

Inter-sectoral coordination between regulators of different domains

Presentation by
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Agenda

Sl. No	Topic
1	Importance of Inter-dependency
2	Inter-dependency of various sectors
3	Case Study : Power Sector
4	Key Issues faced by Power Sector
5	Overcoming the Issues

Why inter-dependency of sectors is important in a regulatory regime

- Holistic approach for sustained growth is important
- Cooperation among regulatory bodies to ensure the overall growth of economy and consumer welfare

1

Regulated Market/Sectors

- Inter-sector coordination is vital else sector will suffer
- Pass-through of any deviations is critical

- Fuel/transportation cost deviation ~ pass-through FSA /True-up
- Interest rate/currency fluctuations ~ to be absorbed by developer
- Eg: Coal and Power

2

Market Driven

- Promotes competition and efficiency
- Benefit to end user

- Any uncertainties will be factored in the pricing of the commodity
- Eg: Steel , Cement and Fertilizer

Which sector has more inter-dependence on others?

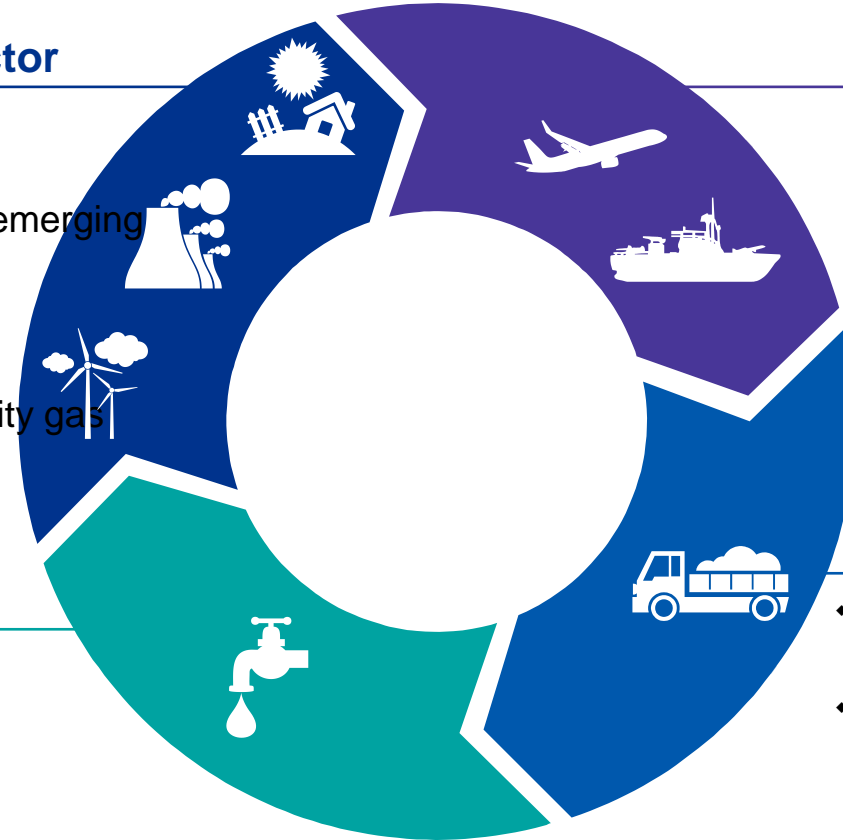
Sectoral issues/ brief update

Energy/ Power Sector

- ❖ Promoting better Renewable Grid integration
- ❖ Improving asset utilization through emerging technologies - Digital
- ❖ Faster response time for consumer complaints
- ❖ Operational challenges in running city gas distribution (CGD) networks

Water Resources

- ❖ Experience of regulation and tariff setting in water sector is yet to gain momentum
- ❖ Few states have Water Regulatory Commission e.g. - Maharashtra



Airports and Port Sectors

- ❖ Inadequate capacity in Runways and Aircraft handling
- ❖ Congestion in parking space and terminal buildings - Airports
- ❖ Draft constraints, Berth Productivity and Rail/Road connectivity.

Road Sector

- ❖ Land Acquisition, financing, Operation & Maintenance (O & M) and revival of old projects.
- ❖ 5.5 million km road network transports 64.5% or two thirds of all goods in the country and 90% of India's total passenger traffic uses this road network to commute.
- ❖ While, India's road network (including national highways etc) grew by just about a third in the last decade, vehicle registrations have increased by almost three times.
Leading to higher incidence of Road Congestion

Inter-dependency of sectors/Regulators

Pictorial representation of Inter-dependency

	Power	Finance/RBI	Railways	Oil & Gas	Ports	Coal
Power Sector		X	X	X	X	X
Finance/RBI	X	X	X	X	X	X
Railways	X	X			X	X
Oil and Gas	X	X			X	
Ports	X	X				X
Coal	X	X	X		X	

Given the high inter-dependency of power sector on other sectors, we will focus our session mainly on power sector as an example



Power sector as a Case Study

Power Sector Snapshot

Stranded capacity

1

2

Low Demand/Negative Demand Growth

Financial Losses in Discoms

3

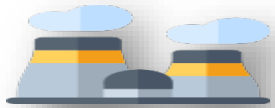
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Liquidation of companies

