



Analysts & Press Meet

30-May-12

POWERGRID

- *A Company Consistent to its Commitments*
- *Not a single MW bottled up due to transmission availability*
- *XI Plan targets achieved*



POWERGRID Today



POWERGRID Today

A NAVRATNA
ENTERPRISE

CENTRAL
TRANSMISSION
UTILITY

LISTED
COMPANY

DIVIDEND
PAYING SINCE
1993-94

CONSISTENTLY
RATED 'EXCELLENT'
BY GoI

Vision

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

Existing
Business

- Transmission
- Grid Management
- Consultancy
- Telecom





New
Business
Opportunities

- Intra-State Trans.
- Renewable Energy Integration
- Smart Grid/ Smart City
- Acquisition, Asset Mgt & EPC in Intl. Business
- R-APDRP & RGGVY
- Backward Integration

POWERGRID Today

 <p>Tr. Lines 93,000 ckm</p>	 <p>Sub-stations 151</p>	 <p>X-formation Capacity 125,000 MVA</p>	 <p>Availability 99.94%</p> <p>Reliability 0.59 trippings/ line</p>
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POWERGRID's Sphere of Influence

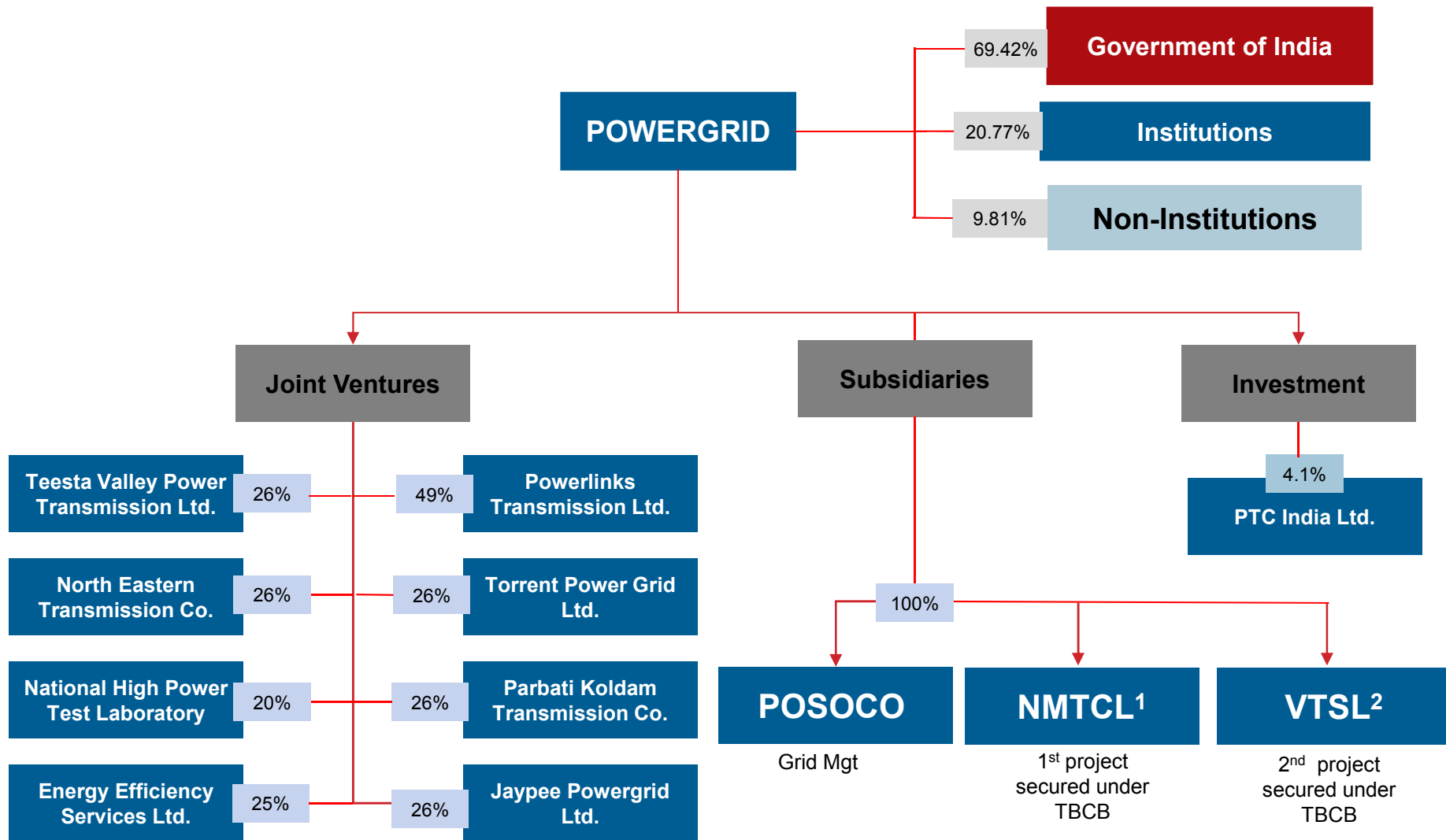
 <p>Inter-Regional Capacity 28,000 MW</p>	 <p>Carries 50% of total power generated in India</p>	 <p>Telecom Network 25,000 km</p>	 <p>Innovation Technology (1200kV¹) Market Design</p>
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Ownership Structure



Ownership Structure



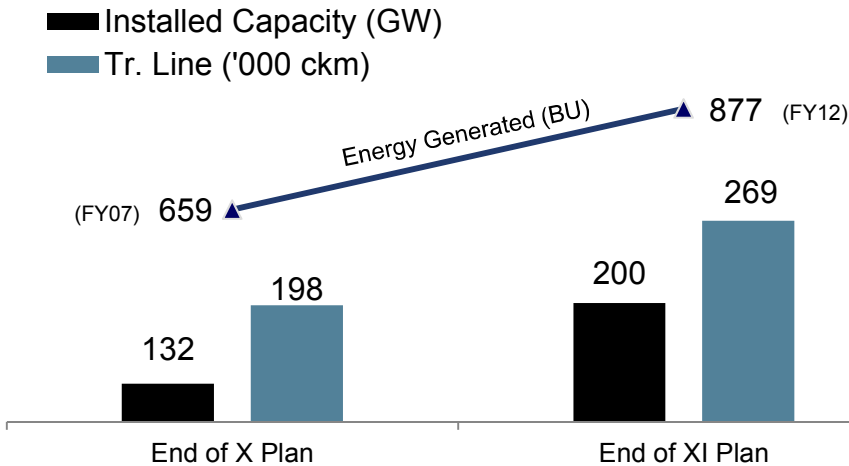
1- Nagapattinam Madhugiri Tr. Co. Ltd. 2- Vemagiri Tr. System Ltd.



