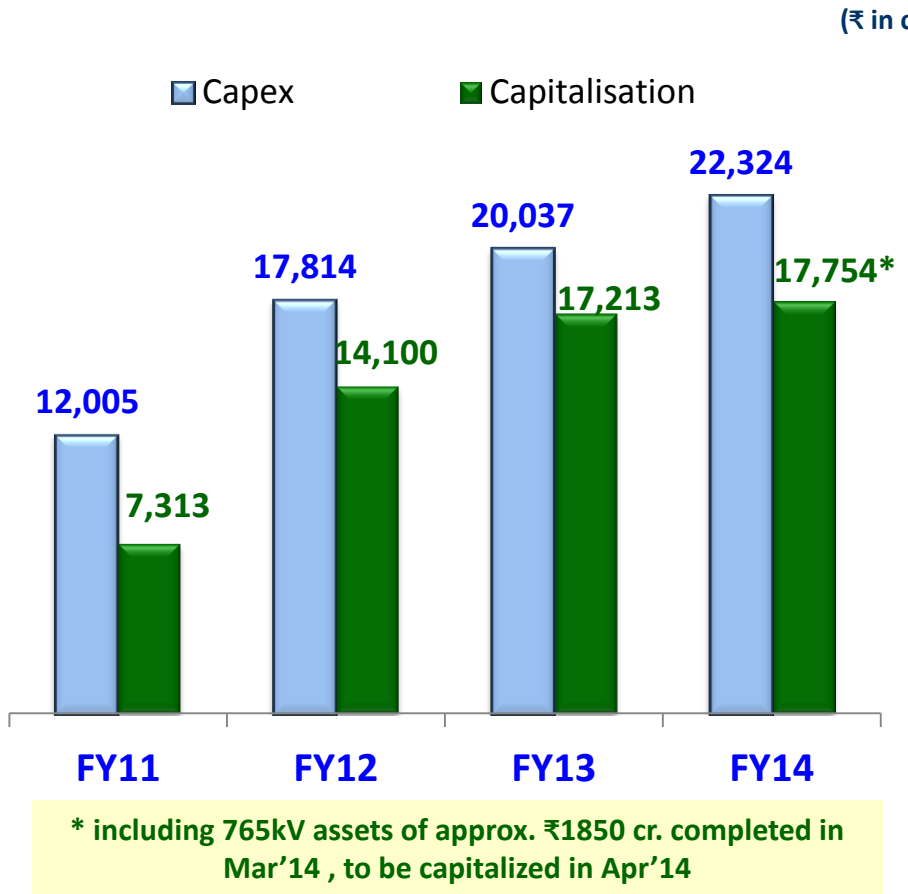
Forbes Global 2000 List of World's Largest Cos. : Rank 1011 (Year 2013)

(1)- PSE Survey 2012-13 of DPE

Financial Highlights – 4 years

Higher capitalization, continuous investments ...

... coupled with improved efficiency in project management ...