Prevailing Issues in Power Sector

1 Stranded capacity

24,405 MW
Commissioned capacity



(34)
No. of Stressed
thermal Projects
40,130 MW

(8)
projects resolved of capacity 8,820 MW

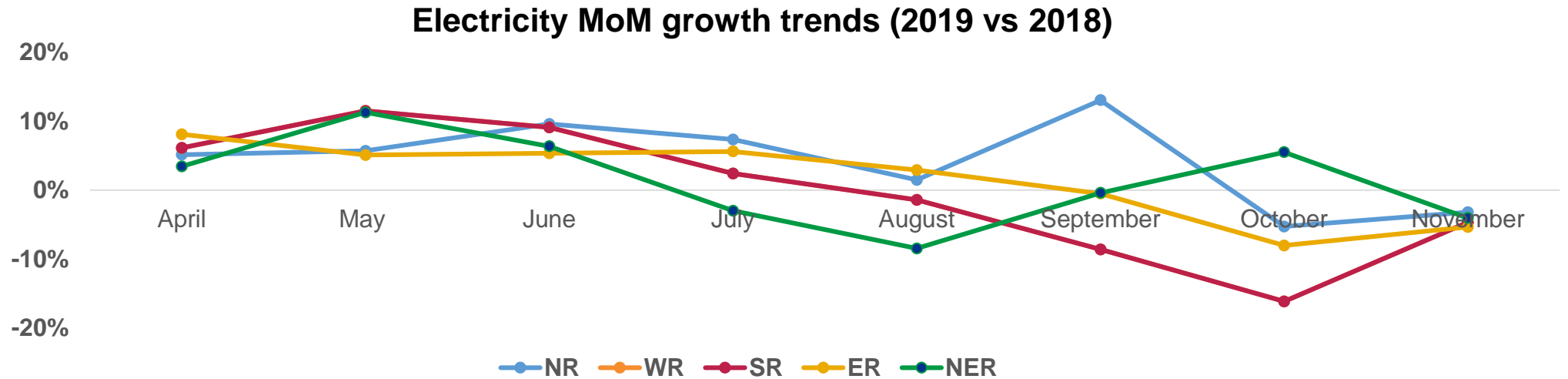
18,516 MW
PPA Tied up

1.74 lakh Cr
Total Outstanding Debt

Prevailing Issues in Power Sector

2

Demand growth

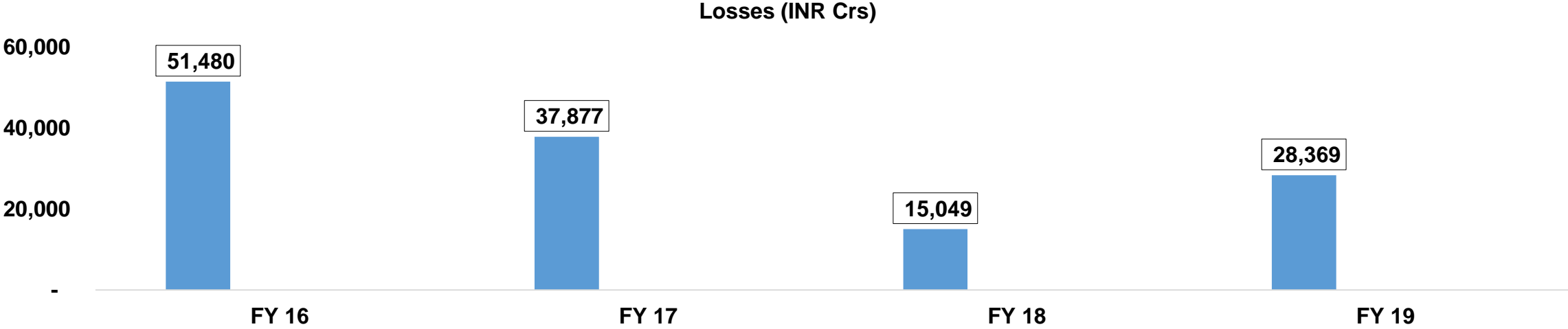


- Negative growth in demand for 4 consecutive months from Aug (wrto. to 2018)
- Overall demand fell by **13%** during October and **4%** during November (2019 vis-à-vis 2018)
- As per APPAI, the fall in demand is symptomatic of general economic slowdown
- However Gol quoted the fall in demand as an aberration as the overall demand is up by 2% as compared to previous year

Source:: Ministry of Power

Prevailing Issues in Power Sector

3 Annual Losses of Discoms



- The overall cumulative financial losses of Discoms is INR 1.32 Lac Crs

Source: Ministry of Power



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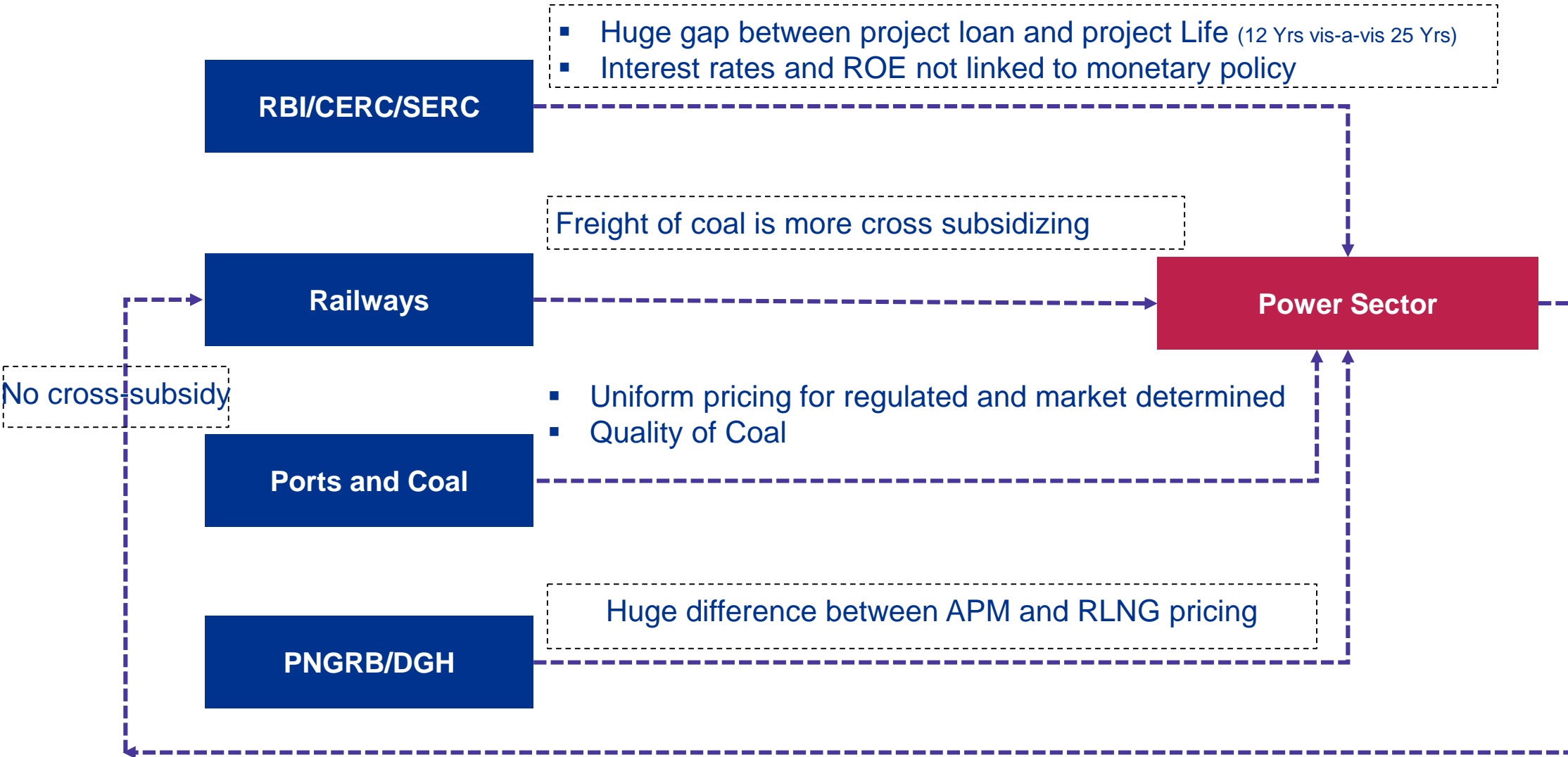
Prevailing Issues in Power Sector

4 Aggression in competitive bidding lead to liquidation of Projects

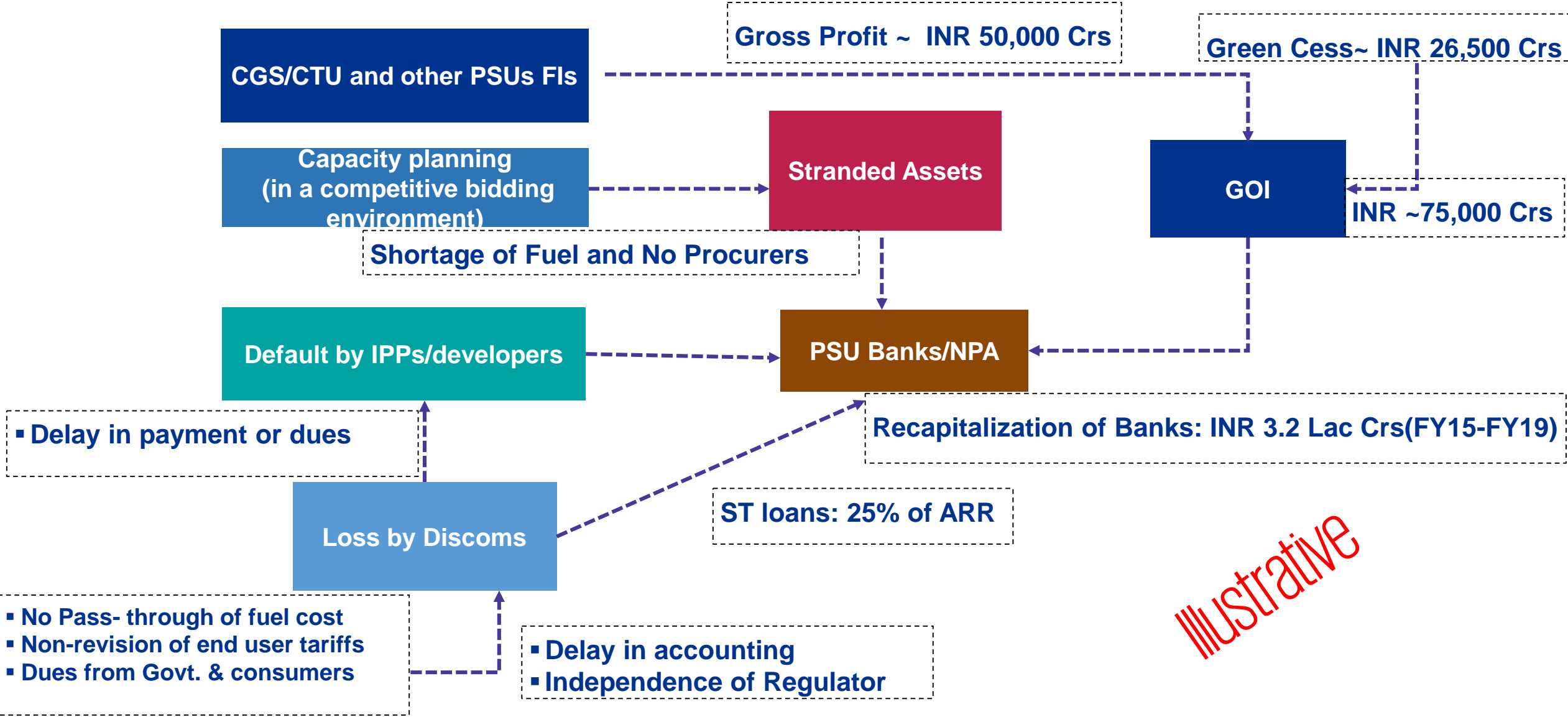
- Aggressive tariffs good for the consumers – ***Viability is an issue***
- ***Risk mitigation is very complex*** - Interest rate variation, Currency fluctuation, fuel security/ prices
- Lack of coordination in capacity planning – ***Untied capacity resulting to Stranded Assets***
- Aggression in competitive bidding resulted into NPAs and thereafter have been referred to NCLT for liquidation

