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Public Private Partnership in Transmission

Financing of Transmission Systems

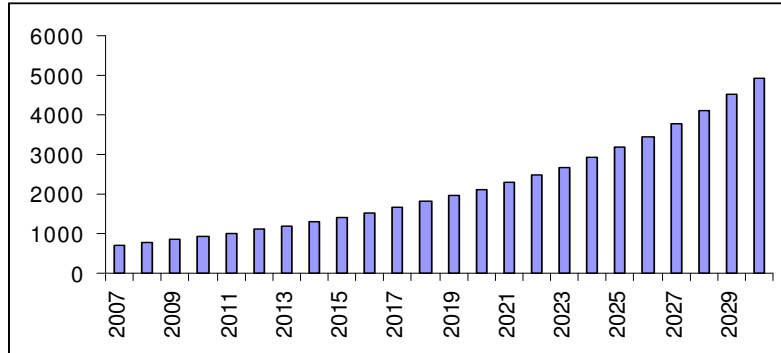
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By
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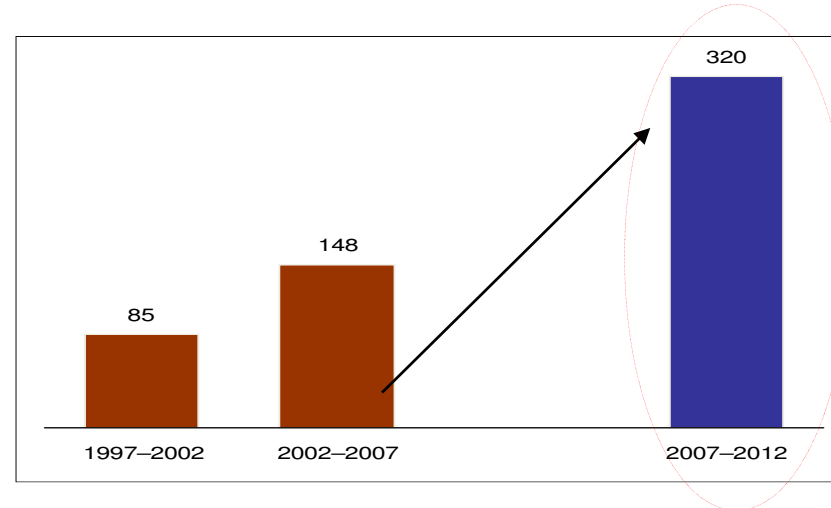
India at an inflexion point

Projected GDP of India till 2030 (in US\$ billion)



Source: *Dreaming with BRICs: The Path to 2050*, Goldman Sachs

Planned Investment in Infrastructure (US\$ billion)

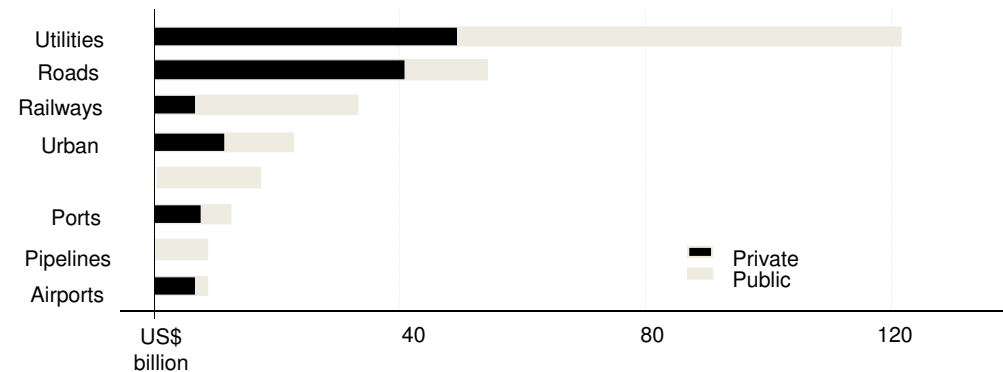


Source: Government of India, Planning Commission

Investment in infrastructure will need to rise to 8-9% of GDP to meet the planned Infrastructure investments of US\$320 billion

