Andhra Pradesh Electricity Regulatory Commission
Hyderabad

O.P. NO. 495/2003
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Dated:23.03.2004

Present: Shri.G.P. Rao, Chairman
Shri. K Sreerama Murthy, Member
Shri Surinder Pal, 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’ or ‘APERC’**) having heard the consumers, representatives of various consumer organizations, political parties, the Staff of the Commission representing the consumers on the 16th and 17th February, 2004 at Hyderabad and on the 19th and 20th February 2004 at Tirupati, the Principal Secretary, Energy Department, Government of Andhra Pradesh on the 17th February 2004 at Hyderabad, the Chairman & Managing Director, APTRANSCO, Director (Commercial & Coordination), APTRANSCO, the Chairmen and Managing Directors of the Distribution Companies (DISCOMS) and having consulted the members of the State Advisory Committee on the 1st March, 2004 and having considered the documents available on record, passed the following order:-

CHAPTER – I
INTRODUCTION

1. (a). The Electricity Act 2003 (Central Act No 36 of 2003), hereinafter called "the Central Act", came into force with effect from 10-06-2003 and the previous Acts governing the electricity supply in the country Viz., the Indian Electricity Act 1910 (9 of 1910), the Electricity (Supply) Act 1948 (54 of 1948), and The Electricity Regulatory Commissions Act 1998 (14 of 1998) are repealed. The provisions of A.P Electricity Reform Act 1998 (hereinafter called 'the Reform Act'), not inconsistent with the provisions of the Central Act, however continue to apply to the State of Andhra Pradesh. The first proviso to Section 14 of the Central Act specifies that any person already engaged in the business of transmission or supply of electricity under the Reform Act on or before the appointed date i.e. 10.06.2003 shall be deemed to be a licensee under the Central Act and the provisions of Reform Act in respect of such licence shall apply for a period of one year from the date of commencement of the Central Act (10th June, 2003) and thereafter the provisions of the Central Act shall apply to such business.

(b). The Transmission Corporation of Andhra Pradesh Limited (APTRANSCO) is the holder of Transmission and Bulk Supply Licence (Licence No. 1/2000) to carry out the transmission and bulk supply business in Andhra Pradesh for a period of 30 years from 1-2-2000. The four Distribution Companies (DISCOMS) namely, Eastern Power Distribution Company of A.P Limited (APEPDPCL), Central Power Distribution Company of A.P Limited (APCPDCL), Northern Power Distribution Company of A.P Limited (APNPDCL) and Southern Power Distribution Company of A.P Limited (APSPDCL) are the holders of Distribution and Retail Supply Licences (Licence Nos. 12/2000, 13/2000, 14/2000 and 15/2000 respectively) to carry out distribution and retail supply business in their respective areas of Andhra Pradesh (A.P.) for a period of 30 years from 01.04.2001.

2. The proviso to Section 61 of the Central Act specifies that the terms and conditions for determination of tariff under the Electricity (Supply) Act 1948, the Electricity Regulatory Commissions Act 1998, and the Reform Act shall continue to

apply for a period of one year or until the terms and conditions are specified under Section 61 of the Central Act, whichever is earlier. So, far, the terms and conditions are not specified u/s 61 of the Electricity Act, 2003. Consequently, each licensee is obliged to file before the 31st December, in terms of Section 26 (5) of the Reform Act, read with Andhra Pradesh Electricity Regulatory Commission (Conduct of Business) Regulations 1999 as amended in Regulation No. 8 of 2000, the Guidelines for Revenue and Tariff Filings framed by the Commission dated:7-10-1999 ("the Guidelines") and the provisions of licences, its calculations related to each licenced 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 (if any) and a general explanation on how it proposes to deal with the revenue gap.

3. (a) The APTRANSO submitted its filings on 24-12-2003 for the Aggregate Revenue Requirement and Tariff proposals for the FY 2004-05, in respect of the following components of its existing licenced business:

(i) Bulk Supply Tariff
(ii) Transmission charges, and
(iii) State Load Despatch Centre (SLDC) charges

(b) The four Distribution Companies filed separately their Aggregate Revenue Requirement (ARR) and Tariff proposals for the FY 2004-05 for distribution and retail supply business on 24-12-2003.