Regulators / Policy makers should ensure balancing the interest of investors and end users

Interdependence of Power Sector



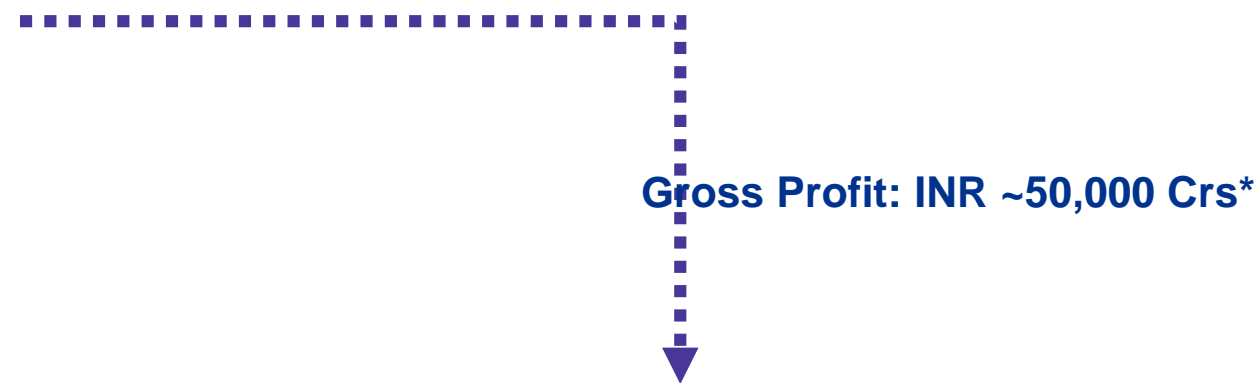
Market landscape of Power Sector - who is gaining / losing?



Illustrative

State Discoms continues to incur financial losses in spite of most of the PSUs in value chain making profits

		Gross Profit (INR Crs)
G	NTPC	12,672
T	PGCIL	9,018
	GAIL	9,125
L	PFC, REC	17,920
	Green Cess	25,000
		Accu. Losses (INR Crs)
D	All State Discoms	1.32 Lac ^{\$}



Wealth created by profitable PSUs in power sector is used for recapitalization of PSBs

- NPAs in Power Sector : ~ INR 1.8 Lac Crs
- Recapitalization of PSBs : INR 3.2 Lac Crs. (FY15 to FY19)