Fastest Growing Navratna¹

(1)- 5th DSII PSU Awards

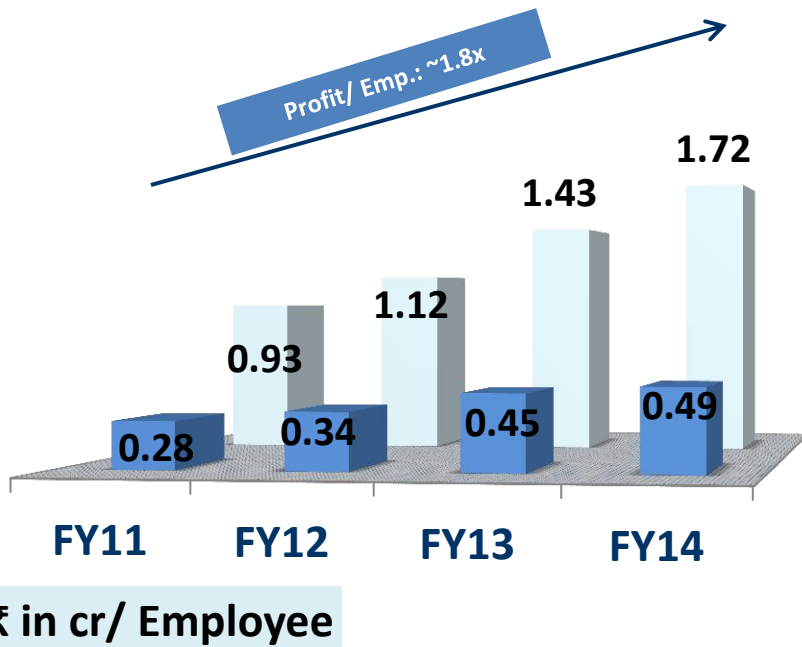
'Lasting Impact on Indian Economy'²

(2)- Governancenow PSU Awards 2013

Financial Highlights – 4 years

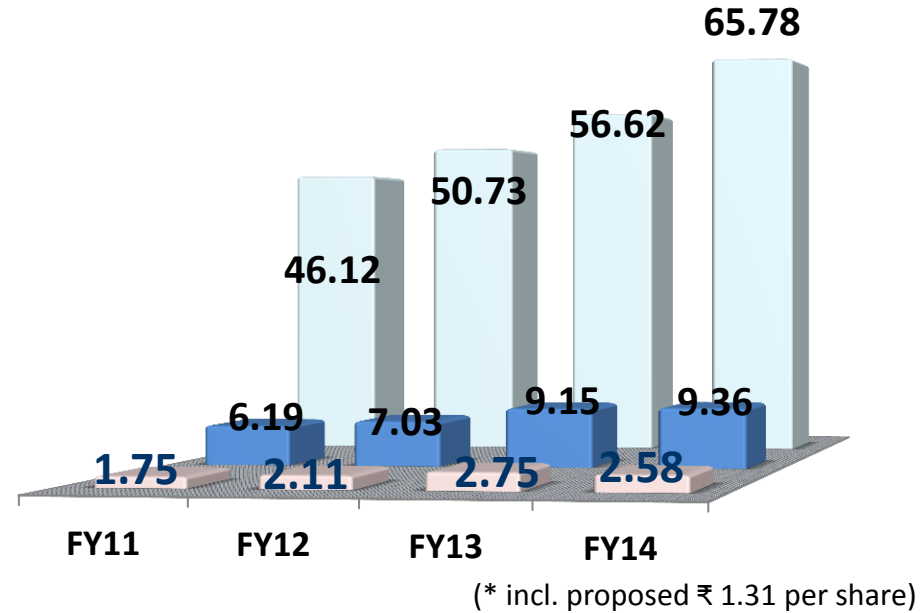
.... assisted by enhanced employee efficiency....

■ Profit ■ Income



... has led to enhanced stakeholders returns

■ Dividend per Share ■ Earnings per Share
■ Book Value per Share



**2013 Platts Top 250 Global Energy Cos.
2nd Fastest Growing Electric Utility in the World[#]**

(#)- Based on 3 year CGR for publicly traded cos. With assets over US\$ 4.5bn

Utilization of FPO funds- Update

FPO funds

Funds raised:
₹ 5321 crore

No. of Projects identified for
fund utilization:
27

Funds utilized till Mar'14:
~ ₹ 2332 crore

(₹ 2782 crore till date)

~ 27 elements of 12 identified
projects commissioned during
Dec13 – May14

- ✓ TS associated with Rihand-III & V'chal-IV
- ✓ TS for Phase-I Generation Projects in Odisha (Part-C)
- ✓ SRSS - XIX
- ✓ TS associated with Krishnapatnam (Part-B)
- ✓ Establishment of Pooling Stations at Champa and Raigarh (near Tamnar) for IPP generation projects in Chhattisgarh
- ✓ Establishment of Pooling Stations at Raigarh (Kotra) and Raipur for IPP generation projects in Chhattisgarh
- ✓ SRSS – XVIII
- ✓ TS for Phase-I generation projects in Odisha (Part-A)
- ✓ TS for IPP generation projects in MP & Chhattisgarh
- ✓ TS for Phase-I generation projects in Odisha (Part-B)
- ✓ NRSS – XXI
- ✓ TS for transfer of power from generation projects in Sikkim to NR/WR – Part B

FY14: Billing & Realization

Billing

₹ 14,556 Crore

Realization

₹ 14,393 Crore

%age realization

98.87%

Avg. Monthly Billing: ₹ 1,213 crore => 2mnths (60 days') billing = ₹ 2,426 crore

Dues as on 30.04.2014

Balance due but not outstanding (<60 days allowed as per CERC) = ₹ 1,058 crore

Description	₹ in Crore
Outstanding > 60 days	348*
Payments (in installments)	147

Outstanding equivalent to ~5 days' billing

Transmission Lines

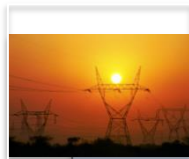
~ 10,076 GW-ckm

Sub-Stations

17 Nos.
~ 41,160 MVA

Inter-Regional Capacity

6,300 MW



Major Lines

- Agra – Jhatikara
- Agra - Meerut
- Sasaram – Fatehpur II
- Parbati Pooling-Amritsar
- Sasan - Satna II
- Behrampur-Bheramara (Bangladesh I/C)
- Fatehpur - Agra II
- TPCIL – Nellore
- Agra - Sikar
- Raigarh (Kotra) – Raigarh (Tamnar)
- Jabalpur PS – Bina
- Raichur-Sholapur
- Raigarh (Kotra) – Raipur (Durg)
- Meerut - Bhiwani
- Satna – Gwalior
- Pirana-Vadodara
- Vadodra-Asoj
- Ranchi- Ranchi I & II
- Bareilly-Lucknow
- Ranchi-WR Pooling (Bilaspur)
- Thiruvalem-Chittoor