(c) The Commission has to determine the tariffs for FY 2004-05 for Transmission, Bulk Supply, Wheeling and Retail Supply as per the provisions of Section 62 read with Section 86 (1) (a) of the Electricity Act, 2003, based on the filings of APTRANSCO and DISCOMS and considering the objections/suggestions received/heard from general public, on the filings.

CHAPTER – II
REVIEW OF TARIFF FILINGS FY 2003-04

4. The Commission approved Tariffs for FY2003-04 on 24-03-2003. That was the fourth tariff order of the Commission. While the first tariff order attempted the initial steps towards reforms in the electricity sector, the second and third orders focused on rationalization and consolidation; the emphasis in the fourth order was on strengthening institution-building, greater transparency, accountability and laying the foundations for performance-based regulation. Towards this end, a number of steps were initiated. It is also in the context of moving gradually to performance-based regulation that the Commission, prior to issuing the Tariff Order FY04, issued the Order on Long Term Tariff Principles (LTTP) with the intention to move to LTTP principles by FY2006.

5. APTRANSCO and the DISCOMS, in line with the instructions of the Commission in the Tariff Order FY03, filed both the ARR/ERC and FPT for FY 04 together on December 31, 2002. In their filing for FY 2002-03, APTRANSCO proposed a uniform single-part Bulk Supply Tariff (BST) of Rs.2.01 / unit to the DISCOMS. However, the Commission felt that a two-part BST, a demand component linked to coincident peak demand and an energy component must also be filed in the next Tariff Order (FY04). Such pricing will help the DISCOMS to improve their overall load profile and reduce cost of power purchased. As of now, the single-part BST is accepted while levying a differential BST on DISCOMS, keeping in mind the historical factors that have shaped the DISCOMS in terms of consumer mix, losses and cost structure and the need to endeavor to keep retail tariffs as far as possible uniform in the State. Based on the ARR approved by the Commission for APTRANSCO, the average BST for FY04 is Rs.2.069 per unit with separate BST calculated for each DISCOM. Furthermore, the Commission fixes an overdrawal charge for DISCOMS for the purchases made over and above the approved MU of purchases within the system at Rs.1.40 per unit which is the average variable pool price. If the purchases are by way of diversion of inter-State sales the charges will be Rs.2.40 per unit.

6. As in the past, the Commission while finalizing the fourth Tariff Order i.e. for FY 2003-04, laid emphasis on greater public participation and ensured that arrangements were made to invite general public as well as media to the public hearings. Notices regarding the public hearings process were issued well in advance. The Commission also directed the licensees to respond in advance in writing to the objections sent in by the public to the filings and these responses were made available to the objectors before the public hearing.

7. Of the total revenue requirement of Rs.9773.52 crores (net of non-tariff income, wheeling, grid support charges, etc.) projected by APTRANSCO and DISCOMS, the Commission admitted Rs.9780.75 crores for the year 2003-04. With the expected revenue requirement from the tariffs existing as on 31-03-2003 of Rs.7972.26 crores, a gap of Rs.1808.49 crores was required to be covered. The Commission directed DISCOMS to achieve efficiency gains of Rs.295 crores leaving a gap of Rs.1513.49 crores to be covered on the basis of fully allocated cost.

8. The Government of Andhra Pradesh (GoAP) u/s 12(3) of the AP Electricity Reform Act, 1998 gave directions to reduce the tariff to certain categories (domestic, cottage industries, local bodies, LT agriculture, RESCOS, HT agriculture, sugarcane crushing and aqua-culture) and agreed to provide Rs.1513.49 crores as subsidy. The increase in tariff was negative (-0.71%).