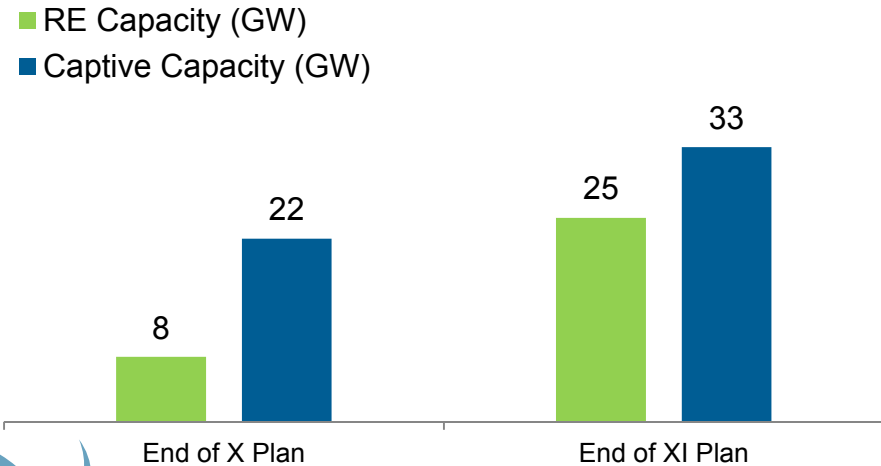
Power Sector Overview

Power Sector Overview – XI Plan

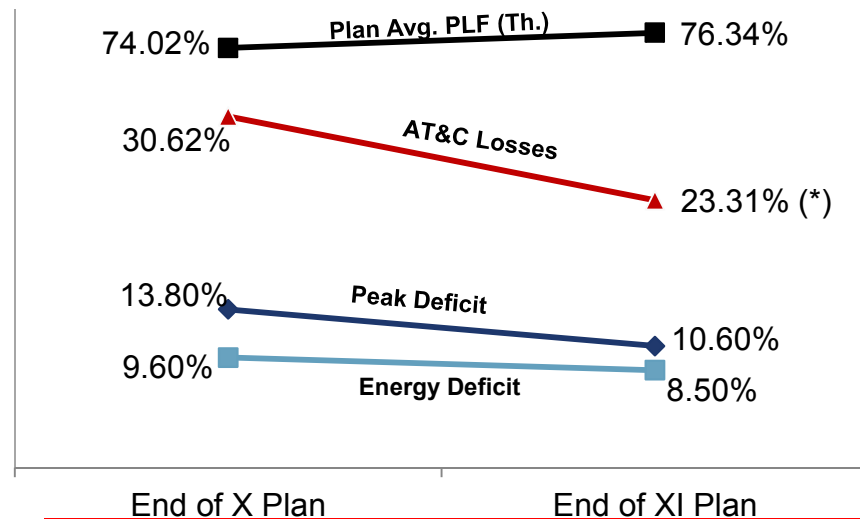
Capacity Addition



Thrust on Renewables



Performance Improvements



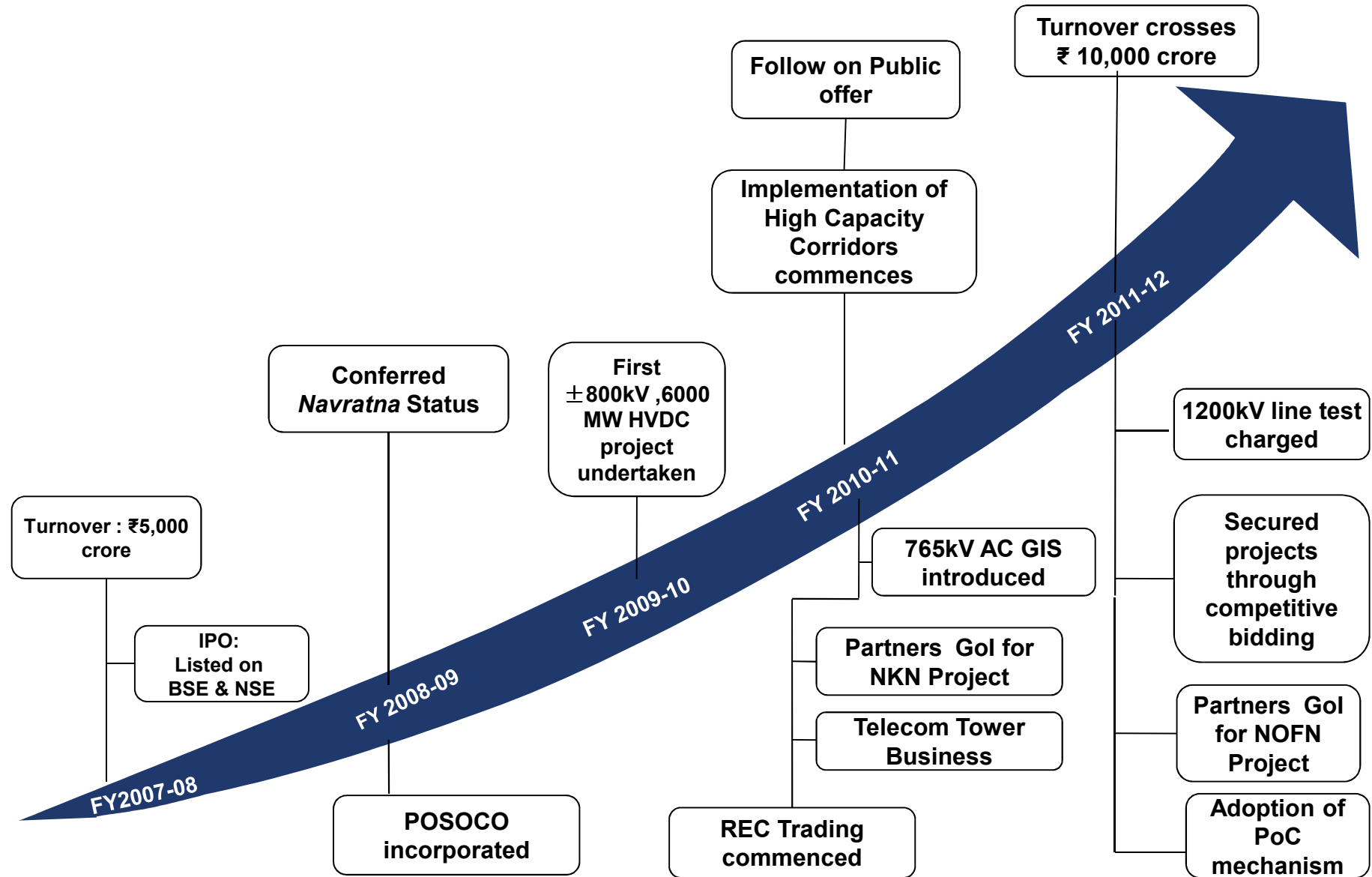
Despite constraints of Fuel, RoW, Land Acquisition, Environmental Concerns, Law & Order Problems - Power Sector performed well

- Installed Capacity: 142%
- Energy Generated: 133%
- Transmission Network: 35%
- Renewables: about 3x
- Reduction in Peak/ Energy Deficit
- Reduction in AT&C Losses



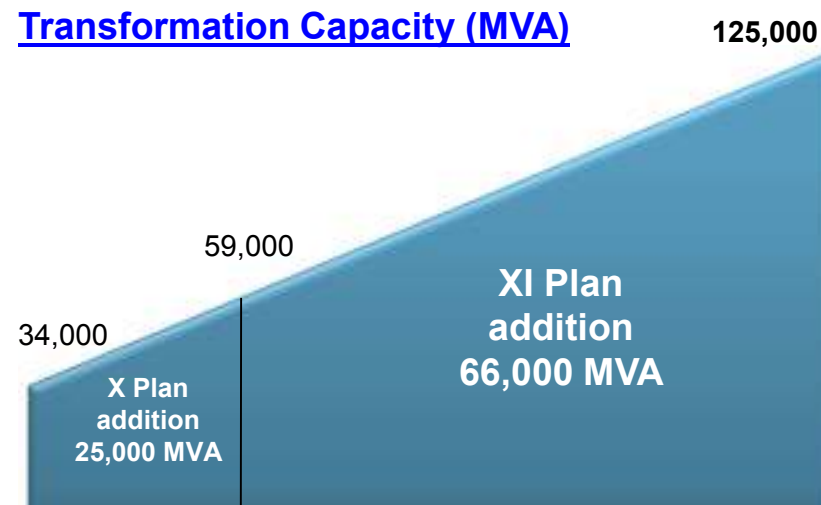
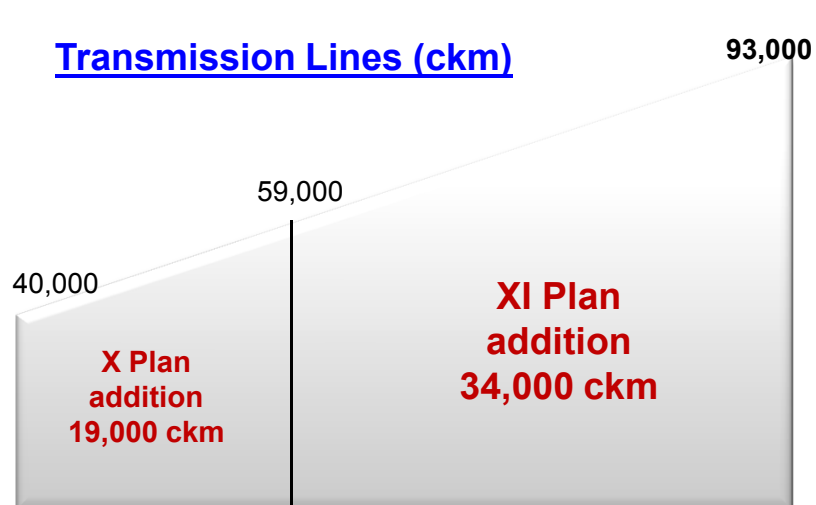
POWERGRID: XI Plan Highlights

Major Events





Growth: Physical



ckm
addition
over X
Plan

1.8
times

MVA
addition
over X
Plan

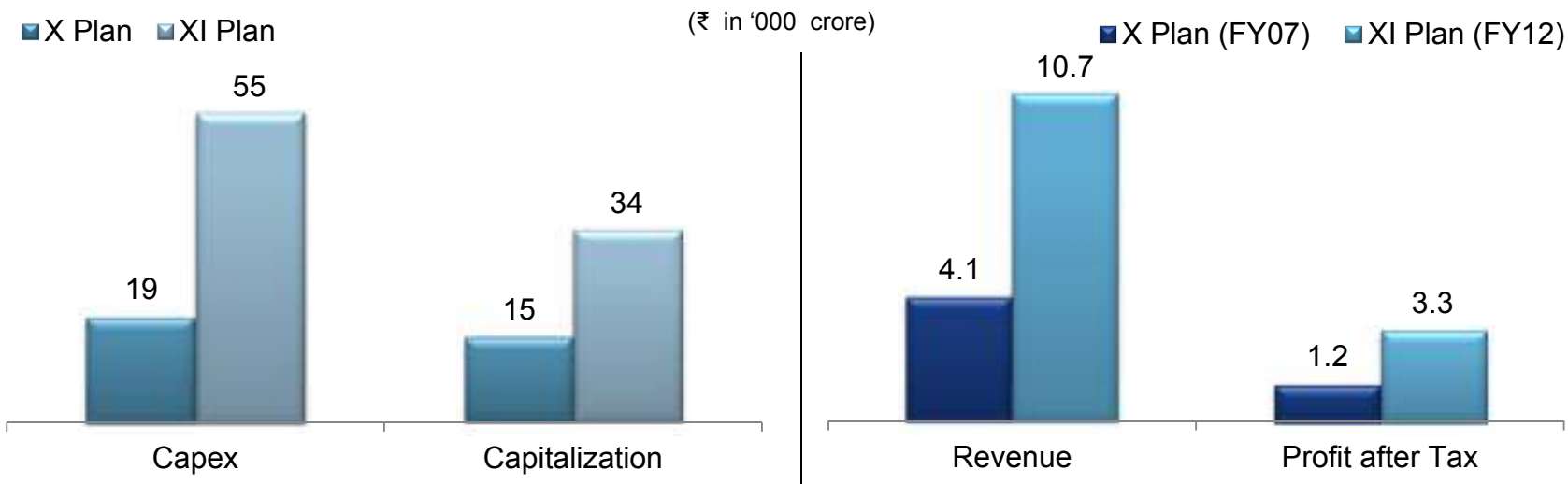
2.6
times

Sub-
Stations
in XI Plan

46

(36 in X Plan)

