Andhra Pradesh Electricity Regulatory Commission
Hyderabad

O.P. NO.4/2001
O.P. NO.5/2001
O.P. NO.6/2001
O.P. NO.7/2001
O.P. NO.8/2001

24th March, 2001

Present: Shri. G.P. Rao, Chairman
Shri. D.Lakshmi Narayana, Member
Shri. A.V.Subba Rao, Member

Transmission Corporation of Andhra Pradesh Limited (APTRANSCO)
Eastern Power Distribution Company of Andhra Pradesh Limited (APEPDCL)
Central Power Distribution Company of Andhra Pradesh Limited (APCPDCL)
Northern Power Distribution Company of Andhra Pradesh Limited (APNPDCL)
Southern Power Distribution Company of Andhra Pradesh Limited (APSPDCL)

………… Applicants

The Andhra Pradesh Electricity Regulatory Commission (***hereinafter called 'the Commission'***) having heard the consumers and representatives of various consumer organizations on 26th February, 2001 at Tirupati, on the 1st, 2nd, 3rd & 5th March, 2001 at Hyderabad, the Staff of the Commission representing the consumers and the Principal Secretary, Energy Department, Government of Andhra Pradesh on the 7th March, 2001 at Hyderabad and the Chairman & Managing Director, APTRANSCO, Joint Managing Director, APTRANSCO, the Directors of APTRANSCO and the Managing Director of the Andhra Pradesh Central Distribution Company on the 8th March, 2001 on the submissions by the Staff of the Commission, having consulted the members of the Commission Advisory Committee on 12.3.2001 and having considered the documents available on record, passed the following order:-

ORDER

CHAPTER – I : INTRODUCTION

1. Following the enactment of the Andhra Pradesh Electricity Reform Act, 1998 (***hereinafter called the 'Reform Act')*** the Government of Andhra Pradesh (GoAP) undertook the reform and restructuring of the erstwhile Andhra Pradesh State Electricity Board (**APSEB),** which was implemented through two statutory Transfer schemes notified under the provisions of the Andhra Pradesh Electricity Reform Act, 1998 (Reform Act).

2. The first statutory transfer scheme was notified on February 01, 1999, separating the Generation business from the Transmission and Distribution businesses. The Generation business was transferred to and vested in Andhra Pradesh Power Generation Corporation Limited (**APGENCO)** while the Transmission and Distribution businesses were transferred to and vested in Transmission Corporation of Andhra Pradesh Limited (**APTRANSCO**).

3. The Commission, vide their orders dated January 31, 2000 granted APTRANSCO the Transmission and Bulk Supply Licence (Licence No. 1/2000) to carry out the Transmission and Bulk Supply business in Andhra Pradesh. The Commission also granted Licence No. 2/2000 for Distribution and Retail Supply of Electricity business to APTRANSCO vide their order dated January 31, 2001.

4. The second statutory transfer scheme was notified on March 31, 2000 by GoAP separating the Transmission and Bulk Supply business from the Distribution and Retail Supply business by creation of separate undertakings for Distribution and Retail Supply Business. APTRANSCO retained the business of Transmission and Bulk Supply while four Distribution Companies (DISCOMS) were constituted to undertake Distribution and Retail Supply business. For this

purpose, the state of Andhra Pradesh was carved into four geographically contiguous distribution zones (East, South, Central and North) and the Distribution and Retail Supply business was segregated and vested respectively in the four distribution companies (i) Eastern Power Distribution Company of Andhra Pradesh Limited (APEPDCL) with headquarters at Visakhapatnam, (ii) Central Power Distribution Company of Andhra Pradesh Limited (APCPDCL) with headquarters at Hyderabad, (iii) Northern Power Distribution Company of Andhra Pradesh Limited (APNPDCL) with headquarters at Warangal and (iv) Southern Power Distribution Company of Andhra Pradesh Limited (APSPDCL) with headquarters at Tirupathi (collectively referred to as "DISCOMS"), to function initially as subsidiary companies of APTRANSCO. The Commission vide Proceedings No. APERC/Secy/Engg./No.6 dt: 31-03-2000 on an application made by APTRANSCO granted approval to APTRANSCO to assign the Distribution and Retail supply functions that APTRANSCO was licensed to conduct and to carry out to its four subsidiary Distribution Companies formed as above and for that purpose hold all or part of its assets in such subsidiary companies subject to certain conditions prescribed in the order of the Commission.

5. On June 11, 2000, the four DISCOMS filed their respective applications with the Commission seeking grant of licences to carry out the business of Distribution and Retail supply in the four respective distribution zones. The Commission examined these applications, conducted formal hearings on December 16, 2000 after giving due notice to general public calling for objections and passed orders on the applications on December 29, 2000 granting Distribution and Retail Supply Licences to the four DISCOMS. The Licences were however made effective from 01.04.2001 as at that stage the prevailing tariff was based on the composite Transmission & Bulk Supply and Distribution & Retail Supply business and disaggregation in the middle of the tariff year was not considered appropriate. The status of the DISCOMS w.e.f. December 29, 2000

till April 1, 2001 can be described as Licensee-Designates. In its order, the Commission directed the DISCOMS to file Annual Revenue Requirement (ARR)/Tariff proposals and/or adopt or join in the filing of such ARR/Tariff proposals of APTRANSCO for the financial year (FY) 2001-02 so far as their respective business of Distribution and Retail supply was concerned. This was considered necessary as the DISCOMS would be entitled to commence their Distribution and Retail Supply business as Licensees from April 1, 2001, the existing Licensee APTRANSCO continuing to be the Distribution and Retail Supply Licensee till such date. The DISCOMS were required to file their own ARR (s) independent of APTRANSCO once they become Licensees with effect from April 1, 2001.

6. In terms of section 26 (5) of the Act read with Amendment to APERC (Conduct of Business) Regulations 2000 (Regulation No. 8), the Guidelines for Revenue and Tariff Filings framed by the Commission dated October 07, 1999 ("**the Guidelines**") and the provisions of licences, a licensee is obliged to file every year before December 31 its calculations related to each licensed business for the ensuing financial year regarding (i) its expected aggregate revenue from charges under its currently approved tariff, (ii) its expected cost of service, and (iii) its expected revenue gap and explanation on how it proposes to deal with the revenue gap (if any).

7. On December 29, 1999, APTRANSCO had filed its ARR for the licensed Transmission and Bulk supply as well as the Distribution and Retail Supply businesses for the FY 2000-01. On April 6, 2000, APTRANSCO filed tariff proposals for the FY 2000 – 01 alongwith supplementary Expected Revenue from Charges (ERCs) for Transmission Supply & Distribution and Retail Supply. On May 27, 2000 the Commission determined tariffs for the FY 2000-01 based on APTRANSCO’s ARR/Tariff filings and objections/suggestions received/heard from general public.

CHAPTER – II : REVIEW OF TARIFF FILINGS FY 2000-01

8. The first Tariff Order of the Commission was passed on May 27,2000. At that time the Commission was acutely aware of the problems associated with regulating a monopoly in the transition phase. The problems that concerned the Commission were: (a) restoration of the viability of the power sector; (b) commercial orientation of the Licensee APTRANSCO and (c) move towards more scientific pricing polices.

9. The power sector scenario prior to introduction of reforms is well known and familiar. The sector suffered from high transmission and distribution losses, which naturally meant that the full revenue earning potentiality of the organisation could never be realised. This was coupled with unscientific pricing principles where some consumer groups paid considerably less than the cost incurred to serve them, while the other consumer groups bore the brunt of cross subsidy. As a consequence, consumer groups such as industry preferred to opt out of the prevailing system of power supply. There was also considerable dependence on government subsidy to meet the revenue deficit. Delays in receiving subsidies accentuated the financial crisis. A major outcome of revenue deficits was the neglect of required investment in technological advancement and systems improvement in Transmission and Distribution of Power. Reforms were initiated to rectify the situation and enable the healthy development of the power sector for the benefit of the consumers of Andhra Pradesh.

10. The first Tariff Order was within the framework of regulating a monopolist and the chosen framework was the Sixth Schedule of the Electricity (Supply) Act, 1948.

11. The financial principles under the Sixth Schedule enjoin the Commission to scrutinise the expenditure of the Licensee and then match the difference between expenditure and revenue with appropriate tariff increases. The

Aggregate Revenue Requirement approved by the Commission in the first filing was Rs.8365.17 crs while the expected revenue from current tariffs was Rs.5447.87 crs. The Gap of Rs 2917.30 crs was filled by tariff increase of Rs.791 crs, GoAP subsidy of Rs.1626 crs and efficiency gains of Rs.500 crs. The main highlights of the First Order are:

- Attempts to assess Transmission and Distribution Losses;
- Attempts to measure agriculture consumption;
- Incorporation of efficiency gains as a proxy measure to reduction of T&D Losses and streamline the system including quality of service;
- Design of scientific pricing policies based on "Cost to Serve" method to move tariffs closer to costs;
- Directives to the Licensee to streamline and monitor the functioning of the regulated monopolist;

Transmission and Distribution Losses

12. Towards measurement and control of losses the Commission made a multi-pronged approach by incorporating the following directives in the Tariff Order.

- Metering at all interface points on both transmission and distribution network and of retail consumers.
- Control of theft and investigation into the ways and means of theft
- Improvement in revenue collection
- Capital investment in the transmission and distribution network

The Licensee has initiated action in compliance of the directives but this is yet to be completed.

Agricultural Consumption

13. Agricultural consumption being unmetered, it is difficult to assess the extent of power consumed in this sector. The unmetered status also lends itself to distortion in the calculation of transmission & distribution losses. To arrive at reasonable estimates of agricultural consumption, the Commission directed (Directive No 2) that a Census study be carried out by APTransco to verify the number of pumpsets, their status and capacity. The studies are yet to be completed. Only the preliminary results of the Census study made in four pilot districts are available.

Efficiency Gains

14. In its filings APTransco had proposed an efficiency gain of Rs.500 crs. These are gains the licensee expected to achieve through measures such as i) regular billing; ii) control of theft and pilferage; iii) metering at interface points between transmission and generation and between transmission and distribution; iv) metering of all consumers; v) regulation of supply to agriculture the unmetered sector and vi) regular energy audits. The expectation of APTRANSCO was that these measures would enable it to earn an additional Rs.500 crs.

15. The Commission accepted the submission of the Licensee and accordingly the tariffs were fixed by reducing the Aggregate Revenue Requirement by Rs. 500 crs to arrive at the fully allocated cost. The inclusion of Rs.500 crs was an innovation in power sector reforms as it allowed the flexibility to the Commission to avoid specifying percentage decreases in losses in the face of poor data availability.

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.

Tariff Design

17. The theme of the tariff design for FY 2000-01 was to move towards cost reflective tariffs and redesign tariffs to reflect cost to serve. This has enabled the Commission to:

- Identify the costs attributable to each category on the basis of the consumer category's consumption characteristics such as contribution to peak load, voltage of supply etc;
- Identify the extent of cross subsidy between consumer categories;
- Assess the need for further cross subsidy in case social considerations required tariffs to be less than cost to serve;
- Attempt to introduce slab structure and telescopic metering on the basis of paying capacity and;
- Provide a measure of value for energy saving.

Consumers are used to low energy prices and naturally resist change. The moves towards compensatory tariffs have to be gradual to prevent a rate shock. The Commission however, feels that it is important to move towards compensatory tariffs in order to reflect costs. At the same time prudent expenditure on the part of the utility ensures that costs do not rise proportionately. In the current filing the same continue to guide tariff fixation

Directives

18. The processes of regulation and monitoring the functioning of the Licensees introduced by the Commission was through Ten Directives and Monthly review of the implementation of these Directives.

CHAPTER – III : FILING OF TARIFF PROPOSALS FY 2001-02

19. On 30-12-2000 the APTRANSCO filed its Expected Revenue from Charges (ERC)/Annual Revenue Requirement (ARR) for FY2001-02 u/s 26(5) of Reform Act, in its capacity as the Transmission and Bulk Supply Licensee in the State of Andhra Pradesh. In respect of Distribution and Retail Supply business the APTRANSCO and the four DISCOMS as the Licensee and Licensee-Designates respectively, filed ERC/ARR jointly on behalf of each DISCOM on 30-12-2000 for the Distribution and Retail Supply businesses for FY 2001-02.

20. Subsequently, on 04-01-2001 the APTRANSCO filed an amendment to the ARR stating that the ARR for the Transmission and Bulk Supply business for FY 2001-02 will be Rs. 7840.20 Crores instead of Rs. 7621.20 Crores as originally filed claiming that the full expenditure on account of working capital borrowing and interest on borrowings to meet the revenue deficit amounting to Rs. 267 Crores was not fully claimed in their filing on 30-12-2000.

21. The Commission after careful examination of the ERC/ARR informed APTRANSCO on 8th Jan 2001 that the filing made by them is considered incomplete as the proposals are not in accordance with Andhra Pradesh Electricity Regulatory Commission (Conduct of Business) Regulations 2000 (as amended).

22. On 17-01-2001 APTRANSCO filed Tariff Proposals for FY 2001-02 for its Transmission and Bulk supply business and jointly with each DISCOM proposals for Distribution and Retail supply business. These filings together with the filings made on 30-12-2000 were taken on record as follows:

Table No.1

Sl. No.	Name of the Company	Details of filing	O.P.No. assigned by the Commission
1	APTRANSCO	ARR/ERC and Tariff proposals for Transmission & Bulk Supply business for FY 2001-02	4/2001
2	APTRANSCO jointly with APEPDCL	ARR/ERC and Tariff proposals for Distribution & Retail Supply business for FY 2001-02	5/2001
3	APTRANSCO jointly with APCPDCL	-do-	6/2001
4	APTRANSCO jointly with APNPDCL	-do-	7/2001
5	APTRANSCO jointly with APSPDCL	-do-	8/2001

Notification calling for Objections/Suggestions

23. The APTRANSCO was directed on 17-01-2001 to serve a public notice through publication in newspapers in one issue of daily newspaper in English and also in Telugu having widest circulation in Andhra Pradesh informing that APTRANSCO for its Transmission and Bulk supply business and APTRANSCO jointly with each of the DISCOMS for the Distribution and Retail supply business had filed ARR and Tariff proposals for FY 2001-02 with APERC. Copies of the filings together with supporting materials for Transmission & Bulk Supply Licence (OP No. 4) were available with Chief Engineer/Plg&RAC/Vidyut Soudha/Hyderabad and that filings made by APTRANSCO jointly with each of the DISCOMS(OP Nos 5 to 8) were available with Chief Engineer/Plg & RAC / Vidyut Soudha /Hyderabad and also in the O/o. Chief Engineer (Commercial) of the Distribution Companies of Visakahapatnam, Hyderabad, Warangal and Tirupathi and all Superintending Engineers in charge of Operation circles in all the districts of Andhra Pradesh including Superintending Engineers (Operation Hyderabad, North, Central and South) for inspection/perusal/purchase by interested persons and that objections/suggestions can be filed on these proposals with Secretary/APERC by 17-02-2001.

24. Though Section 26(7) of the Reform Act, does not expressly contemplate any public hearing before finalisation of the ARR/Tariff proposals of the Licensee, the Commission vide Clause 45(A) (6) of its Regulation (8th Amendment) to the APERC (Conduct of business) Regulations, 2000, made provision that the Commission shall hold a proceeding on the Revenue calculations and Tariff proposals given by the Licensee and may hear such persons as the Commission may consider appropriate for making a decision on such Revenue calculations and Tariff proposals. Accordingly in the notice that was directed to be given on 17-01-2001 APTRANSCO was requested to also notify that the Commission after perusing the comments/objections made by the public may conduct public hearings on dates to be notified later on by them and that the persons who wanted to be heard in person may make a specific mention in their objection/suggestion that they wanted to be heard in person.

Objections/Suggestions received – Public Hearing

25. Following the public notice, 68 persons/organisations have sent their objections/suggestions on APTRANSCO/DISCOMS proposals for revision of tariff to Secretary, APERC by 17-02-2001 of whom 55 persons have expressed their desire to be heard in person. The places from which requests were made for personal hearing are as follows:

Hyderabad city – 39 persons
Chittoor Dist. –12 persons
Vijayawada –1 person
Guntur –1 person
Tanuku – 1 person
Baroda - 1 person

As only one representation each had come from Vijayawada, Guntur, Tanuku and Baroda and a large number of objections/suggestions seeking public hearing have come from Hyderabad city and Chittoor Dist., the Commission decided to hold public hearings at Tirupathi in Chittoor Dist. and Hyderabad city only.

26. As, out of the 12 Nos. objections/suggestions received from Chittoor Dist. 6 Nos. are from different members of a single organisation i.e. "Chittoor District Rythu Samakhya" containing identical objections/suggestions, the Commission decided to invite only the President and Secretary of the organisation instead of all the 6 members from the organisation for the public hearing. Out of the balance 6 Nos. objections/suggestions 5 Nos. relate to agriculture and one to industy. In all it was proposed to hear eight persons at Tirupathi and all the other persons who requested for personal hearing from Hyderabad, Vijayawada, Guntur, Tanuku and Baroda at Hyderabad. The venues fixed for the public hearing were fixed as Sri Srinivasa auditorium, S.V.University Campus at Tirupathi and Ravindra Bharathi auditorium at Hyderabad. The venue auditoriums were large enough to allow the press and also the general public to witness the proceedings. The notice of public hearings from 26-02-2001 to 08-03-2001 was given to APTRANSCO, the four Nos. Distribution Companies and GoAP. All the persons who had expressed their desire to be heard in person and were permitted by the Commission were also intimated in writing the dates on which they would be heard. General public were also informed of the dates of public hearing through a press release. Press was also invited to attend the public hearings.

27. The Commission held public hearings from 26-02-2001 to 08-03-2001 on the dates given below from 9-00 hrs to 14-00 hrs on each day.

Table No.2

Sl. No.	Date	Venue	Details of consumer groups/persons who were heard
1	26-02-2001	Sri Srinivasa Auditorium, Tirupathi	Persons/groups representing all categories of consumers from Chittoor Dist.
2	01-03-2001	Ravindra Bharathi Auditorium, Hyderabad	Persons/groups representing agriculture and domestic categories of consumers
3	02-03-2001	-do-	Persons/groups who made objections /suggestions on all issues of the ARR/Tariff filings.
4	03-03-2001	-do-	Persons/groups representing industrial category and also persons who objected on wheeling charges proposed by APTRANSCO.
5	05-03-2001	-do-	Persons/groups who made objections /suggestions on wheeling charges by APTRANSCO.
6	07-03-2001	-do-	(i) Commission staff (ii) Representative of the Govt. of Andhra Pradesh
7	08-03-2001	-do-	APTRANSCO on the presentation made by Commission Staff.

28. The Commission directed APTRANSCO vide their letters dt:16.2.01 and 17.2.01 to submit para-wise replies for all the 66 public objections received. The APTRANSCO have made available copies of their written responses to the objections of the general public appearing before the Commission each day of the public hearings. Responses for objections of others were submitted after the public hearing.

29. As directed by the Commission vide its letter dated 24-02-2001 the APTRANSCO,

(i). made a short opening presentation on behalf of itself and four DISCOMS at the commencement of the public hearing at Tirupathi.

(ii). at the end of the hearing on each day, on behalf of itself and four DISCOMs responded on issues raised by the objectors as directed by the Commission; and (iii). on 8th March 2001 on behalf of itself and the four DISCOMS presented its reply to the presentation by the Commission Staff.

30. Subsequent to the due date of 17-02-2001 and after finalisation of the programme for public hearings, 21 more objections/suggestions were received by the Commission along with 27 numbers supplemental objections/suggestions. Though it was not possible to resume the hearings, all these objections/suggestions were given due consideration while finalising the orders of the Commission in O. P. Nos. 4 to 8 of 2001. The list of persons who submitted their objections/suggestions on tariff proposals of APTRANSCO/DISCOMS is annexed **(Annexure 'A').**

31. The ARR/Tariff proposals of APTRANSCO/DISCOMS were discussed in the Commission Advisory Committee (CAC) meeting held on 12-03-2001, and suggestions made by the members of CAC were taken into consideration while finalizing the Tariff Orders.

SUMMARY OF FILINGS FY 2001-02

Expected Revenue from Charges / Aggregate Revenue Requirement (ERC/ARR) Filings of both Transmission and Distribution Businesses.

Statutory Filings

32. As already mentioned, the filings on 30th December, 2000 were five in number, one by APTRANSCO in its capacity as the Licensee for the Transmission and Bulk Supply business in the State and the remaining four jointly by APTRANSCO and the respective DISCOM (subsidiary companies of APTRANSCO) as Licensees designate. A supplementary filing was made on 4th January, 2001. The filing as amended by APTRANSCO (as the Transmission and Bulk Supply Licensee) computed the Aggregate Revenue Requirement at Rs. 7840.20 Crores. This comprises a return of Rs. 155.04 Crores and total expenditure of Rs. 7719.75 Crores minus non-tariff income of Rs. 34.60 Crores. The return (Rs. 155.04 Crores) has two components, a return of Rs. 141.96 Crores calculated on a Net Capital Base of Rs. 887.22 Crores and Rs. 13.08 Crores as return on loans. The expenditure included three major items, Rs. 6982.61 Crores towards Power Purchase Cost from various sources, Rs.483.06 Crores towards interest and Rs. 161.23 Crores towards depreciation. Non-tariff income refers to all income from sources other than sale of energy. In respect of interest, the initial filings stated that the Licensee expects to incur an interest expenditure of Rs. 267.00 Crores on short term borrowings in FY 2001-02 . This consists of two components - an interest amount of Rs. 134.00 Crores on borrowings to meet the day-to-day working capital needs of the business and another interest amount of Rs. 133.00 Crores on borrowings to finance its expected revenue deficit for FY 2000-01. The interest amount of Rs. 134.00 Crores referred to above includes a sub-component of Rs. 48.00 Crores which is attributed by the Licensee to interest on cash credit arrangements with banks. The initial filings state that the Licensee has included

only the amount of Rs. 48.00 Crores as expenditure in the ARR filing and that the balance amount of Rs. 219.00 Crores has not been included in the ARR although it is in the nature of legitimate business expenditure expected to be incurred. The Licensee has requested the Commission in the amended filings to allow "as pass through" the entire interest amount of Rs.483.06 Crores in the ARR for FY 2001-02.

33. The ARR for the Distribution and Retail Supply Business is now spread over 4 filings (by the four DISCOMS). The total expenditure projection and the reasonable return for the four DISCOMS taken together amounted to Rs.9070.32 Crores and Rs.56.45 Crores (on a Capital Base of Rs. 256.95 Crores) respectively and in aggregate Rs.9126.78 Crores. After accounting for non-tariff income of Rs. 298.83 Crores, the Revenue Requirement of DISCOMS and the amount to be raised through tariffs worked out to Rs.8827.95 Crores.

34. The position in respect of each DISCOM as per Filing of Proposed Tariff (FPT) is given in the Table below.

Table No.3

Aggregate Revenue Requirement **(Rs. in Crores)**

	APEPDCL	APSPDCL	APCPDCL	APNPDCL	TOTAL
Total Expenditure	1303.24	2030.43	3958.02	1778.63	**9070.32**
Reasonable Return	2.83	17.60	27.92	8.11	**56.46**
Minus : Non-Tariff Income	46.00	56.00	105.43	91.40	**298.83**
Total Aggregate Revenue Requirement	1260.07	1992.03	3844.38	1695.34	**8827.95**

35. In the filings, APTRANSCO (the Licensee) has proposed regulatory treatment of three issues. It has proposed what it calls an "indexation and true-up mechanism" to cover most of the cost variance that the utility would face during the year and states that it can ill afford to carry the costs on its books for over a year in case the costs are substantially more than the projections, particularly on account of power purchases as happened in FY 2000-01 due to

poor monsoon rainfall in catchment areas of rivers feeding the reservoirs in the State leading to lower hydel power generation. The Licensee has not however made any detailed proposals by way of a working mechanism for the consideration of the Commission. Second, it requested the Commission to enable it to recover foregone profits by placing the amount of reasonable return (it would have earned but for its incurring losses) as a negative balance in the Tariff and Dividends Control Reserve. Finally, it proposed a change in the mechanism of subsidy allocation by consumer categories (whereby the subsidy would accrue to DISCOMS) and stated that, for the present, the subsidies may be routed through APTRANSCO.

36. The filings also forecast a "Net Revenue Gap" of Rs. 1073 Crores for FY 2000-01 even taking into account the increase in tariff with effect from 4th June 2000 which left no uncovered gap after providing for all items of expenditure and reasonable return. The Licensee has furnished the following three "key reasons" for this revenue gap:

(i). Change in sales mix

(ii). Change in power purchase mix

(iii). Reduction in non-tariff income

37. The Licensee has stated in the filings that there has been a net decline of 7.3% in the revenue from sale of power (Rs. 5816.00 Crores as against Rs. 6239.00 Crores approved by the Commission in the Order) and has attributed this decline to two factors – increase in agricultural consumption (10,860 MU instead of 9,815 MU approved) and decrease in industrial consumption (4,766 MU instead of 5561 MU). The Licensee has assessed the adverse financial impact of these two factors at about Rs. 425.00 Crores.

38. Regarding the change in the power purchase mix, the Licensee has stated in the filings that the power purchase cost for FY 2000-01 is estimated to be

Rs.7118.00 Crores as against Rs. 6826.00 Crores reckoned in the Commission's Tariff Order i.e. an increase of Rs. 292.00 Crores. This was despite reduction in the quantum of power purchase. It is envisaged that the power purchase for FY 2000-01 will be 41,839 MU as against 42,628 MU provided in the Commission's Tariff Order. The Licensee has attributed the increase in Power Purchase Cost to the shortfall in the hydel power generation to the extent of 1,510 MU which in turn is due to the depleted water storage levels in the State's hydel reservoirs. The Licensee has stated that the shortfall is to be made up through additional purchases of power from other sources at a substitutional cost of about Rs. 218.00 Crores.

39. Regarding non-tariff income, the Licensee has stated that it is now anticipated to be Rs. 299.00 Crores as against Rs. 457.00 Crores projected by Licensee and reckoned by the Commission in the Tariff Order. This results in a shortfall of Rs. 158.00 Crores.

40. It is further mentioned in the filings that though, based on the revised estimates, the Licensee expects to incur a loss for FY 2000-01, no amount towards this loss is claimed as "special appropriation" in the ARR for FY 2001-02 as the amount of the loss is uncertain and has not been finalised at the date of the filing.

Amendment to ERC/ARR Filing

41. APTRANSCO in its capacity as the Transmission and Bulk Supply Licensee filed on 4th January, 2001 an amendment to its ERC/ARR filing of 30th December, 2000. The amendment was to include (i.e. to add) the balance interest expenditure of Rs. 219.00 Crores representing the difference between the interest on working capital borrowing and interest on borrowings to meet revenue deficit and Rs. 48.00 Crores already claimed (representing interest on cash credit facility with banks) together amounting to Rs.267.00 crs. As a consequence, the Aggregate Revenue Requirement of APTRANSCO increased

to Rs. 7840.20 Crores as against the earlier projected Rs. 7621.20 Crores. Correspondingly at the DISCOM level, the revenue requirement to be raised through tariffs went up to Rs. 8966.95 Crores from Rs.8747.95 cr.

Tariff Filing

42. APTRANSCO (as the applicant for both Transmission and Distribution Businesses) has in the tariff filing projected a revenue requirement of Rs. 8827.95 Crores which is less by Rs. 139.00 Crores than the figure of Rs. 8966.95 Crores mentioned above after the amendment of 4th January, 2001. This is due to the net additional revenue (Rs. 139.00 Crores) taken credit for by the Licensee on account of wheeling charges of Re.1/- per kWh proposed to be recovered for energy wheeled to third parties. Against this projected revenue requirement, APTRANSCO expects that the revenues at current tariff levels will realise Rs.6274 Crores leaving a deficit (a gap) of Rs.2692 Crores.

43. The Licensee in the tariff filings has not proposed any increase in the tariff in force from 4th June, 2000 (the date of last revision of tariff) except to a small extent in Slabs 5 and 6 of the Domestic Category and on the other hand has stated that it proposes to bridge the gap either by efficiency gains and / or subsidy from GoAP.

CHAPTER – IV : COMMENTS OF GENERAL PUBLIC ON TARIFF FILING

Legal Issues

44. The following objections to the ARR/Tariff Proposals were raised as preliminary legal issues.

1). The four Distribution Companies have described themselves as Licensees-designate in respect of applications filed for ARR and the tariff proposal. The Distribution Companies were not licensees as on the date of the application as no licence had been granted to them as on that date. The Distribution Companies are, therefore, not entitled to file application for revision of tariff under section 26 of the Reform Act, as only a licensee is entitled to file such an application. APTRANSCO being not in the business of distribution and retail supply of electricity, the applications for ARR and the tariff proposal for such activities filed by APTRANSCO are also not legal and valid.

(2)(i). ARR and tariff proposal filed by APTRANSCO proposes a revision in wheeling charges payable by the various project developers who are empowered to sell electricity to the end-users/consumers at Rs.1(one) per kWh. These Developers have subsisting agreements with APTRANSCO (originally entered into with APSEB), whereunder APTRANSCO and the DISCOMS agreed to and are obliged to wheel the electricity on APTRANSCO transmission and distribution system for delivery at the end user's place. Under the existing agreements, the wheeling charges are to be collected from the Developers in kind and as a percentage of the energy delivered at the inter-connection point. The percentage of such wheeling charges in kind has been set out in the wheeling agreements and also in the various GoAP Notifications issued from time to time.

(2)(ii). The contentions of the objectors in regard to the revision in transmission/wheeling charges sought for by APTRANSCO are:

(a). APTRANSCO is bound by the wheeling agreements signed. APTRANSCO cannot unilaterally alter either the rate or the manner of adjustment of wheeling charges in kind. These agreements are valid for a specified period of time and APTRANSCO cannot resile from the terms of the agreement at this stage.

(b). The wheeling charges etc. were settled by GoAP which had issued necessary notifications. APTRANSCO has no authority to ask for any deviation or change from what the GoAP had decided and had set out in the notifications.

(c). The Commission has also no power to deviate from the binding agreement reached between the project developers and the APSEB in regard to the wheeling charges.

(d). In any event, APTRANSCO is claiming wheeling charges at Rupee 1/- per unit, which is totally unjustified, exorbitant and illegal. APTRANSCO has not given any justification whatsoever for the wheeling charges to be levied at Rupee 1/- per unit.

(e). The Developers are not required to cross-subsidise or contribute any money towards cross subsidization of certain classes of consumers, which the HT consumers provide under the tariff orders issued by the Commission.

45. In reply to the above legal objections raised by various objectors, APTRANSCO has stated that DISCOMS will be licensees entitled to carry on business of distribution and retail supply with effect from 1.4.2001. The DISCOMS had applied for such licenses. The Commission has passed orders

granting licenses to the four Distribution Companies. In any event, the application for ARR and tariff proposal in regard to distribution and retail supply activities in the four zones have been filed jointly by APTRANSCO and the Distribution Company concerned. There is no infirmity in the application filed. The Commission can proceed to decide the ARR and tariff proposal based on such applications filed by APTRANSCO and DISCOMS jointly. The issue raised is hyper technical. Similar issue was raised in the last year's tariff proceedings and also before the Hon'ble High Court in the Writ Petition No.7388 of 2000 and batch against the last tariff order. The High Court has not upheld the contention of the objectors.

46. As regards wheeling charges, the contention of APTRANSCO has been that fixation of tariff including revision thereof are a legislative function and the Commission is entitled to adjudicate on the tariff without being bound by any previous notification issued by the Government or wheeling or other agreements signed between APSEB/APTRANSCO and the Project Developers. APTRANSCO had submitted that the principle of promissory estoppel would have no application when the statute, viz., the Reform Act has specifically empowered the Commission to fix tariff.

Issues raised during Public Hearing:

Agricultural Consumption

47. During the public hearing it was represented that the direction of the Commission to complete census of agriculture pumpsets within six months has not been complied by the licensee. They were of the view that the analysis of agricultural consumption submitted by People's Monitoring Group is closer to reality. Many have objected to the estimation of agricultural consumption by the Licensees for FY 2001-02 at 10,500 MU and have indicated that the consumption in agriculture is much less than the claims of the Licensees. Some of their arguments are mentioned below:

(a). Rashtriya Raithu Seva Samithi: RRSS have assumed 30 working days per month and 200 days of operation in a year. Using the consumption recorded, the connected load and 30 days of measurement they have arrived at average hours of operation per day. Using this over 200-days, they have calculated the total number of hours of operation to be 918 for all the Distribution Companies taken together. They have extrapolated MW figure of 4568.4 MW for FY 1999-2000 to 5178 MW for FY 2000-2001 and worked out a total consumption of 4753 MU for FY 2002, which they claim should be adopted as the consumption in agriculture category.

(b). One objector has contended that 10500 MU as proposed is an overestimation by 200% and the consumption in the sector including unauthorized use cannot exceed 5200 MU to irrigate 48 Lakh acres of net area or 65 Lakh acres of gross area.

(c). Many objectors expressed the opinion that losses in the system were deliberately combined with agricultural consumption since, it was unmetered and thereby preventing a clear analysis of both T&D losses and agricultural Consumption.

(d). Some have also complained that apart from lakhs of applications for agriculture pumpset connections which are pending for years, APTRANSCO had received 2.3 lakhs applications seeking regularization and that no new connections have been given in the recent past.

(e). It is also represented while quoting the excerpts from the lecture of Prof. A.K.N.Reddy, Indian Institute of Science, Bangalore that the APTRANSCO may implement Demand & Supply Side Management measures in respect of agriculture.

(f). Some of the objectors have stated that metering of agriculture consumption is essential as it would lead to realistic assessment and avoid dumping of pilferage losses on the agriculture sector by the Licensee.

(g). Some have argued that the price of electricity for agricultural consumption must be linked to irrigation water rates. Objectors especially from the upland areas argued that irrigation charges for canal irrigation on the right side of Nargarjuna Sagar being free, and the same water used from the left side for generating power energy charge for use in agriculture should also be free. The demand of the farmers from Chittoor was that APTRANSCO must provide free and uninterrupted supply of power. This central argument was buttressed with the plea that agricultural activity must be seen in the context of sustainable development and the advent of international competition through WTO. Hence for farmers to compete and survive, inputs like electricity should not be priced.

Quality of Supply to Agriculture

48. During the public hearing many Objectors complained about the quality of supply to the agriculture sector. They mentioned that because of high voltage fluctuations, the motors are getting burnt. It was also submitted that since the Licensees are making available 9 hours supply in two blocks of 6 hours and 3 hours each either during the day or during the night, many farmers are using automatic starters and are also incurring high labour costs etc. The truncated power supplied to the farmers thus caused undue hardship requiring the farmer to stay awake during the nights. It was requested that supply of power be provided continuously for 9 hours at least for one batch from 3 am in the morning to 12 noon and the two batches maybe alternated over weekly intervals.

Transmission Losses:

49. During the public hearing it was questioned as to how the transmission losses have gone up from 4.5% to 8.5% and it was submitted that APTRANSCOs' projection of Transmission Losses at 8.92% and 8.5% have no basis.

Distribution Losses

50. (1). The distribution losses are said to be too high and the reductions projected are woefully inadequate. It was also contended that the high losses cannot be passed on to the consumers and the normative losses should not exceed 20% for the T & D losses put together. Only such normative loss levels should be used for calculating the tariffs.

(2). The representative of Human Rights Forum contended that the capital investments programs are not resulting in any reduction of losses.

He mentioned that although the investment program of the World Bank started some two years back there is no apparent reduction of losses.

(3). One of the objectors has demanded to know despite much-hyped efforts of the Licensees why are the distribution losses not coming down and are rather on the contrary going up.

(4). Another objector pointed out that the Distribution Losses are too high and the reduction projected is woefully inadequate. The Licensee is showing greater inefficiencies entirely at the cost of the consumers. The cost of inefficient and imprudent investments cannot be passed on to the consumers. The Commission should consider giving returns to the Licensee after due recognition of these factors.

(5). Representative of Citizen Welfare Society contended that the loss in the South Circle of Hyderabad is 33.15% and this needs to be brought down immediately.

Distribution Transformer (DTR) Failures

51. It has been represented that the transformer failure rate is very high indicating poor maintenance or quality of equipment. It was requested that the Commission may direct the licensees to take steps to arrest this and make available figures of expenditure incurred on repair and replacement of DTRs. One of the objectors pointed out that the DTR failure in the first and second quarters of FY 2000-01 was 14,315 and 18,741 respectively. The corresponding figures in the past year were 13,534 and 15,554 resulting in an increase of 5.77% and 20.4% respectively. The issues of procurement and maintenance of DTRs need to be examined by the Commission.

Efficiency Gains

52. (1) The general public complained that the licensee did not indicate in the filing the amount that accrued through efficiency improvement as against Rs.500 cr. taken into account at the time of tariff for FY 2000-01. They have also stated that instead, the licensee was claiming a loss of Rs.1073 cr. One of the objectors stated that he had urged the Hon'ble Commission in the previous FPT proceedings, not to allow Rs.500 cr. efficiency to be left undetailed as it would lead to obfuscation of benchmarks. He also stated that it is seen that the licensee continues to do so leaving no way to the public and the Commission to determine if there was any efficiency improvement at all. The Commission should hold the licensee accountable if it fails to effect the efficiency improvement.

(2). One of the objectors pointed out that bringing down of loss by pilferage and theft of energy through drives in the city, which the licensee is in the process of conducting, should more than wipe out the projected gap and that scope for reduction also exists through metered agriculture supply, load management etc.

(3). It was also stated that as there is no evidence of efficiency improvement, the failure to achieve the same should be reflected in a reduction of the licensee's return to the extent of the failure.

(4). It has also been represented that the licensee failed to achieve efficiency improvement in agricultural consumption and also in the alternative of reducing T & D losses to atleast 29.8% and hence the licensee failed to achieve the committed level of efficiency improvement.

Power Purchase Agreements (PPAs)

53. Several objectors have expressed that the Commission should examine the PPAs entered before it came into being and without such an examination, the public hearing process would be incomplete and that the public should have access to the PPAs and public examination of PPAs is critical. They have also mentioned that the Commission should make its stand clear on PPAs which have already been signed on projects that came into being before the constitution of the Commission and those which have not been executed even after completion of time as provided in the PPA.

Power Purchase Costs

54. The aspect of power purchase costs figured repeatedly during the hearings in relation to two major aspects viz., purchase of extra power for agriculture at higher cost and the signing of new projects with little reference to the costs. While the arguments were not put in such water tight categories the thrust of the public concern was the fear that high power purchase cost in FY 2000-01 and in the future would add to the tariffs. The highlights of the public concern on power purchase costs are as follows:

- Additional purchase of power for agriculture is costing an additional Rs.760 crs based on marginal cost of Rs 4.75 of the Kondapally generating station;
- Preference is shown for costly power purchases as against purchases from APGENCO suggesting that merit order selection has not been strictly followed;
- High cost power from IPPs should not be allowed to be purchased;
- Spectrum & GVK power costs are high and acceptance of increase in their projected capital costs will make them higher;
- CAG's findings on PPAs of GVK & Spectrum may be seen;

New projects should be in line with load forecast;

Financial Losses:

55. (1). During the public representation it was brought out that the licensee explained losses of Rs.801 cr. only whereas the loss expected is Rs.1073 cr. The remaining Rs.273 cr. is not explained.

(2). One of the objectors stated that the licensee will be ending with a loss of Rs.1073 cr. instead of efficiency gains of Rs.500 cr.

Bulk Supply Tariffs

56. (1). Representatives of United Electricity Employees Union expressed concern that wide difference in consumer mix, loss mix will lead to retail tariff differential widening regional imbalances.

(2). Representatives of APTRANSCO Engineers Association opined that since different DISCOMS have different performances, consumers in DISCOMS with high collection and lower transformer failure rates must be encouraged by lower tariffs.

(3). Representatives of Human Rights Forum objected that power purchase costs of DISCOMS from APTRANSCO has increased by 55% over the previous year without providing an explanation in the filing.

Indexation Mechanism

57. During the public hearing it has been stated that such a mechanism which enables an automatic pass through to the consumers is not allowable as per the Andhra Pradesh Electricity Reform Act.

Regulatory Asset

58. (1). During the public hearing it was expressed by some objectors that the licensee admits to have not considered all factors in tariff fixation for FY 2001-02 to impress upon consumers that there would be no additional burden due to tariff increase and to reduce government subsidy requirement. Alternatively, the licensee sought permission to recover additional expenditure and likely shortfall of return through regulatory asset in subsequent years thus hoodwinking the consumers. They requested the Commission not to allow any unjustified and avoidable expenditure and attract achievement failure.

(2). It has also been represented that the pass through of revenue deficit of Rs.1073 cr. to future tariffs is not tenable.

(3). It has been represented that there is ample scope for increased revenues at the existing tariff itself, for example realistic estimation of consumption by agriculture sector and corresponding reduction in purchases, and making prudent investments etc., As they will compensate any deviations from estimates made by the licensees, there is no requirement of a Regulatory Asset to be created.

Data Constraints and Waivers:

59. It has been represented during the public hearing that the Licensees' pleas for repeated waivers makes the guidelines of the Commission issued in this regard meaningless.

Spot Billing

60. One of the objectors has expressed the view that the APERC should direct the Licensees to introduce the system of spot billing immediately.

Billing and Collection

61. (1). In the Public Hearings, a few objections were raised on the Licensees' billing and collection performance. The representatives of People's Monitoring Group on Electricity Regulation and Lok Satta stated that the filings, showed no improvement in billing percentage, which in fact declined to 40.15%.

(2). One of them has also referred to increasing number of services on Disconnection List and Exceptionals List, stating that the number stood at 31 lakhs and 47 lakhs respectively by the end of February 2000 and sought Commission directive to disconnect such services.

(3). On collections, a clarification was sought on extent of recovery of arrears of Rs 1500 crores and reasons for non-recovery of the amount. Another objector stated that of realisable arrears of Rs 1230 crores in FY2000-01, the Licensees have not indicated the actual collections, and suggested that the Licensee should frame an action plan for recovery.

Six Slabs in LT Domestic Category- -I

62. (1). The tariff design for domestic category into four slabs in the last Tariff Order and the proposal of the DISCOMS to revert back to the six-slabs came in for a lot of discussion from the public during the hearing. Some revision petitions were also filed before the Commission prior to the current filing. The public have deposed during the hearing that the six slab

structure was preferred as the present four slabs imposed an undue burden on the lower middle class and the middle class who constituted a large portion of the consumers. In this connection two related issues also came up. They are: i) introduction of a new slab in the 0-50 category and ii) removal of the minimum charges.

(2). There were also representations for introduction of a new slab 0-25/30 units doing away with minimum charges for farm labour, etc.

Status of Compliance of Commission's Directives

63. During the public hearing it has been brought out that the directives of the Commission in the previous Tariff Order have not been complied with.

Release of Government Subsidy

64. During the public hearing, the Commission was requested to ensure that there is no subsidy outstanding from the Government and the total subsidy be paid to the Licensees before the end of the year.

CHAPTER – V : APTRANSCO'S/COMMISSION STAFF'S RESPONSE/SUBMISSION TO PUBLIC OBJECTIONS/SUGGESTIONS

Agricultural Consumption:

65. APTRANSCO explained that prior to 1982 agricultural loads were provided with meters. Subsequently, as per Government's policy meters were removed and all new connections are also released without meters. Since drawal of ground water has increased, more and more borewells came into existence with higher HP. The agricultural consumption gradually increased and the assessment became difficult without metering. However in 1996 erstwhile APSEB had taken up intensive Energy Audit for the first time in the country. In 1996-97, for energy audit they had installed about 10 meters per Mandal in all Mandals to estimate the agricultural consumption. Based on such efforts the agricultural consumption was estimated as 7835 MU in 1996-97 against a figure of 11,399 MU in 1995-96 which was based on average HP and estimated hours of operation. Energy losses, being the remainder of the unaccounted energy after fixing agricultural consumption, have been estimated as 34.35% against previous year figure of 20.56%. The energy losses of 34.35% included commercial losses.

66. After taking into consideration the submissions made to Commission in the tariff order effective from 4.6.2000, Commission has fixed the agricultural consumption for the FY 2000-01 as 9815 MU. The actual agricultural consumption for the FY 2000-01 is expected to be 10,860 MU as per current estimates of APTRANSCO.

67. The Commission has given a directive to provide meters for 0.5% of agricultural services to obtain better estimates of consumption. For arriving at an even better estimate meters have been provided on the LV side of the

Distribution Transformers feeding exclusively agricultural loads. This sample method covers consumption of 58,232 nos. agricultural pumpsets working out to 2.78% of total pumpsets against 0.5% proposed by the Commission.

68. As per meters provided for 58232 Distribution transformers feeding agricultural loads the consumption is assessed as below:

Table No.4

	2000-01	**2001-02**
APEPDPCL	1076.33	1088
APSPDPCL	2055.53	2040
APCPDPCL	5082.37	4795
APNPDPCL	2645.76	2577
STATE	***10859.99***	***10500***

69. The detailed methodology of estimates for agricultural consumption DISCOM wise have been indicated at para 2.2.1.2. of ARR filing.

70. Based on these meter readings, the APTRANSCO has analysed the submissions made by People's Monitoring Group on Electricity Regulation and it does not find it realistic as inter alia, the method assumed 30 days of operation in the month (for which data was provided) and then extrapolated the same for 200 working days.

71. Following the directive of the Commission to conduct a survey of agriculture pumpsets and their capacities, the census of all agricultural pumpsets in the four Districts viz., Nalgonda, Nizamabad, Chittoor and Warangal in the four DISCOMS have been carried out on a pilot study basis by an independent Agency viz., A.P.Productivity Council and the preliminary results are being submitted to the Hon'ble Commission shortly. The reports are under study by APTRANSCO and based on the final conclusion the census for Agricultural Pumpsets in other Districts in the State is being entrusted to various agencies.

72. APTRANSCO welcomed suggestions for Agricultural Metering and stated that it is already taking steps in this regard. Initially metering is being provided on the Distribution Transformers feeding exclusively Agricultural loads. They have stated that there is already a Tariff provision that the consumers opting for metering should be given supply at a metered tariff of 35 paise per unit.

73. APTRANSCO has submitted that no new pumpsets were permitted during FY 2000-01 and as indicated above the number of pump sets registered with them for regularization is 2,83,604. They have mentioned that the matter has been referred to GoAP and the decision is awaited. In one of their depositions they clarified that an estimated Rs.780 Crores is required for creating the Infrastructure for regularization and right now the consumers are availing power by extending the distribution net work by sub-standard equipment and unsafe means.

74. APTRANSCO have stated that they recognize the importance of demand and supply side management measures and are taking various steps in this direction including the following.

(i). Ensuring 9 hours power supply to agriculture;

(ii). Installation of Capacitors and Starters;

(iii). Persuading farmers to replace inefficient pumpsets;

(iv). Removal of phase converters;

(v). Training rural mechanics for quality repair and efficient pumping;

(vi). Educating farmers and;

(vii). Regularisation of services;

Quality of Supply to Agriculture

75. As regards quality of power, APTRANSCO has stated that there has been progressive improvement in the quality of supply to agriculture. In an integrated grid that APTRANSCO operates in the Southern region comprising Andhra Pradesh and other Southern States, there are severe limitations in one constitutent radically improving the quality of supply. In addition the investments in the T & D system prior to reforms was also inadequate. APTRANSCO and the DISCOMS are working towards rapidly correcting this anomaly and improving the quality of supply. Several steps have been taken including introduction of 400 KV system in the state grid, erection of EHT substations, 33/11 KV substations, distribution transformers, erection of capacitors, reconductoring and interlinking of lines to improve quality of supply.

76. Regarding maintaining supply at a stretch for 9 hours, APTRANSCO have stated that in order to provide power supply to all categories of consumers, the agricultural loads are divided into two groups – to be provided with 9 hours of power supply per day. The daytime period of 6.00 a.m. to 6.00 p.m. is 12 hours, which is divided into two groups of 6 hours between 6:00 a.m. to 12:00 noon and 12:00 noon to 6:00 p.m. The other three hours out of 9 hours of assured supply is being given during night time. Thus, a part of the supply is also given in the morning peak hours to the agriculture category.

Commission Staff Analysis

77. The staff noted with apprehension the arbitrary fixation of agricultural consumption based on the earlier methodology of number of pumpsets, and sizes of Pumpsets in this filing. This led to total agricultural consumption of 11,360 MU. The licensee has projected an overall consumption in agriculture of 10,500 MU. The calculations of the objectors, wherein estimates of agriculture

consumption ranged between 4000 MU and 5000 MU, in the opinion of the Staff, were again estimations based on assumptions of HP rating and number of hours of operation. The staff was, therefore, of the opinion that agriculture consumption should be fixed at last year's estimate of 9815 MU till reliable information is available, perhaps after completion of the census. These estimates are based on the fact that there have been no new connections in agriculture. The present number of pump sets as filed at 20.92 lakhs includes unauthorised connections. Regularisation *per se* makes them consumers of the Licensee and their additional power consumption is already accounted for in the estimate of 9815MU.

Transmission Losses

78. In the ARR for FY2000-01, APTRANSCO declared a 4.5% transmission loss which the Commission had allowed in the tariff order. Against this projection, APTRANSCO has revised the transmission loss figures to 8.92% for FY2000-01.

Table No.5

Items	FY2000-01 Order	FY 2000-01 Revised	FY2001-02 ARR
Purchase by APTRANSCO (MU)	42628	41839	41800
Transmission Losses (MU)	1918	3733	3553
Transmission Losses (%)	4.5%	8.92%	8.5%

79. In the ARR application the licensee highlighted the following:

(a). The transmission loss is inclusive of losses in transmission system on account of purchases from stations outside the state, and also losses in transmission system not owned by APTRANSCO i.e. Power Grid Corporation of India, are as much as 4.7 percent. The projection of the overall EHT transmission losses, based on actual meter readings taken for the four months between June and

October 2000 works out to be 9.60 percent of the total energy input into the system.

(b). After taking into account the metering accuracy, meter reading cycle time, input of energy to DISCOMS at 33 kV and 11 kV from other generating sources like mini hydro and wind farms, the overall transmission losses are estimated to be 8.92% for FY 2000-01. Accordingly, a figure of 8.5 percent has been projected for FY 2001-02.

(c). During the public hearings the Licensee also mentioned that the 4.5% mentioned as transmission losses in FY 2000-01 filing refers to the transmission line losses only and does not take into consideration the transformation losses.

80. APTRANSCO explained that the transmission losses provided are based on actual meter readings and the relevant data has been provided in the ARR/ERC filing.

Commission Staff Analysis

81. The staff of the Commission felt that the 8.5% transmission losses indicated by the Licensee included generation transformer losses, station auxiliary transformer losses, colony consumption, energy meter accuracy problems etc. They asked the Licensee to furnish the details of losses attributable to each of these elements. The staff pointed out that a study by Central Power Research Institute, Bangalore suggests 5.87% losses in the transmission system of Karnataka. They asserted that similarly the AP Transmission system cannot have a loss more than 5.9%.

Distribution Losses

82. APTRANSCO have stated that reduction of T & D losses is one of the objectives of power sector reforms. However, this will require substantial time and investment. The T & D losses which were estimated to stand at 38% in FY 1998-99 are projected to go down to 32.3 percent in FY 2001-02. It is unrealistic to expect that the losses will reach normative levels immediately.