Aggregate ckm: ~6600 (765kV: ~50%)



Sub-stations

- Raigarh (Kotra)
- Indore
- Parbati PS
- Behrampur (for Bangladesh interconnection)
- New Wanpoh (J&K)
- Raigarh (Tamnar)
- Hamirpur (GIS)
- Jabalpur PS
- Raichur
- Ranchi
- Aurangabad
- Dharamjaygarh
- Kala (DNH)
- Lakhi Sarai
- Thiruvalem
- Kurnool
- Kotputli



Inter-Regional

- Sasaram - Fatehpur II
- Raichur – Sholapur
- Ranchi – WR Pooling (Bilaspur)

Indo-Bangladesh
Inter-connection

Transnational link

Projects in FY15

Transmission Lines

~ 15,000 GW-ckm



Major Lines

- Nellore-Thiruvalem
- Bina – Gwalior
- Champa-Raipur, Champa-Dharamjaygarh
- Indore - Vadodara
- Satna – Gwalior, Gwalior – Jaipur, Jaipur – Bhiwani
- Raichur - Kurnool
- V'chal – Satna, Rihand – V'chal
- Annupur - Jabalpur
- Barh – Gorakhpur
- Angul-Jharsuguda, Jharsuguda – Dharamjaygarh
- Raigarh - Champa
- Raipur -Wardha, Wardha – Aurangabad
- Silchar – Purba Kanchan Bari, Silchar - Imphal
- Balipara - Bongaigaon
- Vijayawada – Nellore, Nellore - Kurnool, Kurnool – Thiruvalem
- Salem – Madhugiri, Dharmapuri -Somnahalli
- Sholapur - Pune
- Thiruvalem – Sholinganallur
- Biswanath Chariyali – Agra (NE-NR/WR Interconnector)
- Meerut - Moga
- Kanpur - Jhatikara

Aggregate ckm: ~10,000 (765kV: >60%)

Sub-Stations

15 Nos.
~ 30,000 MVA



Sub-stations

- Rangpo (GIS)
- Shahjahanpur
- Magarwada
- Madhugiri
- Salem (Dharmapuri)
- Chaibasa
- Pune (GIS)
- Navi Mumbai (GIS)
- Bareilly
- Vadodara (GIS)
- Champa
- New Melli (GIS)
- Kanpur
- Biswanath Chariyali HVDC
- Agra HVDC

Inter-Regional Capacity

7,300 MW



Inter-Regional

- Barh - Gorakhpur
- Jharsuguda – Dh'jaygarh
- Biswanath Chariyali – Agra (NE-NR/WR Interconnector)

TBCB Projects

Participation
15 Projects



Success
6 (40%)



Aggregate Levelised
Tariff
₹ 565 crore

Licenses received.

Contracts awarded. Projects
commenced.

**POWERGRID NM
Transmission Ltd.**

Vizag Transmission Ltd.

Unchahar Trans. Ltd

SPV acquired
on 24.03.14

NRSS-XXXI-A Trans. Ltd.

SPV acquired
on 12.05.14

TS for connectivity of
NCC Power Projects

Bid process annulled.

Project assigned to
POWERGRID on cost
plus basis

**POWERGRID
Vemagiri Trans. Ltd.**

Project under hold as
per CERC Order

Operational Highlights

Assets under management
(Mar-14)

Tr. lines

- 885 nos.
- 106,804 ckm

Sub-stations: 184 Nos.