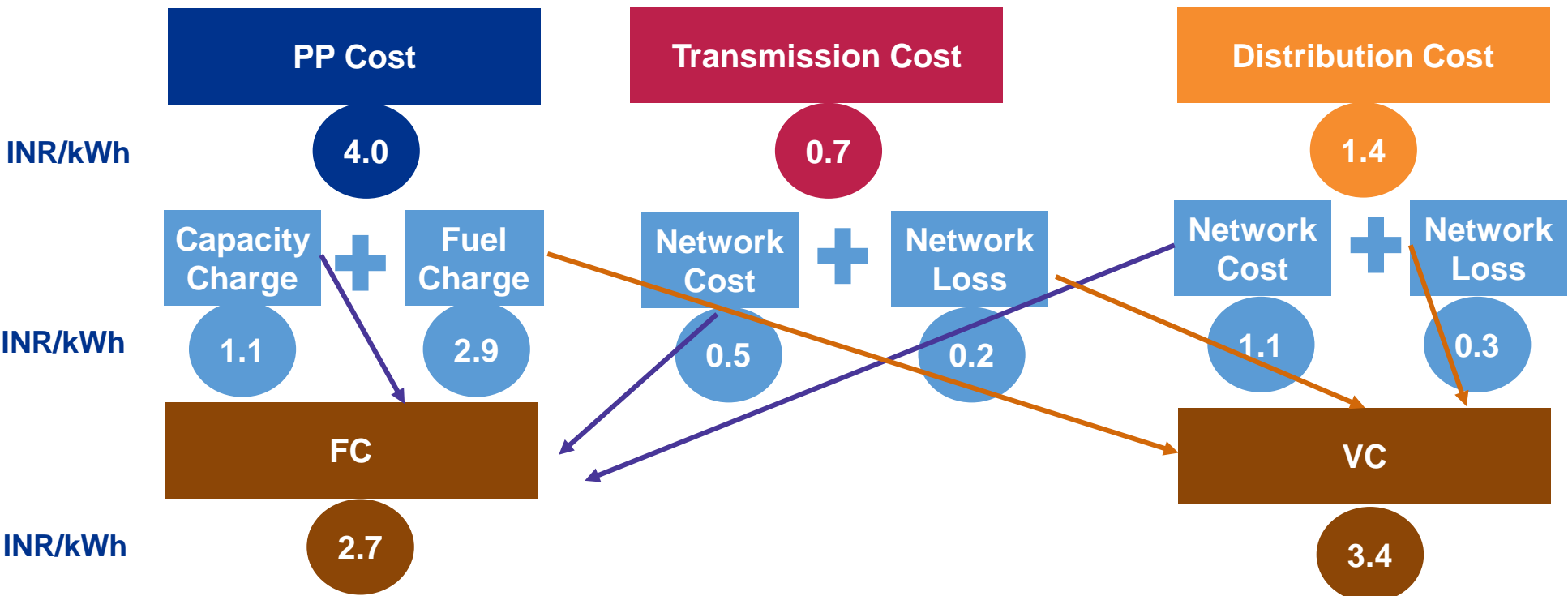
Illustrative

**In addition, cross subsidy levied by Railways is being born by Power Sector

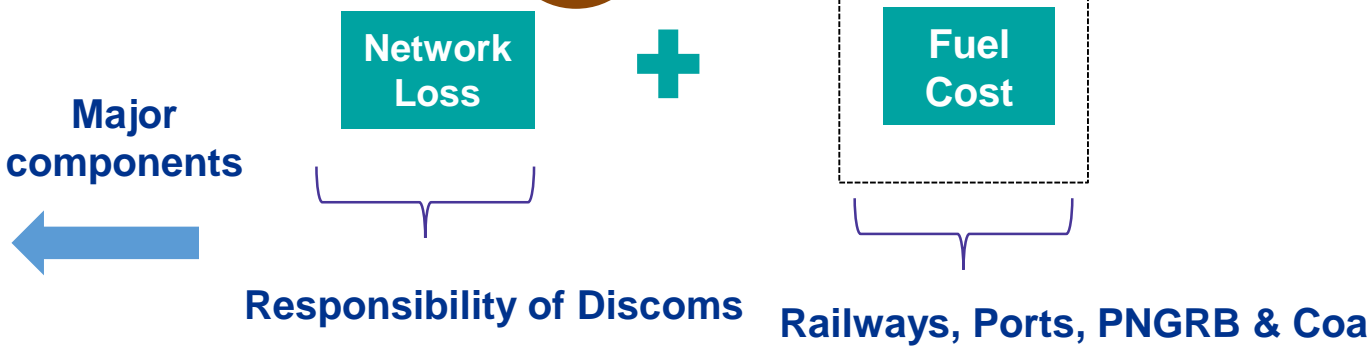
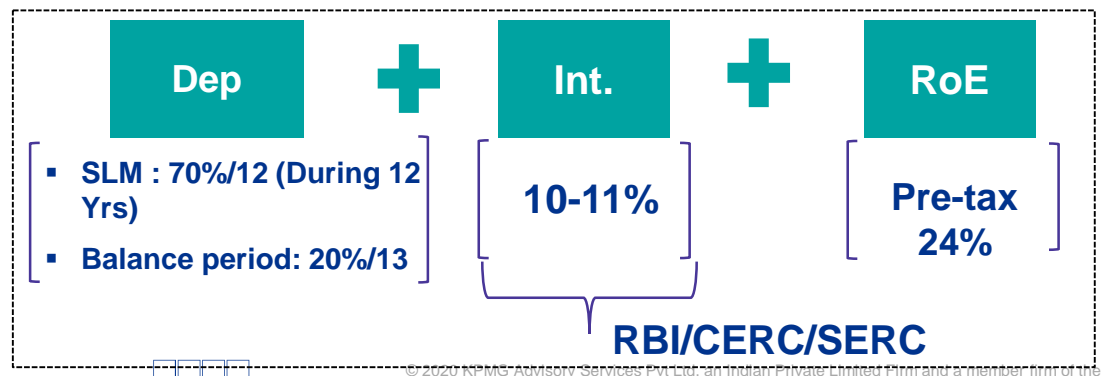
*Including coal cess; T: Transmission & Transportation; L: Lenders; \$: During FY 15-FY19;



Cost to Service breakup



Illustrative



How do we overcome this problem ??

Overcoming the Issues & Challenges in Power Sector

1

Reduction of Financial Losses of Discoms

- **Timely tariff hike to reflect the actual costs**
- **Reducing the cost of supply**

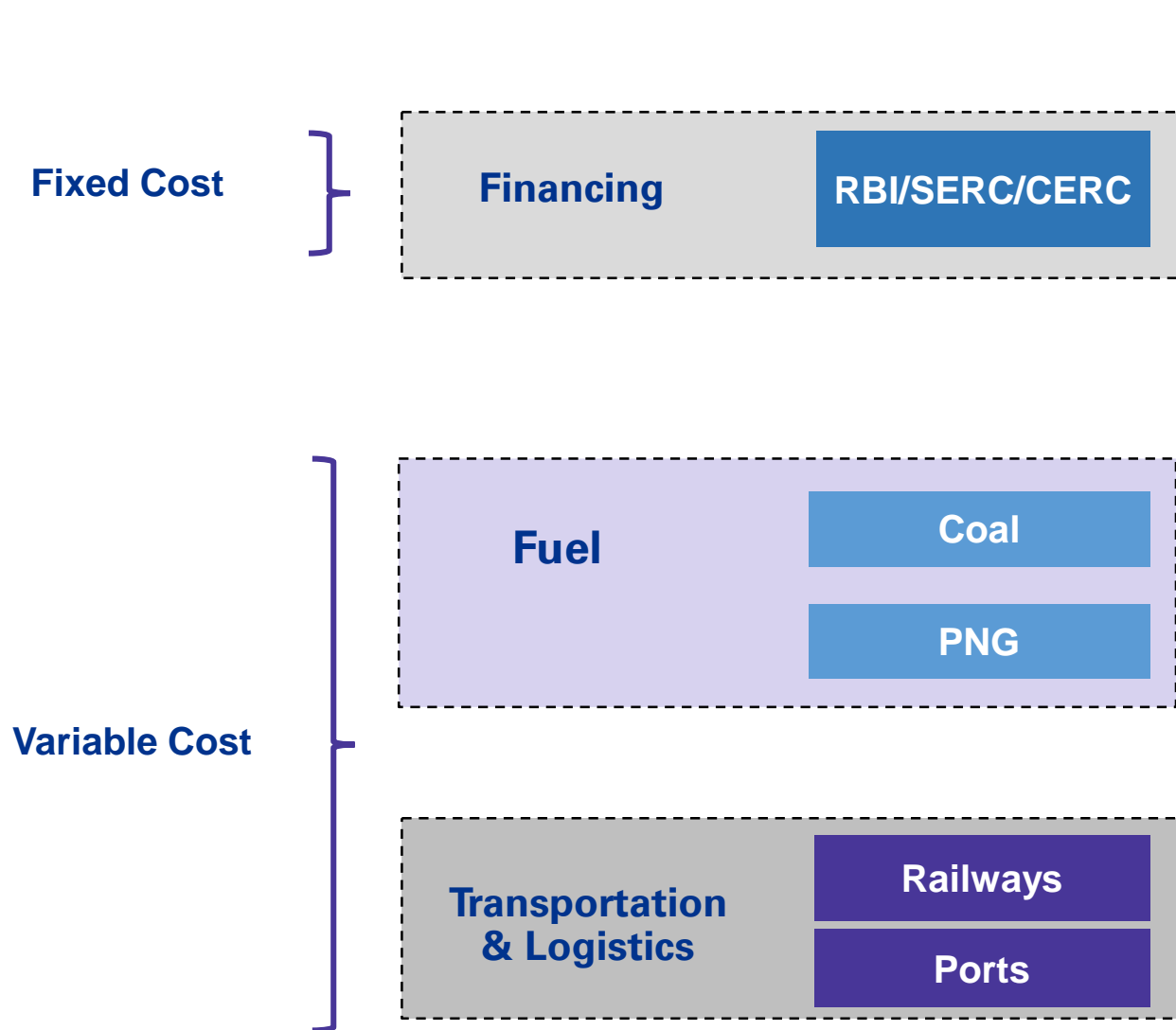
- Utilities shall adopt revenue enhancement and cost reductions measures to improve overall performance

2

Reviving Stranded gas power projects

- **Reviving the gas based generation by blending with RE to provide RTC supplies @ PLF of 65%**

Reducing cost of supply



Possible options

- 1 Repo rate linked interest rates and RoE
- 2 Bridging gap between long term loans & life of project
- 3 New financing instruments – leading to overall reduction in cost of capital – Inv IT
- 4 Mandatory revision of tariffs linked to inflation (at least 50%)
- 5 Blending of domestic coal/ Gas with imported incase of shortages
- 6 Fuel cost pass through subject to SERC approval only
- 7 Accountability by third party sampling of coal
- 8 Railways subsidy element to be zeroed down
- 9 Differential tariff for regulated and non-regulated sectors

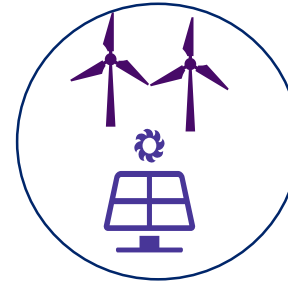
Reviving stranded gas power projects

Hybridization of gas based projects with RE – Targeted PLF @ 65%

Expected Blended Tariff



INR
5.26/kWh



INR
2.80/kWh

INR 4.51/kWh

Expected PLF: 43-45% (R-LNG:25%, APM:75%)

Expected CUF :20- 22%

Illustrative

Possible solutions for operationalizing the stranded gas assets

- Allocation of APM Gas to stranded gas plants on a higher priority basis and landed price of fuel @ ~USD 6/MMBTU (Blended)
- Exemption of custom duty, sales tax, pipeline tariff and GST on pipeline tariff to make the cost of power from gas plants reasonably attractive
- Avoids future investments in conventional thermal sector thereby creating additional demand in RE sector till the improvement in domestic gas supplies
- **Operationalizing stranded gas assets needs coordinated efforts from regulators of power, gas, finance and Central and State Govts.**