83. The present estimates of losses for FY 2000-01 for the T&D system is 33.9 percent, which is lower than the level of 35.4 percent, “allowed” by the Hon’ble Commission.

84. The Licensee has submitted the following distribution loss estimates for the FY2001-02. APEPDCL – 17.5%, APSPDCL - 23.2%, APCPDCL – 30.7% and APNPDCL – 24.4%. It is to be noted that these losses are mentioned as a percentage of the energy input into the particular Distribution Company. The overall distribution loss as a percentage of the total energy purchased by APTRANSCO is 23.8%. Further to a query from the Commission, the Licensee clarified that out of this, 12.0% is commercial losses and 11.8% is technical losses in the distribution system. The Licensees have clarified that the losses mentioned are as per the readings of the interface meters with the APTRANSCO.

Distribution Transformer (DTR) Failures

85. The APTRANSCO has stated that the failure rates of the Distribution Transformers for the last three years have shown a reduction and that the Licensee is taking all steps to minimize the DTR failures. The following data has been submitted.

Table No.6

Year	Total DTRs	Failures	%
1997-1998	159152	56278	35%
1998-1999	171991	54770	32%
1999-2000	186847	52415	28%

The APTRANSCO admitted that the failure rate had gone up sharply in the first two quarters of FY 2000-01 but the data till January, 2001 indicates that this has stabilized. As of January 2001, the failure rate was 25.76% compared to 28.05% in FY99-00. The Licensee expressed optimism that the overall failure rate in FY 2000-01 will be at comparable levels with FY1999-00. The Licensees have mentioned in the ARR filings that although the capacity-wise breakup of failures is not readily available, the process of collecting information on the same is being undertaken. As per filing, 54824 numbers of transformers were overloaded as against a total of 186847 transformers existing as on March 31,2000. The main causes for the DTR failures are as follows:

(a) Originally loads were released adopting a diversity factor of 1.5. However, since restriction and control (R&C) measures are introduced and supply maintained for fixed hours, all loads are incident at the same time, thus overloading the DTRs.

(b) A number of unauthorized agricultural pump sets are hooked on resulting in overloading and increased occurence of LT line faults.

(c) Earthing at DTR structures erected more than 25 years back need renovation.

The details of DTRs and failures are given in the following table:

Table No.7
DISCOM-WISE DISTRIBUTION TRANSFORMERS FAILURE

	1997-98		1998-99		1999-2000		2000-01 (Upto Nov.)	
	No. of DTRs failed	% DTR Failures	No. of DTRs failed	% DTR Failures	No. of DTRs failed	% DTR Failures	No. of DTRs failed	% DTR Failures
APEPDCL	6489	25	7237	26	5425	18	4493	14
APCPDCL	23570	42	22162	37	20714	32	17242	25
APSPDCL	14041	34	13427	31	14512	30	12297	24
APNPDCL	12178	33	11944	30	11764	27	12684	28
State Total	56278	35	54770	32	52415	28	46716	24

Efficiency Gains

86. APTRANSCO has contended that an exercise is being carried out to quantify efficiency gain.

87. APTRANSCO explained that the power purchase input in the current year (FY 2001-02) could be brought down by 280 MU despite an increase in sales by 628 MU through efficient operations bringing down the overall loss level to 33.9% as against 35.4% in the tariff order of FY 2000-01. But for these measures, the revenue deficit would have been higher by Rs.200 cr. It is also stated that the efforts being made by APTRANSCO and the DISCOMS for efficiency improvement have been described in Sec.1.6 of the Bulk Supply and Transmission ERC filing and the section on Plans and Performance Measures in the DISCOM FPT filing.

88. APTRANSCO contended that it is sparing no efforts in ensuring collection of Current Consumption charges from all categories of consumers including industrial consumers. No industrial consumer is allowed to use power without paying the charges as per the conditions of the supply. The APTRANSCO is also pursuing the cases pending in the Courts for early disposal. The APTRANSCO

has also undertaken special drives to enforce disconnection in problem areas even at the risk of law and order problems to ensure that the consumers who pay regularly are not burdened on account of failure of others. APTRANSCO and the DISCOMS are making all out efforts to reduce losses and the ERC and FPT filings incorporate the results of their loss reduction efforts through loss reduction and efficiency improvement.

89. APTRANSCO stated that the financial losses have accrued primarily due to factors beyond the control of the licensee and inspite of its best efforts. Under these circumstances denying returns to the licensee would be unwarranted and detrimental to the financial health of the licensee.

Commission Staff Analysis

90. The staff in their analysis of the financial losses examined the three factors that the Licensee, APTRANSCO claimed were responsible for the losses. On examination of these three factors, the Staff's conclusion was that the losses incurred were more due to operational inefficiencies rather than due to factors beyond the Licensees' control. Under the circumstances the Licensee's claim for a separate dispensation towards losses did not arise. The public were equally worried about the incurring of losses in the filing and attributed it solely to power purchases from high cost producers. In its responses to both Staff and the public the Licensee has asserted that the losses were beyond its control and accordingly claimed its treatment as a regulatory asset.

Power Purchase Agreements (PPAs)

91. APTRANSCO explained that PPAs of the projects commissioned from which power is being drawn during FY 2000-2001 viz., GVK, Spectrum and Lanco, have been made available to the Hon'ble Commission. All the PPAs have been shown to the opposition leaders in the presence of Hon'ble Minister

for Power and examined by them. The PPA being a contract document between APTRANSCO and IPPs is of a confidential nature till the financial closing of the project is over. The financial closing of only 3 Projects viz. GVK, Spectrum and Lanco are over and these PPAs are made available. Other PPAs are getting amended and the amended PPAs require the consent of the Commission in terms of Section 21 of Reform Act and will be filed with the Commission.

Power Purchase Costs

92. APTransco in their responses explained in detail the procedures involved in purchasing power based on merit order to minimise power purchase costs. If there has been any departure from the given merit order it is purely a temporary measure due to factors beyond the control of the Licensee. It is APTRANSCO'S responsibility to ensure continuous power and to maintain the required grid voltage. In order to maintain continuous supply,on the spot decisions have to be taken in the event of the danger of tripping of the system. Hence, the decision on power purchase costs must be made only after careful examination of all factors. This applies to the purchase of power for agriculture also.

93. Detailed explanation was given with regard to the cost of power from IPPs. APTransco accepted that the present cost of power from IPPs is relatively high since it includes power purchased from Lanco that used Naphtha as feedstock (fuel). The costs of Lanco will come down once the fuel is converted to gas in July/August 2001. The per unit price will then be Rs.2.21. It was also clarified that all future combined cycle projects will be with gas. All the short gestation projects have been awarded on Competitive Bidding basis with Naphtha as fuel as per the Government of India policy. The GoAP have subsequently tried to obtain gas linkage from Krishna Godavari Basin for electricity generation to the extent of 1500MW. As none of the short gestation projects except M/s Lanco have achieved financial closure, GoAP have re-negotiated tariff for all these projects and persuaded them to accept the lowest tariff of M/s Gautami Power

i.e. fixed cost of 0.6 cents plus 69.9 paise, which is equivalent to 98 paise at the present exchange rate. At the present gas price, the total tariff is working out to less than Rs 2 per unit for the new gas fired projects, which will be the cheapest tariff in the country for any new project. It was also clarified that all new projects including IPP projects have to be consented by the Commission under Sec 21(5) of the Reforms Act.

94. APTRANSCO stated the ARR/ERC for FY 2001-02 projected a per unit cost of Rs.2.92 per kwh for FY 2000-01 and Rs. 2.94 per kwh for FY 2001-02 for IPP power i.e. a Rs.0.02 per kwh increase in average cost of power. The costs for FY 2001-02 would have been Rs.2.74 had the IPP capacity been fully dispatched. However, due to the projected power surplus in a number of months of the year in FY 2001-02, the IPPs with higher variable costs have not been fully dispatched, following the merit order sequence of dispatch provided in the Transmission & Bulk Supply ERC. Hence APTRANSCO contended that it is incorrect for the public to infer that the cost of IPP’s power is progressively increasing.

95. Further, with the materialisation of capacity additions during the years 2002-05 from NTPC, Simhadri as well as gas fired Short Gestation Projects, the power purchase cost from new IPPs will be coming down when compared to purchases from other sources like Eastern Region, Gridco etc. With regard to signing of new projects APTransco clarified that these were in line with projected load forecast. In case of any shortfall in demand within the state there was always scope for export to other states. Since the projects are approved on the basis of a Competitive Bidding Process, they will be competitive in terms of tariffs thus posing no problems for purpose of export.

96. APTRANSCO have stated that GVK and Spectrum have projected increase in completed capital costs over and above the provisions of the PPA. The proposals submitted by GVK and Spectrum have been entrusted to independent consultants M/s. CRISIL and M/s. ICRA for scrutiny and recommendations. Based on the recommendations of M/s. CRISIL for the GVK project, the APTRANSCO submitted the recommended final capital costs to the CEA through the GoAP for its examination and approval. M/s. ICRA submitted their recommendations on the completed capital costs of M/s Spectrum and these are under examination of APTRANSCO. An opportunity has been given to M/s. Spectrum to explain their case.

97. APTRANSCO further stated that these are the first two IPP projects commissioned in the country and the completed capital cost proposals for the first time being processed by the State Government, APSEB/APTRANSCO and CEA and hence there is delay in processing. The power purchase agreements have been vetted by the Government of India (GoI) as conforming to the guidelines issued by the GoI. These projects, particularly GVK, are identified as fast track projects and the GoI issued the counter-guarantee to the GVK – Jegurupadu project. CEA, which is the competent authority to approve capital costs issued the techno-economic clearance, and certified that the project cost of GVK Jegurupadu and Spectrum, Kakinada was reasonable based on the then cost of ongoing projects in the country, which was in the order of Rs. 3.5 Crs. Per MW.

98. As regards to findings of the Comptroller & Auditor General (CAG), APTRANSCO contended that as per the procedure the remarks of CAG will have to be considered by the Committee on Public Undertakings of the AP Legislature and the Committee after examining the presentations made by the CAG as well as APTRANSCO will finalise its report to the Legislature.

Financial Losses:

99. The APTRANSCO has indicated in the ARR that the Transmission and Distribution Operations in FY 2000-01 will result in a financial loss of Rs. 1073 Crores. The details as filed by the Licensee are as follows:

Table No.8

<table>
<tr><th>Particulars</th><th>Tariff Order (Rs. Cr)</th><th>Revised (Rs. Cr)</th></tr>
<tr><td>Costs including Returns</td><td>8823</td><td>8842</td></tr>
<tr><td>Less: Non-tariff Income</td><td>457</td><td>299</td></tr>
<tr><td>Total Revenue Required</td><td>8365</td><td>8543</td></tr>
<tr><td>Less: Subsidy</td><td>1626</td><td>1626</td></tr>
<tr><td>Less: Efficiency Gains</td><td>500</td><td rowspan="2">5844</td></tr>
<tr><td>Less: Revenue from Tariffs</td><td>6239</td></tr>
<tr><td>Financial Loss</td><td>0</td><td>1073</td></tr>
</table>

100. They explained that the projected loss of Rs.1073 cr. In FY 2000-2001 is primarily due to the following reasons beyond the control of APTRANSCO as already submitted in the filing.

(i) Change in Hydro-Thermal Mix

(ii). Change in load mix i.e. decrease in industrial consumption and increase in agricultural consumption

(iii). Fall in non-tariff income.

Bulk Supply Tariffs

101. The Licensee expressed the view that as long as the Commission regulates the sector the apprehensions that the wide difference in the consumer mix, load mix will lead to retail tariff differential, widening the existing imbalances are unfounded. The Licensee quoted Section 26(8) of the Reform Act, which requires that similarly placed consumers in different areas as far as possible pay similar tariffs. However, the suggestion for uniform Bulk Supply Tariff was welcomed as progressive, although the feasibility of its implementation at this stage was doubted.

102. Regarding the power purchase cost of DISCOMS, the Licensee stated that the power purchase cost of Rs.7621.2 crores in FY 2001-02 is based on full cost tariff, whereas the Rs 4894 crores in FY 2000-01 is based on DISCOMS ability to pay. The Licensee assured that the adoption of this method of computation does not have any additional financial impact on the system as a whole.

Commission Staff Analysis

103. The APERC Staff position is that the economic signals to the distribution companies through the Bulk Supply Tariff should be preserved in order to elicit the right consumption behaviour. The Staff proposed to evolve a mechanism so that these economic signals can be maintained even as the statutory requirements are met.

Indexation Mechanism

104. Automatic indexation of costs mechanism proposed is consistent with the spirit of the Reform Act and the reform process. The licensees have proposed

indexation and true-up mechanism which they believe are vital towards timely mitigation of impact of external costs. The Licensees are willing to arrive at a suitable formula in consultation with the Commission to institutionalise such an arrangement within the legal and regulatory framework.

Regulatory Asset

105. The proposed regulatory asset is a mechanism to protect the financial interests of the utilities for mitigating impact of factors beyond their control. Section 11(1) (e) of the Reform Act clearly states that one of the important functions of the Commission is to keep in view "*the interest of the consumer as well as the consideration that the supply and distribution cannot be adequately maintained unless the charges for the electricity supplied are adequately levied and duly collected".*

106. The Regulatory asset ensures that both the interest of consumers and suppliers are met since such an asset can be amortised over time preventing any possible rate shock.

107. APTRANSCO submitted that their request for a Regulatory Asset is bonafide and based on recognised regulatory principles in comparable reforming utilities and the objection to the same is misconstrued and baseless. It is submitted that the proposed regulatory treatment is based on securing acceptability and success of the reform process within the matrix of the economy. The proposal is analogous to the carry forward of approved losses to be retired or recovered over a reasonable period in time such that it does not cause unbearable burden on the various stakeholders. It is denied that the proposal is unfair or burdensome to consumers. It is further denied that the deferment is motivated by extraneous considerations or that it is contrary to the objectives of the Act.

108. APTRANSCO have stated that factors like sales increase, economic power purchases etc., have already been factored in the ERC filings. In addition, the DISCOMS have proposed an efficiency improvement of Rs.500 cr. for FY 2001-02. Hence there is unlikely to be any further efficiency possible to make good the anticipated gap for FY 2000-01, which is currently projected at Rs.1073 cr.

Data Constraints and Waivers:

109. The APTRANSCO submitted that the Licensee has been diligently making all reasonable efforts to secure compliance with all requirements stipulated by the Act as also the regulatory instruments and directions issued by the Hon'ble Commission. The requests for waivers have been made only with respect to requirements that cannot be complied with inspite of this effort. Even though the Licensee would prefer otherwise, it finds itself without the necessary systems, infrastructure and resources to conduct its operations as a modern utility. The re-structuring and reform of APSEB which commenced only as recently as February, 1999 in the backdrop of the financial, operational and functional problems of the APSEB. Hence it will take some time before the Licensee can completely meet the guidelines.

Spot Billing

110. APTRANSCO stated in connection with the suggestion for introduction of the system of spot billing, that the the proposal is under consideration of the Licensees.

Billing and Collection

111. The Licensees attributed the decline in billing percentage to increase in un-metered agriculture sales (from 9815 MU to 10860 MU) and shortfall in HT sales (4894 MU to estimated 4091 MU). On the Disconnection List, the Licensee assured that all efforts are being made to effect disconnection and rectify exceptional cases.

112. On collections, the Licensees have referred to recent improvements with Rs.590 cr. being realised in December 2000 against a billing demand of Rs.520 cr.

Commission Staff Analysis

113. The Staff presented the compliance of the Licensees on Directive 6 (Billing) and Directive 9 (Collection) issued by the Commission in its previous tariff order. The Staff indicated that the submissions made by the Licensees on these directives, in formats prescribed by the Commission, are incomplete and not amenable to effective monitoring by the Commission. For instance, only APEPDCL provided the input energy data enabling review of its billing percentage, which for that Discom ranged between 52% and 69% for the period monitored. Since other Discoms failed to provide the input energy data, the monthly progress on billing percentage could not be worked out.

Six Slabs in Domestic Category-LT-I

114. During the public hearing the CMD/APTRANSCO while presenting Licensee's proposals for domestic tariff sought change of four slabs to six slabs.

115. The DISCOMS in their filings have proposed a reversion back to 6 slabs in Domestic category and also reduction in the average tariff for the category by 2 per cent. While maintaining the lifeline rate of 135 paise /kwh for the slab 0-50 units the Licensees have proposed introducing an intermediate slab between 51-200 units slab by bifurcating into two slabs i.e. 51-100 units and 101-200 units. The proposed tariff rates are 260 paise/kwh for the first part of the bifurcation and 285 paise/kwh for the second part of the bifurcation. Again the DISCOMS proposed to bifurcate slab 200-400 units, into two slabs viz., 201-300 units and 301 – 400 units. The present rate of 450 paise/kwh is sought to be applied only to the slab 201-300 units. For the slab 301-400 the rate proposed is 500 paise. An increase is proposed in the rate for >400 units from 525 paise to 575 paise/kwh.

116. APTRANSCO explained that minimum charges are levied to meet a part of the fixed charges incurred by APTRANSCO to maintain the lines and the distribution system even if electricity is not availed by the consumer.

117. APTRANSCO stated that they believed that the six slab structure proposed and the additional provision of Rs.25 per month minimum charge for consumers with connected load upto 250 W protects both the interests of the utility and the consumers and hence were not agreeable for the proposal to introduce an additional 0-25/30 slab.

Commission Staff Analysis

118. The Commission Staff opined that continuation of four slabs is preferable as maximum number of consumers fall into this category. Their analysis was based on the concept that over time, leaving the lifeline consumers all other consumers must move closer to their cost to serve. Tariff is the price signal for

consumers to realise the true value of a scarce non-renewable resource. Fair and equitable distribution of costs require that the extent of cross -subsidising category of consumers should gradually be reduced so that only two consumer categories exist lifeline and others. Perhaps the Commission could consider removal of the minimum charges for consumers with connected load below 250 W as a concession to the small and marginal consumers.

CHAPTER – VI : STAFF PRESENTATION

Introduction

119. The Commission staff made a presentation to the Commission on 7th March, 2001 during the public hearing. The presentation was made on behalf of the consumers, a practice initiated in the first Tariff Order. The presentation of the staff related to the analysis of the ARR/ERC filings of APTRANSCO and the four DISCOMS. The analysis was based on the filing and additional information that had been provided on clarifications sought. The presentation was also an attempt on the part of the staff to consider the various objections raised by the public in the five days of public hearing.

120. The staff noted that there were substantial information gaps and data constraints rendering the task of evaluation very difficult. APTRANSCO continued to claim waivers sought in the earlier year showing that there has been no improvement in the information made available.

121. The staff noted that efforts of the Licensees to obtain return as provided for in the Tariff order for FY 2000-01 had not been successful. APTRANSCO has projected a financial loss of Rs.1073 crores. Against efficiency gains of Rs.500 crores promised by the utility, it is claimed now that the gains achieved were only of the order of Rs.350 crores. However, no break up had been furnished by the Utility even for this claim.

Status of Tariff Order FY 2000-01

122. The staff set out the status on compliance of the directives issued by the Commission as under:

Table No.9

Directive No.	Directive	Achievement
1	Filing Data Gap	Data gaps still exist as observed in the waivers requested in this filing
2	Agricultural Census to be done in 6 months	Partial data submitted only for 4 pilot districts
3	Agricultural Consumption to be 9815 MU	Commission has directed the Licensee to get GoAP subsidy for funding the extra 1045 MU supply to agriculture.
4	Interface metering	Metering of the interface points with 0.2 class meters yet to be completed
5	Energy Audit	Information in approved formats not submitted
6	Improve billing to 48%	Information supplied by the Licensee is incomplete
7	Action plan for achieving Rs. 500 efficiency gain	Details not provided by the Licensee
8	Opening of non-drawl A/C for terminal funds	No amounts credited to this account till date.
9	Review of Receivables	Information supplied by the Licensee is incomplete
10	Interest charges of Rs. 163 Cr for APGENCO	Documents submitted and verified by the Commission.

123. It was noted that none of the directives were complied with except furnishing of information in respect of directive No.10. It was broadly noted that failure to comply with the directives 2 and 4, which would have helped in filling substantial information gaps regarding the agricultural consumption, had rendered the task of estimating the consumption for the future years difficult. Similarly, in respect of directive No.6, the billed energy could not be ascertained in the absence of data.

124. The staff observed that the Utility was probably trying to compute efficiency gains for FY 2000-01 with reference to the figures for the earlier year FY 1999-2000, even though the details even in respect of this comparison, had not been furnished. According to the staff, the efficiency gains should have been achieved vis-à-vis the Tariff order of the Commission and not the previous year's figures.

125. Dealing with the Utility's explanation for the loss of Rs.1073 crores, the staff observed that for the excess supply to agriculture (over and above 9815MU, the quantity permitted by the Commission) being without the permission of the Commission the Licensee should seek compensation from GoAP if supply was effected at the instance of GoAP. Dealing with the explanation regarding the huge variation in the HT sales, the staff pointed out that sales to Ferro Alloys units was incorrectly taken as a source of income from the HT in the earlier year. It was also noted that the shortfall in the hydel generation had been made up by thermal generation and other sources. The claim relating to reduction in the non-tariff income had also not been substantiated with data. In the final analysis, the actual power procurement cost had gone up only marginally from Rs.6826 crores to Rs.6888 crores, as concluded by the staff.

126. The staff did not react favourably to the Licensee's suggestion for creation of a Tariff and Dividend Control Reserve with a negative balance, for holding the profit forgone by the Licensee, contending that the sixth schedule did not have a provision for creating a negative reserve, which would, incidentally, have the effect of increasing the capital base in the ensuing year.

127. The staff noted that in FY 2000-01, as against capital investments of the order of Rs.1,714 Cr. allowed by the Commission, the actual expenditure was only Rs.473 crores in the first nine months of the year. The staff did not accept the claim of the applicant that Rs.1548 crores would be spent in the remaining 3 months. The staff's own estimate of possible capital expenditure in the remaining 3 months was only Rs.521 crores.

Tariff Filings For FY 2001-02:

128. The staff in their presentation highlighted the major elements of cost and revenue as a preview of the expected aggregated revenue requirement for the FY 2000-01 and the gap to be covered in the ensuing year. The staff made a detailed analysis of the capital investment proposals and the various items of expenditure estimated by APTRANSCO and the four DISCOMS.

129. The investment proposals were examined from the point of view of the likelihood of investment materialising in the ensuing year on the basis of the past trends. The staff noted that only such of the capital expenditure which is likely to be incurred and is useful, could be considered in the tariff for the year FY 2001-02. The staff also noted that neither APTRANSCO nor the four DISCOMS had obtained prior approval of the commission for any new scheme the cost of which is exceeding Rs.5 crores. They also did not have any plan to show that the capital expenditure proposed would actually be incurred by way of a cash flow statement reflecting these outgoings. Going by the past experience and the estimates of expenditure in respect of on-going projects, the staff recommended the following items of capital investment and capital work-in-progress for APTRANSCO and the four DISCOMS for incorporation in the Tariff for FY 2001-02.

Table No.10

APTRANSCO (Rs. in Crores)

Item	APTRANSCO	STAFF
OCFA	3,621.51	2,633.77
CWIP	706.48	1,155.83
Loans	2,516.68	2,330.25

APNPDCL

OCFA	1,010.31	680.95
CWIP	332.29	264.10
LOANS	829.97	739.12

APEPDCL

OCFA	883.85	824.03
CWIP	233.53	208.54
Loans	374.39	333.41

APSPDCL

OCFA	1,165.51	932.62
CWIP	309.94	324.59
Loans	748.25	666.35

APCPDCL

OCFA	1,773.84	1,533.05
CWIP	534.74	411.56
Loans	1,116.90	994.64

130. The staff also scrutinized the expenditure estimates of APTRANSCO and DISCOMS for the year FY 2001-02. After detailed examination of the various estimates, the estimates of the staff regarding the various items of expenditure are as under:

Table No.11

APTRANSCO (Rs. in Crores)

Expenditure items	**APTRANSCO**	**STAFF**
Power purchase	6,982.61	6,822.61
O & M	249.25	179.03
Interest	483.06	179.10
Others	4.83	4.83
Total	7,719.75	7,185.57

APNPDCL

Power purchase	1,506.00	1,394.79
O & M	183.09	194.65
Interest	65.76	50.60
Others (*)	23.78	6.98
Total	1,778.63	1,647.02
* Bad debts not allowed		

APEPDCL

Power purchase	1,092.20	1,011.92
O & M	157.70	158.59
Interest	34.87	34.04
Others (*)	18.47	5.98
Total	1,303.24	1,210.53
* Bad debts not allowed		

APSPDCL

Power Purchase	1,636.00	1,515.08
O & M	298.45	277.79
Interest	78.06	71.08
Others(*)	17.92	7.17
Total	2,030.43	1,671.12
(*) Bad debts not allowed		

APCPDCL

Power purchase	3,467.00	3,211.07
O & M	360.15	363.52
Interest	81.67	77.97
Others (*)	49.20	10.76
Total	3,958.02	3,663.32
* Bad debts not allowed		

131. The main dis-allowances have been in the area of working capital requirement and interest thereon, bad debts and power purchase costs. The staff noted that no justification had been provided for working capital computed or for interest thereon. The staff were of the opinion that there was no need for working capital considering the float provided by the generators by way of credit for power purchases and the funds provided by the consumer by way of consumer deposits. It also noted that non-payment or default in payment by customers did not also create any need for extra working capital as utilities were authorized to levy delayed payment surcharge at 2% p.m., which meant an interest rate of 24% p.a. as against the borrowing rates of 13% to 15%. There was, therefore, no justification for provision of interest on the working capital as matters stood. However, if utility could make out a case for additional working capital, staff had no objection in principle. As regards bad debts, the staff noted that there was no justification for a provision in view of the existing provision of Rs.618.90 crores in the transfer scheme which had not been utilized and a disallowance on the same score had been made in the earlier tariff order.

132. The next item of adjustment is the power purchase cost. After a detailed analysis of the fixed and variable costs of different stations, and mainly the sourcing of power in merit order, the staff were of the opinion that the power purchase cost could be reduced by about Rs.160 crores. The staff also observed that the merit order should be station-wise and not as one block. It should also match with the availability of generating units and their overhauls. It should also keep in view costs such as incentives and deemed generation.

133. The final projections of the total expenditure, reasonable return and the aggregate revenue requirement for APTRANSCO and DISCOMS vis-à-vis the expected revenue from charges and the efficiency gains were worked out as under by the staff:

Table No.12

(Rs. in Crores)

		FILING	STAFF
Total Expenditure	APTRANSCO	7,719.75	7,185.57
Total Expenditure	4 DISCOMS	1,369.12	1,259.11
Reasonable return	APTRANSCO	155.04	120.89
Reasonable return	4 DISCOMS	56.46	13.79
Total Expenditure	**T&D**	**9,300.37**	**8,579.36**
Non-tariff income	APTRANSCO	(-) 34.60	(-) 34.60
Non-tariff income	4 DISCOMS	(-) 98.83	(-) 298.83
Total Aggregate revenue requirement (T&D)		**8,966.94**	**8,245.93**
Expected revenue from charges (current tariffs)		6,274.49	6,194.00
Proposed efficiency gains		501.00	501.00
GAP		**2,191.45**	**1,550.93**

Transmission Losses

134. The staff observed that APTRANSCO had projected transmission losses of 8.5% as against 4.5% adopted in the earlier year. APTRANSCO had claimed that the loss was worked out on the basis of the meter readings. The staff noted that any estimate of transmission losses should take into account elements such as generating station transformer losses, auxiliary transformer losses, colony consumption, station consumption, energy meter inaccuracy problem and transformer losses up to 33 kV. Following the estimate of Central Power research Institute, Bangalore adopted by the Karnataka Electricity Regulatory Commission, the staff estimated the transmission losses in the range of 5.72% to 5.9%. It is stated that the licensee had been asked to submit an independent simulation study to arrive at the transmission losses. Incidentally the staff also noted that the distribution licensees had provided neither loss figures nor a justification for the technical and commercial losses.

135. The staff made an analysis both for APTRANSCO and for the DISCOMS of the sales projected for 2001-2002. They have moderated the projections considering the past rates. The domestic growth rate at 7.3% estimated by DISCOMS has been accepted. In commercial and miscellaneous category growth rate has been raised from 6.6% to 7.9%. A growth rate of 4% in HT was considered reasonable. Overall growth rates for LT & HT (without agricultural consumption) projected have more or less been accepted by the staff.

136. As regards the agricultural consumption, the staff, after noting that the surveys directed by the Commission last year had not been completed, observed that the number of irrigation pump sets had risen from 18.97 lakhs to 20.92 lakhs. The ARR had projected a consumption of 10500 MUs as against 9815 MUs permitted by the Commission for the earlier tariff year. Taking into account the contention of a large number of petitioners that the pump sets operated on an

average only for about 4 to 5 hours a day for 200 days, the energy audit figures available for APNPDCL and the provisional report of pilot surveys conducted by the AP Productivity Council in four districts, the staff was of the view that till all the relevant surveys are completed, the agricultural consumption should be pegged at the last year's figure of 9815 MUs.

137. The staff commented on some of the proposals made by APTRANSCO in the filing viz., Indexation of costs and wheeling charges. As regards the former, the staff observed that APTRANSCO has not provided any conceptual framework on the mechanics of the proposed indexation mechanism. The staff felt that unless the baseline information was ready and 100% of the consumers were metered, an indexation concept could not be introduced. As regards the proposal of APTRANSCO for levying wheeling charges at Re.1/- per unit, the staff observed that APTRANSCO had not given proper justification for the levy.

138. The staff made certain final observations on tariff policies and structures. It recommended that the Commission should continue to endeavour to establish compensatory tariffs and to rebalance the rate structure by reducing cross-subsidies and by ensuring efficient operation of Licensees. Rationalization was required in the matter of bringing rates closer to the cost to serve and according uniform treatment to all similarly placed customers in terms of tariff terms and conditions of supply. Coming to specifics, the staff felt that Domestic LT-I category should continue to have only four slabs as against the proposed six slabs after noting that the consumption of power in the slabs above 201 units was only 11% of the total consumption of power. It also recommended that minimum charges should be replaced by a two-part tariff incorporating fixed charges based on connected load. The staff also felt that Category-III(B) should be merged with Cateogry-III and Category LT-II should be rationalized. It also proposed a discount on load factor basis to industries and rationalization of tariffs for Aqua-culture and sugar cane crushing.

CHAPTER – VII : STATEMENT OF
GOVERNMENT OF ANDHRA PRADESH (GoAP)

139. The GoAP made a presentation before the Commission covering aspects such as Policy directions regarding subsidies U/s 12(3) of the Reform Act, suggestions for determination of the Terms and Conditions of payment of subsidy and reasons for not paying monthly instalments of subsidy which had fallen due for the some of the months in FY 2000-01, besides comments, on the tariff proposals for FY 2001-02 in the light of reform process pursued by the Govt.

140. Sri V.S.Sampath, Prl.Secretary, Energy Dept., GoAP, Hyderabad, appeared on behalf of GOAP and made the following submissions:

(1). At the outset, he clarified that the Government had released the entire subsidy due for the FY 2000-01 including the instalment due for the month of March 2001 and that there were no arrears. He also informed the Commission that the financial loss of Rs. 1073 Crores sustained by the Licensees was under the examination of the Government. Considering the cash deficit and other requirements of the Licensees the Govt. had decided to provide financial assistance upto a maximum of Rs. 1053 Crores, by way of issue of Power Finance Corporation bonds; but the actual quantum of assistance would depend upon the decisions of the Commission on nature and extent of loss and the Licensee's request for treating the loss or a portion thereof as a Regulatory Asset.

(2). As regards the performance of the Licensees, Sri Sampath remarked that the licensees had achieved considerable efficiency gains inspite of a prolonged spell of disturbance and litigation and are now in a position to build on the efforts made in the last few months to achieve substantial efficiency gains in FY 2001-02. As against the efficiency gains of Rs. 500 Crores promised to the Commission in ARRs filed by the DISCOMS, the Govt. had set an internal target of Rs. 947 Crores which was almost double the amount promised to the Commission. The GoAP. was confident that the Licensees would achieve the targeted efficiency improvement.

(3). Sri Sampath further stated that full functional autonomy is given to APTRANSCO and DISCOMS. APTRANSCO and DISCOMS were given a free hand to run their businesses. The fact that DISCOMS were freely disconnecting services even to Govt. offices for non payment of bills clearly showed that the Licensees had full autonomy in running their businesses.

(4). On the question of tariff, Sri Sampath stated the Govt. had given firm commitment in more than one fora on different occasions regarding the restoration of six slabs and requested the Commission to agree to the same. The Govt. was in agreement with the slab structure proposed by APTRANSCO. The adoption of new slabs would give relief to certain categories of domestic consumers in the intermediate slabs. Sri Sampath stuck to his point even after his attention was drawn to the presentation made by the staff of the Commission, during the course of which the staff pointed out that the domestic consumers in the last three slabs (with consumption above 200 units) consumed only 11% of the total consumption in the domestic category and hence there was no need to have three slabs for them making the total slabs in Domestic Category six.

CHAPTER – VIII : RESPONSE BY APTRANSCO TO THE STAFF PRESENTATION

141. APTRANSCO made a point by point response to the various issues raised by the staff in its presentation. It will be convenient to deal with them issue wise:

(a). DIRECTIVES: Referring to the severe criticism of the staff on the non-fulfillment of the Directives, APTRANSCO contended that it had achieved partial compliance on nine of the ten directives and full compliance on the last directive. The status on the implementation of the directives by the Licensee is stated as follows:

- Directive 1: Most data requirements for which waivers were asked for had been met fully or partly except for elements like marginal costing;

- Directive 2: Census of the agriculture sector is carried out for four districts and interim report received was filed. This would be further extended to all districts. It must be recognized that it is a time and resource intensive exercise;

- Directive 3: Permission was sought from the Commission on 4th January, 2001 for excess supply to agriculture. The matter had been referred to GoAP on the advice of the Commission;

- Directive 4: The reason for the delay in procurement and installation of 0.2 class accuracy interface meters was that competitive bidding tendering procedure required some lead time. However, the 0.5 class accuracy meters installed were adequate as an interim measure;

- Directive 5: Regarding institution of energy audit, data for the first round of results had been provided in the filings. This was an ongoing exercise and in the context of the present status the utilities are in compliance;

- Directive 6: In response to the staff position that improvement in metered billing to 48% had not been achieved, it was explained that despite fall in HT sales and increase in agriculture sales, the metered sales have not fallen. The metered sales can improve appreciably only if agriculture is metered. Percentage of metered sales is not an appropriate yardstick and absolute figure of metered sales would be more appropriate;

- Directive 7: In the context of efficiency gains, several measures had already been taken;

- Directive 8: In response to the staff position that deposition of terminal benefit funds in non-drawal accounts had not been complied with, APTRANSCO informed that non-drawal accounts had been set up and the trust formation was in final stages. Depositing funds in non-drawal accounts without formation of the trust would have resulted in inadequate returns from these funds;

- Directive 9: Substantial progress had been made in the context of review of receivables and the progress had been detailed in the review meetings;

- Directive: All data relating to interest charges had been furnished.

(b) <u>TRANSMISSION LOSSES:</u> APTRANSCO explained that transmission losses could be ascertained by actual measurement by energy meters at both ends or by computer simulation of steady state conditions. The erstwhile APSEB had installed meters of different classes of accuracy (0.5 to 2) for the purpose of internal energy audit. In October 1999, their Consultants had submitted a report which estimated the transmission peak power loss at 6.13%. Assuming a load factor of 0.75, the annual transmission losses were given as 4.59% in the filing for FY 2000-01. However, in the subsequent year, the system had undergone many changes and the peak had increased to 6501 MW on 15-3-2000 and to 6825 MW on 17-2-2001. The loss of 8.5% was ascertained during the course of energy audit after reading the meters. It represented APTRANSCO loss (i.e.) in the transmission system including transformation to 33 kV at which voltage the DISCOMS were supplied. Commenting on the staff estimate of the transmission losses at 5.7% to 5.9%, it was pointed out that studies by MECON Ltd., in Karnataka had shown the loss at 10.42% and the Karnataka Electricity Regulatory Commission had accepted 10% as transmission loss. APTRANSCO contended that the errors incurred in energy audit were significantly less than the errors encountered in estimating losses by way of simulation of different load levels and generating patterns. Further, with the improvements in meter accuracy already under way, the energy audit results could be considered to be a true reflection of the actual loss. In response to queries from the Commission, it was clarified that only 12 of the 460 meters were of 0.2 class accuracy and it would take a full year to install meters of 0.2 class at all points.

(c) <u>AGRICULTURAL CONSUMPTION:</u> APTRANSCO explained that the agricultural consumption was estimated at 10500 MU based on the reading of meters fixed at distribution transformers feeding exclusively agricultural loads. Regarding hours of supply and periods of pump utilization, APTRANSCO estimated 9 hours supply per day for the purpose of projection. The average running hours per pump set as indicated by each DISCOM in its ARR was based on field enquiries about crops raised, average land holding per pump set, cropping pattern, ground water availability etc. APTRANSCO felt that projection of agricultural consumption for FY 2001-02 at 10500 MU was reasonable.

(d) <u>EFFICIENCY GAINS:</u> APTRANSCO listed a number of steps taken by them to achieve efficiency gains.

- Identifying commercial losses – regularization, theft control, category conversion;
- Increase in metered sales – installing meters, identification and rectification of services where consumption was lower than what was normally expected as per connected load, monitoring unmetered sales etc.,
- Power purchase cost – reductions in power purchase through proper load management;
- Reduction of line losses – through R & M, upgradation of infrastructure etc.,
- Overhead costs – O & M costs, inventory costs etc.,
- Inspection of services;
- Installing high quality meters;
- Reconciling MRBs in commercial category and energy reconciliation;
- Revenue enhancement;
- High quality metering and monitoring;
- Inventory control;
- Monitoring industrial express feeders;
- Agricultural services monitoring, installing capacitors and starters in agricultural consumers, conducting consumers awareness programmes;
- Investment planning and contracts execution;
- Common billing software and collection improvement system.

APTRANSCO sought to show that beginning from the month of October, 2000 (not much work could be done before October because of agitation, litigationetc.) there was substantial improvement in the collections month after month as compared to the corresponding months of the previous year, even without taking into consideration the tariff hike granted by the Commission for FY 2000-01.

An increasing trend in the collections was noticed. APTRANSCO was likely to reach Rs.5845 crores for FY 2000-01 as against Rs.4500 crores for FY 1999-2000. The monthly collections are likely to stabilize at Rs.520 crores which was a vast improvement over the previous year. However, it was conceded that if the yardstick adopted for computing efficiency gains was the tariff order for FY2000-01, there was no efficiency increase. APTRANSCO could not also justify by facts and figures their claim that they had achieved efficiency gains of about Rs.350 crores.

(e) TARIFF AND DIVIDEND CONTROL RESERVE: APTRANSCO reiterated that the proposal for the Tariff and Dividend Control Reserve with a negative balance, was consistent with the first Tariff order issued by APERC where the Commission gave agreement in principle for creating a reserve if circumstances warranted. It is further submitted that their request was strictly in conformity with the Sixth Schedule of the E.S. Act and there was no departure from the Sixth Schedule. If permitted, this could be a deferred revenue requirement until an appropriate time.

(f) INDEXATION: Justifying their plea for use of indexation mechanisms, it is submitted that APTRANSCO had offered discussion a number of times but the matter was not taken up by the staff. They further submitted that they are presently working on a formula which will be submitted after they have finalized it.

(g) WORKING CAPITAL REQUIREMENTS: Dealing With the views expressed by the staff on interest on working capital and interest costs, APTRANSCO explained that apart from paying interest on working capital it had to pay interest on other market borrowings for meeting the cash deficit.

(h). PROVISION FOR DOUBTFUL DEBTS : As regards the provision for Doubtful debts, APTRANSCO contended that considering the large sales turnover and similar provision allowed by the Maharastra and Orissa Regulatory Commissions, it should be allowed a provision of 1-2% on the total sales. It also argued that the international practice allowed such a provision based on bad debt levels of past 3-5 years.

(i) CAPITAL INVESTMENT COSTS: In response to the observations of the staff that the applicant had failed to furnish details of the various schemes for capital investments which were to be included in the tariff for FY 2001-02, APTRANSCO submitted that the DISTCOMS had received their licences just prior to ARR filings and were not conversant with the practice obtaining. While the procedural details were important, they may be condoned for the purpose of the present hearing. It also submitted that capital investment costs had been properly stated in terms of their expected completion date. They were willing to submit further clarifications to enable the Commission to approve the proposals for the purpose of inclusion in the tariff.

(j) POWER PURCHASE COSTS: APTRANSCO accepted some of the specific observations of the Commission on the possible generation from certain sources such as Srisailam Left Bank and KTPS and also savings in the power purchase costs in respect of private IPPs. As regards the staff's general observations such as the licensee's block treatment of availability and cost of power from APGENCO and APTRANSCO, it was explained that APTRANSCO had followed the principle of constrained merit order, but they were willing to accept the changes suggested by the staff if the requirement could be trued up in the next filing.

(k) TARIFF ISSUES: In response to the general suggestions made by the staff, APTRANSCO agrees that tariff should be compensatory without however unduly burdening the consumer in the initial stages of the reforms and that the rate structure should be gradually rebalanced to reduce the cross-subsidies. The tariff policy should also ensure efficient operation by the licensees without unduly impairing their financial health. APTRANSCO is of the view that rationalization of tariff could be undertaken as part of comprehensive tariff reform in a subsequent tariff proceeding. It also expressed itself in favour of expanding the present four slabs structure for domestic customers to six slabs with a view to avoid tariff shock to the consumers in the intermediate slabs.

(l) PISCICULTURE ETC., On specific proposals on tariff for Pisci culture, Prawn culture and Sugar cane crushing, APTRANSCO was in general agreement with the views expressed by the staff. It was also in general agreement with the modification of the tariff structure for LT category-III(B) as proposed by the staff. It promised to submit a formal proposal in this regard.

(m) APTRANSCO proposed a concessional tariff for incremental consumption by HT consumers with a view to promote the HT sales. The following are the features of the scheme proposed by APTRANSCO.

- The average energy consumption for a financial year is obtained by adding the monthly energy consumption for FY 2000-01 and dividing by 12. Consumption for this purpose would mean consumption of electricity supplied by APTRANSCO, billed by and payable to APTRANSCO. Consumption would not include purchase from third party or captive generation.
- If the energy consumption in any month for FY 2001-02 exceeds the average consumption determined above, then the consumption over and above 5% excess of the average consumption or of consumption in the corresponding month in the previous year, whichever is higher, will be charged at a rate of 10% less than the corresponding slab rate subject to the condition that this rebate will be applicable only for the energy over

and above the energy corresponding to 40% annual load factor. There will be no rebate on demand charges.

- In case the energy consumption in any month falls below the average and if such consumer has already availed the concession during the previous months, the rebate allowed to the extent of the shortfall in the current month shall be withdrawn and shall be claimed in the current month bill subject to the condition that the withdrawn amount shall not exceed the concession given.
- The minimum annual load factor for the eligibility of this scheme shall be 40% in the previous year for the entire year. However, for whatever reason if the unit could not achieve 40% load factor in the previous year, the base line consumption for the purpose of this computation shall be taken as corresponding to 40% annual load factor on the basis of 24 hours functioning everyday of the month for the entire year.
- However, the consumer should not derate the contracted demand for the ensuing year and should not have derated during the previous year to be eligible for the rebate.
- It is proposed that the scheme shall be valid for only one year and shall lapse with effect from March, 2002 unless APTRANSCO makes a specific submission to the Commission for continuance of the scheme beyond March, 2002.

(n) TRANSMISSION AND WHEELING CHARGES: APTRANSCO gave an elaborate justification in support of the proposal for wheeling charges based on the following points:

- The activity of transmission and/or supply of power is licensed by APERC u/s 14 of Reform Act. APTRANSCO is a licensee for transmission and bulk supply business u/s 15 of Reform Act. The power of fixing tariffs and prescribing the terms and conditions of supply including licensing power are vested in the APERC;

- The APGPCL shareholders have no immunity from the purview of APERC as long as they use the wheeling system of the licensee. The MOU with APTRANSCO does not attract the doctrine of promissory estoppel. Statutory power of the Commission u/s 26 of Reform Act overrides the doctrine of promissory estoppel. (CERC's Revision Orders in the NTPC case on Availability Based Tariff);

- Section 11(1)(e) of Reform Act enjoins the Commission to safeguard the interests of consumer and at the same time ensure financial viability of the utility;

- The Commission had accepted the principle of cross-subsidy from HT industrial consumers to the needy sections of other categories. The participating industries of APGPCL (a small group among the HT consumers) are not subjected to this cross subsidy obligation in respect of the power used by them which constitutes 34% of the total consumption by this category consumers. It may be noted that 3% of the HT consumers are getting 34% of the energy by wheeling without contributing any cross-subsidy, thus violating the principles enshrined in Article 14 of the Constitution;

- Commission has to ensure equity among HT consumers of APTRANSCO / DISCOMS;

- The existing wheeling charge regime in kind is not in conformity with the provisions of the Reform Act and requires intervention by the regulatory authority;

- The beneficiaries of the private power cannot take it for granted that they can use the T & D system built by APSEB /APTRANSCO, for supply of power to the consumers of the State utility on the same terms. T & D network has been laid to transmit 42000 MU on an average to 13 million consumers. It is not logical to take the cost spread over such a wide range of consumers to the advantage of just 76 consumers.

- The cost of T & D system for wheeling 530 MW of private power requires to be computed at the current capital costs as APTRANSCO is required to update the transmission system to meet the demand at the current capital cost. Thus the transmission charges are required to be fixed on the cost of assets at current capital costs instead of historical and depreciated asset cost. The O & M costs incurred for maintaining such a huge network needs to be properly compensated. The transmission and the distribution losses are found to be much higher than the considered losses when the wheeling charges were prescribed. Hence a higher level of losses have been considered in fixing the wheeling charge;

- The wheeling charge should be so fixed that the cumulative charge for the energy should be brought to a comparable level with consumers of similar loads;

- Thus, natural justice and public interest demand review of the existing agreement/MOU terms so as to conform to the provisions of the Reform Act;

- It is proposed that a service obligation charge be levied over and above the transmission cost and compensatory cost for losses during wheeling.

CHAPTER – IX : COMMISSION'S ANALYSIS

Legal Issues

142. The Commission has considered the two legal issues raised by the objectors viz., (1) that the DISCOMs are not entitled to file application for revision of tariff, that APTRANSCO not being in the business of Distribution and Retail Supply of electricity, the ARR and the tariff proposal filed by APTRANSCO are not legal and valid and (2) that the APTRANSCO cannot propose a revision in wheeling charges payable by various project developers, and the submissions of the Licensees on the two issues. In so far as the status of DISCOMS is concerned, the Commission has already issued licenses to the DISCOMS vide Order dated 29.12.2000 passed in OP Nos.643, 644, 645 and 646 of 2000 and these licenses are effective on and from 1.4.2001, i.e. the commencement date for the revised tariff determined by this order. The application filed before the Commission is a joint application both on behalf of APTRANSCO, which is the licensee for distribution and retail supply activities at the time when the ARR and Tariff proposals were filed and the DISCOMS which will be the licensees from 1.4.2001 and are also the 'Agency' performing these activities as a subsidiary of APTRANSCO since 01.04.2000. The tariff is being set for the period 1.4.2001 to 31.3.2002. The Commission, therefore, finds no legal infirmity in entertaining the application on behalf of APTRANSCO and DISCOMs and determining tariff for the DISCOMs effective from 1.4.2001. Accordingly, the objections raised by the objectors in regard to the status of the DISCOMS in filing the joint application with APTRANSCO for determination of ARR and tariffs, are without any merit and are rejected.

143. The issues relating to setting appropriate transmission/distribution wheeling charges are complex in nature and require proper consideration. These include determination of losses in different parts of the system, viz., transmission losses (upto step down to 33 kV) and distribution losses (33 kV and below) forming technical component and the other various losses in metering, reading, billing etc., including theft forming the non-technical component of the total losses. The Commission will consider the issues of appropriate transmission/distribution wheeling charges in a separate proceeding. At this stage, the Commission will continue the existing arrangement on a provisional basis without prejudice to the Commission's rights to consider the issues relating to appropriate transmission/distribution wheeling charges at a later stage. The Commission is not expressing any opinion on the rival contentions of the objectors and APTRANSCO/Distribution Companies at this stage.

Commission Analysis of Substantive Issues raised by the Public and the Staff

The Commission's analysis on the substantative issues raised by the public and staff is set forth below.

Agricultural consumption

144. In the ARR, the Licensees have worked out agricultural consumption for FY 2001-02 based on the hours of supply methodology. On the basis of number of pumpsets, average HP of the pumpsets and hours of supply to the agricultural consumer, the total MU requirement worked out by the Licensee is 11360 MUs. However, the Licensees have indicated that by bringing in discipline in the supply hours, they propose to restrict the MU sold to agriculture to 10500 MU. The following table shows the basis for the consumption in agriculture sector.

Table No.13

Company	APEPDCL	APSPDCL	APCPDCL	APNPDCL	TOTAL
No.of consumers(Lakhs)	1.39	4.67	7.63	7.23	20.92
Average HP	8	5	5	5	5
Hours of Supply per year	1335	1180	1800	1140	
Calculated MUs	1107	2055	5123	3074	11360
Proposed MU	1088	2040	4795	2577	10500

145. Agricultural Consumption estimates remain an area of concern, as there is no metering of supply of electricity to agricultural consumers. This is leading to two problems – loss estimates are becoming highly subjective and there is no incentive to economise use of electricity. This is also leading to uneconomic use of ground water resources. In the tariff application for FY 2000-01, the Licensee had relied on three different methodologies for estimation of agricultural consumption. The Commission directs that the Licensee shall conduct regular and thorough energy audit and the information shall be filed in the format that has already been given to APTRANSCO and the DISCOMS.

a). Sampling Methodology: By installing 10 Meters in each Mandal.

b). Cumulative HP rating method: By taking a total connected pumpset capacity and assuming 1200 hours of operation for the year;

c). Forecast: Estimating a monthly consumption pattern aggregating to 9800 MU and supported it by estimated consumption of 9900 MU based on the agricultural consumption pattern in Kuppam Rural Electric Co-op. Society which adopted an average pumpset capacity of 4.5 HP working for 6 hours a day and 240 days in a year.

The three different methods had led to an inconsistency in the estimates. The final figure for FY 2000-01 was projected at 9815 MU. The Commission had accepted the consumption figures subject to the studies it directed the Licensee to carry out such as, census of agricultural pumpsets and metering of agricultural transformers. In the ARR for FY 2001-02, Licensees have projected that the actual agricultural consumption will be 10860 MU for FY 2000-01.

146. In the FY 2000-01 tariff order the Commission had directed (Directive 2) the Licensee to carry out census of the pump sets within 6 months of the tariff order. The Licensee has carried out the survey in four pilot districts only. A.P.Productivity Council is still to complete this survey. To arrive at any meaningful conclusion regarding the consumption of agriculture, the Commission must have the results of all the districts in the State. As part of the energy audit exercise, the Licensee had proposed to take up a program of metering of the agricultural transformers. This exercise also has not been completed as per the plan.