- 10 GIS
- 51 remotely managed
- 12 unmanned

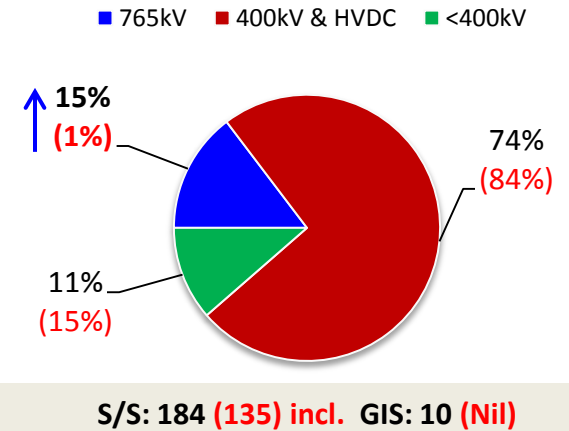
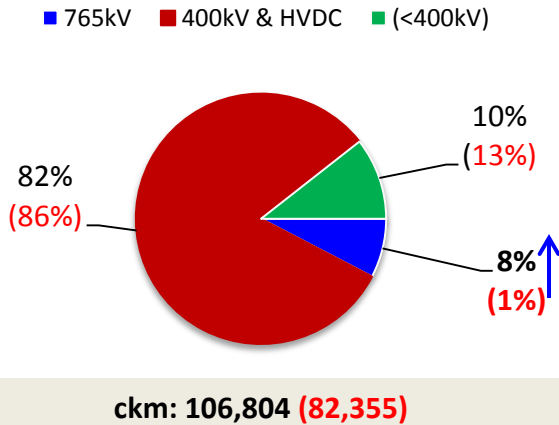
X-formers: ~700 nos.
Xfn Capacity: 205,923 MVA
Reactors: ~ 850 nos.

Changing Asset Profile

Mar-14
(Mar-11)

Tr. Lines

Sub-stations



Availability

- FY14: 99.92%
- FY13: 99.90%

Reliability

- FY14: 0.56
- FY13: 0.58

**POWERGRID- One of the
'Low-cost & Strong Service Level Performance'
transmission utilities globally (*)**

(* As per ITOMS 2013 Benchmarking)

O&M Initiatives



NTAMC

- Operation commenced. 43 S/S connected.
- Real time Video Monitoring
- Maintenance Service Hubs for corrective action



Aerial Patrolling

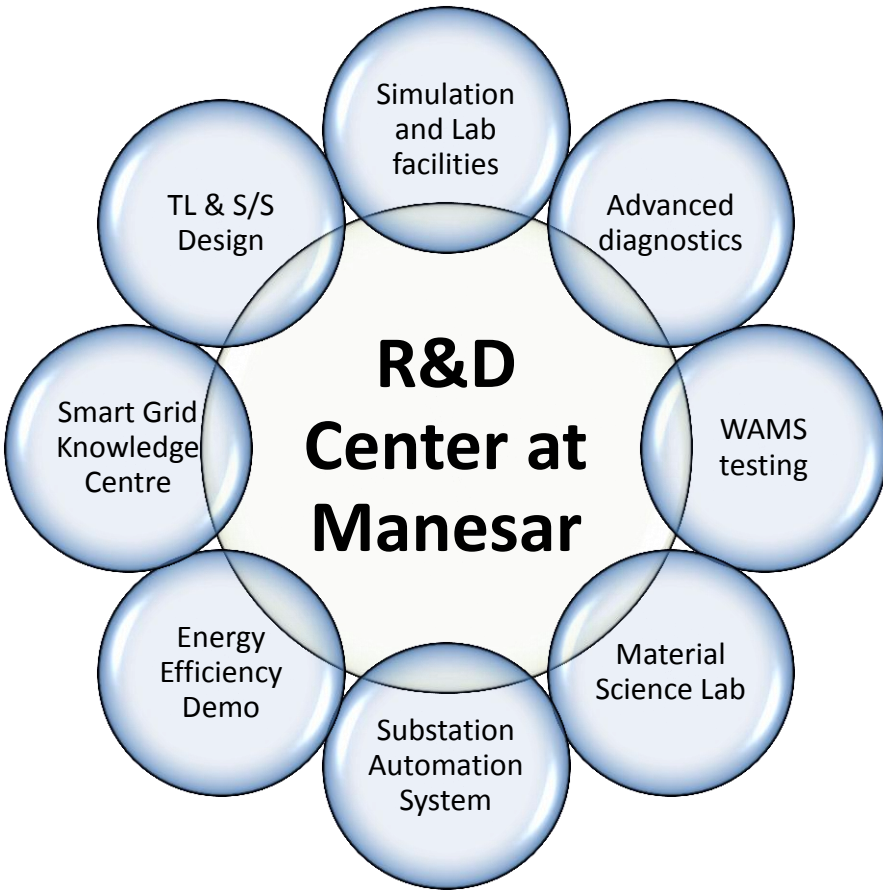
- 550km patrolling (TL) completed
- Total scope 15,000 route km
- Lines in WR, SR and NR (Himachal) covered till now