9. The extent of losses in both transmission and distribution networks remained a priority area of concern for the Commission. In the Tariff Order for FY03, the report on technical losses by an independent agency (Central Power Research Institute-CPRI) placed the transmission losses on EHT within AP at 6.65% as against the Licensee's projection of 8% for FY03. The Commission noted the difference and opined that this difference could be due to commercial losses in the EHV system. APTRANSCO was directed to conduct a separate study on commercial losses observed in the EHV system and to submit its findings by identifying the sources of these losses. Meanwhile, the Commission fixed 7% as transmission losses for FY04 as against the filed projection of 7.25%. APTRANSCO was directed to constitute an in-house committee to study transmission losses and draw up an action plan to implement the Directive.

10. In the case of distribution segment, the losses filed by the DISCOMS at 18.96% with overall losses of 24.63% were finalized for the ARR/ERC calculations after adjusting for the decrease in transmission losses as approved by the Commission. Loss figures were estimated for each DISCOM separately. The power purchase requirement of each DISCOM was worked out taking into account approved sales (metered and un-metered) and losses. This methodology has an element of judgement as long as agricultural consumption remains un-metered. While progress has been made with regard to estimation of agricultural consumption by way of LV side metering, existing data errors required fine-tuning the estimates of losses. Hence, the Commission while accepting the loss figures as filed, directed the companies to undertake a study on loss levels through an independent agency after finalizing the Terms of Reference (TOR) in consultation with the Commission.

11. A number of studies and measures were initiated in the Tariff Order FY04 aimed at institutional strengthening, improving the quality of data availability and measures for enhancing transparency and accountability. To start with, a salient feature of the Tariff Order for FY 2003-04 was the submission of agricultural consumption data based on the LV side metering for a full year. The DISCOMS estimated agricultural consumption in each Mandal and incorporated the same in the filings in support of agricultural consumption requirement for FY04. Analysis of the data filed, however, revealed a large number of data errors, information gaps as well as some abnormalities. The opinion of the Indian Statistical Institute (ISI) was sought in the matter. ISI analyzed the data and expressed the view that we may consider the sample to be adequately representing the population for the given sample size and carry out estimation of consumption with the DISCOMS data, after correcting for the data aberrations and outliers. The Commission noted that the consumption estimates filed by the DISCOMS and analysed by ISI were much higher than the approved consumption of 9936MU for FY03 and accordingly, after consultation with the DISCOMS, fixed consumption estimates for FY04 at 11350MU. It also directed the DISCOMS to continue with the study and estimate agricultural consumption while improving on the quality of data availability. It was also directed that due publicity should be given at each Mandal to the estimates so derived.

12. Apart from agricultural consumption estimates, the Commission's attention was also on the development of the sales database, which the DISCOMS were directed to build up in the Tariff Order for FY03. The absence of complete sales database, among other things, constrained the Commission in examining the sales projections made by the Licensees and performance parameters related to estimation of billing and collection efficiency, ratio of assessed to metered sales, customer and minimum charges. 'Data uncertainty' is the term that is commonly used for the lack of crucial data inputs, such as metered billing, and the collection is best rectified through the development of a sales database. The DISCOMS are directed to develop the sales database along the lines prescribed by the Commission and file monthly reports on the information collated.

13. Two major principles of reforms were enunciated in the Tariff Order for FY04. The first measure was the modification of the Fuel Surcharge Adjustment (FSA) formula to incorporate not only changes in fuel prices as in the case of the prevailing FSA formula but to also incorporate changes in power purchase mix (thermal-hydel) and fixed costs for treatment as pass-through in tariffs. Uncertainty with regard to hydel availability and other uncontrollable factors with regard to power availability projections had implications for APTRANSCO with regard to their working capital requirements. The Commission, as it had always followed a policy of insulating the licensees from the effects of any variations due to uncontrollable factors, was agreeable to the request of APTRANSCO for automatic indexation of variations in costs (fixed and variable) due to changes in power purchase mix arising out of uncontrollable factors. A new formula replaced the existing FSA by way of modification to Regulation No.8. This automatic indexation of costs was however, subject to periodical corrections.

14. The second measure undertaken in the Order was to clearly enunciate the principles for adjusting the financial losses incurred by the Licensees in the previous years as 'true-up' for providing compensation in the current year tariffs. The Commission is of the view that the Licensees could make gains or losses beyond the tariff order on account of three factors:

- Uncontrollable factors with a definition of ‘uncontrollable’,
- Internal efficiency; and
- Government initiatives.