147. The independent studies undertaken by members of the public have engaged the attention of the Commission. Many of the objectors have based their estimates of agricultural consumption on the study undertaken by the Peoples Monitoring Group on data provided by the Licensee. Their estimates place agriculture consumption at 4751MU per annum which is less than half of what has been projected by the Licensees for FY 2001-02. The Staff in their presentation, while examining the claims of the objectors expressed the opinion that without field verification of the underlying assumptions, estimates of agricultural consumption made by the public also remain 'guestimates'. The Commission has examined all evidence and are in concurrence with the Staff analysis. While the Commission has no objection to the methodologies used by the objectors, in their opinion, it remains an academic exercise until definite metered data is available regarding the meters fixed on the transformers supplying exclusive agricultural loads and the final Census Report is available. This would enable verification of the number of hours of pump set usage, and the size of the pump sets. The census study directed by the Commission in its last Tariff Order should be completed by the end of October, 2001.

148. In the absence of any study results to arrive at the actual MUs consumed in this segment, the Commission sees no reason to revise last year's estimation of 9815 MU. Accordingly, the APEPDCL is allowed to have 1017 MUs, the APSPDCL 1907 MUs, APCPDCL 4482 MUs and the APNPDCL 2409 MUs of agriculture sales for the FY 2001-02. The Commission directs that regulated 9 hrs supply to agriculture should be strictly enforced. Any purchase of power for additional supply to agriculture can be only with the prior approval of the Commission.

149. Regarding the number of agricultural services in the State as a whole, the Licensee had communicated to the Commission that as on April 1, 2000 it was 18,21,280. Licensee has also indicated that regularization of 2.83 lakhs additional unauthorized consumers during the year is under consideration. The Licensee also clarified during the hearings that they have no plans of releasing supply to any new pump set as part of regular annual release, as per the direction of GoAP.

150. It is evident that 2.83 lakhs consumers are availing power illegally without contributing any money towards the Licensees' revenue. The Licensees have also indicated that if these are decided to be regularised, proper infrastructure to effect safe supply to them should be put in place. The Commission directs that all unauthorized agriculture connections should either be regularized by arranging the required funds or disconnected within three months. It is not in the commercial interest of the Licensees to continue to supply power without realizing any revenue. Moreover public safety is seriously undermined by continuation of such an arrangement.

151. The Commission is of the opinion that since the ‘to be regularized’consumers were perhaps already part of the electricity system (illegally) and consuming energy, their inclusion as regular consumers should not increase the energy consumption. The Commission therefore sees no reason to revise the last year’s estimation of 9815 MU.

152. 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 exclusively supplying to agriculture consumers.

Quality of Supply to Agriculture

153. The Commission is of the view that adequate measures should be taken by all the Licensees to meet the technical performance standards set by the Commission. To improve the power factor, it must be made compulsory for the farmers to use capacitors with the pumpsets. If it is already provided for under the existing supply conditions it must be strictly enforced. Regarding continuous supply in one spell for the allotted hours of supply rather than in two or three spells, Commission feels that if it is possible on the part of the Licensees to have such an arrangement without exceeding the overall allocated MU for agriculture category, the Licensees must endeavour to do so.

Transmission Losses:

154. The Commission had adopted a transmission loss of 4.5% of the purchased energy in the May 27, 2000 tariff order. Against this projection, APTRANSCO has revised the transmission loss figure to 8.92% for 2000-01.

Table No.14

Items	2000-01	2000-01	2001-02
Purchase by APTRANSCO (MU)	42628	41839	41800
Transmission Losses (MU)	1918	3733	3553
Transmission Losses (%)	4.5%	8.92%	8.5%

155. In the ARR application the licensee highlighted the following:

(a). The transmission loss is inclusive of losses in external transmission system not owned by APTRANSCO on account of power purchases which are as much as 4.7 percent. The projection of the overall EHT transmission losses, based on energy meter readings taken for the four months between June and October 2000 works out to be 9.60 percent of the total energy input into the system.

(b). After taking into account the metering accuracy, meter reading cycle time, input of energy to DISCOMS at 33 kV and 11 kV from other generating sources like mini hydro and wind farms, the overall transmission losses are estimated to be 8.92 percent for FY 2000-01. Accordingly, a figure of 8.5 per cent has been projected for FY 2001-02.

(c). During the public hearings the Licensee also mentioned that the 4.5% mentioned as transmission losses in FY 2000-01 filing refers to the transmission lines losses only and does not take into consideration the transformation losses.

156. There has been a general concern among all stakeholders regarding the transmission loss claimed by APTRANSCO. The Commission felt that the Transmission Losses should also be estimated by System Simulation Study or Load Flow Analysis. During the ARR review process, the Commission asked the Licensee to conduct the above study by an independent agency and present the result before the Commission. The study was carried out and the results were presented before the Commission. As per the study, APTRANSCO sustained a Transmission Loss of 8.7%.

157. The Commission observed many lacunae in the loss estimates in both the methods as given below.

(i). Firstly, the licensee has failed to comply with the Commission directive of providing 0.2 class accuracy meters at the interface points between APTRANSCO and APGENCO and between APTRANSCO and the DISCOMS. Out of 72 interface points between APGENCO and APTRANSCO, only 12 have been provided with 0.2 class accuracy meters.

(ii). There has been no progress in providing these 0.2 class accuracy meters at interface points with the Distribution Companies.

(iii). The period of study, the accuracy of the meters in position and the several adjustments in computation of a small quantity of EHT losses leave a few things in doubt.

(iv). The Commission observed that the Licensee has not considered 132/33 kV and 132/11 kV transformers in the Simulation Study. Also the assumed system load factor of 90% is far higher than the actual average system load factor.

(v). The Simulation Study is for one day when peak demand occurred viz., 15.3.2000 at 19.30 hrs. Calculation of reasonably reliable energy losses would require simulating the system for various generation schedules capturing seasonal and other variations.

158. It is to be noted here that as per the submission of the Licensees, the overall loss in AP is projected to come down to 32.3% with the transmission loss of 8.5% and distribution loss of 23.8%. Thus it is a matter of allocation of these losses between the transmission and the distribution systems within the overall limit of 32.3%. The Commission is not satisfied with the manner in which the loss estimates are made by the Licensees and intends to appoint an independent agency to conduct a detailed study to arrive at the losses at every voltage level in the system. In the meantime, the Commission provisionally accepts 8.5% transmission loss.

159. The Commission directs that the Licensees shall complete by 31st December, 2001' the installation of 0.2 accuracy class meters at all interface points where the ownership of power changes.

Distribution Losses

160. As was mentioned in the last year's tariff order, the distribution loss is at best a derived figure calculated by deducting the metered sales, estimated agricultural consumption and transmission losses from the overall energy input into the system. 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.

161. It is not reasonable for the Commission to direct Licensee to eradicate the entire losses immediately. Any such direction given will not be practical. The Licensees have to be motivated and prevailed upon to achieve efficiency gain progressively. Apart from this, 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. If achieved, the Consumers get direct benefit of this. The Commission has suggested many measures in metering and energy accounting this year. The Commission believes that these would result in substantial reduction in losses.

162. The Commission, thus, intends not to change the loss figures as submitted by the Licensees for the current year. The Commission is, however, not satisfied with the manner in which the loss estimates are made by the Licensees as already stated. It intends to appoint an independent agency of its own to conduct a detailed study to arrive at the losses at every voltage level in the System starting from the point of supply by the generator to the point of distribution to consumer. In the meanwhile we consider the Licensees' estimates of losses provisional.

Distribution Transformer (DTR) Failure

163. Distribution Transformer is a static equipment and its failure should be but very rare. As per the filing, expenditure of all the DISCOMS for repair of DTRs is very high at Rs.131 cr. constituting 90% of the R & M expenditure of the DISCOMS. The argument that higher diversity factor of 1.5 was adopted is not evident from the filing considering the fact that the Connected Load is 14043 MVA and the aggregate Distribution Transformer capacity is 14490 MVA. There are perhaps some pockets where overload exists on the DTRs. It makes

commercial sense to address the overload in these few pockets by providing additional DTR capacity than allow and incur huge repair costs in the range of Rs.130 cr. per annum. This should be addressed immediately.

Table No.15
DISCOM-WISE DISTRIBUTION TRANSFORMERS FAILURE

	1997-98		1998-99		1999-2000		2000-01 (Upto Nov.)	
	No. of DTRs failed	% DTR Failures	No. of DTRs failed	% DTR Failures	No. of DTRs failed	% DTR Failures	No. of DTRs failed	% DTR Failures
APEPDCL	6489	25	7237	26	5425	18	4493	14
APCPDCL	23570	42	22162	37	20714	32	17242	25
APSPDCL	14041	34	13427	31	14512	30	12297	24
APNPDCL	12178	33	11944	30	11764	27	12684	28
State Total	56278	35	54770	32	52415	28	46716	24

164. Although it is difficult to conduct a detailed analysis with the limited information provided by the licensees, it is clearly evident that DTR failures as percentages of the existing transformers 11KV/400V are extremely high. Further, it is also noted that the percentage of DTR failures of the respective DISCOMS is skewed, with high level of failures in APCPDCL , APNPDCL and APSPDCL. The year-on-year growth in DTRs and the reduction in failures, as observed from the table above, are not very encouraging. All this amounts to increasing costs of the Distribution system. The Commission intends to benchmark the technical performance of the DISCOMS against the best among them. There is no reason for the APCPDCL/APNPDCL/APSPDCL to have different level of failure than of the APEPDCL. The Commission hereby directs that the Distribution Transformers failures are to be limited to no more than 18% for APCPDCL, APSPDCL and APNPDCL and 15% for APEPDCL for FY 2001-02. Action plans shall be filed with the Commission by the DISCOMS before 31st May, 2001.

165. The Distribution companies are also directed to submit expenses associated with the repairs and maintenance of the DTRs and the additional expenses towards provision of additional DTRs to relieve the overload of the existing DTRs.

Efficiency Gains

166. The most pressing aspect of reform in electricity industry in Andhra Pradesh continues to be reduction of technical and non-technical losses and metering of consumer consumption. The licensees have made efforts to reduce losses, anticipating a reduction of 1.5% in FY 2000-01 and proposing to reduce by another 1.6% in FY 2001-02.

167. The extent of efficiency gains achieved/not achieved by APTransco in the last one year has drawn a lot of attention from the public and the staff. APTransco's claim that an efficiency gain of Rs.300 crs was achieved has been examined carefully by the Commission. Before assessing whether the Licensee has achieved some portion of the proposed efficiency gain of Rs. 500 crs it is important to understand what constitutes efficiency gain and how to measure it or quantify it.

168. It may be recalled that in lieu of prescribing limits to reduction of losses the Commission in the last Tariff Order had preferred to accept the efficiency gains of Rs.500 crs proposed by APTRANSCO in its filings for FY 2000-01. This Rs.500 crs was over and above the 1.5% reduction in losses. The Commission is of the opinion that there is scope for even higher efficiency gains than the committed Rs.500 crs. Opportunities exist in merit order dispatch, Demand Side Management measures for subsidised consumers, strict implementation of the regulated supply to agriculture, metering at all levels, strengthening of the internal processes to minimise commercial losses, and plugging the loopholes in metering, billing and collection of revenue. A detailed action plan for the same was sought from APTRANSCO. APTRANSCO filed an “Action Plan” on

22nd July, 2000. The Commission felt (in its review of 21.8.2000) that the action plan was in general terms. APTRANSCO later distributed the target of Rs.500 cr. among the four DISCOMS. At one stage APTRANSCO claimed that they had achieved an improvement in metered billing by 2.8%, but did not follow up with any further details.

169. The Tariff Order of the Commission dated 27th May, 2000 incorporated the efficiency gains. Th proposed efficiency gains were deducted from the aggregate revenue requirement in estimating the fully allocated costs to each consumer category. Hence the tariff rates for each consumer category presumed that efficiency gains were already realised and the benefits thereby accrued to the consumers. Any efficiency gains will therefore have to be over and above the increases in revenue due to tariff increases.

170. The staff undertook an exercise of the different aspects of the power sector within which it is possible for effecting efficiency gains. At the outset, the most critical aspect is the reduction of losses both technical and commercial losses. The filings for FY 2001-02 show a shift of losses from the distribution side to the transmission side with regard to technical losses. It may however be noted that Billing Demand had gone up after October, 2000 reflective of better revenue collection. The data filed with the Commission shows that after October, revenue from tariff income increased from Rs.450 crs per month to Rs.500 crs per month. This would mean an increased tariff revenue of Rs 6000 crs per annum. The tariff Order for FY 2000-01 had permitted an increased tariff revenue upto Rs.6239 crs. That mark was not reached. The Commission has repeatedly stated that the base for measurement of efficiency gains is the tariff order for the FY 2000-01 and not performance in FY 1999-2000. A break-even would have meant achievement of the proposed efficiency gains of Rs.500 crs. if other vital projections were right. Improvements in billing demand were outweighed by the increased purchase of power for agriculture. As often stated there is a balance between loss estimates and agricultural consumption. Increases in purchases of

power for the subsidised category offset any gains registered in billing collections. Perhaps, as stated in their filings the decrease in HT sales tended to be a drag on the efficiency.

171. Efficiency gains can be achieved either through reduction in expenditure or through increase in sales revenue. While it is possible to list out all the items of expenditure and by way of variance analysis estimate the increase/decrease in expenditure, in the case of revenue earnings since there are both cross-subsidised and cross-subsidising consumer categories the analysis is more cumbersome. For a regulated monopolist the major expenditure item is power purchase cost. The gains achieved in the purchase of power cost is through: a) reduction in power costs through a judicious merit order selection; b) control of sale to low-value realising customers and in turn increasing sales to high value consumers. In a regime of supply barely matching the demand and fixed long term PPAs the degree of freedom available to the Company for changing the mix is limited. On the other hand, any pressure of demand or a change in the mix can upset planned merit order selection of power sources.

172. The points of relevance and the issues to be examined are: i) merit -order selection; ii) increase in billed units iii) sales mix towards high value consumers. The attention of the public has been largely directed towards the power purchase cost and possible deviation from merit order selection as approved by the Commission. This aspect has also arisen in the context of the claims by APTransco that extra power to the extent of 1050 MU was purchased for agriculture consumption. In the same context the public have expressed a desire to make the PPAs public for the sake of ensuring transparency. There are two aspects to the issue of power purchase costs. Firstly, an increase in costs because of increased purchases on account of agriculture and secondly, violation of merit order.

173. With regard to increased power purchases the Commission abides by the Directive issued in the last order that for purchases for agriculture over and above 9815MU for agriculture requires the prior permission of the Commission. Since such clearance was not sought the Commission will not entertain any increase in power purchase costs on account of purchases for agriculture; On the issue of merit order selection the staff's examination showed that there was no violation with regard to merit order. The Commission sees no reason to believe otherwise. The fear of the public that higher cost power was purchased especially from Lanco is not sustainable as strict merit order cleared by the Commission was maintained by APTRANSCO.

174. It may be noted that the per unit Power Purchase cost in the Tariff Order of May 27,2000 works out to Rs.2.73 per unit (Rs 7381.58 crs/42628MUs.) APTRANSCO claimed that power purchase costs have gone up to Rs. 7652 crs although power purchased has fallen to 41837MUs. The marginal decrease in power purchases however does not get reflected in the revenue realisation. The average revenue realisation as per the Tariff Order of May 27, 2000' was Rs.2.27 paise per unit which APTransco in their revised filings claim it to be Rs.2.11 paise per unit. Efficiency gains by way of lower losses however have not been reflected in the revenue earnings. As a business venture the key factor for assessing efficiency gains is ultimately its impact on the bottom line.

175. APTRANSCO has not been able to demonstrate the achievement of efficiency gains promised for the FY 2000-01. It has however been able to set in process various improvement measures. Trends in increasing Billing Demand and the rigour displayed in reducing losses convinces the Commission that it will be possible for the Licensees to achieve the proposed efficiency gains of Rs.501 crs in FY 2001-02. In the current filing the Commission has therefore, included efficiency gains of Rs.501 crs.

176. The Commission believes that the licensees can significantly improve performance in FY 2001-02, using the powers, changes in conditions of supply, and incentives, which are provided to them by the State Government and the Commission. To ascertain the true improvement in performance, it is important the licensees improve the quality of information. Estimates of non-metered consumption are a poor substitute for accurate meter reading and inhibit the Commission's ability to direct and to ensure that the licensees are receiving the proper amount of revenue from each of its consumers. In the Public Hearings, some objectors proposed lower estimates of non-metered consumption suggesting higher T&D losses than claimed by licensees. These problems have to be resolved at an early date. The Commission proposes to initiate an Independent study for assessment of transmission and distribution system losses in the licensee areas.

177. The methodology for assessment of efficiency gains to be made by the Licensees shall be prescribed by the Commission in consultation with the Licensees. The Commission directs that the progress reports on efficiency gains in the manner prescribed by the Commission shall be submitted by the Licensees to the Commission on a monthly basis.

Power Purchase Agreements (PPAs*)*

178. The Commission has considered the contentions of general public and APTRANCO and is of the view that there is need to maintain transparency without affecting the confidential aspects. In respect of all such agreements which have been concluded, there can be no objection to disclosure of the documents.

179. The Commission directs that all PPAs concluded shall be made available for inspection to the general public. APTRANSCO shall maintain a data room wherein certified true copies of all such PPAs shall be kept for inspection. Copies of the documents shall be made available to the interested parties at reasonable photocopying charges.

Power Purchase Costs

180. One of the objectors has contended that the additional agricultural consumption of 1045 MU could cost an extra Rs.760 cr. based on a marginal cost of Rs.4.75 per unit of the Kondapally Generating Station. The APTRANSCO contended that the stated principles of computation of additional cost by the objector were incorrect. Additional Agricultural Consumption of 1045 MU would require purchase of about 1600 MU. As per the filing the highest rate in Naphtha mode is Rs.2.82 for variable cost and fixed cost is Rs.1.25 which add to Rs.4.07 per Kilo watt hour, but Naphtha generation purchase of only 130 MU has been planned by the Licensee. The remaining 1470 MU have been planned to be purchased from cheaper sources. Marginal cost cannot be used for estimation of the additional cost but rather the cost of additional units available from different sources to be selected on the merit order is only to be considered.

181. Merit Order determines the despatches of the available generating units. The claim of the objectors that cheaper APGENCO power was not purchased is not correct as in FY 2000-01 additional power to a tune of 1300 MU is purchased from APGENCO Thermal stations. In FY 2000-01 the entire energy generated in APGENCO's Stations was drawn by the Licensee. In the present filing also, all possible generation from APGENCO has been admitted in toto. In case higher generation becomes available from APGENCO, such generation gets despatched on the basis of merit order. Merit Order is followed in sourcing the power.

182. The assumption that the cost of power from Independent Power Producers is high may have to be understood against the background of how the tariffs are set for IPPs. In Andhra Pradesh the first two IPPs, namely, GVK and Spectrum are derived from agreed capital costs and other operating parameters as per the Government of India guidelines and the concluded PPAs. Fixed costs of these units will reduce as the loan repayment with interest is made. These IPPs are paid charges as per the cost finalised by CEA. A second type of Independent power producers are coming up on the basis of competitive bidding. Kondapalli power station is one which has been built on the competitive bidding basis. Tariffs for these projects are competitively bid and accepted. The Commission believes that merit order operation and mix of generation from different sources of fuel will provide required reliability of supply in the power starved state. As regards Spectrum and GVK, the power purchase cost filed in the ARR was reduced to the extent of disallowance of Income Tax and double counting of incentive amount by the Commission for ensuing year.

183. Objector's suggestions regarding purchasing from the captive power plants to reduce purchase cost may not always result in reduction of cost. In the ensuing year Licensee has agreements to purchase power from Vizag Steel Plant and Nav Bharat Ferro Alloys (VSP & NBFA) and they will be dispatched only as per the merit order.

184. Objectors view that sanction for new projects should be in line with the Load projections is correct. The Commission has prepared power procurement and resource plans guidelines which every licensee has to follow. Additional capacities by way of 'Spinning Reserve' to ensure system reliability and further capacities in the entire Southern Region to correct the present low frequency operation would be required too. The Commission would take into consideration these factors while conveying consent to the PPAs of new projects.

Financial Losses

185. The Commission has examined the financial performance of the Licensee taking into consideration the information provided in the ARR & FPT and the additional information submitted by the Licensee. This involves review of revenues and costs.

186. The Commission's estimate of Licensees' revenues for FY 2000-01 is as follows:

Revenue from Tariff Income: The Licensee's revenue from tariff income is estimated to be Rs.5524 Crores.

- This is based on the actual revenue till December 2000 and projection for the balance 3 months of the financial year.
- Non-tariff Income: The Non-tariff Income is estimated to be Rs. 331 Crores similarly.

Together with GoAP subsidy of Rs 1626 Crores, the total revenue of the Licensee for FY 2000-01 is **Rs. 7481 Crores**.

187. The Commission's estimate of Licensee's costs for FY 2000-01 is as follows:

- Power Purchase Costs: The Commission estimates that power purchase costs are Rs. 6888 Crores. This estimate is based on the actual power procurement bills until December 2000 and projections for the balance 3 months of the financial year.
- Other Expenses: The Other Expenses (O&M, salary, interest, depreciation etc.) are estimated as Rs. 1470 Crores.

The total of these costs is **Rs. 8358 Crores**.

188. The Reasonable Return as per the Sixth Schedule of Electricity (Supply) Act, 1948 for FY 2000-01 is estimated by the Commission as Rs. 147 Crores. This is lesser than the Licensees' estimate due to a lower Capital Base, which is due to slippage in Capital Expenditure from that budgeted in the Tariff Order of May 27, 2000.

Thus the overall financial loss works out to **Rs. 1024 Crores (=8358 + 147 – 7481).**

189. The following table summarises the Commission's estimates for FY 2000-01, showing the variations vis-à-vis the Tariff Order.

Table No.16

(Rs.in Crores)

	Tariff Order				
	Transmission	Distribution	Consolidated T&D	APERC Present Estimates	Variation
Power Purchase	6825.61		6825.61	6888	-62.39
Other Costs	374.81	1351.35	1726.16	1470	256.16
Reasonable Return	182.42	89.71	272.13	147	125.13
Total Revenue Required	7382.84	1441.06	8823.9	8505	318.9
Less: Non-tariff income	1.22	457.47	458.69	331	-127.69
Less: Efficiency Gain			500	--	-500
Less: GoAP Subsidy			1626	1626	
Revenue from Tariffs			6239.21	5524	-715.21
Financial Loss			0	-1024	

Commission's Treatment of the Actual Financial Loss

190. The Commission proposes to carry forward that portion of financial loss which is on account of factors beyond the reasonable control of the Licensee, through a special appropriation in the annual revenue requirement for FY 2001-02:

- An amount of Rs 62 Crores as compensation towards an adverse Hydel generation experienced in FY 2000-01 by APGENCO due to the poor monsoon conditions resulting in substitution by higher cost thermal power.

- The Commission estimates that the Licensee incurred a loss of Rs. 28 Crores on account of shortfall in delayed payment surcharge component of non-tariff income as a result of interim orders passed by the AP High Court in the course of hearing a Writ Petition on the Tariff Order.

Thus, an amount of Rs. 90 Crores will be included as special appropriation in the Annual Revenue Requirement for FY 2001-02.

191. The Commission recommends that the balance uncovered Financial Loss of Rs. 934 Crores (Rs 1024 Crores less Rs 90 Crores) be compensated by the Government of Andhra Pradesh as subvention as per the provisions of Section 27 (1) of the Reform Act in view of the present adverse financial status of APTRANSCO. Broadly, this compensation is on account of:

- Rs. 500 Crores towards efficiency gains not achieved by the Licensee.
- Rs 257 Crores on account of additional power purchased about 1600 MU in order to supply to agricultural consumers in excess of the quantum allowed by the Commission (9815 MU) in its Order. This is priced at the average power purchase cost and includes the T&D loss suffered.

- An amount of Rs. 147 Crores for the foregone Reasonable Returns.
- The balance Rs. 30 Crores is on account of a number of miscellaneous factors such as shortfall in HT sales. The savings in costs achieved by the Licensees of Rs. 256 Crores are reduced from the increase in costs.

192. The Commission's proposals are summarised in the following table.

Table No.17

Item	Permitted as Special Appropriation by the Commission
Variation in Power Purchase	Rs. 62 Crores
Lost Non-tariff Income	Rs. 28 Crores
Total	**90 Crores**
	GoAP Subvention as advised by the Commission
Non-achievement of efficiency gains	Rs.500 crores
Cost of additional power purchased	Rs. 257 Crores
Reasonable Return	Rs. 147 Crores
Others	Rs. 30 Crores
Total	**Rs.934 Crores**

The above provisions are based on the latest available information for FY 2000-01 with projection for remaining months. The Commission proposes to review them once the Licensee submits the FY 2000-01 audited accounts.

193. The Commission has issued directives and detailed guidelines to control costs while ensuring that appropriate investments are made to improve the quality of supply and service. In the current year, from the submissions made by the licensees, the Commission notes significant deviations such as excess sale of power to subsidised consumer categories while falling short in subsidising categories and under-investment in network. The Commission feels that the licensees need to improve the quality of forecasting and timely completion of capital projects. Deviations such as these result in a loss, threatening the financial viability of the licensees, which could contribute to poor service and an accumulated tariff shock in future.

Need to Separate DISCOMS from APTRANSCO

194. The Andhra Pradesh Electricity Reform (Transfer of Distribution Undertakings from APTRANSCO to Distribution Companies) Rules, 2000 framed under the Reform Act vests the entire area of supply in the state in four DISCOMS who will be Licensees from the date of effectiveness. By Order dated 29.12.2000 the Commission has issued the Distribution and Retail Supply Licenses to the DISCOMS for their areas of supply. These licenses will be effective from 1.4.2001. For the FY 2001-02 for which the tariff is being determined by this Order, the DISCOMS are separate licensees for all intents and purposes. Their respective businesses will have to be independent of APTRANSCO and they should function as separate companies. Their ARRs have been determined separately. Each of the DISCOMS will be judged separately. The mixing of the working of APTRANSCO and the DISCOMS prevalent hitherto will have to be discontinued. The Distribution Companies should represent their case before the Commission instead of being represented by APTRANSCO. APTRANSCO and the DISCOMS and the DISCOMS between themselves should function as independent companies with transactions between them on an arms length basis, and maintain transparency in their dealings with each other, notwithstanding that at present the DISCOMS are wholly owned subsidiaries of APTRANSCO. The need to maintain independent statistics on various parameters of their working from the first day of the License coming into effect cannot be over emphasized.

195. In this context the Commission directs that each of the four Distribution Companies shall enter into a Bulk Supply Agreement (BSA) with the APTRANSCO and get the approval of the Commission for the Agreement. This agreement will form the basis of commercial transaction between the APTRANSCO and the Distribution Companies and contain detailed terms and conditions regulating bulk supply of power.

Bulk Supply Tariffs

196. In terms of Section 26 of the Act the Commission regulates the Bulk Supply Tariffs (payable by the Distribution and Retail Supply Licensees to Bulk Supply Licensee) and Retail Tariffs (charged to retail consumers by the Distribution and Retail Supply licensees).

197. The electricity industry in the state has inherited a history of cross subsidy and the geographical differences in the consumer mix and efficiency. So long as the distribution function throughout the state was undertaken by one entity viz., APSEB initially and with effect from 1.2.1999 to 31.3.2001 by APTRANSCO, these differences did not matter. With the separation of the distribution function and vesting it in four DISCOMS the differences in the consumer mix, and cost structure, in the four areas have resulted in differences in cross subsidy available within the respective DISCOMS. The area of supply vested in a distribution company varies significantly from others, among other things, in terms of consumer mix viz., the subsidising HT and commercial consumers on the one hand and the subsidised domestic and agricultural consumers (i.e. the proportion of different consumer classes), historical differences in efficiency and costs. The four DISCOMS are not equally placed and the Commission has to take into consideration the inequalities existing between the four DISCOMS.

198. Section 26(8) of the Reform Act mandates the Commission to “endeavour to fix tariffs in such a manner that, as far as possible similarly placed consumers in different areas pay similar tariff”. To implement this mandate, the Commission would have to re-balance the surplus and deficit in cross subsidy available with each of the DISCOMS. For this purpose the Commission has to determine a differential Bulk Supply Tariff to be charged by APTRANSCO to the four DISCOMS. The Commission has adopted this method for determination of Bulk Supply Tariffs for FY 2001-02.

199. As mandated, the Commission determines a full cost tariff, based on a summation of the cost of service to consumers in all the distribution companies. However, since the cost to serve differs between Discoms, a uniform full cost tariff (resulting from mandate) results in different cross-subsidy available in the DISCOMS. These differences in surplus or deficit are adjusted in the Bulk Supply Tariff.

200. The extent of differential in the Bulk Supply Tariffs charged to distribution companies will be progressively reduced, in tune with the reduction in the cross subsidy between various classes of consumers and reduction in external subsidy from the Government. Thus, the Bulk Supply Tariffs may eventually move towards a uniform level (or more accurately, an actual Discom cost-based level) as the retail tariffs move closer to the actual cost of service. This however will not prevent a concessional tariff within a class of consumers without affecting the aggregate revenue realisation from the class.

Indexation Mechanism

201. APTRANSCO has proposed developing an indexation mechanism whereby the different cost elements are indexed (to a predefined price index) so as to allow for automatic pass through whenever cost increases occur. A conceptual framework on the mechanics of the proposed indexation mechanism is still awaited. One of the objectors stated in his affidavit automatic trueing up implicit in the indexation mechanism tantamounts to seeking an automatic tariff variation even in the course of the same financial year. This is unacceptable as a concept under the Reforms Act, which ensures tariff stability to the consumer. The staff was equally critical of the mechanism and opined that without 100% metering and complete and reliable data base, indexation was neither feasible nor acceptable. The Commission concurs with the views of the staff and the public. The Commission is also of the opinion that indexation mechanisms can be considered in the future when Performance Based tariff is introduced. Price increases must be matched with productivity increases.

Tariff and Dividend Control Reserve

202. The Commission examined the proposal of the Licensee to include foregone profits as a debit item in the Tariff and Dividend Control Reserve (T & DCR). The applicant is not seeking an adjustment for a debit balance in the revenue account. It wants the Commission to recognize its right for a return even when it has sustained loss, a proposition which is quite untenable.

203. The Sixth Schedule primarily deals with regulation of excess profit made by the Licensee. It provides for one-third of the excess profit to be kept aside for future use by the Licensee as a cushion for possible difficult days in case of any shortfall with regard to reasonable return in subsequent years. There is no provision for keeping a debit balance in this reserve for setting off against future excess profits.

204. Incidentally, a negative balance in the T&DCR would automatically add to the Capital Base next year enabling the Licensee to earn higher return. The Commission therefore does not accept the Licensee's proposal for such a treatment.

Regulatory Asset

205. In the FPT (for the Bulk Supply and Transmission Tariff) the licensee has mentioned that it was expecting a loss. As the amount of loss was not certain it was not claiming it as special appropriation. But a request has been made to the Commission to institutionalise a mechanism for recovering the loss as finalised at the end of the year either as special appropriation in the subsequent year revenue requirements or as regulatory asset to be recovered over a period of time. The principal Secretary, GoAP also referred to a Regulatory Asset to be permitted by the Commission in the context of making good the financial loss of the licensee suffered in FY 2000-01.

206. As seen from the Commission's analysis of financial losses, the Commission have determined the licensee's loss of FY 2000-01 which the Commission accepts is admissible for special appropriation in the FY 2001-02. As the amount is small, the Commission has considered it appropriate to allow the entire admissible amount in the revenue requirement for FY 2001-02 rather than carrying it forward and adjusted in later years.

207. Sixth Schedule provides for the amount of previous losses which the Commission accepts to be included in the Annual Revenue Requirement (ARR) in the subsequent years as a special appropriation. Reference in this connection may be made to Part XVII of Sixth Schedule. Such a special appropriation can be allowed without a need to deviate from the provisions of Sixth Schedule to the ES

Act. While special appropriation for previous losses is an aspect of ‘Regulation” the concept of Regulatory Asset is however, much wider and includes a number of other things. For example, Regulatory Asset can be sought for to fill a deliberate uncovered revenue requirement gap of a year for one reason or the other (say apprehension of a tariff shock) with the idea of writing off the asset over a period. The concept of Regulatory Asset for such matters may require an order providing for deviation from Sixth Schedule. Creation of a Regulatory Asset for FY 2000-01 or FY 2001-02 as at present, does not arise as the revenue requirement of the licensee including the admissible part of previous year losses have been met by tariff or subsidy.

208. However, the Commission reiterates its willingness to consider creation of a Regulatory Asset in appropriate circumstances, as stated in Para 2.7 of the Tariff Order for FY 2000-01.

Metering

209. Commercialisation of any activity requires two necessary conditions (a) the price per unit and (b) the quantity purchased by each consumer. These two conditions are equally applicable to the electricity sector. Central to the second factor is the need for metering both at the retail end and on the network at the interface point where ownership of power changes. While metering on the network has been discussed with reference to transmission losses, the Commission is clear that metering of all services at the retail end must be taken up on a priority basis. In the last Order, Directive No.6 was issued to increase the level of metered billing from the existing 41% to atleast 48%. The Commission notes that the metering on average for all the DISCOMS have in effect registered a decrease to 40%.

210. A related dimension to metering is the existence of faulty, damaged or non-functioning meters. The existence of such meters gives scope for abuse to both consumers and billing employees. It is important therefore, to address the issue of metering on top priority basis. The Commission directs that the Licensee shall ensure that:

(i). Metering for individual agricultural services is completed by March, 2003.

(ii). All new agriculture connections including unauthorized agriculture connections, if any regularised, are metered with immediate effect.

(iii). All dysfunctional meters are set right within 3 months of this Order. All new meters to be fixed within the same period of 3 months.

(iv). All service connections to all consumer categories except LT Agriculture are metered, as per schedule given below:

    (a). Sugarcane crushing is metered with immediate effect.
    (b). Aquaculture is completely metered within 3 months i.e. by June 30, 2001.
    (c). All street lights and public water supply (PWS) schemes are metered. In case of towns and municipal corporations, all streetlights and PWS are metered within 6 months. The balance are metered by December 31, 2001.

Data Constraints:

211. Data constraints and information gaps continue even in this filing. This, as was pointed out at the hearing, constrained proper analysis of the filing especially on important aspects such as the measurement of T&D losses. Most certainly, data constraints prevented a proper assessment of the measurement of agricultural Consumption. The Commission examined the plea of APTRANSCO and the DISCOMS that as far as possible the Licensees have attempted to meet the data requirements in line with the guidelines issued by the Commission with regard to tariff filings. However, in certain instances data gaps continue to prevail. The Licensees assured that efforts are being made to rectify these gaps with regard to information availability, but requested for time to comply in full with all the respective formats. In the filings for FY 2001-02 of APTRANSCO and the four DISCOMS, the waivers requested largely relate to (i) audited accounts and financial statements as per the Second Transfer Scheme; (ii) data on voltage-wise break-up of fixed assets. Details of the waivers sought and the Commission's orders therein, are annexed (Annexure '**B**').

Spot Billing

212. The Commission considers that the Licensee may be left to choose the method best suited to the system as it obtains to improve the billing efficiency.

Billing and Collection

213. The parameter "percentage increase in metering" is not able to capture improvements in billing if the denominator for such calculations (viz., Power Purchases) changes over the tariff year. APTRANSCO has deposed before the Commission that extra power had to be purchased for increased supplies to agriculture and as agriculture is unmetered, improvements in metered billing in the metered segment do not get registered as required under Directive 6 viz., as an increased percentage of metered billing with reference to the power

purchases. For a correct picture to be registered, the base namely power purchases either has to be fixed or the numerator has to be adjusted for the non-metered segment. Directive No.6 issued in the last Order was part of a package of measures, which included fixing of agricultural consumption at 9815 MU. As the latter could not be adhered to and additional purchase of power to the extent of about 1600 MUs was made, simple percentage measure envisaged Directive No.6 got distorted. For want of data, the required adjustments for deriving the actual improvements in metered sales, if any, could not be made. The Commission will explore alternative ways of verifying improvement of sales in different categories.

214. The Commission has taken note of delayed and incomplete submission by the Licensees of the simple monthly monitoring reportsprescribed by the Commission vide their Lr.No.Secy / APERC / Dir / Tariff / F.No.29/D.No.2156/2000 dt:21.08.2000 and Lr.No. Secy / APERC / Dir / Tariff / F.No.29 /D.No.2155/2000 dt:21.08.2000. Further, a few inconsistencies and errors were spotted in the submissions. To facilitate effective monitoring, the Commission requires the Licensees to ensure that in FY 2001-02 all reporting requirements should be met in a complete, correct and timely manner.

215. From the monthly reports filed by the Licensees during August-November 2000, some preliminary observations drawn are:

- In APCPDCL, during August-October 2000, only about 30% of regularised consumers have been added to the billing database.
- In APNPDCL, during August-November 2000, only about 53% of the LT Category I (Domestic) bills issued to consumers were paid
- In APNPDCL, during August-November 2000, only 67% of bills issued to consumers were based on meter readings, and of the balance, 19% were assessed on average basis and 14% were on minimum charges.

216. As for the public concern about growing arrears, the Commission too note that the level of receivables has increased from Rs.1471.50 crores in the Finalised First Transfer Scheme (as on 1.2.1999) to Rs.1567.67 crores by the end of FY 1998-99. 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. The level and age profile of the receivables indicate deteriorating efficiency in the collection of dues, which, if not arrested in time, will pose a serious threat to the financial viability of the DISCOMS. The Commission therefore directs the DISCOMS to pursue vigorously the review of receivables stated as having been already instituted and collect the arrears on priority making use of the statutory instruments available to Licensees to effect recovery. The progress in this regard shall be reported to the Commission on a monthly basis.

217. The Commission also directs that the Licensees shall put the required software in place and store the billing information in a consolidated form for each Circle/accounting division and file the same with the Commission as and when required. The Licensees shall keep all such information for a minimum period of 10 years, use this database as reference for future sales projections in subsequent filings.

Six Slabs in Domestic Category-LT-I

218. It maybe worthwhile at this point to pause and analyse the basic Principles behind four-slab structure that prevailed in the first Tariff Order as against the six-slab structure proposed by APTRANSCO and the eight slab structure used by

the erstwhile APSEB. The Tariff Order of May 27,2000 which is self explanatory states:

> "The Commission reduced the number of slabs from six to four as given below. Recategorisation was necessitated by the consideration that larger the number of categories the greater the scope for leakages. A scientific approach to categorize would have to be based on the principle of 'paying capacity'. Since such studies are not available for the present filing, the Commission has adopted a practical approach to paying capacity. The first slab represents the lifeline rate as stated by APTRANSCO. The next two rates are representative of consumption patterns of the middle class and the upper middle class households. The last slab is for the rich. By modifying the slab rates and the categories the tariff design attempts to combine efficiency with social objectives".

219. Differences in prices for the same product under economic theory can be justified only if they are clear cut principles for categorisation. No rational basis was provided for the six slab structure or the earlier eight slab structure. A more rational approach while designing compensatory tariffs is to have a lifeline tariff and full cost tariffs for consumers other than lifeline consumers in the domestic segment. The lifeline segment serves two purposes. It not only covers consumer category of those falling in the lower income bracket but also takes care of the minimum requirement of power for any consumer. In order to gradually shift out of the six-slab structure, a four-slab structure was considered appropriate.The four-slab structure as stated in the order, is based on the division of households into four categories:

- Lifeline
- Middle class
- Upper middle class
- Rich

This classification matches with the consumption profile of the above categories in terms of size of dwelling; number of points; household equipment etc.

220. The larger the number of slabs greater is the scope for leakages. This observation is borne out by studies with regard to excise duties and import duties and income tax. Multiple rate structure is open to abuse along the following lines:

- Consumers will attempt to shift to lower categories if feasible through multiple meters;
- It increases the work on the billing staff and again provides for possible scope for collusion with the billing staff and the consumers;

221. It is equally important to examine tariff designs from the view point of energy conservation. In a six-slab structure the consumer has no incentive to economize on the use of power thereby nullifying an important dimension of pricing policies.

222. The counter argument that with a larger number of slabs the consumers paying capacity curve is smoothened out thereby mitigating a tendency towards non-payment, has to be examined in the light of the above arguments that encourage leakage. Experience tends to disprove this argument. The Commission is of the opinion that even without a rigorous study of paying capacity it stands to logic that a household that can afford the new electrical gadgets can afford the higher price for the electricity used in running the gadgets.

223. The Commission believes that in the ultimate analysis there should be only two slabs. One for those who are the life-line consumers and the other for all others. But, in order to gradually move towards that goal, the Commission had provided for four slabs in the last Tariff Order to cover the life line, middle class, upper middle class and the rich. The Commission had also felt that more the number of slabs, higher the tendency for leakages. In fact, during the public hearing it has been brought out that in a number of households there are multiple

service connections defeating the very object of provision of number of tariff slabs. So, the Commission has strong reservations on the proposal that the slabs should be increased from four to six. However, keeping in view the adverse public reaction to the last Tariff Order resulting in a long drawn agitation in the State over the high domestic tariffs caused by reducing six slabs to four slabs, and the present request of the licensees and the Government of Andhra Pradesh that six slabs should be reintroduced to provide for lower tariffs in the 2nd and 3rd slabs, the Commission agrees to revert to six slabs. It would at the same time direct the Licensees to launch a special drive to identify multiple service connections in dwelling, commercial, industrial and other units and disconnect excess connections retaining single connection only within four months of this order. Based on the performance of the licensees, in the domestic category, the Commission would review the issue as to the number of slabs in the domestic category in the next Tariff Order. Accordingly, for the FY 2001-02 the six slab rates have been approved.

224. With reference to the representation for doing away with the minimum charges for consumption below 30 units, the Commission noted that even the existing provisions address the issue as the minimum charges applicable for single phase services upto a connected load of 250W is only Rs.25/- per month.

Status of Compliance of Commission's Directives

225. The Commission has issued ten directives to APTRANSCO as a part of the Commission's Tariff Order for FY 2000-01 for compliance by APTRANSCO also laying down the timeframe within which the directives need to be complied with. The Commission has been reviewing the compliance of these directives by APTRANSCO from time to time. The Commission staff made an analysis of the action taken by APTRANSCO in respect of these directives. The following table gives the analysis of the Commission Staff, response by APTRANSCO and the Commission Analysis in respect of each of the ten directives.

Table No.18
STATUS OF DIRECTIVES

Directive No.	Directive	Staff (Tariff Division) analysis of action under taken by Licensee	APTRANSCO action on the Directive	Commissions analysis
1	The Commission directs APTransco to initiate action on priority basis for filling the data gaps and to remedy system deficiencies (para 2.3.1).	Filing data gaps for FY 2000-01 not made good	Most data requirements for which waivers were asked for have been met fully or partly except for elements like Marginal costing.	Staff analysis relates not only to marginal cost but the filing of other formats such as asset wise break up of capital costs. The Commission notes that there are still existing data gaps which need to be rectified and direct that they be submitted by 30.9.2001.
2	APTRANSCO shall file a proposal before the Commission for approval to carry out a census of agricultural pump sets within four weeks from the date of this tariff order. APTRANSCO shall complete the study within six months from the date of this tariff order (para 2.4.1).	The study is only partially completed. Data is available for 4 districts and only on some aspects	Census has been carried out for 4 districts and the interim report is received and filed. This is proposed to be extended to all Districts. This is a resource and time intensive exercise on which the Commission has been apprised.	The interim report for 4 districts has just been filed. The Commission directs that the study for census of agricultural pumpsets shall be completed by end of October, 2001.
3	If it becomes necessary to buy more power for supplying to agriculture (over and above the licensee's submitted estimate of 9815 MU), the licensee shall obtain the specific permission of the Commission to do so and after duly tying up the funds for the required power purchases (Para 2.4.1).	Specific permission for purchase of power for agriculture was sought after the event	Permission was sought from Commission on January 4, 2000. The matter has been referred to the GoAP on the advice of the Commission.	This issue was continually emphasised during all monthly meetings. The Commission agrees with the staff's view that permission was sought only ex-post-facto. Instead of regulating the Agriculture Consumption month after month, APTRANSCO took note of the fact late in the year around December, 2000.

Directive No.	Directive	Staff (Tariff Division) analysis of action under taken by Licensee	APTRANSCO action on the Directive	Commissions analysis
4	The Commission directs APTRANSCO to install and use 0.2 accuracy class meters at all interface-points where the ownership of power changes and file compliance report within one month from the date of this order (para 2.4.2.1).	Status on fixing of 0.2 meters is very slow and in most cases have not been fixed. The concession period sought from the Commission is only till March 31.2001. This directive may not be complied within that time period	Time was initially requested till 31.3.2001 for completing installation of 0.2 accuracy meters. However the lengthy procurement and installation under the Competitive Bidding procedure necessitates more time for full compliance with the Directive. At present the 0.5 class accuracy meters are installed as an interim measure.	The Commission had permitted APTransco considerable time till 31.3.2001 for installation of meters of 0.2 accuracy class. The Commission is in agreement with the staff that this directive has not been complied with. But in view of the lengthy procedures involved under competitive bidding and practical difficulties in fixing them owing to shut downs being required, time is given for meeting this Directive by the end of this year. The Commission directs that the Licensee shall complete by 31st December, 2001' the installation of 0.2 accuracy class meters at all interface points where the ownership of power changes.
5	APTRANSCO shall also conduct regular and thorough energy audit to ensure accountability. The institution of such energy audit shall be confirmed to the Commission within three months from the date of this tariff order.	Audit Formats sent by the Commission have not been completed and submitted to the Commission. Institutions of regular audit including the sequential collection of data from circle upwards have not been submitted.	Data provided for all Discoms in the filing. This is an ongoing exercise and the utilities have complied with this Directive.	Commission endorses the Staff's observations. The Commission directs that the Licensee shall conduct regular and thorough energy audit and the information shall be filed in the format that has already been given to APTRANSCO and the DISCOMS. DISCOMS should file the data in the prescribed format on quarterly basis.

Directive No.	Directive	Staff (Tariff Division) analysis of action under taken by Licensee	APTRANSCO action on the Directive	Commissions analysis
6	The Commission directs APTRANSCO that while the licensee should strive to improve the billing to 51% (from the present level of 41%), it should reach at least 48% before 31.3.2001 (Para 2.4.2.2).	As per the submitted formats improvement of metered billing to 48% has not been achieved. The data that has been submitted is not uniform for all Discoms and the ERO's. Based on the incomplete data no meaningful analysis can be drawn. From the scanty data available only APEPDPCL has done well on the metered billing front.	In spite of fall in HT sales and increase in agriculture sales the metered sales have not fallen. The metered sales can improve appreciably only if agriculture is metered. Percentage of metered sales is not an appropriate yardstick and absolute figure of metered sales would be more appropriate.	The Commission had issued the directive that metered sales (excluding agriculture) must increase to 48% if not 51%. The Commission does not agree that the metered sales can improve appreciably only if the agriculture consumption is metered. The power purchased has 3 components viz., (1) T & D losses (2) Estimated agriculture consumption and (3) Metered sales. Any improvement in the T & D losses should push up the metered sales. In the present case, the agriculture consumption has gone well beyond the estimation and the projected HT sales have gone well below the projections and so the percentages do not reflect the efficiency gains truly. From the data filed with the Commission it is difficult to accept that there are increases in metered sales even in certain specific categories of consumers as claimed by the Licensee.
7	APTRANSCO is directed to file a detailed action plan on how it intends to achieve the projected efficiency gain of Rs.500 crore (para 2.8.1).	The action plan to achieve efficiency gain has not been provided. It is therefore not possible to agree that the directive has been complied with.	Several measures have been taken. The results will be discussed in the presentation on efficiency gains.	Examination and analysis on the presentation on efficiency gains made to the Commission shows that there have been no efficiency gains when comparisons are made with reference to the Tariff Order. If comparisons are made on the base of FY 1999-2000 then the licensee has definitely improved with regard to billing and revenue collection but not with reference to the projections for FY2001. While the Commission is in agreement with the staff, they take note of the fact that the licensees have initiated several measures to achieve efficiency gains. With this understanding the Commission has accepted the DISCOMS projection of Rs.501 crs. for FY-02

Directive No.	Directive	Staff (Tariff Division) analysis of action under taken by Licensee	APTRANSCO action on the Directive	Commissions analysis
8	APTRANSCO is directed that till such time, the requisite trusts for the pension and gratuity funds are formed, the amounts accruing on this account are credited from month to month to a non-drawal bank account opened with a scheduled bank. Such account should be opened not later than July 1, 2000 (para 3.4.8).	This directive has not been complied with although Non-drawal accounts have been opened. These accounts are not operative as the amounts accruing on account of pension and gratuity funds have not been credited. The trusts have yet to be created.	Non drawal accounts have been set up. The trust formation is in final stages. Depositing funds in non-drawal accounts without formation of the trusts would result in inadequate returns from these funds.	In the Tariff Order for the year 2001 following clarification from the Licensee that the requisite Trust for Pension and Gratuity are to be formed the Commission directed the Licensee that till such time the Trusts are formed, the amounts accruing on this account are credited from month to month to a non-drawal bank account opened with a Scheduled Bank and that such account should be opened not later than 1st July, 2000. While the Licensee complied with the opening of the account they have not deposited the Pension and Grauity in the non-drawal bank account on the plea that the matter of formation of Trusts has been taken up with the Govt. and the approval of the Govt. is awaited. The Commission does not accept this response from the Licensee. When the direction to credit Pension and Grauity funds in a non-drawal bank account was given, the Commission was already told that the Trusts were not formed by them and this was precisely the reason for which the Commission directed the opening of a non-drawal account and crediting the Pension and Gratuity funds into such an account. The Licensee has not complied with the directive of the Commission and its explanation is not acceptable to the Commission. The Commission has issued a Show-Cause Memo to the Licensee for non-compliance.

Directive No.	Directive	Staff (Tariff Division) analysis of action under taken by Licensee	APTRANSCO action on the Directive	Commissions analysis
				The Commission further directs that till such time the trusts are formed, the amounts accruing through tariff on this account are credited with immediate effect on a monthly basis to the non-drawal bank accounts already opened with the State Bank of Hyderabad. A certificate of compliance should be filed with the Commission at the end of every month.
9	The Commission directs APTRANSCO to pursue vigorously the review of receivables stated as having been already instituted and collect the debts on priority making use of the statutory instruments available to APTRANSCO to effect recovery. The progress in this regard shall be reported to the Commission latest by December 31, 2000 (para 4.4.7).	The staff on analysis of the data filed in the required format are not able to asses the progress on this front as the data is not complete.	Substantial progress has been made and the progress has been detailed in the review meetings. The details will be covered in the section on efficiency	The Age-wise analysis of data as submitted to the Commission shows that the past receivable s on the books of the licensee pertain mostly to the current year billing demand and in any event less than three years old(*). (*) It also notes that large arrears pertain to Govt. departments. The Commission therefore directs the Licensees to pursue vigorously the review of receivables stated as having been already instituted and collect the arrears on priority making use of the statutory instruments available to Licensees to effect recovery. The progress in this regard shall be reported to the Commission on a monthly basis.