Growth: Financial



Capex

- Increases ~3 times of X Plan
- Only PSU in Power Sector to achieve target

Asset Growth

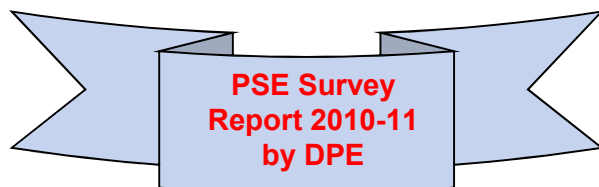
- Increases ~ 2.3 times of X Plan

Financials

- Revenue & PAT in FY12 grow > 2.5 times that of FY07

Dividend

- FY12 Dividend (*) to increase to ₹ 977 crore from ₹369 crore in FY07



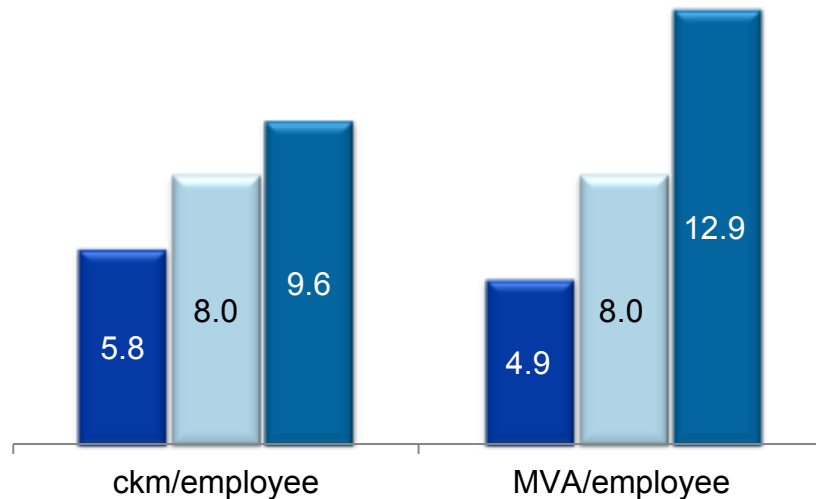
Ranked 5th in terms of Gross Block
Ranked 10th in terms of Net Profit



Growth: Employee Efficiency

Physical Parameters/ Employee

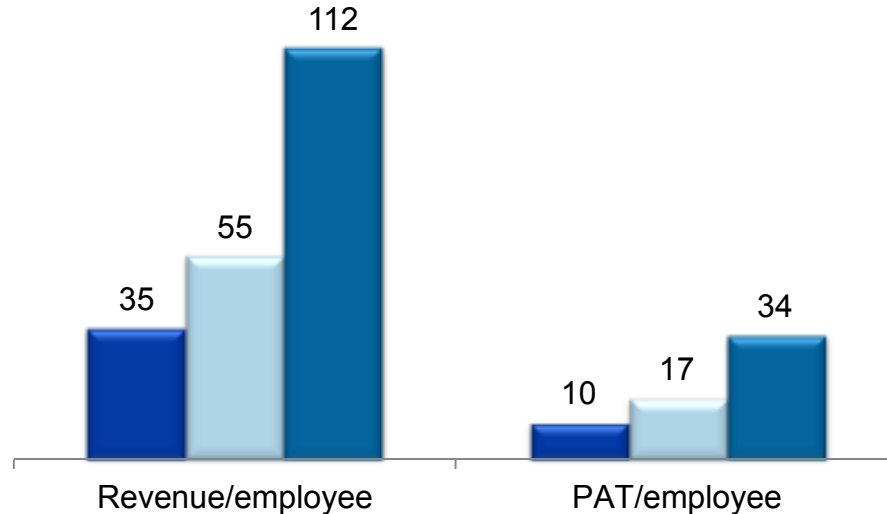
■ IX Plan (FY02) ■ X Plan (FY07) ■ XI Plan (FY12)



Financial Parameters/ Employee

(₹ in lakh)

■ IX Plan (FY02) ■ X Plan (FY07) ■ XI Plan (FY12)



ckm/ Employee
grows
1.7 times

MVA/ Employee
grows
2.6 times

Revenue/
Employee grows
~ 3.2 times

Profit After Tax/
Employee grows
3.4 times

POWERGRID ranked No.7 in terms of PAT/ Employee¹

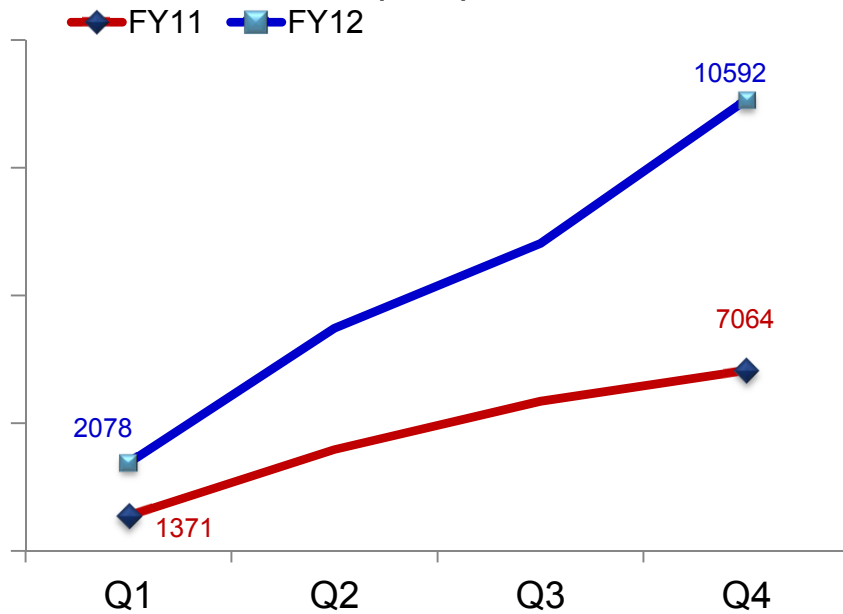
1-Source: BW Real 500 Ranking of Businessworld magazine (Issue: October 2011)



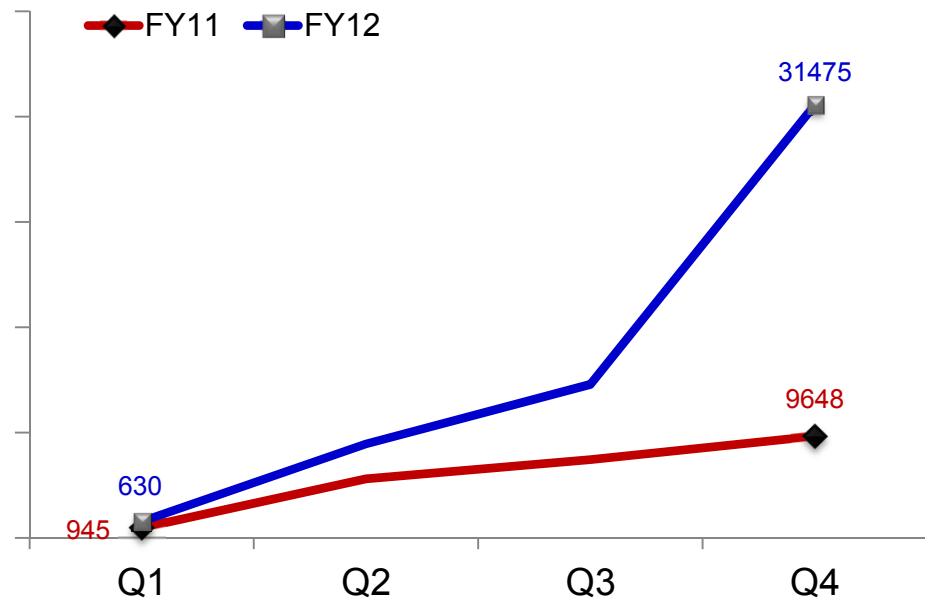
Highlights- FY 12

Project Execution

Transmission Line (ckm)



Transformation Capacity (MVA)



Sub-Station Addition

- 15 in FY12 (11 in FY11)

Inter-Regional Capacity Addition

- 5600MW in FY12 (1600MW in FY11)

Transmission Systems of Major Projects Commissioned

UMPP

- Mundra
- Sasan (Partly)

CGS

- Mauda
- DVC & Maithon
- Uri-II
- Chamera-III
- Koteswar
- Kundankulam
- Kalapakkam

Inter-Regional

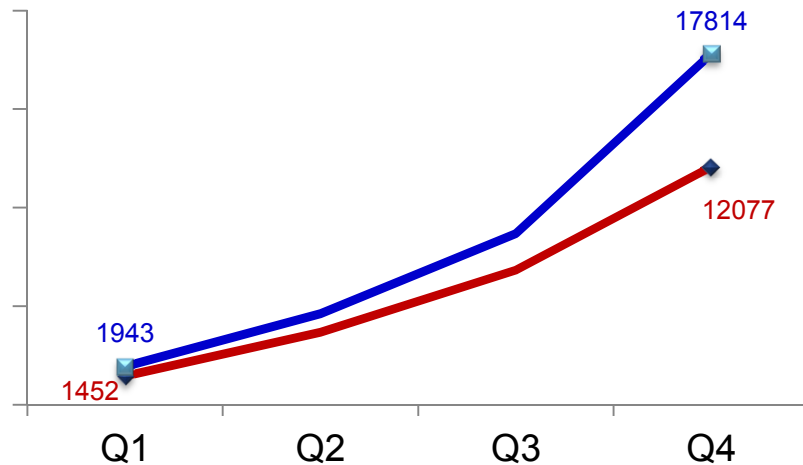
- Sasaram-Fatehpur
- Gaya-Balia
- Rourkela-Raipur