15. Further, while analyzing the losses and advising the GoAP, the Commission decided to adopt a two-phased approach of ‘First Correction’ as per principles outlined above and ‘Second Correction’ based on audited accounts.

16. A major initiative of the Commission as stated earlier was the issue of the Order on LTTP principles prior to the issue of the Tariff Order FY04. The basic objective of the LTTP policy is to provide incentives to the Licensees to improve efficiency of operations including reduction of losses in a multi-year tariff framework. The intention is to shift to performance-based regulation. The DISCOMS are required to file the shadow filings in sync with the Tariff Filings for FY05. The first LTTP filing will be operative from FY06.

17. Mention must be made of the measures introduced in the Tariff Order FY04 for enhancing transparency and incorporating greater accountability in the operations of the Licensees. Firstly, the Commission directed APTRANSCO to host on its website the monthly report on losses and reduction in losses. Merit Order dispatch report is also to be hosted on the website. Secondly, the Commission directed the DISCOMS to incorporate in each consumer bill the status of arrears pertaining to that individual consumer. Lastly, the Commission directed APTRANSCO to initiate negotiations with generating companies where Power Purchase Agreements were concluded prior to the establishment of the Commission on possible areas of cost reduction. This move was initiated in the light of falling interest rates and the scope afforded for reducing costs by way of swapping of loans. In this connection, a related subject raised in the public hearings was with regard to the high cost of non-conventional sources of energy. The Commission directed APTRANSCO to submit proposals for review of tariffs and incentives to be made effective from 01.04.04 after taking into account critical parameters, both financial and technical.

18. Efforts to correlate tariff rates with cost-to-serve continued to remain an important concern of the proposed changes in rates. The main changes in the tariff rates were towards:

- Correcting the imbalances in the rate differentials between the subsidizing and subsidized categories of consumers;
- Providing the benefit of two-part tariffs; and
- Simplifying the slab structure.

Major changes brought about in Tariff Order, FY04

Non-Domestic/Commercial- LT-II

19. The tariff for this category, for which the number of slabs was reduced from 3 to 2 in FY03, was further rationalized by limiting consumption in the first slab to 50 units per month. This was done keeping in mind the paying capacity of small businesses and the fact that for a small shop with two lights and a fan, the consumption would be about 50 units per month and was more akin to the consumption pattern of small households. Further, the rate for the second slab was reduced and fixed at Rs.6.60 per unit as against Rs.7.00 per unit proposed by the DISCOMS and as was prevailing for the highest slab.

Industry LT-III(B)

20. This category which is a specially created category for industries whose connected load is more than 75 HP but due to diversity factor often has lower actual loads, the two-part tariff on the same lines as HT-industry was continued. At the same time, a special sub-category for seasonal industry was created with off-season demand and energy charges along the same lines as for seasonal industry in HT category.

Agriculture – LT-V

21. In Agriculture, two major changes were introduced. These were: (a) Freezing of optional metered tariff for 3 years for all consumers who metered their services and; b) Metering for horticulture services was made mandatory.

22. The Out-of-Turn Allotment Scheme tariff was reduced from Rs.1.25 per unit to Re.1.00 per unit with 50% discount on energy charges for those who undertook demand-side management (DSM) measures. This reduction was effected as representations were made during the public hearings that this would encourage more consumers to opt for the scheme. The Commission considered it reasonable to raise the development charges to Rs.2000 per HP from the prevailing rate of Rs.1000 per HP, while reducing the tariff from Rs.1.25 per unit to Re.1.00 per unit.

Irrigation & Agriculture – HT – IV

23. In this category, as in the case of LT-V Agriculture, the optional metered tariff would remain fixed for a period of three years, provided the meters are fixed.

Industry- HT-I

24. Keeping in mind the need to spur industrial growth within the State and to rationalise tariffs in line with cost-to-serve principle, the single-slab rate was continued with reduced tariff of 360 paise/unit. The tariff for the Ferro Alloy units remained unchanged at Rs.2.12/unit.