Directive No.	Directive	Staff (Tariff Division) analysis of action under taken by Licensee	APTRANSCO action on the Directive	Commissions analysis
10	With reference to the interest expenditure of Rs.163.41 crore included in power purchase cost from APGENCO, APTRANSCO is directed to obtain and file the full particulars relating to the interest charge together with authenticated copies of documents to enable the Commission to conduct a study on the circumstances leading to and terms and conditions of the bond issue and the application of the proceeds (para 3.4.1.1).	Particulars relating to interest charges have been filed. This directive has been complied	All data has been furnished	The Commission concurs with the staff .

226. It will be seen from the above that except in respect of Directive No.10, neither complete data has been furnished nor the action completed. In the case of the directive restricting the agriculture consumption to 9815 MU and the requirement that the licensee shall obtain the specific permission of the Commission to buy power over and above 9815 MUs for supply to agriculture, the APTRANSCO did not seek permission from the Commission before buying more power. On the other hand, they sought the permission after the purchase of power. As power was purchased against the directives of the Commission without the prior approval justifying the need, the Commission has rejected the proposal of the APTRANSCO to carry forward the loss on account of excess purchase of power as a regulatory asset.

Release of Government Subsidy

227. The GoAP had indicated that for the FY 2000-01 they would be paying a subsidy of Rs.1626.25 cr. in regular monthly instalments of Rs.162.70 cr. beginning from June, 2000 ending with March, 2001 after deducting the amounts that are due to the GoAP by way of electricity duty, loans and interest on loans. These amounts have been identified and the net subsidy payable month-wise has been indicated against each month for the tariff year FY 2000-01. The payments were made in June, August, September, October and December.. As releases of subsidy were not made by the Government for the months December – March, the Commission addressed a letter to GoAP for immediate remittance of funds towards subsidy to the licensee. Following this, the GoAP arranged for payments of the amounts due from December – March on 02.03.01. The details of the payments of subsidy are given below:

Table No.19

Statement indicating subsidy payments to APTRANSCO by GOAP for FY 2001

S.No.	Month	Subsidy due (Rs. in Crores)	Plough back dues (Rs. in Crores)	Net subsidy (Rs. in Crores)	Due date for payment	Amount paid (Rs. in Crores)	Date of payment	Remarks
1	Jun-00	162.70	35.44	127.26	01.07.00	127.26	29.06.00	
2	Jul-00	162.70	19.23	143.47	01.08.00	143.47	05.08.00	
3	Aug-00	162.70	33.87	128.83	01.09.00	128.83	23.09.00	
4	Sep-00	162.70	12.70	150.00	01.10.00	150.00	23.10.00	
5	Oct-00	162.70	61.23	101.47	01.11.00	101.47	14.12.00	
6	Nov-00	162.70	51.26	111.44	01.12.00	451.12	02.03.01	Amount of Rs. 451.12 Cr being the subsidy payable (after adjusting the plough back dues) from 01/12/00 to 01/04/01 was actually paid by GoAP on 02/03/01
7	Dec-00	162.70	30.82	131.88	01.01.01			
8	Jan-01	162.70	29.31	133.39	01.02.01			
9	Feb-01	162.70	59.97	102.73	01.03.01			
10	Mar-01	161.95	190.27	-28.32	01.04.01			
Grand Total		**1626.25**	**524.10**	**1102.15**		**1102.15**		

228. The Commission while noting the assurances given by Principal Secretary, Energy, GoAP with regard to payment of subsidy to the Licensees drew attention to an equally critical aspect of subsidy payment viz., the timely releases of the subsidy. In the last order, the Commission was assured of regular monthly payments of the subsidy of the GoAP (vide Lr.No.APERC / Secy / F:5/ D.No. Spl.1/2000, Dt:23.05.2000) but as may be noted from the above table the schedule of subsidy payments was not maintained after the initial three months. Default in release of subsidy is a matter of extreme concern to the Commission as it impacts heavily on the cash flow of the Licensees, forcing short-term borrowings at market rates.

229. It is equally important that the agreed subsidy should be paid in full only with such deductions as are conveyed by GoAP at the time of agreeing to pass subsidy and approved by the Commission. Use of the medium of subsidy by GoAP to offset payments by the companies to various Government departments would defeat the purpose of GoAP providing subsidy to the companies.

Demand Side Management (DSM)

230. Demand Side Management (DSM) refers to actions undertaken by the utility that change the user's pattern of electricity demand and electricity consumption. DSM involves the implementation of measures that enable the customer to reduce electricity costs by using electricity more efficiently and reducing the utility's cost.

231. At one extreme, the perspective could be an entirely market driven DSM wherein the end user sees assured benefits in a well defined energy efficiency project to finance themselves. At other extreme perspective, DSM could be entirely utility driven, where resources are required to be ploughed in by utility for mutual benefit.

232. Agriculture Tariffs being far lower than cost to serve, it does not offer the farmer enough incentive to go for market drive DSM measures and at the same time utility has a serious resource crunch to finance DSM on their own. Commission taking note of these, to incentivise the Demand side Management in agriculture, allows a discount of 50% on the monthly energy charges in slab system or metered system in case the following are in place:

- Friction less foot valve
- HDPE piping for suction and delivery
- ISI marked pumpset
- Capacitor of adequate rating for the pumpset

The Commission further orders that this discount would be continued for a minimum period of 3 (Three) years if the service is metered within 3 months i.e. before 30th June, 01 on a voluntary basis.

Reliability, Quality and Customer Service

233. The Commission has evolved Customer Service Standards to be achieved by the DISCOMS during the transition period. It will also shortly finalise the technical codes and standards for operating the transmission and distribution network. It proposes to constitute a continuous monitoring mechanism to ensure that licensees make efforts to achieve these standards. The Commission believes that the reform process should also benefit the consumer in terms of improvements in system reliability, quality of power and service to consumers. The Commission proposes to develop a structure of incentives to licensees for demonstrating improvements on these aspects.

Financial Principles

234. In the public hearing proceedings, number of issues have been raised on the financial principles which the Commission would adopt in determining tariff. These include multi-year tariff, multi-year tariff principles, deviation from Sixth Schedule of the Electricity (Supply) Act, 1948, treatment of previous year losses as regulatory assets to be covered in the subsequent years, incentives /dis-incentives on good/bad performance by the licensees. It has, therefore, become necessary to clearly set out the Commission's approach on the financial principles to be adopted. In this context it is relevant first to make a reference to the provisions of the Reform Act.

235. Section 26 of the Reform Act deals with the Licensee's revenue and tariff determination. The Act mentions that while determining the tariff, the Commission shall be guided by the financial principles and their application as provided in the Sixth Schedule of the Electricity (Supply) Act, 1948 read with Section 57 and 57A of the said Act. However, the Act provides for the flexibility to the Commission for departing from the factors provided in the Sixth Schedule by recording the reasons for the departure. The Act provides for flexibility to differentiate between consumers according to the consumer's load factor or power factor, total consumption of energy during any specified period or time when supply is required, paying capacity of category consumers and the need for cross-subsidization. The Act requires the Commission to be just and reasonable in deciding the tariff and endeavour to fix tariff in such a manner that as far as possible similarly placed consumers in different areas pay similar tariff.

236. Within the framework and provisions of the Reform Act mentioned herein above, the Commission finalises the tariffs for the Licensees.

237. Under the Reform Act the Commission has the authority to frame regulations, issue guidelines and directions and deal with matters concerning the Licensees' Revenues and Tariffs. The Commission has framed regulations for the purpose which are titled "Andhra Pradesh Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 (amended on 4th September, 2000) Chapter IV A Regulations 43A to 43C deal with Tariff determination.

238. In the light of the above statutory provisions, the Commission is dealing with the specific aspect of the financial principles which the Commission would follow:

(a). Multi-year tariff

In terms of section 26 (5) of the Reform Act (quoted above) the Commission is required to deal with the revenue requirement and the tariff proposals of the licensee on an annual basis. This provision envisages determination of tariffs for the ensuing financial year. For this purpose the licensee is required to file at least three months before the ensuing financial year full details of its revenue calculations and tariff proposals. The Commission is thereafter required to consider the tariff proposals and revenue calculations of the licensee and notify the licensee whether it accepts the same with or without modification or propose any alternative calculation which the licensee is required to accept. It would appear that the Commission cannot proceed on the fixation of tariff on a multi-year basis under the existing statutory provisions and has necessarily to address the issues on yearly basis.

(b). Long term tariff principles

While multi-year tariff cannot be fixed, the Commission is, however, inclined to prescribe long term tariff principles on specific aspects such as loss reduction, efficiency gain, incentives and dis-incentives and such other aspects as the Commission may consider appropriate. This can be done to provide certainty to the Licensees and facilitate long term planning by the licensee to aggressively deal with loss reduction and otherwise achieve efficiency in the working. The Commission recognises the need for incentivising good performance by the Licensee and the further need to motivate the Licensee through appropriate financial gains. The long term tariff principles would, however, require proper deliberations and decisions on matters relating to appropriation or sharing of benefits which may arise as a result of efficient operations by the licensee. To address these issues, the Commission will bring out a consultative paper and deliberate on the same. The Commission will then consider and lay down long term tariff principles for the Licensee in the next tariff proceedings or earlier.

(c). Deviation from Sixth Schedule

In terms of the provisions of the Reform Act, the Commission is authorised to deviate from the provisions of the Sixth Schedule by recording reasons for the deviation. This is specifically recognised in Section 26 (3). Section 26 (2) of the Reform Act recognises factors such as efficiency, economic use of resources, good performance, optimum investments, performance of licence conditions and other matters which the Commission considers appropriate as well as interest of the consumers as parameters for tariff determination besides financial principles and their applications provided in the Sixth Schedule. There is, therefore, no doubt that the Commission can deviate from the various provisions of Sixth Schedule including on matters of incentives and dis-incentives, determination of capital base, determination of rate of return, etc. The Commission can proceed to reward efficienct operations and penalise poor performance. In doing so, the Commission will always be guided by the overall interest of consumers, as ultimately all such measures are adopted to benefit the consumers.

(d). Having noted that the Commission has powers to deviate from the Sixth Schedule, the issue is whether the Commission should do so in regard to FY 2001-02. The licensee has claimed that the losses incurred by the Licensee in FY 2000-01 should be allowed as a regulatory asset to be recovered in tariff in years to FY 2001-02. (The concept of a regulatory asset has been discussed in paragraphs, 203-206). In the Tariff order for FY 2000–01, the Commission did not give any direction for departing from the provisions of the Sixth Schedule. The Commission has dealt with the losses for the FY 2000-01 in the manner provided in the sixth schedule to the ES Act (paras 183-185). Part XVII (2) (xiii) (c) of the sixth schedule provides for special appropriation to cover previous year losses arising from a licensed business. The Commission has analysed the nature of the claims made by the Licensee for the FY 2000-01 and permitted special appropriation only of such claims that the Commission accepted as having resulted for reasons not under the control of the Licensee. The balance claims for FY 2000-01 for which special appropriation has been claimed by the Licensee has been suggested to be borne by the GoAP (if the Licensee had incurred such losses because of any action taken at the instance of GoAP) or by the Licensee itself.

Working Capital

239. APTRANSCO has stated in its filings that the Commission in its Tariff Order of 27th May, 2000 had disallowed the inclusion of receivables, payables and working capital borrowings in the capital base and that based on this, APTRANSCO has excluded receivables, payables and working capital borrowings from the capital base computation in its filings for FY 2001-02. But the filings make a claim for interest on short term borrowings stating that the Licensee considers such interest as legitimate business expenditure incurred on the day-to-day operations of its business and therefore eligible for pass-through in the ARR. The alternate plea by APTRANSCO is nothing but a plea to recognise working capital requirements over and above that permitted under the Sixth Schedule and would be to that extent a deviation from the Sixth Schedule. To recall from the Commission's Tariff Order of 27th May 2000, the Commission had stated that it is sensitive to the working capital needs of the Licensee and would deviate from the Sixth Schedule if the Licensee could fully justify such a need. The Licensee has not come up with proper justification for the same. Moreover, the Commission find considerable force in the staff view that there was no established need for working capital considering the float provided by the generators by way of credit for power purchases and the funds provided by the consumers by way of consumer deposits. The staff also made the point that there was no justification for provision of interest on working capital in view of the condition that in the event of non-payment or delay in payment by customers the utilities were authorised to levy delayed payment surcharge at 2% per month which meant an interest rate of 24% per annum as against the prevailing borrowing rates of 13% to 15%. This point needs to be adequately countered if a plea for interest on working capital is to be sustained by the Commission. In fact, the Commission repeatedly asked the Licensees for projected cash flow and funds flow statements to establish the requirement of working capital under conditions of reasonable efficiency in the Licensee's operations but the

Licensees have failed to furnish them. In the circumstances, the question of deviating from the Sixth Schedule for this purpose for FY 2001-02 does not arise.

240 The Commission however wish to reiterate that if in future a request is made to the Commission justifying the need for working capital (necessitating allowance of the interest thereon as a pass through), the Commission would not be averse to consider such a request if it is supported by the necessary justification and for this purpose make a departure from the Sixth Schedule.

241. The Commission has noted the submission of the licensee that it proposes to make large investment needed to expand and renovate the network in order to improve quality of service and reduce losses and for making a decision on such investment the licensee requires a predictable revenue determination. As stated herein above the Commission is conscious of the need to incentivise better performance and, therefore, the need to allow incentives deviating from the provisions of the Sixth Schedule in different respects. These, the Commission would, however, finalise after proper deliberations and discussions. The Commission will consider setting out long term tariff principles (as opposed to multi-year tariff setting) which should satisfy the purpose the Licensees have urged before the Commission.

Incentives for Consumer Category HT-I

242. The Commission examined the incentive scheme proposed by APTransco. The proposed Scheme provided for a flat 10% discount on energy charges if the consumer's energy consumption was in excess by 5% over the average of last year's consumption and the consumption in the corresponding month of last year provided the load factor (LF) was over 40%. An examination of the Scheme shows that the gain to HT consumers from the incentive was too small to be conducive for encouraging additional consumption. The proposed

discount is also a flat 10% irrespective of the level of LF. It is the Commissions' opinion that HT-consumers should be provided with graded incentives that grow with LF. Incidentally, Sec 26(7)(a) of the Reform Act, enables the Commission to differentiate the tariff according to "the consumer's load factor or power factor". Accordingly the Commission redesigned the proposed telescopic incentive scheme with 10 to 25% discount depending on the consumption at various load factors as given below:

For consumption over -	Discount applicable on the energy rates
40%LF upto 50%LF	10%
50%LF upto 60%LF	15%
60% LF upto 70% LF	20%
70%LF	25%

243. The incentive is applicable for the consumption in excess of the average monthly consumption for FY 2000-01 and the actual consumption for the corresponding month of FY 2000-01 and only if the consumer does not have any outstanding dues to APTRANSCO/DISCOMS.

Directives of the Commission

244. The directives of the Commission appearing at different places in this Tariff Order are annexed (Annexure '**C**'). The Commission also reviewed the progress on the Directives given in the last Order and as observed, compliance on some of the Directives were incomplete. Details on the status of the Directives given in Table No.18 and the Commission's decisions to these directives is given. The Licensees are to comply with the decisions.

CHAPTER – X : ERC/ARR 2001-2002
TRANSMISSION & BULK SUPPLY

245. APTRANSCO, the licence holder for Transmission and Bulk Supply filed its ARR / ERC under section 26(5) of the Reform Act for the FY 2001-02 on 30.12.2000. The Commission has examined the Licensee's proposals and indicates reasons where the calculations of the licensee are found incorrect or unacceptable, with Commission's alternative calculations.

246. As already mentioned, the audited accounts for FY 1999-00 are not available and the Second Transfer Scheme notified by GoAP is also provisional. In view of this, the Commission have to adopt the same opening balances as on 01.04.2000 as given by the Licensee. Changes found necessary due to variations between the provisional balances now adopted and the modifications brought about by the finalised Second Transfer Scheme would be made during the next filing of the Licensee.

247. Before dealing with the proposals of the applicant for capital expenditure and capital works-in-progress for the FY 2001-02, it is necessary to mention that the statements filed along with the ARR as well as the further statements seeking to clarify the ARR do not list out project-wise outlays for each individual project. The applicant has not obtained any permission from the Commission for any project costing more than Rs.5 crores for FY 2001-02. Instead of giving information project-wise, the applicant has given information loan-wise, such as APL-I, PFC etc. The applicant has not given project-wise details even in respect of on-going schemes which are stated to have been sanctioned earlier. This has rendered the scrutiny of the proposals difficult. It is hoped that at least by the next tariff filing, the Licensee would file projectwise details of the expenditure incurred and proposed to be incurred without grouping the projects with reference to the source from which the projects are financed.

248. Going by the pace of expenditure in the FY 2000-01 so far, it is difficult to envisage the licensee spending the projected sums of capital expenditure even in the ensuing year. The applicant has also not filed a cash flow statement incorporating the proposed capital expenditure. However, the Commission has taken a broad view and has approved substantial sums overlooking the procedural failings on the part of the licensee. It may however be stipulated that the expenditure projections for FY 2001-02 reckoned in this order are only for the purpose of computation of capital base and do not constitute approval of the Commission required under para 10 of the licence. The licensee has to separately approach the Commission with full details in respect of each project with all the prescribed details for obtaining the Commission's approval under para 10 of the licence where according to extant License conditions the value of the project/scheme exceeds Rs.5 crores. This process is to be completed within 3 months from the date of this order. The applicant may also initiate action well in time so as to get the Commission's approval for projects / schemes intended to be included in the annual investment plan for ERC /ARR for FY 2002-03 in terms of para 10.5 of the licence before the end of Nov.2001. The licensee is also urged to undertake a review of the existing systems in vogue for implementation of the projects and put in place necessary changes to ensure accountability and speedier implementation of the projects on a time-bound basis so as to be in tune with the change in its role to that of a commercial organisation.

CAPITAL BASE – POSITIVE ELEMENTS

Original Cost of Fixed Assets (OCFA)

249. The Licensee has shown an amount of Rs.3621.51 crores as the original cost of fixed assets to be reckoned in the Capital Base. The expenditure proposed to be capitalized during FY 2001-02 has been shown at Rs.973.05 crores (covering seven projects) in the statement filed along with the ARR. When details were obtained for about the expected completion of the seven projects in the ARR, it was found that some of the projects mentioned by the

Licensee are expected to be completed only in the FY 2002-03. Also some of the projects which were planned for capitalization in FY 2000-01 have not been completed as per schedule and they have spilled over to the FY 2001-02. Taking into account these factors, capitalization of expenditure has been estimated at Rs.983.58 crores in respect of the following projects:

	(Rs.in Crores)
Srisailam Left Bank Transmission Scheme	539.08
A.P. Hazard Mitigation	54.95
APL – I (Main)	332.07
OECF	18.19
PFC	18.30
DFID	20.99
Total:	**983.58**

The OCFA at the end of FY 2001-02 is estimated at Rs. 2633.77 crs. as shown below:

Table No.20
STATEMENT OF FIXED ASSETS

(Amount in Rs. crores)

	APTRANSCO	APERC
Balance of total OCFA as on 1.4.2001	2648.46	1650.19
Add amount proposed to be capitalised during the year (2001-02)	973.05	983.58
Total OCFA as on 31.03.2002	**3621.51**	**2633.77**

Accordingly OCFA taken to the capital base is Rs.2633.77 Crores.

Capital Works in Progress (CWIP)

250. The Licensee has shown additional investment of Rs.623.86 crores in the ARR as capital works in progress . This was revised by the Licensee to Rs.654.37 crores in the statement filed on 2-3-2001. This statement comprises of 17 projects. After examination it was found that expenditure was not likely to be incurred on 5 projects during the course of FY 2001-02. A capital expenditure of Rs.614.31 cr. is therefore reckoned for capital base calculations. 242. But the total amount of work-in-progress this year as computed by the Commission would nevertheless be more than the estimate of the licensee on account of the fact that some of the works which were proposed to be completed in the earlier year have not been completed and continue to be classified as works-in-progress. The closing balance of capital works-in-progress as on 31-03-2002 is estimated to be Rs.1314.93 crores as against Rs.706.48 crores estimated by the licensee.

Table No.21
STATEMENT OF WORKS IN PROGRESS FOR 2001-02

(Amount in Rs. Crores)

	APTRANSCO	APERC
Opening Balance of CWIP as on 1.4.2001	**915.87**	**1546.03**
Additional Investments during the year (2t001-02)	623.86	614.31
Expenses during the year charged to Capital	33.08	33.08
Interest During Construction (IDC) charged to capital	106.72	105.09
Total Additions : Capital Expenditure	763.66	752.48
Total CWIP during the year (OB + Additions)	1679.53	2298.51
Less: Works Capitalised	973.05	983.58
Closing balance of CWIP 31/03/02	706.48	1314.93

Working Capital Requirements

251. The general question of the requirements of working capital of the licensee has been discussed at para 239 separately in the Commission Analysis. The present discussion is limited to the specific items mentioned in the Sixth Schedule.

Average cost of Stores

252. The Licensee has claimed an amount of Rs. 4.97 Crores towards average cost of stores. This represents two months requirement of Repairs and Maintenance expenses for the year, which is considered reasonable.

Average Cash and Bank Balance

253. The Licensee has proposed Rs. 19.60 Crores towards Cash and bank balance and has stated that this has been calculated to equal three months'requirement of specified operating expenses viz the aggregate of Wages and Salaries, Repairs and Maintenance, Administrative and General Expenses , Rent Rates and Taxes, and Contribution to Employee Funds for the year. As per para XVII (1) (e) (ii) of the Sixth Schedule, an amount equal to 1/12 of the sum of cash and bank balances (whether credit or debit) and call and short term deposits at the end of each month of the year of account, not exceeding in the aggregate an amount equal to one quarter of the expenditure items specified in the paragraph, is to be provided. It is evident that "one quarter of the expenditure items" referred to is only a ceiling equivalent to 3 months expenditure on the items referred to in the Sixth Schedule.

254. It is seen that the actual monthly cash balances are nominal and bank balances are negative by way of substantial overdraft throughout the year month after month. This is stated to be on account of non-receipt of subsidies etc., in the earlier years. As the Licensee is still in the early stages of reform, we think it would be fair to allow one month requirement of wages and salaries, administrative and general expenses, repairs and maintenance, rent, rates and taxes and contribution to employees funds, without reference to the average cash / bank balance month after month. An amount of Rs. 5.99 Crores as worked out below is allowed.

Table No.22

Name of the Item of Expenditure	Amount in Rs. Crores
Wages and Salaries	32.79
Admin. And General expenses	1.36
Repairs & Maintenance	29.79
Rent, Rates and Taxes	2.04
Contribution to Employee funds	5.84
Total expenses	**71.82**
Average Cash and Bank balances (71.82 ÷ 12)	**5.99**

CAPITAL BASE – NEGATIVE ELEMENTS

Accumulated Depreciation

255. The accumulated depreciation as projected by the Licensee in the filings is Rs. 848.66 Crores against which Rs. 787.54 Crores is admitted. The difference is due to the capitalisation of assets in the two years 2000-2002 being less than the anticipated levels.

Loans from Govt and Approved Institutions:

256. The Licensee has projected an amount of Rs. 2329.48 Crores towards Government loans and loans from approved institutions plus an amount of Rs. 287.20 Crores as other market borrowings for capital expenditure (capex). Scrutiny of the Licensee's Capital Works in Progress programme reveals that the capital expenditure to the end of March 2001 is likely to be less than that projected in the ARR and likewise, the capital expenditure projected to end of March 2002 has been estimated to be less than that projected by the Licensee. This has been dealt with in the earlier paragraph under Capital Works in Progress above in detail. In view of this reduction in the capital expenditure, the

loan drawals required have also been reduced correspondingly. The Commission has also scrutinized the statement regarding redemption of past loans filed along with the ARR. Taking into account the likely capital expenditure in the course of the year and the loans likely to be redeemed during the course of this year, the Commission has approved loans of the order of Rs.2196.22 crores from Government and other approved institutions. Market borrowings of Rs.278.20 crores have not been considered necessary by the Commission.

257. As already mentioned, the Second Transfer Scheme being provisional, the Commission has no information on how various loans have been reckoned as pertaining to the different successor entities. The Commission has therefore adopted the data as reported for this filing. The Commission directs APTRANSCO to provide instrument-wise details for each loan in an easily verifiable format in its next ARR filing irrespective of the number of such instruments.

Net Capital Base

258. With the above changes in the positive and negative elements of the capital base, the ‘Net Capital Base’ works out to Rs. 975.90 Crores as against Rs.887.22 Crores projected by the Licensee as detailed below.

Table No.23

Capital Base for APTRANSCO for 2001-02 **(Rs. in Crores)**

NAME OF THE ITEM	APTRANSCO	APERC
Positive Elements of Capital Base		
Original Cost of Fixed Assets	3621.51	2633.77
Capital Work in Progress	706.48	1314.93
Working Capital a) Average cost of stores	4.97	4.97
b) Average Cash and Bank Balance	19.60	5.99
Total of Positive Elements of Capital Base	**4352.56**	**3959.66**
Negative Elements of Capital Base		
Accumulated Depreciation	848.66	787.54
Government Loans	1595.92	2196.22
Approved Loans	733.56	
Other Market Borrowings for CAPEX	287.20	
Total of Negative Elements of Capital Base	**3465.34**	**2983.76**
Net Capital Base	**887.22**	**975.90**

EXPENDITURE

Purchase of Energy

259. A major item of expenditure for the Transmission company is the purchase of energy. APTRANSCO has projected an expenditure of Rs 6984 Crs on purchase of energy including external Transmission charges of Rs. 158 Crores payable to PGCIL, NLC ,Eastern Region etc. The licensee estimated purchases of 41800 MU (including external transmission losses of 381 MU). Transmission Losses up to 33 KV circuit breaker in EHT substations were assumed as 8.5% as part of the filing.

260. The Commission undertook a detailed exercise on the requirement of power on the basis of projected sales and arrived at purchase requirement of 40816 MU energy against the APTRANSCO projection of 41800 MU.

261. The Commission also undertook a detailed exercise on the availability of power and the costs of power purchased and the need to develop a frame work for ' merit order selection' with in- built flexibility the Licensee could adopt. The following table compares the estimate of costs of APTRANSCO and of the Commission.

Table No.24
POWER PURCHASE OVER VIEW

(Rs. in Crores)

	APTRANSCO 2001-02	APERC 2001-02	DIFFER-ENCE	REMARKS
External Transmission (Rs Crs)	158.56	144.56	14.00	Transmission costs compared to 2000-01 are reduced by Rs 4 Cr. Further Rs. 10 Cr. reduction on account of separating direct sale by NTPC to Ferro alloy units.
Power Purchases (Rs Crs)	6813.50	6572.44	241.06	Due to reduction in purchase of energy and due to merit order operations
Purchase of energy (Rs. Crs)	6982.00	6717.00	265.00	
Total units Purchased (MU)	41800	40816	984	Power requirement is computed based on projected sales as approved
Cost per Unit Rs/Kwh	1.67	1.65	0.02	Merit Order selection

External Transmission Charges

262. Licensee projected external transmission charges for Southern Region & Eastern Region separately. Transmission charges in the southern Region include PGCIL, NLC lines & SEB lines connected to Central Generators. As per the existing billing of PGCIL (Ex-NTPC Transmission system) on the basis of the CEA/ CERC orders total amount payable by all SREB constituents is Rs.263.25 Crores. Details are shown at Table.

Table No.25

PGCIL TRANSMISSION CHARGES EX- NTPC TRANSMISSION SYSTEM

Name of the Asset	Commercial Operation Date	ANNUAL TRANSMISSION CHARGES		REMARKS
		2000-01 in Rs. Crs	2001-02 in Rs. Crs.	
1. Ramagundam Tr. Line (St I&II)		53.74	53.36	As per GOI Notification dt 1.12.98
2. Central Transmission Project		45.1	44.56	As per GOI Notification dt 1.12.99
3. Ramagundam- Chadrapur-Tr line(50%)		4.14	4.1	As per GOI Notification dt 1.12.2000
4. Ramagundam Tr. Line -II	1.8.1997	16.985	13.682	Provisional
5. Chandrapur HVDC (Pole I & II) (50%)	1.10.97	70.77	68.22	Provisional
6. Khammam A/T& Gajuwaka Syd	1.8.97	2.5142	2.48	As per GOI Notification dt 14.5.99
7. Hyderabad Auto Transformer	1.4.95	1.4171	1.3835	Provisional
8. Cuddapah Shunt reactor	1.4.97	1.3104	1.3085	Provisional
9.315 MVA ICT-3 at Nagarjuna sagar	1.8.99	1.6716	1.6854	As per CERC order dt 26.9.2000
10. Jeypore_ Gajuwaka HVDC (50%)	1.9.99	62.9188	57.7338	As per CERC order dt 3.12.1999
11. Kaiga-Sirsi Line	1.12.99	12.7243	10.3364	As per CERC order dt 26.4.2000
12. Special Energy Meters	1.4.98	0.76	0.765	Provisional
13. SRLDC O&M charges		3.29	3.62	Provisional
Total		277.3414	263.2546	

263. Present allocation of the APTRANSCO from the Central Generators is shown at Table.

Table No.26
ANDHRA PRADESH SHARE FROM CENTRAL GENERATORS

Station	Capacity MW	Allocation MW	Special allocation to Ferro alloys AP MW	Unallocated after special allocations MW	Total MW
NTPC	2100	580	75.25	101.28	756.53
MAPS	340	28		6.19	34.19
NLC StgI	630	97		19.94	116.94
NLC Stg II	840	180		26.24	206.24
Kaiga	420	115		29.16	144.16
Total	4330	1000	75.25	182.8	1258.06

264. PGCIL Transmission charges are revised as Rs 84.33 Crs against Licensee Projection of Rs 98.35 Cr as Transmission costs compared to 2000-01 are reduced by Rs 4 Cr. There is a further Rs. 10 Cr. reduction on account of separating direct sale by NTPC to Ferro alloy units.

265. The projected Transmission charges in Southern Region for NLC & other states lines connecting Central Generators are accepted as projected. Eastern Region Transmission charges are projected as Rs.9.81 Crs. The Commission has accepted the same. The External transmission charge of Rs 144.56 crs allowed is determined accordingly.

Volume of power Purchased:

266. APTRANSCO purchases power from APGENCO, Central Generating Stations, Independent Power Producers (IPPs), Other states (Inter state purchases), APGPCL (Joint Sector), and other sources which include captive power plants, non conventional energy projects etc. The licensee has made separate projections for each of these sources.

Table No.27

SUMMARY OF VOLUME OF POWER PURCHASE FOR FY 2001-02

Source	APTRANSCO (net of auxiliary power consumption) MU	APERC (net of auxiliary power consumption) MU	Difference MU	Average Price Rs/Kwh
APGENCO				
Thermal	18810	18981		
Hydel	8994	8694		
Total APGENCO	27804	27675	-129	1.43
CGs GROSS	8409	8409	0	1.58
APGPCL	382	382	0	1.40
Inter State Power purchases	241	0	-241	2.28
Independent power Producers	4620	4166	-454	2.86
Others	254	84	-170	1.98
Wheeling charges in kind	90	100	+10	0
Total Units	41800	40816	-984	1.65

- **APGENCO**

267. Licensee estimated Machkund Generation as 525 MU and Srisailam LBHES generation as 500 MU.

There were objections raised in the public hearing, staff presentation in the public hearing and in the Commission Advisory Council meeting held on 12.3.01 about optimistic projections of Hydel generation, in particular reference to Machkund and Srisailam LBHES, where only one unit is expected to be operational just before normal spillage period of Srisailam dam. The Commission Staff expressed the view that there could be a short fall of 100MU in Machkund and 200MU in SLBHES. In response to the objections, APTRANSCO accepted the revised availability of Hydel generation of 425 MU in Machkund and 300 Mu in SLBHES. The Commission accepted the revision in availability of 425 MU against 525 MU in Machkund and 300 MU against 500 MU in Srisailam Left Bank PH.

Table No.28

APGENCO – HYDEL POWER STATIONS

Type of Generation	Name of Unit	MW Capacity	PLF %	APTRANSCO MU	APERC MU
HYDEL	MKD(AP)	114	75.10%	525	425
HYDEL	TB(AP)	72	31.55%	159	159
HYDEL	USL	240	19.03%	400	400
HYDEL	DKRY	25	50.23%	110	110
HYDEL	L.SILER	460	28.54%	1150	1150
HYDEL	SSM PH	770	47.52%	3205	3205
HYDEL	NSPH	810	35.47%	2517	2517
HYDEL	NSRCPH	90	25.37%	200	200
HYDEL	NSLCPH	60	19.03%	100	100
HYDEL	PCHPD	27	42.28%	100	100
HYDEL	NZS	10	22.83%	20	20
HYDEL	PABM	20	6.85%	12	12
HYDEL	SINGUR	20	19.98%	35	35
HYDEL	MINIHYDEL	9	19.03%	15	15
HYDEL	SSLBPH	450	12.68%	500	300
HYDEL	GROSS			9048	8748
AUX POWER CONSUMPTION				54	54
HYDEL	NETT			8994	8694

268. In the public hearing staff suggested that a unit each in VTPS-III and KTPS V have recently undergone overhauls consequent to breakdown and consequently no further overhaul may be required in ensuing year. APTRANSCO during the response have submitted that other units will be taken for overhaul instead and certain increase in generation was possible. Subsequently CMD, APGENCO submitted redrawn overhaul schedule for the APGENCO thermal stations considering the requirement. For Vijayawada Unit –I, 90 days over haul has been converted into normal overhaul of 21 days and for VTS –III and KTPS-V, long overhauls will get interchanged with other units and consequently it was estimated that about 300 MU will be additionally available from APGENCO Thermal stations for the ensuing year.

Table No.29
APGENCO THERMAL STATIONS GENERATION

Type of Generation	Name of Unit	Capacity MW	PLF %	APTRANSCO MU	APERC MU
THERMAL	RTS-B	62.5	73.06	399	399
THERMAL	KTS-A	240	82.29	1730	1730
THERMAL	KTS-B	210	63.93	1260	1260
THERMAL	KTS-C	220	64.53	932	932
THERMAL	KTS-D	500	86.76	3800	3800
THERMAL	VTS-I	420	77.73	2790	3049
THERMAL	VTS-II	420	87.52	3220	3220
THERMAL	VTS-III	420	88.33	3250	3250
THERMAL	RTPS	420	89.69	3300	3300
THERMAL	NTS	30	57.08	150	150
THERMAL	GROSS	2942.5		20831	21090
Aux. power consumption		294.25		2021	2109
THERMAL NETT		2648.25		18810	18981

➢ **CENTRAL GENERATING STATIONS (NTPC, NLC, NPC)**

269. The Commission approved the projected power purchases from the central generators in toto.

Table No.30
POWER PURCHASES FROM CENTRAL GENERATORS

Type of Generation	Name of Unit	APTRANSCO MU	EXT. Losses MU	Total MU Available	APERC MU	EXT. Losses MU	Total MU Available
NTPC(SR)	RDM	4464	200.9	4263.12	4464	200.88	4263.12
NTPC (ER)		655	30.1	624	655	29.9865	625.0134
NLC	STG I	1023	47.7	975	1023	47.7	975.3
NLC	STG II	1302	59.9	1242	1302	59.9	1242.1
NPC	MAPS	465	21.1	444	465	21.1	443.9
NPC	KAPP	500	22.1	478	500	22.1	477.9
TOTAL		8409		8027.02	8049		8027.22

➢ **INDEPENDENT POWER PRODUCERS (IPPs)**

270. (a). The Licensee has projected energy purchases of 1542 MU from GVK and 1432 MU from Spectrum. On the merit order also, these units can be dispatched for the projected energy. Commission adopted the same figures.

(b). Kondapalli Power station is expected to run on Naphtha till gas is made available and Licensee projected 240 MU generation from Naphtha and 1087 MU with gas as fuel. The Commission on reviewing the merit order and considering the take or pay clauses admitted 30 MU through Naphtha and 836 MU on the basis of Gas for the ensuing year.

(c). BSES Andhra power station is expected to be operational with Gas as fuel as per the filing of Licensee in FY 2001-02. Licensee estimated 98 MU availability in open cycle mode and 219 MU in combined cycle mode. Commission adopted 98 MU on open cycle mode, as commercial operation of the station requires this level open cycle of operation and combined cycle generation of 210 MU on the basis of merit order.

- **APGPCL**

271. The Commission approved the projected power purchases from the APGPCL in toto.

- **OTHER STATES**

272. Commission disallowed power purchases from other states on the basis of merit order for FY 2001-02.

OTHER SOURCES

273 (1). APTRANSCO projected power purchase of 204 MU from VSP and 50 MU from Nava Bharath Ferro Alloy units for FY 2001-02. These generating stations have power purchase agreements with enabling provisions for reducing generation. On the basis of merit order, commission admitted 54 MU from VSP and 30 MU from NBFA.

(2). Wheeling charges collected in kind from the third party sales have been computed on the basis of agreed wheeling charges. Licensee projected 90 MU as available. Commission adopted a wheeling charge in kind of 100 MU based on trends.

Table No.31
POWER PURCHASE COSTS

SUMMARY OF POWER PURCHASE COSTS

(Rs. in Cr.)

STATION	APTRANSCO				APERC			
	Fixed	Variable	Other	Total	Fixed	Variable	Other	Total
APGENCO	1938.3	2034.61		3972.92	1923.3	2035.08		3958.38
CGS	157.69	1067.5	109.29	1334.48	157.69	1067.5	107.63	1332.82
APGPCL	1.32	52.23		53.55	1.32	52.23		53.55
IPPs	861.06	461.09	36.02	1358.17	812.78	363.11	36.02	1211.91
OTHERS		50.01		50.01		16.58		16.58
WHEELING INKIND	0	0	0	0	0	0	0	0
Other SEBs		54.95		54.95	0	0	0	0
Transmission External	158.54			158.54	144.56			144.56
Total	**3116.91**	**3720.39**	**145.31**	**6982.61**	**3039.65**	**3534.50**	**143.65**	**6717.80**

274. The differences are discussed below:

1. Central Generators incentive and income tax allocable to the Direct sales by NTPC to the Ferro Alloys are reduced from the costs.
2. Kondapalli Naphtha variable cost is reduced owing to the reduction in price of Naphtha.
3. Units delivered from Kondapalli & BSES Andhra are reduced on considerations of merit order selection.
4. Fixed cost of Spectrum & GVK was reduced deleting the double counting of incentive provided in the APTRANSCO projection and disallowing Income tax payments as they enjoy tax holiday.
5. Reduction effected in respect of other generators corresponds to the drawals.
6. With reference to fixed costs of APGENCO, a reduction of Rs 15 Cr has been effected due to adjustments in interest & Financial Charges and Interest Capitalisation.

Wages and Salaries

275. The Licensee has projected an amount of Rs. 41.16 Crores (net of capitalisation) for inclusion in the Annual Revenue Requirements of FY 2001-02 and has stated in the Filings that:

(i) The employee costs show an increase over FY 2000-01 primarily on account of creation of new Transmission lines and service stations ("TL & SS") circles.

(ii) Basic pay has been estimated/projected to increase by 3.3% in FY 2001-02 over the previous year levels.

(iii) Dearness allowance has been estimated/projected at 29.08 percent of basic pay in FY 2001-02.

The Licensee has not furnished any justification for adopting a factor of 3.3% for FY 2001-02. Going by experience this is on the higher side. Similarly the percentage of DA at 29.08% stated as adopted for FY 2001-02 translates into an increase of 4% (cumulative 25.08%) with effect from 1.1.2001, another 4% (cumulative 29.08%) with effect from 1.7. 2001 and another 4% from 1.1.2002 reaching a level of 33.08% with effect from 1.1.2002 as against the actual prevailing rate of 21.08% with effect from 1.7.2000. This is contrary to trends. The increase from 1.1.2000 was just 0.91% and only 2.60% from 1.7.2000. Moderating these projected increases so as to be more in conformity with present trends of inflation, the salaries and wages (before capitalisation) is estimated at Rs. 61.81 Crores assuming the DA to reach a level of 29% by 1.1.2002 instead of by 1.7.2001 as projected by the Licensee.

276. Regarding capitalisation, the Licensee has proposed a total capitalisation of Rs. 29.02 Crores including Rs. 2.66 Crores out of provision towards employees' pension and gratuity funds. In order that the provision towards employees' pension and gratuity funds are reflected at gross (and not net of any

amount), the amount of Rs. 29.61 Crores proposed by the Licensee is taken as capitalised out of salaries and wages. Thus an amount of Rs. 32.79 Crores is taken towards salaries and wages to the statement of expenditure for purposes of arriving at the Annual Revenue Requirement.

Table No.32

Name of the Item	Amount in Rs. crores
Gross Salaries & Wages	61.81
Less Capitalisation	29.02
Net of Capitalisation-Salaries	**32.79**

Administration and General Expenses

277. The Licensee has projected an amount of Rs1.36 Crores (net of capitalisation) which is accepted as reasonable.

Repairs and Maintenance

278. The Licensee has projected an amount of Rs. 29.79 Crores (net of capitalisation) which is accepted as reasonable.

Rents, Rates and Taxes

279. The Licensee has projected an amount of Rs. 2.04 Crores which is accepted as reasonable.

Approved Loan Interest

280. The Licensee has projected an amount of Rs. 483.06 Crores (net of capitalisation) for inclusion in the computation of the revenue requirement. Together with the capitalisation of interest (representing IDC) of Rs.106.72 Crores proposed by the Licensee, the gross interest claimed by the Licensee amounts to Rs. 589.78 Crores. This comprises of interest on Loans and Other Market Borrowings for capex, Working Capital Borrowings and Other Financial Charges. This includes two separate amounts of Rs. 134 Crores claimed towards interest on working capital borrowings, Rs. 133 Crores claimed

as interest to finance the revenue deficit forecast for FY 2000-01. For reasons already stated in para 239 the licensee's claim for the two amounts were not allowed. Also, as the capital expenditure projection has been revised downward resulting in reduction in loan requirements / drawals (vide para 256), the corresponding interest on these amounts has also been excluded (Rs.19.71 Crores). Thus the amount allowed on this account is Rs. 303.07 Crores. This includes interest during construction (IDC) attributable to capital works (Rs.105.09 Crores). The net amount taken to revenue requirement calculations is therefore Rs. 197.98 Crores as detailed in the Table below.

Table No.33

Name of the Item	Amount in Rs. crores
Total Interest	303.07
Less Interest Capitalised	105.09
Net Interest provided	**197.98**

Legal Charges and Auditors' Fees

281. The licensee has claimed an amount of Rs. 0.50 Crore towards legal charges and Rs. 0.02 Crore towards Auditors' Fees which is accepted as reasonable.

Depreciation

282. The Licensee has projected an amount of Rs. 161.23 Crores and the amount admitted is Rs. 100.11 Crores. The difference is on account of the level of capitalisation for FY 2000-01 as explained above under Original Cost of Fixed Assets.

Other Expenses

283. The Licensee has projected an amount of Rs. 4.83 Crores which is accepted as reasonable

Contribution to Employee Funds

284. The acturial study has confirmed that the provision made towards the pension and gratuity liability for FY 2000-01 at 13% of Basic Pay plus DA does not need a revision. In the same study, the percentages worked out by the actuary for FY 2001-02 are also in the neighbourhood of 13% for APTRANSCO as well as the four Discoms. The provision for FY 2001-02 through tariff is therefore made at 13%.

285. The Licensee has stated that the requisite Trusts for pension and gratuity are yet to be formed. The Commission note with considerable disquiet that its directive in the Tariff Order to deposit, in non-drawal bank accounts, the amounts accruing through tariff on this account has not been complied with. While the Commission would have been fully justified in refusing to allow any provision this year towards these funds in the Tariff, the Commission is conscious that it would not be a progressive step and what is more, it may be harmful to the interests of the employees. The Commission would therefore take up the question of non-implementation of the directive separately but in the mean time provides for the required funds through tariff at 13% of Basic Pay + DA for FY 2001-02.

286. The Licensee has projected an amount of Rs. 4.06 Crores (net of capitalisation) against which the Commission has provided Rs. 5.84 Crores (with out any element of capitalisation) taking also into account the Salary expenditure debited to Capital works.

287. The Licensee is again directed to ensure that till such time the Trusts are formed, an amount of Rs. 48.67 lakhs per month is credited from month to month to the non-drawal bank account already opened with the State Bank of Hyderabad treating it as a first charge on the revenue realisations of the company for a month. A certificate of compliance should be filed with the Commission by the Licensee at the end of every month. The licensee is urged to take up with the Bank appropriately to ensure that the amounts in the non-drawal bank accounts earn the maximum possible interest. The Licensee is also directed to file within two months from the date of this order a report detailing the status of action regarding the formation of Trusts for Pension and Grautuity.

Contribution to Contingency Reserve

288. Because of the changes in the Original cost of Fixed Assets as discussed above, Rs. 9.09 Crores projected by the Licensee as contingency reserve changes to Rs. 6.58 Crores, @ 0.25% % of the Original cost of Fixed Assets as per the Sixth Schedule to the E.S.Act.

Total Expenditure

289. In view of the above changes, the total expenditure works out to Rs. 7189.94 Crores as against Rs. 7719.75 Crores projected by the Licensee as summarised in the following table.

Table No.34

EXPENDITURE ITEMS	APTRANSCO	Commission
		(Rs. in Crores)
Purchase of Energy	6982.61	6717.80
Wages and Salaries	41.16	32.79
Administration and General expenses	1.36	1.36
Repairs and Maintenance	29.79	29.79
Rent Rates & Taxes	2.04	2.04
Approved Loan Interest	483.06	197.98
Legal Charges	0.50	0.50
Auditor's Fee	0.02	0.02
Depreciation	161.23	100.11
Other Expenses	4.83	4.83
Contributions to Employee funds	4.06	5.84
Special appropriation permitted by the Commission (para 191)		90.29
Contribution to Contingency Reserve	9.09	6.58
TOTAL EXPENDITURE	**7719.75**	**7189.94**

Reasonable Return

290. Because of the changes to the 'Net Capital Base' as above, the reasonable return calculated as per the Sixth Schedule @16% works out to Rs. 167.12 Crores as against Rs. 155.04 Crores claimed by the Licensee.

Non Tariff Income

291. The Licensee has projected an amount of Rs. 34.60 Crores towards non-tariff income which is accepted as reasonable.

Aggregate Revenue Requirement

292. The Aggregate Revenue Requirement works out to Rs. 7322.46 Crores as against Rs. 7840.19 Crores projected by the Transmission and Bulk Supply Licensee which comes down to Rs. 7701.19 Crores taking the adjustment of Rs. 139.00 Crores net proposed by the Licensee towards Wheeling Charges. Proposed wheeling charges of Rs.139 crores have not been included as the Commission have deferred the consideration of the proposal.

Table No.35

Name of the Item	Amount in Rs. Crores
Reasonable Return	167.12
Total Expenditure	7189.94
Minus : Non-tariff Income	34.60
Total Net Aggregate Revenue Requirement	**7322.46**

CHAPTER - XI

ARR / ERC - DISTRIBUTION AND RETAIL SUPPLY

Andhra Pradesh Eastern Power Distribution Company Ltd (APEPDCL)

293. APTRANSCO, the licence holder for Distribution and Retail Supply jointly with APEPDCL (the Licensee - Designate) filed its ARR under section 26(5) of the Reform Act for FY 2001-02 on 30.12.2000. The Commission has examined the APEPDCL's proposals and indicates below the reasons and its alternative calculations where the Commission finds the calculations incorrect and unacceptable.

294. As already mentioned the Audited Accounts for 1999-2000 are not yet available and the Second Transfer Scheme notified by the GoAP with effect from 31.3.2000 is also provisional. The APEPDCL has stated that the balances as at March 31, 2000 have been taken from the provisional disaggregated opening financial statements prepared as part of the finalisation of the Second Transfer Scheme. In view of this the Commission adopts the same opening balances as on 01.04.2000 as adopted by the APEPDCL for this filing.

CAPITAL BASE – POSITIVE ELEMENTS

Original Cost of Fixed Assets (OCFA)

295. The APEPDCL has proposed an amount of Rs. 683.65 Crores as the Original Cost of Fixed Assets (OCFA) to be reckoned in the Capital Base. This is based on a proposed capitalisation of Rs. 190.75 Crores for FY 2001-02 but no details of works / projects proposed to be completed during FY 2001-02 aggregating to this amount have been furnished. Based on the further information obtained from the APEPDCL regarding projects / works proposed to be completed during FY 2001-02, capitalisation of Rs. 40.00 Crores during FY 2001-02 has

been taken into account covering APL – I and Regularisation of Unauthorised services. The resulting OCFA figure as on 31.3.2002 works out to Rs. 624.03 Crores as detailed in the table below

Table No.36
STATEMENT OF FIXED ASSETS

NAME OF THE ITEM	APEPDCL	Commission
		(Amount in Crores)
Original cost of fixed assets As on 1/4/2001	595.24	584.03
Less consumer contributions	61.34	-
Net balance of OCFA as on 31.03.01	533.90	584.03
Add : Works Capitalised during the year	190.75	40.00
Balance of OCFA as on 31.03.02	724.65	624.03
Less consumer contributions	41.00	-
Net balance of OCFA as on 31.03.02	**683.65**	**624.03**

Accordingly OCFA taken to the capital base is Rs. 624.03 Crores

Capital Works in Progress (CWIP)

296. It is necessary to mention at the very outset that the details of capital investment and capital works-in-progress furnished in the filings are not as per the Commission's guidelines. They do not contain the break-up for the opening balance of CWIP project wise or scheme/work wise. On-going schemes and new schemes to be taken up during the year have not been differentiated and it is not possible to see from the data furnished whether all or any of them require the Commission's approval in terms of Para 9 of the License. Information regarding completion of projects/works is lacking in the filings. Without a Cash Flow Statement incorporating these outlays, the proposals lack conviction. Efforts by the staff to have these deficiencies made good by the APEPDCL over a period exceeding two months have been largely unsuccessful. Normally the projects or schemes which are to be included in the annual investment plan envisaged in Para 9.6 of the License (which forms the basis to arrive at the figures to be taken

towards OCFA & CWIP in the computation of the Capital Base for purposes of allowing reasonable return) should normally be those which already have the Commission's approval in terms of Para 9 of the License (or those which do not require such approval) except that in rare cases and if urgent, projects / schemes which have reached an advanced stage in the process of obtaining the Commission's approval may also be included depending on merits. But it has not been possible for the Commission to enforce it this year in view of the short time available to the DISCOMS after they became Licensees - Designate. Keeping these factors in view, as against the projection by the APEPDCL of Rs. 202.58 Crores, outlay on capital works has been considered at Rs. 164.23 Crores for calculating CWIP for Capital Base calculation purposes.

	Rs. Crores
APL-I	51.71
Regularisation of Unauthorised Services	67.05
Village Electrification	15.26
S I Schemes	15.21
Other Schemes	15.00
	164.23

297. The APEPDCL shall however note that the above projections for purposes of inclusion in the Capital Base do not constitute the Commission's approval for projects / schemes required under Para 9 of the License. The Commission should be approached separately (wherever required) for obtaining the approvals as required under the License with full details of projects / schemes and justification for the investment. It should complete the process of obtaining the Commission's approval for projects / schemes under Para 10 of the License within three months from the date of this Order. Projects / Schemes to be taken up in FY 2002-03 may also be formulated well in advance and forwarded to the Commission wherever required so that Commission approved projects / schemes

are available latest by end of November 2001 in time for inclusion in the annual investment plan envisaged in Para 9.6 of the License accompanying the ARR filings for FY 2002-03. Full details of projects / schemes which do not require Commission's approval but form part of the annual investment plan must be furnished in the filings to enable a quick appraisal by the staff and by the Commission to decide on their inclusion in the annual investment plan. The APEPDCL is also urged to undertake an urgent review of the existing systems in vogue for implementation of projects and put in place necessary changes to ensure accountability and speedier implementation of schemes / projects and utilizing the provision for capital expenditure throughout the yearas uniformly as possible.

