

Report
on
“Study on Review Electricity Tariff
including the role of (i) State
Governments; (ii) State Tariff Regulator;
and (iii) SEBs' /State Distribution
Companies in periodic tariff revision”

Analysis of tariff order issued by 8 States

State 1: Andhra Pradesh- Analysis of APERC Orders¹ for Central Power Distribution Company of Andhra Pradesh Limited (APCPDCL)

1.1 Facts, analysis and extracts from the order:

1. State Government had granted license to APTRANSCO for “Transmission and Bulk Supply” and “Distribution and Retail Supply of Electricity” under AP Electricity Reform Act, 1998 (APERA) w.e.f. 1.2.99 through the first Transfer Scheme.
2. APERC was constituted on 31.3.99 under the APERA 1998.
3. The Government notified the second Transfer Scheme on 31.03.2000 leaving the transmission business with APTRANSCO and vesting the distribution business in four subsidiary companies of APTRANSCO for Northern, Eastern, Southern and Central Zones of AP. The Commission issued all the licenses for a period of 30 years vide its Order dated 29.12.2000 effective from 1.4.2001 and in the interim period, the DISCOMs operated as licensee designates. They were required to file tariff applications by 31st December for each ensuing year.

Tariff Order for 2000-01

4. On 6.4.2000, APTRANSCO filed its first tariff proposals for the year 2000-01 for both Transmission and Retail Supply. Tariff Order was issued by the Commission on 27.05.2000, in a period of only one and a half month.
5. As proposed by licensee, the Commission accepted the transmission loss of 4.5% and target of distribution loss of 30.90% (out of which 13% was commercial loss) for 2000-01 with 1.5% reduction over previous year along with efficiency improvement of Rs. 500 Crore . The relevant extract is as follows:

“...The only reliable figure we have to go by is the level of billing which is at present 41% of the total energy purchased. Any improvement by way of regulation of agricultural consumption and reduction of losses would automatically be reflected in improved billing. When specifically asked, whether it was possible to improve the billing from 41% to 51% of the generated energy, the licensee frankly replied that it would be a very difficult task. But as we see, the licensee has to make serious efforts to achieve substantial improvement in the billing to be able to collect Rs.500 crores towards efficiency improvements as committed. We therefore direct that while the licensee should strive to improve the billing to 51%, should at least reach the level of 48% before 31.3.2001.”

6. Against the proposed ARR (Net of Non-Tariff Income) of Rs. 9018 Crore, the Commission approved an ARR of Rs. 8365 Crore. The main reason for reduction was application of merit order purchase for power requirement.

¹ Based on 2000-01 Order for APTRANSCO (combined transmission and distribution) and 2001-02 to 2011-12 Order for DISCOMs-with CPDCL data

7. The expected revenue from existing charges was Rs. 5448 Crore and the gap was Rs. 2917 Crore.
8. The Gap of Rs 2917 crs was filled by tariff increase of Rs.791 crs, GoAP subsidy of Rs.1626 crs and efficiency gains of Rs.500 crs.
9. The tariffs were annualized so as to recover the entire tariff increase for the whole year over the balance period of 10 months in the year. The Government also conveyed that the subsidy would be made available in equal monthly installments after adjusting monthly plough-back dues which are due from the utilities like Electricity Duty etc.).
10. On metering of agricultural consumption the Commission has recorded in para 2.4 that:

*“A major concern in the Commission is with regard to estimates of agricultural consumption. **Due to historical policy decisions, agricultural consumers are not metered since 1983.** These consumers have been charged a flat rate based on pumpset rated capacity in HP...”*
11. For agricultural tariffs, the Commission raised the existing flat rates to almost 1.5 times and provided for an optional metered tariff of 35 paise/unit, the Commission has recorded that:

“...At current charges, the average realisation for this category is 18 Ps per unit while the cost to serve is 236 ps. The Commission considers that the Electricity industry in Andhra Pradesh cannot sustain such low tariffs for the agricultural sector which is claimed to have a consumption of about 36% of the total energy supplied....”

Tariff Order for 2001-02

The newly created distribution companies filed their ARR Petitions on 30.12.2000 and the tariff proposals on 17.01.2001. The final order was passed on 24.03.2001 (after little over 2 months).

1. Performance for the previous year ie 2000-01,

The Commission concluded that:

1) Agricultural Consumption

*“...The Commission reiterates its views that there is no alternative to metering of the agriculture services. **In last tariff order the Commission suggested that the agriculture services should be metered within 3 years.** The Commission is convinced now that the Licensees should immediately come out with a credible plan for metering all the agriculture services within two years of this Order. The plan should be submitted for the Commission’s approval within three months. Meanwhile, they should expedite the program of metering the LT transformers.”*

Efficiency Gains

“16. At the end of the tariff year however the Licensee expects to be in losses essentially on account of excess agriculture consumption and lower than projected HT sales.”

Collection Efficiency

“... The receivables by end of FY 1999-00 were Rs.1911.69 crores. Though the DISCOMS have reported that by September, 2000 this had come down to Rs.1640.37 crores, the level of outstandings is still alarmingly large. The Commission is also aware that a surge in collections has been reported in December, 2000 but this surge may be attributed to the waiver of surcharge scheme that was ending in December, 2000. There are obvious shortfalls in the billing and collection systems.”

2) Subsidy payment by Government

- The Commission on truing up found the actual gap for 2000-01 to be Rs. 1024 Crore out of which Rs. 90 Crore was identified due to uncontrollable factors and allowed in ARR for 2001-02. However, balance gap of Rs. 934 Crore (comprising of Rs. 500 Crore of efficiency improvement, 247 Crore of excess power purchase for agriculture over and above the approved quantum, 147 Crore of foregone return and 30 Crore of other costs) was required to be bridged through GoAP subvention.
 - Against the subsidy requirement of Rs. 1626 Crore, the net subsidy payable by Government after adjusting its own dues of Rs. 524 Crore was coming to Rs. 1102 Crore, which was paid by the Government.
2. For the year 2001-02, the Commission accepted licensees proposals on losses and efficiency improvement and recorded that:

“...The Licensee had last year submitted that they have 30.9% (17.9% technical and 13% commercial) losses in the distribution system. The Commission had given directions for significant reduction in such losses. If we go strictly by the distribution loss figures in the submission (23.8%), the licensees have shown 7.1% reduction in distribution losses. But this has to be viewed alongwith APTRANSCOs submission that the transmission losses have gone up to 8.5% (from 4.5%). Nonetheless, the overall losses are stated to have come down marginally from last year’s submission of 35.4% to 33.9% for the year 2000-01 and projected to come down to 32.3% during FY 2001-02.

...the Licensees have this year also submitted that they will be achieving Rs.501 crores efficiency gains and to that extent the Commission has reduced their revenue requirements for FY 2001-02.”

3. Overall ARR For the four DISCOMs was Rs. 8285 Crore and its revenue gap of Rs. 2109 Crore was reduced to Rs. 2062 Crore by tariff increase. Rs. 501 Crore was to come from efficiency gains and the balance gap of Rs. 1561 Crore was the committed subsidy by the Government for subsidizing certain categories of consumers considering the tariffs determined by Commission. It was stated that :

“457. The government having seen the tariff at Fully Allocated Cost, directed that the tariff in respect of the subsidized categories may be reduced to the level at which the APTRANSCO had submitted its tariff proposals for FY 2001-02. This required an amount of Rs.1561.42 cr. towards subsidy. The Government have conveyed that this amount would be made available to the licensees in twelve equal monthly instalments. The Government subsidy has been

substantially directed towards domestic, agriculture and RESCOs (Rural Energy Co-operatives).”

4. For APCPDCL, the Commission approved purchase requirement of 16777 MU and sales of 11625 MU for 2001-02, i.e. with distribution loss of 30.71%.
5. The Commission determined an ARR of Rs. 3645 Crore at common BST applicable to all DISCOMs. The revenue at existing tariffs was Rs. 2627 Crore and the revenue at approved tariff was Rs. 2649 Crore, i.e. an increase of Rs. 22 Crore (i.e. less than 1%).
6. With approved retail tariffs, allocated subsidy and efficiency gains to each DISCOM, there were individual surpluses/gaps in DISCOM ARRs, which were eliminated by revising the ARRs of all DISCOMs with differential BST as per their paying capacities. Accordingly, the ARR for APCPDCL was revised to Rs. 3522 Crore. The revenue from approved tariff was Rs. 2649 Crore and the gap of Rs. 873 Crore was met through allocation of Government subsidy (Rs. 607 Crore) and efficiency gain (Rs. 266 Crore).
7. The Commission determined tariffs based on fully allocated costs to various categories and voltages and the requisite cross-subsidies. The resultant tariffs were adjusted for the subsidy paid by Government towards subsidized categories, which were equal to the proposed existing tariffs in line with Government direction. Hence, effectively no tariff increase was there.

Tariff Order 2002-03

8. A consolidated actual shortfall of Rs. 876 Crore was found for the year 2001-02 for APTRANSCO (423 Crore mainly due to increase in power purchase cost) and DISCOMs (453 Crore mainly due to lower revenue on account of change in consumer mix) in spite of the fact that there were savings in other costs. However, no proposal for recovering this shortfall was given to Commission. The Commission also noted that an additional subvention of Rs. 402 Crore was also received by APTRANSCO.
9. The Government stated that apart from committed subsidy it had provided adhoc assistance of Rs. 1053 Crore in 2000-01 to APTRANSCO. The Commission declined to consider this assistance towards regulatory asset.
10. The Commission noted that current collection efficiency is 90% and with past arrears it was 105% and appreciated licensee's efforts towards loss reduction.
11. The Commission fixed an efficiency improvement target of Rs. 300 Crore for all the four DISCOMs out of which APCPDCL's share was Rs. 160 Crore. After accounting for such efficiency gain, the gap at existing tariff was Rs. 1059 Crore.
12. Following the same methodology of tariff fixation as was done for 2001-02, the Commission determined a subsidy of Rs. 1059 Crore to keep the tariffs of subsidized categories at the levels proposed by licensees as per Government direction. Thus, again there was effectively no tariff hike.

Tariff Order 2003-04

13. The Government committed to provide further assistance to DISCOMs by issuing bond of Rs. 875 Crore in 2001-02 and Rs. 350 Crore in 2002-03, which were proposed to be carried forward as regulatory assets till the sector could service them.

14. The Commission found that against target efficiency gain of Rs. 300 Crore the actual gain was Rs. 81 Crore only and fixed a target of Rs. 295 Crore (Rs. 139 Crore for APCPDCL) for 2003-04. It noted the following loss and additional efficiency targets till 2003-04:

	2000-01	2001-02	2002-03	2003-04
System loss (T&D)	35.4%	33.9%	28.4%	24.8%
Efficiency Gain (Rs. Crore)	500	500	300	295

15. The Commission summarized the financial position of licensees as follows (FY01 & FY02 actual and FY03 & FY04 projected)

(All Figures in Rs. Crores)	FY 01	FY 02	FY 03	FY 04
GoAP Subsidy to Sector (Approved)	1626	1561	1509	1513
Financial Profit of licensees	-1073	-876	-819	NA
Financial Profit of licensees reworked by Commission	-1024		-254	
Special Appropriation allowed at beginning of year		90	-163	73
Excess cost of Agriculture to be met by govt.	934	-	-	473
Addl. Govt. Support provided	1133	896	350	NA
Cost Coverage	62.5%	68.4%	80.2%	81.4%
Cross Subsidy / subsidizing unit (Rs. / unit)		2.09	2.07	1.80

The Commission noted that Government support provided on the basis of financial loss shown by licensees was in excess of actual requirement worked out by the Commission and advised Government to make necessary adjustments after CAG audit.

16. Following the same methodology of tariff fixation as was done for 2001-02 and 2002-03, the Commission determined a subsidy of Rs. 1513 Crore to keep the tariffs of subsidized categories at the levels proposed by licensees as per Government direction. Rs. 1513 was also the gap for 2003-04 at the approved tariffs that was filled by Government subsidy. Thus, again there was no tariff hike barring minor changes for simplifying tariff structure and making it closer to Cost of Supply.

Tariff Order 2004-05

17. The Commission has summarized financial position of the sector up till 2004-05 as follows (2003-04 and 2004-05 projected), i.e. after regulatory intervention:

	2000-01	2001-02	2002-03	2003-04	2004-05
Average Cost of Service in Rs.	3.24	3.05	2.96	3.03	2.82
Average Revenue Realization in Rs.	2.09	2.00	2.19	2.34	2.35
Cost coverage	64%	66%	74%	77%	83%
Percentage of Revenue collection	94.84%	100.60%	98.16%	92.33%	100.00
Percentage of Metered sales in (%)	36.89%	38.44%	40.93%	42.49%	46.74%
Overall Tariff increase as a percentage	14.50%	0.76%	0.71%	-0.71%	-1.5%
Cross Subsidy	2177.38	1938.54	1970.93	2109.87	1754.54
Government Subsidy	1626.26	1561.41	1509.38	1513.49	1301.86
Percentage of Cross Subsidy	27.68%	24.90%	24.81%	22.24%	18.76%
Percentage of Subsidy	20.68%	20.06%	19.00%	15.96%	13.92%
Approved T&D loss level	35.4%	33.9%	28.4%	24.8%	23.6%
Actual T & D loss levels	38.91%	35.93%	30.23%	29.83%	27.71%

18. An efficiency gain target of Rs. 300 Crore was set for 2004-05.
19. Following the same methodology of tariff fixation as was done in previous orders, the Commission determined a subsidy of Rs. 1303 Crore to keep the tariffs of subsidized categories at the levels proposed by licensees as per Government direction. Rs. 1303 was also the gap for 2004-05 at the approved tariffs, and the same was to be covered by Government subsidy. Thus, again there was no tariff hike barring minor changes for simplifying tariff structure and making it closer to Cost of Supply for subsidizing categories. There was, accordingly, marginal reduction of 1.5% in tariffs for 2004-05.
20. The Commission also for the first time recorded that it was the time to link subsidy inflows to the level of actual sales to subsidized categories and directed DISCOMs to present actual sales data for subsidized categories for subsidy adjustment in the next year.