Upcoming Initiatives in O&M

Use of helicopters for live line TL maintenance

Insulated Bucket Trucks for Hotline Maintenance of TL & S/S

R&D and New Technology Initiatives



Transmission Line Research Lab at Bina S/S

Field Testing and Optimization
Studies of TL

1200kV UHVAC Technology

- Field Trial since 2012
- Feedback is satisfactory

Superconductor Technology

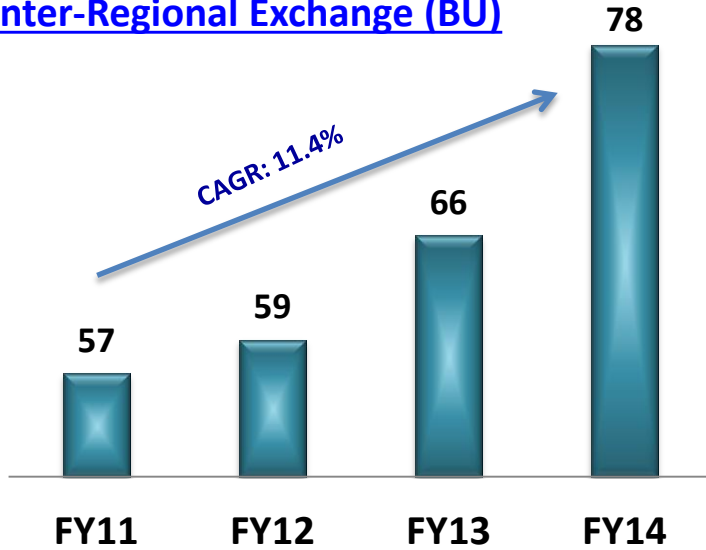
- Use of High Temperature Superconducting (HTS) Cable – **Eols being invited in Jun'14**
- Fault Current Limiter

Smart Grid Technology

- Energy Storage Technology for RE integration – **Eols being invited in Jun'14**
- Home Energy Management Systems & Micro Grid Controllers- Patents being filed
- Smart Meter & Data Concentrator Unit
- Cool Roof Technology
- Active Filter for Power Quality Improvement
- Mobile Reactive Power Source (Capacitor)

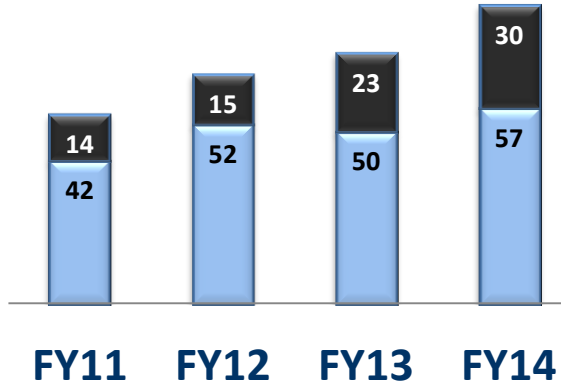
Grid Management- Highlights

Inter-Regional Exchange (BU)



Short Term Open Access

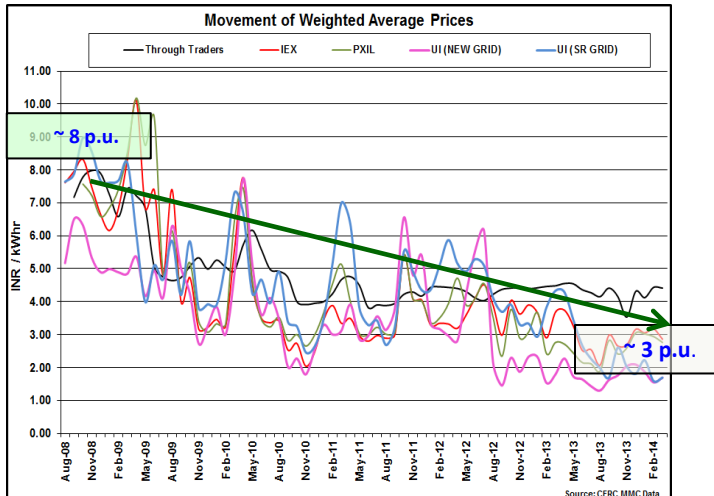
■ Energy(BU) Bilateral ■ Energy (BU) Collective



Average Daily Volumes (MU)

- Bilateral: 156
- Collective: 82
- STOA: 238

Impact of STOA: Reduction in cost



919 RE generators registered
Aggregate capacity: 4228 MW

REC
Update
(Mar-14)

Total RECs issued upto March, 2014: 1.18 crore

Total RECs traded till March, 2014: 63.54 lakh

6.70 lakh RECs traded in Mar-14 for ₹ 109 crore
(Highest ever in a month)

RECs traded since inception (Mar-11)
₹ 1208 crore (Aggregate Value)

