MINUTES OF THE TWENTY FIFTH MEETING

OF

FORUM OF REGULATORS (FOR)

Venue : "SAFFRON-III" Hall
The Claridges, Surajkund, Delhi-NCR
Shooting Range Road
Faridabad

Date : 29th July, 2011

The meeting was chaired by Dr. Pramod Deo, Chairperson, CERC/FOR. The list of participants is at **Annexure-I**.

Confirmation of the minutes of the 24th Meeting of FOR held on 16th June, 2011 at New Delhi.

Shri Rajiv Bansal, Secretary, CERC/FOR briefed the Members about the action taken on the decisions of the last meeting. The Members desired to know the status of projects selected under the National Solar Mission (NSM). It was agreed that the updated status of projects under NSM would be presented in the next "FOR" meeting. After discussion, the minutes were confirmed.

Average Pooled Power Purchase Cost (APPPC) in the context of REC.

Shri Sushanta K. Chatterjee, Deputy Chief (RA) made a presentation **(copy enclosed at Annexure – II)** highlighting the issues around APPPC in the context of REC. He highlighted that the Floor price and Forbearance price for REC are determined by Central Electricity Regulatory Commission (CERC) with reference to the APPPC of various States. The cash flow for the developers under the REC Scheme thus depends on the REC price discovered in the Power Exchange and the APPPC rate allowed to them by the local DISCOM in a State. In the event of their being allowed APPPC rate lower than what has been taken by CERC for determination of REC price band, there could be a viability gap for the REC developers, especially in cases where the price discovered in the Power Exchange is close to Floor price. After discussion, there was a general consensus on the following :-

- For the sake of regulatory certainty, there is a need for uniformity in approach to treatment of APPPC. The definition of APPPC as agreed earlier by the Forum and consequently as provided in the CERC Regulation may be adopted uniformly across States.
- The developers should be allowed APPPC as determined by the State Commission in its Tariff Order. CERC may consider amending the provision in its REC Regulations and substitute expression "not exceeding APPPC" by the expression "at APPPC".
- There should be a longer term visibility for APPPC and suitable escalation should be allowed to take care of likely increase in the APPPC in future.

Interaction with Secretary, Ministry of Power.

Dr. Pramode Deo, Chairperson, CERC/FOR welcomed Shri P. Uma Shankar, Secretary, Ministry of Power. He said that interaction between the Government and the Regulators at regular intervals is essential in the larger interest of the development of the power sector. The Government and the Regulators are co-partners in the process of reforms. It is, therefore, essential that they act in harmony for the betterment of the sector.

Shri P. Uma Shankar expressed his gratitude for inviting him for interaction with the Regulators. He recounted the objective behind creation of the institution of independent Electricity Regulatory Commission and also emphasized that enormous responsibilities have been bestowed on the Regulators for furtherance of reforms in the electricity sector. Distribution sector and revenue generated by this sector sustain the other segments in the chain, namely, transmission and generation. Secretary (Power) stated that the state of affairs of this vital distribution sector is not satisfactory. Viability of the distribution companies is at stake. The general perception is that the costs incurred by the distribution utilities are not being allowed. Stakeholders have a feeling that tariff determination process has not yet been immune of political interference and the objective of creating the regulatory institution for fixation of tariff without external influences, has perhaps not been achieved so far. Shunglu Committee is considering the issues at stake around financial health of the distribution companies and has underscored in its preliminary report inter alia the urgent need for corrective actions to arrest the downturn of the power sector in particular and avoid disastrous consequences for the financial sector in general. The Committee has also felt the need for evaluation of the performance of the Regulators. Shri Uma Shankar said that he would like to use this opportunity to urge upon the Regulators to appreciate the constraints facing the sector and take effective steps in discharge of their statutory responsibilities without fear and external pressure. He also mentioned that the Ministry of Power has done an exercise to compile the status of financial health of the power sector, which he would like his Joint Secretary (Shri Devender Singh) to present before the Forum.

Shri Devender Singh, Joint Secretary, Ministry of Power then made a presentation highlighting the status of Distribution Sector Performance. He informed that cumulative losses as per the Balance Sheet of the DISCOM upto 2008-09 stand at Rs.75,000 crores and is expected to grow to a level of Rs.1,15,000 crores in 2014-15 based on current tariff and without subsidy. Gap between the Average Cost of Supply (ACS) and Average Revenue Realized (ARR) was 50 paise during 2008-09 as per the PFC Report. Level of Cross Subsidy across different consumer categories is also at an unsustainable level. A copy of the presentation made by Shri Devender Singh is **enclosed (Annexure – III).**

Shri Devender Singh also informed that the Ministry had compiled financial statistics of 15 top power consuming States which constitute about 90% of the total consumption in the country. He highlighted the key performance indicators and drew attention of the Members towards inferences based on the analysis of the data. While there are some good performing States like Maharashtra, Gujarat and West Bengal, there are others where the situation is grim. For instance, the gap between the ACS and ARR is abnormally high, increase in power purchase cost is higher than increase in tariff, increase in outstanding loan is higher than increase in gross fixed assets which indicates a possibility that loans have been used to fund revenue deficit rather than for creating an asset. AT&C losses have increased to unsustainable level in some States like Tamil Nadu, Rajasthan, Madhya Pradesh etc. The networth of the DISCOM in most cases is negative. A copy of the presentation made by Shri Devender Singh in this context is **enclosed (Annexure – IV).**

Chairperson, CERC/FOR requested the Members of the Forum to share their thoughts on the issues raised by the Ministry of Power. There was a detailed discussion on the issues raised. The following emerged after the discussion :-

- The statistics presented by the Ministry of power should be updated to reflect the current financial position of the State utilities.
- There is an urgent need for empowering the State Commissions to enforce their orders. The plight of the Regulators is that in the absence of deterrent powers on lines of powers of APTEL, they cannot take effective action against non-compliance of their orders, especially, in relation to non-payment of subsidy by State Government. They have powers under section 142 but its application has its own limitation.
- The Government of India should work on measures to enforce financial discipline in States. Financial liability of the Government owned Distribution Companies should be treated as deficit of the State for the purpose of enforcing fiscal discipline.
- Loss reduction should be the main focus of reforms and Government of India should impress upon the States to require their DISCOMs to invest in High Voltage Distribution System (HVDS) to control theft and pilferage.
- Segregation of agricultural feeder should be resorted to by all distribution utilities.
- Non-performance of the distribution companies should be dis-incentivized/penalized.
- RGGVY should be expanded to include electrification for the entire village. This is required to avoid theft of electricity by the households remaining un-electrified. Fund should be provided under RGGVY for separation of agricultural feeder.

- R-APDRP fund should be extended to the private utilities. There is no reason why consumers in the area of private distribution licensee should be deprived of the benefit of this Scheme.

<u>Consideration of the Model Tariff Regulations.</u>

Shri Sushanta K. Chatterjee recapitulated that earlier a study was conducted by the "FOR" for 10 States. The findings of the study were used as reference points for evolving Model Tariff Regulations. The Model Tariff Regulations seek to address the major issues that the earlier study has revealed.

The study of the 10 States highlighted inter alia the following major issues responsible for financial distress of the distribution companies :-

- Timeliness of tariff determination process.
- Disallowance of legitimate costs.
- Fuel Purchase Adjustment.
- Untreated gap/Regulatory Assets.

The Model Tariff Regulations address each of the above issues. The salient features of the Model Regulations include –

- A year long study for correct estimation of metered sales.
- A year long study (to be continued for 2 more years) for estimation of unmetered sales based on stratified random sampling method.
- Estimation of power purchase quantum based on the sales estimation done as above and after factoring in the T&D loss.

- Demand forecast based on the econometric model of moving average method and consequent long term/medium term planning for procurement of power to meet such demand.
- Regulation of short term power procurement and projection of short term procurement cost based on the weighted average price in the OTC market and Power Exchanges.
- Automatic pass through of incremental cost as a result of fuel price increase and increase in short term procurement over and above what has been approved, if such purchases are because of factors beyond the control of the DISCOM. Such pass through to be allowed on quarterly basis.
- Benchmarking of other cost components, namely, O&M, interest on Working Capital, interest on loan etc.
- Separate schedule of tariff with subsidy and without subsidy.
- Provision for allowance of carrying cost if regulatory assets are created.

A copy of the presentation made by Shri Chatterjee highlighting salient features of the Model Tariff Regulations as also observations on the comments received on the Model Regulations is **enclosed (<u>Annexure – V</u>)**. Some State Commissions had already given their written comments which were highlighted in the presentation. After discussion, the following were agreed :-

✓ Provision should be made to ensure monitoring of performance of the distribution companies and recovery of cost should be linked to such performance parameters.

✓ The Mode Tariff Regulations should provide details of evolving benchmark on important parameters like O&M costs.

- ✓ There should be a provision explaining the basis for segregation of wheeling and energy charges.
- ✓ In the context of the proposed study for estimation of metered and unmetered sales, the provision of inclusion of an officer of SERC should be omitted.

After discussions, the following decisions were taken :-

- o The Model Tariff Regulations were approved subject to incorporation of the changes as indicated in the preceded para and changes of consequential and editorial in nature as highlighted by SERCs in their written comments.
- o The Model Regulations be finalized after incorporating the above changes and seeking approval of Chairperson, FOR.
- o Ministry of Power may be requested to provide assistance for the proposed study for metered and unmetered sales estimation.

A vote of thanks was extended by Shri Rajiv Bansal, Secretary, CERC/FOR. He conveyed his sincere thanks to all the dignitaries present in the meeting. He also thanked the staff of "FOR" Secretariat for their arduous efforts at organizing the meeting.

The meeting ended with a vote of thanks to the Chair.

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/ ANNEXURE – I /

LIST OF PARTICIPANTS ATTENDED THE TWENTY FIFTH MEETING OF

FORUM OF REGULATORS (FOR)

HELD ON 29TH JULY, 2011

AT "SAFFRON-III" Hall, THE CLARIDGES, SURAJKUND, DELHI-NCR, SHOOTING RANGE ROAD, FARIDABAD (HARYANA).

S. No.	NAME	ERC
01.	Dr. Pramod Deo Chairperson	CERC – in Chair.
02.	Shri A. Raghotham Rao Chairperson	APERC
03.	Shri Digvijai Nath Chairperson	APSERC
04.	Shri Umesh Narayan Panjiar Chairperson	BERC
05.	Shri P.D. Sudhakar Chairperson	DERC
06.	Shri Bhaskar Chatterjee Chairperson	HERC
07.	Shri Subhash Chander Negi Chairperson	HPERC
08.	Shri S. Maria Desalphine Chairperson	J&KSERC
09.	Dr. V.K. Garg Chairperson	JERC for Goa & All UTs
10.	Shri Mukhtiar Singh Chairperson	JSERC
11.	Shri M.R. Sreenivasa Murthy Chairperson	KERC
12.	Shri K.J. Mathew Chairperson	KSERC
13.	Shri Rakesh Sahni Chairperson	MPERC

14.	Shri B.K. Das Chairperson	OERC
15.	Shri T.T. Dorji Chairperson	SSERC
16.	Shri Manoranjan Karmakar Chairperson	TERC
17.	Shri Rajesh Awasthi Chairperson	UPERC
18.	Shri Jag Mohan Lal Chairperson	UERC
19.	Shri B.K. Sharma Member	CSERC
20.	Shri Pravinbhai Patel Member	GERC
21.	Shri Hemam Bihari Singh Member	Joint ERC for Manipur & Mizoram
22.	Shri Gurinderjit Singh Member	PSERC
23.	Shri Rajiv Bansal Secretary	CERC/FOR
24.	Shri Sushanta K. Chatterjee Deputy Chief (RA)	CERC
25.	Ms. Neerja Verma Assistant Secretary	FOR
	SPECIAL INVITEES	
01.	Shri P. Uma Shankar Secretary	Ministry of Power
02.	Shri Devender Singh Joint Secretary	Ministry of Power
03.	Shri Sanjeev Kumar Director	Ministry of Power

Average Pooled Power Purchase Cost (APCC) in the context of REC

- The CERC REC Regulation states that an RE generator will be eligible if it sells the electricity generated either (i) to the distribution licensee of the area in which the eligible entity is located, **at a price not exceeding the pooled cost of power purchase of such distribution licensee,** or (ii) to any other licensee or to an open access consumer at a mutually agreed price, or through power exchange at market determined price.

APPC

- The term ‘Pooled Cost of Purchase’ is defined in the CERC REC Regulations as;

‘Pooled Cost of Purchase’ means the weighted average pooled price at which the distribution licensee has purchased the electricity including cost of self generation, if any, in the previous year from all the energy suppliers long-term and short-term, but excluding those based on renewable energy sources, as the case may be.

- Pooled Cost of Purchase across States is used for the determination of floor price and forbearance price for REC.

APPC (cont…)

- Regulation 9 (2) of the CERC REC Regulation specifies principles to be followed while determining the floor price and forbearance price inter- alia includes:

(a) Variation in cost of generation of different renewable energy technologies falling under solar and non-solar category, across States in the country:

(b) Variation in the Pooled Cost of Purchase across States in the country

******It is to be noted that CERC while determining floor price and forbearance price considered CERC determined RE Tariff for various technologies and Pooled Cost of Purchase across States.

APPC (cont…)

- REC Forbearance price:
  - RE Tariff – APPC
- Floor Price:
  - Viability cost – APPC.
- Generators cash flow/cost recovery
  - APPC+REC price discovered.

RE generator's source of Income

- An RE generator has two sources of income:

1) through sale of electricity component either to local utility at pooled cost of power purchase or to Open access consumer / exchange at mutually agreed / market determined rate, and
2) through sale of RECs the power exchange between floor and forbearance price.

- REC Mechanism is an alternative to preferential tariff mechanism for recovery of cost.