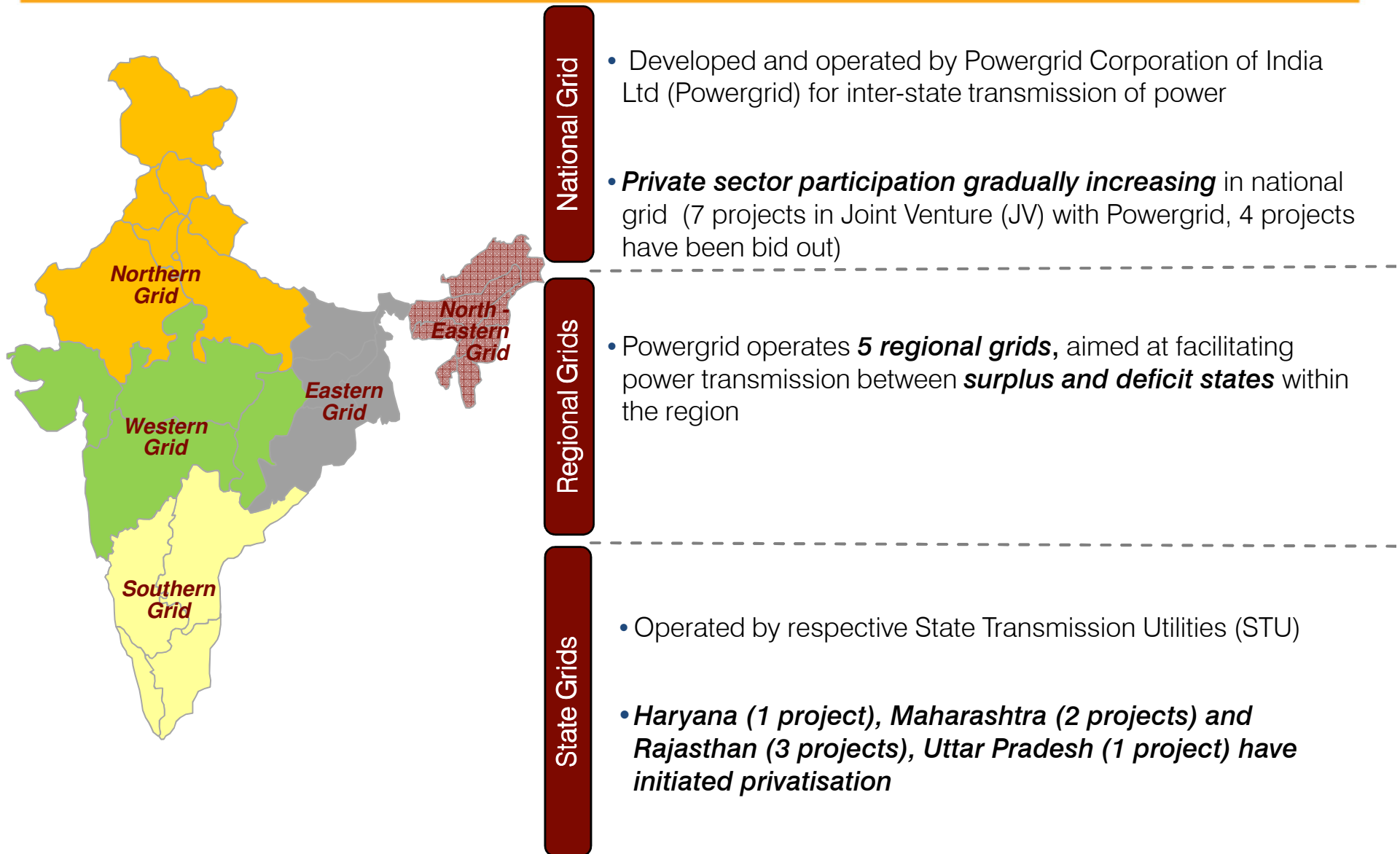
Investments in generation and transmission comprise bulk of the utility investments

