

### **Open Access, Electricity Trading and Power Markets in India**



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Challenges



All India	Coal	Gas	Die	sel	Nuclear	Hydro	Rene	wable	Total
Jul-16	186,293	24,644	91	19	5,780	42,888	44	,237	304,761
RE	Small HE	EP Wi	nd	d Bio Mass		Waste to Energy		Solar	Total
Jul-16	4,304	4,304 27,1		51 4,860		122		7,805	44,244



## **Power Supply Position**



- The Average PLF fell marginally from 64.26% to 62.19% from FY15 to FY16, largely on account of increase in capacity and continued structural problems of the sector
  - Weak Industrial demand
  - Stressed Financial situation of Discoms.
- Inability of the sector to identify, crystalize and address the latent demand which is estimated to be 6-8% of the total energy requirement.
- Government has come up with the UDAY Scheme for revival of Discoms. We can look at the impact and assessment of the major aspects of the scheme:
  - **Debt Restructuring:** So far States have raised about Rs.1 trillion through UDAY bonds till 31 March 2016. This will result in reduction of financing cost for the Discoms and consequent fall in average cost of supply
  - AT & C Losses: There has not been any substantial improvement in reduction of AT&C losses, hence its impact as envisaged in the UDAY Scheme is yet to be observed
  - **Cost Reflective Tariffs:** This is also an area of concern as Discoms are still delaying the filing of the ARRs. This year, 28 out of 40 utilities have not filed for tariff revisions with the regulators

# **Evolution of Power Market**



#### Prior to Power Market

- Monopoly Suppliers (SEBs, Private Licensees);
- Allocation of power from Central/ Jointly owned station
- Price setting by Central/ State Governments.
- Entire sector developed on fixed rate return;
- Power as a resource for earning revenue did not exist in this cost based regime

#### Need for Power Market

• Need for private investments:

Requirement of transparency, optimiza tion and attracting investments into the sector

- Need for efficiency: Optimization of geographically scattered demand and supply pockets of India
- Need for Trading Solutions:

Generators/Lenders were apprehensive about the payments from SEBs/ Discoms and market for power for merchant capacity

#### Introduction of Power Market

- A credible entity to take care of counterparty financial risk for supply of power to utilities.
- In 1999 PTC India Ltd started its business to position itself in this niche area.
- Different products based on type of consumers, tenor of demand has been launched to meet the sectoral demand.
- EA 2003 brought in suitable regulation for the development of this sector.

## **Power Market Intervention**



- Introduction of innovative products for customers' needs
- Offtake tenure in line with Credit visibility.
  A mix of Medium Term and Short Term products
- Transition from cost-based returns to market based returns & Cost reflective tariff
- Creating "value" for power market based price discovery of power
- Optimal utilization of generation capacity

# Power Market Intervention cont...







In spite of enabling provisions for Non Discriminatory open access in Electricity Act 2003, Sates are yet to bring in relevant provisions in their States or have not been implemented in true sense.

The table below depicts the status of open access in various States:

Sr. No.	Did Aroo	States covered under Did Area	Open Access Status		
	BIU Area	States covered under Bid Area	Sale	Purchase	
1	N1	Jammu and Kashmir			
		Himachal Pradesh			
		Chandigarh			
		Haryana			
2	N2	Uttar Pradesh			
		Uttaranchal			
		Rajasthan			
		Delhi			
3	N3	Punjab			
4	E1	West Bengal			
		Sikkim			
		Bihar			
		Jharkhand			
5	E2	Orissa			

Less than 50% States have implemented Open Access





- □ IPPs are contributing more capacity additions to the power generation than govt. sector.
- Various issues coming up in Long Term power tie-ups which are leading to disruption in the power availability
- □ Short term power is only a tool to bridge the temporary demand supply mismatch
- Medium Term power procurements (5-7 years) can provide a reliable solution to resolve the issues emanating at the same time making available reliable power for the foreseeable time
- Looking at the needs of the present era, we need to find framework to take care of business interactions of a shorter tenure PPAs and long tenure loans to make projects viable.



#### **Medium Term Agreements**

- Long Term Agreements for procurement of power are not picking up due to ٠ uncertainty of demand/supply and tariff projections
- Discoms are reluctant to commit to long term PPAs and in last two years ~6000 ٠ MW has been procured on long term
- Going forward, procurement of power by Discoms on Medium Term basis (3 to ٠ 5 years) may prove a balanced solution to various issues specially the matching of demand supply, tariff viability prediction and fluctuations in the short term market
- **Trading of Renewable Energy** 
  - So far, growth in RE was largely due to favorable State feed-in –tariff ٠
  - Now trading products need to be developed for growth of RE without FIT ٠ support. So we may need products for Inter-State transfer for Discoms and for **Open Access consumers**



- Segregation of Content and Carriage
  - Segregation of Carriage and Content leading to supply licensees shall bring in market intervention into the Distribution and Consumption sides and has potential to provide new growth momentum for the sector



- For Trading in Renewable Power:
  - Management of Renewable Energy: 175 GW out of 500 GW by 2022 (as per Gol plan) i.e. 35% generation capacity (from RE Power) contributing around 10% of total energy requirement and how to manage its consequential impact on power sector. (scheduling, settlement of energy, and finally economic limitation)
  - Adequate Transmission Capacity In addition to the resources required to create capacity, time required for creating a transmission lines is many times higher than time line to create RE capacity.
- For Medium Term PPA:
  - Financing institutions may not like to remain exposed without suitable tie up of power Off- Take, as their loans are long tenor and PPA tenures are relatively short.
  - Govt. also finds difficult in allocating coals for medium term PPA.

Policy Makers need to formulate for a medium term policy where all the resources has repricing clauses to factor in changing macro economic environment



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