Trend in pooled cost of power across States

- States where APPC increased >15 paise/unit

		APPC (in Rs./ kWh)	
Sl.No.	**States**	**2009-10**	**2010-11**
1.	Gujarat	2.59	2.80
2.	Assam	2.05	2.40
3.	Haryana	2.42	2.60
4.	Uttar Pradesh	2.43	2.58
5.	West Bengal	2.20	2.34
6.	Kerala	2.16	2.30
7.	Jammu and Kashmir	2.45	2.62
8.	Delhi	2.38	2.62

Trend in pooled cost of power across States (cont…)

- States where APPC increased in the range of 4-6 paise/unit

		APPC (in Rs./ kWh)	
Sl.No.	**States**	**2009-10**	**2010-11**
1.	Orissa	1.97	2.03
2.	Karnataka	2.57	2.61
3.	Uttaranchal	2.28	2.31
4.	Maharashtra	2.50	2.56
5.	Punjab	2.64	2.69
6.	Chhatisgarh	---	1.62

Trend in pooled cost of power across States (cont...)

		APPC (in Rs./ kWh)		Remarks/Source
Sl.No.	**States**	**2009-10**	**2010-11**	
1.	Madhya Pradesh	1.81	1.74	APPC decreased
2.	Tamil Nadu	---	2.37	TNERC APPC Order: M.O. 4 /E/RPO:28/12/2010
3.	Bihar	---	2.32	Tariff Order: July 24, 2011
		2011-12		
4.	Rajasthan	2.60		Tariff Order
5.	Andhra	2.50		Petition filed by Utility
6.	Himachal	2.33		HPERC Order dated 14/6/2010

Rationale for APPC

- CERC uses APPC while determining the floor & forbearance prices.
  - Rationale for the price band – The REC price discovered in the PXs plus the APPC should enable the developer to recover its cost.

  - The viability will be ensured if an investor gets atleast the floor price and the APPC.

Rationale for APPC (cont…)

- **Need for uniform definition of APPC across country**
  - REC surplus States for wind energy in the country are primarily Gujarat, Rajasthan, Tamil Nadu and Karnataka.
  - TNERC, RERC and KERC have excluded the short term power purchase from traders and liquid fuel based power cost has been excluded while calculating the APPC.
  - Since REC framework is a national level mechanism, there should be consistency in approaches in determining the APPC.
  - There is also a need for clarity that electricity component shall be sold at APPC only.
  - The definition of APPC should be uniform for the country.

Rationale for APPC (cont…)

- **Need for notifying APPC of utilities by SERCs**
  - In many cases, the Discom dictates APPC at a level much below the actual APPC. Quite often this is not backed up by reasonable calculation. For example, Gujarat utility is signing PPA at fixed APPC of Rs. 2.60/kWh for 10 years.
  - Since the APPC is not declared as part of any Order/ ARR of the Discom, it is very difficult for any investor to make any financial decision and projection on the basis of APPC. This has prevented a significant amount of investment in the RE sector.

Rationale for APPC (cont…)

- **Need for standard PPA document for power purchase at APPC**
  - Most projects face several operational issues in adopting APPC based pricing.
  - PPA for electricity component can have a clause stating that the purchase price will change depending on APPC increase or decrease.
  - A draft model Power Purchase Agreement for RE Projects (on the pattern of Draft Model Regulations for SERCs for REC Framework by the Forum of Regulator) may be evolved for the sake of regulatory certainty for investment in the renewable sector.

Thank You

Welcome to Conference of Power Ministers

On

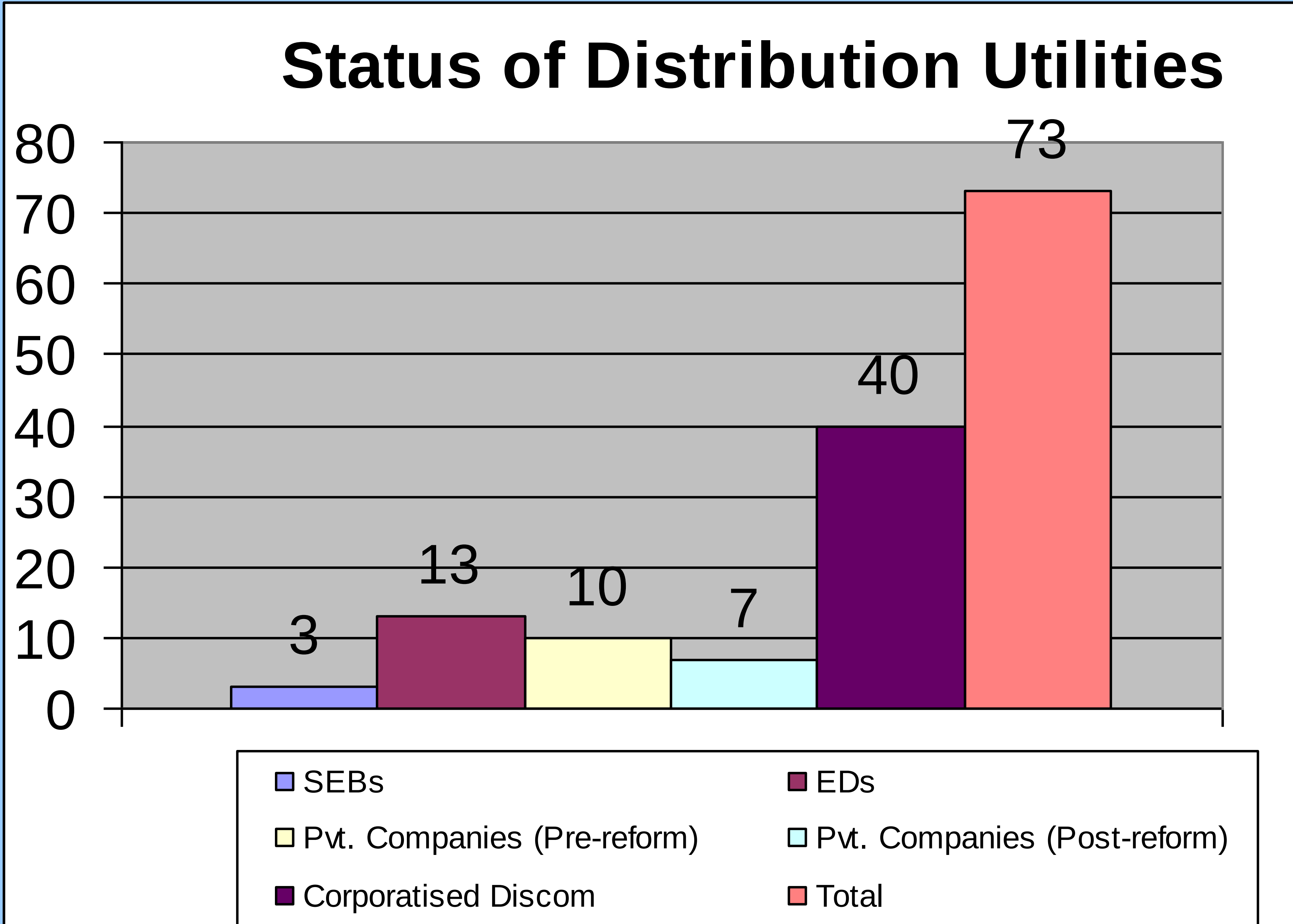
Distribution Reforms

Distribution Sector at a Glance

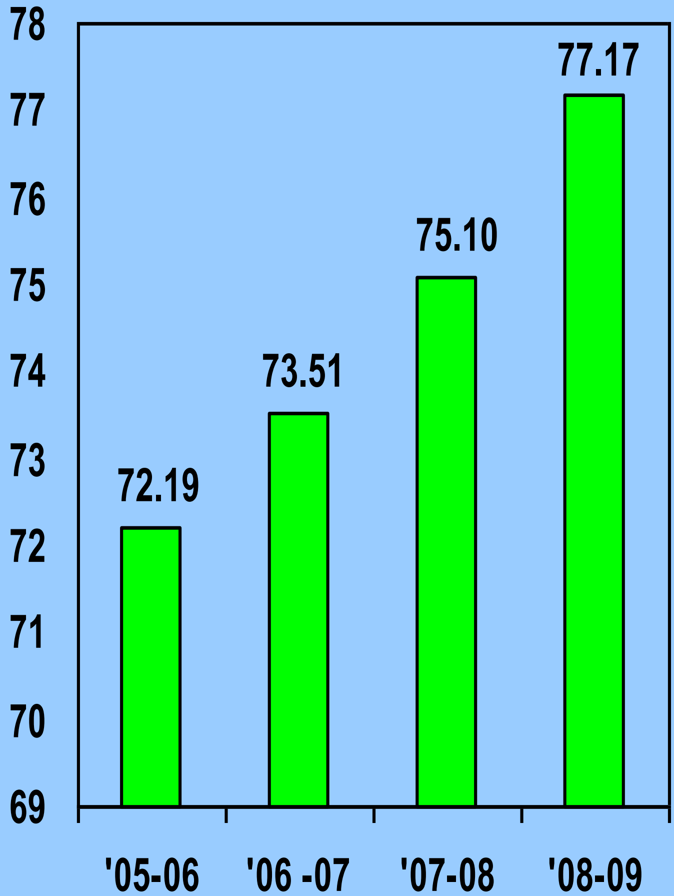
- Number of distribution utilities - 73
- 20 states have unbundled SEBs
- SEBs in Jharkhand, Kerala, Bihar
- ED in Arunachal Pradesh, J&K, Goa, Manipur, Mizoram, Nagaland, all six UTs and NDMC (Delhi) are yet to be unbundled

Distribution Sector at a Glance

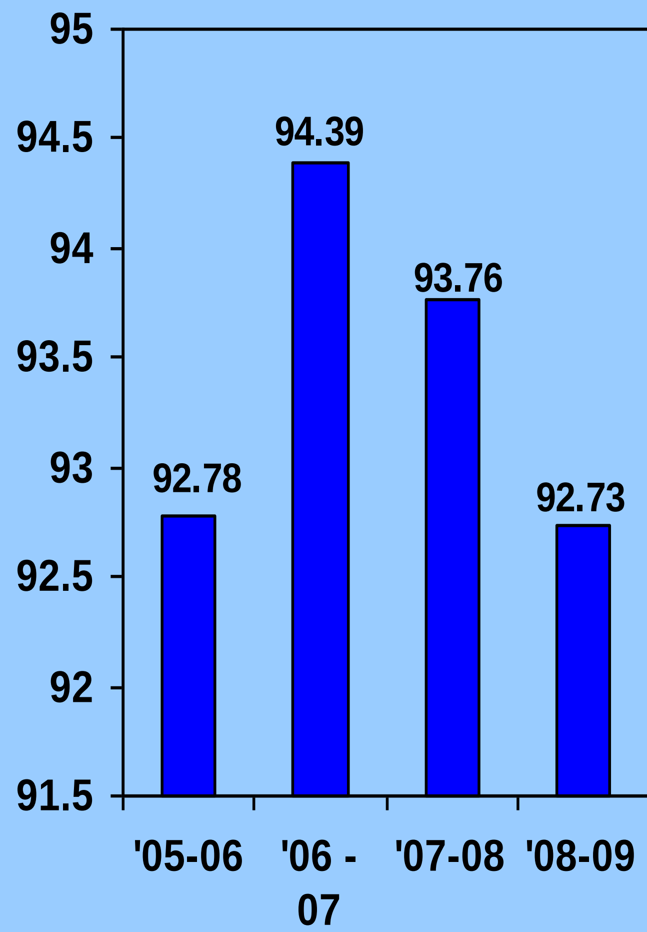
- Tariff notification by SERCs in 28 States
- Tariff orders not issued by Regulator in respect of Goa (JERC for Goa and UTs except Delhi came in to being in August, 2008).
- Tariff orders not issued since 2006 by SERCs of Tripura, Haryana and Nagaland and since 2005 in the case of Rajasthan.
- Special courts set up in 23 States except Bihar, Goa, Jharkhand, Kerala, Arunachal Pradesh and Mizoram.
- Special police stations set up in 11 states (AP, Delhi, Gujarat, Karnataka, MP, Maharashtra, Orissa, Rajasthan, WB, HP and Tripura.