Sectoral Breakup of Planned Investment



Source: IDFC Capital Estimates for 2008- 2012

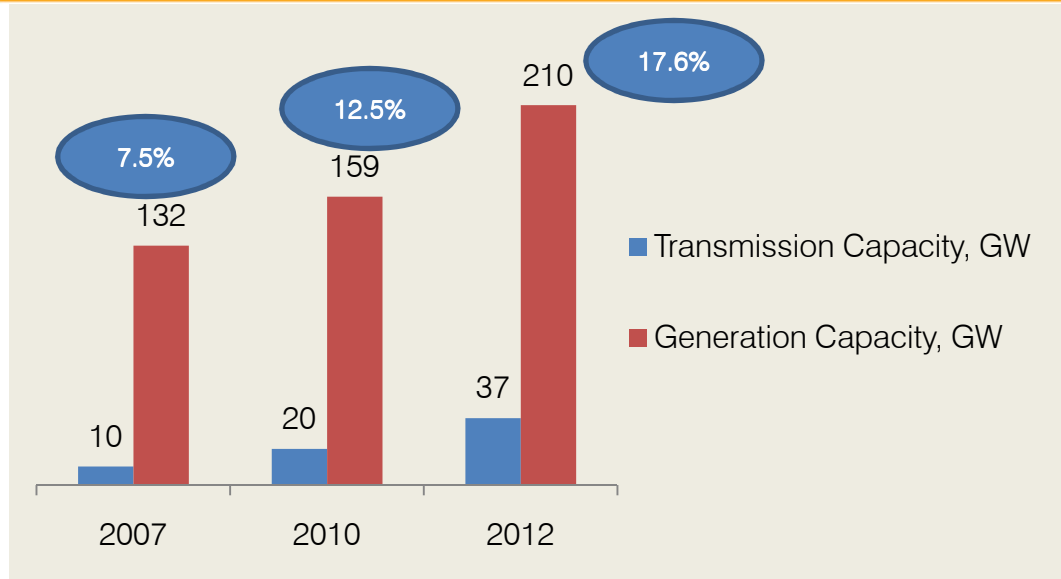
Grids in India are operated at 3 levels





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Inter-regional /Intra-state capacity being ramped up..



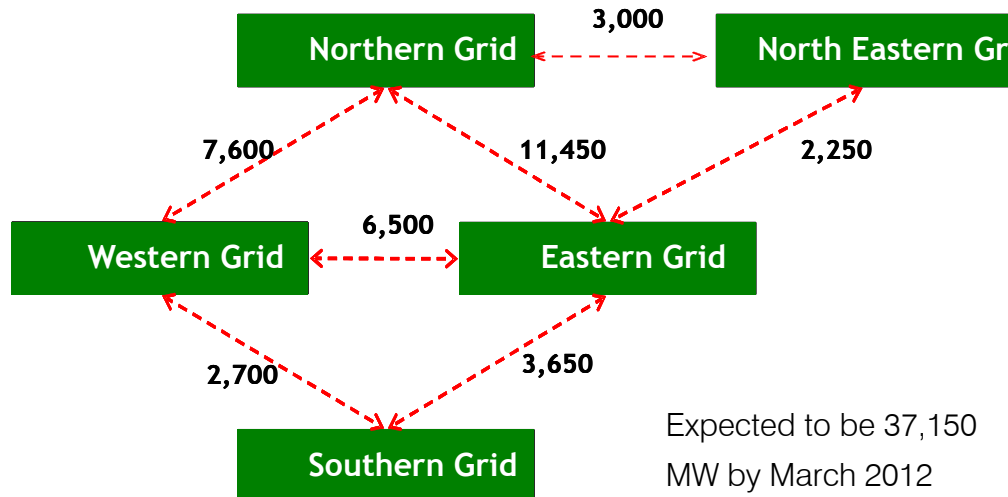
Source: Ministry of Power, Government of India, 2012 are estimates

Transmission capacity being ramped up to match generation capacity additions

Investments in Inter-regional transmission sector (Rs. 75,000 crore during 2007-12) being made by Power Grid Corporation Ltd (Rs. 55,000 crore)/ Private Sector (Rs. 20,000 crore)

State Transmission Utilities also expected to make investments of Rs. 65,000 crore (2007-12), for Intra-state transmission

Total planned investment is Rs.1,40,000 crore during the period 2007-2012



Source: Ministry of Power, Government of India

Modest beginning has been made, though the initial projects are under the JV route

***IDFC has financed 34% of the private sector capex**

Project	Private Developer	JV Percent	Estimated Cost (Rs.Crore)
Category A (Central)			11,915
Parbati – Koldam	Reliance Infrastructure & PGCIL	74-26	660
SUGEN Transmission	Torrent Power & PGCIL	74-26	325
Karcham – Wangtoo	Jaiprakash Hydro & PGCIL	74-26	1,000
Teesta Basin	Athena & PGCIL	74-26	1,500
Hazira Power Project	Essar Power & PGCIL	74-26	330
Tripura Project	North East Transmission & PGCIL	74-26	1,700
Tala Project*	Tata & PGCIL	51-49	1,600
WRSSS-II	Reliance Power Transmission Ltd (RPTL)	100	1,500
Talcher II*	RPTL	100	800
North Karanpura*	RPTL	100	1,500
East North interconnect	Sterlite Technologies Limited	100	1,000
Category B (State level)			1,030
Jhajjar Transmission*	Jhajjar KT Transco Ltd	100	450
Rajasthan transmission	GMR (2 projects)	100	NA
Rajasthan transmission	EMCO energy (1 project)	100	NA
Jaigad Power Transco	JSW Energy and Mahatransco	74:26	580