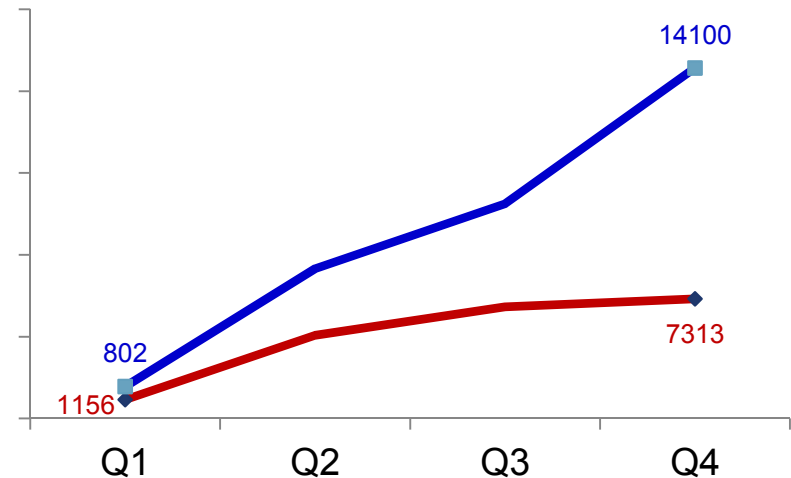
Project Execution

(₹ in crore)

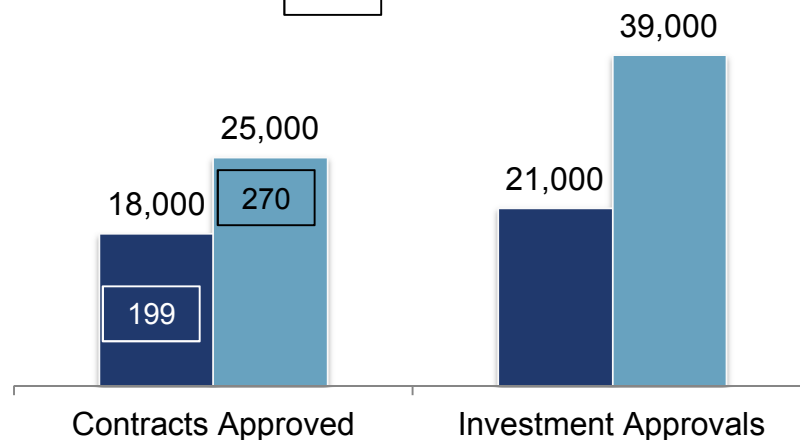
Capex ◆ FY11 ■ FY12



Commissioning ◆ FY11 ■ FY12



■ FY11 ■ FY12 Nos.

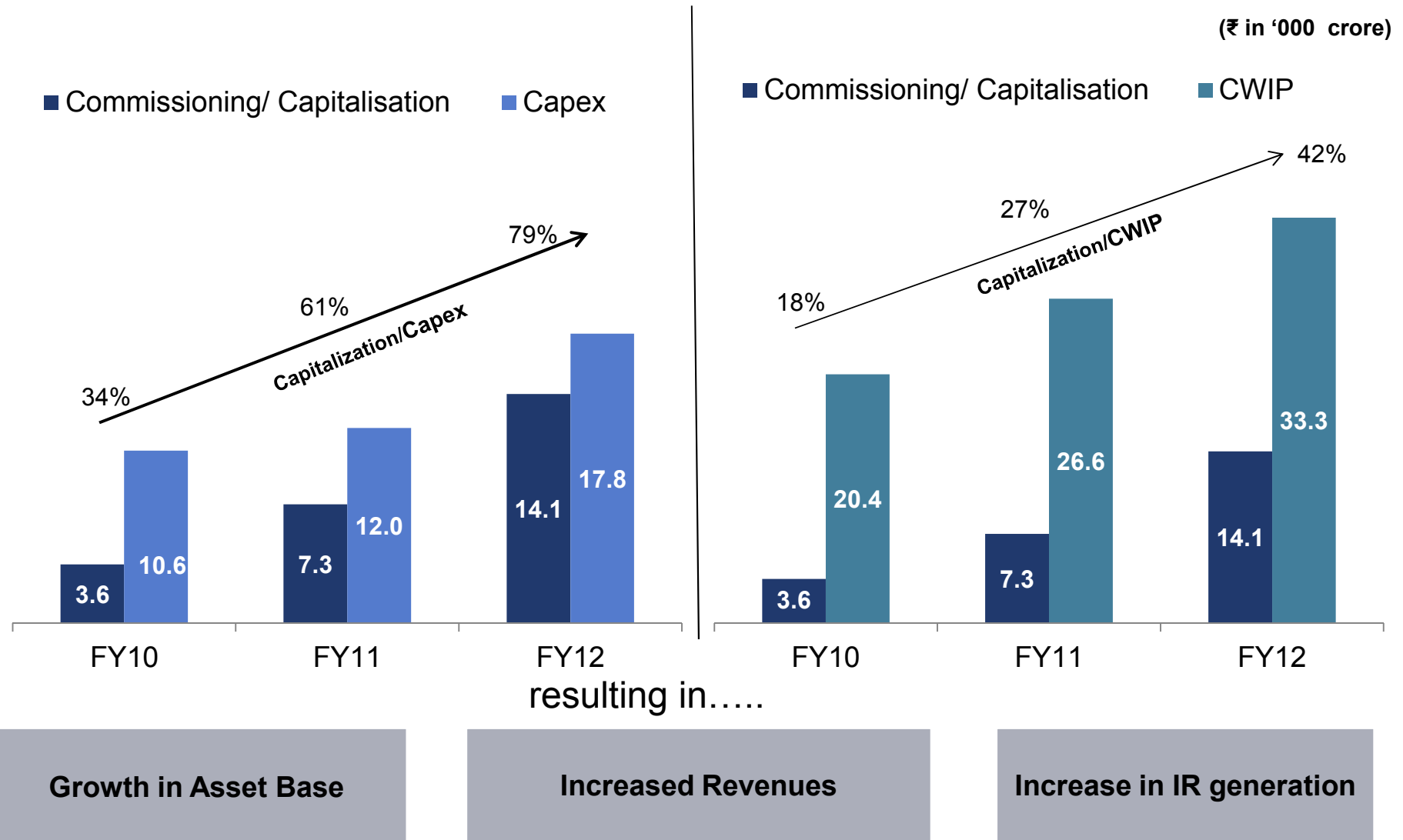


Increase in:

- **Capex** : **48%**
- **Commissioning** : **93%**
- **Contracts Approved** : **39%**
- **Investment Approval** : **86%**



Theme 'Commissioning/ Capitalization'



Operation

	FY 11	FY 12
Availability (%)	99.80	99.94
System Reliability (No. of Trippings/ line)	1.27	0.59



International Benchmarking

- Positioned in High Performance Quadrant in most O&M activities
- Comparison with 28 International Power Transmission Companies

32

Sub-stations operated remotely

6

Un-manned sub-stations

NTAMC

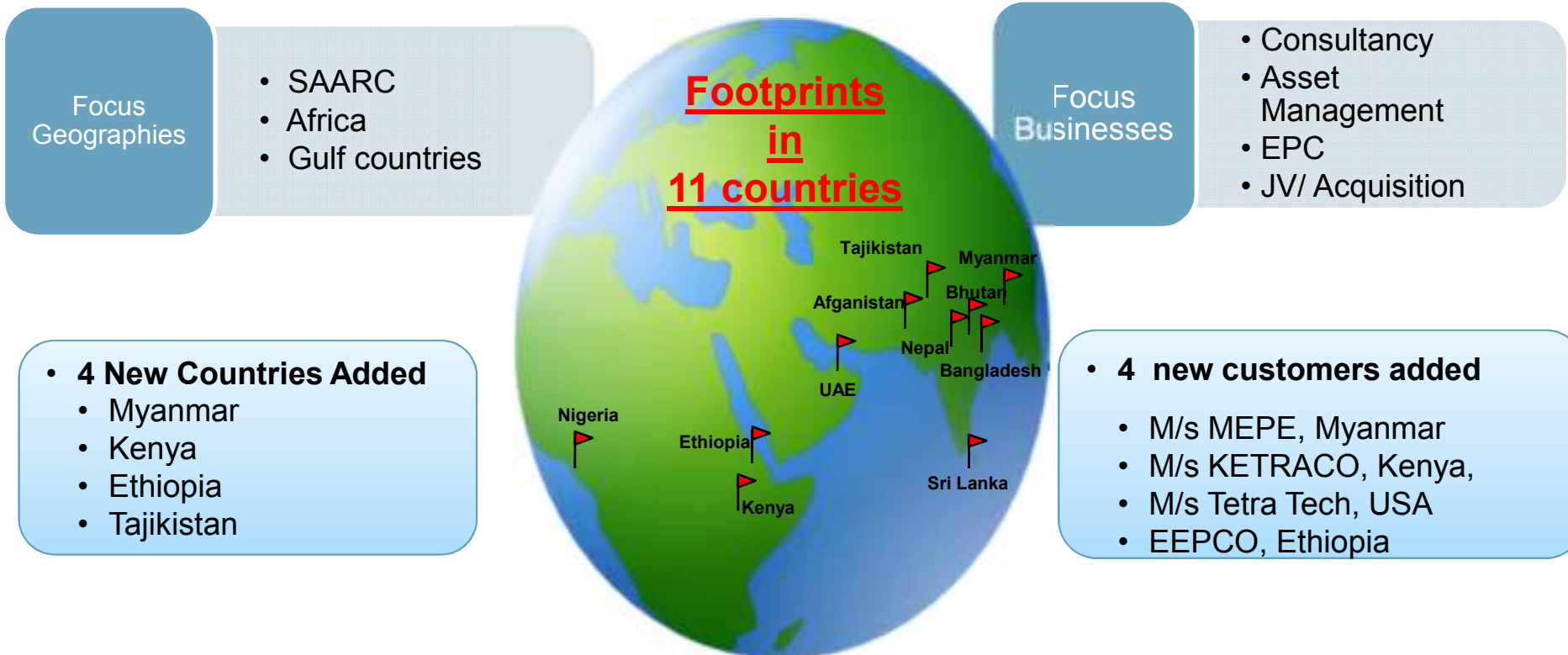
- Implementation started
- Maintenance Service Hubs established

Developed Repair Capabilities

- In-House repair facility for Transformer & Reactor established at Hyderabad
- On-Site Repair capability developed