Status of Distribution Utilities
80
70
60
50
40
30
20
10
0
3
13
10
7
40
73
SEBs
EDs
Pvt. Companies (Pre-reform)
Pvt. Companies (Post-reform)
Corporatised Discom
Total

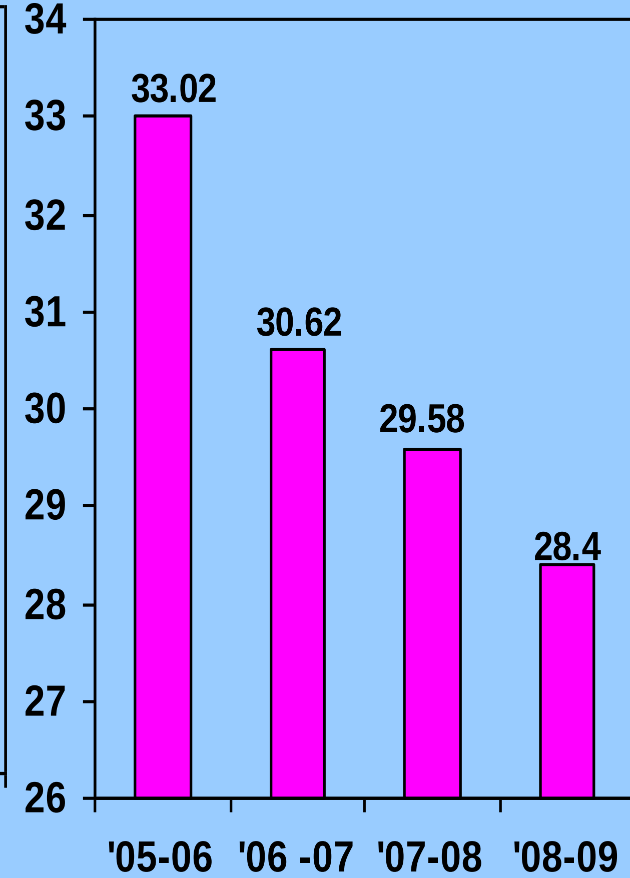
Key Performance Indicators



Billing Efficiency



Collection Efficiency



AT&C Loss

Source: PFC

Financial Performance At A Glance (2008-09)

Analysis of 40 utilities where unbundling has taken place shows:

- 11 utilities (APCPDCL, BYPL, NDPL, NESCO, WESCO, DGVCL, MGVCL, PGVCL, UGVCL, CSPDCL & WBSEDCL) are in profit on subsidy received basis.
- 29 utilities have losses on subsidy received basis.
- Networth of 18 utilities positive in 2008-09:

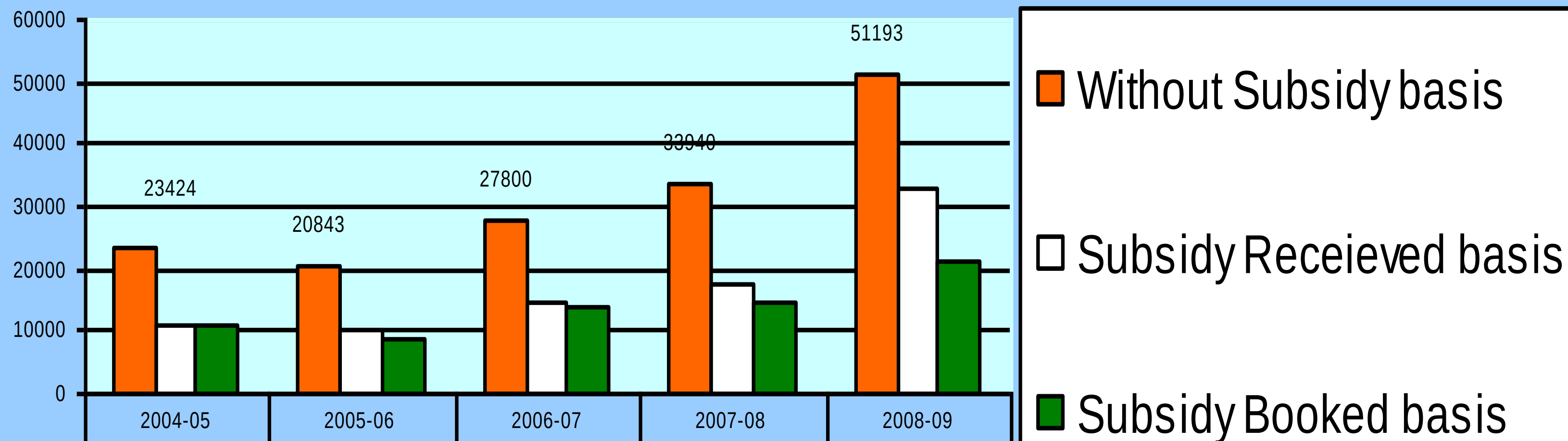
  (4 DISCOMs of AP, LAEDCL in Assam, BYPL & NDPL in Delhi, all 4 DISCOMs in Gujarat, MESCOM in Karnataka, MSEDCl in Maharashtra, all 3 DISCOMs of Rajasthan, CSPDCL in Chhattisgarh and WBSEDCL in West Bengal)
- 22 utilities have negative net worth.

SOURCE-PFC REPORT

AT&C Losses and Commercial Losses

(Utilities Directly selling to Consumers)

(Rs Crores)



	2004-05	2005-06	2006-07	2007-08	2008-09
Without Subsidy basis	23424	20843	27800	33940	51193
Subsidy Receieved basis	11120	9905	14964	17469	32678
Subsidy Booked basis	10921	8610	14210	14423	21527

AT&C LOSSES (%)	**34.33**	**33.02**	**30.62**	**29.58**	**28.40**

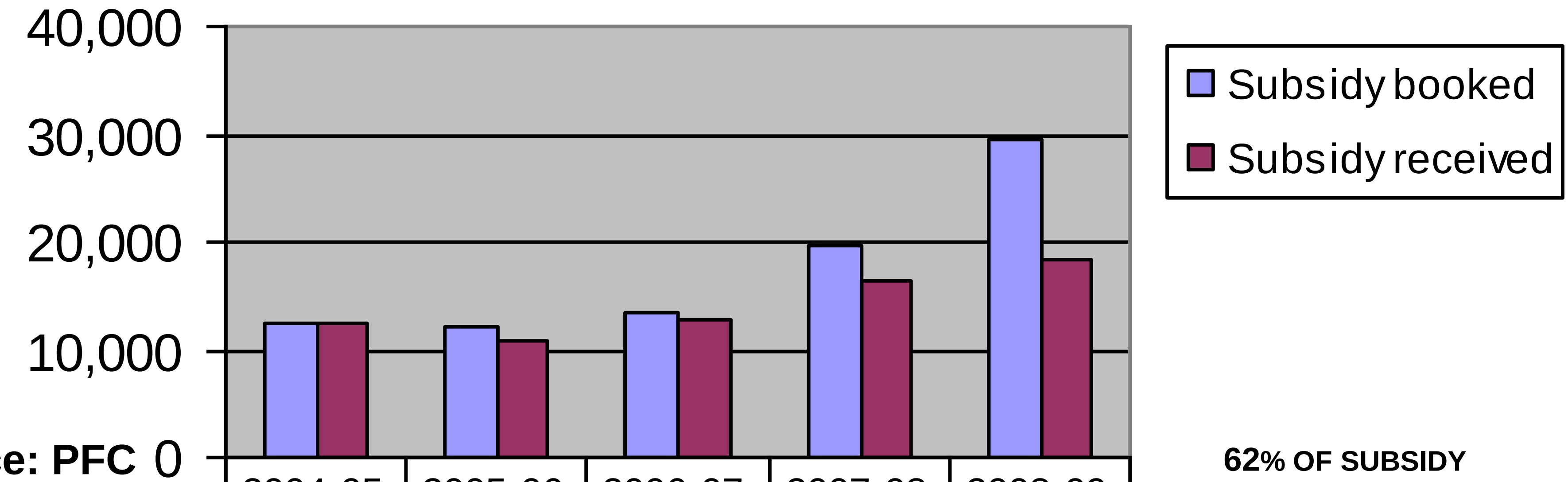
Source: PFC

Cumulative Commercial Losses & Projections

- **CUMULATIVE LOSSES (AS per Balance Sheet) ARE Rs 74977 Crs (2008-09)**
- **FUTURE PROJECTIONS BASED ON CURRENT TARIFF AND WITHOUT SUBSIDY PROJECTED AS Rs 116089 Crs IN 2014-15**

(Source :13TH Finance Commission Report)

Subsidy Booked and Received (Rs Crs)



Source: PFC

	2004-05	2005-06	2006-07	2007-08	2008-09
Subsidy booked	12,503	12,233	13,590	19,518	29,665
Subsidy received	12,304	10,938	12,836	16,472	18,515

62% OF SUBSIDY BOOKED

Shortfall of

Rs 11150 Crs

GAP Between ARR and ACS

The Average Cost of Supply, Average Revenue Realised and Gap for utilities selling power directly to consumers :

Rs/kwh

	2006-07	**2007-08**	**2008-09**
Average Cost of Supply (ACS)	2.75	2.93	3.41
Average Revenue Realized (ARR) (on subsidy received basis)	2.49	2.65	2.91
Gap on subsidy received basis* (National average)	0.26	0.28	0.50
* Ranges from Rs 1.94 for AVVNL (Rajasthan) to Rs (-) 0.24 in Sikkim (Power Department)			

Gap = ACS - ARR

Source: PFC

CAG OBSERVATIONS
(Report - ISSUES IMPACTING FINANCIAL PERFORMANCE OF POWER DISTRIBUTION UTILITIES IN INDIA)

DEFICIT AS % OF SALES (Excluding subsidies)

Year	No of Utilities	DEFICIT AS % OF SALES (Excluding subsidies)
2005-06	42	22.09
2006-07	34	25.11
2007-08	32	19.26
2008-09	24	32.48

CAG OBSERVATIONS
(Report - ISSUES IMPACTING FINANCIAL PERFORMANCE OF POWER DISTRIBUTION UTILITIES IN INDIA)

- TARIFF INCREASE IS ONLY 6.95% WHEREAS COST OF POWER PURCHASE RISE IS 11.90% (FROM 2005-06 to 2008-09)
- MINIMUM TARIFF RISE REQUIRED TO BREAKEVEN IS 19.43% (2008-09 CONDITIONS), AFTER THE AT&C LOSSES ARE BROUGHT TO 15%.

CAG OBSERVATIONS
(Report - ISSUES IMPACTING FINANCIAL PERFORMANCE OF POWER DISTRIBUTION UTILITIES IN INDIA)

% OF GRANT/SUBSIDY TO SALES (Exclusive of subsidy)

Year	No of Utilities	% OF GRANT/SUBSIDY TO SALES (Exclusive of subsidy)
2005-06	42	11.44
2006-07	34	11.50
2007-08	32	12.95
2008-09	24	16.30

Tariff increase required in Various states for Break even (as per study of FOR)

State	% gap in tariff vis-à-vis costs	Year
Haryana	10.00%	2009-10
Madhya Pradesh	16.44%	2007-08
Uttar Pradesh	29.00%	2008-09
Rajasthan	37.00%	2007-08
Karnataka	22.37*	2008-09
Tamilnadu	39.44%	2010-11

Source: FOR

AT&C Losses (%)

- The AT&C losses at the national level for 2008-09 are 28.40% (PFC) but in some states likes Manipur these losses are as high as 79.06%.
- In case of Rajasthan, the AT&C losses with and without subsidy are 29.52% and 58.41% respectively for the year 2008-09.
- In case of Tamil Nadu , where agricultural consumers are given free power, the AT&C losses for the year 2009-10 are 20.15%. If the revenue due from agricultural consumers is taken equivalent to ACS, the revenue from agricultural consumers should be Rs 6136 crores against which the subsidy released by the state Government is Rs 1672 crores indicating notional shortfall of Rs 4464 crores. The AT&C losses would increase to 35.49% considering the notional shortfall of subsidy of Rs 4464 crores.

Cross Subsidy

According to principles enunciated in Section 8.3 of the Tariff Policy (2006), the SERCs would notify road map that latest by end of 2010-11, the tariffs are within +/- 20% of the average cost of supply. The road map should also have intermediate milestones based on approach of gradual reduction in cross subsidy.

Cross Subsidy (Contd.)

But it is seen that the tariff realized as percentage of cost of supply ranges :

(a) In domestic sector from 31% in J&K (FY2008) to 100% in Karnataka (FY2009).
(b) In Agricultural sector from 4% in Andhra Pradesh (FY2008) to 72% in Madhya Pradesh (FY2009).
(c) In non-domestic / commercial sector from 53% in J&K (FY2008) to 214% in Andhra Pradesh (FY2008)
(d) For HT industries 60% in J&K (FY2008) to 155% in Kerala ((FY2009).

Source: CERC

Status of Financial Accounts for last three years

Year	Audited	Provisional	Resource Plan	Not Available	Total
2009-10	25	11	10	8	54
2008-09	29	17	10	-	56
2007-08	37	9	10	-	56

Status of Distribution Franchisee (DF)

- Franchisee in Bhiwandi (Maharashtra) Successful.
- Franchisee appointed in Nagpur and Aurangabad. In operations since May, 2011.Jalgaon likely to be taken over by Crompton fron mid august, 2011. For Mumbra, Shil and Kalwa Towns of Maharashtra bids have been opened. For Malegaon process of appointing DF has been statrted.
- Franchisee in Agra started operations. Kanpur under progress.
- All above franchisees are input based franchisee.
- Model Bidding Document for input based franchisee available on FOR website. Model Bidding Document for other Revenue sharing Models is being worked out.

Performance of BHIWANDI Franchisee Model

	AT the time of take over by Franchisee (January 2007)	Performance as of June 2010
T&D losses	42.3 %	18.79%
AT&C losses	54.64%	20.20%
Failure rate of transformers	40%	3.7%
No. of 22 kV feeders	46 nos.	82 nos.
No. of overloaded feeders	35 nos.	Nil
Capacity of EHV transformers	650 MVA	1000 MVA
Capacity of distribution transformers MVA(Nos.)	780 MVA (2254 Nos.)	960 MVA (2571 Nos.)
Collection efficiency	78.6	99.5
Consumer metering	23%	100%

Performance of NDPL (Delhi Privatization)

Parameter	2002-03	2009-10
AT&C Losses (%)	56.39	17.80 (2008-09)
Turnover	Rs. 850 Cr.	Rs. 3400 Cr.
Peak Load	930 MW	1259 MW
Annual Energy Requirement	3927 Mn Units	6911 Mn. Units
Total Registered Consumers	7,00,000	11,00,000
Number of Employees	5600	3998
Area	510 Sq Kms	510 Sq Kms
Population serviced in Network area (approx)	4.5 Mn.	5 Mn.
Number of consumers per Sq.Km.	1372	2157
Employees per `000 consumers	8	3.63
Employees per Mn. Unit input	1.42	0.58

Performance of NDPL (Delhi Privatization)- REVAMPING OF NETWORK

Particulars	Level	Unit	On takeover Jul 2002	As on Mar 2010	% Change
Capex	Total	Rs. Cr.	920	3120	339
Transformation Capacity	66 kV	MVA	860	1475	71
	33 kV	MVA	791	1413	77
	11 kV	MVA	1703	3770	121
Total		MVA	3,354	6,558	96
Transmission Lines	66 kV	km	176	293	66
	33 kV	km	156	283	81
	11 kV	km	2,245	3,475	55
Total		km	2,578	4,051	57

Performance of BSES (Delhi Privatization)-
REVAMPING OF NETWORK

SN	Item	Unit	BRPL		Increase		BYPL		Increase	
			2002-03	2008-09	Nos.	%	2002-03	2008-09	Nos.	%
1	No. of Grids	Nos.	63	70	7	11%	40	48	8	20%
2	Power Transformers	Nos.	146	188	42	29%	98	131	33	34%
3	EHV Capacity	MVA	3036	4105	1069	35%	1863	2658	795	43%
4	EHV Cable Laid	Kms	674	1076	402	60%	363	764	401	110%
5	66 & 33 kV Feeders	Nos.	132	175	43	33%	89	130	41	46%
6	Shunt Capacitors	MVAr	810	1354	544	67%	573	878	305	53%
7	Distribution Transformers	Nos.	4852	6460	1608	33%	2657	3223	566	21%
8	Distribution Transformers Capacity	MVA	2587	3918	1331	51%	1704	2272	568	33%
9	11 kV Feeders	Nos.	733	1007	274	37%	476	673	197	41%
10	11 kV Cables Laid	Kms	1595	2008	413	26%	1303	1735	432	33%
11	11 kV Lines Laid	Kms	1566	1701	135	9%	145	246	101	70%
12	LT Feeders	Nos.	15219	21376	6157	40%	10193	13224	3031	30%
13	LT Lines Laid	Kms	5382	10003	4621	86%	4589	5512	923	20%

Performance of BSES (Delhi Privatization)- AT&C Losses (%)

	2002-03	2003-04	204-05	2005-06	2006-07	2007-08	2008-09
BRPL	51.78	45.73	41.97	41.25	32.94	37.10	20.59
BYPL	62.49	55.54	51.70	50.48	43.24	47.31	13.73

Status of R-APDRP

Under Part-A

- 1401 projects at an estimated cost of Rs 5177 Crore have been approved for 29 States/UTs and Rs 1450.09 crores have been disbursed.
- SCADA projects for 42 towns of 8 states have also been sanctioned at an estimated cost of Rs 982.5 crores and Rs 45.25 crores have been disbursed.