List of Private Projects	Tender Details
<u>Central level projects</u>	
System Strengthening common for Western Region & Norther Region	Award by FY2011
System Strengthening for WR	Award by FY2011
Power evacuation for Maithon RB, Barh II, Nabinagar, Daaripally, Koderma, Mejia Extn, Simhadri extn	-
Lara Integrated Project	-
SR-WR Synchronous Inter-Connector	-
<u>State level projects</u>	
Uttar Pradesh (power evacuation & system strengthening)	Award by FY2011
Maharashtra - Maharashtra Eastern grid Power Transmission Company Ltd (74:26 JV between Adani and Mahatransco)	Work likely to start next year

Source: Ministry of Power, PGCIL, CRISIL Research

Private participation in the transmission sector is regulated and is restricted to specific projects

- Regulation has evolved for Private Sector Participation as more projects have been bid out
- Guidelines for competitive bidding (13 Apr 2006) to encourage private participation –
Tariff Model
 - Bid criteria: levelized annual transmission charges from commissioning till expiry of license
 - Build, Own, Operate and Maintain (BOOM) model
 - Payment Security Mechanism : (i) Letter of Credit (ii) Rescheduling of low cost power
- Planning Commission model for transmission projects - Grant/Premium model
 - Bid criteria: Lowest grant or highest premium payable to Authority
 - Design Build Finance Operate and Transfer (DBFOT) model
 - Payment Security Mechanism : (i) Letter of Credit (ii) Escrow



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...risks in financing private transmission projects

Transmission projects are stable state annuities

Re-routing
Right of way
River crossings



State Electricity Boards
Payment Security Mechanism

Transmission License
Forest Clearance

...key financing view points

	Remarks
Long tenor /low cost financing needed to facilitate aggressive bids	<ul style="list-style-type: none"> • Projects have been aggressively bid, which is likely to result in low equity returns • Aggressive bidding requires constant financial structuring to control financing costs <ul style="list-style-type: none"> ➤ Long tenor of debt ➤ ECB fund raising, ➤ Issuance of long dated bonds after commissioning of project, to reduce interest costs
Security	<ul style="list-style-type: none"> • Tariff bidding model <ul style="list-style-type: none"> ➤ Security of assets available, Substitution rights available ➤ No termination payments • Premium/ Grant model <ul style="list-style-type: none"> ➤ No security on project assets, Substitution rights available ➤ Concession agreement is similar to the concession agreement in road sector and has similar clauses on Termination payment, project agreement definition includes financing agreement etc ➤ On termination, lenders to get 90% of debt due in case of Concessionaire default and 100% in case of State Utility default

...key financing view points

	Remarks
Project cost increase which may not be absorbed	<ul style="list-style-type: none"> • Forest clearance typically follows only after start of construction, unlike generation projects – delay is a key risk if forest / wildlife areas form major part of the transmission line • Right of Way (ROW) to be acquired as construction progresses unlike in road sector where a bulk of the ROW is acquired upfront • Limited number of sponsors with capability to implement such large inter-state projects
Customer risk relatively lower than generation project	<ul style="list-style-type: none"> • Transmission tariff is relatively a smaller portion of the overall cost of the utility compared to a generation project • Standard first tier (Letter of Credit) payment security mechanism in both models, expected to provide short term liquidity support • <u>Tariff bidding model</u>: Tier 2 mechanism of rescheduling of low cost power and outside sale, yet to be notified and tested in market

**Huge potential
for private
sector
transmission
investment**

- Imbalance of generating regions and load centres, entails the need for a huge inter-regional transmission capacity, which in turn signifies huge investment opportunity in transmission
- Unless long term financing mechanism is formed, the same would not match aggressive bids of developers
- Developers/lenders can get greater comfort if uncertainty on forest clearance and ROW is reduced, as this can delay project implementation and result in increased costs
- Central/State projects need to be bid out at a faster pace, if private sector has to play a greater role in transmission

Thank you