Highlights – Consultancy

FY14 Performance

New Orders

37 New Orders from 27 clients
Project Cost: ~ ₹ 4900 crore

Under Execution

120 assignments
Project Cost (Bal.): ~₹ 15,000 crore

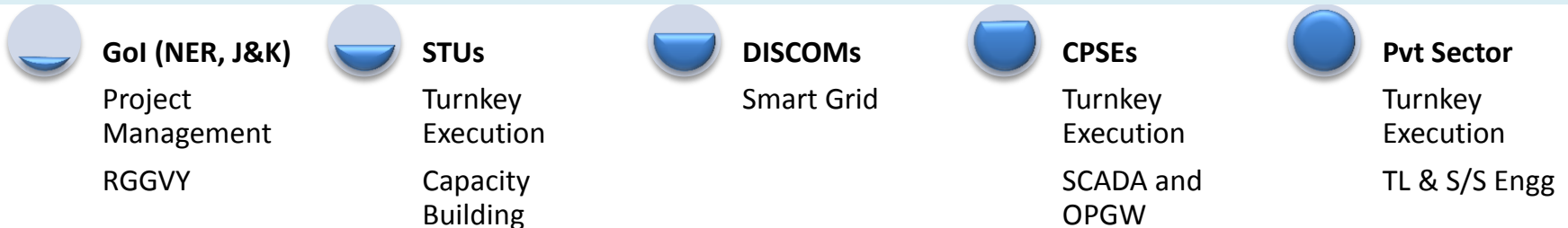
FY15 Update

- 5 Orders received

Major Assignments

- | | |
|---|---|
| <ul style="list-style-type: none"> ✓ NER Power System Improvement Project (6 NE States) ✓ Strengthening of T&D System in Arunachal & Sikkim ✓ 220kV TS to Leh-Kargil (J&K) | <ul style="list-style-type: none"> ✓ Evacuation System for Lalitpur TPP (UP) ✓ RGGVY in 4 Districts of UP ✓ Smart Grid Consultancy in 9 States |
|---|---|

Areas of Consultancy & Clientele



Highlights – International Business

FY14 Performance

Activities

26 EOIs submitted

6 New countries approached

Success

7 Orders received
4 New countries added

1st Mgmt Contract

Status

20 projects under Execution

All supplies under Myanmar Project completed

FY15 Update

- **2 Orders received**
- **3 Countries added**

Major On-going Assignments

- ✓ EPC Consultant: CASA 1000 Project
- ✓ Management Contract - Ethiopia
- ✓ Feasibility Studies, Engg. & Proj. Mgt. - Kenya

- ✓ Capacity Building Prog. for SAARC & Central Asian countries
- ✓ Design & Engg. Consultancy in Afghanistan, Nepal, Bhutan
- ✓ O&M of Tr. Lines- Bhutan

Building a Global Business - Brick by Brick

Afghanistan

Bangladesh

Bhutan

Ethiopia

Kenya

Myanmar

Nepal

Nigeria

Sri Lanka

Tajikistan

UAE

Congo

Pakistan

Senegal

Kyrgyz Republic

Kazakhstan

Tanzania

Uzbekistan

Highlights – Telecom

Infrastructure & Licenses

- Infrastructure
 - Fiber Optic Network: ~ 29,650 km
 - Points of Presence: 317
- Licenses/ Registrations
 - NLD
 - ISP Category 'A'
 - IP-I

Services Offered

- Point to Point dedicated Bandwidth Leased Lines
- Internet Leased lines
- Dark Fiber
- Tower Space for antennae installation
- MPLS – VPN

Clientele

- NLDOs/ ILDOs
- Unified Access Providers (incl. all Leading Telcos)
- ISPs
- Call Centers
- Central & State Govt. Deptts & PSEs
- Corporates incl. MNCs

FY14



27 PoPs added

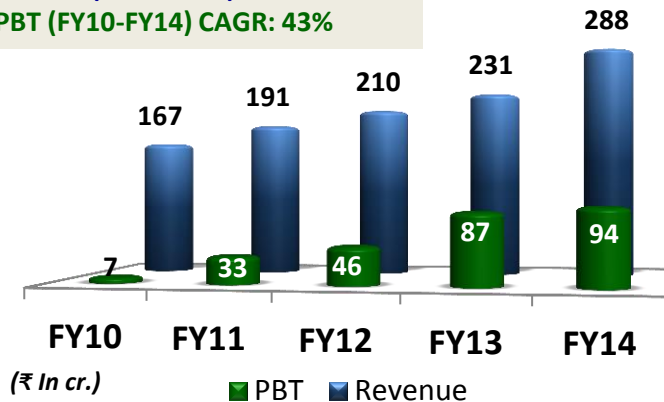


**32 New Clients
(21-Pvt, 11-Govt)**



**Backbone Availability
99.94%**

Income (FY10-FY14) CAGR: 20%
PBT (FY10-FY14) CAGR: 43%



Major Projects

NKN (Size: ₹ 6,000 cr.)