Tariff Order 2005-06

For the year 2004-05, the Commission has recorded that apart from the subsidy determined in the tariff order, the Government has also paid subsidy for its subsequent direction on free supply to agriculture:

“10. The Government of Andhra Pradesh (GoAP) gave directions to reduce the tariff of certain categories (domestic, cottage industries, local bodies, LT agriculture, RESCOS, HT agriculture, sugarcane crushing and aqua-culture) and agreed to provide Rs.1303.27 crs as subsidy. Thereby the revenue from proposed tariffs after subsidy came to Rs.8051.18 crs. On 14th May, 2004, Government of Andhra Pradesh, announced its policy of free power to agriculture and sought the Commission’s direction on the financial impact of the policy. The total subsidy payable on account of this policy during 2004-05 was Rs.433.24 crs including RESCOs, which was duly paid by the Government.”

21. An efficiency gain target for 2005-06 was Rs. 125 Crore was set.

22. Following the same methodology of tariff fixation as was done in previous orders, the Commission determined a subsidy of Rs. 1599 Crore to keep the tariffs of subsidized categories at the levels proposed by licensees as per Government direction. Rs. 1599 was also the gap for 2005-06 at the approved tariffs that was filled by Government subsidy. Thus, again there was effectively no tariff hike. The energy charges for HT industry were, however, fixed voltage wise for the first time.

23. The Commission also recorded the following on subsidy from Government:

“GoAP support to regulatory processes

376. The Commission would like to place on record, its appreciation of the unstinted support extended by GoAP to the Commission, the regulatory processes and for regular payments of subsidy amounts to the Utilities, as determined by the Commission from time to time.”

24. Regarding regularization of agricultural connections, the Commission has recorded:

“... In this connection, the Commission would like to clarify that supply of power to agriculture is highly subsidized by GoAP. As such, any decision on regularization or otherwise of the unauthorized agricultural connections lies within the domain of GoAP alone.”

Tariff Order 2006-07 to 2008-09 dated 23.03.2006 (First MYT Control Period), Tariff Order 2007-08 dated 20.03.2007 and Tariff Order 2008-09 dated 20.03.2008

25. The Commission notified its MYT Regulations on 14.11.2005 and Tariff Policy was issued on 6th February 2006. Accordingly, the Commission determined tariffs with regulations and also in line with the Tariff Policy.

26. The petitions for determination of ARRs and Wheeling Charges for the first control period 2006-07 to 2008-09 and for retail supply tariff for 2006-07 were filed on 31.12.2005.

27. While confirming that it was releasing its committed subsidy of Rs. 1599 Crore for 2005-06, Jt Secretary, Energy Department, GoAP stated that:

“... All key sector performance indicators have shown significant improvements, notable of them being reduction in T&D losses from about 37.90% in 1999-2000 to an estimated level of about 21.36% in 2005-06. It was a matter of pride to the Government, he added, that all the utilities have recorded profit and achieved a combined profit of about Rs.57 crore during the financial year 2004-05 and the sector was rightly ranked number one by the Ministry of Power...”

28. For 2006-07, the Commission approved overall sales of 43563 MUs and purchase of 54481 MUs with overall loss of 20%. The Commission also directed DISCOMs to charge FSA quarterly as per existing formula. FSA is applicable on all categories of consumers except agriculture.

29. Against the proposed loss reduction trajectory for the First Control Period, the trajectory approved by the Commission is as follows:

	2006-07	2007-08	2008-09
CPDCL	18.90%	17.41%	16.29%
APERC	18.90%	16.91%	15.89%
EPDCL	17.08%	16.25%	15.76%
APERC	17.08%	15.83%	15.07%
NPDCL	19.92%	18.80%	17.87%
APERC	19.92%	18.01%	17.08%
SPDCL	17.31%	16.46%	15.68%
APERC	17.31%	15.86%	14.94%

The Commission, however, based on actual losses has subsequently factored in higher loss levels for 2007-08 and 2008-09.

30. Following the same methodology of tariff fixation as was done in previous orders, the Commission determined the gaps for each DISCOM and the Government provided subsidy equal to the gap determined by Commission for each DISCOM for keeping tariffs of subsidized categories same as existing. Thus, again there were effectively no tariff hikes except nominal decreases for subsidizing categories. The Government had also vide its letter dated 18.3.2008 directed the Commission to keep tariffs for all DISCOMs same and committed to provide the requisite subsidy for subsidized categories.

Tariff Order 2009-10 to 2013-14 dated 20.03.2009 (Second MYT Control Period), Tariff Order 2010-11 dated 22.07.2010 and Tariff Order 2011-12 dated 31.03.2011

31. The petitions for determination of ARRs and Wheeling Charges for the period 2009-10 to 2013-14 and for retail supply tariff for 2009-10 were filed on 29.11.2008.
32. On 24.12.2008, the Commission directed licensees to publish proposals. The final order was passed on 20.03.2009, i.e. well within 4 months.
33. On performance of utilities and Government's commitment to subsidy, the Commission has recorded Government's statement as follows:

"174. All the Electricity utilities have performed exceptionally well. The transmission and distribution utilities have reduced T&D losses from 19.06% to 18.10 % up to November, 2008 and reduction is estimated to reach 17.30% by end of 2008-09. The APTRANSCO received 'India Power Award 2008 for overall utility performance from the Council of Power Utilities (CPU). The APGENCO has also performed consistently well maintaining a PLF of about 85% during the year 2008-09, up to January, 2009.

...

178. The Government is committed to the welfare of the farmers and is providing free power to all eligible agricultural consumers since 14.05.2004 and has been providing necessary

subsidy besides amount for purchasing additional power to meet the additional demand in the present Rabi Season

...

181. The filings made by the utilities for the financial years 2009-14, reflect the key objectives set by the Government of Andhra Pradesh

182. To conclude, the Government is committed to providing necessary financial assistance as needed by the Power Sector and providing subsidy to the utilities in accordance with the provisions of Section 65 of the Electricity Act, 2003”

34. The Commission did not accept the target loss levels for 5 years as proposed by DISCOMs and reduced them suitably. For example, the target loss level proposed for CPDCL for 2009-10 was 17.97% to be reduced to 14.94% by 2013-14. The Commission, however, approved target losses to be reduced from 13.04% to 10.10% in this period. The Commission gave following reasons for the same:

“197. The clause 5.4.6 of National Electricity Policy (NEP) states that the loss levels shall be specified, so as to bring down loss levels to be in line with the international practices by 2012. The international loss levels are in the range of 10-12 percent for both transmission and distribution.

198. Considering the normative loss level for Indian Electrical System at 15 percent (5 percent in transmission and 10 percent in distribution), the loss reduction targets are specified as envisaged in National Electricity Policy. As per National Electricity Policy, the Licensees should achieve the loss target of 10 percent by 2012.

199. While specifying loss trajectory with the consideration of the practical limitations, a grace period of two years is set to achieve the targets envisaged in National Electricity Policy.”

35. The loss trajectory was later on revised by the Commission by relaxing the time frame for achieving the target loss level to 2016-17.

36. The licensees sought true up for distribution business for the years 2005-06 to 2008-09 without including its impact on proposed ARRs for control period of 5 years. The DISCOMs had shown a gap of Rs. 1854 Crore and APGENCO Rs. 2820 Crore for the period 2005-06 to 2008-09 to be true up as per MYT Regulations. However, the gap was not sought to be carried forward in the next control period by DISCOMs as it was expected to be addressed by Government through subsidy although there was no commitment by Government towards this. The Commission decided to take the true up exercise separately and recorded as follows:

“203. It is appropriate to take up the issue of true up of expenses related to previous years separately after completion of the audited accounts for all years of the Control Period. As such, Licensees may seek the true ups outside the current filings as per the applicable regulations already notified.”

37. The Licensees computed and proposed to levy the wheeling charges in the form of Rs./kVA/month at 33 kV and 11 kV voltages and Rs./kWh at LT level. The Licensees did not file the reason for such differential proposal, i.e. on capacity and energy in their filings. The Commission decided to fix the wheeling charges uniformly for all the three voltages on capacity, i.e. Rs./kVA/Month for each year of the Control Period. Accordingly, the wheeling charges for CPDCL were fixed at 27.12, 185.94 and 671.71 (Rs./kVA) for 33 kV, 11 kV and LT levels respectively.

38. The Commission did not provide for any separate incentive/penalty mechanism for the following reason:

“211. It is felt that the approved ARR amount and Loss Reduction Trajectory are sufficient to provide incentives and penalties for the Licensees. Accordingly, no special measures for incentives and penalties have been contemplated for the Control Period.”

39. The Net Revenue Requirement for CPDCL was approved at Rs. 8416 Crore for 2009-10 against Rs. 9743 Crore proposed by licensee. Major heads of reduction were (i) power purchase cost approximately Rs. 900 Crore (both due to lower loss level and merit order purchase) (ii) Distribution Cost about Rs. 300 Crore and (iii) Inter-state transmission charges about Rs. 120 Crore. The tariffs were fixed on the basis of fully allocated CoS for each category.

40. Few changes were made in existing tariffs, which are recorded as:

“Tariff Changes

335. Some changes in energy charges and categorization of consumers have been done for FY2009-10 that will have a bearing on revenue from tariff. These changes are as follows;

a) the energy charge for HT I: Industrial and HT V: Railway Traction has been reduced by Rs.0.05/kWh for FY2009-10. This is to progressively achieve the mandatory objective contained in section 42 of the Electricity Act 2003,

b) Rural Horticulture Nurseries have been placed in LT V(A):Agricultural Category with energy charge at Rs.1.00/kWh on request of Government of Andhra Pradesh as submitted by some DISCOMS,

c) Salt Farming Units have been placed in LT V(A): Agricultural Category with energy charge at Rs.1.00/kWh, on request of Government of Andhra Pradesh as submitted by some DISCOMS,

d) cotton seed oil mills are classified as seasonal industry on request of Government of Andhra Pradesh and as recommended by Licensees, and e) A new category has been introduced under LT VII(B):Religious places with connected load up to 1 kW with first 200 units at Rs.2.00/kWh and the balance units at Rs.4.00/kWh in view of continued public representations.”

41. The approved revenue was Rs. 7389 Crore against the proposed revenue of Rs. 7680 Crore for 2009-10. Corresponding approved gap was Rs. 1028 Crore against the proposed gap of Rs. 2059 Crore. The Government conveyed its commitment to provide subsidy of Rs. 1028

Crete to fund the approved gap. The Commission has directed licensees to get the subsidy trued up for any variation in actual sales to subsidised categories.

42. The Commission keeping in view the direction of State Government to keep tariff of subsidized categories as proposed by licensees, determined a tariff schedule where it kept the tariffs as proposed by licensees for almost all categories and determined subsidy requirement from the Government for covering the projected gaps for 2009-10, 2010-11 and 2011-12.
43. For 2010-11, the sectoral subsidy requirement determined by Commission is Rs. 3653 Crore, which was committed by Government to be provided. For 2011-12, the Government has committed the provision of determined subsidy (gap) of Rs. 4146 Crore. In addition, the Government has given certain directions for not enhancing tariffs for domestic, cottage industry etc. for which Government has committed to provide additional subsidy.
44. By reducing the tariffs for HT Industry the Commission has reduced their cross-subsidy. While the Commission approved reduction in tariffs for some of the subsidized categories, in the absence of requisite data, the Commission has directed the licensees to give revenue implications for the same as Government has committed additional subsidy for the same. The Government has conveyed its acceptance to provide such additional subsidy.
45. The agricultural consumers still remain unmetered in the State. Some of the explanations given by DISCOMs for not metering are (i) metering and regular meter reading of large number of agricultural consumers is uneconomical (ii) there is stiff resistance from farmers and (iii) DISCOMs are following the estimation methodology based on sample meter reading at Distribution Transformers as approved by APERC.

1.2. Key Findings

1. The Commission has always issued tariff orders within the stipulated time frame and well before the beginning of the financial year except the very first order, which was issued about two months after start of year but the utility was compensated for delay by annualizing the tariffs. Also, the tariff order for 2010-11 was issued in July 2010 on request of DISCOMs for late filing of Petitions. The increase in tariff was, however, given effect to only from 1st August 2010 but covered the gap for entire year.
2. The Commission initiated tariff and efficiency reforms right from its first Order and has been issuing Orders each year till now.
3. The Commission issued MYT Regulations in 2005 and first control period was from 2005-06 to 2008-09. The true-up of this period is still to be done as the Commission has asked the Discoms to come separately for true up with audited accounts.
4. The Commission has successfully brought the cross-subsidy of subsidizing consumers down to reasonable level.
5. Collection efficiency has been close to 100% right from beginning.

6. There have been regular but nominal tariff revisions since the likely revenue gap has been covered by Government subsidy. The Government also seems to have been regularly funding the additional losses of the licensees.
7. An important finding is that the subsidy for subsidized categories at tariffs desired by Government has been regularly determined by the Commission and actually paid by the Government.
8. The sectoral distribution losses have come down from 30.90% in 2000-01 to 17.30% in 2008-09.
9. Metering of agricultural consumers has not been successful in the State. Thus, the figure of losses based on estimated agricultural consumption may not represent the correct picture and, hence, the gap for true up sought by the DISCOMs as per Regulations may actually be higher in financial terms due to camouflaged losses. The Commission has directed for scientifically determining agricultural consumption through Indian Statistical Institute.
10. The CPDCL is largest in volume of sales in AP capturing about 40% of State's consumption. The inefficiencies of the system have been brought down to large extent by various initiatives taken by it.
11. The efficiency level of CPDCL has improved from 30.71% in 2001-02 to 17.97% (proposed) in 2009-10. The Commission has approved loss level of 13.04% for 2009-10, which is to be reduced to 10.10% by 2013-14.