Under Part – B

- 907 Projects at the cost of Rs 19367.3 crores have been approved to 15 States and Rs1117.69 crores have been disbursed.

High Level Panel on Financial Position of Distribution Utilities

CHAIRMAN : V.K.SHUNGLU, FORMER CAG

TERMS OF REFERENCE

- **REVIEW OF ACCOUNTS OF SEBs AND DISTRIBUTION COMPANIES**
- **REVIEW THEIR FINANCIAL POSITION:**
  - **LOSSES INCURRED AND PROJECTED DISTRIBUTION LOSSES.**
  - **REVIEW ELECTRICITY TARIFF.**
- **ASSESS SYSTEM IMPROVEMENT MEASURES.**
- **EXAMINE GEOGRAPHICAL AND SPATIAL COMPULSIONS AND DETERMINE THEIR OPERATIONS**
- **REVIEW ORGANISATIONAL AND MANAGERIAL STRUCTURE.**
- **RECOMMEND PLAN OF ACTION TO ACHIEVE FINANCIAL VIABILITY.**

ISSUES/RECOMMENDATIONS FOR DISCUSSION

TARIFF ADEQUACY

- The state Governments to make efforts to get the accounts of the utilities audited upto the year 2009-10 and ensure that the accounts of a FY is audited by the September of the next FY.
- The states to ensure that the distribution utilities would file their Annual Tariff Revision Petition every year, by December – January of the preceding financial year to the State Regulators as stipulated by the National Tariff policy.
- Truing up of accounts to be done by ERCs and interest cost to be allowed by the ERCs.
- Regulatory assets should not be created. But, if created in exceptional circumstances, it should not be carried over for more than three years.

ISSUES/RECOMMENDATIONS FOR DISCUSSION

TARIFF ADEQUACY (Contd.)

- The Annual Tariff Revision Petition should be filed before the SERC, keeping in view the increase of the Power purchase cost (which accounts for nearly 70-80% of the Cost of supply) and states to ensure that the difference between ARR and ACS is not only bridged but is positive to generate internal surpluses which can be used for network expansion and maintenance.
- The State government should ensure automatic pass through of the increase in cost of power procurement due to fuel cost increase in the tariff. (State Governments can issues directions to SERCs under Section - 108 of the Act)
- CAGR of cost of power purchase is higher than the CAGR of tariff. This needs to be addressed.

ISSUES/RECOMMENDATIONS FOR DISCUSSION

ISSUES ON SUBSIDIES

- The state governments should not only clear all the outstanding subsidies to the utilities, but ensure advance payment of subsidy as per the Section 65 of the Electricity Act, 2003 in future.

- The National Tariff policy stipulates that by the end of year 2010-2011 tariffs are within ± 20 % of the average cost of supply. Which is yet to be achieved. The states to make efforts to achieve the same.

ISSUES/RECOMMENDATIONS FOR DISCUSSION

OUTSTANDING DUES FROM GOVERNMENT DEPARTMENTS

The state governments to ensure payment of all outstanding dues from various departments of state governments and institutions to the distribution utilities or release payments from the State budget directly.

ISSUES/RECOMMENDATIONS FOR DISCUSSION

CAPITAL INFUSION BY GOVERNMENT

The state government to convert loans due from the government to the distribution utilities as state government equity to ensure capital infusion and improvement in net worth of utility which at present is valued at Rs (–)37107 Crores. (The outstanding loans from the State Government are Rs 27544 Crores for the year 2008-09. Source PFC.)

ISSUES/RECOMMENDATIONS FOR DISCUSSION

STEPS TO REDUCE AT&C LOSSES

- The state governments to take effective administrative steps to reduce AT&C losses by curbing pilferage of electricity and by setting up special police stations and special courts to deal exclusively with power theft related cases.
- Utilities to bring improvement in operational efficiency.
- Ensure 100% metering of consumers.

ISSUES/RECOMMENDATIONS FOR DISCUSSION

APPOINTMENT OF DISTRIBUTION FRANCHISE

The state to appoint distribution franchises in urban areas through competitive bidding. The Standard Bidding Document will be provided to the states by Ministry of Power.

ISSUES/RECOMMENDATIONS FOR DISCUSSION

FISCAL RESPONSIBILITY AND BUDGET MANAGEMENT (FRBM) COMMITMENTS

The state governments to regulate the subsidies in the power distribution sector in the state so that the FRBM commitments are not breached.

ISSUES/RECOMMENDATIONS FOR DISCUSSION

REVIEW OF ORGANIZATIONAL STRUCTURE & ACTION PLAN BY UTILITIES

- Review of Organizational and managerial structure.
- Action Plan by utilities to achieve financial viability.

ISSUES/RECOMMENDATIONS FOR DISCUSSION

HUMAN RESOURCES AND INFRASTRUCTURE

- AGEING INFRASTRUCTURE AND LOW LEVEL OF INVESTMENT IN DISTRIBUTION SECTOR.
- INCREASING AVERAGE AGE OF EMPLOYEES AND INADEQUATE OR NIL INDUCTION.
- LACK OF PROFESSIONAL STAFF AND NON-ESTABLISHMENT OF IT CELL IN UTILITIES.
- CAPACITY BUILDING WITH RESPECT TO TECHNICAL ADVANCEMENTS - RAPDRP/SMART GRIDS ETC.

RGGVY Major Issues

Energization of Villages

- 97,940 villages have been electrified but only 82.350 villages have been energized so far. Major gap is in the states of Assam, Bihar, Jharkhand and Orissa

Sl. No.	State	Villages Electrified (30-06-11)	Villages Electrified (31-03-11)	Village Energized (30-06-11)	Villages yet to be energized
1	Assam	6556	6019	5174	1382
2	Bihar	21192	20981	18500	2692
3	Jharkhand	17295	17181	11915	5380
4	Orissa	13322	13187	8465	4857
Sub-Total		58365	57368	44054	14311
Country TOTAL		**97940**	96562	**82350**	**15590**

Rural Electrification Plan

- States were to notify their RE Plans by August 2008
- Andhra Pradesh, Bihar, J&K, Karnataka, Kerala, Manipur, Sikkim, Tripura and Uttarakhand have not yet submitted/ notified their RE Plans
- Chhattisgarh, Haryana,, Manipur, & Punjab submitted draft to MoP. MoP has communicated comments.
- Arunachal, Assam, Gujarat, H.P., Jharkhand, MP., Maharashtra, Meghalaya, Mizoram, Nagaland, Orissa, Rajasthan, Tamilnadu, U.P. and West Bengal have notified.

Closure of RGGVY Projects

- States are not coming forward to close the RGGVY projects.
- A meeting was convened on 18th March 2011, wherein it was decided that all the RGGVY projects, awarded before December 2007, will be closed within next six months i.e. by September 2011 after fulfilling all the RGGVY conditions.
- In case states do not fulfil all the conditions of RGGVY, grant released under the scheme is liable to be converted into interest bearing loan.

THANK YOU

Vital Financial statistics of 15 top power consuming states in the country

Maharashtra

(Rank 1 : Share in power sold 2008-09 : 11.95%)

1. **In Maharashtra, losses on accrual basis increased from Rs.594 Crores in 2005-06 to Rs. 902 Crores in 2008-09.**
2. **The accumulated losses as on 31st March 2009 amount to Rs. 1146 Crs.**
3. **Gap of Rs. 0.17/Kwh during 2008-09.**
4. **Tariff last revised in the year 2010.**
5. **No Subsidy has been booked during the years 2005-06 to 2008-09**
6. **Power Purchase Cost has increased with a CAGR of 13.93% while revenue from sale of power has increased with a CAGR of 11.72% during the period 2005-06 to 2008-09 indicating that increase in revenue is not commensurate with increase in power purchase cost.**

Contd…

Maharashtra

7. Networth is positive but has decreased marginally from Rs.2,725 Crores as on 31st March 2006 to Rs.2,424 Crores as on 31st March 2009.

8. The total outstanding loans as on 31st March 2009 are Rs. 4446 Crs out of which loans from State Government are Rs. 591 Crs equivalent to 13.29% of total loans.

9. Agricultural consumption as a % of total units sold has increased marginally from 21.88% in 2005-06 to 21.90% in 2008-09 whereas agricultural revenue as a % of total revenue has decreased from 13.02% to 10.81% during the period.

10. The receivables for sale of power are high at Rs. 10627 crores equivalent to 165 days sales as on 31st March 2009.

11. AT&C Losses have improved from 33.15% in 2005-06 to 31.19% in 2008-09

12. Audited accounts are available upto the year 2009-10.

Andhra Pradesh

[Rank 2 : Share in power sold 2008-09 : 11.09% (cum 23.04%)]

1. **Andhra Pradesh has been making profit on accrual basis during the years 2004-05 to 2008 - 09. The profit in the year 2008-09 was Rs. 44 Crores vis-à-vis Rs.91 Crores in the year 2005-06.**

2. **The accumulated profits as on 31st March 2009 are Rs. 22 Crs against accumulated loss of Rs. 325 Crs as on 31st March 2005.**

3. **Gap (on subsidy received basis) of Rs. 0.50/Kwh during 2008-09.**

4. **Tariff last revised in the year 2010.**

5. **Subsidy booked has increased from 19.05% of revenue from sale of power in 2004-05 to 58.79% of revenue from sale of power in 2008-09.**

6. **The subsidy outstanding against subsidy booked for last 5 years is Rs. 3863 Crs.**

7. **Loss on subsidy received basis has increased from Rs. 33 Crores in 2006-07 to Rs. 3,194 Crores in 2008-09 as subsidy received as a % of subsidy booked has fallen from 94.05% to 59.42% in the corresponding years.**

8. **Power Purchase cost is more than the revenue from sale of power on subsidy received basis in 2008-09.**

Contd…

Andhra Pradesh

9. Power Purchase Cost has increased with a CAGR of 19.48% while revenue from sale of power has increased with a CAGR of 12.19% during the period 2004-05 to 2008-09 indicating that increase in revenue is not commensurate with increase in power purchase cost.

10. Gross fixed assets have increased with a CAGR of 14.47% while total outstanding loans have increased with a CAGR of 29.35% during the period 2004-05 to 2008-09 indicating a possibility that loans have been used to fund revenue deficits.

11. The total outstanding loans as on 31st March 2009 are Rs. 9209 Crs. against which Rs. 191 Crs. are State Govt. loans equivalent to 2.08% of total loans.

12. Agricultural consumption (MUs) has shown a CAGR of 3.37% for the period 2004-05 to 2008-09. However, CAGR for agricultural revenue is negative.

13. The receivables for sale of power are Rs. 1998 Crs. equivalent to 28 days sales only as on 31st March 2009.

14. AT&C Losses have improved from 16.68% in 2006-07 to 12.99% in 2008-09. However, AT&C losses considering unpaid subsidy is 25.65% for the year 2008-09.

15. Audited accounts are available upto the year 2009-10.

Tamil Nadu

[Rank 3 : Share in power sold 2008-09 : 10.90% (cum. 33.94%)]

1. In Tamil Nadu, losses on accrual basis increased from Rs.1,177 Crores in 2004- 05 to Rs. 7,771 Crores in 2008-09.

2. The accumulated losses as on 31st March 2009 are Rs. 17414 Crs.

3. Gap (on subsidy received basis) increased from Rs. 0.23/Kwh in 2004-05 to Rs. 1.24/Kwh in 2008-09.

4. Tariff last revised in the year 2010.

5. Subsidy booked has increased from 8.29% of revenue from sale of power in 2004-05 to 12.19% of revenue from sale of power in 2008-09. However, if subsidy is taken as equal to cost of supply to agricultural consumers the notional subsidy would be 36% of revenue from sale of power.

6. The subsidy outstanding against subsidy booked for last 5 years is Rs. 250 Crs.

7. Power purchase cost is more than their total revenue in 2008-09.

8. Gross fixed assets have increased with a CAGR of 9.21% while total outstanding loans have increased with a CAGR of 23.21% during the period 2004-05 to 2008-09 indicating a possibility that loans have been used to fund revenue deficits.

Contd….

Tamil Nadu

9. The net worth is (-) Rs. 13,413 Crs as on 31st March 2009.

10. The total outstanding loans as on 31st March 2009 are Rs. 21502 Crs. The State Government loans are Nil.

11. Power Purchase Cost has increased with a CAGR of 17.58% while revenue from sale of power has increased with a CAGR of 7.73% during the period 2004-05 to 2008-09 indicating that increase in revenue is not commensurate with increase in power purchase cost.