Thank You

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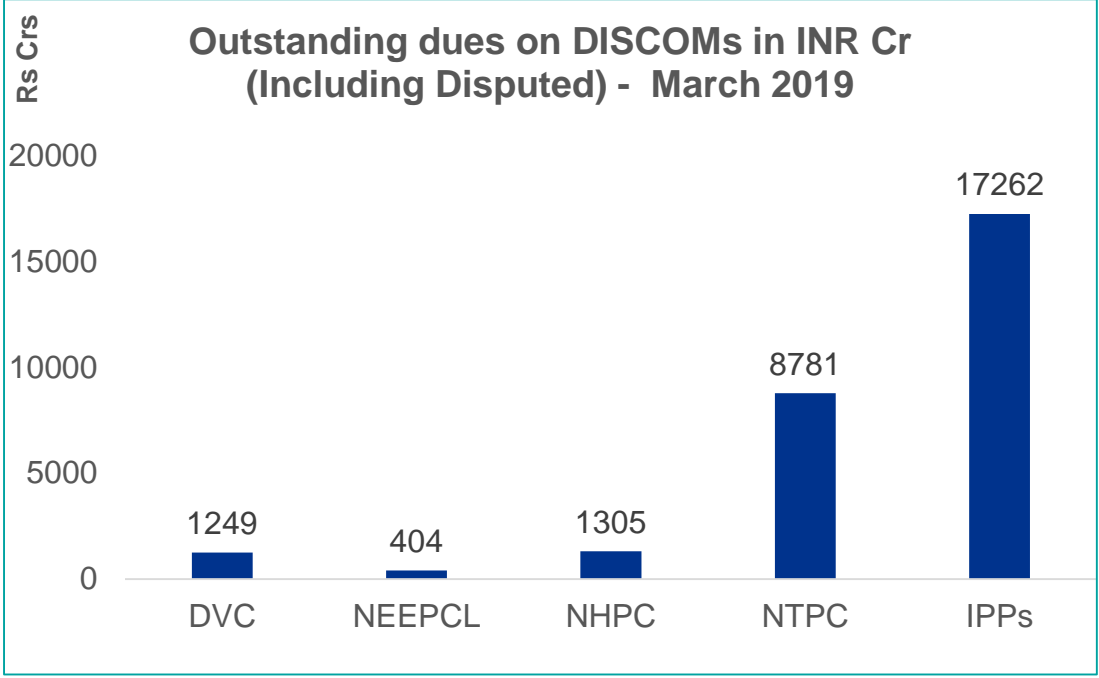
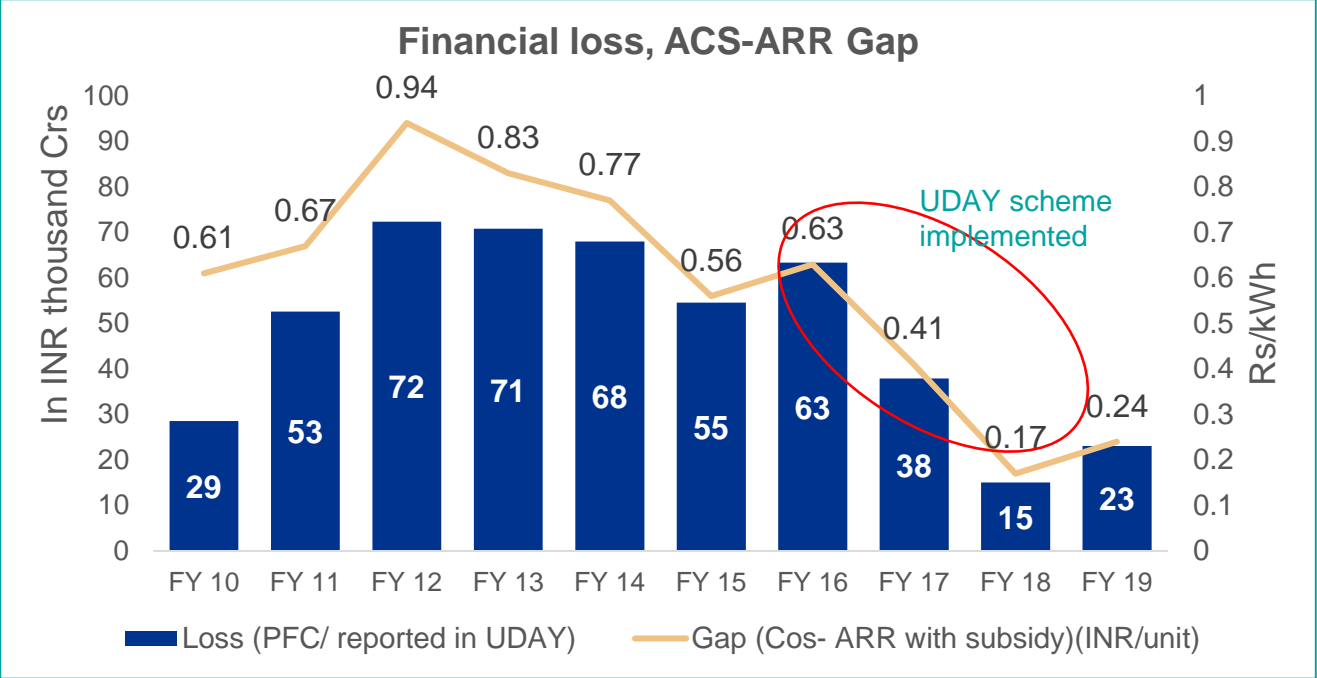
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Annexures

However the financial performance of distribution utilities continues to be a key concern which will have an adverse impact on the entire value chain



Source: PFC reports, UDAY portal

March 2019, Source: PRAAPTI – the data is for participating GENCO’s only

- **Accumulated losses** of DISCOM have cast a doubt on the their financial viability going forward
- Tariff hike are not reflective of input cost increases and in some cases are not done at all
- Operational improvements possible however structural solutions will also be needed to ensure benefits are sustained in the long run

- The high payables are due to
 - **Under Recovery** of cost through tariff’s
 - **Non-payment of dues** by Government agencies
- Total Payable days on average are at 90 days
- For some states and generators it has reached 9 months
- Payable are especially high for **IPP’s which might result in increase of NPA’s**

The no. of stressed projects in power sector is already high and is expected to increase further if the financial position of DISCOMs is not improved

24,405 MW
Commissioned capacity



34

No. of Stressed thermal Projects
40,130 MW

18,516 MW
PPA Tied up

1.74 lakh Cr
Total Outstanding Debt

8
projects resolved of capacity 8,820 MW

Items	Jun - 2017		
	Gross Loans and Advances (INR Cr)	GNPAs at the end of the period (INR Cr)	Restructured Std. Advances (INR Cr)
Electricity (Generation)	482,965	34,244	55,557
Electricity (Transmission)	24,299	2,617	433
Electricity (Distribution)	51,761	1,080	4,868
Total	559,025	37,941	60,858

Major Issues

- **Coal Supply**
Projects with no coal linkages from CIL were drastically impacted by cancellation of 204 coal mines by Hon'ble Supreme court
- **Delay in Payments from DISCOMS**
- **Slow growth in power demand**
- **Delay in implementation of project**