State 2- Analysis of DERC Tariff Orders:

2.1 Facts, analysis and extracts from the order:

1. Prior to privatization, the Commission had issued two Orders (1) Order on the Aggregate Revenue Requirement (ARR) for FY02 and Tariff Determination Principles for DVB for the period FY03 to FY06 on 23 May, 2001 and (2) the first Tariff Order after the notification of the Transfer Scheme and Policy Directions, on 22 February, 2002 based on a Joint Petition for determination of the Bulk Supply Tariff (BST) and opening loss levels for the distribution companies. The Commission determined the BST applicable for sale of power from DTL to the DISCOMs, on the basis of the paying capacity of each distribution company.
2. The period of 2002-03 to 2006-07 was the period of applicability of Policy Directions issued by the Government of NCT of Delhi (Government) for determination of tariff for three privatized DISCOMs. Accordingly, the analysis has been done separately for the policy direction period and subsequent period. The salient features of the Policy Directions were:
 - a) AT&C losses for the purpose of computation of tariff shall be based on the values of reduction in AT&C loss each year for the years FY03, FY04, FY05, FY06 and FY07 indicated in the bid submitted by the Petitioner and as finally accepted by the Government, over the opening level of AT&C loss approved by DERC for each distribution company in the Tariff Order dated 22 February, 2002.
 - b) The Tariffs shall be determined such that the distribution licensees earn, at least, 16% return on the issued and paid up capital and free reserves provided that such share capital and free reserves have been invested into fixed or any other assets, which have been put into beneficial use for the purpose of electricity distribution and retail supply and provided further that investment of such share capital and free reserves has the approval of the Commission.
 - c) Retail Tariffs for the DISCOMs shall be identical till the end of FY07, i.e., consumers of a particular category shall pay the same retail tariff irrespective of their geographical location. The DISCOMs were accordingly, required to pay TRANSCO for power purchase as per their paying capacity after meeting all their legitimate expenses and return. Any remaining gap in TRANSCO's ARR was to be met through Government Loan support of Rs.3450 Crore over a period of 5 years.
 - d) Any over-achievement or under- achievement with respect to reducing AT&C losses shall be treated as per the methodology specified in the Policy Directions.
3. After the Transfer Scheme of DVB was made effective (1 July, 2002), the Commission issued a Tariff Order on 26 June, 2003 for approval of ARR of privatized DISCOMs and determination of Retail Supply Tariffs to be charged to different consumer categories for FY03 (9 months) and FY04. This Order adopted the directions laid down in the Policy Directions issued by the GoNCTD for determination of Retail Supply tariffs for all the DISCOMs.
4. The Commission subsequently issued Tariff Orders for DISCOMs for FY05, FY06 and FY07 on 9 June, 2004, 7 July, 2005 and 22 September, 2006 respectively. The key highlight of these

Orders was approval of BST based on the principle of “ability to pay” to maintain uniform retail tariffs across all DISCOMs. The total sectoral gap was filled up by Government support in the form of loan to TRANSCO amounting to Rs. 3450 Crore spread over the Policy Direction period of 5 years. After the Policy Direction period, the Commission issued two tariff orders under new MYT Regulations, 2007 on 28 February 2008 (2007-08 to 2010-11) and on 31st May 2009 (2009-10)

5. The summary of tariff orders issued by the Commission after privatization of distribution business for three companies viz. NDPL, BRPL and BYPL is presented below:

Financial Year	Date of Order	NDPL		BRPL		BYPL	
		Date of filing	Date of Admission	Date of filing	Date of Admission	Date of filing	Date of Admission
2002-03 & 2003-04	26.06.2003	02.12.2002 & 1.1.2003	06.03.2003	30.11.2002 & 1.1.2003	06.03.2003	30.11.2002 & 1.1.2003	06.03.2003
2004-05	09.06.2004	17.12.2003	16.01.2004	26.12.2003	16.01.2004	26.12.2003	16.01.2004
2005-06	07.07.2005	31.12.2004	10.05.2005	29.12.2004	10.05.2005	29.12.2004	10.05.2005
2006-07	22.09.2006	14.12.2005	30.03.2006	20.12.2005	30.03.2006	20.12.2005	30.03.2006
2007-08 to 2010-11	23.02.2008	29.09.2007	26.10.2007	01.10.2007	26.10.2007	03.10.2007	26.10.2007
2009-10	31.05.2009	02.12.2010	19.12.2008	02.12.2010	19.12.2008	02.12.2010	19.12.2008

6. Key performance parameters of each DISCOM during Policy Direction period are presented in the following Tables:

NDPL

Parameters	2003-04	2004-05	2005-06	2006-07	2008-09	*2009-10
AT&C loss (%)	44.86%	33.79%	26.52%	23.73%	18.29%	18.68%
Collection Efficiency (%)	95.78%	100.19%	100.75%	104.95%	103.07%	99.50%

*Approved as per MYT Regulations

BRPL

Parameters	2003-04	2004-05	2005-06	2006-07	2008-09	*2009-10
AT&C loss (%)	45.06%	40.64%	35.53%	29.92%	27.51%	20.23%
Collection Efficiency (%)	97.95%	92.58%	105.13%	108.87%	104.89%	99.50%

*Approved as per MYT Regulations

BYPL

Parameters	2003-04	2004-05	2005-06	2006-07	2008-09	*2009-10
AT&C loss (%)	54.29%	50.12%	43.89%	39.03%	30.23%	26.26%
Collection Efficiency (%)	95.80%	116.22%	107.76%	105.58%	104.79%	99.50%

*Approved as per MYT Regulations

Highlights of Tariff Orders for Policy Direction Period:

1. The period of ARR for 2002-03 was last 9 months and entire year for balance period of Policy Directions.
2. The Commission changed the depreciation rate of 6.69% (based on accelerated rates in 1994 MoP notification) used in its BST Order dated 22.02.2002, which was basis of bidding for privatization, to 3.75% (based on straight line rates specified by CERC). The modification was challenged by DISCOMs and they succeeded before Hon'ble ATE and Hon'ble Supreme Court after long litigation.
3. Cost of meters and transformers replaced was considered as capital expenditure rather than revenue expenditure.
4. Commission approved financing and, hence, its servicing cost (i.e. interest and return) for the approved capital expenditure as compared to capitalized/transferred to fixed assets expenditure in some other States.
5. The collection of Arrears of DVB period (prior to privatization) was not permitted to be given to Holding Company as per scheme of the Policy Directions and was utilized to make payment to TRANSCO for reducing its gap. The Commission was of the view that since collection efficiency and hence AT&C loss is calculated considering arrears, the receivable should also be counted as revenues rather than expense and should remain in the sector.
6. The tariffs remaining same for all DISCOMs, the differential BST's were fixed with regard to paying capacity of DISCOMs, the deficit in BST was compensated by Government support.
7. For estimating employee expenses, the Commission instead of taking reduced costs due to Special Voluntary Retirement Scheme (SVRS) and its associated cost of paying terminal benefits, preferred to go by previous employee costs adjusted for normal increase with a rider that net savings and costs of SVRS shall be considered after complete implementation of scheme alongwith amortization of costs.
8. The Commission has been carrying out provisional true up in the ensuing year and final true up in year next to ensuing year based on audited data. The Commission declined to do third time true up except in the year in the Order dated 6th February 2008, where Commission true up for all the years of Policy Direction Period due to various judgments of Hon'ble ATE.
9. While the costs and revenues were matched with tariff in 2003-04 Order, in the Order for 2004-05 the Commission chose to create Regulatory Asset of Rs. 696 Crore as the hike of 30% (gap of Rs. 1072 Crore) in tariff required was moderated to only 10%. The Commission wrote:

"In principle, the Commission is of the view that this Option has to be resorted to only as a final measure after exhausting all other practically available measures..."

10. The Commission examined the other two options i.e. efficiency improvement and regulatory asset creation. The Commission found that efficiency improvement is inbuilt in Policy Direction framework and it is bound to adhere to the same and hence the only option available was creation of regulatory asset to be amortised in 2-3 years preferably within the

Policy Direction period. The need for sudden high hike was (i) lower hike(5%) in previous tariff order than envisaged in Policy Directions (10%)and (ii) reduction of Government support amount to a large extent in the third year. The Commission discussed the importance of overachievement benefit of which had to be shared with consumers as an important measure for amortization of regulatory asset in future apart from taking it as a part in future ARRs. The Commission finally decided to raise tariffs by 10% and create Regulatory Asset for balance gap of Rs. 696 Crore. The Commission allocated Regulatory Asset on the basis of Revenues of DISCOMs.

11. After first true up of the 2004-05, the Regulatory Asset of Rs. 696 Crore was revised to Rs. 548 Crore and Rs. 205 Crore out of it was amortised in 2005-06. A hike of Rs. 6.6% (Rs. 320 Crore) was required after amortization in 2005-06. In the year 2006-07 TO, the Commission further revised the Regulatory Asset to Rs. 518 Crore and after accounting for trued-up figures and complete amortization of balance Regulatory Asset, the net sectoral revenue surplus was found to be Rs. 45 Crore.

Period Post Policy Directions

1. In February 2008 the Commission passed the first order after expiry of the period of directions. In this order, the Commission determines ARRs for 2007-08 to 2010-11 and sets retail tariffs for 2008-09. The Commission has also done final true up of Policy Direction Period in this Order. The gap of previous years was set off against the projected surplus for 2007-08 and 2008-09. No change in tariffs were done except for structural adjustments.
2. The next order passed in May 2009 is basically a true up Order for 2007-08 and sets retail tariffs for 2009-10. Here again, the gap for 2007-08 was adjusted against the current surplus and the no revision in tariff was done.
3. The Commission, followed the regulations that no true up of controllable costs shall be done, has trued up uncontrollable costs like power purchase and sales based on targeted loss.
4. The state Government issued a Policy Direction to Commission on 4th May 2010 u/s 108 not to issue the Tariff Order until the issues raised by DISCOMs are answered to Government by the Commission. The Commission, accordingly, did not issue the tariff order. This was challenged before Hon'ble High Court of who quashed the policy directions given by the Government on the ground that the state government's power to give policy directions u/s 108 could not be used for matters that relate to statutory functions of the Commission.

2.2 Key Findings in Delhi's Case

1. The collection efficiencies and AT&C losses of all the three DISCOMs improved impressively over the period of Policy Direction and in fact have crossed the minimum levels stipulated in these Directions.
2. The Companies have by and large met the deadlines for filing the Petitions. However, there have been delays in admission due to incomplete filing/information or the Order was delayed as the information filing continues for a long time. This also reveals that the information being filed before the Regulator after the public process is not made available to

public for making any comments. It is, therefore, proposed that before going public the Regulator may fix a deadline after which no information should be accepted and it may proceed with the available information based on indexed tariffs.

3. The Regulator resorted to Regulatory Asset in the initial years, which increased pressure on tariff in subsequent years, but was finally amortised in subsequent year tariffs.
4. There has been delay in truing up of past expenses particularly the power purchases expenses, which forms a major chunk. On this, the Regulator has also taken a stand before Hon'ble High Court that for speedy recovery of gap in 2008-09 and 2009-10 due to higher power purchase cost, it is soon coming out with Fuel and Power Purchase Adjustment (FPPA) formula for quarterly adjustments. FPPA is, thus, important for speedy cost recovery for a major portion.
5. The regulator is neither bound by the "Code of Conduct" period nor by the Policy Directions of Government while discharging its statutory functions like Tariff Determination.

State 3- Analysis of GERC Orders for Torrent Power Ltd.

3.1 Facts, analysis and extracts from the order:

1. The Commission issued two separate tariff orders for Ahmedabad and Surat Electricity Company Ltd. way back on 5.9.2002 and 1.12.2001 respectively.
2. In 2005, the Torrent Generation Company Ltd., Ahmedabad Electricity Co. Ltd. and Surat Electricity Co. Ltd. were merged into one company viz. Torrent Power Ltd. The amalgamation scheme was also approved by Hon'ble High Court of Gujarat.
3. The Commission has issued three tariff orders after merger of the three companies i.e. for 2007-08, 2008-09 (MYT Order for 2008-09, 2009-10 & 2010-11) and 2009-10.
4. The Commission determines generation ARR for TPL generating stations C, D, E, F at Sabarmati and Vatva Gas having capacities of 60, 120, 110, 110 and 100 MW respectively. The tariff for 1130 MW Sugan plant, which also supplies power to TPL, is determined by CERC. The Commission also determines retail tariffs for the distribution business of the Co.

Tariff Order for 2007-08 (Dated 31.07.2007)

5. The petition for 2007-08 was filed by TPL on 06.02.2007 and was admitted by Commission on 1.05.2007. Final order on this petition was passed by the Commission on 31.7.2007.

Main Features of the ARR.

6. The past losses of Ahmedabad and Surat Areas have been given as (%)

Year	Ahmedabad & Gandhinagar	Surat
2002-03	18.75	14.23
2003-04	16.67	12.98
2004-05	12.62	11.11
2005-06	9.67*	
2006-07	9.34*	

*These figures were not provided separately by TPL to the Commission

7. The profit after tax for the both these areas taken together has steadily gone up with actual figures being Rs. 78, 147 and 179 Crore for the years 2003-04, 2004-05 and 2005-07 (upto September 06). As on 1.4.2007, the combined equity was Rs. 600 Crore with accumulated reserves and surplus as Rs. 1852 Crore, these have been ploughed back in the assets of the System. On past performance the Commission has recorded:

On losses

"The company appears to have taken a number of effective steps to reduce the distribution losses over years. Its performance, as may be seen from above figures, is commendable."

"While appreciating the steps taken by TPL for reducing the T&D losses, the Commission feels that there is scope for further reduction. "

On financial performance

“The financial performance of the AEC and SEC during the financial years 2003-04 and 2004-05 was impressive. Both the companies earned profit individually for the years 2003-04 and 2004-05 i.e prior to amalgamation. Even after amalgamation TPL has earned profit after tax to the extent of Rs. 17927 lakhs for the period ending 30/09/2006 (18 months period).”

On Cost coverage and cross subsidy

“Both AEC and SEC have good consumer mix where almost all the consumers are paying average cost of service. The lowest paying consumers viz Residential and Agricultural consumers pay over 80% of the average cost of supply while other consumers are paying a little higher than the average cost of supply.”