12. Agricultural consumption as a % of total units sold has decreased from 23.70% in 2004-05 to 21.69% in 2008-09. There is no revenue from agricultural consumers in TNEB

13. The receivables for sale of power are Rs. 3413 Crs. equivalent to 48 days sales only as on 31st March 2009.

14. AT&C Losses as on 2009-10 are 20.15%. However, AT&C losses considering notional revenue due from agricultural consumers (calculated based on ACS) is 35-49%.

15. Audited accounts are available upto the year 2007-08.

Uttar Pradesh

[Rank 4 : Share in power sold 2008-09 : 8.06%(cum. 42%)]

1. In Uttar Pradesh, losses on accrual basis increased from Rs.1,818 Crores in 2004-05 to Rs. 4,239 Crores in 2008-09.
2. The accumulated losses as on 31st March 2009 are Rs. 17876 Crs.
3. Gap (on subsidy received basis) increased from Rs. 0.46/Kwh in 2004-05 to Rs. 0.81 / kwh during 2008-09.
4. Tariff last revised in the year 2010.
5. Subsidy received is almost 100% of subsidy booked in all the years and hence losses on subsidy received basis are similar to losses on accrual basis.
6. Power Purchase Cost is more than their total revenue on subsidy received basis in 2008-09.
7. Power Purchase Cost has increased with a CAGR of 13.50% while revenue from sale of power has increased with a CAGR of 10.11% during the period 2004-05 to 2008-09 indicating that increase in revenue is not commensurate with increase in power purchase cost.

Contd…..

Uttar Pradesh

8. Gross fixed assets have increased with a CAGR of 7.32% while total outstanding loans have increased with a CAGR of 9.39% during the period 2004-05 to 2008-09 indicating a possibility that loans have been used to fund revenue deficits.

9. Negative networth of Rs.9,417 Crores as on 31st March, 2009.

10. The total outstanding loans as on 31st March 2009 are Rs. 4692 Crs. out of which State Govt. loans are Rs. 658 Crs. equivalent to 14.03% of the total loans.

11. Agricultural consumption (MUs) has shown a CAGR of 1.11% for the period 2005-06 to 2008-09 while revenue has gone up by 4.92% indicating better realization from the category.

12. The receivables for sale of power are high at Rs. 8421 Crs. equivalent to 300 days sales as on 31st March 2009.

13. AT&C Losses have improved from 43.89% in 2005-06 to 40.90% in 2008-09.

14. The Audited accounts are available upto the year 2005-06. The audited accounts for the year 2006-07 are not completed for one DISCOM.

Gujarat

[Rank 5 : Share in power sold 2008-09 : 7.61% (Cum. 49.61%)]

1. **Gujarat has been continuously making profit on accrual basis during the years 2005-06 to 2008-09.**

2. **The accumulated profits as on 31st March 2009 are Rs. 148 Crs.**

3. **There is no gap since utilities are in profit.**

4. **The tariff last revised in the year 2010.**

5. **Subsidy booked as % of Revenue from sale of power decreased from 14.06% in 2005-06 to 7.41% of revenue from sale of power in 2008-09. The entire amount of subsidy booked was received during the year 2005-06 to 2008-09.**

6. **Power Purchase Cost has increased with a CAGR of 18.45% while revenue from sale of power has increased with a slightly higher CAGR of 20.96% during the period 2005-06 to 2008-09**

Contd..

Gujarat

7. Networth is positive and has increased from Rs.1,877 Crores as on 31st March 2006 to Rs.2,761 Crores as on 31st March 2009

8. The total outstanding loans as on 31st March 2009 are Rs. 3344 Crs. out of which Rs. 492 Crs. are State Govt. loans equivalent to 14.72% of total loans.

9. Agricultural consumption as a % of total sales (MU) has decreased from 36.37% in 2005-06 to 31.63% in 2008-09 whereas agricultural revenue as a % of total revenue has increased from 12.26% to 15.07% during the period indicating better realization from the category.

10. The receivables for sale of power are Rs. 2117 Crs. equivalent to 18 days sales only as on 31st March 2009.

11. AT&C Losses have improved from 26.72% in 2005-06 to 22.04% in 2008-09

12. The Audited accounts are available upto the year 2009-10.

Punjab

[Rank 6 : Share in power sold 2008-09 : 6.70% (Cum. 56.31%)]

1. In Punjab, losses on accrual basis decreased from Rs.3,834 Crores in 2004-05 to Rs. 1,041 Crores in 2008-09.

2. The accumulated losses as on 31st March 2009 are Rs. 8411 Crs.

3. Gap (on subsidy received basis) of Rs. 0.26/Kwh during 2008-09.

4. The tariff last revised in the year 2010.

5. Subsidy booked has increased from 15.78% of revenue from sale of power in 2004-05 to 29.84% of revenue from sale of power in 2008-09.

6. Subsidy received is almost 100% of subsidy booked in all the years and hence losses on subsidy received basis are similar to losses on accrual basis

7. Power Purchase Cost has increased with a CAGR of 17.19% while revenue from sale of power has increased with a CAGR of 10.47% during the period 2004-05 to 2008-09 indicating that increase in revenue is not commensurate with increase in power purchase cost.

Contd…

Punjab

8. Gross fixed assets have increased with a CAGR of 7.12% while total outstanding loans have increased with a CAGR of 12.32% during the period 2004-05 to 2008-09 indicating a possibility that loans have been used to fund revenue deficits.

9. Negative networth of Rs.5,540 Crores as on 31st March 2009.

10. The total outstanding loans as on 31st March 2009 are Rs. 15816 Crs. out of which State Govt. loans are Rs. 2298 Crs. equivalent to 14.53% of the total loans.

11. Agricultural consumption as a % of total units sold has increased from 27.54% in 2004-05 to 28.65% in 2008-09. There is no revenue from agricultural consumers.

12. CAGR of Power Sold (MU) is 8.55% whereas CAGR of agricultural consumption (MU) is 9.63%.

13. The receivables for sale of power are at Rs. 1618 Crs. equivalent to 43 days sales only as on 31st March 2009.

14. AT&C Losses have improved from 23.31% in 2005-06 to 18.51% in 2008-09

15. The Audited accounts are available upto the year 2009-10.

Karnataka

[Rank 7 : Share in power sold 2008-09 : 6.62% (cum. 62.93%)]

1. **Karnataka earned profit on accrual basis from 2004-05 to 2007-08. However, it incurred losses of Rs.1,609 Crores in 2008-09.**

2. **The accumulated losses as on 31st March 2009 are Rs. 1203 Crs.**

3. **Gap (on subsidy received basis) of Rs. 0.41/Kwh during 2008-09.**

4. **The tariff last revised in the year 2009.**

5. **Subsidy booked as percentage of Revenue decreased from 24.27% in 2004-05 to 15.49% in the year 2008-09.**

6. **Subsidy received has increased from 82.17% of subsidy booked in 2004-05 to 100% in next two years (i.e. 2005-06 & 2006-07) and to 96.09% in 2007-08**

7. **The subsidy outstanding against subsidy booked for last 5 years is Rs. 371 Crs.**

8. **Power Purchase Cost has increased with a CAGR of 13.47% while revenue from sale of power has increased with a CAGR of 10.80% during the period 2004-05 to 2008-09 indicating that increase in revenue is not commensurate with increase in power purchase cost.**

Contd…..

Karnataka

9. Power Purchase Cost is more than revenue from sale of power on subsidy received basis in the year 2008-09.

10. Networth was positive during the years 2004-05 to 2007-08 but turned negative due to losses in the year 2008-09.

11. The total outstanding loans as on 31st March 2009 are Rs. 3535 Crs. out of which State Govt. loans are Rs. 433 Crs. equivalent to 12.24% of the total loans.

12. Agricultural consumption (MUs) has shown a CAGR of 9.70% but agricultural revenue has shown CAGR of 5.90% during the year 2005-06 to 2008-09.

13. CAGR of Power Sold (MU) is 8.58% whereas CAGR of agricultural consumption (MU) is 9.70%.

14. The receivables for sale of power are high at Rs. 4628 Crs. equivalent to 147 days sales as on 31st March 2009.

15. AT&C Losses have improved from 38.04% in 2006-07 to 24.94% in 2008-09

16. The Audited accounts are available upto the year 2009-10.

Rajasthan

[Rank 8 : Share in power sold 2008-09 : 5.42% (Cum. 68.35%)]

1. Rajasthan works on a no-profit no-loss basis, as all losses are booked as receivables from Government.
2. The tariff last revised in the year 2005.
3. Gap (on subsidy received basis) increased from Rs. 0.33/Kwh in 2004-05 to Rs. 1.71/Kwh in 2008-09.
4. Subsidy booked increased from 44.38% of revenue in 2004-05 to 103.81% in 2008-09.
5. Subsidy received has decreased from 51.95% of subsidy booked in 2004-05 to 13.73% in 2008-09. Consequently, losses on subsidy received basis have increased from Rs. 968 Crores in 2004-05 to Rs.6,604 Crores in 2008-09.
6. The subsidy outstanding against subsidy booked for last 5 years is Rs. 11160 Crs.
7. Gross fixed assets have increased with a CAGR of 25.16% while total outstanding loans have increased with a CAGR of 40.68% during the period 2004-05 to 2008-09 indicating a possibility that loans have been used to fund revenue deficits.

Contd….

Rajasthan

8. The total outstanding loans as on 31st March 2009 are Rs. 21435 Crs. out of which State Govt. loans are Rs. 1118 Crs. equivalent to 5.22% of the total loans.

9. Power Purchase Cost has increased with a CAGR of 20.82% while revenue from sale of power has increased with a CAGR of 12.90% during the period 2004-05 to 2008-09 indicating that increase in revenue is not commensurate with increase in power purchase cost.

10. Power Purchase Cost is more than total income on subsidy received basis in the year 2008-09.

11. Agricultural consumption (MUs) has shown a CAGR of 17.25% for the period 2004-05 to 2008-09.The CAGR of agricultural revenue during the same period is 20.31%.

12. CAGR of Power Sold (MU) is 12.51% whereas CAGR of agricultural consumption (MU) is 17.25% indicating the possibility that losses are being loaded in agricultural consumption.

13. The receivables for sale of power are at Rs. 2109 Crs. equivalent to 42 days sales only as on 31st March 2009.

14. AT&C Losses have improved from 42.19% in 2005-06 to 29.52% in 2008-09. However, AT&C losses considering unpaid subsidy is 58.41% in the year 2008-09.

15. The Audited accounts are available upto the year 2008-09.

Madhya Pradesh

[Rank 9 :Share in power sold 2008-09 : 4.30% (Cum. 72.65%)]

1. The losses of the Discoms increased from Rs. 593 Crores in 2005-06 to Rs.2,484 Crores in 2008-09.

2. The accumulated losses as on 31st March 2009 are Rs. 5992 Crs.

3. Gap (on subsidy received basis) increased from Rs. 0.19/kwh in 2005-06 to Rs. 0.70/Kwh in 2008-09.

4. The tariff last revised in the year 2010.

5. Subsidy booked has increased from 6.40% of revenue from sale of power in 2005-06 to 13.83% of revenue from sale of power in 2008-09.

6. Subsidy received is almost 100% of subsidy booked in all the years and hence losses on subsidy received basis are similar to losses on accrual basis

7. Power Purchase Cost has increased with a CAGR of 14.82% while revenue from sale of power has increased with a CAGR of 6.55% during the period 2005-06 to 2008-09 indicating that increase in revenue is not commensurate with increase in power purchase cost.

8. Power Purchase cost is more than the total income on subsidy received basis in the year 2008-09.

Contd…….

Madhya Pradesh

9. Gross fixed assets have increased with a CAGR of 12.97% while total outstanding loans have increased with a CAGR of 36.80% during the period 2005-06 to 2008-09 indicating a possibility that loans have been used to fund revenue deficits.

10. Negative networth of Rs. 3905 Crs. as on 31st march 2009

11. The total outstanding loans as on 31st March 2009 are Rs. 6012 Crs. out of which State Govt. loans are Rs. 1872 Crs. equivalent to 31.14%of the total loans.

12. Agricultural consumption (MUs) has decreased from 35.04% in 2006-07 to 29.88% in 2008-09 while agricultural revenue has decreased marginally from 13.98% to 13.33% during the same period.

13. The receivables for sale of power are high at Rs. 4966 Crs. equivalent to 254 days sales as on 31st March 2009.

14. AT&C Losses have increased from 44.44% in 2005-06 to 61.04% in 2008-09.

15. The Audited accounts are available upto the year 2009-10.

Note: AT&C Losses for the year 2008-09 are under revision following receipt of additional information from Madhya Pradesh with respect to debtors for sale of power after notification of Final Opening Balance sheet in 2007-08.

Haryana

[Rank 10 : Share in power sold 2008-09 : 4.13% (Cum. 76.78%)]

1. In Haryana, losses on accrual basis increased from Rs.420 Crores in 2004-05 to Rs. 1,484 Crores in 2008-09.
2. The accumulated losses as on 31st March 2009 are Rs. 4039 Crs.
3. Gap (on subsidy received basis) increased from Rs. 0.21/Kwh in 2004-05 to Rs. 0.52/Kwh in 2008-09.
4. The tariff last revised in the year 2006.
5. Subsidy booked as a % of revenue increased from 32.63% in 2004-05 to 40.08% in 2008-09.
6. Subsidy received is 100% of subsidy booked in all the years and hence losses on subsidy received basis are similar to losses on accrual basis
7. Power Purchase Cost has increased with a CAGR of 19.89% while revenue from sale of power has increased with a CAGR of 18.13% during the period 2004-05 to 2008-09 indicating that increase in revenue is not commensurate with increase in power purchase cost.

Contd.....

Haryana

8. Gross fixed assets have increased with a CAGR of 19.69% while total outstanding loans have increased with a CAGR of 51.37% during the period 2004-05 to 2008-09 indicating a possibility that loans have been used to fund revenue deficits.