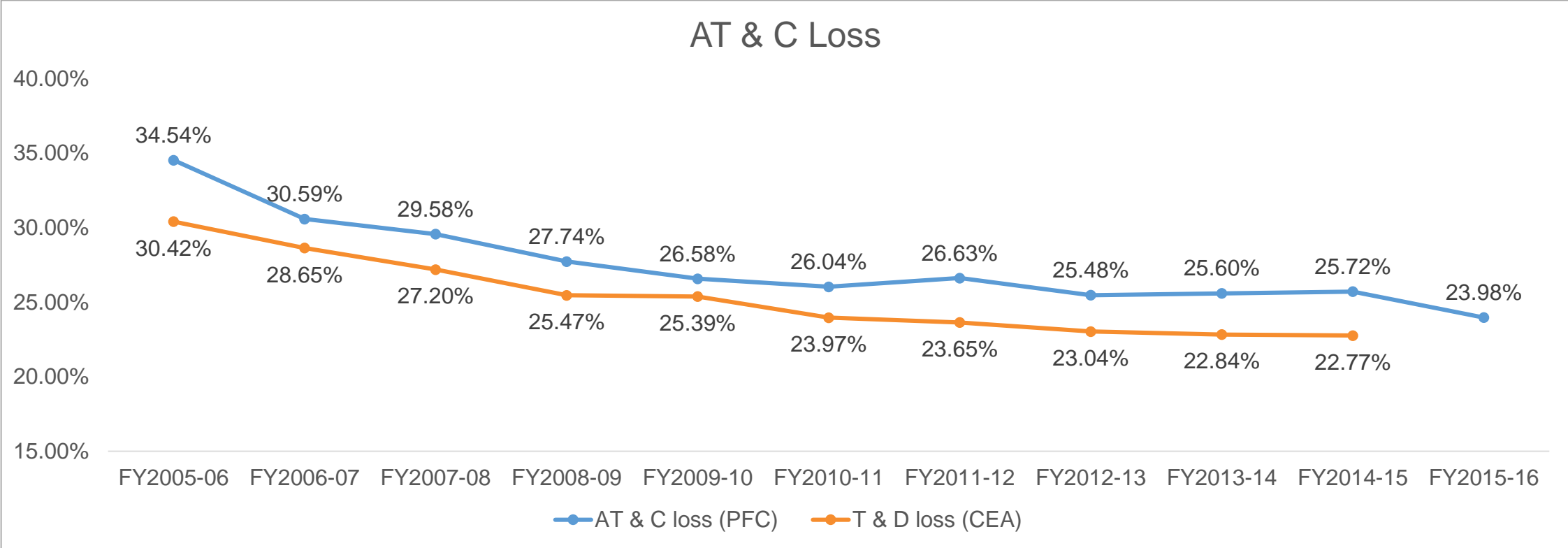
Source: http://164.100.47.193/lssccommittee/Energy/16_Energy_37.pdf, Ministry of Power



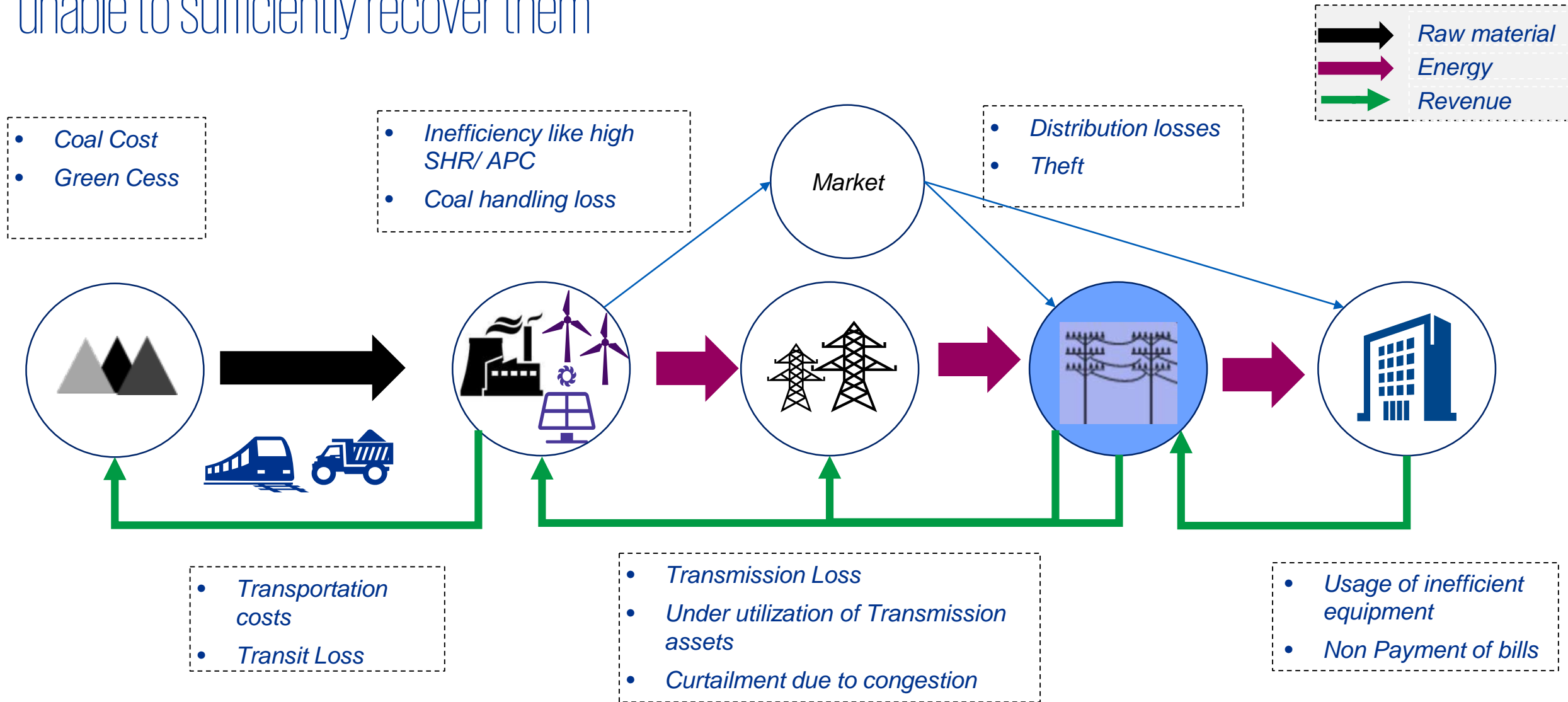
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Although Transmission and Distribution losses have been consistently decreasing there is still need for improvement

Issues
Lower investments in transmission and distribution business
Reduce losses and “unsold electricity” due to transmission congestions



A numbers of costs in the value chain are directly passed on to the DISCOMs which are unable to sufficiently recover them