On Details of Revenue arrears

“The arrears from the consumers are Rs. 34014 lakhs as on 31/03/2005 and Rs. 40910 lakhs as on 30/09/2006. Out of the arrears of Rs. 40910 lakhs as on 30/09/2006, the doubtful debts are only Rs. 756.90 lakhs and have been provided as provision for doubtful debts. All the other sundry debtors are considered good. The arrears correspond to about 58 days revenue.”

8. For Ahmedabad and Surat taken together, the sales was approved at 7410 MUs and revenue at Rs. 2796 Crore. The Commission fixed loss level of 9.26% considering actual loss level of 9.52% in 2006-07. The Commission approved an ARR of 2820 Crore after prudence check (CoS Rs. 3.81/unit) leaving a gap of Rs. 24 Crore. (The gap was subsequently found as surplus of Rs. 11 Crore during truing up for 2007-08 done on 17.01.2009).
9. The Commission did not change the existing tariffs and has recorded the following reason for doing so to be addressed during truing up:

“The TPL should be able to bridge the gap in revenue by the following measures

- Effective metering, billing and revenue realization of all consumer installations would also improve the sales and revenue.
- By reducing certain operational costs which are controllable by efficiency improvement measures.
- Improve PLF of Vatva and thereby reduce its SHR by ensuring additional gas”

Tariff Order for 2008-09 (Dated 17.01.2009)

10. The first MYT petition for the period 2008-09, 2009-10 and 2010-11 was filed by TPL on 28.05.2008 was admitted by Commission on 29.05.2008.
11. The petition filed was for Truing up for 2007-08 and ARR for a three year control period of 2008-09, 2009-10 and 2010-11. Final order was passed by Commission on 17.01.2009

True up for 2007-08

12. For Ahmedabad (including Gandhinagar) and Surat taken together, the actual sale was 7415 MUs against 7470 MUs approved for 2007-08. Actual combined revenue was Rs. 2935 Crore

against estimate of Rs 2796 Crore. In short the actual values turned to be better than those approved resulting in revenue surplus of Rs. 11 Crore against the gap of Rs. 24 Crore left uncovered in the tariff order. Similarly, against the approved distribution loss of 9.26%, actual loss was 8.75%. The entire savings of loss reduction were, passed on to consumers in true up. The combined updated ARR was Rs. 2924 Crore against Rs. 2820 Crore approved earlier (CoS being 3.94 and 3.78 respectively)..

ARR and Tariffs for 2008-09

13. For Ahmedabad, the sales were approved at 4922 MUs and revenue at Rs. 1881 Crore. The Commission fixed loss level of 10.43% considering actual loss level of 10.48% in 2007-08. The Commission approved an ARR of 1895 Crore of which Rs. 957 Crore was cost of power purchased from its own generating units at average cost of Rs. 2.66/unit after prudence check (CoS Rs. 3.85/unit) leaving a gap of Rs. 14 Crore.
14. For Surat, the sales was approved at 3186 MUs and revenue at Rs. 1216 Crore. The Commission fixed loss level of 6.00% against the actual loss level of 6.01% in 2007-08. The Commission approved an ARR of 1307 Crore after prudence check (CoS Rs. 4.10/unit) leaving a revenue gap of Rs. 91 Crore.
15. The combined sale was approved at 8108 MUs and revenue at Rs. 3097 Crore. The Commission approved an ARR of 8108 Crore after prudence check (CoS Rs. 3.95/unit) leaving a gap of Rs. 105 Crore to be addressed during truing up.(This gap subsequently turned out to be a surplus of Rs. 22 Crore in the truing up order dated 9.12.2009).
16. The Commission did not change the existing tariffs except for nominal increase in energy charges for some categories, and has recorded the following reason for doing so:

“...Though the Commission determines the tariff to cover the gap during 2008-09, the revised tariff is not to be implemented retrospectively w.e.f. 1st April 2008 as it imposes heavy burden on the consumers. Hence, it shall be implemented with effect from 1st February 2009. The utility can recover only about 40% of the gap on annual basis, and other part of the gap can be recovered during the remaining years of the control period. The actual gap would, however, be arrived at on the performance review and truing up for the year 2008-09.

...It is seen that the revenue gap for the Ahmedabad / Gandhinagar area is Rs.13.91 crore during 2008-09, which could be covered by a modest increase in energy charges for some categories of consumers.

For the Surat area the gap is Rs.91.03 crore which is about 7.50% of the revenue. Bulk of consumption and revenue in Surat area comes from LT industry (small industry) – Diamond Polishing and Textiles - which are mostly export oriented and are affected by global economic slow down and recession.”

17. The Commission has also allowed Fuel and Power Purchase Adjustment as follows:

“The FPPPA formula approved by the Commission vide its order dated 31st July 2007 is reproduced below:

$$FPPPA = [FOT+PPP1 + PPP2] \div [S.E]$$

Where,

FOT is Adjustment on account of variations in delivered cost of Fuel at TPL's thermal power stations (Rs. Millions).

PPP1 is Adjustment on account of variable cost of power purchased in (Rs. Millions).

PPP2 is Adjustment on account of fixed cost of power purchased in (Rs. Millions).

S.E. (in mU) is [Total sales in MU + Excess T&D loss in MU]

(a) Fuel cost adjustment of own generating stations:

FOT = Sum [(HB X OTDA) X (Fuel/CA – Fuel CB)] for n=1 to k

where,

n 1 to k, the thermal power station in TPL

OTDA is the actual level of delivered energy at the bus bar (net generation) from TPL's thermal plants in million units during the control period.

HB is the base station heat rate in K.Cal./kWh calculated on the net output using permitted auxiliary consumption.

Fuel/CA is the new landed price of fuel at relevant TPL's generating stations, expressed in Rs./K.Cal calculated after allowing increase (or decreases)

in the price of fuel/railway freight, taxes and duties on fuel as well as fuel price increase by fuel suppliers.

Fuel/CB is the base## landed price of fuel at relevant TPL's generating stations, expressed in Rs./K.Cal calculated using the base data. This parameter is constant (frozen) for the various quarters (periods) for which increases in fuel price is being permitted.

Base year for this order is the Financial Year 2006-07.

(b) Power purchase cost adjustment formula:

= [PPP1 + PPP2] ÷ [S.E]"

18. Two main features of the Fuel and Power Purchase Adjustment Formula are:

- a) It divides the entire excess power purchase cost over the actual sales and excess loss
- b) Even FPPA figure for all consumers is same irrespective of their category.

Tariff Order for 2009-10 (Dated 09.12.2009)

19. The petition for 2009-10 was filed by TPL on 12.05.2009 and was admitted by Commission on 6.6.2009. The petition was filed for Annual Performance Review (APR) for 2008-09 and ARR for 2009-10, which was the second year of 3 year Control period 2008-09 to 20010-11. Final order was passed by Commission on 09.12.2009 (6 months after admission).

Annual Performance Review (APR) for 2008-09

20. During APR for 2008-09, the Commission kept the controllable parameters at the same level as were approved irrespective of their actual values (although there were savings in certain heads) while the uncontrollable parameters were trued up to actual values. The Commission has specified the following as controllable and uncontrollable parameters:

Controllable	Uncontrollable
Distribution loss	Power purchase cost
Employee expenses	Depreciation expense
R&M expenses	Interest on loans
A&G expenses	Interest on security deposit
Interest on Working Capital	Return on equity
Provision for bad debts	Income tax
Contingency reserve	Incentive

21. For Ahmedabad, the actual sales was 4737 MUs against 4922 MUs approved (consumer base 15.11 and 14.85 lakh respectively). Actual revenue was Rs. 2145 Crore against estimate of Rs 1881 Crore. Against approved loss of 10.43%, actual loss was 8.69%. The savings from losses and other controllable parameters were shared between consumers and company in the ratio 2:1 giving the consumers additional revenue of Rs. 45 Crore. Power purchase cost was allowed at actual. The trued up ARR was Rs. 2070 Crore against Rs. 1895 Crore approved earlier (CoS being 4.37 and 3.85 respectively). Net surplus after true up was Rs. 121 Crore.
22. For Surat, the actual sales in 2008-09 was 2907 MUs against 3186 MUs approved (consumer base 5.97 and 6.02 lakh respectively). Actual revenue was Rs. 1331 Crore against estimate of Rs 1216 Crore. Against approved loss of 6%, actual loss was 5.51% and corresponding savings in power purchase cost at average rate were shared between consumers and company. The savings from losses and other controllable parameters were shared between consumers and company in the ratio 2:1 giving the consumers additional revenue of Rs. 28 Crore. Power purchase cost was allowed at actual. The trued up ARR was Rs. 1384 Crore against Rs. 1307 Crore approved earlier (CoS being 4.76 and 4.10 respectively). Net deficit after true up was Rs. 25 Crore.
23. For TPL (Combined), the actual sales in 2008-09 was 7644 MUs against 8108 MUs approved. Actual revenue was Rs. 3476 Crore against estimate of Rs 3097 Crore. The trued up ARR was Rs. 3454 Crore against Rs. 3202 Crore approved earlier (CoS being 4.52 and 3.95 respectively). Net surplus after true up was Rs. 22 Crore.

Updated Estimate of ARR for 2009-10

24. For Ahmedabad, the generation ARR for 2009-10 was estimated as Rs. 895 Crore, while the same was approved at Rs. 913 Crore in MYT order. Savings primarily arose from uncontrollable parameters like depreciation, interest on loan and working capital and RoE. However, the Commission observed that if CEA's recommended norms were applied to

these stations, a saving of around Rs. 47 Crore would have accrued. The sales were revised from 5340 MUs to 4996 MUs and revenue from Rs. 2046 Crore to Rs. 1905 Crore. The Commission had fixed loss level of 10.25% for 2009-10 in the MYT Order. The Commission revised the loss level from 10.25% to 8.54% in view of the actual loss level of 8.69% in 2008-09. The ARR was revised from Rs. 2195 Crore to Rs. 1945 Crore (CoS from Rs. 4.11 to Rs. 3.89/unit). The reduction was mainly due to reduction in power purchase cost due to reduced sales estimate.

25. For Surat, the sales was revised from 3411 to 2885 MUs and revenue from Rs. 1271 Crore to Rs. 1091 Crore. The Commission had fixed loss level of 6% for 2009-10 in MYT Order. The Commission revised the loss level from 6% to 5.51%, equal to actual loss level of 5.51% in 2008-09. The ARR was revised from Rs. 1375 Crore to Rs. 1223 Crore (CoS from Rs. 4.03 to Rs. 4.24/unit). The reduction in ARR was mainly due to reduction in power purchase cost due to reduced sales estimate, while CoS went up because %age reduction in sales was more than reduction in ARR.

26. The Commission did not change the existing tariffs and found the following gaps in approved ARRs for Ahmedabad and Surat areas of TPL vis-à-vis that approved in MYT Order 2008-09:

Parameter	Ahmedabad		Surat		Combined	
	MYT order	Approved	MYT order	Approved	MYT order	Approved
Net ARR	2194.95	1945.47	1375.43	1222.70	3570.38	3168.17
Revenue	2045.63	1904.69	1271.27	1090.94	3316.9	2995.63
(Gap) / Surplus (FY 2009-10)	(149.32)	(40.77)	(104.16)	(131.77)	-253.48	-172.54

27. The Commission has left this gap of Rs. 173 Crore (Combined) uncovered citing the following reasons, which are expected to reduce the actual gap:

“... if the CEA recommendations in regard to operating parameters are applied to TPL-G (APP) for FY 2009-10, its aggregate variable cost of generation would decrease by Rs. 47.13 crores.”

“The tariff for SUGEN has been provisionally considered at Rs. 3.10 for FY 2008-09 and Rs. 2.98 for FY 2009-10 pending the finalization of its tariff by CERC. If CERC approves a tariff of Rs. 2.98 as estimated by the petitioners for FY 2009-10, the gap for FY 2008-09 would reduce. If CERC approves a tariff lower than Rs. 2.98, the final gap for FY 2008-09 and FY 2009-10 shall reduce further.”

28. The Commission has allowed quarterly corrections in retail tariff based on variations in cost of fuel and power purchase as per the prescribed fuel and power purchase adjustment (FPPA) formula, for which TPL has been regularly filing petitions for approval of Commission.

3.2 Key Finding of Gujarat, TPL Study

1. Torrent Power Ltd. has been one of the best performing utilities in the country. However, regulatory intervention has given further impetus to its efforts for efficiency improvement. This is evident from the fact that the losses have sharply gone down from 19% and 14% to

9% and 5.5% respectively for Ahmedabad and Surat areas from 2002-03 to 2008-09. The reserves and surpluses have gone up from Rs. 922 Crore as on 31.3.2004 to Rs. 2632 Crore as on 30.09.2006 for which figures were available.

2. The Commission having acknowledged high performance of TPL has always been impressing upon for further scope for improvement. The efficiency levels of TPL can be gauged from the fact that in spite of gradual increase in CoS, the tariffs are still at the same level as for 2006-07, barring moderate change in energy charges for a few categories. The FPPA mechanism has been able to take care of the cost of power purchase increases.
3. The Commission has always taken 6 or more months for passing orders since 2007-08 for various reasons like late filing of ARR, inadequacy of data given, time extensions given for responses and filing of a case before Hon'ble High Court of Gujarat by consumer association on constitution of the Commission.
4. Cross-subsidy is not an issue in TPL.
5. Although the Commission has been leaving some revenue gap in the ARRs which were generally determined after the due date, the gaps have been adequately covered as actual revenues were higher than estimated revenues.
6. In order to meet steep fuel cost escalations, the recovery in short time is ensured through a fuel and power purchase adjustment (FPPA) mechanism, which does quarterly corrections in power costs.