298. Based on the above, and the capitalisation as mentioned under OCFA above, the CWIP works out to Rs. 263.09 Crores as detailed below.

Table No. 37
STATEMENT OF WORKS IN PROGRESS FOR 2000-01 & 2001-02

(Rs. in Crores)

	APEPDCL	Commission
Opening Balance of CWIP 1/4/2000	**84.42**	**84.42**
Additional Investments during the year **(2000-01)**	158.91	85.00
Expenses during the year Capitalised	15.89	8.50
Interest during construction (IDC) charged to Capital	10.90	5.83
Total Additions : Capital Expenditure	185.70	99.33
Total (OB + Additions)	270.12	183.75
Less: Works Capitalised	88.91	77.70
Closing Balance of CWIPas on 31.3.2001	**181.21**	**106.05**
Additional Investments during the year **(2001-02)**	202.58	164.23
Expenses during the year Capitalised	20.26	16.42
Interest During Construction (IDC) charged to capital	20.22	16.39
Total Additions : Capital Expenditure	243.06	197.04
Total CWIP during the year (OB + Additions)	424.27	303.09
Less: Works Capitalised	190.75	40.00
Closing balance of CWIP 31/03/02	**233.52**	**263.09**

Working Capital Requirements

Average cost of Stores.

299. The APEPDCL has claimed an amount of Rs. 20.82 Cr towards average cost of stores. This is considered excessive compared to the level of Repairs and Maintenance expenses projected for the year. An amount of Rs. 2.21 Crores calculated at two months Repair and Maintenance expenses is considered reasonable and is therefore provided.

Average Cash and Bank Balance

300. The APEPDCL has proposed Rs. 25.60 Crores towards Cash and bank balances and has stated that this has been calculated to equal three months' requirement of specified operating expenses viz the aggregate of Wages and Salaries, Repairs and Maintenance, Administrative and General Expenses, Rent Rates and Taxes, and Contribution to Employee Funds for the year. As per Para XVII (1) (e) (ii) of the Sixth Schedule, an amount equal to 1/12 of the sum of cash and bank balances (whether credit or debit) and call and short term deposits at the end of each month of the year of account, not exceeding in the aggregate an amount equal to one quarter of the expenditure items specified in the paragraph, is to be provided. It is evident that " one quarter of the expenditure items" referred to is only a ceiling equivalent to 3 months expenditure on the items referred to in the Sixth Schedule. The actual cash balances at month end are nominal and the bank balances are mostly negative. Strictly applying the provisions of the Sixth Schedule, the provision under this head has to be negative. But, considering the present stage of Reforms, the Commission considers that the funds requirement for a level of one month's payment of Wages and Salaries, Administrative and General expenses, Repairs and Maintenance Expenses, Rent Rates and Taxes and Contribution to Employee Funds would be appropriate for this year. Calculated on this basis, the amount works out to Rs. 8.38 Crores which is provided for in the calculation of the Capital Base.

Table No. 38

Item of Expenditure	Amount In Rs. Crores
Wages and Salaries	66.69
Admin. and General expenses	11.21
Repairs & Maintenance	13.24
Rent, Rates and Taxes	0.52
Contribution to Employee funds	8.85
Total expenses	**100.51**
Average Cash and Bank balances (100.51 ÷ 12)	**8.38**

CAPITAL BASE – NEGATIVE ELEMENTS

Accumulated Depreciation

301. The accumulated depreciation according to APEPDCL is Rs. 348.06 Crores against which Rs. 347.29 Crores is admitted. The difference is due to difference in capitalisation of assets in FY 2000-01 according to the details of likely completion of projects furnished by the APEPDCL during FY 2000-01.

Loans from Govt. and Approved Loans

302. The APEPDCL has projected an amount of Rs. 106.02 Crores towards Government loans and Rs. 268.37 Crores towards loans from approved institutions. Scrutiny of the APEPDCL's Capital Works in Progress / programme showed that the capital expenditure to end of March 2001 would be less than that projected in the ARR and likewise, the capital expenditure projected in FY 2001-02 has been estimated to be less than projected by the APEPDCL. This has been dealt with in the paragraph under Capital Works in Progress above. In view of this reduction in the capital expenditure, the loan drawals required have also been reduced appropriately. Besides, there are on-going schemes carried forward from earlier years in respect of which capital expenditure is incurred in FY 2001-02. In all, an amount of Rs. 283.83 Crores is allowed for Government and Approved Loans put together.

303. As already mentioned, the Second Transfer Scheme being provisional, the Commission has no information on how various loans have been reckoned as pertaining to the different successor entities. The Commission has therefore adopted the data as reported for this filing. The Commission directs APEPDCL to provide instrument-wise details for each loan in an easily verifiable format in its next ARR filing irrespective of the number of such instruments.

Consumer Security Deposit

304. The Consumer Security Deposit as projected by the APEPDCL at Rs. 235.13 Crores has been adopted.

Net Capital Base

305. With the above changes in the positive and negative elements of the capital base, the 'net capital base' works out to Rs.31.46 Crores as against Rs .6.02 Crores projected by the APEPDCL as detailed below.

Table No.39

CAPITAL BASE FOR APEPDCL FOR FY 2001-02 **(Rs. in Crores)**

NAME OF THE ITEM	APEPDCL	Commission
Positive Elements of Capital Base		
Original Cost of Fixed Assets	683.65	624.03
Capital Works in Progress	233.53	263.09
Working Capital a) Average cost of stores	20.82	2.21
b) Average Cash and Bank Balance	25.60	8.38
Total of Positive Elements of Capital Base	**963.60**	**897.71**
Negative Elements of Capital Base		
Accumulated Depreciation	348.06	347.29
Government Loans	106.02	283.83
Approved Loans	268.37	
Consumers' Security Deposits	235.13	235.13
Total of Negative Elements of Capital Base	**957.58**	**866.25**
Net Capital Base	**6.02**	**31.46**

EXPENDITURE

Purchase of Energy

306. APEPDCL has projected a requirement of 5426 MU of energy against which the Commission has allowed 5339 MU . The corresponding cost has been arrived at as Rs. 1046.80 Crores as against Rs. 1092.20 Crores shown in the ARR.

Wages and Salaries

307. The APEPDCL has projected an amount of Rs. 69.91 Crores (net of capitalisation) for inclusion in the Annual Revenue Requirements of FY 2001-02 and has stated in the Filings that:

(iv) Basic pay has been estimated/projected to decrease by 5.7 per cent in FY 2000-01 and increase by 1.9 per cent in FY 2001-02 over the previous year levels;

(v) Dearness allowance has been estimated/projected at 19.0 per cent of basic pay in FY 2000-01 and 18.3 per cent in FY 2001-02.

308. The APEPDCL has not furnished any justification for these factors adopted for projecting the basic pay increase for FY 2000-01 or for FY 2001-02 Similarly there is no basis for the DA rate projected for FY 2001-02. Taking these projected increases at realistic levels, the expenditure on salaries and wages (before capitalisation) is estimated at Rs. 80.55 Crores assuming that the DA would reach a level of 29% by 1.1.2002. Net of Capitalisation, the Salaries and Wages provided for calculation in the revenue requirement is Rs. 66.69 Crores

Table No.40

Name of the Item	Amount in Rs crores
Gross Salaries	80.55
Less Capitalisation	13.86
Net of Capitalisation-Salaries	**66.69**

Administration and General Expenses

309. APEPDCL has projected an amount of Rs. 11.21 Crores which is accepted as reasonable.

Repairs and Maintenance

310. APEPDCL has projected an amount of Rs. 13.24 Crores which is accepted as reasonable.

Rents, Rates and Taxes

311. APEPDCL has projected an amount of Rs 0.52 Crores which is accepted as reasonable.

Approved Loan Interest

312. APEPDCL has projected a gross amount of Rs. 55.09 Crores which is inclusive of Interest on Existing Loans, Fresh Loans, and Other Financial Charges. As the Capital Works in Progress programme and consequently the loan requirements have been reduced, there is correspondingly a reduction in the interest amount also. The gross amount allowed on this account is Rs. 47.63 Crores. This includes interest during construction (IDC) attributable to capital amounging to Rs. 16.39 Crores. The net amount taken to revenue requirement calculations is therefore Rs. 31.24 Crores as detailed in the table below.

Table No.41

Name of the item	Amount (in Rs. Crores)
Total Interest allowed	47.63
Less: Interest Capitalised	16.39
Net Interest Provided	**31.24**

Interest on Consumer's Security Deposits

313. APEPDCL has projected an amount of Rs. 6.89 Crores which is accepted.

Legal charges and Auditors' Fees

314. APEPDCL has claimed an amount of Rs. 0.13 Crore towards legal charges and Rs. 0.02 Crore towards Auditors' Fee which is accepted as reasonable.

Bad Debts

315. APEPDCL has claimed Rs. 12.49 Crores as provision towards Bad Debts and has stated that the provision towards bad and doubtful debts has been estimated / projected at 1% of revenues. It may be recalled in this connection that in respect of similar claim for bad debts for FY 01 the Commission in its order dated 27th May 2000 recorded detailed reasons as to why it does not consider a provision for doubtful debts justified for inclusion in the calculation of the Revenue Requirement. The Commission noted there that the First Transfer Scheme notified by the GoAP has a provision of Rs. 618.90 Crores towards bad and doubtful debts and felt that an addition to the revenue requirement on this account by allowing a further provision was not justified particularly in view of the fact that there has been no review and no actual write-off of bad debts for the past many years. In that order, the then Licensee was advised to pursue vigorously the review of receivables stated to have been instituted. But the present filing is silent about the progress and results of the review. Further, no new factors have been adduced in the filings (apart from stating in general that providing for bad and doubtful debts is a standard practice in the utility industry and is in vouge in utilities even in developed countries) for the Commission to take a different view of the matter now. We also see that, the provision of Rs. 618.90 Crores in the First Transfer Scheme has been distributed among the DISCOMS in the Second Transfer Scheme and the amount allocated to the APEPDCL is Rs.67.16 Cr. From the age profile of the debts furnished by the

APEPDCL, it is incidentally seen that the dues more than 3 years old (i.e. upto FY 1997-98) total only Rs.40.10 Crores (as of 30.09.2000), which is well within the provision available to the APEPDCL. Moreover, unless bad debts are actually written off by the DISCOM under approved procedures to the extent of the provision already available, further provision through tariff cannot be considered.

Depreciation

316. APEPDCL has projected an amount of Rs 45.72 Crores and the amount admitted is Rs. 44.94 Crores. The difference is on account of the level of capitalisation for FY 2000--01 as explained above under Original Cost of Fixed Assets.

Other Expenses

317. The claim is Rs. 5.98 Crores which is accepted as reasonable.

Contribution to Employee Funds

318. As already explained, the provision towards Employee Funds is made at 13% of Basic Pay + DA .The amount provided is Rs. 8.85 Crores as against Rs. 7.54 Crores projected in the ARR.

319. APEPDCL is directed to ensure that till such time the Trusts are formed, an amount of Rs.73.75 lakhs per month is credited from month to month to the non-drawal bank account already opened with State Bank of Hyderabad treating it as a first charge on the revenue realisations of the company for a month. A certificate of compliance should be filed with the Commission by the DISCOM at the end of every month. The DISCOM is urged to take up with the Bank appropriately to ensure that the amounts in the non-drawal bank account earn the maximum possible interest. The Licensee is also directed to file within two months from the date of this order a report detailing the status of action regarding the formation of Trusts for Pension and Gratuity.

Tax on Income

320. APEPDCL has projected an amount of Rs 0.44 Crore and has stated that the Tax liability is under the provisions of the Minimum Alternative Tax (MAT) under the Income Tax Act, 1961. But as the estimated tax liability has not been supported with detailed calculations, no provision is made. However, if the APEPDCL pays MAT for FY 2001-02, the amount would be considered as special appropriation in a subsequent year.

Contribution to Contingency Reserve

321. Because of the changes in the Original cost of Fixed Assets as discussed above, Rs. 2.08 Crores projected by the APEPDCL also undergoes a modification to Rs. 1.56 Crores, @ 0.25 % of the Original Cost of Fixed Assets as per Sixth Schedule.

Total Expenditure

322. In view of the above changes, the total expenditure works out to Rs 1238.07 Crores against Rs. 1303.24 Crores projected by the APEPDCL as summarised in the following table.

Table No. 42

EXPENDITURE ITEMS	APEPDCL	COMMISSION
		(Rs. in Crores)
Purchase of Energy	1092.20	1046.80
Wages and Salaries	**69.91**	**66.69**
Administration and General expenses	11.21	11.21
Repairs and Maintenance	13.24	13.24
Rent Rates & Taxes	0.52	0.52
Approved Loan Interest	34.87	31.24
Int. on Consumers' Security Deposits	6.89	6.89
Legal Charges	0.13	0.13
Auditors' Fees	0.02	0.02
Bad debts	12.49	0.00
Depreciation	45.72	44.94
Other Expenses	5.98	5.98
Contributions to Employee funds	7.54	8.85
	1300.72	1236.51
Special Appropriations		
Tax on Income	0.44	0.00
Contribution to Contingency Reserve	2.08	1.56
Total Special Appropriations	2.52	1.56
Total "Expenditure" (including Special Appropriations)	**1303.24**	**1238.07**

Reasonable Return

323. Because of the changes to the 'Net Capital Base' as above, the reasonable return calculated as per the Sixth Schedule works out to Rs. 6.70 Crores as against Rs. 2.83 Crores shown by the APEPDCL in the ARR.

Non Tariff Income

324. APEPDCL has projected an amount of Rs. 46.00 Crores which is accepted as reasonable.

Aggregate Revenue Requirement

325. The Aggregate Revenue Requirement works out to Rs. 1198.77 Crores as against Rs. 1260.07 Crores projected by APEPDCL.

Table No.43

Name of the Item	**Amount in Rs. Crores**
Reasonable Return	6.70
Total Expenditure	1238.07
Minus:Non-tariff Income	46.00
Total Net Aggregate Revenue Requirement	**1198.77**

Revenue from Tariff and the Gap

326. Determination of the Aggregate Revenue Requirement is the first step in the process of tariff formulation. Subsequent sections of this Tariff Order discuss the sales projections by the APEPDCL and its revenue gap, the tariff approved by the Commission taking into account the cross subsidy within and the external subsidy, the adjusted bulk supply tariff and the consequent adjustments.

CHAPTER - XII

ARR / ERC - DISTRIBUTION AND RETAIL SUPPLY

Andhra Pradesh Northern Power Distribution Company Ltd (APNPDCL)

327. APTRANSCO, the licence holder for Distribution and Retail Supply, jointly with APNPDCL (the Licensee - Designate) filed its ERC under section 26(5) of the Reform Act for FY 2001-2002 on 30.12.2000. The Commission has examined the APNPDCL's proposals and provides below the reasons where the Commission finds the calculations incorrect and its alternative calculations.

328. As already mentioned the Audited Accounts for 1999-2000 are not yet available and the Second Transfer Scheme notified by the GoAP with effect from 31.3.2000 is also provisional. The APNPDCL has stated that the balances as at March 31, 2000 have been taken from the provisional disaggregated opening financial statements prepared as part of the finalisation of the Second Transfer Scheme. In view of this the Commission adopts the same opening balances as on 01.04.2000 as adopted by the APNPDCL for this filing.

CAPITAL BASE – POSITIVE ELEMENTS

Original Cost of Fixed Assets (OCFA)

329. The APNPDCL has proposed an amount of Rs. 1010.31 Crores as the Original Cost of Fixed Assets (OCFA) to be reckoned in the Capital Base. This is based on a proposed capitalisation of Rs. 338.26 Crores for the year 2002 but no details of works / projects proposed to be completed during FY 2001-02 aggregating to this amount have been furnished. Based on further information obtained from the APNPDCL regarding projects / works proposed to be completed during FY 2001-02, a capitalisation of

Rs. 50.00 Crores during FY 2001-02 has been taken into account covering Regularisation of Unauthorised Services. The resulting OCFA figure as on 31.3.2002 works out to Rs. 680.95 Crores as detailed in the table below.

Table No.44
STATEMENT OF FIXED ASSETS

NAME OF THE ITEM	APNPDCL	COMMISSION
		Amount in Crores
Original cost of fixed assets As on 1.4.2001	729.92	630.95
Less consumer contributions	32.87	-
Net balance of OCFA as on 31.03.01	697.05	630.95
Add : Works Capitalised during the year	338.26	50.00
Balance of OCFA as on 31.03.02	1035.31	680.95
Less consumer contributions	25.00	-
Net balance of OCFA as on 31.03.02	**1010.31**	**680.95**

Accordingly OCFA taken to the capital base is Rs. 680.95 Crores.

Capital Works in Progress (CWIP)

330. It is necessary to mention at the very outset that the details of capital investment and capital works-in-progress furnished in the filings are not as per the Commission's guidelines. They do not contain the break-up for the opening balance of CWIP project wise or scheme/work wise. On-going schemes and new schemes to be taken up during the year have not been differentiated and it is not possible to see from the data furnished whether all or any of them require the Commission's approval in terms of Para 9 of the License. Information regarding completion of projects/works is lacking in the filings. Without a Cash Flow Statement incorporating these outlays, the proposals lack conviction. Efforts by the staff to have these deficiencies made good by the APNPDCL over a period exceeding two months have been largely unsuccessful. Normally the projects or schemes which are to be included in the annual investment plan envisaged in Para 9.6 of the License (which forms the basis to arrive at the figures to be taken

towards OCFA & CWIP in the computation of the Capital Base for purposes of allowing reasonable return) should normally be those which already have the Commission's approval in terms of Para 9 of the License (or those which do not require such approval) except that in rare cases and if urgent, projects / schemes which have reached an advanced stage in the process of obtaining the Commission's approval may also be included depending on merits. But it has not been possible for the Commission to enforce it this year in view of the short time available to the DISCOMS after they became Licensees - designate. Keeping these factors in view, as against the APNPDCL's projection of Rs. 286.41 Crores, outlay on capital works has been considered at Rs. 170.71 Crores for calculating CWIP for Capital Base calculation purposes.

	Rs. Crores
APL-I	73.00
Regularisation of Unauthorised Services	50.00
Rural Electrification	13.60
Distribution System improvement Schemes	27.11
AIJ Project	7 .00
Total:	170.71

331. The APNPDCL shall however note that the above projections for purposes of inclusion in the Capital Base do not constitute the Commission's approval for projects / schemes required under Para 10 of the License. The Commission should be approached separately (wherever required) for obtaining the approvals as required under the License with full details of projects / schemes and justifications for the investment. It should complete the process of obtaining the Commission's approval for projects / schemes under Para 9 of the License within three months from the date of this Order. Projects / Schemes to be taken

up in FY 2002-03 may also be formulated well in advance and forwarded to the Commission (wherever required) so that Commission - approved projects / schemes are available latest by end of November 2001 in time for inclusion in the annual investment plan envisaged in Para 9.6 of the License accompanying the ARR filings for FY 2002-03. Full details of projects / schemes which do not require Commission's approval but form part of the annual investment plan must be furnished in the filings to enable a quick appraisal by the staff and by the Commission to decide on their inclusion in the annual investment plan. The – APNPDCL is also urged to undertake an urgent review of the existing systems in vogue for implementation of projects and put in place necessary changes to ensure accountability and speedier implementation of schemes / projects and utilizing the provision for capital expenditure throughout the year as uniformly as possible.

332. Based on the above, and the capitalisation as mentioned under OCFA above, the CWIP works out to Rs. 322.52 Crores as detailed below.

Table No.45
STATEMENT OF WORKS IN PROGRESS FOR 2000-01 & 2001-02

(Rs. in Crores)

	APNPDCL	COMMISSION
Opening Balance of CWIP 1/4/2000	**97.76**	**97.76**
Additional Investments during the year **(2000-01)**	277.48	60.00
Expenses during the year charged to Capital	27.75	6.00
Interest during construction (IDC) charged to Capital	21.31	4.61
Total Additions : Capital Expenditure	326.54	70.61
Total (OB + Additions)	424.30	168.37
Less: Works Capitalised	102.97	4.00
Closing balance of CWIP as on 31.3.2001	**321.33**	**164.37**
Additional Investments during the year **(2001-02)**	286.41	170.71
Expenses during the year charged to Capital	28.64	17.07
Interest During Construction (IDC) charged to capital	34.18	20.37
Total Additions : Capital Expenditure	349.23	208.15
Total CWIP during the year (OB + Additions)	670.56	372.52
Less: Works Capitalised	338.26	50.00
Closing balance of CWIP 31/03/02	**332.30**	**322.52**

Working Capital Requirements
Average cost of Stores

333. APNPDCL has claimed an amount of Rs. 27.36 Crores towards average cost of stores. This is considered excessive compared to the level of Repairs and Maintenance expenses projected for the year. An amount of Rs. 4.53 Crores calculated at two months Repair and Maintenance expenses is considered reasonable and is therefore provided.

Average Cash and Bank Balance

334. APNPDCL has proposed Rs. 30.63 Crores towards Cash and bank balances and has stated that this has been calculated to equal three months requirement of specified operating expenses viz the aggregate of Wages and

Salaries, Repairs and Maintenance, Administrative and General Expenses, Rent Rates and Taxes, and Contribution to Employee Funds for the year. As per Para XVII (1) (e) (ii) of the Sixth Schedule, an amount equal to 1/12 of the sum of cash and bank balances (whether credit or debit) and call and short term deposits at the end of each month of the year of account, not exceeding in the aggregate an amount equal to one quarter of the expenditure items specified in the paragraph, is to be provided. It is evident that " one quarter of the expenditure items" referred to is only a ceiling equivalent to 3 months expenditure on the items referred to in the Sixth Schedule. The actual cash balances at month end are nominal and the bank balances are mostly negative. Strictly applying the provisions of the Sixth Schedule, the provision under this head has to be negative. But, considering the present stage of Reforms, the Commission considers that the funds requirement for a level of one month's payment of Wages and Salaries, Administrative and General expenses, Repairs and Maintenance Expenses, Rent Rates and Taxes and Contribution to Employee Funds would be appropriate for this year. Calculated on this basis, the amount works out to Rs. 10.81 Crores which is provided for in the calculation of the Capital Base.

Table No.46

Item of Expenditure	Amount In Rs. Crores
Wages and Salaries	80.82
Admin. and General expenses	10.78
Repairs & Maintenance	27.18
Rent, Rates and Taxes	0.48
Contribution to Employee funds	10.40
Total expenses	**129.66**
Average Cash and Bank balances (129.66 ÷ 12)	**10.81**

CAPITAL BASE – NEGATIVE ELEMENTS

Accumulated Depreciation

335. The accumulated depreciation according to APNPDCL is Rs. 409.76 Crores against which Rs. 402.62 Crores is admitted. The difference is due to differences in capitalisation of assets in FY 2000-01 according to the details of projects proposed to be completed furnished by the APNPDCL during FY 2000-01.

Loans from Govt and Approved Loans

336. APNPDCL has projected an amount of Rs. 147.26 Crores towards Government loans and Rs. 619.89 Crores towards loans from approved institutions plus an amount of Rs. 62.82 Crores as other market borrowings for capital expenditure (capex). Scrutiny of the APNPDCL's Capital Works in Progress / programme showed that the capital expenditure to end of March 2001 would be less than that projected in the ARR and likewise, the capital expenditure projected in FY 2001-02 has been estimated to be less than projected by the APNPDCL. This has been dealt with in the paragraph under Capital Works in Progress above. In view of this reduction in the capital expenditure, the loan drawals required have also been reduced appropriately, with the result that there is no need for "other market borrowings for capex". Besides, there are on-going schemes carried forward from earlier years in respect of which capital expenditure is incurred in FY 2001-02. In all, an amount of Rs. 475.20 Crores is allowed for both Government and Approved Loans put together and the projection under other market borrowings for capex is nil.

337. As already mentioned, the Second Transfer Scheme being provisional, the Commission has no information on how various loans have been reckoned as pertaining to the different successor entities. The Commission has therefore adopted the data as reported for this filing. The Commission directs APNPDCL to provide instrument-wise details for each loan in an easily verifiable format in its next ARR filing irrespective of the number of such instruments.

Consumer Security Deposit

338. The Consumer Security Deposit as projected by the APNPDCL at Rs. 136.14 Crores has been adopted.

Net Capital Base

339. With the above changes in the positive and negative elements of the capital base, the 'net capital base' works out to Rs 4.85 Crores as against Rs.24.72 Crores projected by the APNPDCL as detailed below.

Table No.47

CAPITAL BASE FOR APNPDCL FOR 2001-02 **(Rs. in Crores)**

NAME OF THE ITEM	APNPDCL	Commission
Positive Elements of Capital Base		
Original Cost of Fixed Assets	1010.31	680.95
Capital Works in Progress	332.29	322.52
Working Capital a) Average cost of stores	27.36	4.53
b) Average Cash and Bank Balance	30.63	10.81
Total of Positive Elements of Capital Base	**1400.59**	**1018.81**
Negative Elements of Capital Base		
Accumulated Depreciation	409.76	402.62
Government Loans	147.26	475.20
Approved Loans	619.89	
Other Market Borrowings for CAPEX	62.82	
Consumers' Security Deposits	136.14	136.14
Total of Negative Elements of Capital Base	**1375.87**	**1013.96**
Net Capital Base	**24.72**	**4.85**

EXPENDITURE

Purchase of Energy

340. APNPDCL has projected a requirement of 7479 MU of energy against which the Commission has allowed 7258 MU. The corresponding cost has been arrived at as Rs. 1422.92 Crores as against Rs. 1506.00 Crores shown in the ARR.

Wages and Salaries

341. The Company has projected an amount of Rs. 75.76 Crores (net of capitalisation) for inclusion in the Annual Revenue Requirements of FY 2001-02 and has stated in the Filings that:

(vi) Basic pay has been estimated/projected to decrease by 3.5 per cent in FY 2000-01 and increase by 3.3 per cent in FY 2001-02 over the previous year levels;

(vii) Dearness allowance has been estimated/projected at 21.4 per cent of basic pay in FY 2000-01 and 29.1 per cent in FY 2001-02.

The Company has not furnished any justification for these factors adopted for projecting the basic pay decrease for FY 2000-01 and increase for FY 2001-02. Similarly there is no basis for the DA increase adopted for FY 2001-02. Making these projections at realistic levels, the expenditure on salaries and wages (before capitalisation) is estimated at Rs. 94.63 Crores assuming that the DA would reach a level of 29% by 1.1.2002. Net of Capitalisation, the Salaries and Wages provided for in the calculation of the revenue requirement is Rs. 80.82 Crores

Table No.48

Name of the Item	Amount in Rs crores
Gross Salaries	94.63
Less Capitalisation	13.81
Net of Capitalisation-Salaries	**80.82**

Administration and General Expenses

342. APNPDCL has projected an amount of Rs. 10.78 Crores which is accepted as reasonable.

Repairs and Maintenance

343. APNPDCL has projected an amount of Rs. 27.18 Crores which is accepted as reasonable.

Rents, Rates and Taxes

344. APNPDCL has projected an amount of Rs 0.48 Crores which is accepted as reasonable.

Approved Loan Interest

345. APNPDCL has projected a gross amount of Rs. 99.94 Crores comprising Interest on Existing Loans, Fresh Loans, Other Market Borrowings for capex, and Other Financial Charges. As the Capital Works in Progress programme and consequently the loan requirements have been reduced, there is correspondingly a reduction in the interest amount also. The gross amount allowed on this account is Rs. 64.93 Crores. This includes interest during construction (IDC) attributable to capital works (Rs. 20.37 Crores). The net amount taken to revenue requirement calculations is therefore Rs. 44.56 Crores as detailed in the table below.

Table No.49

Name of the item	Amount (in Rs. Crores)
Total Interest allowed	64.93
Less: Interest Capitalised	20.37
Net Interest Provided	**44.56**

Interest on Consumer's Security Deposits

346. The APNPDCL has projected an amount of Rs. 3.89 Crores which is accepted.

Legal charges and Auditors' Fees

347. APNPDCL has claimed an amount of Rs. 0.08 Crore towards legal charges and Rs. 0.02 Crore towards Auditors' Fee which is accepted as reasonable.

Bad Debts

348. APNPDCL has claimed Rs. 16.80 Crores as provision towards Bad Debts and has stated that the provision towards bad and doubtful debts has been estimated / projected at 1% of revenues. It may be recalled in this connection that in respect of similar claim for bad debts for FY 2000-01 the Commission in its order dated 27th May 2000 recorded detailed reasons as to why it does not consider a provision for doubtful debts justified for inclusion in the calculation of the Revenue Requirement. The Commission noted there that the First Transfer Scheme notified by the GoAP has a provision of Rs. 618.90 Crores towards bad and doubtful debts and felt that an addition to the revenue requirement on this account by allowing a further provision was not justified particularly in view of the fact that there has been no review and no actual write-off of bad debts for the past many years. In that order, the then Licensee was advised to pursue vigorously the review of receivables stated to have been instituted. But the

present filing is silent about the progress and results of the review. Further, no new factors have been adduced by the applicant in the filings (apart from stating in general that providing for bad and doubtful debts is a standard practice in the utility industry and is in vouge in utilities even in developed countries) for the Commission to take a different view of the matter now We also see that, the provision of Rs. 618.90 Crores in the First Transfer Scheme has been distributed among the DISCOMS in the Second Transfer Scheme and the amount allocated to the APNPDCL is Rs. 159.23 Crores. From the age profile of the debts furnished by the APNPDCL, it is incidentally seen that the dues more than 3 years old (i.e. up to FY 97-98) total only Rs. 123.49 Crores (as of 30.09.2000), which is well within the provision available to the APNPDCL. Moreover, unless bad debts are actually written off by the DISCOM under approved procedures to the extent of the provision already available, further provision cannot be considered.

Depreciation

349. APNPDCL has projected an amount of Rs 53.87 Crores and the amount admitted is Rs. 46.72 Crores. The difference is on account of the level of capitalisation for the year 2000-01 as explained above under Original Cost of Fixed Assets.

Other Expenses

350. The claim is Rs. 5.98 Crores which is accepted as reasonable.

Contribution to Employee Funds

351. As already explained, the provision towards Employee Funds is made at 13% of Basic Pay + DA .The amount provided is Rs. 10.40 Crores as against Rs. 8.32 Crores claimed in the ARR.

352. APNPDCL is directed to ensure that till such time the Trusts are formed, an amount of Rs.86.67 lakhs per month is credited from month to month to the non-drawal bank account already opened with State Bank of Hyderabad treating it as a first charge on the revenue realisations of the company for a month. A certificate of compliance should be filed with the Commission by the DISCOM at the end of every month. The DISCOM is urged to take up with the Bank appropriately to ensure that the amounts in the non-drawal bank account earn the maximum possible interest. The Licensee is also directed to file within two months from the date of this order a report detailing the status of action regarding the formation of Trusts for Pension and Gratuity.

Tax on Income

353. APNPDCL has projected an amount of Rs 0.97 Crore and has stated that the Tax liability is under the provisions of the Minimum Alternative Tax (MAT) under the Income Tax Act, 1961. But as the estimated tax liability has not been supported with detailed calculations, no provision is made. However, if the APNPDCL pays MAT for FY 2001-02, the amount would be considered as special appropriation in a subsequent year.

Contribution to Contingency Reserve

354. Because of the changes in the Original cost of Fixed Assets as discussed above, Rs. 2.74 Crores projected by the APNPDCL also undergoes a modification to Rs. 1.71 Crores, @ 0.25 % of the Original cost of Fixed Assets as per Sixth Schedule.

Total Expenditure

355. In view of the above changes, the total expenditure works out to Rs 1655.54 Crores against Rs. 1778.63 Crores projected by the APNPDCL as summarised in the following table.

Table No.50

EXPENDITURE ITEMS	APNPDCL	COMMISSION
		(Rs. in Crores)
Purchase of Energy	1506.00	1422.92
Wages and Salaries	**75.76**	**80.82**
Administration and General expenses	10.78	10.78
Repairs and Maintenance	27.18	27.18
Rent Rates & Taxes	0.48	0.48
Approved Loan Interest	65.76	44.56
Int. on Consumers' Security Deposits	3.89	3.89
Legal Charges	0.08	0.08
Auditors' Fees	0.02	0.02
Bad debts	16.80	0.00
Depreciation	53.87	46.72
Other Expenses	5.98	5.98
Contributions to Employee funds	8.32	10.40
Total Expenditure	**1774.92**	**1653.83**
Special Appropriations		
Tax on Income	0.97	0.00
Contribution to Contingency Reserve	2.74	1.71
Total Special Appropriations	3.71	1.71
Total "Expenditure" (including Special Appropriations)	**1778.63**	**1655.54**

Reasonable Return

356. Because of the changes to the 'Net Capital Base' as above, the reasonable return calculated as per the Sixth Schedule works out to Rs. 3.15 Crores as against Rs. 8.11 Crores shown by the APNPDCL in the ARR.

Non Tariff Income

357. APNPDCL has projected an amount of Rs. 91.40 Crores which is accepted as reasonable.

Aggregate Revenue Requirement

358. The Aggregate Revenue Requirement works out to Rs. 1567.29 Crores as against Rs. 1695.34 Crores projected by the APNPDCL.

Table No.51

Name of the item	**Amount in Rs. Crores**
Reasonable Return	3.15
Total Expenditure	1655.54
Minus : Non-tariff Income	91.40
Total Net Aggregate Revenue Requirement	**1567.29**

Revenue from Tariff and the Gap

359. Determination of the Aggregate Revenue Requirement is the first step in the process of tariff formulation. Subsequent sections of this Tariff Order discuss the sales projections by the APNPDCL and its revenue gap, the tariff approved by the Commission taking into account the cross subsidy within and the external subsidy, the adjusted bulk supply tariff and the consequent adjustments.

CHAPTER – XIII
ARR / ERC - DISTRIBUTION AND RETAIL SUPPLY
Andhra Pradesh Southern Power Distribution Company Ltd (APSPDCL)

360. APTRANSCO, the licence holder for Distribution and Retail Supply, jointly with APSPDCL (the Licensee - Designate) filed its ERC under section 26(5) of the Reform Act for FY 2001-02 on 30.12.2000. The Commission has examined APSPDCL's proposals and provides below the reasons where the Commission finds the calculations incorrect and its alternative calculations.

361. As already mentioned the Audited Accounts for 1999-2000 are not yet available and the Second Transfer Scheme notified by the GoAP with effect from 31.3.2000 is also provisional. The APSPDCL has stated that the balances as at March 31, 2000 have been taken from the provisional disaggregated opening financial statements prepared as part of the finalisation of the Second Transfer Scheme. In view of this the Commission adopts the same opening balances as on 01.04.2000 as adopted by the APSPDCL for this filing.

CAPITAL BASE – POSITIVE ELEMENTS

Original Cost of Fixed Assets (OCFA)

362. APSPDCL has proposed an amount of Rs. 1165.51 Crores as the Original Cost of Fixed Assets (OCFA) to be reckoned in the Capital Base. This is based on a proposed capitalisation of Rs. 260.02 Crores for FY 2001-02 but no details of works / projects proposed to be completed during FY 2001-02 aggregating to this amount have been furnished. Based on further information obtained from the APSPDCL regarding projects / works proposed to be completed during FY 2001-02, a capitalisation of Rs. 210.00 Crores during FY 2001-02 has been taken into account covering

APHM, Regularisation of Unauthorised Services and System Improvement Works at Cuddapah District. The resulting OCFA figure as on 31.3.2002 works out to Rs. 952.62Crores as detailed in the table below.

Table No.52
STATEMENT OF FIXED ASSETS

NAME OF THE ITEM	APSPDCL	COMMISSION
		Amount in Crores
Original cost of fixed assets As on 1.4.2001	1027.95	742.62
Less consumer contributions	69.46	-
Net balance of OCFA as on 31.03.01	958.49	742.62
Add : Works Capitalised during the year	260.02	210.00
Balance of OCFA as on 31.03.02	1218.51	952.62
Less consumer contributions	53.00	-
Net balance of OCFA as on 31.03.02	**1165.51**	**952.62**

Accordingly OCFA taken to the capital base is Rs. 952.62 Crores.

Capital Works in Progress (CWIP)

363. It is necessary to mention at the very outset that the details of capital investment and capital works-in-progress furnished in the filings are not as per the Commission's guidelines. They do not contain the break-up for the opening balance of CWIP project wise or scheme/work wise. On-going schemes and new schemes to be taken up during the year have not been differentiated and it is not possible to see from the data furnished whether all or any of them require the Commission's approval in terms of Para 9 of the License. Information regarding completion of projects/works is lacking in the filings. Without a Cash Flow Statement incorporating these outlays, the proposals lack conviction. Efforts by the staff to have these deficiencies made good by the APSPDCL over a period exceeding two months have been largely unsuccessful. Normally the projects or schemes which are to be included in the annual investment plan envisaged in

Para 9.6 of the License (which forms the basis to arrive at the figures to be taken towards OCFA & CWIP in the computation of the Capital Base for purposes of allowing reasonable return) should normally be those which already have the Commission's approval in terms of Para 9 of the License (or those which do not require such approval) except that in rare cases and if urgent, projects / schemes which have reached an advanced stage in the process of obtaining the Commission's approval may also be included depending on merits. But it has not been possible for the Commission to enforce it this year in view of the short time available to the DISCOMS after they became Licensees - Designate. Keeping these factors in view, as against the APSPDCLs projection of Rs. 267.94 Crores, outlay on capital works has been considered at Rs. 143.59 Crores for calculating CWIP for Capital Base calculation purposes.

	Rs. Crores
APL-I	44.00
Regularisation of Unauthorised Services	61.00
Rural Electrification	9.30
S I Schemes including Cuddapah- OECF	14.29
Other Schemes	15 .00
TOTAL:	143.59

364. APSPDCL shall however note that the above projections for purposes of inclusion in the Capital Base do not constitute the Commission's approval for projects / schemes required under Para 9 of the License. The Commission should be approached separately (wherever required) for obtaining the approvals as required under the License with full details of projects / schemes and justifications for the investment. It should complete the process of obtaining the Commission's approval for projects / schemes under Para 9 of the License within three months from the date of this Order. Projects / Schemes to be taken up in

FY 2002-03 may also be formulated well in advance and forwarded to the Commission (wherever required) so that Commission - approved projects / schemes are available latest by end of November 2001 in time for inclusion in the annual investment plan envisaged in Para 9.6 of the License accompanying the ARR filings for FY 2002-03. Full details of projects / schemes which do not require Commission's approval but form part of the annual investment plan must be furnished in the filings to enable a quick appraisal by the staff and by the Commission to decide on their inclusion in the annual investment plan. The APSPDCL is also urged to undertake an urgent review of the existing systems in vogue for implementation of projects and put in place necessary changes to ensure accountability and speedier implementation of schemes / projects and spreading the provision for capital expenditure throughout the year.

365. Based on the above, and the capitalisation as mentioned under OCFA above, the CWIP works out to Rs. 342.54 Crores as detailed below.

Table No.53
STATEMENT OF WORKS IN PROGRESS FOR 2000-01 and 2001-02

(Rs. in Crores)

	APSPDCL	Commission
Opening Balance of CWIP 1/4/2000	**272.50**	**272.50**
Additional Investments during the year **(2000-01)**	215.85	90.00
Expenses during the year charged to Capital	21.59	9.00
Interest during construction (IDC) charged to Capital	23.89	9.96
Total Additions : Capital Expenditure	261.33	108.96
Total (OB + Additions)	533.83	381.46
Less: Works Capitalised	286.75	1.42
Closing balance of CWIP as on 31.3.2001	**247.08**	**380.04**
Additional Investments during the year **(2001-02)**	267.94	143.59
Expenses during the year charged to Capital	26.79	14.36
Interest During Construction (IDC) charged to capital	27.15	14.55
Total Additions : Capital Expenditure	321.88	172.50
Total CWIP during the year (OB + Additions)	568.96	552.54
Less: Works Capitalised	260.02	210.00
Closing balance of CWIP 31/03/02	**308.94**	**342.54**

Working Capital Requirements

Average cost of Stores

366. The APSPDCL has claimed an amount of Rs. 33.59 Crores towards average cost of stores. This is considered excessive compared to the level of Repairs and Maintenance expenses projected for the year. An amount of Rs. 6.74 Crores calculated at two months Repair and Maintenance expenses is considered reasonable and is therefore provided.

Average Cash and Bank Balance

367. The APSPDCL has proposed Rs. 50.00 Crores towards Cash and bank balances and has stated that this has been calculated to equal three months requirement of specified operating expenses viz the aggregate of Wages and Salaries, Repairs and Maintenance, Administrative and General Expenses, Rent Rates and Taxes, and Contribution to Employee Funds for the year. As per Para XVII (1) (e) (ii) of the Sixth Schedule, an amount equal to 1/12 of the sum of cash and bank balances (whether credit or debit) and call and short term deposits at the end of each month of the year of account, not exceeding in the aggregate an amount equal to one quarter of the expenditure items specified in the paragraph, is to be provided. It is evident that " one quarter of the expenditure items" referred to is only a ceiling equivalent to 3 months expenditure on the items referred to in the Sixth Schedule. The actual cash balances at month end are nominal and the bank balances are mostly negative. Strictly applying the provisions of the Sixth Schedule, the provision under this head has to be negative. But, considering the present stage of Reforms, the Commission considers that the funds requirement for a level of one month's payment of Wages and Salaries, Administrative and General expenses, Repairs and Maintenance Expenses, Rent Rates and Taxes and Contribution to Employee Funds would be appropriate for this year. Calculated on this basis, the amount works out to Rs. 16.87 Crores which is provided for in the calculation of the Capital Base.

Table No.54

Item of Expenditure	Amount in Rs. Crores
Wages and Salaries	126.82
Admin. and General expenses	19.24
Repairs & Maintenance	40.41
Rent, Rates and Taxes	0.84
Contribution to Employee funds	15.12
Total expenses	**202.43**
Average Cash and Bank balances (202.43 ÷ 12)	**16.87**

CAPITAL BASE – NEGATIVE ELEMENTS

Accumulated Depreciation

368. The accumulated depreciation as per the APSPDCL is Rs. 516.31 Crores against which Rs. 495.68 Crores is admitted. The difference is due to differences in capitalisation of assets in FY 2000-01 according to the details of projects proposed to be completed furnished by the APSPDCL during FY 2000-01.

Loans from Govt and Approved Loans

369. The APSPDCL has projected an amount of Rs. 141.12 Crores towards Government loans and Rs. 553.18 Crores towards loans from approved institutions plus an amount of Rs. 53.95 Crores as other market borrowings for capital expenditure (capex). Scrutiny of the APSPDCL's Capital Works in Progress / programme showed that the capital expenditure to end of March 2001 would be less than that projected in the ARR and likewise, the capital expenditure projected in FY 2001-02 has been estimated to be less than projected by the APSPDCL. This has been dealt with in the paragraph under Capital Works in Progress above. In view of this reduction in the capital expenditure, the loan drawals required have also been reduced appropriately, with the result that there is no need for "other market borrowings for capex". Besides, there are on-going schemes carried forward from earlier years in respect of which capital expenditure is incurred in FY 2001-02. In all, an amount of Rs. 566.56 Crores is allowed for both Government and Approved Loans put together and the projection under other market borrowings for capex is nil.

370. As already mentioned, the Second Transfer Scheme being provision, the Commission has no information on how various loans have been reckoned as pertaining to the different successor entities. The Commission has therefore adopted the data as reported for this filing. The Commission directs APSPDCL to provide instrument-wise details for each loan in an easily verifiable format in its next ARR filing irrespective of the number of such instruments.

Consumer Security Deposit

371. The Consumer Security Deposit as projected by the APSPDCL at Rs. 206.85 Crores has been adopted.

Net Capital Base

372. With the above changes in the positive and negative elements of the capital base, the 'net capital base' works out to Rs 49.68 Crores as against Rs.86.63 Crores projected by the APSPDCL as detailed below.

Table No.55

CAPITAL BASE FOR APSPDCL FOR 2001-02 **(Rs. in Crores)**

NAME OF THE ITEM	APSPDCL	COMMISSION
Positive Elements of Capital Base		
Original Cost of Fixed Assets	1165.51	952.62
Capital Works in Progress	308.94	342.54
Working Capital a) Average cost of stores	33.59	6.74
b) Average Cash and Bank Balance	50.00	16.87
Total of Positive Elements of Capital Base	**1558.04**	**1318.77**
Negative Elements of Capital Base		
Accumulated Depreciation	516.31	495.68
Government Loans	141.12	566.56
Approved Loans	553.18	
Other Market Borrowings for CAPEX	53.95	
Consumers' Security Deposits	206.85	206.85
Total of Negative Elements of Capital Base	**1471.41**	**1269.09**
Net Capital Base	**86.63**	**49.68**

EXPENDITURE

Purchase of Energy

373. APSPDCL has projected a requirement of 8124 MU of energy against which the Commission has allowed 7973 MU. The corresponding cost has been arrived at as Rs. 1563.10 Crores as against Rs. 1636.00 Crores shown in the ARR.

Wages and Salaries

374. The APSPDCL has projected an amount of Rs. 126.13 Crores (net of capitalisation) for inclusion in the Annual Revenue Requirements of FY 2001-02 and has stated in the Filings that:

(viii) Basic pay has been estimated/projected to decrease by 3.7 per cent in FY 2000-01 and increase by 10.0 per cent in FY 2001-02 over the previous year levels;

(ix) Dearness allowance has been estimated/projected at 18.8 per cent of basic pay in FY 2000-01 and 18.8 per cent in FY 2001-02.

375. The APSPDCL has not furnished any justification for these factors adopted for projecting the basic pay decrease for FY 2000-01 and increase for FY 2001-02. The DA has been projected to be at the same level in FY 2001-02 as in FY 2000-01 which is unrealistic and so the projections in FY 02 towards DA does not appear to be adequate. Making these projections at realistic levels, the expenditure on salaries and wages (before capitalisation) is estimated at Rs. 137.93 Crores assuming that the DA would reach a level of 29% by 1.1.2002. Net of Capitalisation, the expenditure on Salaries and Wages provided for in the calculation of the revenue requirement is Rs. 126.82 Crores

Table No.56

Name of the Item	Amount in Rs crores
Gross Salaries	137.93
Less Capitalisation	11.11
Net of Capitalisation-Salaries	**126.82**

Administration and General Expenses

376. The APSPDCL has projected an amount of Rs. 19.24 Crores which is accepted as reasonable.

Repairs and Maintenance

377. The APSPDCL has projected an amount of Rs. 40.41 Crores which is accepted as reasonable.

Rents, Rates and Taxes

378. The APSPDCL has projected an amount of Rs 0.84 Crores which is accepted as reasonable.

Approved Loan Interest

379. The APSPDCL has projected a gross amount of Rs. 106.11 Crores comprising Interest on Existing Loans, Fresh Loans, Other Market Borrowings for capex, and Other Financial Charges. As the Capital Works in Progress programme and consequently the loan requirements have been reduced, there is correspondingly a reduction in the interest amount also. The gross amount allowed on this account is Rs.95.14 Crores. This includes interest during construction (IDC) attributable to capital works (Rs. 14.55 Crores). The net amount taken to revenue requirement calculations is therefore Rs. 80.59 Crores as detailed in the table below.

Table No.57

Name of the Item	Amount in Rs. Crores
Total Interest allowed	95.14
Less: Interest Capitalised	14.55
Net Interest Provided	**80.59**

Interest on Consumer's Security Deposits

380. The APSPDCL has projected an amount of Rs. 5.91 Crores which is accepted.

Legal charges and Auditors' Fees

381. The APSPDCL has claimed an amount of Rs. 0.05 Crore towards legal charges and Rs. 0.02 Crore towards Auditors' Fee which is accepted as reasonable.

Bad Debts

382. The APSPDCL has claimed Rs. 19.75 Crores as provision towards Bad Debts and has stated that the provision towards bad and doubtful debts has been estimated / projected at 1% of revenues. It may be recalled in this connection that in respect of similar claim for bad debts for FY 2000-01 the Commission in its order dated 27th May 2000 recorded detailed reasons as to why it does not consider a provision for doubtful debts justified for inclusion in the calculation of the Revenue Requirement. The Commission noted there that the First Transfer Scheme notified by the GoAP has a provision of Rs. 618.90 Crores towards bad and doubtful debts and felt that an addition to the revenue requirement on this account by allowing a further provision was not justified particularly in view of the fact that there has been no review and no actual write-off of bad debts for the past many years. In that order, the then Licensee was advised to pursue vigorously the review of receivables stated to have been instituted. But the present filing is silent about the progress and results of the review. Further, no new factors have been adduced by the applicant in the filings (apart from stating in general that providing for bad and doubtful debts is a standard practice in the utility industry and is in vouge in utilities even in developed countries) for the Commission to take a different view of the matter now. We also see that, the provision of Rs. 618.90 Crores in the First Transfer Scheme has been distributed among the DISCOMS in the Second Transfer Scheme and the amount allocated to the APSPDCL is Rs. 86.79 Crores. From the age profile of the debts furnished by the APSPDCL, it is incidentally seen that the dues more than 3 years old (i.e. up to FY 97-98) total only Rs. 46.09 Crores (as of 30.09.2000), which is well within the provision available to the APSPDCL. Moreover, unless bad debts are actually written off by the DISCOMunder approved procedures to the extent of the provision already available, further provision cannot be considered.

Depreciation

383. The APSPDCL has projected an amount of Rs 77.35 Crores and the amount admitted is Rs. 56.73 Crores. The difference is on account of the level of capitalisation for the year 2000--01 as explained above under Original Cost of Fixed Assets.

Other Expenses

384. The claim is Rs. 7.17 Crores which is accepted as reasonable.

Contribution to Employee Funds

385. As already explained, the provision towards Employee Funds is made at 13% of Basic Pay + DA .The amount provided is Rs. 15.12 Crores as against Rs. 13.36 Crores claimed in the ARR.

386. APSPDCL is directed to ensure that till such time the Trusts are formed, an amount of Rs.1.26 crores per month is credited from month to month to the non-drawal bank account already opened with State Bank of Hyderabad treating it as a first charge on the revenue realisations of the company for a month. A certificate of compliance should be filed with the Commission by the DISCOM at the end of every month. The DISCOM is urged to take up with the Bank appropriately to ensure that the amounts in the non-drawal bank account earn the maximum possible interest. The Licensee is also directed to file within two months from the date of this order a report detailing the status of action regarding the formation of Trusts.

Tax on Income

387. The APSPDCL has projected an amount of Rs 1.88 Crore and has stated that the Tax liability is under the provisions of the Minimum Alternative Tax (MAT) under the Income Tax Act, 1961. But as the estimated tax liability has not been supported with detailed calculations, no provision is made. However, if the APSPDCL pays MAT for FY 02, the amount would be considered as special appropriation in a subsequent year.