International Business

19 Assignments for Projects worth ₹ 10,500 crore under execution



New Assignments	FY 11	FY 12
No. of Orders	6	9

Domestic Consultancy

116 Assignments for Projects worth ₹ 19,000 crore under execution

- ❖ **59 new assignments (including 15 Nos. repeat orders)**
- ❖ **Major Projects**
 - Jharkhand Sub-transmission
 - Smart Grid in Haryana & Chattisgarh
 - OPGW network in J&K
- ❖ **16 new Clients of Private Sector added**



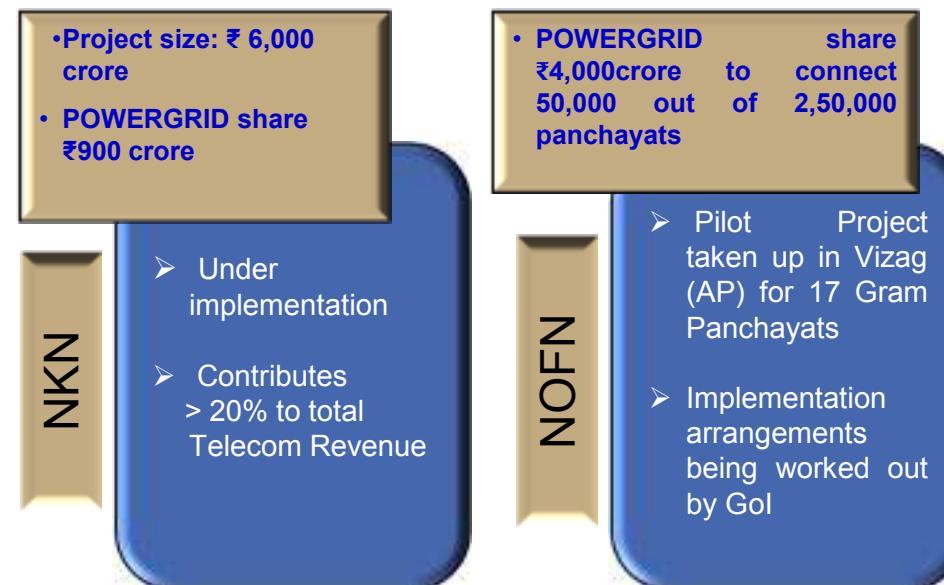
- Major Clients include:**
- Utilities in States/ UTs
 - Central PSUs
 - Central Govt. Organizations (Indian Navy, Railways)
 - Private Utilities
 - Companies in Private Sector

New Assignments	FY11	FY12
No. of Orders	45	59



Telecom

- Order Book increased to ₹ 1050 crore in FY12 compared to ₹ 650 crore in FY11
- 11 new clients added including 1 International client
- 7 new cities added to the existing presence at more than 200 locations
- Backbone availability 99.97%
- International connectivity to Bhutan facilitated



MPLS

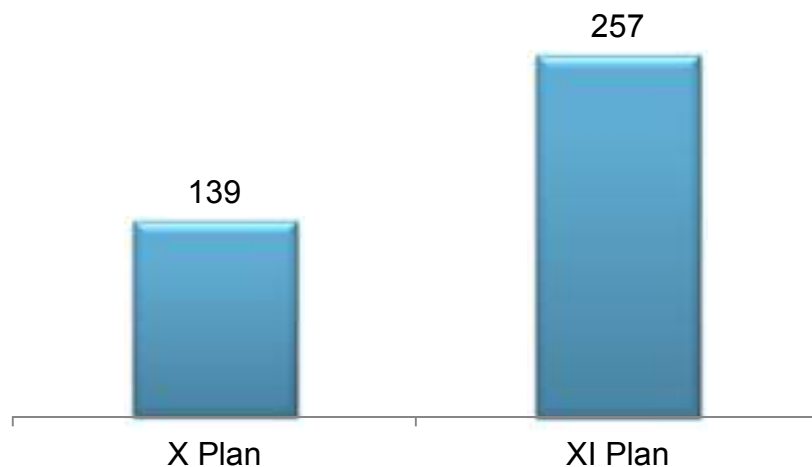
Multi Protocol Label Switch (MPLS)-Virtual Private Network(VPN)

- Pan India Implementation in progress:
 - To enhance customer base
 - Shall provide High Speed Communication links for NTAMC/ ERP etc. (covering ~ 400 locations of POWERGRID across India)



Growth: Grid Management (POSOCO)

Inter-Regional Exchange (BUs)

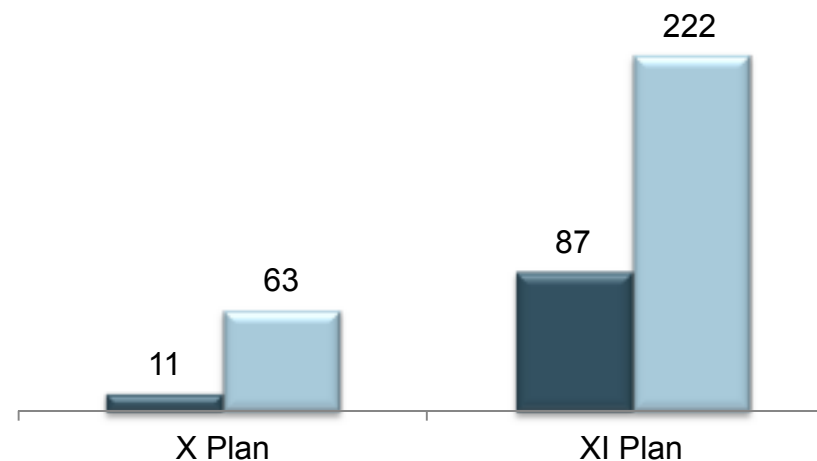


IR Exchange
Grown to

1.9 times

STOA Exchanges

■ Transactions ('000) ■ Energy (BUs)



Transactions
Grown to

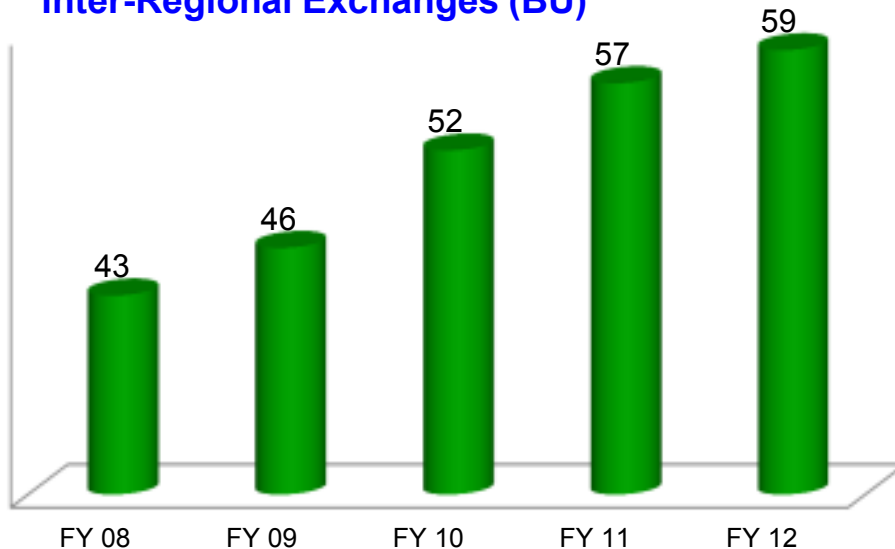
8 times

Energy Grown
to

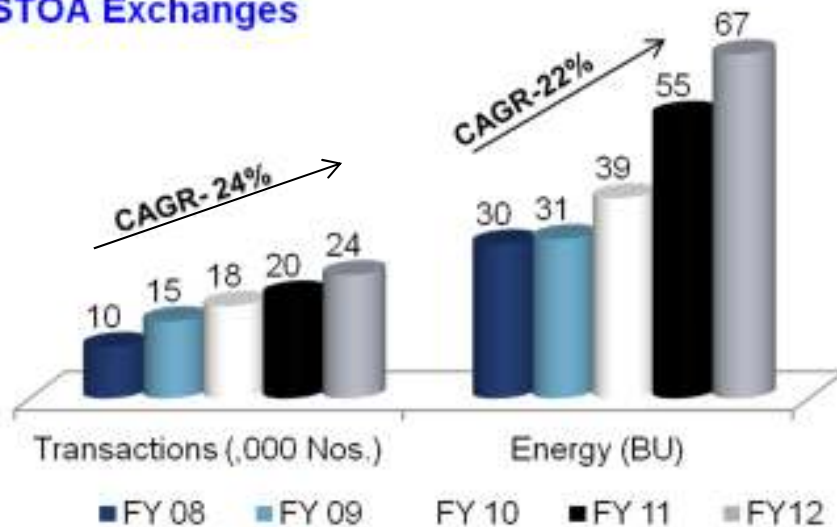
3.5 times

Grid Management- POSOCO

Inter-Regional Exchanges (BU)



STOA Exchanges

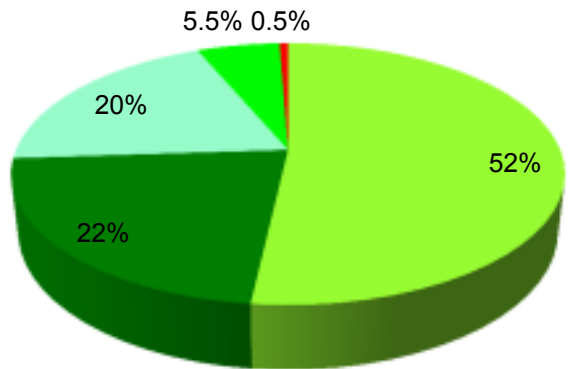


leading to reduction in per unit energy charges

Renewable Energy Certificate (REC) Mechanism

- More than 10 lakh RECs issued
- >95% redeemed through power exchanges
- RECs traded: ₹ 286 crore till Mar-12
- **1334 RE** generators signed up since inception