State 4- Analysis of HERC Orders

4.1 Facts, analysis and extracts from the order:

1. The Commission consists of three members, including the Chairperson. The first Chairman and one member of the Commission were sworn in on 17th August 1998 and the third member joined on 16th September 1998. Currently there is one chairman and two members in the Commission.
2. The Commission issued its first tariff order for HVPN for its Distribution and Retail Supply Business for FY 1999-2000.
3. HERC determined the first revision in tariff for FY 2000-01 which became effective from 01.01.2001. The tariff in the State of Haryana has been revised only twice post the formation of the Commission i.e. FY 2000-01 and FY 2010-11.
4. The tariff for FY 2000-01 was applicable for three months, the Commission had approved the uncovered gap of Rs. 432 Crs to be made up by borrowings (60%) and balance to be met through efficiency gains by the Licensee.
5. Broad parameters of ARR for FY 09-10:
6. Haryana is predominantly an agricultural State therefore has a significant share of unmetered agricultural consumption which is billed on flat rate basis. For Unmetered Agriculture Category, the Commission estimates the energy consumption based on the pattern of the consumption of metered agriculture pump sets. Though Commission had directed the distribution companies to submit credible data to correctly estimate the consumption of unmetered agricultural consumers, the utilities had failed to submit sufficient field data of segregated agricultural feeders and install MDI meters to record energy flow to agriculture pump sets.

Category	Approved Sales (in MUs) for FY 09-10	% Share
Domestic	4055	20%
Non-Domestic/Commercial	1394	7%
HT Industrial	4553	22%
LT Industrial	1169	6%
Agriculture Metered	3163	16%
Agriculture Un-Metered	4311	21%
Bulk Supply	747	4%
Others	1003	5%
Total	20395	100%

7. Post the power sector reforms in Haryana, the Commission had restated the T&D losses from approximately 29% reported by the power utilities to approximately 41% after scrutinizing the power purchase and sales details including power flow to the large un-

metered agriculture consumers. The approach for setting of loss reduction targets by the Commission is primarily based on the reduction in loss level achieved in the past years and capital expenditure planned by the DISCOMs. In the tariff order for FY 09-10 the Commission has stated:

“The Commission has been fixing up distribution losses over the years and also giving road map for reduction. The utilities to some extent have succeeded in showing a downward trend; however, the desired result is yet to be achieved. Considering the example of some states that have done well in this regard the Commission feels that there is ample scope for further bringing down losses in the distribution system in the State of Haryana. It would be relevant to refer in this context the capital expenditure being incurred by the distribution utilities to strengthen their distribution system with prior approval of the Commission but there is a need for improvement in their execution so as to avoid any cost and time over-run. The quality of work also needs to be checked so as to ensure that they serve desired result. The list of capital work to be undertaken for the ensuing season be prepared with great care after prioritizing the needs and preparing a road map for efficient utilization. The Commission has observed over the years that the capex plan submitted by the utilities at their own level is not fully implemented or mid-course changes made by the utilities at their own level without prior information/approval of the Commission. No wonder that the distribution losses have not shown appreciable reduction over the years.”

8. Since no true-up has been done for FY 06 to FY 10, the actual losses cannot be ascertained. The Commission in its Tariff Orders have mentioned that the Commission’s estimate of sales to the agriculture consumers is lower than the sales estimated by the utilities. This is primarily due to distribution losses which are restated as excess units allocated to the agricultural consumers.
9. The State of Haryana has been an energy deficit state and thus the power procurement has not been demand driven but based on the estimates of power availability from various sources including owned generation, share from CGS, joint ventures, IPPs and other sources like bilateral, banking, UI, etc.

Source	Units Purchased (Mus)	% Share of Total
NTPC	7672	27%
NHPC	2926	10%
NPCIL	358	1%
HPGCL	13203	47%
Shared Projects	3559	13%
Short-term/ Bilateral	200	1%
Total Unit Availability (Mus)	27918	100%

10. The actual per unit power purchase cost therefore has been higher than the approved per unit power purchase cost due to purchase of costlier short-term power purchase.

Power Purchase Cost (Rs. per Unit)	FY06	FY07	FY08	FY09	FY10
Approved	2.09	2.29	2.38	2.49	2.77
Actual*	2.10	2.36	2.79	3.25	

* Actual refers to the actual figures as per the annual accounts of both the Discoms i.e. DHBVN and UHBVN

11. Any increase in power purchase cost for the distribution licensee could be recovered by filing of Fuel Surcharge Adjustment (FSA) application as per the FSA formula prescribed by the Commission. No such proposals were filed year after year. FSA for FY 2003-04, FY 2004-05, FY 2005-06 and first half of FY 2006-07 by the DISCOMs with considerable delay, and the Commission staggered the recovery of the FSA in three years without approving any interest/ holding cost on the same.
12. The Commission approves the O&M expense based on latest available audited annual accounts. In absence of any true-up, the adverse financial impact of the gap in the approved and actual O&M expense is borne by the utilities.
13. The HERC approves interest on working capital, long term and government loans and finance charges. However, there is large variation in actual and approved interest cost primarily on account of interest burden of short-term loans taken by the distribution utilities for meeting the revenue deficit which the regulatory commission has not been approving in the approved interest cost.
14. The tariff regulations provide for return on capital base for adequate return to the utilities. However, no return could be allowed by the Commission in the tariff orders of the utilities for FY 06 to FY 10 as the capital base of both the DISCOMs was negative. The Commission in its FY 09-10 Tariff Order has advised the Government of Haryana to consider re-capitalization of the distribution companies to the extent of the accumulated losses which would also help them in claiming return on equity and also improve their credit rating.
15. In each of the tariff orders, the Commission has tried to meet the revenue deficit for the subsequent year through additional reduction in distribution losses or additional Government subsidy. Further, as seen above true-up exercise has not been done with due regularity. Therefore, the variation in actual and approved cost elements has not been addressed in the subsequent orders leading to accumulation of losses for the distribution utilities. As per the annual accounts of UHBVN and DHBVN, it is observed that the accumulated financial loss of the two entities as on March-2009 is Rs. 2778.32 Crs. and Rs. 1260.98 Crs, respectively. The Commission in its FY 09-10 order has shown concern over the financial health of the distribution companies as well as the slow reduction in the loss levels in the State.
16. The Commission has also issued directive to the distribution companies for submitting a road map for achieving 100% metering in accordance with the provisions of the Electricity Act, 2003. The Commission has taken serious concerns over the efforts taken by the utilities

to achieve 100% metering at the 33/11kV feeders, distribution transformers and consumers and directed the utilities to comply with the directive.

17. Since the State Government declares the subsidy support to be provided in its budget, the same is considered by the Commission at the time of processing of the ARR & Tariff Order. The tariff to be charged by the utilities in absence of receipt of subsidy is not computed in the tariff order. Also, no carrying cost is provided in the Tariff Order for late receipt of subsidy from the State Government.
18. A regulatory asset was created in the FY 09-10 Tariff Order by the HERC as three quarters of the financial year was over and the Discoms had not submitted any tariff proposal to bridge the revenue gap. The untreated gap of FY 08-09 was also included in this regulatory asset. Borrowing charges against this regulatory asset has been provided in the subsequent Tariff Order.
19. The retail tariff in the State of Haryana has not been revised during FY 2001-02 to FY 2009-10 which has resulted in accumulation of losses for both the DISCOMs. Therefore, the tariffs have not been reflective of the approved average cost of supply which has increased from Rs. 3.86 per unit in FY 06-07 to Rs.4.23 per unit in FY 09-10, an increase of approximately 10%.
20. In the FY 10-11 Tariff Order the Commission has revised the retail tariff by approximately 12%. However, a gap of Rs. 1463 Crs is still left untreated for which the Commission has allowed the utilities to cover by the way of borrowings.

4.2. Key Findings of Haryana Study

1. Haryana Electricity Regulatory Commission was established on 17th August 1998 as an independent statutory body corporate as per the provision of the Haryana Electricity Reform Act, 1997. Haryana was the second State in India to initiate the process of Reform & Restructuring of the Power sector in India.
2. HERC has issued ARR orders for retail supply business in each of the past five years i.e. FY 05-06 to FY 09-10. The retail tariff in Haryana had not been revised between FY 2000-01 and FY 2009-10. The distribution licensees in Haryana did not file a petition to the Commission for revision of tariff during this period. The Commission revised the retail tariff by approximately 12% in FY 2010-11. However, a revenue gap of Rs. 1463 Crs was still left untreated for which the Commission allowed the utilities to meet it through short-term borrowings. Also, the HERC created regulatory assets in FY 09-10 as three quarters of the financial year was over and the Discoms had not submitted any tariff proposal to bridge the revenue gap for FY 09-10. The regulatory assets created in FY 2009-10 also included the uncovered gap of FY 08-09.
3. As per the annual accounts of UHBVN and DHBVN, it is observed that the accumulated financial loss of the two entities as on March-2009 is Rs. 2778.32 Crs. and Rs. 1260.98 Crs, respectively. The Commission in its FY 09-10 order has shown concern over the financial health of the distribution companies as well as the slow reduction in the loss levels in the State.

4. The Government of Haryana provides subsidy support to the Discoms against consumption of energy by the agricultural consumers in the State. Every year, the State Government announces the amount of budgetary subsidy it intends to provide to the State consumers. The State Government subsidy is considered for meeting a part of revenue deficit. Between FY 2000-01 and FY 2009-10, balance deficit was either met through creation of regulatory asset, proposed additional reduction in distribution losses or additional Government subsidy by the Commission in the tariff orders. After a gap of nine years, it was only in FY 2010-11 that the Commission revised the retail tariff. The subsidy provided by the Government of Haryana has significantly increased from Rs. 1256 Crs in FY 05-06 to Rs. 2739 Crs in FY 09-10, an increase of 118%. The Government of Haryana had to increase the subsidy amount as the tariff was not revised between FY 2000-01 to FY 2009-10 and Average cost of supply went up. This resulted in lesser cross subsidy from other consumers for subsidized consumers.
5. The Commission approved the ARRs over the period based on the subsidy declared by the State Government. Whereas, the approach adopted by the Commissions of some other states is to approve the ARR and tariff to be charged without considering Government subsidy and reduce the tariff at the later stage based on the subsidy declared by the Government for a particular category. The issues of tariff to be charged in case of non disbursement of subsidy and carrying cost to be considered in case of late receipt of subsidy from State Government were not addressed by the HERC. The Commission always proposed to meet the revenue deficit through further loss reduction, additional Government subsidy and by creation of regulatory assets. Though loss reduction generates additional revenue for the utility, the recovery of increasing average cost of supply can be achieved by tariff revision only. Hence in order to reduce government support to the utilities and to reduce the revenue deficit, tariff revision was essential to meet the ever increasing cost of supply. In the interest of utilities and to improve their financial condition, the Commission could have been more effective and even revised the tariff on suo-motu basis. Electricity Act 2003 Sec 86(a) states that "In discharge of its functions the State Commission shall be guided by the National Electricity Policy, National Electricity Plan and tariff policy published under section 3". In this context, Sec 8 of Tariff Policy states that "*Making the distribution segment of the industry efficient and solvent is the key to success of power sector reforms and provision of services of specified standards. Therefore, the Regulatory Commissions need to strike the right balance between the requirements of the commercial viability of distribution licensees and consumer interests. Loss making utilities need to be transformed into profitable ventures which can raise necessary resources from the capital markets to provide services of international standards to enable India to achieve its full growth potential*".
6. In the absence of any serious attempts by the utility as well as the Commission to true-up of various cost elements of the ARR (except for power purchase cost which is passed by the way of Fuel Surcharge Adjustment (FSA) to the consumers), the variation in the actual and approved cost parameters of the DISCOMs are not adequately addressed in the subsequent ARR & Tariff orders leading to adverse impact on the financials of the distribution utilities.
7. Any increase in power purchase cost for the distribution licensee could have been recovered by filing of Fuel Surcharge Adjustment (FSA) application as per the FSA formula to

the Commission. However there was considerable delay in filing of the FSA for FY 2003-04, FY 2004-05, FY 2005-06 and first half of FY 2006-07 by the DISCOMs. When such claims were finally made, the Commission staggered the recovery of the FSA in three years but again without approving any interest/ holding cost on the same. The Commission issued similar orders for FY 2008-09, first half of FY 2009-10 and for FY 2007-08 also.

State 5- Analysis of RERC Orders

5.1 Facts, analysis and extracts from the order:

1. RERC is a body incorporated and was fully funded up to the year 2007-08 by the State Government and currently being funded by its own resources. It consists of a Chairperson and two Members one each from the technical and financial discipline. The Commission has a Secretary and other supporting staff to carry out its day-to-day functions.
2. RERC issued its first tariff order for fixation of tariff for retail supply of electricity in March 2001 for the years 2000-01 and 2001-02.
 - i) In the order, the Commission directed the petitioners that they should make all efforts to improve recoveries out of its current dues as well as arrears to cover up shortfall in receipt of subsidies from Government. If as a measure of last resort, the petitioner has to take recourse to borrowing, then the Government should consider bearing the burden of cost of borrowing so that it does not fall on the consumers.
 - ii) RERC directed that the Discoms shall achieve 5.4% reduction in T&D loss by 31st march 2002. Moreover T&D losses should be brought down to the level of 20% by the end of 5 years starting from 2001-2002. The petitioner was asked to submit an action plan within one month of the order. Petitioners were also directed to release all new connections for agriculture consumers in the metered category only. The existing flat rate agricultural consumers should also be transferred to the metered category within a period of 3 years.
3. In its order on petition for ARR for FY 2002-03 issued in June 2003 the Commission raised a concern about T&D losses and non compliance of directives by Discoms in the following manner:

“The Commission is of the view that reduction in T&D losses of the Nigam is of paramount importance to its financial health, in fact, to its very survival. The Commission has accepted in its tariff order dated 24.3.2001 the target proposed by Nigam for reduction in T&D losses. The Commission notes that Nigam has totally failed to achieve the target set by Nigam for itself for reduction in T&D losses. On the other hand, the figures furnished show that the actual loss level has increased since the process of reform was initiated in the State. As the exact level of losses could not be determined with any degree of reliability, the Commission had directed a field study to be carried out by the Nigam for ascertaining the existing level of losses. The Nigam has taken this directive in a casual manner and the study has been commissioned only recently and some more time would be required before initial results of the study are available.

The Commission in its order dated 24.3.2001 had also asked the Nigam to reduce its losses to the level of 20% in five years for which an action plan was to be prepared. The Nigam did prepare a comprehensive long term action plan for reducing T&D losses but the Commission is disappointed to observe that very little has been done for implementing the plan.

Similarly, the Commission had directed energy audit for 11KV feeders. This work was also inordinately delayed and necessary action on the basis of information received by such energy audit is yet to be initiated.”