Contribution to Contingency Reserve

388. Because of the changes in the Original cost of Fixed Assets as discussed above, Rs. 3.36 Crores projected by the APSPDCL also undergoes a modification to Rs. 2.38 Crores, @ 0.25 % of the Original cost of Fixed Assets as per Sixth Schedule.

Total Expenditure

389. In view of the above changes, the total expenditure works out to Rs 1918.38 Crores against Rs. 2030.43 Crores projected by the APSPDCL as summarised in the following table.

Table No.58

(Rs. in Crores)

EXPENDITURE ITEMS	APSPDCL	COMMISSION
Purchase of Energy	1636.00	1563.10
Wages and Salaries	**126.13**	**126.82**
Administration and General expenses	19.24	19.24
Repairs and Maintenance	40.41	40.41
Rent Rates & Taxes	0.84	0.84
Approved Loan Interest	78.96	80.59
Int. on Consumers' Security Deposits	5.91	5.91
Legal Charges	0.05	0.05
Auditors' Fees	0.02	0.02
Bad debts	19.75	0.00
Depreciation	77.35	56.73
Other Expenses	7.17	7.17
Contributions to Employee funds	13.36	15.12
Total Expenditure	**2025.19**	**1916.00**
Special Appropriations		
Tax on Income	1.88	0.00
Contribution to Contingency Reserve	3.36	2.38
Total Special Appropriations	5.24	2.38
Total "Expenditure" (including Special Appropriations)	**2030.43**	**1918.38**

Reasonable Return

390. Because of the changes to the 'Net Capital Base' as above, the reasonable return calculated as per the Sixth Schedule works out to Rs. 11.28 Crores as against Rs. 17.60 Crores shown by the APSPDCL in the ARR.

Non Tariff Income

391. The APSPDCL has projected an amount of Rs. 56.00 Crores which is accepted as reasonable.

Aggregate Revenue Requirement

392. The Aggregate Revenue Requirement works out to Rs. 1873.66 Crores as against Rs. 1992.03 Crores projected by APSPDCL.

Table No.59

Name of the Item	**Amount in Rs. Crores**
Reasonable Return	11.28
Total Expenditure	1918.38
Minus : Non-tariff Income	56.00
Total Net Aggregate Revenue Requirement	**1873.66**

Revenue from Tariff and the Gap

393. Determination of the Aggregate Revenue Requirement is the first step in the process of tariff formulation. Subsequent sections of this Tariff Order discuss the sales projections by the APSPDCL and its revenue gap, the tariff approved by the Commission taking into account the cross subsidy within and the external subsidy, the adjusted bulk supply tariff and the consequent adjustments.

CHAPTER – XIV
ARR / ERC - DISTRIBUTION AND RETAIL SUPPLY
Andhra Pradesh Central Power Distribution Company Ltd (APCPDCL)

394. APTRANSCO, the licence holder for Distribution and Retail Supply, jointly with APCPDCL ((the Licensee - Designate) filed its ERC under section 26(5) of the Reform Act for FY 2001-02 on 30.12.2000. The Commission has examined the APCPDCL's proposals and provides below the reasons where the Commission finds the calculations incorrect and its alternative calculations.

395. As already mentioned the Audited Accounts for 1999-2000 are not available and the Second Transfer Scheme notified by the GoAP with effect from 31.3.2000 is also provisional. The APCPDCL has stated that the balances as at March 31, 2000 have been taken from the provisional disaggregated opening financial statements prepared as part of the finalisation of the Second Transfer Scheme. In view of this the Commission adopts the same opening balances as on 01.04.2000 as adopted by the APCPDCL for this filing.

CAPITAL BASE – POSITIVE ELEMENTS

Original Cost of Fixed Assets (OCFA)

396. The APCPDCL has proposed an amount of Rs. 1773.84 Crores as the Original Cost of Fixed Assets (OCFA) to be reckoned in the Capital Base. This is based on a proposed capitalisation of Rs. 409.59 Crores for FY 2001-02 but no details of works / projects proposed to be completed during FY 2001-02 aggregating to this amount have been furnished. Based on further information obtained from the APCPDCL regarding projects / works proposed to be completed during FY 2001-02, a capitalisation of Rs. 300.00 Crores during FY 2001-02 has

been taken into account covering APL – I, SCADA, Regularisation of Unauthorised Services and other miscellaneous works. The resulting OCFA figure as on 31.3.2002 works out to Rs. 1533.05 Crores as detailed in the table below.

Table No.60
STATEMENT OF FIXED ASSETS

(Rs. in Crores)

NAME OF THE ITEM	APCPDCL	COMMISSION
Original cost of fixed assets As on 1.4.2001	1483.34	1233.05
Less consumer contributions	63.09	-
Net balance of OCFA as on 31.03.01	1420.25	1233.05
Add : Works Capitalised during the year	409.59	300.00
Balance of OCFA as on 31.03.02	1829.84	1533.05
Less consumer contributions	56.00	-
Net balance of OCFA as on 31.03.02	**1773.84**	**1533.05**

Accordingly OCFA taken to the capital base is Rs. 1533.05 Crores.

Capital Works in Progress (CWIP)

397. It is necessary to mention at the very outset that the details of capital investment and capital works-in-progress furnished in the filings are not as per the Commission's guidelines. They do not contain the break-up for the opening balance of CWIP project wise or scheme/work wise. On-going schemes and new schemes to be taken up during the year have not been differentiated and it is not possible to see from the data furnished whether all or any of them require the Commission's approval in terms of Para 9 of the License. Information regarding completion of projects/works is lacking in the filings. Without a Cash Flow Statement incorporating these outlays, the proposals lack conviction. Efforts by the staff to have these deficiencies made good by the APCPDCL over a period exceeding two months have been largely unsuccessful. Normally the projects or schemes which are to be included in the annual investment plan envisaged in Para 9.6 of the License (which forms the basis to arrive at the figures to be taken towards OCFA & CWIP in the computation of the Capital Base for purposes of

allowing reasonable return) should normally be those which already have the Commission's approval in terms of Para 9 of the License (or those which do not require such approval) except that in rare cases and if urgent, projects / schemes which have reached an advanced stage in the process of obtaining the Commission's approval may also be included depending on merits. But it has not been possible for the Commission to enforce it this year in view of the short time available to the DISCOMS after they became Licensees - designate. Keeping these factors in view, as against the APCPDCL's projection of Rs. 461.71 Crores, outlay on capital works has been considered at Rs. 322.17 Crores for calculating CWIP for Capital Base calculation purposes.

	Rs. Crores
APL-I	75.00
DFID / SCADA	50.00
Regularisation of Unauthorised Services	80.00
Rural Electrification	11.78
S I Schemes	10.39
Other Schemes	95 .00
	322.17

398. The APCPDCL shall however note that the above projections for purposes of inclusion in the Capital Base do not constitute the Commission's approval for projects / schemes required under Para 9 of the License. The Commission should be approached separately (wherever required) for obtaining the approvals as required under the License with full details of projects / schemes and justifications for the investment. It should complete the process of obtaining the Commission's approval for projects / schemes under Para 9 of the License within three months from the date of this Order. Projects / Schemes to be taken up in FY 2002-03 may also be formulated well in advance and forwarded to the Commission (wherever required) so that Commission - approved projects / schemes are available latest by end of November 2001 in time for inclusion in the

annual investment plan envisaged in Para 9.6 of the License, accompanying the ARR filings for FY 2002-03. Full details of projects / schemes which do not require Commission's approval but form part of the annual investment plan must be furnished in the filings to enable a quick appraisal by the staff and by the Commission to decide on their inclusion in the annual investment plan. The APCPDCL is also urged to undertake an urgent review of the existing systems in vogue for implementation of projects and put in place necessary changes to ensure accountability and speedier implementation of schemes / projects and spreading the provision for capital expenditure throughout the year.

399. Based on the above, and the capitalisation as mentioned under OCFA above, the CWIP works out to Rs. 526.27 Crores as detailed below.

Table No.61

STATEMENT OF WORKS IN PROGRESS FOR 2000-01 & 2001-02

(Rs.in Crores)

	APCPDCL	COMMISSION
Opening Balance of CWIP 1/4/2000	**285.29**	**285.29**
Additional Investments during the year **(2000-01)**	337.37	200.00
Expenses during the year charged to Capital	33.74	20.00
Interest during construction (IDC) charged to Capital	33.05	19.59
Total Additions : Capital Expenditure	404.16	239.59
Total (OB + Additions)	689.45	524.88
Less: Works Capitalised	300.29	50.00
Closing balance of CWIP as on 31.3.2001	**389.16**	**474.88**
Additional Investments during the year **(2001-02)**	461.71	322.17
Expenses during the year charged to Capital	46.17	32.22
Interest During Construction (IDC) charged to capital	47.29	33.00
Total Additions : Capital Expenditure	555.17	387.39
Total CWIP during the year (OB + Additions)	944.33	862.27
Less: Works Capitalised	409.59	300.00
Closing balance of CWIP 31/03/02	**534.74**	**562.27**

Working Capital Requirements

Average cost of Stores

400. APCPDCL has claimed an amount of Rs. 48.92 Cr towards average cost of stores. This is considered excessive compared to the level of Repairs and Maintenance expenses projected for the year. An amount of Rs. 10.96 Crores calculated at two months Repair and Maintenance expenses is considered reasonable and is therefore provided.

Average Cash and Bank Balance

401. The APCPDCL has proposed Rs. 57.95 Crores towards Cash and bank balances and has stated that this has been calculated to equal three months requirement of specified operating expenses viz the aggregate of Wages and Salaries, Repairs and Maintenance, Administrative and General Expenses, Rent Rates and Taxes, and Contribution to Employee Funds for the year. As per Para XVII (1) (e) (ii) of the Sixth Schedule, an amount equal to 1/12 of the sum of cash and bank balances (whether credit or debit) and call and short term deposits at the end of each month of the year of account, not exceeding in the aggregate an amount equal to one quarter of the expenditure items specified in the paragraph, is to be provided. It is evident that " one quarter of the expenditure items" referred to is only a ceiling equivalent to 3 months expenditure on the items referred to in the Sixth Schedule. The actual cash balances at month end are nominal and the bank balances are mostly negative. Strictly applying the provisions of the Sixth Schedule, the provision under this head has to be negative. But, considering the present stage of Reforms, the Commission considers that the funds requirement for a level of one month's payment of

Wages and Salaries, Administrative and General expenses, Repairs and Maintenance Expenses, Rent Rates and Taxes and Contribution to Employee Funds would be appropriate for this year. Calculated on this basis, the amount works out to Rs. 20.19 Crores which is provided for in the calculation of the Capital Base.

Table No.62

Item of Expenditure	Amount in Rs. Crores
Wages and Salaries	133.37
Admin. and General expenses	25.33
Repairs & Maintenance	65.76
Rent, Rates and Taxes	0.51
Contribution to Employee funds	17.28
Total expenses	**242.25**
Average Cash and Bank balances (242.25 ÷ 12)	**20.19**

CAPITAL BASE – NEGATIVE ELEMENTS

Accumulated Depreciation

402. The accumulated depreciation as per the APCPDCL is Rs. 804.81 Crores against which Rs. 786.74 Crores is admitted. The difference is due to differences in capitalisation of assets in FY 2000-01 according to the details of likely completion of projects furnished by the APCPDCL during FY 2000-01.

Loans from Govt and Approved Loans

403. The APCPDCL has projected an amount of Rs. 196.70 Crores towards Government loans and Rs. 896.20 Crores towards loans from approved institutions plus an amount of Rs. 24.00 Crores as other market borrowings for

capital expenditure (capex). Scrutiny of the APCPDCL Capital Works in Progress / programme showed that the capital expenditure to end of March 2001 would be less than that projected in the ARR and likewise, the capital expenditure projected in FY 2001-02 has been estimated to be less than projected by the APCPDCL. This has been dealt with in the paragraph under Capital Works in Progress above. In view of this reduction in the capital expenditure, the loan drawals required have also been reduced appropriately, with the result that there is no need for "other market borrowings for capex". Besides, there are on-going schemes carried forward from earlier years in respect of which capital expenditure is incurred in FY 2001-02. In all, an amount of Rs. 934.51 Crores is allowed for both Government and Approved Loans put together and the projection under other market borrowings for capex is nil.

404. As already mentioned, the Second Transfer Scheme being provisional, the Commission has no information on how various loans have been reckoned as pertaining to the different successor entities. The Commission has therefore adopted the data as reported for this filing. The Commission directs APCPDCL to provide instrument-wise details for each loan in an easily verifiable format in its next ARR filing irrespective of the number of such instruments.

Consumer Security Deposit

405. The Consumer Security Deposit as projected by the APCPDCL at Rs. 354.15 Crores has been adopted.

Net Capital Base

406. With the above changes in the positive and negative elements of the capital base, the 'net capital base' works out to Rs 51.07 Crores as against Rs.139.59 Crores projected by the APCPDCL as detailed below.

Table No.63

CAPITAL BASE FOR APCPDCL FOR 2001-02 (Rs. in Crores)

NAME OF THE ITEM	APCPDCL	COMMISSION
Positive Elements of Capital Base		
Original Cost of Fixed Assets	1773.84	1533.05
Capital Works in Progress	534.74	562.27
Working Capital a) Average cost of stores	48.92	10.96
b) Average Cash and Bank Balance	57.95	20.19
Total of Positive Elements of Capital Base	**2415.45**	**2126.47**
Negative Elements of Capital Base		
Accumulated Depreciation	804.81	786.74
Government Loans	196.70	934.51 ---
Approved Loans	896.20	
Other Market Borrowings for CAPEX	24.00	
Consumers' Security Deposits	354.15	354.15
Total of Negative Elements of Capital Base	**2275.86**	**2075.40**
Net Capital Base	**139.59**	**51.07**

EXPENDITURE

Purchase of Energy

407. APCPDCL has projected a requirement of 17218 MU of energy against which the Commission has allowed 16777 MU. The corresponding cost has been arrived at as Rs. 3289.42 Crores as against Rs. 3467.00 Crores shown in the ARR.

Wages and Salaries

408. The APCPDCL has projected an amount of Rs. 126.34 Crores (net of capitalisation) for inclusion in the Annual Revenue Requirements of FY 2001-02 and has stated in the Filings that:

(x) Basic pay has been estimated/projected to decrease by 6.7 per cent in FY 2000-01 and increase by 3.3 per cent in FY 2001-02 over the previous year levels;

(xi) Dearness allowance has been estimated/projected at 21.4 per cent of basic pay in FY 2000-01 and 26.7 per cent in FY 2001-02.

409. The APCPDCL has not furnished any justification for these factors adopted for projecting the basic pay decrease for FY 2000-01 or increase for FY 2001-02. Similarly there is no basis for the DA rate adopted for FY 2001-02. In fact the rate projected for FY 2001-02 towards DA does not appear to be adequate. Taking these projected increases at realistic levels, the expenditure on salaries and wages (before capitalisation) is estimated at Rs. 158.52 Crores assuming that the DA would reach a level of 29% by 1.1.2002. Net of Capitalisation, the Salaries and Wages provided for in the calculation of the revenue requirement is Rs. 133.37 Crores

Table No.64

Name of the Item	Amount in Rs crores
Gross Salaries	158.52
Less Capitalisation	25.15
Net of Capitalisation-Salaries	**133.37**

Administration and General Expenses

410. The APCPDCL has projected an amount of Rs. 25.33 Crores which is accepted as reasonable.

Repairs and Maintenance

411. The APCPDCL has projected an amount of Rs. 65.76 Crores which is accepted as reasonable.

Rents, Rates and Taxes

412. The APCPDCL has projected an amount of Rs 0.51 Crores which is accepted as reasonable.

Approved Loan Interest

413. The APCPDCL has projected a gross amount of Rs. 128.96 Crores comprising Interest on Existing Loans, Fresh Loans, Other Market Borrowings for capex, and Other Financial Charges. As the Capital Works in Progress programme and consequently the loan requirements have been reduced, there is correspondingly a reduction in the interest amount also. The gross amount allowed on this account is Rs. 121.52 Crores. This includes interest during construction (IDC) attributable to capital works (Rs. 33.00 Crores). The net amount taken to revenue requirement calculations is therefore Rs. 88.52 Crores as detailed in the table below.

Table No.65

Name of the item	Amount (in Rs. Crores)
Total Interest allowed	121.52
Less: Interest Capitalised	33.00
Net Interest Provided	**88.52**

Interest on Consumer's Security Deposits

414. The APCPDCL has projected an amount of Rs.10.12 Crores which is accepted.

Legal charges and Auditors' Fees

415. The APCPDCL has claimed an amount of Rs. 0.07 Crore towards legal charges and Rs. 0.02 Crore towards Auditors' Fee which is accepted as reasonable.

Bad Debts

416. The APCPDCL has claimed Rs. 38.44 Crores as provision towards Bad Debts and has stated that the provision towards bad and doubtful debts has been estimated / projected at 1% of revenues. It may be recalled in this connection that in respect of similar claim for bad debts for FY 2000-01 the Commission in its order dated 27th May 2000 recorded detailed reasons as to why it does not consider a provision for doubtful debts justified for inclusion in the calculation of the Revenue Requirement. The Commission noted there that the First Transfer Scheme notified by the GoAP has a provision of Rs. 618.90 Crores towards bad and doubtful debts and felt that an addition to the revenue requirement on this account by allowing a further provision was not justified particularly in view of the fact that there has been no review and no actual write-off of bad debts for the past many years. In that order, the then Licensee was advised to pursue vigorously the review of receivables stated to have been instituted. But the present filing is silent about the progress and results of the review. Further, no new factors have been adduced by the applicant in the filings (apart from stating in general that providing for bad and doubtful debts is a standard practice in the utility industry and is in vouge in utilities even in developed countries) for the Commission to take a different view of the matter now. We also see that, the provision of Rs. 618.90 Crores in the First Transfer Scheme has been distributed among the DISCOMS in the Second Transfer Scheme and the amount allocated to the APCPDCL is Rs. 305.71 Crores. From the age profile of the debts furnished by the APCPDCL, it is incidentally seen that the dues more than 3 years old (i.e. up to FY 97-98) total only Rs.254.39 Crores (as of 30.09.2000), which is well within the provision available to the APCPDCL. Moreover, unless bad debts are actually written off by the DISCOM under approved procedures to the extent of the provision already available, further provision cannot be considered.

Depreciation

417. The APCPDCL has projected an amount of Rs 110.32 Crores and the amount admitted is Rs. 92.25 Crores. The difference is on account of the level of capitalisation for FY 2000-01 as explained above under Original Cost of Fixed Assets.

Other Expenses

418. The claim is Rs. 10.76 Crores which is accepted as reasonable.

Contribution to Employee Funds

419. As already explained, the provision towards Employee Funds is made at 13% of Basic Pay + DA .The amount provided is Rs. 17.28 Crores as against Rs. 13.84 Crores claimed in the ARR.

420. APCPDCL is directed to ensure that till such time the Trusts are formed, an amount of Rs.1.44 crores per month is credited from month to month to the non-drawal bank account already opened with State Bank of Hyderabad treating it as a first charge on the revenue realisations of the company for a month. A certificate of compliance should be filed with the Commission by the DISCOM at the end of every month. The DISCOM is urged to take up with the Bank appropriately to ensure that the amounts in the non-drawal bank account earn the maximum possible interest. The Licensee is also directed to file within two months from the date of this order a report detailing the status of action regarding the formation of Trusts.

Tax on Income

421. The APCPDCL has projected an amount of Rs 2.95 Crore and has stated that the Tax liability is under the provisions of the Minimum Alternative Tax (MAT) under the Income Tax Act, 1961. But as the estimated tax liability has not been supported with detailed calculations, no provision is made. However, if the APCPDCL pays MAT for FY 2001-02, the amount would be considered as special appropriation in a subsequent year.

Contribution to Contingency Reserve

422. Because of the changes in the Original cost of Fixed Assets as discussed above, Rs. 4.89 Crores projected by the APCPDCL also undergoes a modification to Rs. 3.83 Crores, @ 0.25 % of the Original cost of Fixed Assets as per Sixth Schedule.

Total Expenditure

423. In view of the above changes, the total expenditure works out to Rs 3737.24 Crores against Rs. 3958.02 Crores projected by the APCPDCL as summarised in the following table.

Table No.66

(Rs. in Crores)

EXPENDITURE ITEMS	APTRANSCO	COMMISSION
Purchase of Energy	3467.00	3289.42
Wages and Salaries	**126.34**	**133.37**
Administration and General expenses	25.33	25.33
Repairs and Maintenance	65.76	65.76
Rent Rates & Taxes	0.51	0.51
Approved Loan Interest	81.67	88.52
Int. on Consumers' Security Deposits	10.12	10.12
Legal Charges	0.07	0.07
Auditors' Fees	0.02	0.02
Bad debts	38.44	0.00
Depreciation	110.32	92.25
Other Expenses	10.76	10.76
Contributions to Employee funds	13.84	17.28
Total Expenditure	**3950.18**	**3733.41**
Special Appropriations		
Tax on Income	2.95	0.00
Contribution to Contingency Reserve	4.89	3.83
Total Special Appropriations	7.84	3.83
Total "Expenditure" (including Special Appropriations)	**3958.02**	**3737.24**

Reasonable Return

424. Because of the changes to the 'Net Capital Base' as above, the reasonable return calculated as per the Sixth Schedule works out to Rs. 13.27 Crores as against Rs. 27.92 Crores shown by the APCPDCL in the ARR.

Non Tariff Income

425. The APCPDCL has projected an amount of Rs. 105.43 Crores which is accepted as reasonable.

Aggregate Revenue Requirement

426. The Aggregate Revenue Requirement works out to Rs. 3645.08 Crores as against Rs. 3880.51 Crores projected by APCPDCL.

Table No.67

Name of the Item	**Amount in Rs. Crores**
Reasonable Return	13.27
Total Expenditure	3737.24
Minus : Non-tariff Income	105.43
Total Net Aggregate Revenue Requirement	**3645.08**

Revenue from Tariff and the Gap

427. Determination of the Aggregate Revenue Requirement is the first step in the process of tariff formulation. Subsequent sections of this Tariff Order discuss the sales projections by the APCPDCL and its revenue gap, the tariff approved by the Commission taking into account the cross subsidy within and the external subsidy, the adjusted bulk supply tariff and the consequent adjustments.

CHAPTER – XV : CONSOLIDATED POSITION OF THE FOUR DISCOMS

428. The summary position of the Net Aggregate Revenue Requirement of the four DISCOMS together works out to Rs.8284.80 cr. as detailed in the table below:

Table No.68
THE AGGREGATE REVENUE REQUIREMENT FOR THE 4 DISCOMS TOGETHER FOR 2001-02

(Rs. in Crores)

Name of the Item	APEPDCL	APSPDCL	APCPDCL	APNPDCL	TOTAL
Reasonable Return	6.70	11.28	13.27	3.15	34.40
Total Expenditure	1238.07	1918.38	3737.24	1655.54	8549.23
Minus:Non-Tariff Income	46.00	56.00	105.43	91.40	298.83
Total Net Aggregate Revenue Requirement	1198.77	1873.66	3645.08	1567.29	8284.80

429. The Aggregate Revenue from current tariffs for the four DISCOMS is as follows:

Table No.69

(Rs. in Crores)

	Filing	Commission
APEPDCL	1189	1196
APNPDCL	987	965
APSPDCL	1399	1388
APCPDCL	2699	2627
Total	6274	6176

The resultant gap is Rs.2109 crs. to be covered through tariff increase, efficiency gains and GoAP subsidy.

CHAPTER – XVI : SALES PROJECTIONS, REVENUES AND REVENUE GAP

SALES PROJECTION

BACKGROUND OF SALES FORECAST

430. The category-wise sales forecast submitted to the Commission by the Distribution and Retail Supply Licensees for approval are based on:

- ♦ Actual sales for FY2000.
- ♦ Actual sales for first half and projected sales for second half of FY2001.

431. All Distribution and Retail Supply Licensees have followed similar methodology in forecasting sales, and have provided the monthly baseline data used by them in making the forecast.

432. The key issues commonly impacting the sales forecast of the Discoms are as follows:

- ♦ Metering and regularisation of consumers and release of services against pending applications (LT Category I:).

- ♦ Mis-utilisation of supply by consumers falling under other categories but billed under Cat.I and VII detected in several cases during raids.

- ♦ A realistic forecast for industrial LT and HT categories in view of the significant shortfall in actual sales compared to the original ARR filed for FY 2000-01.

Evaluation of Sales Forecasts

433. Following alternate methods were used to analyse the sales forecast presented in the ARR by the DISCOMS:

- **Trend Analysis:** Statistical Trend analysis using past information, aggregated for the state, was conducted for each customer category.

- **Aggregate Annual Analysis of Sales Growth:** The annual consolidated forecast sales of all DISCOMS for each category was analysed using past 3 years actual sales as well as with the previous filings, making adjustments where sales forecast in relation to the past performance was seen as unrealistic, and finally apportioning the aggregate forecast to DISCOMS.

- **Disaggregated Month-wise Analysis:** The monthly sales forecast for each customer category is compared with the actual figures for the corresponding month in previous year, separately for all DISCOMS, suitably adjusting where proposed variations are seen as unrealistic. This methodology has been used for the final adjustments.

434. This method takes into account the following aspects:

- disaggregated information provided by the DISCOMS for all customer categories during FY 1998-99 to FY 2000-01;
- present economic conditions;
- economic performance of the sectors and implications for the electricity sales;
- key issues influencing the power sales as submitted by the DISCOMS;

- actual billing information taken from the Financial Progress Reports (FPR) submitted by the DISCOMS during the proceedings;

The Sales Forecast: Adjustment

435. Based on the methodology discussed above, adjustment has been made to the sales forecast submitted by the DISCOMS. As already stated, the Commission didn't find any reason to deviate from the estimate of 9815 MU for agriculture as approved by the Commission in its Tariff Order dated May 27th 2000. There are minor adjustments in other categories. The net impact of the adjustment is a reduction of forecasted sales by 657 MU. The details of aggregate sales are given in the following table:

Table No.70

AGGREGATE SALES FOR ALL DISCOMS (in MUs)

CATEGORY	Filings	Commission	Difference
Domestic-LT I	6815	6816	1
Commercial –LT II	1332	1350	18
Industrial LT-III	1792	1792	0
Cottage LT-IV	32	31	-1
Agriculture LT– V	10500	9815	-685
Public Lighting LT – VI	496	502	6
General Purpose LT – VII	121	123	2
Temporary .Category LT – VIII	12	12	0
Total LT	**21101**	**20441**	**-660**
Industry Segregated HT-I	4244	4244	0
Industry non-segregated HT-II	709	710	1
Irrigation and Agriculture HT – IV	36	36	0
Railway Traction HT – V	937	937	0
Colony Lighting HT – VI	128	128	0
RESCO's HT – VII	1154	1155	0
Temporary HT – VIII	0	0	0
Total HT	**7209**	**7210**	**1**
Total	**28308**	**27651**	**-657**

Revenue estimation

Methodology used by DISCOMS

436. (a). In forecasting revenue at current tariffs for FY 2001-02, the DISCOMS used average realisation for September 2000 (for LT Domestic and LT Agriculture) and average realisation of FY 2000-01 (for all other categories) multiplied by the forecasted kWh sales of that category. In the same manner, average realisation has been used for computing revenue at proposed tariffs.

(b). For LT Category III, the DISCOMS computed revenue based on kVA/MW instead of on HP basis. Similarly, for LT Category V Agriculture, revenue was computed using MW load rather than HP load. In LT Category IV Cottage Industries, the DISCOMS assessed revenue on consolidated basis rather than on the basis of fixed charges and energy charges separately.

(c). The DISCOMS computed Fixed Charges from HT Category I and HT Category II consumers assuming a demand of 100% of the Contracted Maximum Demand (CMD).

437. There are several typographical errors and arithmetical inconsistencies in the filing which have been corrected. The Commission have examined these and decided that:

(i). Revenue estimates may be calculated at notified tariffs;

(ii). Demand charges from HT-I and HT-II consumers may be computed at 80% of CMD (this is decided upon keeping in view the

Licensee's failure to achieve the projected revenues in FY 2000-01 when the projections were based on 100% of the CMD)

(III). Average realisation has been taken for LT-VI consumers as disagregated data is not available.

438. In this connection, the Commission directs the DISCOMS to build a comprehensive data base for which each Company shall put the required software in place and store the billing information on a consolidated form for Circle/Accounting division and file the same with the Commission on a quarterly basis. The Data Base has to be continuously upgraded and maintained such that it will be the basis for future sales projections.

The Revenue Adjustments

439. The revenue at current tariff as assessed by the Commission is Rs.6175 crores for FY 2001-02, which is lower by Rs.99 crores than the revenue filed by the Discoms at Rs.6274 crores. The revenue at proposed tariff as assessed by the Staff is Rs.6250 crores for FY 2001-02, which is lower by Rs.65 crores than the revenue filed by the DISCOMS at Rs.6316 crores. The details are presented in the following table:

Table No.71

AGGREGATE REVENUE FROM ALL DISCOMS **(Rs. in Crores)**

	Revenue at Current Tariffs		Revenue at Proposed Tariffs	
	DISCOMS Filing	Staff Assessment	DISCOMS Filing	Staff Assessment
Low Tension	**3511**	**3447**	**3518**	**3488**
Domestic-LT I	1571	1584	1532	1544
Commercial –LT II	736	627	754	645
Industrial LT-III	746	777	764	796
Cottage LT-IV	6	6	6	6
Agriculture LT– V	303	302	303	302
Public Lighting LT – VI	93	94	100	135
General Purpose LT – VII	49	49	52	53
Temporary .Category LT – VIII	8	7	8	7
High tension	**2763**	**2728**	**2798**	**2763**
Industry Segregated HT-I	1876	1863	1898	1885
Industry non-segregated HT-II	375	362	380	367
Irrigation and Agriculture HT – IV	5	3	5	3
Railway Traction HT – V	424	425	430	431
Colony Lighting HT – VI	41	40	43	41
RESCO's HT – VII	42	35	42	35
Temporary HT – VIII	0	0	0	0
Total revenue	**6274**	**6175**	**6316**	**6250**

EASTERN POWER DISTRIBUTION COMPANY LIMITED (APEPDCL)

Total Sales and Revenue

440. The company projected sales of 4479MU and the Commission approved sales of 4409MU for FY 2001-02, a reduction of 70MU for FY 2002. The variations are the reduction of 71MU in case of LT V: Agriculture, 6MU reduction in case of HT II; Industry non-segregated and increase of 4MU in case of LT II: Non-Domestic. Based on the adjustments, revenue at current tariffs is Rs 1196 crores and revenues at proposed tariffs is Rs 1207 crores. The details are presented in the following Table:

Table No.72
SALES AND REVENUES

	SALES In MU		Revenue at Current Tariff in Rs. Crs.		Revenue at Proposed Tariff in Rs. Crs.	
	Filings	Commission	Filings	Commission	Filings	Commission
Low Tension	**3185**	**3120**	**628**	**664**	**628**	**668**
Domestic Cat I	1391	1392	305	332	296	322
Non Domestic Cat II	236	240	106	113	109	116
Indl. Supply Cat III	345	345	146	147	150	151
Cottage Indl. Cat IV	2	1	0	0	0	0
Irri. & Agri Cat V	1088	1017	45	45	45	45
Public lighting Cat VI	105	107	19	19	20	26
Gen. Purpose Cat VII	18	18	7	7	8	8
Temp Cat VIII	0	0	0	0	0	0
High Tension	**1295**	**1289**	**561**	**532**	**568**	**539**
Indl. Seg Cat I	792	792	372	344	376	348
Indl. Non-Seg Cat II	95	89	49	45	50	46
Irr & agri Cat IV	6.87	6.87	0	1	0	1
Rail traction Cat V	281	281	128	128	130	129
Colony Consumption Cat VI	27	27	8	8	9	9
Resco 's	93	93	3	7	3	7
Temporary	0	0	0	0	0	0
Total	**4479**	**4409**	**1189**	**1196**	**1195**	**1207**

The Revenue Gap

441. As per the filing, the revenue gap for the company equals to Rs.91cr at current tariff and Rs.65cr at proposed tariff. With alternate calculations adopted by the Commission, the revenue gap for the company equals to Rs. 2.77 cr. at current tariff and the company will have surplus of Rs.8.23 cr. at proposed tariff. The details are given in the table below.

Table No.73

APEPDCL: REVENUE GAP FOR FY 2001-2002 (RS. CRORES)

KEY FINANCIAL PARAMETERS	Current Tariff		Proposed Tariff	
	Filings	Commission	Filings	Commission
1. Reasonable Return	2.83	6.7	2.83	6.7
2. Expenditure	1323.34	1238.07	1303.24	1238.07
3. Non-Tariff Income	46	46	46	46
4. Revenue Requirement(1+2-3)	1280.17	1198.77	1260.07	1198.77
5. Revenue	1189	1196	1195	1207
6. The Revenue Gap(5-4)	-91.17	-2.77	-65.07	8.23

NORTHERN POWER DISTRIBUTION COMPANY LIMITED (APNPDCL)

Total Sales and Revenue

442. The company projected sales of 5656MU and the Commission approved sales of 5488 MU for FY 2001-02; a reduction of 168 MU for FY 2001-02. The major variation is on account of reduction of 168 MU in case of LT V: Agriculture. The Company's estimates of revenues at current tariffs have been revised from Rs 987 crores to Rs 965 crores. In the similar manner, revenue from proposed tariffs has been adjusted to 986 crores. The details of the sales and revenues category wise are presented in the following table:

Table No.74
SALES AND REVENUES

	SALES in MUs		Revenue at Current Tariff in Rs. Cr.		Revenue at Proposed Tariff in Rs. Cr.	
	Filings	Commission	Filings	Commission	Filings	Commission
Low Tension	**4136**	**3968**	**494**	**470**	**496**	**486**
Domestic Cat I	1062	1061	229	227	225	223
Non Domestic Cat II	138	139	78	55	79	56
Indl. Supply Cat III	230	230	97	99	100	101
Cottage Indl. Cat IV	4	4	1	1	1	1
Irri. & Agri Cat V	2577	2409	66	66	66	66
Public lighting Cat VI	109	109	16	16	18	32
Gen. Purpose Cat VII	16	16	6	6	7	7
Temp Cat VIII	0	0	0	0	0	0
High Tension	**1520**	**1520**	**493**	**495**	**499**	**501**
Indl. Seg Cat I	779	779	327	336	331	340
Indl. Non-Seg Cat II	60	60	33	30	33	30
Irr & agri Cat IV	3	2	0	0	0	0
Rail traction Cat V	252	252	115	114	116	116
Colony Consumption Cat VI	10	11	3	3	3	4
Resco 's	416	416	15	10	15	10
Temporary	0	0	0	0	0	0
Total	**5656**	**5488**	**987**	**965**	**995**	**986**

The Revenue Gap

443. As per the filing, the revenue gap for the company equals to Rs.735cr at current tariff and Rs.700 cr at proposed tariff. With alternate calculations adopted by the Commission, the revenue gap for the company is Rs.602cr at current tariff and Rs.581cr at proposed tariff. The details are given in the table below.

Table No.75

APNPDCL: REVENUE GAP FOR FY 2001-02 (RS.IN CR)

KEY FINANCIAL PARAMETERS	Current Tariff		Proposed Tariff	
	Filings	Commission	Filings	Commission
1. Reasonable Return	8.11	3.15	8.11	3.15
2. Expenditure	1805.78	1655.54	1778.63	1655.54
3. Non-Tariff Income	91.4	91.4	91.4	91.4
4. Revenue Requirement(1+2-3)	1722.49	1567.29	1695.34	1567.29
5. Revenue	987	965	995	986
6. The Revenue Gap(5-4)	-735.49	-602.29	-700.34	-581.29

SOUTHERN POWER DISTRIBUTION COMPANY LIMITED (APSPDCL)

Total Sales and Revenue

444. The company projected sales of 6243MU and the Commission approved sales of 6129 MU for FY 2001-02; a reduction of 114MU for FY 2001-02. The major variation is the reduction of 133MU in case of LT V: Agriculture and an increase in sales by 13 MU to LT II:Non-Domestic. The company estimated the revenue from forecasted sales at Rs.1399 cr at current tariff and Rs.1406 cr at proposed tariff. Based on the adjustments and the observations made, the revenue at current tariffs is arrived at Rs 1388 crores and revenue at proposed tariffs at Rs.1399 crores. The details are presented in the following table:

Table No.76
SALES AND REVENUES

	SALES in MUs		Revenue at Current Tariff in Rs. Crs.		Revenue at Proposed Tariff in Rs. Crs.	
	Filings	**Commission**	**Filings**	**Commission**	**Filings**	**Commission**
Low Tension	**4742**	**4629**	**868**	**846**	**867**	**850**
Domestic Cat I	1746	1748	402	400	390	389
Non Domestic Cat II	331	344	183	137	187	140
Industrial Supply Cat III	471	471	177	203	182	208
Cottage Indl. Cat IV	15	15	3	3	3	3
Irri. & Agri Cat V	2040	1907	71	71	71	71
Public lighting Cat VI	102	106	17	18	18	23
Gen. Purpose Cat VII	36	37	14	15	15	16
Temp Cat VIII	1	1	1	1	1	1
High Tension	**1500**	**1501**	**532**	**542**	**539**	**549**
Indl. Seg Cat I	672	673	287	296	291	299
Indl. Non-Seg Cat II	128	128	65	68	66	69
Irrigation & Agriculture Cat IV	5	5	1	1	1	1
Rail traction Cat V	336	336	151	153	153	155
Colony Consumption Cat VI	43	43	15	13	15	14
Resco 's	316	316	11	11	11	11
Temporary	0	0	0	0	0	0
Total	**6243**	**6129**	**1399**	**1388**	**1406**	**1399**

The Revenue Gap

445. As per the filing, the revenue gap for the company equals to Rs.622cr at current tariff and Rs.586cr at proposed tariff. With alternate calculations adopted, the revenue gap for the company is Rs.486cr at current tariff and Rs.475cr at proposed tariff. The details are given in the table below.

Table No.77

APSPDCL: REVENUE GAP FOR FY 2001-02 (RS. CRORES)

KEY FINANCIAL PARAMETERS	Current Tariff		Proposed Tariff	
	Filings	Commission	Filings	Commission
1. Reasonable Return	17.6	11.28	17.6	11.28
2. Expenditure	2059.73	1918.39	2030.43	1918.39
3. Non-Tariff Income	56	56	56	56
4. Revenue Requirement (1+2-3)	2021.33	1873.67	1992.03	1873.67
5. Revenue	1399	1388	1406	1399
6. The Revenue Gap (5-4)	-622.33	-485.67	-586.03	-474.67

CENTRAL POWER DISTRIBUTION COMPANY LIMITED (APCPDCL)

Total Sales And Revenue

446. The company projected sales of 11930 MU and the Commission approved sales of 11625 MU for FY 2001-02; a reduction of 305 MU. The variations are on account of increase in sales to HT Category II Industry non-segregated by 8 MU and reduction of 313 MU in case of LT V: Agriculture. The company estimated the revenue from forecasted sales of 11930 MU at Rs.2699 crores at current tariff and Rs.2720 crores at proposed tariff. Based on the forecast approved by the Commission, the revenue at current tariffs and proposed tariffs works out to Rs 2627 crores and Rs 2658 crores respectively. The details have been provided in the following table:

Table No.78
SALES AND REVENUES

	SALES in MUs		Revenue at Current Tariff in Rs. Crs.		Revenue at Proposed Tariff in Rs. Crs.	
	Filings	Commission	Filings	Commission	Filings	Commission
Low Tension	**9038**	**8724**	**1521**	**1466**	**1527**	**1483**
Domestic Cat I	2616	2615	636	625	621	610
Non Domestic Cat II	627	627	370	323	379	332
Indl. Supply Cat III	746	746	325	328	333	336
Cottage Indl. Cat IV	11	11	2	2	2	2
Irri. & Agri Cat V	4795	4482	120	120	120	120
Public lighting Cat VI	180	180	40	40	43	54
Gen. Purpose Cat VII	52	52	21	21	22	22
Temp Cat VIII	11	11	7	7	7	7
High Tension	**2893**	**2901**	**1178**	**1160**	**1193**	**1175**
Indl. Seg Cat I	2001	2001	890	888	901	898
Indl. Non-Seg Cat II	425	433	227	219	231	222
Irr & agri Cat IV	22	22	3	2	3	2
Rail traction Cat V	68	68	31	31	31	31
Colony Consumption Cat VI	47	47	15	15	15	15
Resco 's	330	330	12	6	12	6
Temporary			0	0	0	0
Total	**11930**	**11625**	**2699**	**2627**	**2720**	**2658**

The Revenue Gap

447. As per the filing, the revenue gap for the company is Rs.1244cr at current tariff and Rs.1161 crores at proposed tariffs. With alternate calculations adopted by the Commission, the revenue gap for the company is Rs.1018cr at current tariff and Rs.987cr at proposed tariff. The details are given in the table below.

TABLE NO.79

APCPDCL: REVENUE GAP FOR FY 2001-02 (RS. CRORES)

KEY FINANCIAL PARAMETERS	Current Tariff		Proposed Tariff	
	Filings	Commission	Filings	Commission
1. Reasonable Return	27.92	13.26	27.92	13.26
2. Expenditure	4020.46	3737.24	3958.02	3737.24
3. Non-Tariff Income	105.43	105.43	105.43	105.43
4. Revenue Requirement(1+2-3)	3942.95	3645.07	3880.51	3645.07
5. Revenue	2699	2627	2720	2658
6. The Revenue Gap(5-4)	-1243.95	-1018.07	-1160.51	-987.07

CONCLUSIONS

Aggregate Revenue Gap for FY 2001-02

448. The DISCOMS filed the tariff application with an aggregate revenue gap of Rs.2692 crores at current tariff and Rs.2512 crores at proposed tariff. The Commission revised the gap (as discussed before) to Rs.2109 crores at current tariff and Rs.2035 crores only at proposed tariff. The details are given in the table below.

Table No.80

(In Rs. Crores)

KEY FINANCIAL PARAMETERS	Current Tariff		Proposed Tariff	
	Filings	Commission	Filings	Commission
1. Reasonable Return	56.46	34.39	56.46	34.39
2. Expenditure	9209.31	8549.24	9070.32	8549.24
3. Non-Tariff Income	298.83	298.83	298.83	298.83
4. Revenue Requirement(1+2-3)	8966.94	8284.8	8827.95	8284.8
5. Revenue	6274	6176	6316	6250
6. The Revenue Gap(5-4)	-2692.94	-2108.8	-2511.95	-2034.8

The revenue gap of Rs. 2109 crores arrived in the above manner is to be bridged to enable the companies to supply electricity without incurring financial loss from operations. The Commission seeks to bridge the revenue gap as estimated and approved by it through a combination of tariff charges and allocation of subsidies as detailed in subsequent paras of this order.

CHAPTER – XVII : TARIFF DESIGN

Cost to Serve Model

449. The Cost to Serve (CoS) Model has been the basis for the structure and design of retail tariffs issued by the Commission. It is the basic framework for estimating the cost of delivering a unit of electricity to a particular consumer category. It is the basis on which tariffs are fixed, and thereby, is the benchmark against which it is possible to measure cross-subsidies and the required external subsidy. It can be modelled to reflect the inherent characteristics of different categories of consumers that impact on the cost of servicing that category of consumer.

450. The process of rationalisation of tariffs as enunciated in the Commission's Tariff Philosophy is to move tariffs closer to class embedded cost. The process, which was initiated in the first Tariff Model, has been carried forward in this Order. The Model first submitted by the Licensee has been modified to suit the prevailing conditions as perceived by the Commission.

451. The Aggregate Revenue Requirement as filed and approved by the Commission is the basic cost data for building the CoS. As a first step, each line item of cost in the approved ARR is classified and allocated to three headings – Energy component, Demand component and Customer service component. Energy component comprises of the variable cost of the total power purchase costs. Demand component comprises of the Fixed Portion of the total power purchase costs and a part of the network costs. Lastly, the Customer service component representing metering, billing, customer servicing, etc, forms the remaining part of the network costs.

452. Such classified cost components (Energy, Demand & Customer) are apportioned among the consumer categories based on the principles used by the Licensee which are:

(i). Energy component: Category Input (Sales + Losses)
(ii). Demand Component: Category Input (Coincident demand + Losses)
(iii). Customer component: No. of consumers in the category.

453. The costs derived thus for each category are the Fully Allocated Costs (FAC) for the category. The FAC divided by the Sales of that category gives the Cost to Serve per unit for the concerned consumer category. In this filing also, the Commission has preferred to use the embedded cost to serve. The FAC, consumer category wise, when compared with the revenues recovered from that category, measures the extent to which the current revenue recovers the cost of service expended for each consumer category. On the basis of the information available from the FAC, the Commission fixes the extent of feasible cross-subsidy required and tenable before determining the final tariffs.

Allocation of Efficiency Gains, Cross Subsidy and Subsidy by GoAP

454. Apart from costs, the CoS Model also incorporates the proposed efficiency gains. Efficiency gains are first deducted from the Revenue Requirement to arrive at the Fully Allocated Cost.

455. The model, as already explained, also enables fixing the quantum of desired cross-subsidy among consumer categories. The Commission after considering all relevant aspects fixes constraints on increase of tariff in respect of subsidizing categories. The tariff increase in these categories upto the constraint level provides an amount of cross subsidy. The quantum of cross-subsidy so arrived is distributed among the cross-subsidised consumer categories in proportion to the deficit of the respective category to total deficit of the system. The amount of cross-subsidy and efficiency gains incorporated into the model leave the amount that needs to be further covered by tariff increase. The Commission then increases the tariff in case of subsidized categories to the extent of the balance revenue requirement. This is called the Fully Allocated Cost Tariff. The Fully Allocated Cost Tariff is indicated to the Government for directions in respect of provision of subsidy for any class or classes of consumers etc., under Section 12(3) of the Reform Act. The Government decides the levels to which the Fully Allocated Cost tariff in respect of the subsidized categories are to be reduced. The resultant gap in the revenue requirement would be made good by GoAP as government subsidy. On the basis of the directions of the GoAP for provision of subsidies, the Commission modifies the Fully Allocated Costs by reduction of tariffs in respect of the subsidized categories to the extent of the subsidy provided by the government. The tariff so arrived, is approved by the Commission and notified accordingly.

Fully Allocated Cost Tariff FY 2001- 02

456. The level of cross-subsidy in Andhra Pradesh continues to be high, wherein large industrial users pay well above the cost to serve while low tension users, such as domestic and all agriculture consumers (LT and HT) pay tariffs well below cost to serve. Low tariffs to subsidised categories result in an inefficient high demand for power that tends to put pressure on system capacity and quality of service, and forces procurement of costlier power. With higher tariffs, the subsidising categories such as industry, are forced to look for alternative sources of power. In case they leave the system to set up captive generation, the burden is transferred to licensees, adversely affecting all consumers. The Commission considers that to be fair to those consumer categories that are now paying more than the cost of service and keeping in mind the larger macro compulsions of increasing industrial and economic growth, it should plan to gradually bring down the cross-subsidy while raising the recovery from the cross-subsidised categories closer to cost-to serve. Accordingly, the Commission decided that the tariff in respect of the subsidizing categories should be increased only upto the level of annualized tariffs notified for FY 2000-01. As a result, the amount of cross subsidy available for FY 2001-02 remained at the same level as in FY 2000-01. After taking this cross subsidy into account, the Commission finalized the tariff at Fully Allocated Cost by increasing tariff in respect of the subsidized categories to the extent of the gap in the revenue requirement. The tariff so finalized at full cost has been communicated to the GoAP for directions u/s. 12(3) of the Reform Act. The table below gives the Fully Allocated Cost tariff communicated to GoAP.

Table No.81
Schedule of Retail Tariffs –
Fully Allocated Cost - 2001-02

		Fixed Charge (Rs/year)	Energy Charge (Ps/Unit)	Fixed Charge (Rs/year)	Energy Charge (Ps/Unit)	Fixed Charge (Rs/year)	Energy Charge (Ps/Unit)	Total Revenue In Rs Lakhs			Fully Allocated Cost of APERC
		APTransco Current		**APTransco Proposed**		**APERC**		**APTransco Current**	**APTransco Proposed**	**APERC**	
LOW TENSION											
Category I: Domestic								**158,354**	**154,381**	**213,228**	**284825**
	0 – 50		135		135		180	48,074	48,074	64,098	
	51 – 100		295		260		380	44,162	38,922	56,886	
	101 – 200		295		285		420	29,736	28,728	42,336	
	201 – 300		450		450		600	13,275	13,275	17,700	
	301 – 400		450		500		650	4,680	5,200	6,760	
	> 400		525		575		725	18,428	20,183	25,448	
Category II: Non-Domestic and Commercial								**62,741**	**64,480**	**64,480**	**45719**
	0 – 100		330		340		340	27,918	28,764	28,764	
	101 - 200		650		665		665	14,885	15,229	15,229	
	> 200		725		745		745	19,938	20,488	20,488	
Category III (a & b) Industrial								**77,716**	**79,555**	**79,555**	**47261**
Category III (a): Industrial-Normal											
		(Per HP)		(Per HP)		(per HP)					
	First 1000	180	374	180	385	180	385				
	Balance	180	420	180	430	180	430				
Category III (b): Industrial-Optional											
		(Per HP)		(Per HP)		(per HP)					
	All Units	180	420	180	430	180	430				
Category IV:		(Per HP)		(Per HP)		(per HP)		**576**	**622**	**698**	**983**
A Cottage Industries -		120	165	120	174	120	**211**				
Dhobighats											
Upto 3 HP		250		250		250					
3 HP upto 5 HP		400		400		400					
5 HP upto 10 HP		500		500		500					
Above 10 HP		600		600		600					
Category V: Agriculture								**30,246**	**30,246**	**115229**	**222685**
DPAP areas		(per HP)		(per HP)		(per HP)					
Up to 3 HP		200	*	200	*	**750**	@	2,234	2,234	8,378	
> 3 HP up to 5 HP		350	*	350	*	**1350**	@	4,680	4,680	18,050	
> 5 HP up to 10 HP		450	*	450	*	**1750**	@	2,003	2,003	7,788	
> 10 HP		550	*	550	*	**2150**	@	1,826	1,826	7,138	
Other areas		(per HP)		(per HP)		(per HP)					
Up to 3 HP		250	*	250	*	**950**	@	4,278	4,278	16,255	
> 3 HP up to 5 HP		400	*	400	*	**1,500**	@	7,900	7,900	29,625	
> 5 HP up to 10 HP		500	*	500	*	**1,900**	@	5,220	5,220	19,836	
> 10 HP		600	*	600	*	**2,325**	@	2,106	2,106	8,161	

Category VI: Local Bodies Street Lighting & PWS schemes		**242**		**250**		**259**	**9,406**	**13,483**	**13,002**	**14100**
Local Bodies										
Street Lighting										
Minor Panchayats		140		148		150				
Major Panchayats		190		198		204				
Nagarpalikas and Municipalities Gr.3		250		260		268				
Municipalities Gr.1 & 2		300		310		322				
Municipalities Selection Spl.Gr.		325		335		348				
Corporations		350		360		375				
PWS Schemes										
Minor Panchayats	Agri.tariff as applicable in "other areas"									
Major Panchayats	**Agri.tariff as applicable in "other areas"**									
Nagarpalikas and Municipalities Gr.3										
	(Per HP)		(Per HP)		(Per HP)					
Upto 1000 units	240	350	240	355	240	375				
Balance units		380		385		407				
Municipalities Gr.1 & 2										
Upto 1000 units	240	350	240	355	240	375				
Balance units		380		385		407				
Municipalities Selection Spl.Gr.										
Upto 1000 units	240	350	240	355	240	375				
Balance units		380		385		407				
Corporations										
Upto 1000 units	240	380	240	385	240	407				
Balance units		430		438		461				
Category VII: General Purpose		**400**		**430**		**430**	**4,920**	**5,289**	**5,289**	**3364**
Category VIII: Temporary Supply		**600**		**620**		**620**	**720**	**744**	**744**	**304**
TOTAL LOW TENSION							**344,677**	**348,800**	**492,224**	**619,241**
HIGH TENSION	Per KVA		Per KVA		Per KVA					
Category I: Industry - General	**2,040**		**2,040**		**2,040**		**186,333**	**188,546**	**188,546**	**91446**
For first 1 lakh units		370		376		376	33,707	35,853	35,853	
Next 1 lakh units		385		390		390	30,415	32,034	32,034	
Balance units		390		395		395	99,216	109,464	109,464	
Category II: Industry – Other	**2,040**	**443**	**2,040**	**450**	**2,040**	**450**	**36,218**	**36,715**	**36,715**	**14877**
Category IV: Irrigation and Agriculture	**400 per HP**	**35***	**400 per HP**	**35***	**550 perHP**	@	**300**	**300**	**413**	**569**

Category V: Railway Traction	**454**		**460**		**460**	**42,540**	**43,102**	**43,102**	**22422**
Category VI: Townships and Residential Colonies	**310**		**320**		**320**	**3,968**	**4,096**	**4,096**	**3281**
Rural Electric Co-operatives	**30**		**30**		**115**	**3,502**	**3,502**	**13,283**	**26539**
Temporary				**$**	**$**				
TOTAL HIGH TENSION						**272,861**	**276,262**	**286,155**	**159,134**
SYSTEM TOTAL						**617,539**	**625,062**	**778,379**	**778,375**
*** Optional metered tariff at 35 paise per unit**									
@ Optional Agri Metered Tariff at 50 Paise per unit									
$ Temporary supply or temporary increase in supply to existing consumers ordinarily limited to a period not exceeding 6 months at rates 50% in excess of HT tariffs									

Directions of GoAP on Subsidy

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. This time, the GoAP has also provided subsidy for sugarcane crushing and Aquaculture. GoAP considered subsidy to sugar cane crushing for purpose of providing a metered tariff of 50 paise per unit as it is now classified under LT-III, a cross-subsidising category. In case of aquaculture where the Commission has done away with the earlier provision of an optional flat rate, GoAP have subsidized the metered tariff which is now fixed at 125 paise per unit without fixed charges as against the earlier rate of Rs174 paise. The following table gives the details of allocation of subsidy.