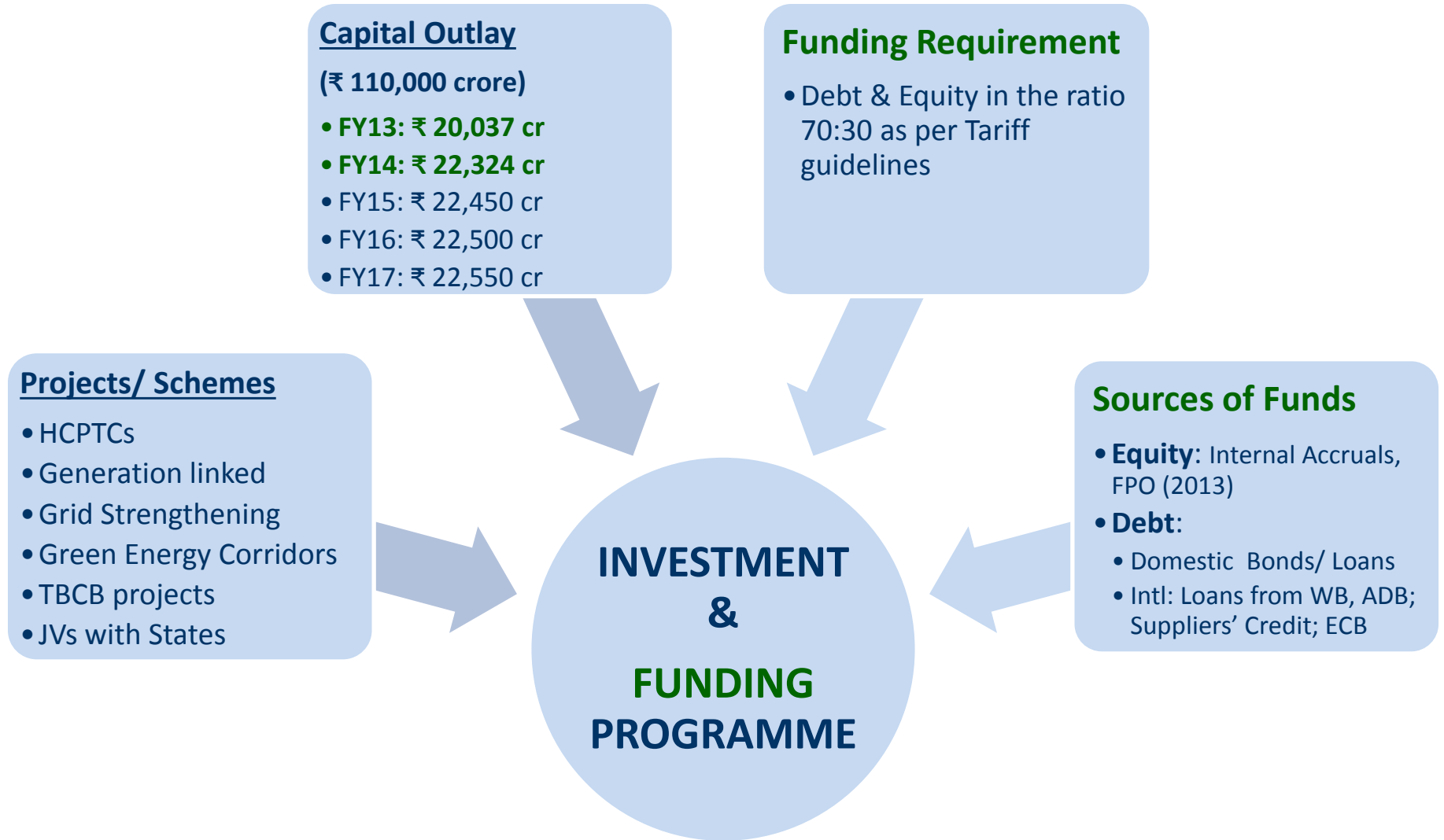
- POWERGRID Scope: ₹ 900 cr.
- Project completed & under Operation

NOFN (Size: ₹ 20,000 cr.)