Similarly here is the Commission view on the financial condition of the Nigams with a review of Net Revenue Gap:

Rs. crores

S.No.	Particular	2000-01 (a)	2001-02 As per Tariff Order (b)	2001-02 Actual (c)	2002-03 AS per ARR (d)	2003-04 Commission Estimate (e)
1.	Total Revenue	1083.02	1734.12	1668.19	1720.61	1786.65
2.	Total Expenditure	1326.30	2065.40	2096.05	2164.25	2178.56
3.	Gap	243.29	331.28	427.86	443.64	391.91
4.	Subsidy received from Govt.	46.0	331.28	94.85	163.63 Actually recd.	225.00
5.	Net Gap	197.29		333.01	280.01	166.91

“It will be seen from the above statement that by the end of 2003-04, the cumulative revenue deficit of the Nigam is expected to be about Rs.1507 Crore. This deficit is after tariff increase of nearly 17% with effect from April 1, 2001. The subsidy actually paid by the State Govt. is Rs.304 Crore till 31st March 2003 and Rs.225 Crore is anticipated in 2003-04. The net cumulative revenue gap would be around Rs.978 Crore. This gap has so far been managed by deferring liabilities of RVPN and by resorting to short term borrowings. Heavy borrowing for meeting revenue deficit is untenable and the Nigam has already landed itself in a precarious financial situation. It is all the more imperative for the Nigam to concentrate on measures for improvement in efficiency, including reduction in distribution losses. At the same time, the Nigam would require enhanced financial support from the State Govt. by way of subsidy to clear off the accumulated losses”

- On December 17th, 2004, the Commission revised the retail tariff in response to the petition filed by Discoms. The tariff was effective from 1.1.2005 and was expected to generate combined additional revenue of Rs 130.54 Crore for all Vitran Nigams in the remaining 3 months of FY 2004-05.

With a view that tariff should be so designed that the agriculture consumers on unmetered supply have an incentive to get metered supply which is also a mandate of the Act of 2003, RERC decided not to increase the tariff of metered category of general agriculture consumers to the extent of 30 paise/unit sought by the petitioners but to keep it at Rs. 1.10/unit i.e. an increase of 20 paise/unit.

5. The Commission vide its Order dated 21.7.06 determining the ARR for the year FY 07, revised the normative consumption of flat rate agriculture consumers for FY 06 and onwards from 1739 to 1945 Units/kW/year.
6. RERC issued the first MY ARR order for the period FY 2007-08 and FY 2008-09 in March 2007. It was noted that the Discom is treating the balance gap as deferred revenue subvention receivable from the State Government in its books as per Financial Restructuring Plan approved.

Since Discoms did not seek for RoE in their petitions, the Commission decided to allow the interest on short term borrowing as expenses to the extent of RoE which the Discom is eligible to receive as per Terms and Conditions of Tariff Regulations. The Commission however clarified that partial allowing of interest on short term borrowing should not be construed as approval of such short term borrowing by the Commission. The Discom should endeavor to reduce such borrowings and take up the issue of early payment of subvention by the State Government.

7. RERC issued MYT order for the Annual Revenue Requirement of Discoms for the control period FY 2009-10 to FY 2013-14.

- i) The Discoms in this submitted that as per policy directives received from Government of Rajasthan vide letter no. F1 (18)/Energy/2008 dated 18.01.2008; the Discoms have been directed to give 8 hours power supply to Agriculture consumers. Therefore, the Discoms have decided to increase the power supply for all the agriculture consumers and requested the Commission to increase the norm for flat rate consumer from 1945 units/kw/year to 2400 units/kw/year.

The commission however rejected the request with a view that

“The sample data submitted by Discoms cannot be relied upon and the Commission does not want to change the norms at this stage as the Discoms have already been advised to meter all consumers through super transformers. The norm of 1945 kWh/kW/Year has been retained for assessment of consumption by the Agriculture Flat category, in accordance with previous RERC Orders.”

- ii) Commission states that the uncovered revenue deficit standing at Rs 15,540 Crore as on 31.03.2009 would further accumulate over the years. During the public hearing, the Discoms submitted that the State Govt. has owned their deficit of Rs.15, 540 Crore as on 31.3.2009 and have decided to liquidate the same over a period of 23 years, which relates to past accumulated deficit.
- iii) Discoms concern over the financial status of Nigams and the suggested way forward in the order.

“The increasing revenue gap is bound to affect the financial viability of the Discoms and will have adverse implications for the sector and the consumers. The annual deficit, which was Rs.1666 Crore in FY 05-06 (the first year after last tariff revision) would be of the order of Rs.4224 Crore in FY 10-11. This is over and above the accumulated deficit of past years. The Government subsidy in year 05-06 was Rs. 908 Cr., thus the uncovered

revenue deficit (total deficit – Govt. subsidy) of that year was Rs. 758 Cr. Though Govt. subsidy has increased in recent past, being Rs. 1375 Cr. in year 09-10 as against Rs. 908 Cr. in year 05-06; however, the increase in overall deficit is far more than increase in Govt. subsidy.

Considering the mounting revenue gap, the Commission in its previous orders dated 21.7.2006 & dated 31.3.2007 had stated that the Discoms may file tariff petitions based on the ARR approved under these orders. However, no petition for tariff revision has been filed by the Discoms after the year 2004. The Commission is of the considered view that unless additional revenue is generated through tariff revision and/or financial support from the Government, the increasing deficit will jeopardize the financial sustainability of the Discoms.

Since 5 years Annual Revenue Requirement for the Multi Year Tariff control period F.Y. 10 to F.Y. 14 has now been assessed by the Commission – a first exercise of revenue assessment for 5 years – which indicates huge revenue deficit; it is indeed the right juncture to analyze the emerging scenario in the light of likely Government subsidy and tariff adjustment to improve financial health of Discoms and to obviate any future tariff shock. Even the revised Financial Restructuring Plan (FRP) approved by the State Government on 26.11.2005 has envisaged the necessity of tariff increase in F.Y. 9-10 and the annual revenue deficit of Discoms in the past years have been much more than what was assumed in FRP.

The Discoms therefore, should file petition for revision of tariff within a period of two months based on Annual Revenue Requirement determined as per this order without waiting for separate ARR determination for F.Y. 10-11, as updated information has been used in determining ARR of F.Y. 10-11. The tariff petition, inter alia, could include subsidy targeted to specific consumer categories and proposed tariff for consumers, power purchase and fuel cost adjustment, etc. Incentive for energy efficiency could also be considered while filing petition. In case no tariff petition is filed within the stipulated period, Discoms should explain the reason thereof and satisfy the Commission as regards additional revenue generation to meet the deficit.”

Year-wise distribution loss trajectory-Approved by Commission

Discom	FY 10	FY 11	FY 12	FY 13	FY 14
Jodhpur	25%	23%	21%	19%	18%
Jaipur	22.50%	20.50%	19.00%	18.00%	17.00%
Ajmer	29.00%	27.00%	25.00%	23.00%	21.00%

Performance of Discoms- T&D Loss approved for each Discom during FY 06 to FY 09

Particulars	FY 05	FY06	FY07	FY 08	FY 09
T&D Loss (Ajmer)					
Approved in the Tariff Order	34.25%	39.14%	34.08%	35%	32.00%
Actual	43.49%	40.07%	37.26%		
T&D Loss (Jaipur)					
Approved in the Tariff Order	32.9%	33.88%	29.51%	28.50%	23.90%
Actual	37.65%	36.21%	33.70%		
T&D Loss (Jodhpur)					
Approved in the Tariff Order	34.25%	34.77%	31.29%	33.00%	30.00%
Actual	42.39%	40.34%	32.47%		

Average Cost of Supply vs Realization

Particulars	FY05	FY 06	FY 07	FY 08	FY 09
Jodhpur					
Average Cost of Supply (Rs/kWh)	3.99	4.17	3.80	4.15	4.71
Total Avg Realization (Rs/kWh)	2.66	3.19	3.13	3.12	3.14
Gap/Surplus	-1.33	-0.97	-0.66	-1.03	-1.57
Jaipur					
Average Cost of Supply (Rs/kWh)	4.05	4.06	3.59	3.85	4.23
Total Avg Realization (Rs/kWh)	3.15	3.59	3.52	3.61	3.6
Gap/Surplus	-0.90	-0.47	-0.07	-0.24	-0.63
Ajmer					
Average Cost of Supply (Rs/kWh)	4.10	4.27	3.67	3.99	4.44
Total Avg Realization (Rs/kWh)	3.51	3.24	3.04	3.24	3.21
Gap/Surplus	-0.58	-1.03	-0.63	-0.75	-1.23

Approved Revenue Gap (Rs Crore) for the period FY 05 to FY 09

Discoms	FY05	FY 06	FY 07	FY 08	FY 09
Ajmer	(322)	(450)	(306)	(543)	(1034)
Jaipur	(540)	(300)	(52)	(203)	(611)
Jodhpur	(640)	(451)	(280)	(583)	(1008)

Approved Revenue Gap for the period FY 05 to FY 09

Particulars	FY05	FY 06	FY 07	FY 08	FY 09
Subsidy announced by State Govt.	1039.00	927.00	1066.00	NA	NA
Subsidy Requirement estimated in the Tariff Order	NA	NA	1652.72	1675	NA
Actual Subsidy Received by DISCOMs	1050.20	NA	NA	NA	NA

5.2 Key Findings from Rajasthan

1. The Rajasthan Electricity Regulatory Commission was established under the provisions of the Electricity Regulatory Commissions Act 1998 (Act 14 of 1998), on 10th December 1999 vide Government of Rajasthan Gazette notification of the same date. The Commission became operational with effect from 2nd January 2000, on appointment of Chairman and a Member. RERC issued its first tariff order for fixation of tariff for retail supply of electricity in March 2001 for the years 2000-01 and 2001-02. Thereafter the Commission revised the retail tariff in response to the petition filed by Discoms on December 17th, 2004.
2. Since 2004, Discoms have been filing the petitions for Annual Revenue Requirement but have not sought any revision of tariffs. Cost of supply has increased over the years owing to increase in power purchase cost and interest on short term borrowings. Tariff in the state has not been revised since 2004 and RERC have also not issued any sou-moto order in this regard. This has resulted in increase in revenue deficit for Discoms. The uncovered revenue deficit of Discoms was Rs 15540 Crore as on 31.03.2009. The Commission issued the first MY ARR order for the three Discoms for the period FY 2007-08 and FY 2008-09. RERC issued the second order for Multi-Year Annual Revenue Requirement for the control period FY 2009-10 to FY 2013-14. The combined revenue gap assessed by the Commission for the Discoms for the MYT Period FY 10-14 is Rs 22519 Crore.

3. Revenue deficit at existing tariff- Approved by the Commission from FY 10 to FY 14

Rs Crore

Description	FY 10	FY 11	FY 12	FY 13	FY 14	Total
Jodhpur	1423	1651	1753	2026	2280	9133
Jaipur	962	861	819	787	964	4393
Ajmer	1474	1712	1718	1959	2130	8993
Total						22519

Presently, the revenue gap is partially met by government subsidy and through short term borrowings.

4. The deficit, in FY 05-06 (the first year after last tariff revision) was Rs.1666 Crore and the govt subsidy was only Rs. 908 Cr. It is expected to be of the order of Rs.4224 Crore in FY 10-11. Though Govt. subsidy has increased to Rs. 1375 Cr. in year 09-10, but the deficit for that year had also increased to Rs 3859. It is seen that year after year the overall deficit is far more than the Govt. subsidy.
5. In MY ARR order for Discoms for FY 2007-08 and FY 2008-09, the Commission suggested the Discoms that the approved revenue gap can be bridged or reduced by tariff rise and/or fuel/power purchase adjustment in retail supply tariff or subsidy from State Govt., suitable mechanism of trading and by higher reduction of losses than targeted. The Commission also suggested that the Discom may file tariff petition based on ARR approved under the order which may interalia seek power purchase and fuel cost adjustment, ToD tariff for HT consumers and rationalization of various categories including abolition of minimum charges. The Commission in its order on ARR for the period FY 2009-10 to FY 2013-14 has shown concern over the increasing revenue deficit for the Discoms.
6. Discoms have not been seeking any RoE in their ARR but the Commission has been approving an amount equivalent to that of RoE for Discoms in the ARR under the head Interest and Finance Charges. This amount is a part of interest on the short term borrowings that the Discoms have to take to meet their unmet revenue deficit.
7. Agriculture consumers in Rajasthan have been segregated into two categories of metered and unmetered consumers. The un-metered consumers are billed on the flat rate norm specified by the Commission. However, there has been no record of actual supply to these un-metered consumers over the years and that could provide an escape route to Discoms on reduction in loss levels. The actual T&D losses were more than 30% for each of the Discoms at the time of truing up of ARR for FY 2007-08. Government of Rajasthan has directed the distribution companies, vide letter no. F1 (18)/ Energy/2008 dated January 18, 2008, to supply power for 8 hours to Agriculture consumers. Therefore, the losses may be on higher side as the sales to Agriculture consumers have been increasing over the years. This has resulted in Commission approving higher specific consumption for flat rate consumers during the MY period FY 2009-10 to FY 2013-14 based on the consumption for FY 2008-09.

Revenue realization from flat rate consumers into metered consumers has been declining every year.

8. As per the approved Financial Restructuring Plan(FRP), GoR has also committed in the revised FRP to provide the entire revenue deficit as revenue subsidy during the transition period till the Utilities turnaround. However, GoR is not able to provide the entire subsidy burden every year. The Discoms are to be provided Rs. 400 Crore per annum as transitional cash support till 2011-12 under the provisions of Financial Restructuring Plan. This is also proposed to be extended till 2016-17 under revised FRP”

At present, tariff subsidy is being provided by the state government to Discoms under section 65 of Electricity Act 2003 for subsidizing the tariff of agricultural consumers, BPL consumer and small domestic consumers having consumption up to 50 units. The Discoms have been allowed to retain electricity duty collected from the consumers till 2011-12 under the provisions of Financial Restructuring Plan. The retention of ED is proposed to be extended up to 2016-17 under Revised FRP.