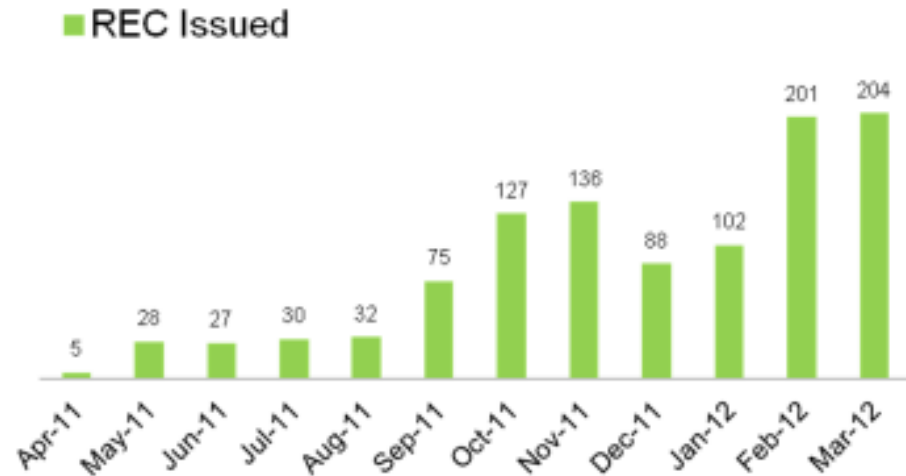
About 2900 MW RE accredited



- Wind
- Bio-fuel cogeneration
- Biomass
- Solar PV
- Small Hydro

Registered Capacity Surpasses CERC estimate of most optimistic scenario

(i'000 nos.)



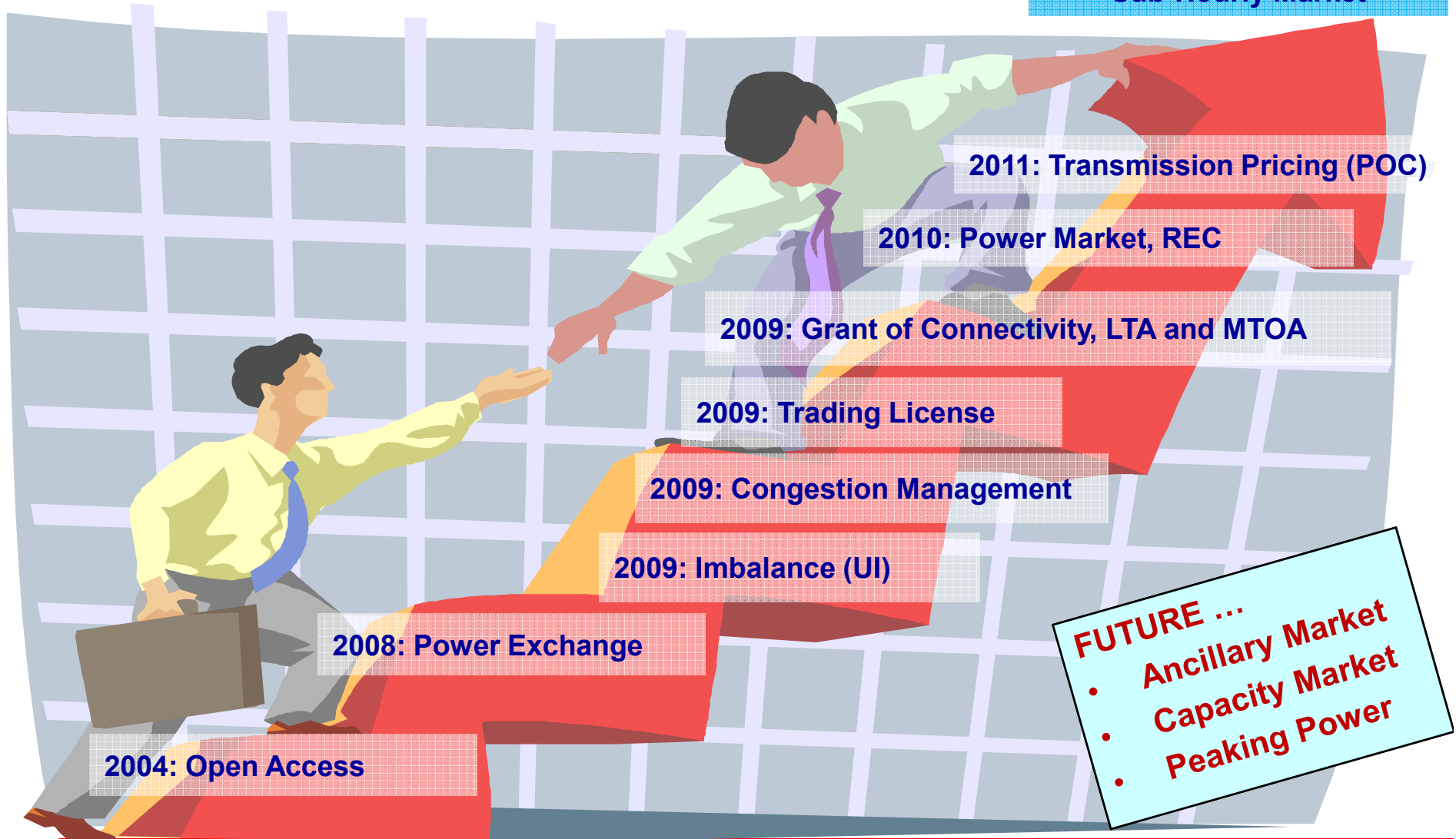
RECs- Increasing Penetration



Grid Management: Evolution & Maturity of Power Markets



**Introduced in Apr-12
Sub-Hourly Market**



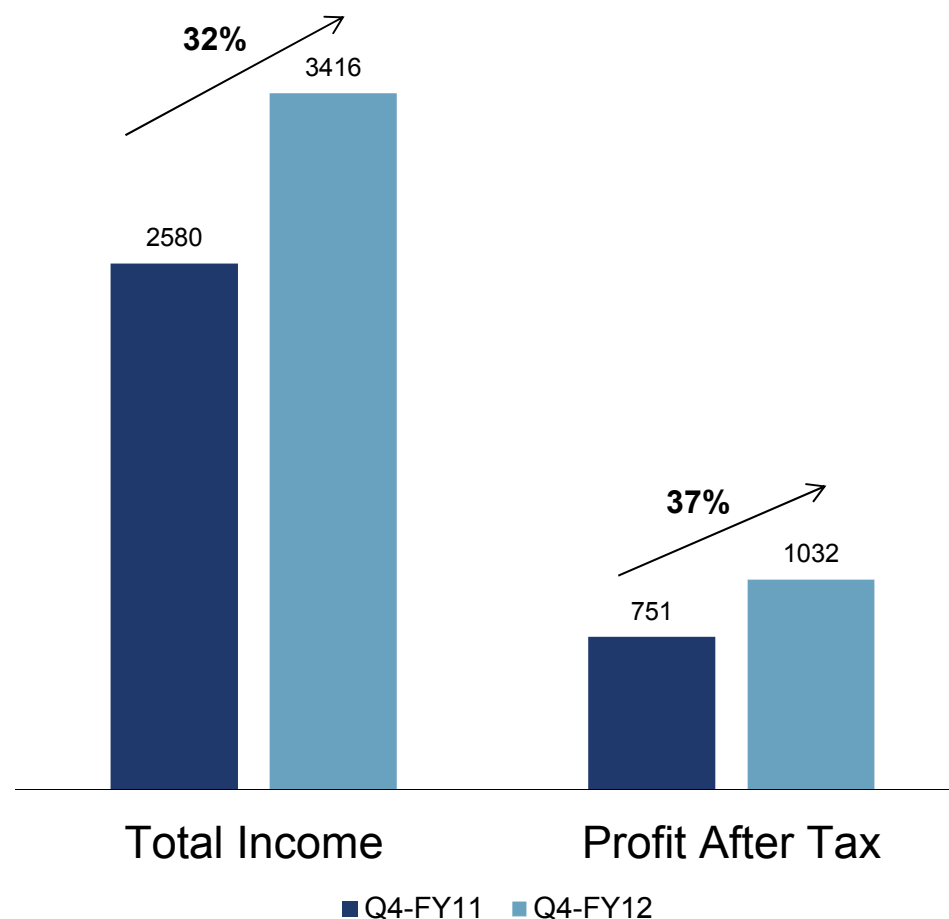


FINANCIAL HIGHLIGHTS FY 2011-12



Financial Performance- Q4 FY11-12

- Profit After Tax increased by 37% i.e. ₹ 1032 crore in Qtr-4 from ₹ 751 crore in Qtr-4 (FY2010-11).
- Total Income increased by 32% i.e. ₹3409 crore in Qtr-4 from ₹2580 crore in Qtr-4 (FY2010-11).
- EBITDA increase by 34% i.e. ₹2911 crores in Qtr-4 from ₹2177 crores in Qtr-4 (2010-11)
- Projects worth ₹7736 crore commissioned during Qtr-4 (FY 2011-12) as against ₹486 crore in corresponding quarter of previous year i.e. FY 2010-11
- Final Dividend of 13.1% has been proposed for the FY 2011-12 as against 12.5% declared for FY 2010-11