9. Negative networth of Rs.2,280 Crores as on 31st March 2009

10. The total outstanding loans as on 31st March 2009 are Rs. 7189 Crs. out of which SG loans are Rs. 101 Crs equivalent to 1.41%.

11. Agricultural consumption as % of total units sold has decreased from 42.45% in 2004-05 to 36.43% in 2008-09 whereas agricultural revenue as a % of total revenue has decreased from 7.91% to 4.44% during the period.

12. The receivables for sale of power are high at Rs. 2289 Crs. equivalent to 115 days sales as on 31st March 2009.

13. AT&C Losses have improved from 42.83% in 2005-06 to 33.29% in 2008-09.

14. The Audited accounts are available upto the year 2009-10.

Delhi

[Rank 11 : Share in power sold 2008-09 : 3.90% (Cum. 80.68%)]

1. **Delhi is continuously making profit on accrual basis during the years 2004-05 to 2008-09 except the year 2007-08**

2. **The accumulated losses as on 31st March 2009 are Rs. 228 Crs.**

3. **No Subsidy has been Booked during the years 2004-05 to 2007-08.**

4. **The tariff last revised in the year 2009.**

5. **Power Purchase Cost has increased with a CAGR of 17.57% while revenue from sale of power has increased with a CAGR of 15.50% during the period 2004-05 to 2008-09 indicating that increase in revenue is not commensurate with increase in power purchase cost.**

6. **Networth is positive and has increased from 818 Crores as on 31st March 2005 to 1,003 Crores as on 31st March 2009.**

Contd…….

Delhi

7. The total outstanding loans as on 31st March 2009 are Rs. 4335 Crs.

8. The receivables for sale of power are Rs. 1210 Crs. equivalent to 32 days sales as on 31st March 2009.

9. AT&C Losses have improved from 40.32% in 2005-06 to17.92% in 2008-09

10. The Audited accounts are available upto the year 2009-10.

West Bengal

[Rank 12 : Share in power sold 2008-09 : 3.80% (Cu. 84.44%.)]

1. **West Bengal has turned around from losses of Rs.285 crore in the year 2004-05 to profit on accrual basis of Rs 39 crore during the year 2008-09.**
2. **The accumulated losses as on 31st March 2009 are Rs. 361 Crs.**
3. **There is no gap in the year 2008-09 due to profits.**
4. **The tariff last revised in the year 2010.**
5. **No Subsidy has been booked during the years 2004-05 to 2008-09.**
6. **Power Purchase Cost has increased with a CAGR of 15.05% while revenue from sale of power has increased with a CAGR of 13.77% during the period 2004-05 to 2008-09 indicating that increase in revenue is not commensurate with increase in power purchase cost.**

Contd…….

West Bengal

7. Positive networth after unbundling.

8. The total outstanding loans as on 31st March 2009 are Rs. 4822 Crs.out of which state govt. loans are Rs. 2249 Crs. equivalent to 46.64% of total loan.

9. The receivables for sale of power are Rs. 1167 Crs. equivalent to 37 days sales as on 31st March 2009.

10. AT&C Losses have improved from 28.33% in 2005-06 to21.36% in 2008-09

11. The Audited accounts are available upto the year 2009-10.

Chhattisgarh

[Rank 13 : Share in power sold 2008-09 : 2.81% (Cum. 87.29%)]

1. **Chhattisgarh continuously making profit on accrual basis during the years 2004-05 to 2008-09. Profit on accrual basis increased from Rs.135 Crores in 2004-05 to Rs. 838 Crores in 2008-09.**

2. **The accumulated profits as on 31st March 2009 are Rs. 74 Crs.**

3. **There is no gap since utility is in profit.**

4. **The tariff last revised in the year 2009.**

5. **No Subsidy has been Booked during the years 2004-05 to 2008-09.**

6. **Power Purchase Cost has increased with a CAGR of 23.69% while revenue from sale of power has increased with a CAGR of 20.62% during the period 2004-05 to 2008-09 indicating that increase in revenue is not commensurate with increase in power purchase cost.**

Contd…….

Chhattisgarh

7. Agricultural consumption (MUs) has shown a CAGR of 18.13% for the period 2004-05 to 2008-09. However, growth rate for agricultural revenue during the period is 14.13%.

8. Positive networth during the years 2004-05 to 2008-09.

9. The total outstanding loans as on 31st March 2009 are Rs. 336 Crs. out of which state govt. loans are Rs. 193 Crs. equivalent to 57.51% of total loan.

10. CAGR of Power Sold (MU) is 13.83% whereas CAGR of agricultural consumption (MU) is 18.13% indicating the possibility that losses are being loaded in agricultural consumption.

11. The receivables for sale of power are high at Rs. 1158 Crs. equivalent to 93 days sales as on 31st March 2009.

12. AT&C Losses have improved from 38.76% in 2005-06 to 32.73% in 2008-09

13. The Audited accounts are not available.

Kerala

Rank 14 : Share in power sold 2008-09 : 2.64% (Cum. 89.93%)

1. **Kerala continuously making profit on accrual basis during the years 2004-05 to 2008-09.Profit on accrual basis increased from Rs.104 Crores in 2004-05 to Rs. 217 Crores in 2008-09.**

2. **The accumulated losses as on 31st March 2009 are Rs. 1245 Crs.**

3. **There is no gap since utility is in profit.**

4. **The tariff last revised in the year 2010.**

5. **Subsidy booked as % of Revenue from sale of power is 11.75% in 2004-05. No subsidy has been booked during the last three years 2006-07 to 2008-09.**

6. **The subsidy outstanding against subsidy booked for last 5 years is Rs. 487 Crs.**

7. **Power Purchase Cost has increased with a CAGR of 25.51% while revenue from sale of power has increased with a CAGR of 13.80% during the period 2004-05 to 2008-09 indicating that increase in revenue is not commensurate with increase in power purchase cost.**

Contd……

Kerala

8. **Networth is positive and has increased from Rs. 2,172 Crores in 2004-05 to Rs. 2,803 Crores in 2008-09.**

9. **The total outstanding loans as on 31st March 2009 are Rs. 1338 Crs.. The State Govt. loans are Nil.**

10. **Agricultural consumption (MUs) has shown a CAGR of 4.23% for the period 2004-05 to 2008-09. However, growth rate for agricultural revenue has shown a CAGR of 12.80% during the same period. The share of agricultural consumption (MU) has reduced from 2.03% in the year 2004-05 to 1.75% in the year 2008-09.**

11. **The receivables for sale of power are high at Rs. 940 Crs. equivalent to 67 days sales as on 31st March 2009.**

12. **AT&C Losses have improved from 23.61% in 2005-06 to 21.61% in 2008-09**

13. **The Audited accounts are available upto the year 2008-09.**

Orissa

[Rank 15 : Share in power sold 2008-09 : 2.41% (Cum. 92.34%)]

1. **In Orissa, losses on accrual basis decreased from Rs.410 Crores in 2004-05 to Rs. 149 Crores in 2008-09.**

2. **The accumulated losses as on 31st March 2009 are Rs. 2817 Crs.**

3. **Gap of Rs. 0.08/Kwh in 2008-09.**

4. **The tariff last revised in the year 2010.**

5. **No Subsidy has been Booked during the years 2004-05 to 2008-09.**

6. **Power Purchase Cost has increased with a CAGR of 13.61% while revenue from sale of power has increased with a slightly higher CAGR of 14.03% during the period 2004-05 to 2008-09.**

7. **Networth has been negative throughout the period 2004-05 to 2008-09.**

Contd…….

Orissa

8. The total outstanding loans as on 31st March 2009 are Rs. 2178 Crs. out of which Rs. 273 Crs. are state Govt. loans equivalent to 12.55% of total loans.

9. Agricultural consumption as a % of total units sold has decreased from 1.93% in 2004-05 to 1.23% in 2008-09 whereas agricultural revenue as a % of total revenue has decreased from 0.86% to 0.50% during the period.

10. The receivables for sale of power are high at Rs. 1450 Crs. equivalent to 132 days sales as on 31st March 2009.

11. AT&C Losses have improved from 44.07% in 2005-06 to 42.20% in 2008-09.

12. The Audited accounts are available upto the year 2008-09.

THANK YOU

“Model Tariff Guidelines”

S.K. Chatterjee
CERC

July, 2011

Background

Project Background

- **SERCs across States have adopted different mechanisms to estimate parameters critical for determination of Average Revenue Requirement (ARR) of a Distribution Licensee for ensuing year.**
- **There has often been disagreement in between Distribution Licensees and respective SERCs over estimation methodologies, leading to disallowances of certain genuine expenses, amplifying woes of the Distribution Licensees.**
- **Objective: The proposed Model Tariff Guidelines intends to streamline the practices across SERCs and enable estimation of critical parameters with insignificant expected variance from actual.**
- **Applicability: These guidelines shall apply to all of the Distribution Licensees. In case Multi Year tariff regime has not been implemented as yet, 'the corresponding period/control period' refers to the year for which tariff has to be determined by the SERC under ARR filing.**

Average CoS vs Average Revenue Realization

Average Cost of Supply, Average Revenue Realized and Gap for utilities selling power directly to consumers

	2006-07	2007-08	2008-09
Average Cost of Supply (ACS)	2.75	2.93	3.41
Average Revenue Realized (ARR) (on subsidy received basis)	2.49	2.65	2.91
Gap on subsidy received basis* (National average)	0.26	0.28	0.50
* Ranges from Rs 1.94 for AVVNL (Rajasthan) to Rs (-) 0.24 in Sikkim (Power Department)			

Gap= ACS- ARR

Source: PFC

.

CAG Observations on Distribution Sector

Deficit as % of Sales (Excluding subsidies)

Year	No of Utilities	DEFICIT AS % OF SALES (Excluding subsidies)
2005-06	42	22.09
2006-07	34	25.11
2007-08	32	19.26
2008-09	24	32.48

- **Tariff increase is only 6.95%, Whereas Cost of Power Purchase rise is 11.90% (From 2005-06 to 2008-09)**
- **Minimum tariff rise required to breakeven is 19.43% (2008-09 CONDITIONS), after the AT&C losses are brought to 15%.**

Source: CAG OBSERVATIONS

(Report - ISSUES IMPACTING FINANCIAL PERFORMANCE OF POWER DISTRIBUTION UTILITIES IN INDIA)

CAG Observations on Distribution Sector

- **% OF Grant/Subsidy to SALES (Exclusive of subsidy)**

Year	No of Utilities	% OF GRANT/SUBSIDY TO SALES (Exclusive of subsidy)
2005-06	42	11.44
2006-07	34	11.50
2007-08	32	12.95
2008-09	24	16.30

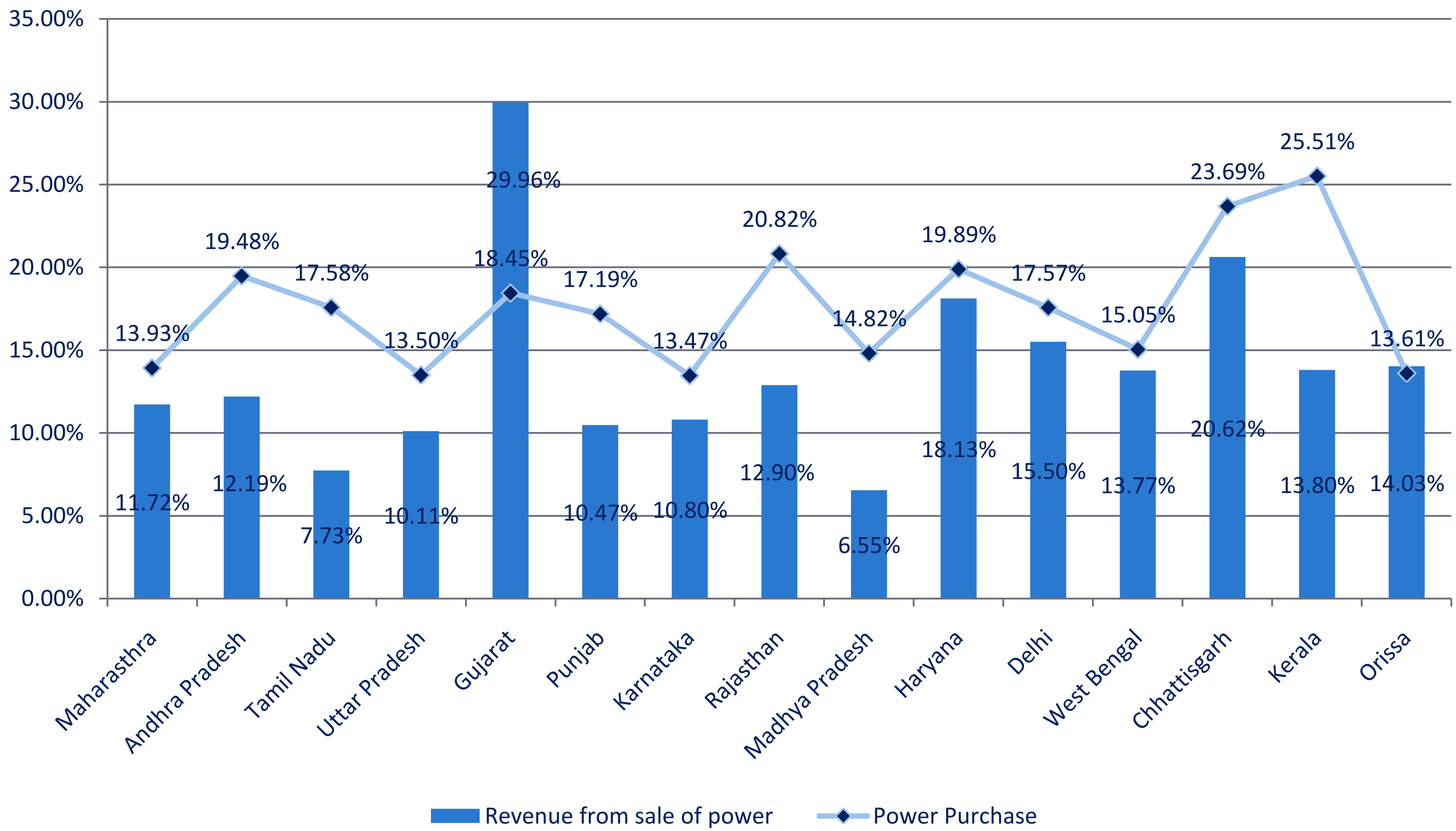
Source: CAG OBSERVATIONS

(Report - ISSUES IMPACTING FINANCIAL PERFORMANCE OF POWER DISTRIBUTION UTILITIES IN INDIA)