9. The Discoms have failed miserably in filing its proposals before the Regulator even though its annual revenue has not been adequate to cover its valid expenses. Instead, the SEB opted for the convenient option of borrowing funds, which made its financial position even worse. Even the Regulator in its approach has always been ‘only suggestive’ on filing a tariff revision petition for the reduction of revenue deficit but did not deem it necessary to take up the tariff revision exercise suo moto, even though, it could have done so under the law.
10. Most recently, i.e. in January 2011 Discoms have filed tariff petitions for revision of ARR and Retail Supply Tariff for FY 2011-12, first time since the tariff was revised in 2004. The Discoms have proposed to cover a part of revenue gap through Transitional support from GoR, Government subsidy towards BPL, Small domestic and Agriculture consumer and through tariff hike.

State 6-Analysis of UPERC Orders

6.1 Facts, analysis and extracts from the order:

1. In terms of sub-section (4) of section 82 of the said Act, the State Commission consists of three Members including the Chairperson. Currently there is one chairman and two members in the Commission.
2. Post the transfer scheme in 2003, the Uttar Pradesh Electricity Regulatory Commission (UPERC) had issued the Tariff Order for approval of ARR of Agra, Meerut, Lucknow and Varanasi DISCOMs and determination of Retail Supply Tariff to be charged to different consumer categories for FY 04-05 through FY 08-09. The tariff order for FY 06 was not issued due to delay in tariff filing by the DISCOMs. Thereafter, the tariff filing for FY 07-08 was again delayed by almost a year (filed on 7th October 2007) and therefore the Commission issued a joint ARR for FY 07-08 and FY 08-09.
3. Broad parameters of ARR for FY 09-10:

4. The domestic category (35%) forms the major chunk of consumers in the overall consumer mix for DISCOMs in Uttar Pradesh followed by Large Industrial (21%) and Agriculture (14%) categories.

Consumer Category	Sales in Mus	% Share
Domestic	15,084	35%
Non-Domestic	2,819	7%
Commercial	1,351	3%
Small Industrial	2,171	5%
Large Industrial	9,013	21%
Agriculture	6,063	14%
Railways	625	1%
PWW/ Irrigation	1430	3%
Bulk Sales	3,130	7%
Others	975	2%
Total Sales	42,661	100%

5. The Commission while approving energy sales for the DISCOMs have considered a reverse method by approving the total power purchase quantum and T&D loss levels to arrive at the net energy available for sale. The sales for each consumer category has been forecasted based on the CAGR method and adjusted for balance power availability.
6. Based on the table below, it is observed that the approved sales have been higher than the actual sales in each of the year. Since the Commission approves energy sales based on power availability, the higher than approved T&D losses contribute to the lower availability of power for sale within the state.

Financial Impact due to over-estimation of Sales

Disallowance	FY 06-07	FY 07-08	FY 08-09
Impact due to over-estimation of sales#	(871)	(1,306)	(976)

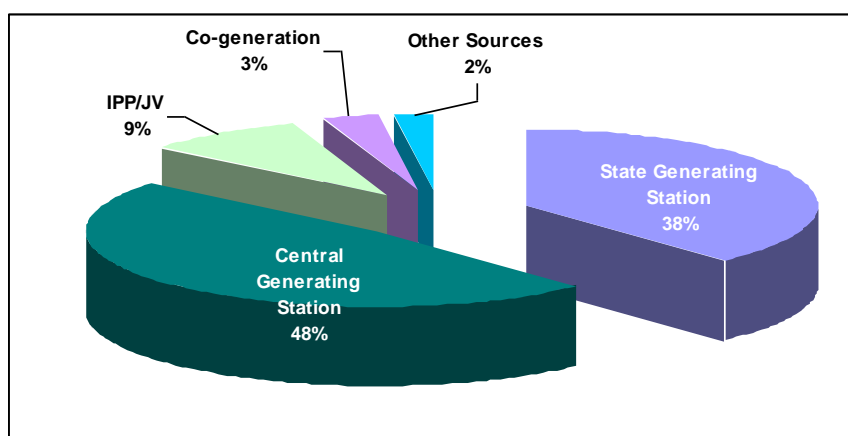
Financial impact due to lower sales has been estimated by considering the difference in actual and approved sales and average realization approved by the Commission

7. The Commission had set a loss reduction trajectory starting FY 02 for five years for UPPCL. This trajectory was based on the baseline data for FY 01 and represented a 3% year on year reduction in T&D losses. The Commission had subsequently revised loss reduction trajectory in FY 06 and FY 08 as the DISCOMs were not able to achieve the targets.
8. For all years from FY 05 through FY 09, the Commission decided to keep the T&D loss level at 27.4%, the level that was approved for FY 05 as per the trajectory set earlier. Such a decision had to be taken by the Commission because the DISCOMs had not met the targets set for FY 03 and FY 04 and was unlikely to meet the targets in the following years. Accordingly, the

Commission had approved T&D loss of 27.4% for FY 07. Again for FY 08 and FY 09, in the absence of any study being undertaken by the DISCOMs, non-availability of reliable base line information and DISCOMs proposing high T&D losses of 32% and 28%, the Commission had no other option but to set the loss targets for the years on interim basis. Hence the Commission again approved T&D losses on an overall basis at the same level as approved in FY 07 i.e 27.4%.

9. The DISCOMs had neither achieved the proposed nor approved T&D target levels in any of the years. Though the Commission devised policy for incentivizing the DISCOMs of overachievement, the Commission failed to penalize the DISCOMs for not achieving the targets.
10. UPPCL on behalf of the DISCOMs is responsible for the power purchase from various sources. The Commission has repeatedly directed UPPCL to allocate all existing Power Purchase Agreements (PPAs) to the DISCOMs however; the same has not been implemented.
11. The major sources of power purchase for the Uttar Pradesh DISCOMs are CGS (NTPC, NHPC), State Generating Stations (UPRVUNL and UPJVNL) and other plants including Cogeneration plants (obligatory purchase), Independent power producers (IPP), bilateral and banking arrangements with other States.

Constitution of Power Purchase from various sources for FY 09-10



12. The actual power purchase cost in FY 06-07 and FY 08-09 has been higher than the approved power purchase cost. However, for FY 07-08, the actual cost has been lower than the approved due to lower quantum of power purchased and per unit lower cost. Since no true-up order has been issued by the Commission, the variation in power purchase cost has remained un-recovered. The per unit approved and actual power purchase cost is summarized in table below:

Power Purchase Per Unit (Rs/KWh)	FY 06-07	FY 07-08	FY 08-09	FY 09-10
Approved	2.13	2.25	2.35	2.53
Actual	NA	2.15	2.58	NA

13. The Commission approves the employee cost, R&M and A&G cost separately for the distribution companies based on the tariff regulations and past trends. The cost elements for employee expense and Administration & General expense are approved by undertaking the estimations based on the historical trend and further any specific addition in cost item such as the billing expenses etc has been included. The Repair & Maintenance (R&M) expense is approved as a percentage of the opening Gross Fixed Assets (GFA). The actual O&M expense is higher than the approved O&M expense in each of the year excluding FY 07-08. The financial impact of the actual cost being higher than the approved is borne by the utilities in absence of any true-up.
14. The Commission in the tariff approval process has approved capital expenditure based on the investment plan submitted by the distribution utilities. The scheme wise investment plan is scrutinised by the Commission. Based on the past actual and approved capital expenditure, the Commission has observed that the DISCOMs had undertaken significantly lesser amount of capital expenditure as compared with the approved. In view of the same, the Commission had approved a lower amount towards capital expenditure as against the proposed. Also, the depreciation has been approved considering the disallowance in the capitalization.
15. The interest and finance charges consists of interest on borrowed long-term & short-term loans, interest on working capital, interest on consumer security deposits and financing charges. Since the interest on working capital is based on the normative working capital requirement, the DISCOMs had claimed interest charges on account of overdraft (OD) facilities used for long-term loans and working capital. Further, the DISCOMs have claimed for working capital interest and finance charges of UPPCL allocated to the DISCOMs arising due to market borrowing to meet the short-term requirements of funds. However, the Commission has disallowed these interest and finance charges stating that the same cannot be recovered from the consumers as it is an internal mechanism and the DISCOMs are eligible only for interest cost on account of normative working capital.
16. The DISCOMs are entitled to earn 16% return on equity as per the tariff regulations. However, the utilities have not claimed for any return considering the sector is not viable and any return if proposed would put burden the consumers. In view of the same, the Commission has not considered any return while approving the ARR of the DISCOMs.
17. The DISCOMs have been receiving huge subsidy from the Government of UP (GoUP) to meet their revenue deficit. In FY 2005-06, FY 2006-07 & FY 2007-08, there has not been any increase in the tariffs whereas the distribution companies have been meeting the deficit partly through the subsidy provided by the GoUP. During FY 2008-09 & FY 2009-10, the retail tariffs in the state were increased. However, the balance gap after considering the additional revenue from tariff increase was met by subsidy from the GoUP. Therefore, the GoUP has been providing subsidy grant on a consistent basis to bridge the revenue deficit of the utilities. The details of the subsidy are provided in the table below:-

Subsidy (Rs Crs)	FY 06-07	FY 07-08	FY 08-09	FY 09-10
Govt. Subsidy	1012	1822	1532	1832
Additional Govt Subsidy/Loan Support from GoUP	500 ²	0	0	255 ³
Total	1512	1822	1532	2087

18. No tariff increases were approved by the Commission during FY 05-06 to FY 07-08. However, the Commission had approved tariff increase for FY 2008-09 & FY 2009-10 to meet the large revenue deficit. The table below summarises the tariff increase in percentage from FY 05-06 to FY 09-10

Particulars	FY 06-07	FY 07-08	FY 08-09	FY 09-10
Average Tariff increase (%)	No change	No change	13.91%	13.22%

19. The Commission did not revise the retail tariff during FY 2006-07 and FY 2007-08 and resorted to other measures i.e. government support in form of short-term loans, efficiency improvements, savings in power purchase cost, etc. for meeting the revenue gap as claimed by the DISCOMs in their submissions. For FY 2006-07, the Commission had approved revenue deficit to be funded through short-term loans. However, the Commission had considered these as Government support in the form of short-term loans and had not approved any interest cost on these short-term loans in the future ARR of the DISCOMs. Similarly, the Commission considered the institutional loans availed by the DISCOMs for meeting the revenue deficit during FY 2007-08 as subsidy from GoUP and directed that the debt servicing of such loans should be directly funded by the GoUP through budgetary provisions.

20. Also, for FY 09-10, the Commission had mentioned that the DISCOMs should pursue the GoUP for additional subsidy of Rs. 255 Crore (as proposed in the Petition) as a first measure and in case of non-availability of the same, exercise the option of revolving bank guarantee. However, the Commission had clarified that no cost / charges on account of meeting the gap through revolving bank guarantee shall be allowed as pass through in the ARR. Also, savings on account of efficiency improvement and power purchase are not workable considering the underachievement in T&D loss level each year by the DISCOMs.

21. In each of the Tariff Order, the Commission had observed that the distribution companies have not claimed for any true-up as entitled under the provisions of the tariff regulations. Therefore, the Commission in all its tariff order has expressed that the true-up exercise would be undertaken whenever the DISCOMs file a true-up petition along audited annual accounts.

6.2 Key Findings of Uttar Pradesh Study

² Rs 500 Crores is provided as additional government subsidy

³ Rs 255 Crores as loan support from State Government

1. The Uttar Pradesh Electricity Regulatory Commission (UPERC) was set up by the Government of Uttar Pradesh as per the U.P. Electricity Reform Act 1999.
2. Post the unbundling exercise and transfer scheme dated 15th January 2000 & 14th June 2000, the distribution utilities were formed for the purpose of handling the distribution business in the State of Uttar Pradesh. The state distribution companies include Paschimanchal Vidyut Vitran Nigam Ltd. (PVVNL), Purvanchal Vidyut Vitran Nigam Ltd. (PuVVNL), Dakshinanchal Vidyut Vitran Nigam Ltd. (DVVNL), Madhyanchal Vidyut Vitran Nigam Ltd. (MVVNL) and Kanpur Electric Supply Company Limited (KESCO).
3. The tariff order for FY 06 was not issued due to delay in tariff filing by the DISCOMs. Thereafter, the tariff filing for FY 07-08 was again delayed by almost a year (filed on 7th October 2007) and therefore the Commission issued a joint ARR for FY 07-08 and FY 08-09.
4. The DISCOMs have been receiving subsidy from the Government of UP (GoUP) to meet their revenue deficit. In FY 2005-06, FY 2006-07 & FY 2007-08, there has not been any increase in the tariffs whereas the distribution companies have been meeting the deficit partly through the subsidy provided by the GoUP. During FY 2008-09 & FY 2009-10, the retail tariffs in the state were increased. However, the balance gap after considering the additional revenue from tariff increase was met by subsidy from the GoUP.
5. The SERC had set loss reduction trajectory in FY02 with approved reduction of T&D losses by 3% every year. For FY 05 through FY 09 SERC kept the reduction target at 27.4% (for all the DISCOMs put together) because the DISCOMs were not able to meet the targets for FY 03 and FY 04.
6. The Commission while approving energy sales for the DISCOMs have considered a reverse method by approving the total power purchase quantum and T&D loss levels to arrive at the net energy available for sale. The sales for each consumer category has been forecasted based on the CAGR method and adjusted for balance power availability. Since the T&D loss considered by the Commission is based on the approved numbers which are generally lower than the actual T&D losses of the Discoms, there is significant over-estimation of sales resulting in higher approved revenue as compared with the actual. As the true-up exercise is not being undertaken, the Discoms are incurring financial losses each year resulting in accrual of losses.
7. One of the major reasons for the financial ill health of the Discoms is on account of no true-up exercise carried out by the Commission. The DISCOMs have also not claimed / requested for any true-up of the past years in the absence of audited accounts. However, it has been submitting provisional accounts to the Commission during the processing of the ARR & Tariff petition. However, the Commission has not undertaken any true-up based on provisional accounts of the Discoms. As a company discoms should keep audited accounts and even in the absence of audited accounts the Commission could have taken up true-up exercise on suo-motu basis.
8. The Commission did not revise the retail tariff during FY 2006-07 and FY 2007-08 and resorted to other measures i.e. government support in form of short-term loans, efficiency

improvements, savings in power purchase cost, etc. for meeting the revenue gap as claimed by the DISCOMs in their submissions. For FY 2006-07, the Commission had approved revenue deficit to be funded through short-term loans. However, the Commission had considered these as Government support in the form of short-term loans and had not approved any interest cost on these short-term loans in the future ARR of the DISCOMs. Similarly, the Commission considered the institutional loans availed by the DISCOMs for meeting the revenue deficit during FY 2007-08 as subsidy from GoUP and directed that the debt servicing of such loans should be directly funded by the GoUP through budgetary provisions.