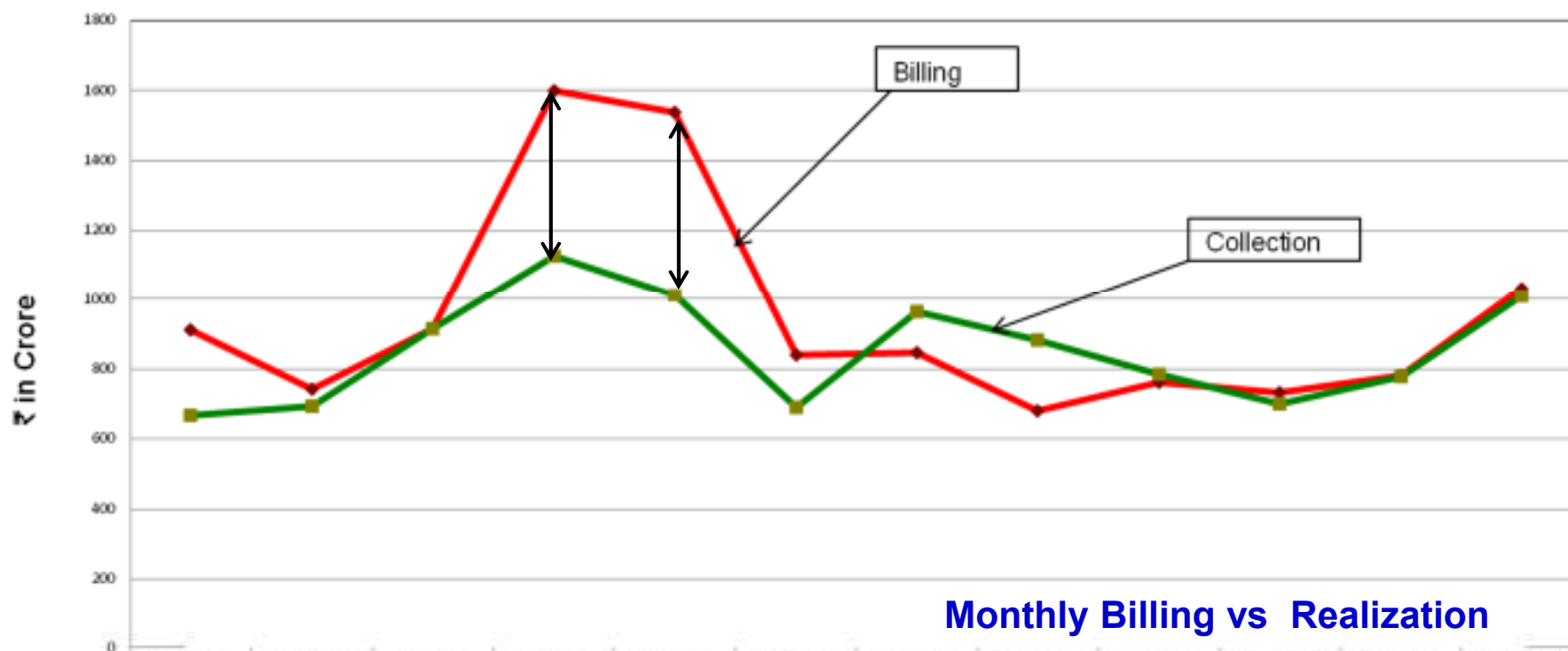


Financial Performance (₹ in crore)

Description	FY 2011-12	FY 2010-11	%age Growth
Income			
• Transmission Charges	9,544	7,903	20.8%
• Consultancy	290	299	(3.0%)
• Telecom	201	187	7.5%
• Other Income	750	710	5.6%
Total Income	10,785	9,099	18.5%
EBITDA	9132	7654	19.3%
Profit After Tax (PAT)	3,255	2,697	20.7%
Earnings per Share (₹)	7.03	6.19	13.6%
Book Value per Share (₹)	50.73	46.12	10.0%
Gross Fixed Assets	63,387	50,352	25.9%
Debt	53,402	40,883	30.6%
Net Worth	23,487	21351	10.0%
<i>Return on Net Worth</i>	13.86%	12.63%	
Debt Equity Ratio	69:31	65:35	

Revenue Collection Efficiency

Revenue Realization



Monthly Billing vs Realization

	Apr'11	May'11	Jun'11	Jul'11	Aug'11	Sept'11	Oct'11	Nov'11	Dec'11	Jan'12	Feb'12	Mar'12
— Billing	909.99	741.98	913.37	1599.31	1536.76	838.82	847.02	681.20	762.43	732.25	782.49	1033.60
— Collection	666.22	694.00	913.43	1127.07	1011.40	689.46	964.68	881.38	784.00	699.02	779.16	1009.85
% Collection	73%	94%	100%	70%	66%	82%	114%	129%	103%	95%	100%	98%

↕ Provisional Tariff orders of Rs. 2152 crores issued by CERC in July & Aug 2011 out of which Rs. 1897 Crores was realized during the current year



Revenue Collection Efficiency

(₹ in crore)

Billing

FY 11	FY 12	
7367	11379	Increased by 54%

Outstanding as on date

Outstanding beyond 60 days	415	(includes ₹ 250 crore installments)
Balance Outstanding	165	Equivalent < 6 days' billing (Monthly billing: ₹ 900 crore)

Realization of Transmission Revenue considered very critical by all Authorities viz. CERC/GOI

CERC Open Access Regulations, 2009 (Amendment) Notification dated 20-May-2009 states:

“25A. When so directed by the Commission, the National Load Despatch Centre or the Regional Load Despatch Centre, as the case may be, shall not grant short-term open access to the entities and associates of such entities, who consistently and willfully default in payment of Unscheduled Interchange charges, transmission charges.....”

Revenue Collection Efficiency



CERC Order dated 26-Dec-2011 against Petition No.213/ 2011

“This Commission which has been vested with the function to regulate the inter-State transmission of electricity has the mandate of the Parliament to ensure that inter-State transmission is regulated in a smooth and efficient manner and is not crippled on account of non-payment or partial payment of transmission charges. We direct all DICs to make timely payment of transmission charges and other charges to the petitioner in accordance with the bills raised by the CTU.....”

CERC Order dated 25-Jan-2012 regarding Non-payment of Dues

“..... we direct the staff to process the case for non-compliance of directions of the Commission by the defaulting DICs on account of non-payment of transmission charges and other charges.”

Thereafter, CERC issued notices to the CEOs of the defaulting utilities on 8.5.2012 and directed them to appear before the Commission on 12.06.2012. The order states “..... We direct the second respondent (i.e. CMD) to explain as to why he would not be held personally liable for non-compliance with the orders of the Commission”

Revenue Collection Efficiency



CERC Staff Paper dated 7-May-2012 regarding utilization of PSDF Fund emphasizes:

Transmission is a public service and of strategic importance. Uncertainty in demand growth/ fuel supplies and high impact low probability events in the system further necessitate creation of a robust transmission system.

- *Recognizing this aspect, CERC has granted regulatory approval for nine High Capacity Transmission Corridors:*
 - *For timely implementation even in case of delay in IPP commissioning, to avoid pronounced Right of Way challenges in future;*
 - *Utilization of PSDF Fund, for relieving burden of beneficiaries from impact of enhancement in tariff for servicing new transmission asset*



Towards New Business Opportunities

Smart Grid/ City

Smart Grid/ City

➤ PUDUCHERRY

- MoU signed with Electricity Dept, Govt. of Puducherry
- 56 organizations joined hands for implementation

Pre-Feasibility Studies

- Firozabad (UP)
- Katra (J&K)
- Chitradurga (Karnataka)
- District/cities of Tripura
Chhatisgarh, Haryana, Punjab



Grid Integration of Renewable Energy



RENEWABLE GENERATION (XII PLAN)

- ❖ Planning of intra-State/inter-State Transmission requirements
- ❖ Provide Mechanism to address Wind/Solar generation uncertainty
 - Forecasting of generation
 - Provision of flexible generations, reserves
 - Demand side Management
 - Energy Storage
 - Policy and Regulatory Framework

₹ 42,000 crore investment in transmission for 40 GW



Transmission Relieving Load on Other Infrastructures !!



Business Opportunities



Backward Integration

Joint venture companies contemplated for manufacturing of material and equipment



JVs with States for intra-State Transmission

Discussions under way with

- Bihar, Odisha, Jharkhand, Chhatisgarh, Manipur, UP, MP, Tamil Nadu, Karantaka



R&M of T&D activities of CPSUs

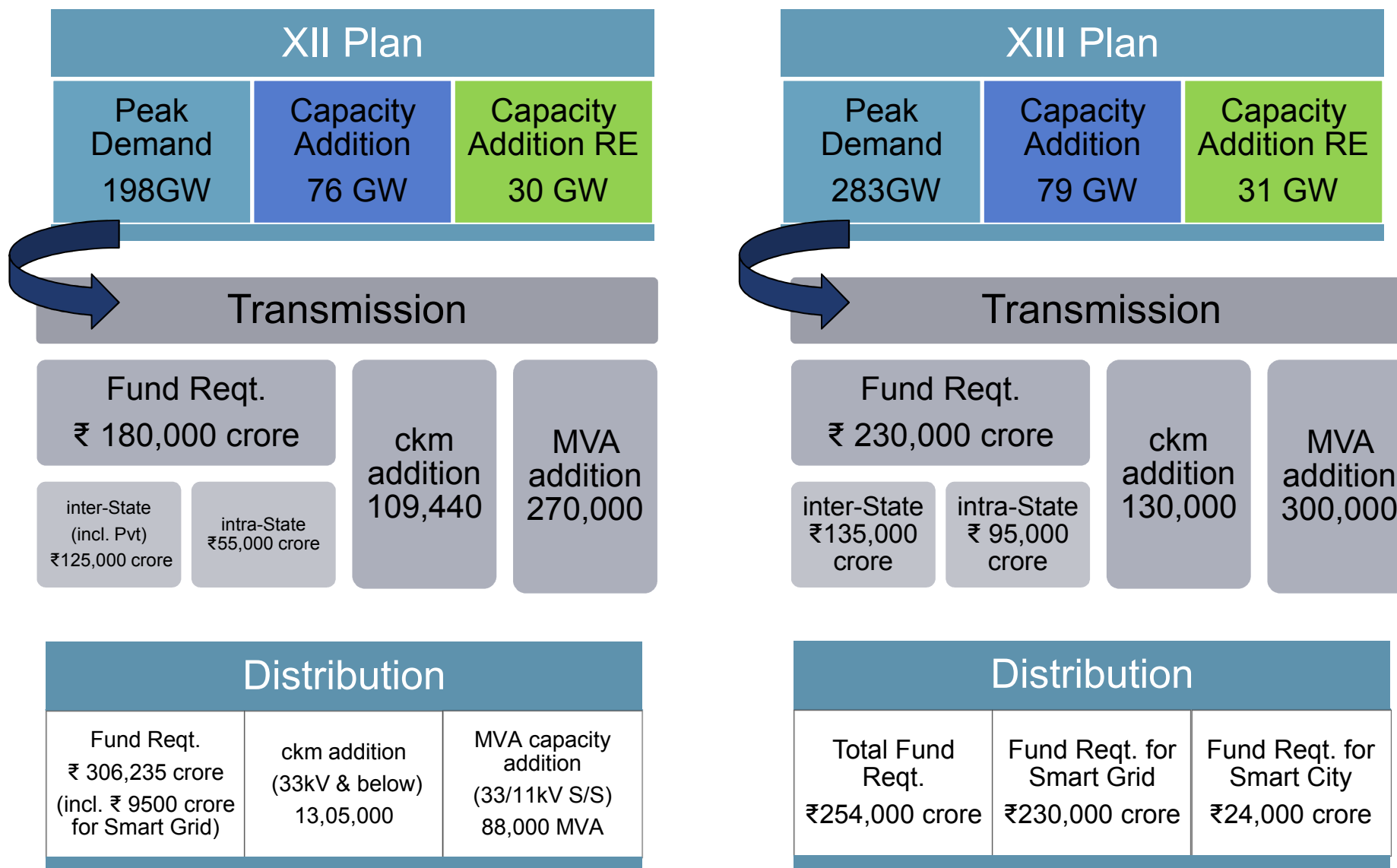
- T&D activities : a non-core area for most CPSUs
- Dialogue initiated with CPSUs in Coal/Steel/Mining Sector
- Future Opportunities in Fertilizer & Petroleum Sectors, both for R&M and Project Consultancy for Sub-Station