Tariff Revision and Tariff Adequacy in States (APTEL)

- **Increase in Revenue Gap because of non revision of tariff.**
  - Revenue gap is bridged through creation of Regulatory Assets, Government Subsidy, Tariff hike and sometimes SERCs do not treat revenue gap and leave it as it is.
- **Delay in tariff filing or Non filing of tariff petition by Distribution licensee. Delay may be on part of delay in sanction of subsidy by the state government and in select states, if the licensee has not filed petition in accordance with the guidelines of SERCs. Only a few SERCs have issued suo-motu Tariff orders in case of non filing of tariff petition.**
- **Delay in issuance of Tariff orders due to delay in filing or delay in furnishing complete data/information by the licensee.**
- **True-up petitions are not being filed by utilities on account of non finalization of audited accounts for the year.**
- **Fuel Surcharge Adjustment: Select states have provided for FSA in regulations or in tariff orders. In most of the states the process of approval of such charges takes a long time and adjusted during the true up exercise.**

Power Purchase Cost vs Revenue from Sale of Power (CAGR between FY 2004-05 and FY 2008-09)



FOR- Financial Viability Study

Reason for Revenue Gap in states:

- **Non revision of tariff in the states including absence of True-up mechanism**
- **Regulatory Asset has been created by the SERC leading to gap in tariffs**
- **Shortfall and delay in subsidy disbursements by the State Government**
- **Actual power purchase quantum as well as cost are higher than approved levels**
  - Actual sales is more than approved
  - Actual loss levels of the DISCOMs are higher than the approved loss levels
  - Disallowance of interest cost on short-term borrowings for meeting the revenue deficit of previous year and carrying cost for time lag involved in recovery of FSA
- **Increase in short term loans**

FOR- Financial Viability Study

- **Tariff increase required in various states for Break even**

State	% gap in tariff vis-a-vis costs	Year
Haryana	10%	2009-10
Madhya Pradesh	16.44%	2007-08
Uttar Pradesh	29.%	2008-09
Rajasthan	37%	2007-08
Karnataka	22.37%	2008-09
Tamil Nadu	39.44%	2010-11

Source: FOR Study

Issues addressed by Model Tariff Guidelines

Issues

- **Timeliness of tariff determination process.**
- **Disallowance of legitimate costs**
- **Fuel Purchase Adjustment**
- **Untreated gap/Regulatory Assets**

Model Tariff Guidelines

I. Timeliness of tariff determination process

Issues

- Delay/Non-filing of tariff petition
- Delay in issuing order
- Delay in finalization of true-up order
- Time lag for recovery of cost for the distribution companies

Model Tariff Guidelines

- Licensee to file tariff petition by 30th November every year.
- SERCs to issue Tariff Order within 120 days after seeking clarification and receiving response from the licensee
- SERC to issue suo-motu tariff order in case of delay/non submission of tariff application or non-receipt of additional information
- True-Up order to be passed on annual basis

II. Disallowance of Legitimate Costs

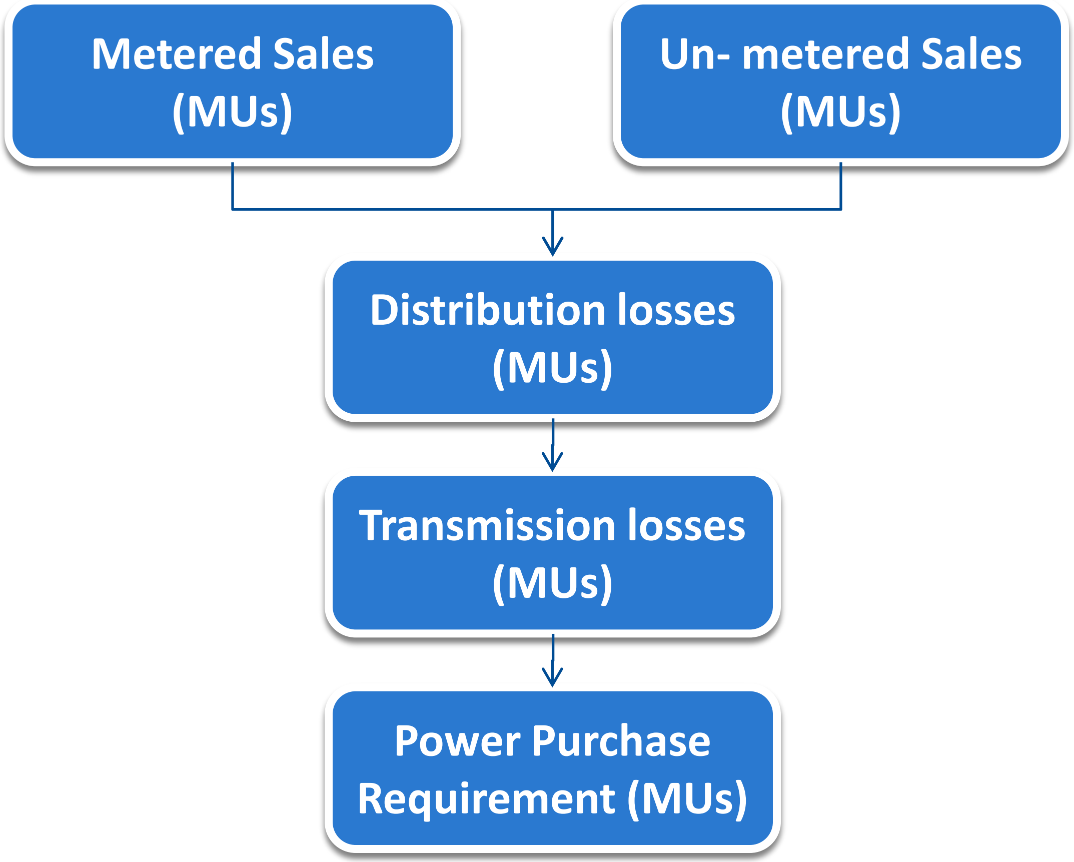
Issues

- **Disallowance of power purchase quantum/cost by way of**
  - Disallowance of sales estimates
  - T&D loss estimate

- **Model Tariff Guidelines address the issues…………………..**

Disallowance of Legitimate Costs Power Purchase Requirement

Assessment of sales to be grossed up first by distribution losses and then by transmission losses to arrive at quantum of power to be purchased.



Disallowance of Legitimate Costs- Metered Sales

- **A year long study to be conducted on monthly basis for the first year**
- **Licensee to get the accounts audited within a year of roll out of model tariff guidelines so that audited slab-wise sales figures are available**
  - Besides other aspects study to verify connected load, verification of meters & sample readings, and billing software verification
- **A team of an independent agency, designated team of distribution licensee and an officer from SERC to conduct/monitor the study**
- **Forecast shall be based on CAGR for past 2 to 3 years of audited sales figures within each of the slab of consumer categories.**
- **Depending on the area of operation the estimated cost of the study shall vary from INR 20 lakh to INR 75 lakh per State. Total estimates for 20 States INR 10 crores (@ average of 50 lakhs per State).**

Disallowance of Legitimate Costs- Un-metered Sales

- **An Independent study with Distribution licensee to be conducted to assess actual consumption**
  - Year long month-wise, circle wise study for the first 3 years to establish base line. Norm to be established in the first year itself which would be subsequently fine tuned (in next two years)
  - Results to be submitted to the Regulator
  - Stratified random sampling shall be used for the study
  - Verify actual consumption in circle in terms of hours of usage, specifications & connected load of motor power
  - Sample of DTR meters in case of un segregated feeder and Feeder meters in case of separate feeders for assessment of un-metered sales
- **Estimates for 20 States INR 10 crores (@ average of 50 lakhs per State)**

Disallowance of Legitimate Costs- Distribution losses

- **Correction of baseline distribution losses based on the studies conducted to assess metered and unmetered sales and data collected at the input point of the distribution utilities**
- **Where Distribution licensee is unable to reduce losses -**
  - **Circle-wise** Distribution **loss reduction targets** shall be approved
  - Circle-wise **differential tariff** shall be implemented to mobilize support/push from the consumer on the Distribution Licensee to drive loss reduction
  - The circle/area may be awarded to **Distribution Franchisee**. Any circle beyond a certain loss level shall be mandatorily handed over to Distribution Franchisee

Disallowance of Legitimate Costs-Power Purchase quantum/cost

- **Based on the demand estimates power purchase quantum/cost shall be calculated**
- **Short term power purchase: SERC to regulate short term purchase quantum. Cost for purchase of such quantum shall be arrived by multiplying it with per unit quarterly weighted average cost of bilateral purchases and power exchange prices of the same quarter.**
- **Cost of short term power (over and above what has been approved) shall <u>be automatically quarterly passed through</u> to tariff without prior approval of SERC under following <u>circumstances beyond the control</u> of the utility:**
  - Shortage of fuel availability
  - Snow capping of hydro resources inhibiting power generation in sources stipulated in the plan
  - Delay in commissioning of proposed sources of power (plants)
  - Unplanned outages of power generating units
  - Acts of God (including monsoon failure)

Fuel Purchase Adjustment Incremental fuel/Power procurement cost (FPPA)

Identification of incremental cost and process of recovery

- **Recovery of incremental cost due to**
  - Change in fuel surcharge from as approved by SERC- To be charged on actual variation and not estimated variation.
  - Cost of incremental power (including short term power) required over and above planned and approved
    - Licensee to charge the incremental cost from the first month of 2nd quarter within the ceiling of 10% of variable component of tariff.
    - Under or over recovery shall be carried forward to the next quarter.

Fuel Purchase Adjustment Incremental fuel/Power procurement cost (Cont..)

Formula for computation of incremental cost

Variables are in INR Crores unless otherwise stated

$$ICq1 = Cq1 + Fq4 + Aq3$$

ICq1 = Incremental Cost incurred in Q1

Cq1 = Change in cost of:

1. **<u>Fuel surcharge</u> pertaining to power approved by SERC.**
2. **Total cost incurred to secure <u>power over and above plan</u> as approved in Power Purchase section (capped by weighted average cost of bilateral purchase and power exchange price).**

Fq4 = Carry forward factor for over-recovery / under-recovery of ICq3 in Quarter 4 from previous year.

Aq3 = Adjustments on the basis of the SERC's order pertaining to discrepancies, if any, in computation of ICQ3 from previous year

IC (INR/kWh) = (IC / (Metered sales + Unmetered consumption estimates + excess distribution losses))*10

Long term Power Purchase Planning under MYT

- **Comprehensive Power Procurement Plan to monitor, reduce and control unplanned energy requirement. - <u>To be a component of MYT petition</u>**
- **Power procurement plan for both <u>peak and off-peak period</u>**
- **Long term plan (10 years or more)**
  - Econometric modeling to be carried out
- **Procurement for long/medium term to be addressed through competitive bidding**
  - Assessment of optimal generation/supply mix
  - Options of JV with resource rich state to be explored
  - RPO consideration as well as stand by arrangement to be considered
  - Quarterly Procurement from renewable energy sources

Study - AT&C Losses

Identification and calculation of various components of AT&C losses.

Technical losses:

- **EHV system (33 kV & above)- Computed as Difference between energy input and sent out**
- **11 kV system of Discom (Sample feeders) - Difference between Input Energy recorded at a few select feeders (with no commercial losses) and at the receiving end of the consumer plus the energy recorded at LV side of Distribution Transformer. Weighted average of such results can be applied to all the energy handled to arrive at total technical energy loss in 11kV systems.**
- **The results of the above sample studies can be extrapolated to compute the overall technical losses in the distribution system. Estimation of losses in LT network may be done initially for sample network emanating from representative DTs covering different categories of consumers and load density.**

Commercial losses:

- **Commercial losses= Total AT&C losses – Technical losses**
- **The different components of commercial losses should be separately identified and calculated.**

Other Costs

O&M Expense

- O&M= Employees Cost + A&G Expense + R&M Cost
- Separate baseline for components of O&M expenses shall be developed by the Distribution licensee by conducting a year long study.
- One time expenses beyond the control of licensee shall also be excluded from the baseline.
- Benchmarking of expense components Employee cost, R&M and A&G and productivity factor in the first year of the study .
- From second year onwards, adjustments in identified benchmarks/productivity trajectory shall be estimated in annual studies as per external factors, technological advancements etc.

Other Costs

Capital Expenditure (recovery on capitalisation)

- SERCs to consider capex scheme wise. Licensee to take prior approval from the Regulator for capex greater than INR 10 Crore.
- Capex < INR 10 Crore: Licensee to undertake the execution of the plan with information to the SERC.

Treatment of Depreciation

- Depreciation Allowed: Maximum of 90% of the original cost of asset. Shall not be allowed on capital subsidies and grants.

Interest on term loan

- The rate of interest shall be the weighted average rate of interest calculated on the basis of actual loan portfolio at the beginning of each control period applicable, in accordance with terms and conditions of relevant loan agreements/bonds/non-convertible debentures.

Other Costs

Interest on Working Capital

- **Provided that the Working Capital for the Distribution Licensee shall consist of following:**

  a. O&M expenses for one month

  b. Receivables for two months of revenue from sale of electricity

  c. Maintenance spares @ 40% of R&M expenses for one month:

  Less:

  Consumer security deposit, if any

- **Rate of interest on working capital shall be on a normative basis and shall be equal to the State Bank Advance Rate (SBAR) as of the date on which the application of determination of tariff is made**

Other Costs and Subsidy

Return on Equity

- **16% post-tax Return on Equity.**
- **In case the distribution licensee has not factored or claimed the return on equity in the ARR/MYT petition, the same shall be considered for tariff determination by the SERC.**

Subsidy

- **The SERC shall approve two sets of tariffs, with and without subsidy support.**
  - Subsidized Tariff: If Government adheres to the subsidy schedule in terms of time of payment and quantum of payment.
  - Tariff without subsidy: If the Government defaults for two consecutive installments, either in terms of time or quantum of payment.