9. For FY 09-10, the Commission had mentioned that the DISCOMs should pursue the GoUP for additional subsidy of Rs. 255 Crore (as proposed in the Petition) as a first measure and in case of non-availability of the same, exercise the option of revolving bank guarantee. However, the Commission had clarified that no cost / charges on account of meeting the gap through revolving bank guarantee shall be allowed as pass through in the ARR. Also, savings on account of efficiency improvement and power purchase are not workable considering the underachievement in T&D loss level each year by the DISCOMs.
10. The approval for bridging of gap through other measures i.e. government support in form of loans, efficiency improvements, saving in power purchase, etc. does not seem workable. Considering that the Discoms are not able to achieve the T&D loss targets as specified by the Commission, efficiency improvement over and above the loss target specified by the Commission may not be possible. Government support in the form of loans or additional subsidy support considered without Government of Uttar Pradesh's approval should be considered post approval/ written commitment by the State Government.

State 7- Analysis of WBSERC Orders

7.1. Facts, analysis and extracts from the order:

1. In terms of sub-section (4) of section 82 of the said Act, the State Commission consists of three Members including the Chairperson. Currently there is one chairman and two members in the Commission.
2. The Commission issued its first combined tariff order for FY 2000-01 & FY 2001-02 for West Bengal State Electricity Board (WBSEB) on 7th December, 2001. The WBSEB was unbundled as per terms of Section 131 of the Electricity Act, 2003 in to West Bengal State Electricity Transmission Company Limited and West Bengal State Electricity Distribution Company Limited (WBSEDCL) w.e.f 1.4.2007 in accordance with a transfer scheme viz., West Bengal Power Sector Reforms Transfer Scheme 2007 notified by Govt. of W.B vide No.12-PO/O/III/3R-29/2006 dated 25.1.2007 Therefore, the first order for FY 2007-08 for determination of retail tariff for WBSEDCL was issued on 1st August, 2007.
3. The Commission has revised retail tariff annually to recover the increased annual revenue requirement of WBSEDCL.
4. Broad parameters of ARR for FY 09-10:
5. WBSEDCL has a favourable sales mix. Agriculture consumption in the state is small and contributes to less than 10% of the consumption while the industrial (HT) consumption is high and contributes more than 40% of the total energy consumption.
6. For each of the year, the Commission has approved sales as proposed by WBSEDCL. The Commission has not disallowed any sales for WBSEDCL in any of the years while undertaking true-up/ APR and has approved sales as per the audited accounts, without any disapproval.

Category	Approved Sales for FY 07-08 (MUs)	% Share
Domestic	4274	33%
Commercial/ Non-Industrial	1609	12%
Industrial	5191	40%
PW Works	92	1%
Irrigation/ Agriculture	950	7%
Public	95	1%
Traction	685	5%
Total Sales	12896	100%

7. The Commission had approved T&D loss for WBSEB for FY 05 as per the reduction trajectory set by the Commission in tariff order for FY03. The Commission for approving baseline T&D loss in FY 03 took into consideration T&D loss as proposed by WBSEB for supply to own consumers (excluding bulk supply). For FY 06 and FY 07 the Commission approved a

reduction of 1% over the approved T&D loss of previous year irrespective of the actual T&D loss and stated that T&D loss excess to that approved will have to be borne by the licensee.

8. For FY 08 after division of WBSEB into WBSETCL & WBSEDCL, the DISCOMs proposed combined loss of 24.7% with transmission loss of 4%, hence the Commission approved Distribution loss of 19.50%.
9. For FY 09 the Commission approved Distribution loss as per the norms specified in the Tariff Regulations, 2007.

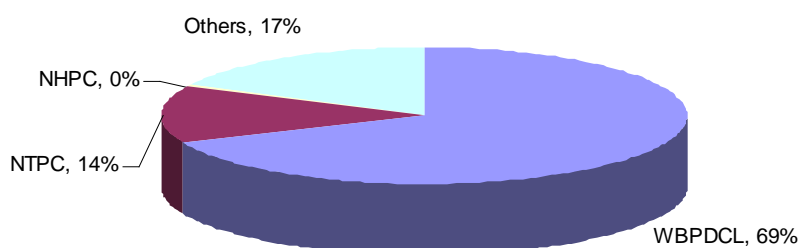
T&D Loss	FY06*	FY07*	FY08	FY09	FY10
Approved	24%	23%	19.50%	18.75%	18.25%
Actual#	NA	NA	26.48%	24.91%	26.32%
APR	NA	23%	19.50%	18.75%	18.25%

* Losses for West Bengal State Electricity Board as a whole

#CRIS Analysis (Actual losses have been computed based on the power purchase units disallowed in the FPPCA Order)

10. For the purpose of true-up of the power purchase cost, the Commission has considered T&D losses as approved in the Tariff Order of the respective year. Therefore any underachievement in the T&D loss has been to the account of WBSEDCL. Excess power purchase on account of under-achievement of T&D loss reduction targets has been disapproved.
11. WBSEDCL purchases energy from different sources like Central Generating stations, West Bengal Power Development Corporation Ltd, West Bengal Renewable Energy Development Authority (WBREDA) and other DISCOMs in the state like DPL, DPSC and CESC.
12. Power purchase requirement of WBSEDCL is mostly met with energy production of WBPDC which account for approx 70% of the total power purchase quantum. The quantum availability and tariff for State Generating Stations is approved separately by the Commission. WBSEDCL also has some hydel generating stations the quantum and cost for which are approved in the same tariff order.

Approved Breakup of Power from Various Sources for FY09



13. The actual per unit power purchase cost has been higher than the approved per unit power purchase cost. The decrease in per unit approved power purchase cost for FY 09 and FY 10 is due to sourcing of power from new power plants at cheaper rates. WBSEDCL is a major power seller in the short term market contributing around 5% of total transaction.

Power Purchase Cost per Unit (Rs./kwh)	FY06	FY07	FY08	FY09	FY10
Approved	1.87	1.85	1.96	1.90	1.79
Trued-up*		1.92	2.01	1.95	2.21

14. The Commission has disallowed power purchase quantum on account of under achievement of T&D loss targets set in the tariff orders for the respective years therefore corresponding power purchase cost w.r.t. disallowed power purchase quantum has been reduced from the actual power purchase cost as claimed by WBSEDCL. The financial impact of disallowance of power purchase cost is summarized in table below:

Power Purchase Cost disapproved	FY07	FY08	FY09	FY10
Disapproved in Power Purchase Cost due to under-achievement of T&D loss (Rs. crore)	-351.98	-229.71	-209.89	-342.64

15. WBERC had approved each of the total O&M under two heads i.e. Employee Cost, O&M cost (comprising of various components like R&M Cost, A&G cost, rents and taxes, audit fee, insurance etc).
16. The employee expense is considered as uncontrollable cost and therefore, the Commission has allowed the actual employee cost as per the audited accounts of WBSEDCL subject to prudent checks. However, the O&M charges (comprising of A&G and R&M cost) are considered to be controllable as per the tariff regulations and therefore any variation in actual and approved O&M expense is to the account of the licensee.
17. For FY 07 – FY 09, the Commission approved interest cost as proposed by WBSEDCL. The Commission, however, disallowed other financing charges relating to fees and expenses for restructuring of loans and interest on capital liabilities. The Commission has considered interest on working capital as uncontrollable expense. In the Tariff Orders for FY 06-07 and FY 07-08, the Commission had approved working capital on normative basis. However, in the APR Orders, interest on working capital was disallowed as no borrowings were undertaken by WBSEDCL for working capital requirement during each year. In the MYT Order for FY 08-09 to FY 10-11, the Commission did not approve any interest towards working capital requirement considering that the WBSEDCL had not undertaken any working capital borrowings in FY 08-09.
18. For FY 07, the Commission has allowed Return on Equity at 14% on closing equity of FY 05 (equity fund was from the State Government) as the Commission noted that no addition to the equity capital will be considered for WBSEDCL till the time the amount of accumulated loss for the previous years were completely negated by the infusion of funds from WBSEDCL's own or outside sources. For FY 08 and FY 09 the Commission approved return on equity at 14% on average equity for the respective year.

19. The Government of West Bengal did not provide any subsidy support to the Discoms during FY 05 through FY 09.
20. The Commission has increased retail tariff in the state of West Bengal annually to recover the increased annual revenue requirement of WBSEDCL each year. Further, the Commission has approved regulatory assets to contain the tariff hike.
21. An amount of Rs. 127.24 Crore which was the revenue deficit for FY 07-08 in the APR of WBSEDCL was to be recovered in the subsequent ARR i.e. FY 09-10. However, the Commission created a regulatory asset in order to contain the tariff hike at a reasonable level. In the FY 10-11 Order, the Commission approved the regulatory asset of Rs. 127.24 Crore to be passed to the consumers in the FY 10-11 ARR but created a new regulatory asset of Rs. 1569.33 Crore on account of power cost variation as approved in the FPPCA Order dated 30 June, 2010.

Particulars	Amount
Regulatory Asset for FY 09-10 (Rs. Crs)	127.24
Regulatory Asset for FY 10-11 (Rs. Crs)	1569.33

22. As per the Annual Report FY 2009-10, the Regulatory Asset for the FY 2008-09 and FY 2009-10 was Rs 1891.07 Crore and Rs 2991.59 Crore respectively. The addition of Rs 1100.52 Crore of Regulatory Asset in FY 2009-10 is on account of FPPCA, loss incurred for taking over distribution assets of Singure Haripal Rural Electric Co-operative Society and employee cost.
23. The Commission follows a two stage approach while doing the true-up of any financial year in all the tariff orders. The Commission first approves the FPPCA Order for a year followed by the Annual Performance Review (APR) Order and the net recoverable/ payable as per the APR Order is charged to the ARR of the subsequent year.

7.2 Key Findings of West Bengal State Electricity Distribution Co. Ltd. Study

1. The West Bengal Electricity Regulatory Commission was constituted by Government of West Bengal under section 17(1) of the Electricity Regulatory Commission Act, 1998 (14 of 1998) vide Notification No 06-Power/III dated 06.1.1999. The first Chairperson joined on 31.3.1999.
2. Post the unbundling of West Bengal State Electricity Distribution Company Limited (WBSEDCL) w.e.f 1.4.2007 from the West Bengal State Electricity Board, the Commission has issued tariff orders each year starting from FY 2007-08. Also, the Fuel & Power Purchase Cost Adjustment (FPPCA) and Annual Performance Review (APR) for each year has been issued by the Commission for true-up of power purchase and other cost elements.
3. State of West Bengal adopted MYT framework in FY 2007-08 and defined first Control Period to be from 1st April 2007 to 31st March 2008. Second MYT control period has been set as 3 years from 1st April 2008 to 31st March 2011.
4. The financial impact on the WBSEDCL is primarily due to non-achievement in T&D loss targets and disallowance of higher than approved controllable cost i.e. O&M expense. The

T&D loss targets approved by the Commission each year have not considered the actual T&D losses of the licensee. The difference in approved vis-à-vis actual loss of 8.07% for FY 09-10 resulted in a financial impact of Rs. 342.6 Crore for the utility.

5. In the APR for FY 06-07, FY 07-08 and FY 08-09, the Commission had disallowed actual cost over and above the approved cost for all the controllable parameters (as defined in the tariff regulations). Further, the power purchase cost on account of non-achievement of target T&D loss levels approved by the Commission in the respective year was disallowed in each APR resulting in accumulation of financial losses for WBSEDCL.

Particulars (Rs. Crore)	FY07	FY08	FY09	FY10
Power purchase cost disallowance	-352.0	-229.7	-209.9	-342.6
R&M disallowance	-26.3	-46.3	-22.4	0.0*
Total Disallowance	-378.3	-276.1	-232.3	-342.6

* APR for FY 09-10 is not available; therefore the disallowance is only on account of FPPCA Order

6. Though, revision in tariff has been undertaken by the Commission frequently to meet the revenue gap determined in the ARR & Tariff Order for each year from FY 2007-08, the Commission has created regulatory asset to defer the revenue deficit in FY 09-10 & FY 10-11 Tariff Orders. The Commission had determined an amount of Rs. 127.24 Crore as revenue deficit post the APR of FY 07-08 which was to be recovered in the subsequent ARR i.e. FY 09-10. However, considering the hike required for meeting the gap, the Commission had created a regulatory asset which was amortized in the ARR for FY 10-11. However, the Commission created a new regulatory asset in FY 10-11 Order of Rs. 1569.33 Crore on account of power cost variation as approved in the FPPCA Order dated 30 June, 2010. As per the National Tariff Policy Sec 8.2.2, creation of regulatory assets by Regulatory Commission should be done only as exception.

As per the Annual Report FY 2009-10, the Regulatory Asset for the FY 2008-09 and FY 2009-10 was Rs 1891.07 Crore and Rs 2991.59 Crore respectively. The addition of Rs 1100.52 Crore of Regulatory Asset in FY 2009-10 is on account of FPPCA, loss incurred for taking over distribution assets of Singure Haripal Rural Electric Co-operative Society and employee cost.

For FY 08, the Commission did not approved interest on working capital since the same has not been proposed by WBSETCL. For FY 09 though WBSETCL had proposed interest on working capital the Commission did not approve any interest on working capital as there was no existing working capital borrowing. Liquidity is one of the most essential part of any business and the prudent value of interest on working capital borrowing could be approved for WBSETCL.