Incentive Scheme

25. The incentive scheme introduced during the year 2001-02 for HT-I and modified in FY2002-03 had a positive impact on HT sales. The benefit of the Scheme as stated in the earlier Order was made available for a period of 3 years, up to March 2005.

26. It may be appropriate to mention here an important decision of the Commission in the effort to attract captive consumers to the grid and for ensuring quality power to industry. The Commission directed APTRANSCO and DISCOMS not to effect load relief for purpose of grid management on feeders, which had more than 50% of incumbent load due to industries and an appropriate officer to be designated to ensure uninterrupted power supply on these feeders.

Time-of-Day Metering

27. The Commission evinced interest in implementing time-of-day (TOD) tariff not only as an economic measure for optimal utilization of available electrical energy but also in anticipation of implementing Availability Based Tariffs at the DISCOMS level.

Towards this end, the Commission directed that all DISCOMS should explore and identify all such consumers who were using higher quantum of energy and select cases where TOD tariff could be effectively implemented to the advantage of the utilities and the consumers

Railway Traction- HT-V

28. HT-V Railway traction tariff was reduced to Rs.4.50 per unit from Rs.4.60 per unit.

Subsidies

29. At the tariffs existing as on 24-03-2003, against the total cost-to-serve of Rs.3804.52 crores for the domestic category, the cross-subsidy was Rs.1017.60 crores and Government subsidy Rs.729.97 cr. It was estimated that the new domestic tariff would fetch 56.19% of the cost-to-serve for the domestic category. For agriculture, against the total cost-to-serve of Rs.2051.31 crores, the amount of cross-subsidy was Rs. 926.61 crores and the Government subsidy Rs.664.70 crores. The level of tariff represented 17.70% of the cost-to-serve for the agricultural category. The other major subsidy by the Government of Andhra Pradesh was to the Rural Electric Co-operative Societies, which was Rs.70.87 crores to cover domestic and agriculture categories in their areas.

Commission's Directives

30. The process of issuing specific Directives was continued in this Order. The directives covered both old directives that were 'on-going' and those which were not fully complied with by the Licensees and included different areas, such as, metering of new services, regularisation of unauthorised agricultural connections, identification of and disconnection of multiple connections, energy audit, completion of census of agricultural pump-sets, collection of arrears, preparation of databases, reduction in failure of distribution transformers, appropriations for contingencies reserve, approvals for new schemes and details of Capital Works-in-Progress (CWIP) as on 01.04.2000, credit to non-drawal bank accounts of employee funds and revenue estimation methodology. New directives for FY 2003-04 as stated in the text were focused on strengthening institutions and performance efficiency and for enhancing transparency and accountability. Review of Merit Order and placing monthly reports on the

website, study on losses and reports to be hosted on the website, consumer bills to show arrears, uninterrupted supply for quality power, negotiations on old PPAs, review of cost of non-conventional power, discussion paper on CWIP, filing a comprehensive report on performance standards are some of the new directives. The individual directives and the extent of compliance by the utilities over the year have been reviewed in detail elsewhere in this Order.

CHAPTER – III
FILING OF TARIFF PROPOSALS FY 2004-05

31. The APTRANSCO as the Transmission and Bulk Supply Licensee in the State of Andhra Pradesh and the four Distribution Companies viz., APEPDCL, APCPDCL, APNPDCL and APSPDCL (hereinafter called as DISCOMS) the Distribution and Retail Supply Licensees, filed separately their (i) Expected revenue from existing charges (ERC) (ii) Aggregate Revenue Requirement (ARR) and (iii) tariff proposals for carrying out the Transmission and Bulk Supply Businesses and the Distribution and Retail Supply businesses respectively for the FY 2004-05 under Section 26(5) of the A.P. Electricity Reform Act 1998, and under Sections 61 to 64 of the Central Act, on 24.12.2003.

32. The APTRANSCO filed a corrigendum to the Expected revenue from existing charges on 30.12.2003 and another corrigendum on 31.12.2003. Each of the four DISCOMS filed a corrigendum to its filing of proposed tariffs on 26.12.2003. The APNPDCL filed a supplemental filing to the Expected revenue from existing charges and proposed tariffs on 07.02.2004.