Cross- Subsidy/Tariff Design

Cross Subsidy

- **SERC would notify revised roadmap within six months from the notification of these Regulations with a target that latest by the end of year 2015-16 tariffs are within ± 20 % of the average cost of supply.**
- **The road map would also have intermediate milestones, based on the approach of a gradual reduction in cross subsidy.**

Tariff Design

- **SERC shall be guided by the objective that the tariff progressively reflects the efficient and prudent cost of supply of electricity.**

Untreated gap/ Regulatory Assets

Regulatory Assets

- **Regulatory asset to be an exception and not norm. Not to be created to cover the losses incurred in normal course of business.**
- **Amortization schedule corresponding to the regulatory asset shall be prepared and put in effect along with creation of the regulatory asset.**
- **Carrying cost of the regulatory asset shall be line with the State Bank Advance Rate (SBAR) for the tenure for which regulatory asset has been created.**

Comments/observations

Observations

Observations	Reply
Assam	
Un-metered sales Referring to section 55 of the Electricity Act 2003. The Electricity Act discourages unmetered sale of electricity and as such incorporation of such a provision in the guidelines may need to be adequately explained. It may be mentioned here that there is no unmetered sale is reported in Assam and there is no provision for unmetered sale in the tariff orders.	Many states have significant agriculture consumption and many of them are un metered. Till the time utilities achieve 100% consumer metering, the issue of consumption of such consumers needs to be addressed.
Distribution losses Circle-wise differential tariff implementation may not be a practical proposition in some states.	This could be implemented through T&D loss or reliability surcharge. MERC have implemented this.
AT&C losses Revenue collected= R-L+S+T+A A" shown in the formula is not defined	"A" is to be omitted from the formula.

Observations

Observations	Reply
Assam	
Methodology and Treatment of Power Purchase Cost **Factors beyond the control of Utility** 1. Unplanned outages of power generating units may be replaced by unplanned /forced outages of power generating units 2. Fuel shortage may be replaced by shortage/non-availability of fuel.	Spirit of the Regulation is same. We will elaborate/strengthen this.
Identification of incremental cost and process of recovery Ceiling of 10% may be enhanced to 25% to ensure to the extent possible that cost accumulated in one quarter is not carried forward to the subsequent quarters.	At this stage we have kept 10%. WE can increase to 25% depending on other SERC's view.

Observations

Observations	Reply
Assam	
Identification of incremental cost and process of recovery No prior approval of the Commission may be required even when the incremental cost is being charged for the first time. While framing the regulations, advance publication is given inviting comments and objections from the stakeholders. These regulations become effective from the date of publication in the gazette of the state. Therefore, further approval of the Commission prior to calculation of FPPA is not required.	Agreed. It is in line with the spirit of draft regulations/ guidelines.

Observations

Observations	Reply
Assam	
<u>Operation & Maintenance Expenses</u> Specific provision may be made to recover/ adjust <u>terminal benefit/ past period liabilities</u> on account of employees etc, in O & M expenses which are excluded in calculating baseline data.	Please refer to Chapter 8 (8.1) for the formula for calculating Employee Cost. This is already covered in the formula.

Observations

Observations	Reply
Madhya Pradesh	
Treatment of Distribution and AT&C Losses. The proposed provision relating to circle-wise differential tariff may not be practically implementable in the State in the foreseeable future looking to ground realities/ policy directives.	MERC has introduced this practice: Draft Regulations propose circle-level monitoring. It is also recommended that the areas where loss levels are persistently high should be given to DF mandatorily. Tariff differential through surcharge will mobilize support from the consumer on the Distribution Licensee to drive loss reduction
Power Purchase Cost Needs clarity on implementation of direct pass through of short term power purchase cost to consumers in case the cause is on account of factors beyond the control of the utility while simultaneously informing SERC.	For greater clarity the word 'simultaneously' shall be omitted.

Observations

Observations	Reply
Madhya Pradesh	
The provision on subsidy may lead to practical difficulty in implementation. The Commission does not consider subsidy provided by the Government to the subsidized category of consumers in its tariff order. The tariff order is given for full rates. Once the tariff order is issued, the Government declares the subsidy taking on the extent to which it wishes the subsidy to be provided on the tariff determined by the Commission for various categories of consumers.	• Tariffs with subsidy and without subsidy are to be incorporated in the Tariff Order by the SERCs where subsidy is declared in advance. • If the Tariff Order is issued at full rates and the Government declares subsidy after that, then the utility shall charge tariff at full rates., if the subsidy is not received in 'advance'.

Observations

Observations	Reply
Gujarat	
Depreciation and Financing Cost shown as controllable i.e. CAPEX considered as controllable, what if scheme/project not executed due to reasons beyond the control of licensee. It is suggested to keep time over-run and cost over-run only as controllable.	Spirit of Model Tariff Guidelines is same. For clarity we will include this
Chapter 3 Shall we take CAGR of number of consumers in slab and specific consumption of slab (kWh/Consumer) for forecasting sale? Because revenue calculation depends on specific consumption of slab.	**Refer: Chapter 3 (3.1)** We have proposed slab wise consumption forecast based on 2-3 year CAGR. However, baseline consumption is to be arrived through one year study (since authenticity of slab wise consumption as well as consumption norm per consumer is at question).

Observations

Observations	Reply
Gujarat	
Chapter 4 It is suggested to link assessment of unmetered agricultural consumption with supply hours to agricultural feeders. Then only we will get true picture of losses.	Supply hours is already considered for calculation of norms of un-metered consumption. We have proposed a study of 3 years to get accurate picture of connected load as well as supply hours
Chapter 5 For billing efficiency, it is also required to consider energy related to open access transaction (energy wheeled) at input level as well as at billing level.	We will incorporate this
Chapter 5 It is not clear whether energy assessed due to stop/slow meter or theft assessment forms part of energy billed or not?	It will be included in the calculation as per the spirit of the existing FOR formula for AT & C loss calculation.

Observations

Observations	Reply
Gujarat	
Chapter 5 Whether theft/unauthorized assessment to be considered in amount billed while computing collection efficiency?	Yes it will form part of amount billed under the head 'Amount realized on account of theft cases'. Please refer to formula for Billed Amount in Chapter 5 (5.2).
Chapter 6 Licensee to keep alternate source of power due to in-firm nature of renewable power. How to treat expense related to this alternate source of power. It is suggested to consider alternate firm source of power and surplus energy to be consider as market power and their revenue to be considered at benchmark rate.	We will elaborate this aspect.

Observations

Observations	Reply
Gujarat	
Chapter 6 Some surplus power is also available with licensee during lean period. It is suggested to consider revenue from such power while deriving net power purchase cost.	We will elaborate this aspect.
Chapter 7 For Calculation of incremental cost per kWh, it is suggested to considered salable energy as energy input multiply by (1- Distribution loss).	Please refer Chapter 7 (7.3) for the formula which is considered in the Guidelines
Chapter 9 CAPEX or Capitalization? As capitalization is more appropriate for ARR computations.	Agreed.

Observations

Observations	Reply
Gujarat	
Chapter 12 Working capital requirement of Distribution Licensee consists some controllable parameters also.	Agreed.
Chapter 13 It is suggested to keep 14% RoE only and tax to be considered as pass-through only at the end of year on the basis of actual payment by Licensee.	The provision of ROE is as per earlier recommendation of FOR.
Chapter 15 Act provide for determination of tariff for retail sale of electricity as well as wheeling of electricity. Draft guideline is silent on determination of wheeling charges.	Will be incorporated.
Chapter 16 Tariff design- some guideline for fixed charges/ energy charges required.	Will be incorporated.

Observations

Observations	Reply
Gujarat	
Chapter 16 It is suggested that 'Creation of Regulatory Assets' should not be allowed, hence there is no question of carrying cost for the same.	The spirit of Model Tariff Guidelines is the same. Model Tariff Guidelines and NTP do not advocate creation of regulatory asset and provide that the regulatory asset should be allowed in exceptional circumstances.
Chapter 17 Not possible to issue the suo-motu tariff order. The Commission may initiate suo-motu proceedings.	SERCs to initiate the proceedings and ask the utility to file the petition/give data.

Observations

Observations	Reply
Uttar Pradesh	
Page [h] of Model Tariff Guidelines method of computing power purchase requirement of Uttar Pradesh. This is wrong. Please refer to Para 6.2 of UPERC Tariff Order FY 2009-10 (quoted below): “6.2 SALES, NUMBER OF CONSUMERS & CONNECTED LOAD PROJECTIONS: 6.2.1 SALES: *6.2.1.1 The methodology adopted by Commission for computing Energy Balance is in line with the provisions of the Distribution Tariff Regulations. The Commission has arrived at the quantum for power purchase required for each DISCOM by first determining the category wise sales for each DISCOM and then grossing the same by the distribution and transmission losses.”*	Prior to FY 2009-10, UPERC followed this practice. Now that the Commission has changed the methodology, we shall incorporate it.
What does ‘A’ stand for in the collection efficiency formula? Is it ‘Arrears’? Should not the formula be: Revenue Collected = R – L + S + T - A	“A” is to be omitted from the formula.

Observations

Observations	Reply
Uttar Pradesh	
Page [m] “Provided that projection of AT&C loss trajectory shall be in accordance with percentage reduction as specified in National Electricity Policy. AT&C loss reduction shall be incentivized by linking returns in a MYT framework to an achievable AT&C loss reduction trajectory:” Which exact para / clause of the NEP are we referring too?	The reference of NEP will be removed.
Page [p] *Cost of such power procurement- capped by quarterly weighted average cost of bilateral purchases and power exchange prices of the same quarter in which the tariff Order is planned to be issued.* Such a cap determined could be low or high, depending on the power prices in that specific quarter in which the Tariff Order is planned to be issued as compared to the current year & preceding year.	Spirit of the Regulation is same

Observations

Observations	Reply
Uttar Pradesh	
Page [w] A&G expense as percentage of number of employees – How will this be useful? Take an example where 'X' company outsources a large no. of functions and a 'Y' company has its own employees for those functions, then how do we benchmark?	The expression "employee" will be changed to "personnel deployed".
Dearness allowance, terminal benefits in Employee cost etc. – So in a way except for 'Salaries' we are considering everything else as 'uncontrollable'. Then in that case a private licensee will keep its 'salaries' low and have other items very high, which will be passed through in the ARR.	One time expenses like terminal benefit etc,. Do not form basis for benchmarking.

Observations

Observations	Reply
Uttar Pradesh	
Provided that baseline for expenses shall be determined at constant prices of base year as escalation on account of inflation shall be over and above the baseline. – Say the base year was FY 2009-10, then what is meant by 'constant prices' of base year? Now for FY 2010-11, the escalation index was say 9%, then we escalate the FY 2009-10 figures to get the FY 2010-11 approved figures. Now for FY 2011-12, what do we do? We find the escalation index (again for that year) and apply the same on FY 2010-11 figures or do we apply the earlier (former) escalation index and apply it to FY 2010-11 figures?	CPI and WPI as mentioned in Employee cost and A&G cost shall be the average increase in the indices for immediately preceding three years.
"Provided that depreciation shall not be allowed on assets funded by capital subsidies or grants:" But these assets need R&M during the useful life, which will be borne by the licensee. Please clarify. What treatment has to be given to assets created from "Consumer Contributions"?	R&M is generally not envisaged during the useful life of the assets. Consumer contribution is not included

Observations

Observations	Reply
Uttar Pradesh	
Page [bb] "The repayment for the control period shall be deemed to be equal to the depreciation allowed for the year." Not clear. An illustration / example would bring in clarity.	This is in line with CERC Regulations.
Page [dd] "Provided that the interest on working capital shall be payable on normative basis notwithstanding that the Distribution Licensee has not taken working capital loan from any outside agency." In case the licensee has taken working capital loan from any outside agency, then will the actual interest be allowed, as interest is an uncontrollable cost?	This is in line with CERC Regulation which is on normative basis. For more clarity we will delete the expression: *notwithstanding that the Distribution Licensee has not taken working capital loan from any outside agency"*

Observations

Observations	Reply
Uttar Pradesh	
"Provided that 16% of post-tax Return on Equity per annum shall be considered for tariff determination pertaining to the Distribution Licensee:" An illustration / example would bring in clarity.	Illustration will be provided
Page [ff] "On the other hand, SERCs like BERC, UPERC, JKERC and HERC are not approving ROE which may further push the utility in to further losses." UPERC <u>approved 0% ROE</u> for FY 2009-10 for the State DISCOMs as submitted by the petitioners as this would have increased the gap further. But for NPCL (Private licensee) it allowed 16% ROE.	Even if the utility has not claimed it, the Guidelines recommend that the SERC should consider ROE for Tariff determination.

Observations

Observations	Reply
Jharkhand	
Endorsed	

Observations

Observations	Reply
Tripura	
Distribution Losses Circle-wise differential tariff circle wise as per the distribution loss may not be feasible as adoption of two or more type tariff by same utility may invite grievances of the consumers. Suggestion- To introduce incentive on loss reduction to the operation & maintenance staff.	Already discussed
AT&C losses Suggestion- To break AT&C losses in Technical and OTTD losses(Other than T&D losses). It is suggested that the above two losses need to be monitored by the respective wings. Accountability can be fixed for better results.	Spirit of the Regulation is same. We will elaborate this section.

For Consideration:

- **Model Tariff Guidelines.**

- **Funding for Studies:**
  - Metered sales.
  - Unmetered sales.
  - Audit of Accounts/IT application for accounts.

  - ➢ Estimated cost INR 20-30 Crore for 20 states.
  - ➢ Request for assistance from GOI.

THANK YOU