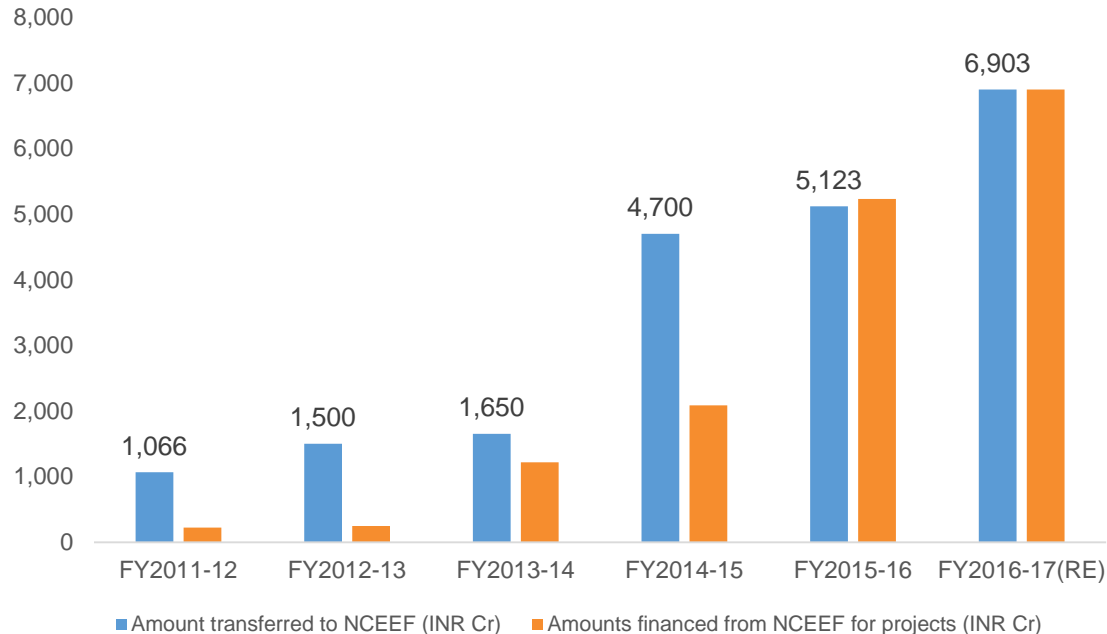


Clean Energy Cess adds to the financial burden of the DISCOM

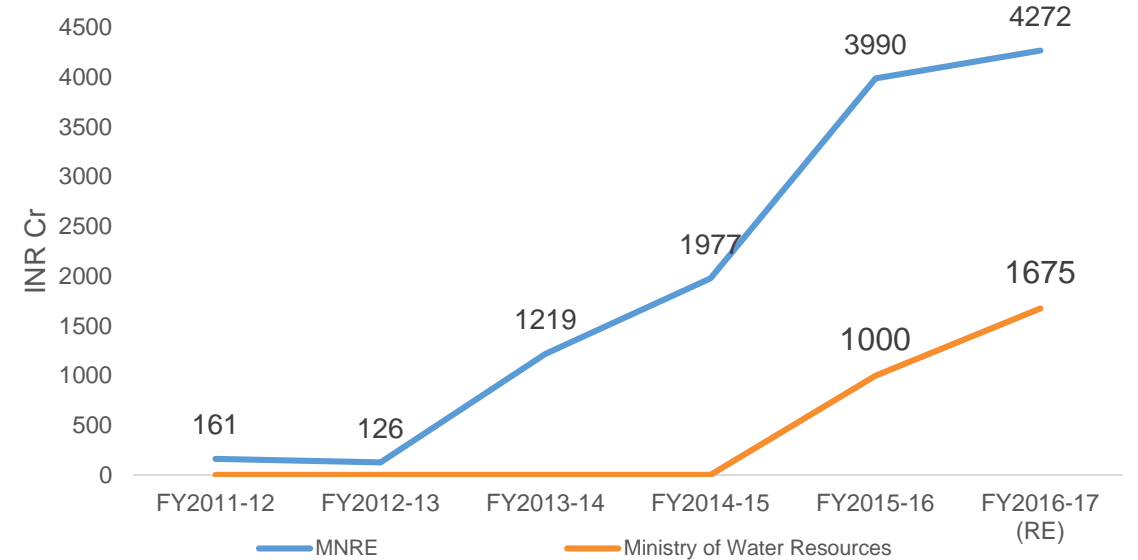
- Clean Energy Cess is a kind of carbon tax and is levied as a duty of Excise on **Coal**, in order to finance and promote clean environment initiatives, funding research in the area of clean environment
- In 2017, coal cess was constituted in **GST Compensation Fund aimed at compensating the states for 5 years** on the potential losses incurred on account of GST.

Year	Clean Energy Cess (INR/ton)
FY2010	50
FY2014	100
FY2015	200
FY2016	400

Details of Fund Position in NCEEF



Ministry wise NCEEF Fund allocation



Coal freight is higher compared to the average freight tariff

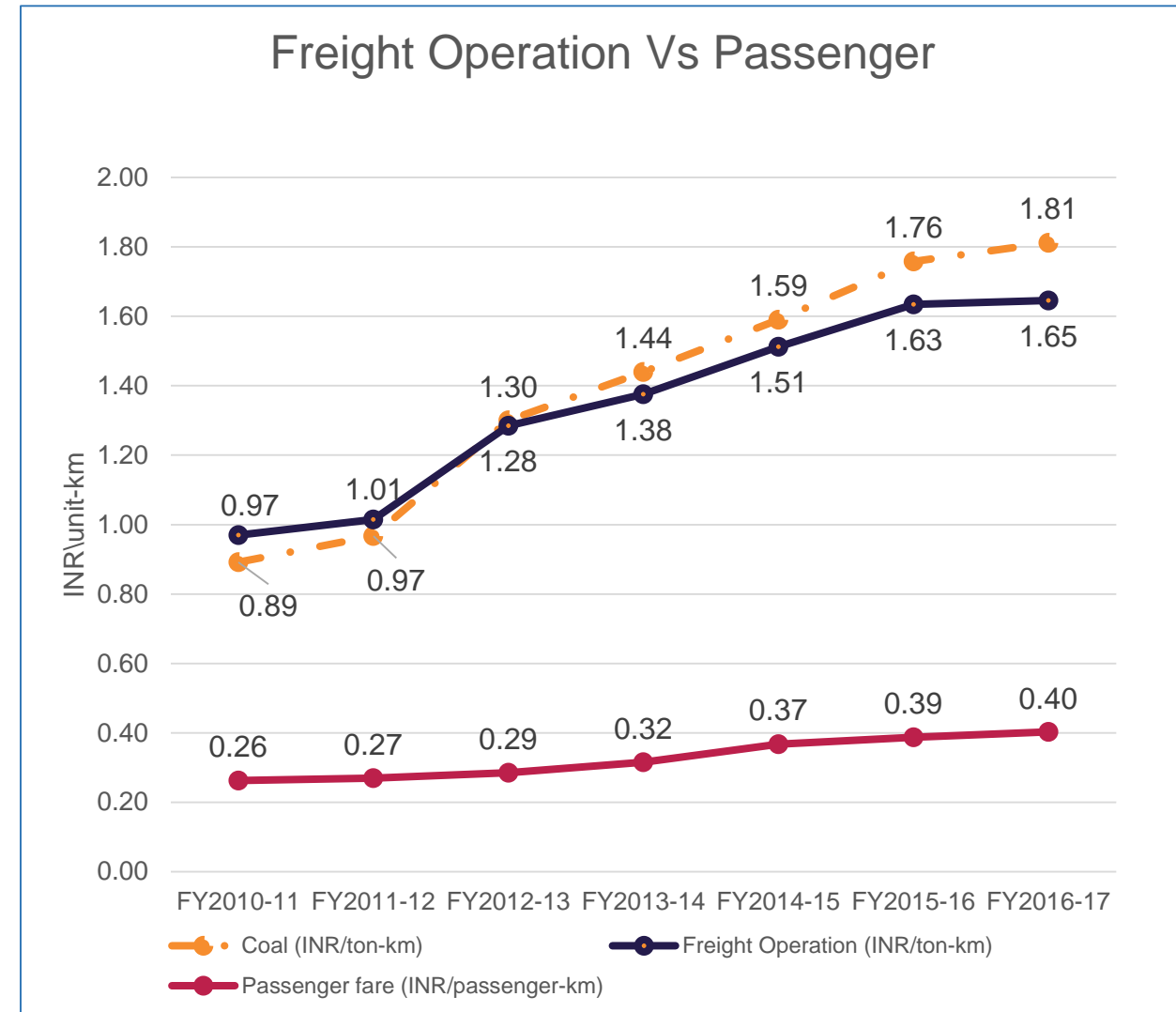
- 78% of coal mine reserves concentrated in Odisha, Jharkhand, West Bengal, Chhattisgarh
- Only 13% of thermal plants are in eastern states while others spread across India, Led to **high dependency on railways for coal transportation**