XII Plan



Power Sector Overview – XII & XIII Plans



Investment Programme

Projects/ Schemes	Capital Outlay
Central Sector Generation	22,500
UMPP	14,000
IPP	52,000
Grid Strengthening	11,500
Total	100,000

(₹ in crore)

Capital Outlay



Investment Approved - ₹ 76,000 crore
Contracts Approved - ₹ 67,000 crore

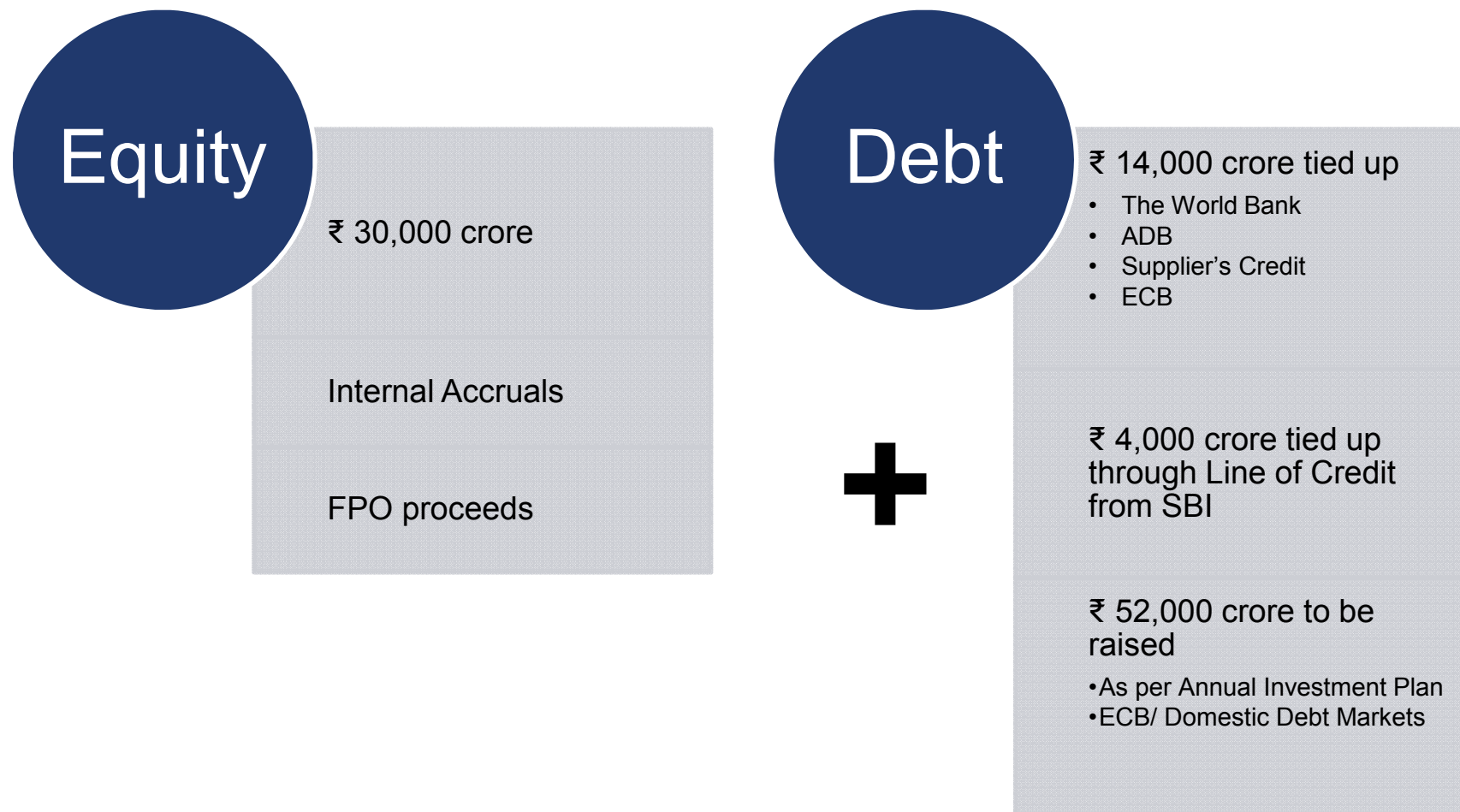
Additional Projects

1. Tariff Based Competitive Bidding
2. Nomination Basis by GoI
3. Consultancy assignments/ Sub-Transmission Projects

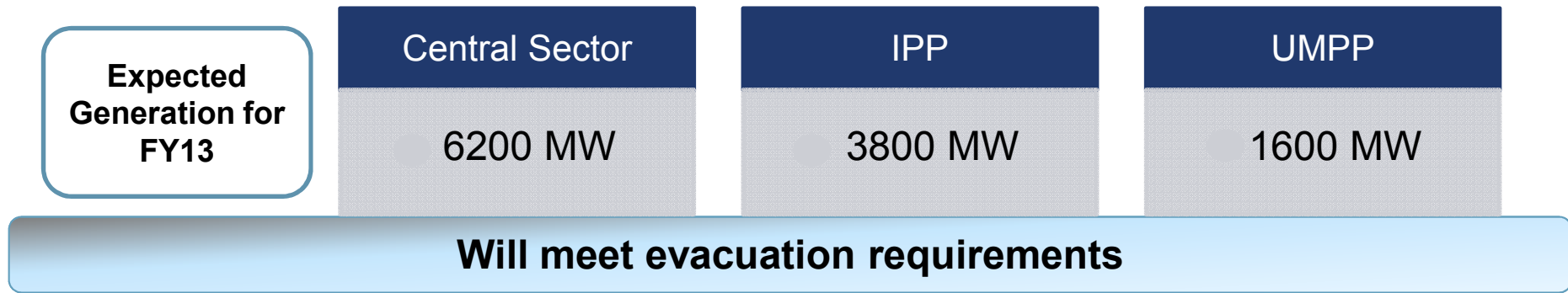


Funding Requirement

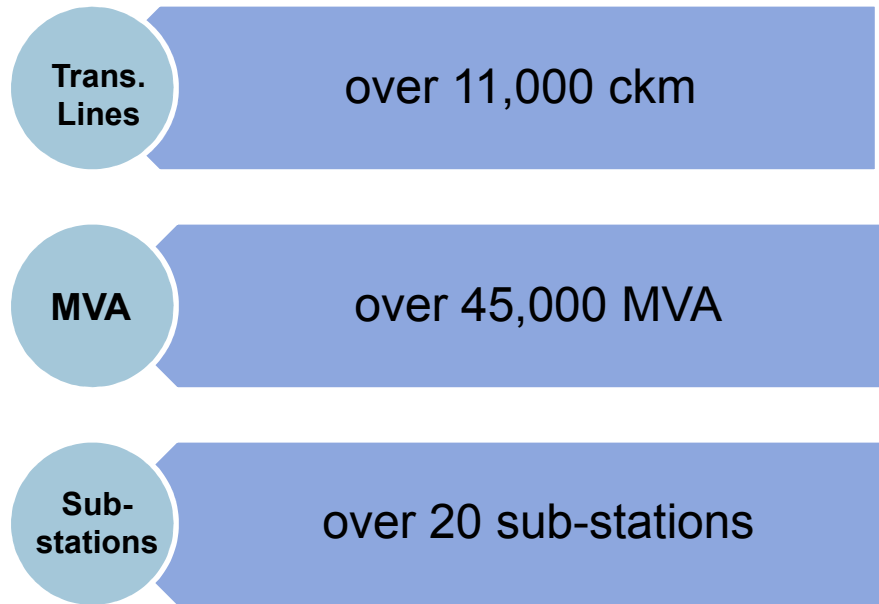
Investment planned in Debt-Equity ratio of 70:30



FY13: Project Execution



Transmission System in advance stage



Assets Commissioned (₹ in crore)

	FY10-11	FY11-12	FY12-13
Q1	1,156	802	> 2500 (by end May-12)
Q2	3,932	3,255	
Q3	1,739	2,228	
Q4	486	7,815	
Total	7,313	14,100	



Thank You