Table No.82
SUBSIDY ALLOCATION TO CATEGORIES

(Rs. in Crores)

Name of the Category	Subsidy Allocated
LT-I Domestic	588.47
LT-III Industrial - (Sugarcane crushing and Aquaculture)	18.72
LT-IV Cottage Industries	0.94
LT V Agriculture	849.83
LT -VI Local Bodies	4.52
HT -IV -Irrigation and Agriculture	1.13
Rural Electric Cooperatives	97.80
Total Subsidy	1561.41

Administration of Subsidy

458. Subsidy provided by Government of Andhra Pradesh is administered as follows:

a). The subsidy given by the GOAP as per Section 12 (3) of Reform Act, 1998 is for a consumer category.

b). The retail supply tariffs of the subsidised categories are arrived at by uniformly allocating across the state the subsidy as directed by the GOAP to the respective categories of consumers.

c). Each DISCOM gets the subsidy commensurate to the extent of energy sales to its subsidised categories.

d). The subsidy allocation to each DISCOM as calculated in (c) above must be paid by the GOAP to the respective DISCOMS.

Tariff Structure - Retail Tariffs

459. Sec 26 of the APER Act sets out the guiding principles for the Commission to fix the final tariffs to all categories of consumers defined and differentiated according to consumers load factor or power factor, the consumer's total consumption of energy during any specified period or the time at which supply is required; or paying capacity of category of consumers and need for cross-subsidisation. The CoS model allows the Commission flexibility to explore various tariff design options and examine their impact on average rates and cost recovery in each consumer category.

460. The emphasis in the present filings is on rationalisation of tariffs in terms of correcting the imbalance or the rate differentials between the subsidising and subsidised categories of consumers and on consolidating the efficiency measures. In this context the DISCOMS proposed to generally retain the tariff rates being used currently as per the Tariff Order of May 2000 with but a few changes. These changes relate to: (i) the provision of incentives to HT industry; (ii) reversion back to 6 slab structure in LT - I category (Domestic); (iii) steps to improve the quality of supply, better levels of consumer service, metered sales, demand side management and promote energy conservation. No changes have been suggested with regard to consumer classification.

Category -LT-I : Domestic

461. The DISCOMS have uniformly proposed a reversion back to 6 slabs in Domestic category and also reduction of the average tariff for the category by 2 per cent. While maintaining the lifeline rate of 135 paise /kwh for the slab 0-50 units, the DISCOMS have proposed introducing an intermediate slab between 51-200 slab by bifurcating it into 51-100 and 101-200. The proposed

tariff rates are 260 paise/kwh for the first part and 285 paise/kwh for the second part of the bifurcation. Against the slab 200-400, the DISCOMS propose to bifurcate it into two slabs from 201-300 and 301 - 400. The present rate of 450 paise/kwh will apply only to the slab 201-300. For the slab 301-400, the rate proposed is 500 paise. There is an increase in the rate for >400 units from 525 paise to 575 paise/kwh. The reversion back to the six-slabs has been justified on the grounds of rationalisation or avoiding rate shock to middle level consumers, who had the maximum increase in tariff in the Order of May 2000.

462. The issue relating to the reversion to six slabs has been dealt in detail in the Commission Analysis. However, in deference to the wishes of the public, the Licensee and the GoAP, the Commission has redefined the slabs in accordance with the proposal of APTRANSCO to revert back to six slabs. The Commission approves the tariff proposals made by the Licensee for the six slabs as given in the table below:

Table No.83
CAT-LT-I : DOMESTIC

	APTRANSCO / DISCOMS				COMMISSION	
Slab units /month	Current Energy Charge ps/unit	Slab units /month	Proposed energy Charge ps/unit	Slab units /month	Energy Charge ps/unit
0-50	135	0-50	135	0-50	135
51-200	295	51-100	260	51-100	260
201-400	450	101-200	285	101-200	285
>400	525	201-300	450	201-300	450
		301-400	500	301-400	500
		>400	575	>400	575

Category LT-II:Non-Domestic and Commercial

463. The Commission is aware of the need to reduce the cross-subsidy this category bears and facilitate the faster growth rate of the services sector. Evolving an incentive mechanism while moving to a two-part tariff, necessitates identification of the connected load vis-à-vis the contracted load of the consumers. As a first step, the Commission has accepted the suggestion of APTransco to fix demand meters for larger loads of 35KW and above in this category. This would facilitate in moving to a two-part tariff in future. Secondly, based on the actual Demand, optimal infrastructure can be provided to ensure quality supply.

464. Consumers in the non-domestic and commercial category on average currently pay more than the cost to serve. The Cost to Serve this category is 372 paise. The Commission proposes to maintain rates notified as given in the Tariff Order for FY 2000-01 for FY 2001-02.

Table No.84
CAT-LT-II : NON-DOMESTIC AND COMMERCIAL

	APTRANSCO		COMMISSION	
Slab	Current Energy Charge ps/unit	Proposed energy Charge ps/unit	Slab	Energy Charge ps/unit
0-100 units/month	340	340	0-100 units/month	340
101-200 units/month	665	665	101-200 units/month	665
More than 200 units/month	745	745	More than 200 units/month	745

Category-LT III Industrial

465. The tariff rates notified for this category for FY 2000-01 are Rs.15/Hp/month fixed charges and 385 ps/kwh for the first 1000 units and for the

balance at 430 ps/unit. The cost to serve this category is 298 ps/unit. The Commission proposes to retain the rates notified for FY 2000-01 for FY 2001-02.

Table No.85
CAT-LT-III : INDUSTRIAL

	Current charges		APTRANSCO / DISCOMS Proposed charges		COMMISSION	
Slab	Fixed Charges (Rs/HP/ Month)	Current Energy Charge ps/ unit	Fixed Charges (Rs/HP/ Month)	Proposed energy Charge ps/ unit	Fixed Charges (Rs/HP/ Month)	Energy Charge ps/ unit
Industrial-III (A) Upto the Load of 75 HP						
First 1000 units	15	385	15	385	15	385
Balance		430		430		430
Industrial -III (B) Load >75 HP and up to 150 HP	15	430	15	430	15	430

466. Sugarcane crushing has been brought under this category. APTRANSCO had opined during the hearings that sugarcane crushing is an industrial actvitiy. The Commission accepts this view. The GoAP, however, has agreed to provide subsidy to this category. A concessional rate of 50 ps/unit for the period of operation has accordingly been fixed. Another change introduced in this category is the removal of flat rate for aquaculture with less than 10HP. The prevailing alternate rate of Rs 10/hp/Month fixed charges with energy charges of Rs174 ps/unit has been modified to 125 ps per unit with no fixed charges. This rate has been fixed after taking into account the subsidy given by GoAP.

467. Optional category- LT-III(B) is continued in this tariff order in deference to the public request for continuation of the category for SSI units. The Commission directs that metering should be on the HT side.

468. With reference to metering of LT Category-III(A) consumers, the Commission decided that;

(i). For loads 20HP and above but below 50HP, an LT demand meter may be provided, and

(ii) For loads 50HP and above upto 75 HP, the metering may be on the HT side of an exclusive 11 kV/400 V Tr. provided for each of the loads.

469. The special metering of LT III(A) & LT III(B) is intended to facilitate moving to a two-part tariff in future.

Category-LT-IV : Cottage Industries

470. The Commission accepts the rates of fixed charges of Rs/10/HP/month and energy charges of Rs174 ps /unit proposed by the Licensee as given below. The cost to serve this category per unit is 362 ps/unit

Table No.86
CAT-LT-IV : COTTAGE INDUSTRIES-

Current charges		APTRANSCO / DISCOMS Proposed charges		COMMISSION	
Fixed Charges (Rs/HP/ Month)	Current Energy Charge ps/ unit	Fixed Charges (Rs/HP/ Month)	Proposed energy Charge ps/ unit	Fixed Charges (Rs/HP/ Month)	Energy Charge ps/ unit
10	174	10	174	10	174

Category-LT-IV (B) : Dhobighats:

The following current flat rates are continued without change.

Upto 3HP	: Rs. 250/HP/Year
> 3 HP and upto 5 HP	: Rs. 400/HP/Year
>5 HP and < 10 HP	: Rs. 500/HP/Year
10 HP and above	: Rs. 600/HP/Year.

Category-LT-V: Agriculture

471. In the last tariff order, the Commission introduced an optional tariff of 35 ps/unit. T here were divergent views expressed during Public hearing on the number of hours of pump set usage. The Commission strongly believes that the only way of preventing any possible misunderstanding on the extent of agriculture consumption as observed during the public hearing is to have complete metering of agriculture. The process of metering is slow and in order to encourage the process started last year, the Commission has fixed a metered rate of 20 ps/unit for the consumption upto 2500 units and 50 paise per unit for the balance consumption in a year per service. The cost to serve this category is 257 ps/unit. Flat rates/HP/year both for DPAP and non-DPAP areas as proposed by the Licensee are accepted as given in the Table below.

Table No.87
CAT-LT-V : AGRICULTURE

	Current charges		APTRANSCO / DISCOMS Proposed charges		COMMISSION		
Slab	Fixed Charges (Rs/HP/ Year)	Optional Metered tariff ps/ unit	Fixed Charges (Rs/HP/ Year)	Optional Metered tariff ps/ unit	Fixed Charges (Rs/HP/ Year)	Optional Metered tariff ps/ unit	
DPAP Areas		35		35			
upto 3HP	200		200		200	0-2500 units per annum	20
>3Hp upto 5Hp	350		350		350		
>5 Hp upto 10Hp	450		450		450	More than 2500 units per annum	50
10 Hp and above	550		550		550		
Other Areas		35		35			
upto 3HP	250		250		250	0-2500 units per annum	20
>3Hp upto 5Hp	400		400		400		
>5 Hp upto 10Hp	500		500		500	More than 2500 units per annum	50
10 Hp and above	600		600		600		

472. The Commission accepts the view that agricultural consumption figure as of now, is a 'guestimate' until complete results of the census study and consumption study reduce the element of arbitrariness. Nevertheless, a proper assessment of consumption hinges on metering of all pumpsets. The Commission believes that it would be in the interest of the farmer to have the energy consumption metered so that the billing is restricted to the actual consumption. The metered rate is advantageous especially for those farmers who use the Pumpsets for less than 1200 hours per year which was the contention of many objectors. Under flat rates, in the absence of incentive to limit the consumption, the tendency to waste is more and also where the usage is

limited, the farmer pays for units not consumed. Slab rates are an inefficient method of levying usage charges. The Commission therefore directs that the metering of all consumers under this category shall be completed by 31.3.2003 positively.

Category-LT-VI : Local Bodies

473. The cost to serve this category is 304 ps/unit. Rates as proposed by APTRANSCO/DISCOMS are accepted by the Commission as given below:

Table No.88

CAT-LT-VI : LOCAL BODIES

	Current charges		APTRANSCO / DISCOMS Proposed charges		COMMISSION	
Slab	Fixed Charges (Rs/HP/ Year)	Energy ps/ unit	Fixed Charges (Rs/HP/ Year)	Energy ps/ unit	Fixed Charges (Rs/HP/ Year)	Energy ps/ unit
Street Lighting						
Minor Panchayats		148		148		148
Major Panchayats		198		198		198
Nagarpalikas and Municipalities Gr.3		260		260		260
Municipalities Gr.1 & 2		310		310		310
Municipalities Selection Spl. Grade		335		335		335
Corporations		360		360		360
PWS Schemes						
Minor Panchayats	Agricultural tariff as applicable in "other areas"					
Major Panchayats	Agricultural tariff as applicable in "other areas"					
Nagarpalikas and Municipalities Gr.3						
Upto 1000 Units	240	355	240	355	240	355
Balance Units		385		385		385
Municipalities Gr.1 & 2						
Upto 100 units	240	355	240	355	240	355
Balance units		385		385		385
Municipalities Selection Spl. Gr.						
Upto 1000 units	240	355	240	355	240	355
Balance units		385		385		385
Corporations						
Upto 1000 units	240	385	240	385	240	385
Balance units		438		438		438

Category-LT-VII : General Purpose

474. The LT General Purpose category covers places of worship, Govt. schools, charitable institutions, (including Public Charitable Trusts and Societies registered under the Societies Registration Act running educational and medical relief institutions running on a no-profit basis). Rates as notified for FY 2000-01 are retained as given below:

Table No.89
CAT-LT-VII : GENERAL PURPOSE

	APTRANSCO		COMMISSION
	(Current) Energy Charge (Paise/ Unit)	(Proposed) Energy Charge (Paise/Unit)	Energy Charge (Paise/Unit)
	430	430	430

Category-LT-VIII : Temporary Supply

475. Rates as notified for FY 2000-01 are accepted by the Commission as given below:

Table No.90
CAT-LT-VIII : TEMPORARY SUPPLY

	APTRANSCO		COMMISSION
	(Current) Energy Charge (Paise/ Unit)	(Proposed) Energy Charge (Paise/Unit)	Energy Charge (Paise/Unit)
Agricultural purpose	230	230	230
Others	620	620	620

Category-HT-I : Industrial Segment

476. Traditionally, industry has cross subsidised other consumer categories. A number of petitions have been made stating that there should be no further increase in this category as the tariffs have reached a limit. The Commission therefore, has attempted to balance diverse forces which include: i) industries

concern to be competitive internationally ii) the need for quality power and iii) concessions for bulk purchases and iv) the continued need to cross-subsidize.

477. The Commission retains the rates notified for this category both fixed charges and energy charges of FY 2000-01 for FY 2001-02 as given below: .

Table No.91
CAT-HT-I : INDUSTRIAL SEGMENT

	Current charges		APTRANSCO / DISCOMS Proposed charges		COMMISSION	
Slab	Fixed Charges (Rs/KVA/ month)	Energy Charge ps/ unit	Fixed Charges (Rs/KVA/ month)	Energy Charge ps/ unit	Fixed Charges (Rs/KVA/ month)	Energy Charge ps/ unit
For first 1 Lakh units/month	170	376	170	376	170	376
Next 1 Lakh units /month		390		390		390
Balance units during the month		395		395		395

An incentive is provided for higher consumption over 40% LF ranging from 10% to 25% as below:

Load Factor (LF) For consumption over	Discount applicable on the energy rates
40%LF upto 50%LF	10%
50%LF upto 60% LF	15%
60LF upto 70% LF	20%
70%LF	25%

478. The incentive at above rates is applicable only for the consumption in excess of the average monthly consumption for the FY 2000-01 and the actual consumption for the corresponding month of the FY 2000-01 and only if the consumer does not have any outstanding dues to APTRANSCO/Distribution Companies.

Category-HT-II : Industrial Non-Segment

479. The rates notified for FY 2000-01 are continued as given below: The cost to serve is 202 ps/unit.

Table No.92
CAT-HT-II : INDUSTRIAL NON-SEGMENT

Current charges		APTRANSCO / DISCOMS Proposed charges		COMMISSION	
Fixed Charges (Rs/KVA/month)	Energy Charge ps/ unit	Fixed Charges (Rs/KVA/ month)	Energy Charge ps/ unit	Fixed Charges (Rs/KVA/ month)	Energy Charge ps/ unit
170	450	170	450	170	450

Category-HT-IV : Irrigation and Agriculture

480. The rates notified for FY 2000-01 for either a flat rate of Rs.400/- per HP per year or an optional metered tariff at 35 ps/unit are continued as proposed by the Licensee and as given below. This category continues to be a subsidised category. The cost to serve is 146 ps/unit.

Table No.93
CAT-HT-IV : IRRIGATION AND AGRICULTURE

Current charges		APTRANSCO / DISCOMS proposed charges		COMMISSION	
Fixed Charges (Rs/HP/ Year)	Optional Metered tariff ps/ unit	Fixed Charges (Rs/HP/ Year)	Optional Metered tariff ps/ unit	Fixed Charges (Rs/HP/ Year)	Optional Metered tariff ps/ unit
400	35	400	35	400	35(*)

(*)The optional metered tariff is subject to a minimum of Rs.300/HP/year of Contracted Load

481. As in the case of LT Agriculture, the Commission strongly believes that this category should also be metered and accordingly directs that metering of these should be completed by 31.3.2003.

Category-HT-V : Railway Traction

482. For this category, the revenue realisation as in the case of HT categories other than Irrigation and Agriculture is higher than the cost to serve. As stated, cross-subsidy burden is borne by some of the categories and it is the intention of the Commission to gradually reduce cross-subsidy in due course as the cross-subsidised consumer categories move towards compensatory tariffs. Since this is the uniform policy of the Commission, it is not possible to show preferential treatment for railway traction. The Commission has examined the petitions of South Central Railway and their deposition at the public hearing and have decided to continue the applicability of the tariffs notified for the year 2000-01 as given below.

Table No.94
CAT-HT-V : RAILWAY TRACTION

	APTRANSCO		**COMMISSION**
	Current Energy Charge (Paise/Unit)	Proposed Energy Charge (Paise/Unit)	Energy Charge (Paise/Unit)
	460	460	460

Category-HT-VI : Townships/Colonies

483. Customers in this category purchase power at HT and redistribute it to persons living in their employee colonies through their own colony distribution systems.The rates notified for FY 2000-01 have been retained as given below:

Table No.95
CAT-HT-V : TOWNSHIPS/COLONIES

	APTRANSCO		COMMISSION
	Current Energy Charge (Paise/Unit)	Proposed Energy Charge (Paise/Unit)	Energy Charge (Paise/Unit)
	320	320	320

Rural Electric Cooperative Societies (RESCOs)

484. The Licensee projected an average realisation of 35 ps. per kWh for supplies to Rural Electric Cooperative Societies. The cost to serve as per the APERC estimates is 220 ps. per unit.

485. The licenses have been extended to the nine Rural Electric Co-operative Societies for a further period upto 31.03.2002 pending decision on their further continuance based on viability in the reform and restructuring set up of the power sector. The Commission therefore have accepted the proposal of the APTRANSCO to supply power at current charges to the nine Rural Electric Co-operative Societies. Accordingly, the Commission decided that the current rates be charged to Rural Electric Co-operative temporarily till further orders are issued on the bulk supply tariff applicable to each of the Rural Electric Co-Operative Societies.

486. This retail tariff determined by the Commission is applicable to the consumers of the nine Rural Electric Cooperative Societies also.

Government Services in Subsidized Categories

487. All Government Services in subsidized categories will be charged based on cost to Serve rather than include them in subsidized category The Licensee is directed to update and submit the information relating to all Govt. services.

488. The schedule of tariffs for FY 2001-02 is finalized on the above lines. The table below gives the schedule of tariffs for FY 2001-02 after adjusting the GoAP subsidy among different categories as directed by the GoAP.

Table No.96
SCHEDULE OF TARIFFS FOR FY 2001 –2002

		Fixed Charge (Rs/year)	Energy Charge (Ps/Unit)	Total Revenue in (Rs. Lakhs)
LOW TENSION				
Category I: Domestic				**154,381**
	0 – 50		135	48,074
	51 – 100		260	38,922
	101 – 200		285	28,728
	201 – 300		450	13,275
	301 – 400		500	5,200
	> 400		575	20,183
Category II: Non-Domestic and Commercial				**64,480**
	0 - 100		340	28,764
	101 – 200		665	15,229
	> 200		745	20,488
Category III (a & b) Industrial				**77,683**
Category III (a): Industrial-Normal				
	First 1000	180 per HP	385	
	Balance	180 per HP	430	
Category III (b): Industrial-Optional				
	All Units	180 per HP	430	
Category IV:				
	Cottage Industries	120 per HP	**174**	**603**
	Dhobighats			
	Upto 3 HP	250 per HP		
	Above 3 HP upto 5 HP	400 per HP		
	Above 5 HP below 10 HP	500 per HP		
	Above 10 HP	600 per HP		
Category V: Agriculture				**30,246**
	DPAP areas			
	Up to 3 HP (2.25kw)	200 per HP	@	2,234
	> 3 HP up to 5 HP (2.25to 3.75kw)	350 per HP	@	4,680
	> 5 HP up to 10 HP (375 to 7.5kw)	450 per HP	@	2,003
	> 10 HP (7.5kw)	550 per HP	@	1,826
	Other areas			
	Up to 3 HP (2.25kw)	250 per HP	@	4,278
	> 3 HP up to 5 HP (2.25to 3.75kw)	400 per HP	@	7,900
	> 5 HP up to 10 HP (375 to 7.5kw)	500 per HP	@	5,220
	> 10 HP (7.5kw)	600 per HP	@	2,106
Category VI: Local Bodies Street Lighting & PWS schemes			**250**	**12,550**
	Local Bodies			
Street Lighting				

	Minor Panchayats		148	
	Major Panchayats		198	
	Nagarpalikas and Municipalities Gr.3		260	
	Municipalities Gr.1 & 2		310	
	Municipalities Selection Spl.Gr.		335	
	Corporations		360	
PWS Schemes				
	Minor Panchayats	Agri. Tariff as applicable in "other areas"		
	Major Panchayats	Agri. Tariff as applicable in "other areas"		
	Nagarpalikas and Municipalities Gr.3			
	Upto 1000 units	240 per HP	355	
	Balance units		385	
	Municipalities Gr.1 & 2			
	Upto 1000 units	240 per HP	355	
	Balance units		385	
	Municipalities Selection Spl.Gr.			
	Upto 1000 units	240 per HP	355	
	Balance units		385	
	Corporations			
	Upto 1000 units	240 per HP	385	
	Balance units		438	
Category VII: General Purpose			**430**	**5,289**
Category VIII: Temporary Supply			**620**	**744**
TOTAL LOW TENSION				**345,976**
Category I: Industry - General - #		2,040 per HP		**188,546**
	For first 1 lakh units		376	35,853
	Next 1 lakh units		390	32,034
	Balance units		395	109,464
Category II: Industry - Other - #		2,040 per HP	**450**	**36,715**
Category IV: Irrigation and Agriculture		400 per HP	**35***	**300**
Category V: Railway Traction			**460**	**43,102**
Category VI: Townships and Residential Colonies			**320**	**4,096**
Rural Electric Co-operatives			**30**	**3,502**
Temporary		**$**	**$**	
TOTAL HIGH TENSION				**276,262**
SYSTEM TOTAL				**622,238**
Subsidy Provided				**156,142**
TOTAL REVENUE WITH SUBSIDY				**778,380**

*** Optional metered tariff at 35 paise per unit**

@ New Optional LT Agri Metered Tariff
0-2500 units/annum – 20 ps. per unit
> 2500 units/annum – 50 ps. per unit

$ Temporary supply or temporary increase in supply to existing consumers ordinarily limited to a period not exceeding 6 months at rates 50% in excess of HT tariffs

Category LT II – An LT demand meter shall be provided for contracted loads 35 to 56 KW

Category LT III-a

(i) Sugarcane crushing shall be metered and the rates applicable are 50 ps/unit subject to obtaining specific permission from the Divisional Engineer (operation).

(ii) Aquaculture (Pisciculture & Prawn farming) : For those with contracted load below 10 Hp, a metered tariff of 125 Ps/Kwh will be applicable.

Category III-b - Optional

Category LT V Agriculture : Optional tariff for metered consumption

<u>Units consumed</u>	<u>Charges</u>
0-2500 Units/Per annum	20 Paise/Unit
above 2500 units/Per annum	50 Paise/Unit

Category HT I: The following incentives are applicable for consumers for use of APTRANSCO supply:

Load factor	**Discount applicable on the energy rates**
More than 40% upto 50%	10%
More than 50% upto 60%	15%
More than 60% upto 70 %	20%
More than 70%	25%

The incentive is applicable for the consumption in excess of the average monthly consumption for the past financial year and the actual consumption for the corresponding month of the past financial year and only if the consumer does not have any outstanding dues to APTRANSCO/Distribution Companies.

489. The schedule of Retail Supply Tariff rates and conditions in respect of the four DISCOMS for FY 2001-02 is annexed (Annexure 'D').

CHAPTER – XVIII : TARIFF STRUCTURE
- BULK SUPPLY TARIFF

Transmission and Bulk Supply Tariffs

490. The Commission regulates the Transmission & Bulk Supply Tariffs (payable by the Distribution and Retail Supply licensees to the Transmission and Bulk Supply licensee) and retail tariffs (charged to retail consumers by the Distribution and Retail Supply licensees). As already stated, the Andhra Pradesh Electricity Reform (Transfer of Distribution Undertakings from APTRANSCO to Distribution Companies) Order, 2000 vests the entire area of supply in the state in four Distribution Companies (or DISCOMS) which will be licensees from April 1, 2001.

Methodology for fixing Transmission and Bulk supply Tariffs:

491. APTRANSCO in their filing have proposed a single part bulk supply tariff. Once the infrastructure/information is ready and better load flow studies are available, the Commission expects to structure the BST on a two-part basis comprising of a demand component linked to coincident peak demand and an energy component. Such pricing will help the DISCOMS to improve overall load profile and reduce cost of power purchased. In the present calculation, the estimated BST is the weighted average bulk supply tariff.

492. In the wake of multiple DISCOMS, maintenance of uniform retail tariff in the State impacts on the fixing of bulk supply tariffs by the Transmission Company. The principle of level playing field suggests the need for the Transmission Company, especially since it is a natural monopoly, to charge uniform bulk supply tariffs to all who purchase power. The issue for the

Commission is how far one can ensure uniform bulk supply tariffs while retaining uniform retail tariffs.

493. In the transition period, the historical factors which have shaped the DISCOMS stand in the way of simple uniform bulk supply tariff and uniform retail tariff. The area of supply vested in one DISCOM as per the Second Transfer Scheme varies significantly from others, among other things, in terms of consumer mix (i.e., the proportion of different consumer categories). The differences in consumer mix between DISCOMS result in differences in cross-subsidy available to the different DISCOMS:

494. Section 26(8) of the Reform Act directs the Commission to "endeavour to fix tariffs in such manner that, as far as possible similarly placed consumers in different areas pay similar tariff". To implement this mandate, the Commission has to re-balance the surplus and deficit in cross-subsidy available with DISCOMS, to ensure that the retail tariff is the same.. This can be reflected either as a financial transfer between DISCOMS operated through a pool or incorporated as a differential in bulk supply tariff charged to DISCOMS.

495. Charging a differential Bulk Supply Tariff is preferred for the ease of its operation.

496. In the future, the extent of differential in the bulk supply tariffs charged to DISCOMS will gradually reduce in tune with the reduction in extent of cross-subsidy between various classes of consumers. Thus, the bulk supply tariffs will move to a uniform level as the retail tariffs move closer to the actual cost of service. Ultimately, commercial principles will define the bulk supply tariffs to be charged to distribution companies.

497. However, it is important to have an in-built mechanism of monitoring performance and providing performance based incentives to the individual DISCOMS. While, the Commission appreciates the need to separate the

controllable (such as efficiency improvements, better cost control etc) from the uncontrollable factors in setting the bulk supply tariffs, the concern of the Commission is to induce the DISCOMS towards better performance. The Commission proposes to evolve a mechanism in the next six months to ensure that DISCOMS that achieve better than stated efficiency gains are rewarded retention of such gains, and for sharing with its consumers.

Steps involved in calculation of Bulk Supply Tariff

498. APTRANSCO in their filings have proposed a uniform Bulk Supply Tariff (BST) at Rs.2.014 per kwh. This was estimated on the fully allocated cost of APTRANSCOs proposal. Additionally a surcharge for overdrawal of Rs.0.139 per kwh was also indicated.

499. Based on the Commission's approved ARR for APTRANSCO, the bulk supply tariff is Rs.1.961 per kwh. The differential BST ensures that all DISCOMS earn the 16% return according to the financial principles of the Sixth Schedule of Elelectricity (Supply) Act, 1948. To facilitate understanding the differential BST fixation process, the steps involved are outlined below:

(i) The Cost-to-Serve (CoS) is worked out for each of the DISCOMS. The category wise CoS figures are summated across DISCOMS to arrive at an equivalent CoS for the entire state. When calculating the CoS, the full cost BST of Rs 1.961 per unit has been used as the power purchase cost for each of the DISCOMS.

(ii). The per unit Fully Allocated Cost (FAC) is calculated by reducing from the CoS the efficiency gains as proposed by the Licensees and accepted by the Commission. It has thus been ensured that the efficiency gains as proposed by a DISCOM are contained within it.

(iii). The Fully Allocated Cost is adjusted to arrive at Full Cost Tariffs (FCT) by distributing to the subsidised consumer categories the extent of cross subsidy available from the subsidising consumer categories.

(iv). The gap between the revenues at uniform Full Cost Tariffs and the costs of each DISCOM is bridged by the power purchase price. This arises out of the need to comply with Section 26 (8) to maintain uniform tariffs and the Sixth Schedule of the Electricity (Supply) Act, 1948 with respect to the aspect of granting reasonable return.

500. The differential Bulk Supply Tariffs are applicable only for the approved MU. Any additional MU will be charged at full cost BST (1.96) + overdrawal surcharge.

Table No.97
SCENARIO OF FULL COST BULK SUPPLY TARIFFS

(Rs. in Crores)

Revenue	1464.91	1775.48	3256.33	1287.08	7783.79
Subsidy	0.00	0.00	0.00	0.00	0.00
Power Purchase Cost	1360.94	1559.91	3166.67	1234.71	7322.24
Other Cost	191.27	355.28	447.82	232.62	1226.99
Reasonable Return	6.70	11.28	13.26	3.15	34.39
Revenue Requirement	1558.91	1926.48	3627.76	1470.48	8583.62
Non-Tariff Income	46.00	56.00	105.43	91.40	298.83
Net Revenue Requirement	1512.91	1870.48	3522.33	1379.08	8284.79
Efficiency Gains	48.00	95.00	266.00	92.00	501.00
Total Expenditure allowed	1464.91	1775.48	3256.33	1287.08	7783.79
Surplus / (Deficit)	(0.00)	0.00	0.00	0.00	0.00
Bulk Supply Tariff (Rs / kwh)	2.55	1.96	1.89	1.70	1.96

501. The Differential BST so calculated ensures:

(i). That the retail tariffs announced by the Commission are uniform throughout the state as mandated by Section 26 (8) of the Reform Act, 1998.

(ii). That each of the DISCOMS earns the prescribed return as permitted under Schedule VI of Electricity Supply Act, 1948.

Overdrawal Surcharge for DISCOMS:

502. APTRANSCOs energy requirement, to be purchased, of 40,816 MU was drawn up on the basis of the projected energy sales and the overall transmission and distribution loss of 32.3%. The costs are computed based on the merit order selection from the available generation. In keeping with the merit order principles, any overdrawal by the DISCOMS will be available only at higher costs. Keeping this in mind, it is estimated that an additional 2524 MU will be available at the DISCOM interface point at an additional cost of Rs.530 cr. (averaging Rs.2.10 per unit). The overdrawal surcharge is therefore fixed at 13.9 paise per unit (i.e. Rs.2.10 minus Rs.1.961).

GoAP Subsidy and Bulk Supply Tariff

503. As the purpose of the GoAP Subsidy is only to bridge the gap between the full cost tariffs and retail tariffs, there would be no impact on the Bulk Supply Tariffs as calculated above. In the context of sending the right price signal across the value chain, the Commission believes that as far as possible each intermediary should face its respective full costs. It requires to be ensured that APTRANSCO doesn't bear the risk for DISCOMS' business (for e.g. any deviation from the DISCOMS' approved power procurement plan) as APTRANSCO gets a full cost recovery from the BST.

504. A proposal has been made by APTRANSCO that subsidies should be routed through them. A view has also been expressed in certain quarters that this would provide some kind of security for payment for power supplied, once the DISCOMS are privatized. With all the convenience such an arrangement may provide, we do not agree to the proposal. In the first place, the Reform Act contemplates subsidies to particular consumer categories and not the intermediaries. When such subsidies cannot be directly given to the consumers, the next best thing would be to give it to the DISCOMs with a direction to pass on the benefit to the consumer categories concerned. The subsidy payments while ensuring better cash flow for the DISCOMS, would also promote better accountability on the part of the DISCOMS. Such an arrangement is also conducive to the independent functioning of the DISCOMS.

Scenario of Bulk Supply Tariffs – After GOAP Subsidy

505. The following table gives the details of subsidy to be provided and the power purchase costs for each of the DISCOMS based on the differential rates of Bulk Supply Tariff.

Table No.98

(Rs. in Crores)

	APEPDCL	APSPDCL	APCPDCL	APNPDCL	DISCOMS
1. Revenue	**1189.65**	**1401.97**	**2649.01**	**981.75**	**6222.38**
2. Subsidy	**275.26**	**373.50**	**607.32**	**305.33**	**1561.41**
3. Power Purchase Cost	1360.94	1559.91	3166.67	1234.71	7322.24
4. Other Cost	191.27	355.28	447.82	232.62	1226.99
5. Reasonable Return	6.70	11.28	13.26	3.15	34.39
6. Revenue Requirement	1558.91	1926.48	3627.76	1470.48	8583.62
7. Non-Tariff Income	46.00	56.00	105.43	91.40	298.83
8. Net Revenue Requirement	**1512.91**	**1870.48**	**3522.33**	**1379.08**	**8284.79**
9. Efficiency Gains	48.00	95.00	266.00	92.00	501.00
10.Total Expenditure allowed	**1464.91**	**1775.48**	**3256.33**	**1287.08**	**7783.79**
11.Surplus / (Deficit)	0.00	0.00	0.00	0.00	0.00
12.Bulk Supply Tariff Ps/Kwh	**254.90**	**195.70**	**188.80**	**170.10**	**196.10**

506. The Bulk Supply Tariffs to the different DISCOMS are as at the last row of the above table. The Commission directs that the Govt. subsidy payments should be made to the DISCOMS each month.

507. The Commission does not consider the Licensees' revenue calculations as filed to be in accordance with the requirement. The Commission has instead proposed alternative calculations of the expected revenue from charges, which the Licensees shall accept and implement the Tariffs based thereon, as contained in this order.

This Order is signed by the Andhra Pradesh Electricity Regulatory Commission on 24th March, 2001.

(A.V.SUBBARAO)	**(D. LAKSHMI NARAYANA)**	**(G.P.RAO)**
MEMBER	**MEMBER**	**CHAIRMAN**

Annexure 'A'

LIST OF PERSONS WHO SUBMITTED THEIR OBJECTIONS/SUGGESTIONS ON ARR/TARIFF PROPOSALS OF APTRANSCO/DISCOMS FOR FY 2001-2002

(PARA 30)

Sl. No.	Name	Address
1	S/Sri R. Rama Krishnaiah	42/3RT, (No. 76), S. R. Nagar, Hyderabad - 38.
2	Prasad R. K. Chukkapalli	GMK Products Pvt. Ltd., Plot No. B-4, Industrial Estate, Vijayawada.
3	T. Venkateswara Rao	Ex. Mayor, 32-20-6, 1st Mayor Street, Maruti Nagar, Vijayawada
4	S. Subhramanyam	26/14, Chanakyapuri, 6th Street, Malkajgiri Post, Hyderabad.
5	M. Krishna Murthy	Retd., Senior Accounts Officer, SRT-302, Santhnagar, Hyderabad
6	N. S. R. Sastry	16 Navodaya Colony, Mehdipatnam, Hyderabad
7	S. Kishore	Director, K & S Consulting Group, 1st Floor, SDE Serene Chambers, Road No. 7, Banjara Hills, Hyderabad
8	M. Timma Reddy	Peoples Monitoring Group on Electricity Regulation, C/o, Centre For Environment Concerns, 3-4-142/6, Barkatpura, Hyderabad
9	Ch. Venkateswarlu	President, AP Electricity Consumers Forum, 33-10-14, Sitarampuram, Vijayawada-2
10	G. R. Ram	Deccan Cements Ltd., 6-3-666/B, Deccan Chambers, Somajiguda, Hyderabad
11	D. Ramaswami Reddy	Retd., SE, APSEB, 21/72, Trunk Road, Opp, Collector's Office, Cuddapah
12	Pr. U. Murali Krishna	6-20-19, Jemini, East Point Colony, (NE), Visakhapatnam.
13	B. Seshagiri Rao	General Secretary, Khammam District Consumers Care Society, Sudhanilayam, H. No. 12-36/3, Gandhi Nagar, New Paloncha, Khammam District *[Deleted because It is not partaining to Tariff]*
14	A. K. Rawal	Chief Electrical Distribution Engineer, South Central Railway, 4th Floor, C-Block, Railnilayam, Secunderabad
15	K. Rajendra Reddy	Convenor, Rashtriya Raithu Seva Samithi, P. Kotha Kota, BPO, Via Pakala Post, Chittoor.
16	A. Venkatarama Reddy	M.D, LVS Power Limited, 6-3-596/47/A/3, Road No. 8, Khairatabad West, Hyderabad
17	M. Kodanda Reddy	206, AK Bhavan, Old MLA Quarters, Hyderabad
18	K. Shankar Reddy	Advocate, 1-7, Lakshminagar Colony, Chittoor.
19	G. V. J. Chowdary	Chittoor Zilla Rytu Samakya, Diguvamagham Village, Thavanampalle Mandal, Chittoor District
20	K. Jagannadha Reddy	Chittoor Zilla Rytu Samakya, Diguvamagham Village, Thavanampalle Mandal, Chittoor District
21	V. Rajinikanta Naidu	Chittoor Zilla Rytu Samakya, Diguvamagham Village, Thavanampalle Mandal, Chittoor District
22	W. Rajanaidu	Chittoor Zilla Rytu Samakya, Diguvamagham Village, Thavanampalle Mandal, Chittoor District

23	M. Sreeramulu Reddy	Chittoor Zilla Rytu Samakya, Diguvamagham Village, Thavanampalle Mandal, Chittoor District
24	Y. Sidhayya Naidu	Chittoor Zilla Rytu Samakya, Diguvamagham Village, Thavanampalle Mandal, Chittoor District
25	J. N. Karamchetti	35, RNR Avenue, Tilak Road, Tirupathi.
26	G. Manoharan	Chief General Manager (Finance), & Company Secretary, Penna Cement Industries, Plot 703, Sriniketan Colony, Road No. 3, Banjara Hills, Hyderabad
27	A. Bhaskar Reddy	Karinapalle Village, P. Kottakota Post, Via Pakala, Chittoor Dt.
28	V. R. Chinaswami Naidu	P. Kottakota Village, Putalapattu Mandal, Chittoor District
29	P. V. V. Satyanarayana	Secretary General, APSEB Engineer's Association, 6-3-663, Somajiguda, Hyderabad
30	D. Shankar Rao	D. No. 5-11-13A, 2/10,Brodipet, Guntur-2
31	R. Keshavulu Naidu	Pakala Mandalam Rytu Seva Sangham, Pakala, Chittoor Dt.
32	G. Manoharan	Director, Sriba Industries Ltd., 703, Sriniketan Colony, Road No. 7, Banjara Hills, Hyderabad
33	M. Venugopal Rao	Special Correspondent Praja Shakti Telugu Daily, 1-7-130/43, Risalagedda, Hyderabad
34	M. R. Prasad	M/s. Ferro Alloys Corporation Ltd., 12 Sriramnagar Colony, Balkampet, Hyderabad.
35	B. V. Raghavulu	CPI(M), AP State MB Bhavan, RTC 'X' Roads, Hyderabad
36	Gopal Shorilal Makad	Director, Best Power Line Ltd., 205, Saptagiri Towers, 1-10-75/ 1to 6, Begumpet, Hyderabad
37	C. S. R. Sarma	Secretary General, APTRANSCO Engineer's Association, Vidyut Soudha, Hyderabad
38	G. R. Chary	General Manager, Finance, Rain Calcining Ltd., 6-3-571/2, 2nd Floor, Rockvista, Rockdale Estate, Somajiguda, Hyderabad
39	Mullapudi Harichandra Prasad	Chairman, The Andhra Sugars Ltd., Venkatrayapuram, Tanuku.
40	K. Raghu	RVK Energy Pvt. Ltd., 6-3-1109/A/1, 3rd Floor, Navbharat Chambars, Rajbhavan Road, Hyderabad
41	P. Ramaih	AP Agricultural Labour Union, 1-1-9/10, Jawaharnagar, RTC 'X' Road, Musheerabad, Hyderabad
42	T. Pavani	Co-ordination Committee of DWCRA, 1-1-9/10, Jawaharnagar, RTC 'X' Road, Musheerabad, Hyderabad
43	M. Venkata Narasimha Reddy	President, AP Rytu Sangham, 1-1-9/10, Jawaharnagar, RTC 'X' Road, Musheerabad, Hyderabad
44	S. Jeevan Kumar	Convenor, HRF, 3-12-117/A2/1, PS Colony, Ramantapur, Hyderabad
45	R. K. Roychowdury	Chief Executive, Nagarjuna Electric Generating Co. Ltd., Nagarjuna Hills, Panjagutta, Hyderabad
46	A. Srinivasa Rao	Honorary Secretary, Citizen Welfare Society, Plot No. 4D, 3rd Floor, Geetanjali Apts., Hidden Bagh, King Koti, Hyderabad
47	S. Kishore	Director, K & S Consulting Group, 1st Floor, SDE Serene Chambers, Road No. 7, Banjara Hills, Hyderabad
48	G. Diwakar	General Secretary, All India Kisan Mazdoor Sabha, Mark Bhavan, 7th Line, Vidyanagar, Hyderabad

49	K. Gopal Chowdary	Advocate, C-13/2, Sainikpuri, Secunderabad, AIEU on (Retail Supply Tariff) OP No. 5 to 8.
50	K. Gopal Chowdary	Advocate, C-13/2, Sainikpuri, Secunderabad, AIEU on (Retail Supply Tariff) OP No. 5 to 8.
51	K. Gopal Chowdary	Advocate, C-13/2, Sainikpuri, Secunderabad, FAPCI on (Bulk Supply Tariff) OP No. 4.
52	A. Venkat Rama Reddy	Managing Director, LVS Power Ltd., 6-3-596/47/A/3, Road No. 8, Khairatabad West, Hyderabad
53	Dr. Rameswar Rao. J	Chairman & Managing Director, My Home Cement Industries Ltd., IV Floor, My Home Jupally, Ameerpet Road, Greenlands, Hyd.
54	V. Bruhat Kumar	General Manager, Navbharat Ferro Alloys Ltd., Nav Bharat Chambers, 6-3-1109/1, Rajbhavan Road, Hyderabad
55	D. Venkateswara Reddy	AP Gas Power Corporation Ltd., Flat No. 202, 2nd Floor, Pancom Chambers, Ameerpet, Hyderabad
56	T. Chidambaram	Vaaraahi Power Generation Ltd., Flat C/3, Plot No. 16, 3rd Floor, Surya Square Apartments, Hindi Nagar, Punjagutta, Hyderabad
57	Satish Narsipur	Larsen & Toubro Ltd., BP Estate, N. H. No. 8, Chhani, Baroda, 391740
58	T. Prabhakar Rao	Telangana Pumpset Farmers Welfare Association, 6-3-634, Khairatabad, Hyderabad
59	Suresh R. Vijayakar	Lok Satta, CORE, Panjagutta, Hyderabad
60	Suresh R. Vijayakar	Lok Satta, CORE, Panjagutta, Hyderabad
61	Suresh R. Vijayakar	Lok Satta, CORE, Panjagutta, Hyderabad
62	Suresh R. Vijayakar	Lok Satta, CORE, Panjagutta, Hyderabad
63	Suresh R. Vijayakar	Lok Satta, CORE, Panjagutta, Hyderabad
64	D. Venkatapati	Priyadharshini Cements Ltd., 34,Green Towers, Srinagar Col. Hyd.
65	K. Gopal Chowdary	Advocate, C-13/2, Sainikpuri, Secunderabad, FAPCI on (Retail Supply Tariff) OP No. 5 to 8.
66	K. Gopal Chowdary	Advocate, C-13/2, Sainikpuri, Secunderabad, AIEU on (Bulk Supply Tariff) OP No. 4.
67	M. Hari Prasada Rao	Harikundan', E-161, Besant Nagar, Madras - 600 090.
68	Boepudi Seshagiri Rao,	General Secretary, Khammam District Consumers CARE Society, Regd Off. H. No. 12-36/3, Gandhi Nagar, New Palvancha, 507 115.
69	C. Parthasarathy	Chairman, Sri Bharathi Co-Op. Urban Bank Ltd., Off. Sundara Sadan, Street No. 5, H. No. 3-6-462/5, Himayathnagar, Hyd - 29.
70	L. N. Prasad	General Secretary, Affliated Private Junior Colleges Managements Association, Andhra Pradesh.
71	A. Bhoomaiah	Convenor, Telangana Jana Sabha, H. No. 1-8-677/14B, Street 4, Padma Colony, Vidyanagar, Hyderabad - 20.
72	C. Kaseem	Convenor, Telangana Student Front, H. No. 1-8-677/ 14B, Street No. 4, Padma Colony, Vidyanagar, Hyderabad - 20.
73	Lakshman Rao	Dattatreya Colony Welfare Assn, Asifnagar, Hyd.Ph No.: 3531880.
74	T. Venkateswara Rao	Ex. Mayor, 32-20-6, 1st Mayor Street, Maruti Nagar, Vijayawada
75	K. C. Kalkura	President, The Andhra Pradesh Hotels Association, 'Sundara Nivas' 6-1-346/3, Near Meera Talkies, Khairatabad, Hyderabad - 4.
76	D. V. L. Narayana	Vice President, Consumer's Assistance & Welfare Centre, 4/14, Brodipet, Guntur - 2.
77	M. Komaraiah	Managing Director, Shalivahana Power Corporation Ltd., 7th Floor, Minerva Complex, S. D. Road, Secunderabad - 3.

78	Kommireddy Narasimha Reddy	Ex. MLA, Bhuvanagiri, Brahmanapaly Village, Bibinagar Mandal, Nalgonda District
79	G.Prabhakar Reddy	Nellore District Prawn's Welfare Society, Indukurpet Mandal, Aqua Rythu Sangham, Indukurpet, Nellore Dist.
80	V.Venkata Swamy	Former Member, APSEB, 49 A, Sundhar Nagar, Hyd - 500 030
81	S.Rama Narayana Reddy	Commissioner Chittoor Municipality, Chittoor Dist.
82	T.Gopala Rao	Principal Secretary & Commissioner, Industrial Promotion, Secretriat, Hyderabad
83	G.Narendranath	Human Activist, Chittoor Dist Rythu Samakhya.
84	Smt.Umashankari	Rashtriya Rythu Seva Samithi, Chittoor Dist.
85	T.Subramanyam Yadav	Sheshapuram, chandragiri Mandal, Chittoor Dist.
86	S.Sudhakar Reddy	Secretary, Ex.MP, CPI A.P.State Council
87	B.V.Raghavulu and 8 others	9 left parties
88	M.G.Gopal	Managing Director, Hyderabad Metropolitan Water Supply And Sewarage Board, Khairatabad, Hyderabad
89	M.V.S.Sastry	Ponnalure, Prakasam Dist., A.P

Annexure 'B'

COMMISSION'S ORDERS ON WAIVERS SOUGHT BY APTRANSCO AND DISCOMS

(PARA 211)

APTRANSCO			
Sl.No	**Section /Form Ref of ERC/ARR Filing**	**Waivers Requested by APTRANSCO**	**Commission's Decision**
1.	Section 1.2.4	The Licensee has sought waiver to file audited accounts for the financial year ended March 31, 2000 & financial year ended March 31,1999 as auditing is continuing.	Licensee is directed to submit Audited Accounts for all years upto FY 2000-01 latest by end of Oct 2001 and in the meantime file a report on the status of completion of audit by end of Aug 2001.
2.	Section 1.2.4	The Licensee has sought waiver from the Commission's guidelines requiring opening balances of "previous year" to be on the basis of audited accounts and instead to base its estimates for FY 2000-01 and FY 2001-02 on provisional accounts of FY 1999-00. The opening balances as on April 1, 2000 are provisional estimates and are based on the disaggregated financial statements of the Second Transfer Scheme	Requirement waived for this filing only.
3.	Section 1.2.4	The Licensee has sought waiver to estimate figures for the current financial year on the basis of the actual figures for the first six months of the current financial year and audited figures for the second six months of the previous year. Audited figures for the second half of the previous year are not available.	Waiver approved for this filing only.
4.	Form 1.1a, 1.1b. 1.1.e, 1.1g	The Licensee has requested waiver from providing a roll-forward of balance required by the Guidelines for the previous year ending March 31, 2000 as the disaggregated financial statements for the previous year are being finalised and the Licensee is unable to provide the information.	Waiver granted for this filing only. Licensee to ensure that need to waive does not arise for the next filing.
5.	Form 1.1a, 1.1b. 1.1.d	Licensee has sought waiver from providing the following information as required by the Guidelines due to deficiencies in the accounting and information systems. • Voltage-wise break up of Fixed Asset and Depreciation.	Waiver granted for this filing only. Licensee to ensure that the deficiencies in the accounting and information systems are rectified latest by end of Oct 2001 and file a compliance report by 15.11.2001.