- Sanction Letter recd for 4 States
- 15,000 Gram Panchayats to be connected in Phase-1. Contracts for ducts & trenching placed
- Estimate cost: ₹ 3000 crore

MPLS-VPN links for POWERGRID's in-house projects (NTAMC and ERP) under implementation

Investment & Funding Programme



Investment Approved - ~ ₹ 98,500 crore

Debt: ₹ 53,000 crore tied up

New Initiatives- Updates

JVs for Intra-State Transmission

**JV with Bihar
(Bihar Grid Co. Ltd.)**

- Trans. License received. Funding (Loan) tied up
- Contracts under finalization for projects worth ₹ 1700 crore

**JV with Odisha
(Kalinga Bidyut Prasaran
Nigam Ltd.)**

- Under discussion

Proposed JVs

Manufacturing
(Tower & Tower Parts,
Conductor & Insulators)

- JV proposals with SAIL, RINL etc. under various stages of finalization
- Bids opened for selecting partner for Polymer Insulators

Others

- With SAIL for implementation of T&D System
- With DMIC & GICC for Smart Grid in Dholera Special Investment Region

Energy Efficiency

Registered with BEE as 'Grade-I ESCO'

POWERGRID Energy Audits identified energy savings equiv. to avoided generation of 20.5MW

Agri-Demand side Management project in Karnataka taken up – replacement of ~1300 agriculture pumps with energy efficient pumps

Highlights – CSR & Sustainability



Environment and Social Policy & Procedure (ESPP)

- Principles of **Avoidance**, **Minimization** and **Mitigation**
- Certified to Social Accountability Standard (SA-8001: 2008)

POWERGRID's CSR Policy aligned to DPE guidelines on CSR & Sustainability which came into effect from April 1, 2013

Thrust Areas

Education

Infrastructure

Health

Ecology

Environment

Tree Plantation

Livelihood

Major Projects undertaken in FY14

A 325 Bed 'Dharamshala' at AIIMS, New Delhi	Integrated Watershed Mgmt in 5000 hectares of semi-arid land each in AP & Karnataka	Capacity Building Programs (TL Tower Erection & Stringing) for 1500 youths in NER & ER	Skill Development Programs for 850 youths in NER & ER	Supply of Ambulances to Govt. Hospitals, Health Centers across the country	Solar Street Lights installation
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FY14 CSR Budget: ₹ 42.35 cr
(1% of FY13 PAT)



CSR Projects sanctioned in FY14
94 Nos.
Cost: ₹ 103 cr.

Sustainability Initiatives

- ✓ NTAMC Building at Manesar- POWERGRID's 1st Green Building
- ✓ 50kW Solar Power Plant set up at Manesar
- ✓ RHQ, Bangalore – under construction, as a Green Building
- ✓ Solar Powered Electric Vehicles at Manesar & Gurgaon for local conveyance

Future Outlook: Transmission

Transmission <small>(Source: 12th Plan Working Group on Power)</small>	Addn. during XII Plan <i>TL: 109,440 ckm</i> <i>X-fm Capacity: 270,000 MVA</i>	Addn. during XIII Plan <i>TL: 130,000 ckm</i> <i>X-fm Capacity: 300,000MVA</i>	Fund Requirement <i>~ ₹ 180,000 crore (XII Plan)</i> <i>~ ₹ 200,000 crore (XIII Plan)</i>
Renewable Energy Integration	Green Energy Corridor <i>(Investment: ~ ₹ 25,000 cr.)</i>	Inter-State: ~ ₹13,000 cr. <i>(POWERGRID to implement)</i> <i>Proj. DPR for ₹ 6000 cr approved by KfW</i>	Intra-State: ~ ₹ 12,000 cr.
	Desert Power	Estimated Investment* in Txn till 2050: ~ ₹4.5 lakh cr.	<i>By 2022: ~ ₹ 0.20 lakh cr.</i> <i>2022-32: ~ ₹ 1.85 lakh cr.</i> <i>2032-2050: ~ ₹ 2.45 lakh cr.</i>
Projects in States <small>(POWERGRID to implement)</small>	NER assignments <i>(~₹12,800 cr. in aggregate)</i> <i>i) Six States: (~ ₹ 8100 cr.)</i> <i>ii) Sikkim & Arunachal (~₹ 4700 cr.)</i>	Transmission Project for Leh-Kargil connectivity <i>(~ ₹ 1800 cr.)</i>	Evacuation System for Lalitpur TPP in UP <i>(~ ₹ 2200 cr.)</i>
Smart Grid/ Smart City Opportunities	Smart Grid in Trans.-work commenced <small>(POWERGRID to implement)</small> <i>~ ₹ 1,500 crore</i>	Smart Grid works in Distribution <i>~ ₹9,500 cr.</i>	Smart Grid Consultancy assignments in 9 States <i>~ ₹ 200 crore</i>
Other projects	Distribution Reform works	RGGVY in XII & XIII Plan <i>~ ₹ 25,000 cr new projects</i>	R-APDRP: ~₹ 22,000 cr. <i>Govt grant allocated- XII & XIII Plans</i>
	Distribution Business & Energy Efficiency	Targeting for Roof Top Solar PV in various states	Power Quality Improvement Projects

* Source: POWERGRID Report on Desert Power 2050- for Integrated Plan for Desert Power Development

Thank You