Inadequate Infrastructure

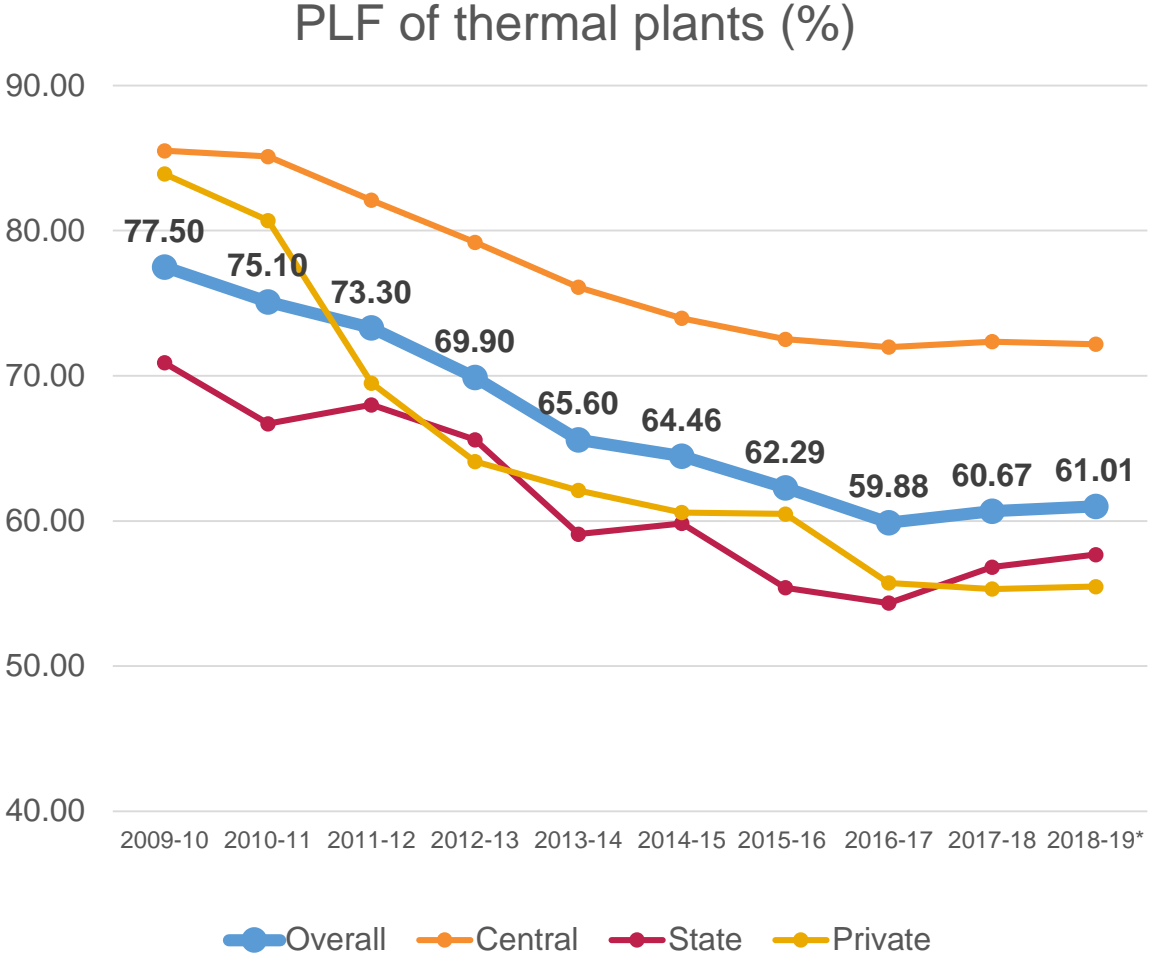
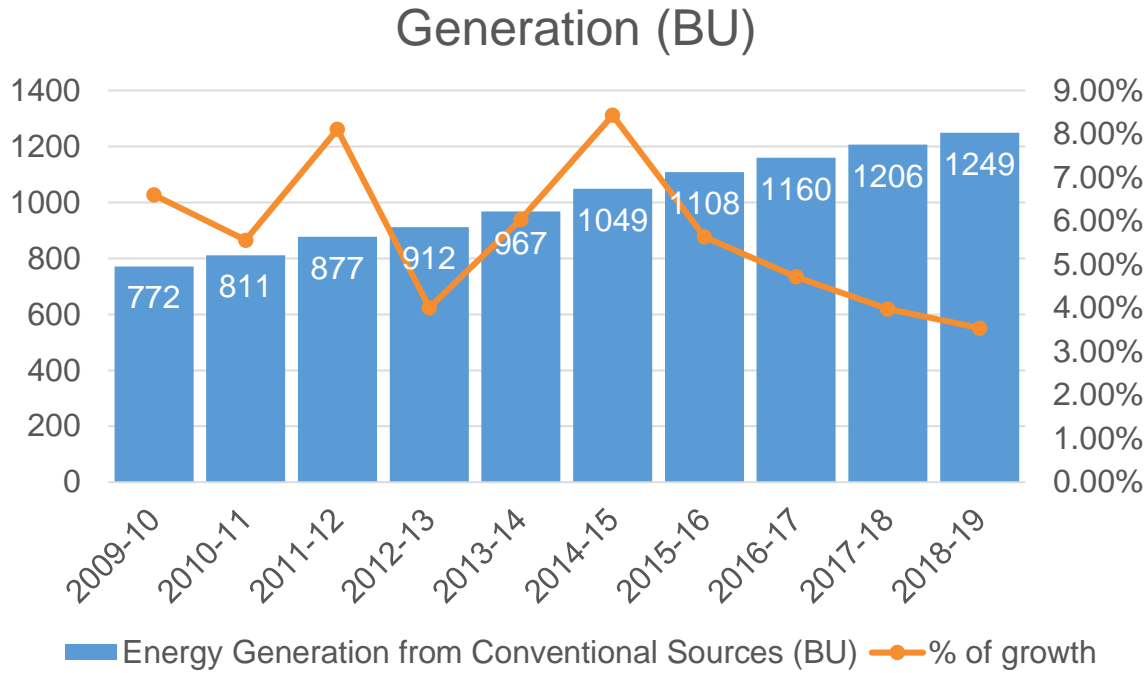
- Delay in transportation leads to coal shortages in power plants
- Average speed of freight trains ~ 25kmph, while average speed of passenger trains is ~ 45kmph

Higher fare for freight business

- Passenger fares are highly subsidized at the cost of Freight business.
- Freight operation fare is **3 times** (INR/ton-km) higher than that of passenger fare (INR/passenger-km)
- Within freight business, **Coal transportation is costlier**



Falling PLF's of thermal plants have increased the per-unit cost of power

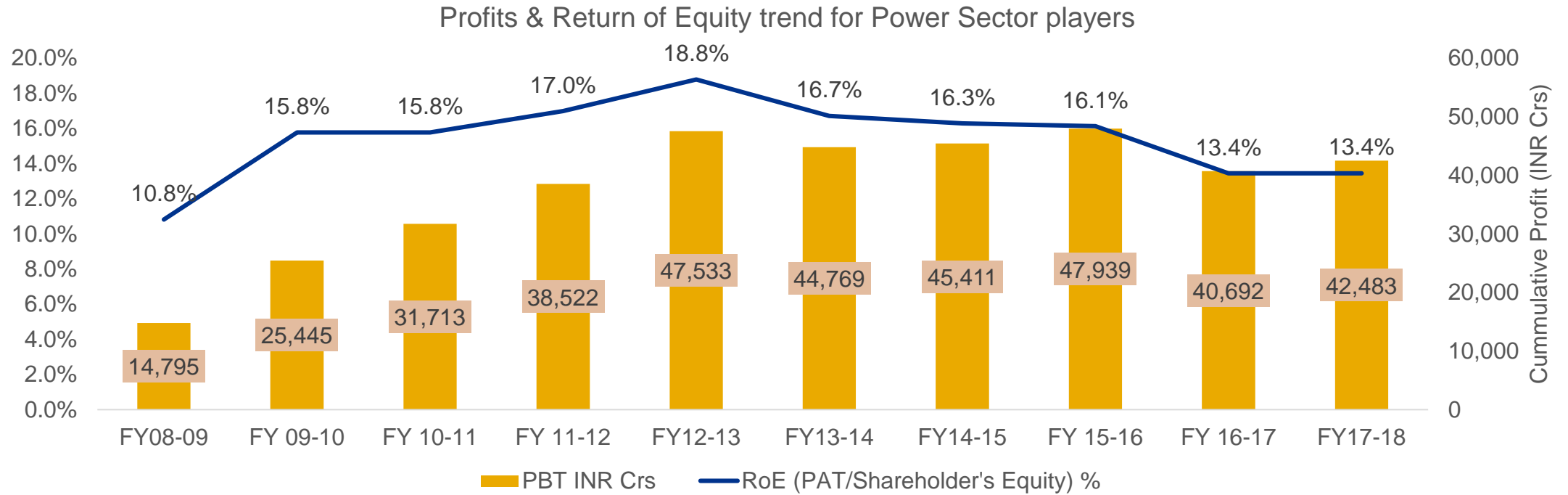


Improve Fuel Efficiency
Revival of distress assets
Optimal utilization of thermal power plants
 - Declining PLF over a period of time

* Source : CEA



Almost all players in the power sector value chain have had consistent return over the last 10 years



Cumulative profits of NTPC, PGCIL, REC, CIL, PFC, NHPC, NPCIL,

Source : Capitaline



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