		• Full details of capital expenditure in the prescribed format.	
6.	Form : 3.1(a), 3.1(b), 3.1.(c), 3.2(a), 3.2(b), 3.3	The Licensee has requested waiver from providing details in the required formats for the previous year and the first two months of the current financial year as, based on the interface metering implemented during the current year, details of transmission losses are available only for the five months ended October 31, 2000.	Waiver granted for this filing only.
7	Voltage class-wise information Form: 4.4 to 4.8	Modifying the Forms for Discom wise data instead of voltage class wise data as given in the guidelines.	Waiver granted for this filing only.
8	8.2(a) Form: 2.1	Statement of Current Tariffs	Waiver granted for this filing only.
9	8.2 (e) Form:4.3	Estimated Change in Annual expected revenue	Waiver granted for this filing only.
10	8.2 (f) Form:4.4	Submitting embedded cost study by voltage level	Waiver granted for this filing only.
11	8.2 (g) Form:4.5	Submitting Marginal Cost Study	Waiver granted for this filing only.
12	8.2 (h) Form:4.5	Statement of efficiency of price signals by the proposed tariff vis-à-vis marginal cost per unit	Waiver granted for this filing only.
13	Form:4.6	Submitting embedded cost study	Waiver granted for this filing only.
14	9.1.1 Form:4.7	Cross subsidy statement with Marginal cost revenues	Waiver granted for this filing only.
15	9.2 Form:4.4, 4.8	Allocation of external subsidy by voltage classes	Waiver granted for this filing only.

DISCOMS			
1.	Section 1.2.4	DISCOMS have sought the following waiver with regard to audited accounts: i) waiver to file audited accounts for the financial year ended March 31, 2000. ii) The opening balances as on April 1, 2000 are provisional estimates; the disaggregated financial statements as per the Second Transfer Scheme used as a basis for preparing estimates of ARR elements are expected to be finalised by March 31, 2001. iii) DISCOMs have sought waiver to estimate figures for the current financial year on the basis of the actual figures for the first six months of the current financial year as audited accounts for FY 1999-00 are not available.	Waiver granted Noted. DISCOMS to file current status by end of Oct 2001. Commission note that the audited accounts for 1999-00 are not available
2.	Form 1.1a,1.1b,1.1g, 4.4, 4.8	i) DISCOMs have sought waiver from providing fixed assets break up and embedded cost study by voltage, as voltage-wise classification of assets is not available. ii) Due to deficiencies in the accounting and information systems, the following information could no be provided in the formats required by the Guidelines: • Category-wise break up of Fixed Asset and Depreciation balances at the beginning of the previous year • Opening balance, additions and repayment of loans for the previous year	Waiver granted for this filing. For next filing data have to be provided. Progress in this direction to be submitted quarterly. Waiver granted for this filing. For next filing data have to be provided. Progress in this direction to be submitted quarterly
3.	Section 1.2.2. And 1.2.3	Due to lack of comprehensive metering of agricultural consumers, the estimates of agricultural consumption and of distribution losses are tentative.	Waiver granted for this filing only.
4	Form 4.5, 4.7	DISCOMs have sought waiver form submitting marginal cost study, statement of efficiency of price signals, and cross subsidy statement with marginal cost revenues.	Waiver granted for this filing only
5	Form 4.6	DISCOMs have sought waiver from submitting embedded cost study	Waiver granted for this filing only.

Annexure 'C'

List of Directives

Metering

1. The Commission hereby directs that the licensee shall ensure that:

   (i). Metering for individual agricultural services is completed by March, 2003.

   (ii). All new agriculture connections including unauthorized agriculture connections if any regularised are metered with immediate effect.

   (iii). All dysfunctional meters are set right within 3 months of this Order. All new meters to be fixed within the same period of 3 months.

   (iv). All service connections to all consumer categories except LT Agriculture are metered, as per schedule given below:

   (a). Sugarcane crushing is metered with immediate effect.

   (b). Aquaculture is completely metered within 3 months i.e. by June 30, 2001.

   (c). All street lights and public water supply (PWS) schemes are metered. In case of towns and municipal corporations, all streetlights and PWS are metered within 6 months. The balance are metered by December 31, 2001.

(Para 210)

Installation of 0.2 Accuracy Class Meters

2. The Commission directs that the Licensees shall complete by 31st October 2001' the installation of 0.2 accuracy class meters at all interface points where the ownership of power changes.

(Para 159)

Unauthorised Connections

3. All unauthorised agriculture connections should either be regularised by arranging the required funds or disconnected within three months.

(Para 150)

Power Supply to Agriculture

4. Regulated 9 hrs supply to agriculture should be strictly enforced. Any purchase of power for additional supply to agriculture can be only with the prior approval of the Commission.

(Para 148)

Multiple Connections

5. Licensees to launch a special drive to identify multiple service connections in dwelling, commercial, industrial and other units and disconnect made retaining single connections only within four months of this Order.

(Para 223)

Census of Agricultural Pumpsets

6. The study for census of agricultural pumpsets directed to be conducted in the last Tariff Order shall be completed by the end of October, 2001.

(Para 147)

Energy Audit

7. The Licensee shall conduct regular and thorough energy audit and the information shall be filed in the format that has already been given to APTRANSCO and the DISCOMS.

(Para 145)

Efficiency Gains

8. The methodology for assessment of efficiency gains to be made by the Licensees shall be prescribed by the Commission in consultation with the Licensees. The Commission directs that the progress reports on efficiency gains in the manner prescribed by the Commission shall be submitted by the Licensees to the Commission on a monthly basis.

(Para 177)

Formation of Trusts

8. The Licensee is directed that till such time the trusts are formed, the amounts accruing through tariff on this account are credited with immediate effect on a monthly basis to the non-drawal bank accounts already opened with the State Bank of Hyderabad. A certificate of compliance should be filed with the Commission at the end of every month. The Licensee is also directed to file within two months from the date of this order a report detailing the status of action regarding the formation of Trusts for Pension and Gratuity.

(Para 287, 319, 352, 386 & 420)

Receivables

9. The Commission directs the DISCOMS to pursue vigorously the review of receivables stated as having been already instituted and collect the arrears on priority making use of the statutory instruments available to Licensees to effect recovery. The progress in this regard shall be reported to the Commission on a monthly basis.

(Para 216)

Sales Database

10. The DISCOMS shall build a comprehensive data base for which each company shall put the required software in place and store the billing information in a consolidated form for each Circle/accounting division and file the same with the Commission as and when required. The Licensees shall keep all such information for a period of 10 years and use this data base as reference for future sales projections in subsequent filings.

(Para 217)

Distribution Transformer Failures

11. The Commission directs that the Distribution Transformers failures are to be limited to no more than 18% for APCPDCL, APSPDCL and APNPDCL and 15% for APEPDCL for FY 2001-02. Action plans shall be filed with the Commission by the DISCOMS before 31st May, 2001.

(Para 164)

Bulk Supply Agreement (BSA)

12. The Commission directs that each of the four Distribution Companies shall enter into a Bulk Supply Agreement (BSA) with the APTRANSCO and get the approval of the Commission for the agreement. Within two months this agreement will form the basis of commercial transaction between the APTRANSCO and the Distribution Companies and contain detailed terms and conditions regulating bulk supply of power.

(Para 195)

Power Purchase Agreements (PPAs)

13. The Commission directs that all PPAs concluded shall be made available for inspection to the general public. APTRANSCO shall maintain a data room wherein certified true copies of all such PPAs shall be kept for inspection. Copies of the documents shall be made available to the interested parties at reasonable photocopying charges.

(Para 179)

Details of Projects where investment exceeds Rs.5 cr.

14. The Commission directs that the Licensee has to separately approach the Commission with full details in respect of each project with all the prescribed detailf for obtaining the Commission's approval under para 10 of the licence where according to extant Licence conditions the value of the project/scheme exceeds Rs.5 crores.

(Para 248, 297, 331, 364 & 398)

Annexure 'D'

SCHEDULE OF RETAIL TARIFF RATES AND TERMS & CONDITIONS IN RESPECT OF THE FOUR DISCOMS FOR FY - 2001-02

(Para 489)

PART 'A' - H.T. TARIFFS

These tariffs are applicable for supply of Electricity to H.T. Consumers having loads with a contracted demand of 70 KVA and above and/or having a connected load exceeding 75 H.P/56 KW excepting the optional category under LT III(B).

H.T. Category-I

This tariff is applicable for supply to all H.T. Industrial Consumers. Industrial purpose shall mean manufacturing, processing and/or preserving goods for sale, but shall not include shops, Business Houses, Offices, Public Buildings, Hospitals, Hotels, Hostels, Choultries, Restaurants, Clubs, Theaters, Cinemas, Railway Stations and other similar premises not withstanding any manufacturing, processing or preserving goods for sale. The Water Works of Municipalities and Corporations and any other organisation come under this category.

A) DEMAND CHARGES

Per KVA of Billing Demand .. **Rs.170** per KVA per month

PLUS

B) ENERGY CHARGES

For first 1 Lakh Units per month .. **376** Paise per Unit
Next 1 Lakh Units per month .. **390** Paise per Unit
Balance units during the month .. **395** Paise per Unit

IMPORTANT

i) The billing demand shall be the maximum demand recorded during the month or **80%** of the contracted demand whichever is higher.

ii) Energy charges will be billed on the basis of actual Energy consumption or **50 units** per KVA of billing demand whichever is higher

FSA will be extra as applicable

Notes:

1) Incentive

a) The following telescopic incentives are applicable for consumers for use of Licensee supply:

Load Factor	Discount applicable on the energy rates
More than 40% upto 50%	10%
More than 50% upto 60%	15%
More than 60% upto 70%	20%
More than 70%	25%

(iii) b) The incentive is applicable for the consumption in excess of the average monthly consumption for the FY 2000-01 and the actual consumption for the corresponding month of the FY 2000-01 and only if the consumer does not have any outstanding dues to APTRANSCO/Distribution Companies. This scheme is applicable for new consumers also.

2) Consumption of energy for lights and fans in factory:

The consumption of energy for lights and fans in the factory premises in excess of **10%** of total consumption shall be billed at **450** paise per unit provided lights and fans consumption in the Unit is separately metered.

3) Case of non-segregation of fans and lights

In case segregation of lights and fans loads has not been done, **15%** of the total energy consumption shall be billed at **450** paise per unit and the balance at H.T. Category-I rates.

4) Colony Consumption

The consumption of energy exclusively for the residential colony/ township in a month, separately metered with meters installed by the consumer and tested and sealed by the Licensee shall be billed at **320** paise per unit.

5) Seasonal Industries

Where a consumer avails supply of energy for manufacture of sugar or ice or salt, decorticating, ginning and pressing, tobacco processing and redrying and for such other industries or processes as may be approved by the Commission from time to time principally during certain seasons or limited periods in the year and his main plant is regularly closed down during certain months of the year, he may be charged for the months during which the plant is shut down (which period shall be referred to as the **off-season** period) as follows under H.T. Category-II rates.

DEMAND CHARGES	
Based on the Recorded Maximum Demand or **30%** of the Contracted Demand whichever is higher	Rs.**170** per KVA/Month.
PLUS	
ENERGY CHARGES	
For all the units of energy consumed	**450** Paise / unit.
FSA will be extra as applicable	

This concession is subject to the following conditions:

i) Consumers, classified as seasonal load consumers, who are desirous of availing the seasonal benefits shall specifically declare their season at the time of entering into agreement that their loads should be classified as seasonal loads.

ii) The period of season shall not be less than 4(four) continuous months.

iii) Existing eligible consumers who have not opted earlier for availing of seasonal tariffs will also be permitted to opt for seasonal tariff on the basis of application to the concerned Superintending Engineer of the Licensee

iv) The seasonal period once notified cannot be changed , during one Tariff year.

v) The off-season tariff is not available to composite units having seasonal and other categories of loads.

vi) The off-season tariff is also not available for such of those units who have captive generation exclusively for process during season and who avail supply from Licensee for miscellaneous loads and other non-process loads.

vii) Any consumer who after declaring the period of season consumes power for his main plant during the off-season period, shall not be entitled to this concession during that year.

H.T. CATEGORY-II

This tariff is applicable to all H.T. Consumers other than those covered under other H.T. Categories:

A) DEMAND CHARGES

Per KVA of billing Demand .. Rs.**170** /KVA/Month

PLUS

B) ENERGY CHARGES

For all units consumed During the month .. **450** Paise per unit

IMPORTANT

i) The billing demand shall be the maximum demand recorded during the month or **80**% of the contracted demand, whichever is higher.

ii) Energy charges will be billed on the basis of actual Energy consumption or **25 units** per KVA of Billing Demand, whichever is higher.

FSA will be extra as applicable

Note

(i) In respect of Government controlled Auditoriums and Theaters devoted purely for purpose of propagation of art and cultural activities and are not let out with a profit motive and in respect of Charitable Institutions rendering totally free service to the general public the overall unit rate (including customer charges) may be limited to the tariff rates under L.T. Category-VII General purpose in specific cases as decided by the Licensee.

H.T. Category-III (Deleted)

H.T. Category-IV - IRRIGATION AND AGRICULTURAL

This tariff is applicable for consumers availing H.T. Supply for Irrigation and Agricultural purposes only.

Rates:		
Flat Rate Tariff	..	**Rs.400/- per HP** per Annum on the Contracted Load.
Metered Tariff **(Optional)**		**35 Paise/Unit** subject to minimum of **Rs.300/HP/Year** of Contracted Load

NOTE:

1. If the consumer does not maintain the capacitors of requisite capacity as indicated in part (D) the consumer attracts the penal provisions as per the conditions of supply.

2. The existing metering will be continued and Energy reading will be taken even in cases where the Flat rate tariff is applicable.

3. The Low Power Factor surcharge condition mentioned in General conditions of HT Supply shall be applicable for those who opt for metered tariff.

H.T. Category-V - RAILWAY TRACTION

This tariff is applicable to all H.T. Railway Traction Loads.

NO DEMAND CHARGES

ENERGY CHARGES

For all units consumed ..**460** paise per unit

IMPORTANT

Energy charges will be billed on the basis of actual energy Consumption or **32 units** per KVA of Contracted Maximum Demand whichever is higher.

FSA will be extra as applicable

HT CATEGORY -VI - TOWNSHIPS AND RESIDENTIAL COLONIES

This tariff is applicable to H.T. supply exclusively for Townships, Residential Colonies of consumers under HT categories I to V and bulk supplies for domestic purpose such as lighting, fans, heating etc., provided that the connected load for common facilities such as Non Domestic supply in residential area, Street Lighting and Water Supply etc., shall be within the limits specified hereunder:-

Water Supply & Sewerage and Street Lighting put together -- **10%** of total connected load

Non-Domestic/ Commercial and General Purpose put together -- **10%** of total connected load

NO DEMAND CHARGES

ENERGY CHARGES

For all units consumed .. **320** paise per unit

IMPORTANT

Energy charges will be billed on the basis of actual consumption or **25 units** per KVA of Contracted Maximum Demand, whichever is higher.

FSA will be extra as applicable

CONDITIONS

i) The consumer shall lay suitable internal distribution lines at his own cost and maintain the same in accordance with the statutory rules and Licensee's directions if any.

ii) The bulk supply consumers as well as the HT consumers who avail separate HT supply under this category for supply of electricity to individuals, shall obtain permission of the Commission under amendment to APERC (Conduct of Business) Regulations 2000 (Regulation No.8), and subject to conditions mentioned thereunder.

GENERAL CONDITIONS OF H.T. SUPPLY

The foregoing tariffs are subject to the following conditions:-

(1) **A. VOLTAGE OF SUPPLY**

The voltage at which supply has to be availed by HT consumers shall be:

For Total Contracted Demand with the Licensee and all other sources like A.P.G.P.C.L., Mini Hydel, Wind Power, MPPs, Co-Generating Plants etc.

Upto 1500 KVA	11000 Volts
1501 KVA to 5000 KVA	33000 Volts
Above 5000 KVA	132000 Volts or 220000 Volts as may be decided by Licensee

B. VOLTAGE SURCHARGE

(1) H.T. consumers who are now getting supply at voltage different from the declared voltages and who want to continue taking supply at the same voltage will be charged as per the rates indicated below:

Sl. No	Contracted Demand with TRANSCO and other sources	Voltage at Which supply should be availed	Voltage at Which Consumer is availing supply charge	Rates % Extra Over Normal Rate	
				Demand Charge	Energy Charge
	KVA	KV	KV	KVA	Kwh
1.	70 to 1500	11	6.6 or below	12%	10%
2.	1501 to 5000	33	11 or below	12%	10%
3.	Above 5000	132 or 220	66 or below	12%	10%

Note: The FSA will be extra as applicable

(2) MAXIMUM DEMAND

The maximum demand of supply of electricity to a consumer during a month shall be twice the largest number of Kilo-Volt- Ampere Hours (KVAH) delivered at the point of supply to the consumer during any consecutive 30 minutes in the month. However, for the consumers having contracted demand above 4000 KVA the maximum demand shall be four times the largest number of Kilo-Volt-Ampere-Hours(KVAH) delivered at the point of supply to the consumer during any consecutive 15 minutes in the month.

(**3) BILLING DEMAND**

The billing demand shall be the maximum demand recorded during the month or **80%** of the contracted demand whichever is higher.

(4) MONTHLY MINIMUM CHARGES

Every consumer whether he consumes energy or not shall pay monthly minimum charges calculated on the billing demand plus energy charges specified for each category in this part to cover the cost of a part of the fixed charges of the Licensee.

(5) SUPPLY TO TOWNSHIPS OR RESIDENTIAL COLONIES OF H.T. CONSUMERS

Consumers of High Tension supply except those coming under H.T. Category - VI may, with the permission of the Commission under Amendment to APERC (Conduct of Business) Regulations 2000 (Regulation No. 8), and subject to the conditions mentioned thereunder supply electricity after converting it into Low Tension at their own cost for the township or residential colonies attached to the consumer's establishment for domestic purposes like lighting, fans and heating to their employees or others residing therein and for any non-domestic supply in the residential area and street lighting of such residential colony.

CONDITIONS

i) The consumer shall lay suitable internal distribution lines at his own cost and maintain the same in accordance with the statutory rules and Licensee's directions, if any.

ii) Such HT consumers have to obtain permission from the Commission as required under the amendment to APERC (conduct of Business) Regulations 2000 (Regulation No.8)

(6) SURCHARGE FOR LOW POWER FACTOR

The power factor for the month shall be the ratio of Kilo-Watt hours to the Kilo-Volt-Ampere Hours supplied to the consumer during the month. The power factor shall be calculated upto two decimal places. The power factor of the consumer's installation shall not be less than 0.90. If the power factor falls below 0.90 during any month, the consumer shall pay a surcharge as detailed below:

S.No	Power Factor Range	Surcharge
1.	Below 0.90 & upto 0.85	1% of C.C.charges bill of that month for every 0.01 fall in Power Factor from 0.90
2.	Below 0.85 & Upto 0.80	1.5% of C.C. charges bill of that month for every 0.01 fall in Power Factor from 0.85
3.	Below 0.80 & Upto 0.75	2% of C.C.charges bill of that month for every 0.01 fall in Power Factor from 0.80
4.	Below 0.75	3% of C.C.charges bill of that month for every 0.01 fall in Power Factor from 0.75

Should the power factor drop below 0.75 and so remain for a period of 2 consecutive months it must be brought upto 0.90 within a period of 6 months by methods approved by the Licensee failing which, without prejudice to the right of the Licensee to collect surcharge and without prejudice to such other rights as having accrued to the Licensee or any other right of the Licensee, the supply to the consumer may be discontinued.

(7) ADDITIONAL CHARGES FOR MAXIMUM DEMAND IN EXCESS OF THE CONTRACTED DEMAND

If in any month the recorded maximum demand of the consumer exceeds his contracted demand (with Licensee), that portion of the demand in excess of the contracted demand will be billed at twice the normal charges.

8) Temporary Supply at HT

i) <u>For new connections:</u> Temporary supply at High Tension may be made available by the Licensee to a consumer, on his request subject to the conditions set out herein-after as also in Part-C. Temporary supply shall not ordinarily be given for a period exceeding 6(six) months. The electricity supplied to such consumer shall be charged for, at rates 50% in excess of the rates set out in the H.T. Tariffs applicable subject to, however, that the billing demand for temporary supply shall be the contracted demand or the recorded maximum demand registered during the month whichever is higher.

ii) Existing consumers requiring temporary supply or temporary increase in supply:

If any consumer availing regular supply of electricity at High Tension requires an additional supply of electricity at the same point for a temporary period, the temporary additional supply shall be treated as a separate service and charged for as in Clause(i) above, subject to the following conditions:

a) The contracted demand of the temporary supply shall be the billing demand for that service. The recorded demand for the regular service shall be arrived at by deducting the billing demand for the temporary supply from the maximum demand recorded in the month.

b) The total energy consumed in a month including that relating to temporary additional supply, shall be apportioned between the regular and temporary supply in proportion to the respective billing demands.

9) ADDITIONAL CHARGES FOR BELATED PAYMENT OF CHARGES

The consumer shall pay an additional charge at 0.07 paise per rupee per day of delay on the amount of the bill for the period of delay if he does not pay the bill within the prescribed period. The amount of additional charges shall be rounded off to nearest paisa.

10) CUSTOMER CHARGES

Every consumer of H.T. electricity shall in addition to demand and energy charges billed as per tariff applicable to them, pay customer charges as applicable.

11) The Tariffs are exclusive of Electricity charges payable as per the provisions of Electricity Duty Act.

12) These rates are applicable in the areas of operation of 4 (four) Distribution Companies viz., (i) Andhra Pradesh Eastern Power Distribution Company Limited, Andhra Pradesh Central Power Distribution Company Limited, Andhra Pradesh Northern Power Distribution Company Limited and Andhra Pradesh Southern Power Distribution Company Limited.

PART -'B'

L.T.TARIFFS

System of Supply	Low Tension A.C. 50 Cycles
	Three Phase Supply at 415 Volts
	Single Phase supply at 240 Volts

The tariffs are applicable for supply of Electricity to L.T consumers with a connected load of 56 KW/75 HP and below except the optional category LT-III (B).

<u>L.T. Category-I-Domestic</u>

Applicability

Applicable for supply of energy for lights and fans and other domestic purposes in domestic premises.

Rates

Consumers shall pay electricity charges as shown below:

0-50 units per month	135 paise per unit
51-100	260
101-200	285
201-300	450
301-400	500
above 400	575

Subject to monthly minimum charges of:

Single Phase:

Upto 250 W	**.. Rs.25/ Month**
Above 250 W	**.. Rs.50/ Month**
Three Phase	**.. Rs.150/ Month**

FSA will be extra as applicable

Notes:

1. Three phase supply for domestic purpose will not normally be given. However three phase supply can be considered if three phase supply of the Licensee is available at that point. For loads less than 3KW single phase supply only will be given.

2. If electricity supplied in domestic premises is used for non-domestic and commercial purposes the entire supply shall be charged under L.T.Category-II tariff.

3. For common services like Water supply, common lights in corridors and supply for lifts in multistoried buildings, consumers shall pay electricity charges as follows:

   i) At L.T.Category-I, if the plinth area occupied by the domestic consumers is 50% or more of the total plinth area.

   ii) At L.T.Category-II, if the plinth area occupied by the domestic consumers is less than 50% of the total plinth area.

   iii) If the service in a flat is for domestic purpose, it will be charged at L.T.Category -I (Domestic). If the service in a flat is for commercial or office use or any other purpose which does not fall under any L.T.Category, it will be charged at L.T. Non-Domestic Category-II.

4. Single Point LT services released to residential complexes of State Government/ Central Government Departments under specific orders of Licensee with Contracted Load/ Connected Load in excess of 56 KW/75 HP shall continue to be billed under LT-I Domestic tariff slab rate applicable based on the average monthly energy consumption per each authorized dwelling i.e. total energy consumption in the month divided by the number of such dwelling units, in the respective residential complex.

The above orders are subject to the following conditions, namely:

a). Orders are applicable to Police Quarters and other State/Central Government residential complexes specifically sanctioned by the Licensee.

b). Provided that it is at the request of the designated officer, who shall give an unconditional undertaking that he will pay up the bill for CC charges to the Licensee irrespective of collection from the individual occupants.

c). The consumers shall be billed at the appropriate slab rate in tariff based on the monthly consumption per dwelling unit in the complex.

d). Meter reading shall be taken monthly in all such cases.

MODE OF BILLING AND PAYMENT

The licensee may introduce monthly billing for all consumers instead of bimonthly (once in two months) presently in vogue.

L.T. CATEGORY-II - NON-DOMESTIC AND COMMERCIAL

This will be applicable upto 56KW.

Applicability

Applicable for supply of energy for lights and fans for non-domestic and commercial purposes excluding loads falling under L.T. Categories I, III to VII and shall include supply of energy for lighting, fans, heating and power appliances in Commercial and Non-Domestic premises such as shops, business houses, offices, public buildings, hospitals, hostels, hotels, choultries, restaurants, clubs, theaters, cinema halls, railway stations, Timber Depots, Photo Studios and other similar premises.

The Educational Institutions run by individuals, Non-Government Organisations or Private Trusts and their student hostels are also classified under this category. Exclusions for this would be those that qualify to be under Category LT-VII.

Consumers shall pay electricity charges as shown below:

First 100 Units /month	.. **340 Paise** per Unit
Next 100 Units/ month	.. **665 Paise** per Unit
Balance Units / month	.. **745 Paise** per Unit
Monthly Minimum Charges	.. **Rs. 65** per month for **Single Phase**
	.. **Rs.200** per month for **Three Phase**
FSA will be extra as applicable	

Notes:

1) For Loads less than 5 KW single phase supply only will be given.

2) For loads 35 KW and above, a demand meter shall also be provided.

3) In respect of the complexes having connected load of more than 56 KW/75 HP released under specific orders of Licensee for Single Point Bulk supply, where such complex is under the control of a specified organisation/ agency taking responsibility to pay monthly current consumption bills regularly and abide by the Terms and Conditions of supply as per agreement, the billing shall be done at the highest slab tariff rate under this category. The energy shall be measured at HT. In cases where energy is measured on LT side of the transformer, 3% of the recorded energy during the month shall be added to arrive at the consumption on High Tension side of transformer.

MODE OF BILLING :

The Licensee may introduce monthly billing for all consumers instead of bi-monthly (once in two months) presently in vogue.

L.T.CATEGORY-III (A) - INDUSTRIAL: NORMAL CATEGORY

The tariffs are applicable for supply of electricity to Low Tension Industrial consumers with a Contracted load of 75 HP/56 KW and below including incidental lighting load not exceeding 5% of the total Contracted Load. Industrial purpose shall mean supply for purpose of manufacturing, processing and/or preserving goods for sale but shall not include shops, business houses, offices, public buildings, hospitals, hotels, hostels, choultries, restaurants, clubs, theaters, cinemas, railway stations and other similar premises, notwithstanding any manufacturing, processing or preserving goods for sale. This tariff will also apply to Water Works & Sewerage Pumping Stations operated by Government Departments or Co-operative Societies and pumpsets of Railways, pumping of water by industries as subsidiary function and sewerage pumping stations operated by local bodies. This tariff is also applicable to Workshops, flour mills, oil mills, saw mills, coffee grinders and wet grinders, Ice candy units with or without sale outlets, Goshalas, grass cutting and fodder cuttings units. Further, this tariff is also applicable to:

i) Poultry Farming Units other than those coming under LT Category - IV

ii) Pisciculture and Prawn culture units.

iii). Mushroom production units, Rabbit Farms.

iv). Floriculture in Green Houses.

v). Sugar cane crushing.

Rates:		
First 1000 Units/Month	-	**385** Paise per unit
Balance Units in the month	-	**430** Paise per unit
Fixed Charges	-	**Rs.15** per HP per month On contracted load
Tariff for Pisciculture and Prawn culture units with Contracted Load below 10HP	-	**125 Ps/Kwh**
Sugar cane crushing	-	**50 paise/kwh**
FSA will be extra as applicable		

NOTE :

(i) The Licensee reserves the right to restrict usage of Electricity by the consumers for Industrial purpose during evening peak load hours i.e 17.00 hours to 21.00 hours in any area based on system constraints through notification by the Superintending Engineer of the area from time to time . Violation of this condition by the industrial consumer shall entail disconnection of power supply.

(ii) The Contracted load shall be the connected load required by the consumer and so specified in the agreement as per sanction accorded for the service.

(iii) If the actual connected load for lighting purpose exceeds the prescribed limit of 5%, the energy recorded prorata to the lighting load shall be billed at the LT Category-II highest slab rate. It is not necessary to have a separate service for lighting load in the premises.

(iv) Sugar cane crushing operations will be allowed under existing agricultural connections with the specific permission of DE (Operations).

(v) (a) A demand meter shall be provided for the Consumers with connected load 20HP and above but below 50 HP.

(vi) (b) For loads 50 HP and above the metering will be provided on HT side.

L.T. CATEGORY - III(B) - INDUSTRIAL - OPTIONAL CATEGORY

This Optional tariff is applicable to Small Scale Industrial Units which have been licensed by the Industries Department as bonafide Small Scale Industries and given registration number under Small Scale Industries Registration Scheme with connected loads above 75 HP and upto 150 HP and who wish to avail supply at Low Tension subject to the Conditions mentioned here-under. The applicants should indicate their consent for these conditions, in the application for LT supply. The existing LT Category-III consumers who come under SSI category and who were sanctioned LT supply for connected loads above 75 HP and upto 125 HP subject to certain conditions prior to 15.7.1987, and who did not switch over to HT supply, may also come under this category duly complying with these conditions.

Rates:

Energy Charges:
For all units consumed/month - **430 Ps/Unit**.

Fixed Charges - **Rs.15/HP/Month** of Contracted Load
FSA will be extra as applicable.

<u>Conditions:</u>

i) The maximum Connected Load under this Category shall not exceed 150 HP including incidental lighting load of 5%.The contracted load shall be the connected load required by the consumer and as specified in the agreement as per sanction accorded for the service.

ii) The Contracted Load in HP shall be treated as the contracted demand in KVA.

iii) If the recorded demand exceeds the Contracted Demand mentioned in (ii) above, such excess demand shall be billed at the demand charge prescribed under HT Category-I.

iv) The consumer should erect his own Distribution Transformer and structure initially along with necessary switch gear. The transformer will be maintained by the Licensee

v) For new/additional loads the consumer has to pay Development charges and Service Line Charges as per Licensee Rules as applicable for HT Industrial consumers.

vi) The metering will be on HT side with a HT Trivector Meter along with MD indicator. The energy recorded in the HT meter will be billed at the energy charge mentioned above.

vii). The LPF surcharge is applicable as in the case of HT consumers.

viii) Customer charges shall be as applicable for HT consumers.

ix). The conditions (1) & (3) mentioned in the NOTE under LT Category-III(A) shall be applicable for Category -III(B) also.

L.T. Category-IV

(a) Cottage Industries

Applicable for supply of energy to bonafide small Cottage Industries like power looms having connected load not exceeding 5H.P. including incidental lighting in the premises. Poultry farming units upto 1000 birds strength (subject to certification by A.P.S.M & P.D.C. as to the strength in the poultry farm) come under this category. If the bird strength of birds in the poultry farm exceeds 1,000 birds, electricity supply to such poultry farms shall be classified under L.T. Category-III (A) or HT category I as the case may be according to the connected load.

Rates		
For all units consumed	.. **174 Paise** per unit	
Fixed charges	.. **Rs.10/- per month** per H.P. of contracted load subject to a minimum of Rs.30/- per month.	
FSA will be extra as applicable		

Notes

i) It is not necessary to have a separate service for lighting load in the premises.

ii) Poultry farming units upto 1000 units without certification from APSM &PDC shall be classified under LT Category-III (A) Industrial Tariff.

(b). DHOBIGHATS:

Applicable for Community Dhobighats or Washermen using motive power for pumping water for washing purpose.

Rates:	
i) Upto 3 HP	**Rs.250 /HP/M**
ii) Above 3 HP upto 5 HP	**Rs.400/HP/M**
iii)Above 5 HP and below 10 HP	**Rs.500/HP/M**
iv).10 HP and above	**Rs.600/HP/M**

Note:

i). Consumers under this Category are permitted to use 3 Pilot Lamps of 5 Watts each.

ii). Customer charges of Rs.10 per month per service shall be levied.

L.T. CATEGORY – V – Agricultural

Applicable for supply of electricity for irrigation and agricultural purposes upto a connected load of 75 HP.

Rates

Consumers shall pay electricity charges as shown below:

<table>
<tr><th rowspan="2">S.No.</th><th rowspan="2">Capacity of Pumpset</th><th colspan="2">Tariffs (Rs. per HP/Year)</th></tr>
<tr><th>In DPAP Areas</th><th>In other Areas</th></tr>
<tr><td>i.</td><td>Upto(*) 3 HP</td><td>Rs.200/-</td><td>Rs.250/-</td></tr>
<tr><td>ii.</td><td>Above 3 HP and Upto(*) 5 HP</td><td>Rs.350/-</td><td>Rs.400/-</td></tr>
<tr><td>iii.</td><td>Above 5HP and Upto(*)10HP</td><td>Rs.450/-</td><td>Rs.500/-</td></tr>
<tr><td>iv.</td><td>Above 10 HP (*)
and including</td><td>Rs.550/-</td><td>Rs.600/-</td></tr>
<tr><td colspan="4">* Metered Tariff (Optional):
0 – 2500 Units per annum 20 Ps/Unit
above 2500 Units per annum 50 Ps/Unit</td></tr>
</table>

Note:

1. Agricultural consumers are permitted to use 3 pilot lamps of 5 watts each near the main switch as pilot lamps.
2. Supply to the L.T. Agricultural services will be suitably regulated as notified by Licensee from time to time.
3. Customer charges of Rs.10/- per month per service in terms of Part `C' of the tariff shall be payable by all Agricultural Consumers.
4. A discount of 50% on the monthly energy charges in slab system or metered system will be given as incentive if the agriculture consumer provides the following for his pumping system.

   (i) Friction less foot valve
   (ii) HDPE piping suction and delivery
   (iii) ISI marked monobloc pumpset.
   (iv) Capacitor of adequate rating for the pumpset.

This discount would be continued for a minimum period of 3 years (Three), if the service is metered within 3 months i.e. before 30th June 2001.

L.T. CATEGORY-VI

Applicable for supply of energy for lighting on public roads, streets, thorough fares including parks, markets, cart-stands, bridges and also for PWS scheme in the Local Bodies viz. Panchayats/ Municipalities/ Municipal Corporations. Metering is compulsory irrespective of tariff structure.

Rates:

A. Street Lighting:

Minor Panchayats

For all units consumed .. **148 Paise** per unit

Major Panchayats

For all units consumed .. **198 Paise** per unit

Nagarpalikas & Municipalities Gr.3:

For all units consumed .. **260 Paise** per unit

Municipalities Gr. 1 & 2:

For all units consumed **..** **310 Paise** per unit

Municipalities Selection Spl. Gr.:

For all units consumed **..** **335 Paise** per unit

Corporations

For all units consumed .. **360 Paise** per unit

Minimum charges

Panchayats Rs.2 per point per month

Municipalities/Corporations Rs.6 per point per month

B. PWS Schemes:

Minor Panchayats	Agricultural Tariff as applicable in other areas
Major Panchayats	Agricultural Tariff as applicable In other areas

Nagarpalikas & Municipalities		**Energy charges**	**Fixed charges**
Municipalities Gr.3:			
Upto 1000 Units		**355 Paise/Unit**	
Balance Units	..	**385 Paise/Unit**	
Municipalities Grade 1 & 2:			
Upto 1000 Units		**355 Paise/Unit**	
Balance Units	..	**385 Paise/Unit**	
Municipalities Selection Spl.Gr.	..		**Rs. 20/HP/ Month of Contracted Load subject To a minimum of 5 HP.**
Upto 1000 units		**355 Paise /Unit**	
Balance Units	..	**385 Paise/Unit**	
Municipal Corporations:			
Upto 1000 Units	..	**385 Paise/Unit**	
Balance Units	..	**438 Paise/Unit**	

FSA will be extra as applicable

Notes (Street Lighting):

i). The cost of fittings shall be borne or paid for by the consumers. The responsibility for maintenance including renewals and replacements rests with the Local Bodies viz. Panchayats, Municipalities, Municipal Corporations.

ii) Where the cost of fittings is borne by the Licensee the first supply of filament lamps, flourscent tubes, mercury vapor lamps including special type lamps along with their fittings will be made by the Licensee at its cost. In such cases consumer will have to pay fixed charges as in column(3) below. Where however, the cost of fittings is borne by the consumer but maintenance is done by the Licensee the consumer will have to pay fixed charges as in Column (4) below:

Sl. No (1)	Fittings for (2)	Fixed charges Per Month where the cost of fittings is borne by Licensee (3)	Fixed charges per month where the cost of fittings is borne by the Local Body but maintenance by Licensee (4)
		(Rs.)	(Rs.)
1.	Ordinary Filament Lamp	2.00	1.00
2.	Fluorescent Lamp 40 W Single Fixture	7.00	4.00
3	Flourascent Lamp 40 W Double Fixture	8.00	4.00
4.	M.V. Lamps 80 W Fixture	12.00	6.00
5.	M.V. Lamps 125 W Fixture	15.00	8.00
6.	M.V. Lamps 250 W Fixture	45.00	23.00
7.	M.V. Lamps 400 W Fixture	50.00	25.00

iii). The replacement of filament lamps, fluorescent tubes, mercury vapour and other special type of lamps will be made by the Local Body at its cost. However, in Urban areas till such time the Municipalities and

Corporations make their own arrangements for such replacements the Licensee may, if the consumer so desires, carry out the replacement provided the Local Body supplies the lamps and tubes. The consumer will in such cases be billed labour charges at the rate of Rs. 2 per replacement.

However, in Rural areas, such replacement of bulbs supplied by the Local Body will be made by the Licensee without collecting labour charges. For this purpose the area coming under Gram Panchayat shall constitute 'Rural Area'.

iv). Additional charges: Every local body shall pay an additional charge equivalent to any tax or fee levied by it under the provisions of any law including the Corporation Act, District Municipalities Act or Gram Panchayat Act on the poles, lines, transformers and other installations through which the local body receives supply.

L.T. Category-VII - General Purpose

Applicable for supply of energy to places of worship like Churches, Temples, Mosques, Gurudwaras, Government Educational Institutions and Student Hostels of Government Educational Institutions, and Educational Institutions run by charitable Institutions (Public charitable trusts and societies registered under the Societies Registration Act running educational and medical institutions on a no profit basis) and Recognised Service Institutions.

Rates	
For all the units consumed	.. **430 Paise per unit**
Minimum charges	.. Rs.50 per month for single phase supply
Single phase supply	Rs.150 per month for three phase supply

FSA will be extra as applicable

Note:

1. Licensee may introduce monthly billing for all consumers instead of bimonthly (once in two months).

2. For loads less than 5 KW, single phase supply only will be given.

<u>L.T. CATEGORY-VIII - L.T. Temporary supply</u>

1. For temporary supply of energy to all categories other than Irrigation and Agriculture:

Rates:		
For all units consumed	..	**620 paise per unit**
Minimum charges	..	Rs.125 per KW or part thereof contracted load for first 30 days or part thereof and Rs.75 per KW or part thereof of contracted load for every subsequent period of 15 days or part thereof
FSA will be extra as applicable		

2. **Temporary supply for Agriculture Purpose**:

Rates:		
For all units consumed	..	**230 Ps. /Unit**
Minimum Charge		Rs.100 per HP of contracted load for the first 30 days or part thereof and Rs.50 per HP of contracted load for every Subsequent period of 15 days or part thereof.

CONDITIONS

(i) Service charges (Estimate cost) and estimated energy charges.

The charges shall be paid by the consumer in accordance with the scale of miscellaneous and general charges in force from time to time.

(ii) Regular consumers requiring temporary additional supply:

In cases where consumers availing regular supply of energy require additional supply for temporary period, the additional supply shall be given as a temporary service and charged as such.

General conditions of L.T. Tariff

The foregoing L.T. Tariffs are subject to the following conditions.

1. Classification of Premises

   The Licensee shall have the right to classify or re-classify the supply of energy to any premises under an appropriate category of L.T. Tariff.

2. The connected load of the consumer shall not exceed his contracted load and if the connected load of the consumer is found to be in excess of his contracted load, the provision of Terms and Conditions of supply notified shall be applied.
3. Additional Charges for belated payment of Bills:

   a) The C.C. bills shall be paid by the consumers within the due date mentioned in the bill, i.e. 14 days from date of the bill.

   b) If payment is made after due date, the consumers are liable to pay belated payment charges on the bill amount at the rate of 0.07 Ps. per rupee per day of delay calculated from due date mentioned in the bill upto the date of payment.

   c) If the c.c. bills amount is not paid within 7 days from the due date the power supply is liable for disconnection.

d) For re-connection of power supply after disconnection, the consumer has to pay reconnection fees plus belated payment charges calculated as per para (b) above.

4. The Tariffs are exclusive of Electricity charges payable as per the provisions of Electricity Duty Act.

5. These rates are applicable in the areas of operation of 4 (four) Distribution Companies viz., (i) Andhra Pradesh Eastern Power Distribution Company Limited (APEPDCL), Andhra Pradesh Central Power Distribution Company Limited (APCPDCL), Andhra Pradesh Northern Power Distribution Company Limited (APNPDCL) and Andhra Pradesh Southern Power Distribution Company Limited (APSPDCL)) and 9 (nine) Rural Electric Co-operatives viz., Anakapally, Chepurupally, Siricilla, Kuppam, Sanjay, Rayachoty, Atmakur, Kadiri (East) and Kadiri (West).

Part - `C'

I. Service connection charges.

(1) In respect of the cases involving extension of distribution mains, the extension portion of the scheme will be executed by the Licensee adopting the standards prescribed by the Commission from time to time on payment of service line charges..

(2) The service connection portion from the overhead mains terminated outside the premises of the consumer shall be executed by the consumer as per the standards prescribed the licensee from time time. However, the meter and cutout shall be provided by the licensee.

(3) Service lines for agricultural purpose under L.T. Category- V. Tariff Irrigation and Agricultural purposes shall be laid collecting an amount of Rs.25/- per H.P. of contracted load towards service connection charges.

II. RECONNECTIONS

(a) Low Tension Services.

i). Overhead Services	Rs. 50/-
ii). U.G. Services	Rs.100/-

(b) High Tension Services

i) 11 KV.	Rs.300/-
ii) 33 KV	Rs.500/-
iii) 132/220 KV	Rs.1000/-

III TESTING

(a) Installations:	**L.T.**	**H.T.**

i) The first test and inspection of a new installation or of an extension to an existing installation.	Nil	Nil
ii) Charges payable by the consumer in advance for each subsequent test and/or inspection if found necessary owing to any fault in the installation or to non-compliance of the conditions of supply.	Rs.20/-	Rs.200/-

(b) Meters	**L.T.**	**H.T.**
i) A.C. Single Phase Energy meter	Rs. 10/-	--
ii) A.C. Three Phase Energy meter	Rs .30/-	--
iii) Demand or special type meter	Rs.150/-	Rs.500/-

(c) Transformer Oils:

i) First sample of oil	Rs.150/- per sample
ii) Additional sample of oil of the same equipment received at the same time	Rs.100/- per sample

IV. SERVICE CALLS

(a) Charges for attendance of Fuseman for Low Tension Consumers

i) Replacing of Licensees cut out fuses	Nil
ii) Replacing of consumer's fuses	Rs.3/-

(b) Charges for attendance of Fuseman/Wireman at the consumer's premises during any function or temporary illumination provided a Fuseman/Wireman can be spared for such work	Rs.100/- for each day or part thereof.
(c) Charges for Infructuous visit of Licensee employees to the consumer's premises .	Rs.25/- for each visit when there is no defect in Licensees equipment.

V MISCELLANEOUS CHARGES

(a) Application Registration Fees	
i) For LT Agricultural & Domestic	Rs. 25/-
ii) For all other LT Categories	Rs. 50/-
iii) For all HT Categories	Rs.100/-
(b) Revision of estimates	Rs. 10/-
(c) Fee for rerating of consumer's installation at the request of the consumer. This does not include the additional charges payable by the consumer for increasing his connected load in excess of the contracted load, as provided in Clause 39.7.2 of the Terms and conditions of supply.	Rs. 20/-
(d) Resealing of:	
i) L.T. Meter Cut outs in the consumer's premises	Rs. 5/-

ii) M.D. Indicator meters and other apparatus in the consumer's premises (The aforesaid charges do not include the additional charges payable by the consumer for breaking the seals)	Rs.100/-	
	L.T.	H.T
(e) For changing meter only at the request of the consumer (where it is not necessitated by increase in demand permanently)	Rs.25/-	Rs.100/-
(f) For changing or moving a meter board :	Actual cost of material and labour plus 25% supervision charges on cost of materials and labour.	
(g) Customer charges:		
For all LT Categories inclusive of Agricultural services	Rs.10/- per month	
H.T. Categories:		
a) 66 KV and below	Rs. 400/- per month	
b) 132/220 K.V..	Rs.1000/- per month	
Urgency charges for temporary supply at short notice	Rs. 100/-	

(h) Special rates chargeable for pilferage and malpractice cases

HT & LT All Categories: 3 times the Tariff applicable for the purpose for which power is used.

Supervision/Inspection & checking charges

i) For LT Agricultural and Domestic	Rs. 50.00
ii) For all other LT categories	Rs.150.00
iii) For HT Services	Rs.300.00

VI TEMPORARY SUPPLY

(1) Requests for temporary supply of energy cannot normally be considered unless there is a clear notice of at least one week in the case of domestic and three months in case of other types of supply. If supply is required at a short notice, in addition to the charges mentioned below, an urgency charge, as may be specified by the Licensee be levied.

(2) Estimated cost of the works for making necessary arrangements for supplying energy including the cost of distribution lines, switchgear, metering equipment, etc., as may be worked out on the basis of standards and norms prescribed by the Licensee , from time to time plus cost of dismantling the lines and other works when the supply is no more required less the cost of retrievable material.

(3) (a) Estimated cost of the works payable by the consumer as mentioned herein before shall be paid by him in advance. On completion of the works, a bill for the actual amount payable by the consumer shall be prepared and the difference would be collected from or refunded to the consumer, as the case may be.

(b) In the case of temporary supply of electricity bill of actual expenditure shall be prepared after the lines and other works are dismantled and retrievable material is returned to Stores.

(c) In addition to the aforesaid charges payable by the H.T. Consumers availing temporary supply, they shall pay hire charges at 2% on cost of retrievable material per month or part thereof, for the duration of temporary supply.

(4) (a) The consumer requiring supply on temporary basis shall be required to deposit in advance in addition to service connection charges, estimated energy charges worked out on the basis for use of electricity by the consumer for 6 hours per day and meter rent for the period for which temporary supply is required. Bill for electricity consumed in any month shall be prepared at the tariff applicable and adjusted every month with the estimated energy charges deposited by the consumer. If the balance amount in deposit is found insufficient for the balance period of temporary connection, the consumer shall replenish the deposit, as may be demanded by the Licensee.

(b) In the case of consumers requiring temporary supply for the purposes of Cinema, the estimated energy charges for a minimum period of 3 months shall have to be deposited by the consumer subject to the condition that the consumer shall pay every month energy and other miscellaneous charges for the preceding month and the amount deposited by him in advance shall be adjusted with the last month consumption and the balance amount shall be refunded.

In the event of estimated energy charges deposited by the consumer having been found insufficient, the consumer shall deposit such additional amount, as may be demanded by the Licensee failing which the Licensee may discontinue the supply of electricity.

VII MISCELLANEOUS WORKS

The charges for any work which the Licensee may be required to undertake for the consumer and which is not included in the foregoing schedule, shall be the actual cost of labour and material plus 25% on cost of labour and material to cover overhead charges. The aforesaid charges shall be paid by the consumer in advance.

PART `D'

POWER FACTOR APPARATUS

1. FOR H.T. AGRICULTURAL CONSUMERS

Every H.T. Agricultural Consumer using induction motors shall install L.T. Shunt capacitors of specified rating as given below:

S.No.	Rating of Individual Motor (in HP)	KVAR rating of L.T.Capacitors for various R.P.M. of motors			
		750 RPM	1000 RPM	1500 RPM	3000 RPM
1	Up to 50	15	15	12	10
2	60	20	20	16	14
3	75	24	23	19	16
4	100	30	30	24	20
5	125	39	38	31	26
6	150	45	45	36	30
7	200	60	60	48	40

2. FOR L.T. CONSUMERS

a) Other than welding transformers

Every L.T. Consumer using induction motors shall install L.T. Shunt Capacitors of specified rating as given below:

Sl. No.	Rating of individual Motor (in HP)	KVAR rating of LT capacitors for various R.P.M of motors			
		750 RPM	1000 RPM	1500 RPM	3000 RPM
1.	Upto 3	1	1	1	1
2.	5	2	2	2	2
3.	7.5	3	3	3	3
4.	10	4	4	4	4
5.	15	6	5	5	4
6.	20	8	7	6	5
7.	25	9	8	7	6
8.	30	10	9	8	7
9.	40	13	11	10	9
10.	50	15	15	12	10

Welding transformers

Sl.No	Rating of Welding Transformer In KVA	Rating of Capacitor in KVAR
1	1	1
2	2	2
3	3	3
4	4	3
5	5	4
6	6	5
7	7	6
8	8	6
9	9	7
10	10	8
11	11	9
12	12	9
13	13	10
14	14	11

Sl.No	Rating of Welding Transformer In KVA	Rating of Capacitor in KVAR
15	15	12
16	16	12
17	17	13
18	18	14
19	19	15
20	20	15
21	21	16
22	22	17
23	23	18
24	24	19
25	25	19
26	26	20
27	27	21
28	28	22
29	29	22
30	30	23
31	31	24
32	32	25
33	33	25
34	34	26
35	35	27

NOTE

1. If any such consumer fails to install the capacitors at all or fails to install the capacitors of required rating or the capacitors already installed are found during inspection to be damaged or become defective or ceased to function, the consumer shall attract penal provisions as per conditions of supply

2. Low Power factor surcharge is not applicable for the consumers under the flat rate tariff. Instead, these consumers are required to install L.T.Shunt

Capacitors of specified rating as indicated in these Tariffs annexed , failing which they are liable to pay capacitor surcharge at the rates indicated in Part-'D'. In case the L.T.shunt capacitors of specified rating are not installed within one month period from date of notice after detection, without prejudice to right of the Licensee to collect surcharge and without prejudice to such other rights having accrued to the Licensee or any other right of the Licensee, the supply to the consumer may be discontinued. The consumer attracts the penal provision as per the conditions of supply.

3. In case the rated capacity of the welding transformer falls in between the steps of the stipulated ratings, the capacitors suitable for the next higher step shall be installed by the consumer.

4. The failure on the part of the consumer to comply with the above requirement, shall be treated as violation of terms and conditions of the supply and the Licensee can terminate the contract and collect the sum equivalent to the minimum charges for the balance initial period of agreement.