These filings were taken on record as follows:

Table No.1
Statement showing Original Petition Nos. assigned to ARR/Tariff filings

Name of the Licensee	Details of filing	O.P. No. assigned to filing
APTRANSCO	ARR/ERC and Tariff proposals for Transmission and Bulk Supply business for FY 2004-05	495/2003
APEPDCL	ARR/ERC and Tariff proposals for Distribution and Retail Supply business for FY 2004-05	496/2003
APCPDCL	-do-	497/2003
APNPDCL	-do-	498/2003
APSPDCL	-do-	499/2003

Notification calling for objections/suggestions

33. The APTRANSCO and the four DISCOMS were directed to serve public notices on 27.12.2003 through publication in one issue each of two daily newspapers in English and two in Telugu having the widest circulation in their respective areas informing the general public that APTRANSCO for its Transmission and Bulk supply

businesses and each of the DISCOMS for its Distribution and Retail supply businesses had filed ARR and Tariff proposals for FY 2004-05 with the Andhra Pradesh Electricity Regulatory Commission, (hereinafter called "the Commission" or “APERC”), and that copies of the filings (together with supporting materials) made by APTRANSCO, the Transmission & Bulk Supply Licensee (O.P.No.495 of 2003) and DISCOMS, the Distribution & Retail Supply Licensees (O.P.Nos. 496 to 499 of 2003) were available with Chief Engineer/ RAC, APTRANSCO, Vidyut Soudha, Hyderabad, and also in the offices of the Chief General Manager, RAC, of the DISCOMS with headquarters at Visakhapatnam, Hyderabad, Warangal and Tirupathi and all Superintending Engineers incharge of Operation circles in Andhra Pradesh for inspection/perusal/purchase by interested persons and that objections/ suggestions can be filed on these proposals with the Secretary, APERC by 29.01.2004.

34. Though Section 26(7) of the Reform Act does not expressly contemplate any public hearing before finalisation of the ARR/Tariff proposals of the Licensees, the Commission vide Clause 45 - A (6) of its Conduct of Business Regulations incorporated through amendment Regulation No.8 of 2000, stipulated that it shall hold a proceeding on the revenue calculations and tariff proposals of the Licensees and hear such persons as the Commission may consider appropriate for taking a decision on such revenue calculations and tariff proposals. Accordingly, in the notices that were directed to be published on 27.12.2003, APTRANSCO and the DISCOMS were 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 by the Commission, and that the persons who wanted to be heard in person may make a specific request thereof in their objections/suggestions.

Objections/suggestions received – Public hearings

35. Following the public notice, 412 persons/organisations sent their objections/suggestions to Secretary, APERC, on the ARR/Tariff proposals of APTRANSCO/DISCOMS before the due date i.e., by 29.01.04. Later, 12 more objections / suggestions were received raising the number of those responding to 424. Of these, 119 persons/organisations expressed their desire to be heard in

person. The number of persons/ organisations who made requests to be heard in person were as follows, licensee-wise:

Number of objections/suggestions received on ARR/Tariff filings

Table No. 2

Name of the Licensee	**No. of objections received**	**No. of persons/ organizations who wanted to be heard in person**
APTRANSCO	329	35
APEPDCL	01	01
APCPDCL	13	10
APNPDCL	03	03
APSPDCL	62	61
Common to all DISCOMS	16	09
Total	**424**	**119**

36. Considering the elaborate arrangements required for conducting a public hearing and the time available to finalise the new tariffs to make them effective from 01.04.2004, the Commission decided to hold the public hearings at Hyderabad City (Headquarters of APERC, APTRANSCO and APCPDCL) and Tirupati (Headquarters of SPDCL). As the number of persons who wanted to be heard in person were very few from APEPDCL area and APNPDCL area, the three objectors from APNPDCL area and one objector from APEPDCL area were requested to attend the hearing at Hyderabad, where the objections / suggestions common to all DISCOMS were also scheduled to be heard.

37. The venues fixed for the public hearings were the Institution of Engineers, Khairathabad for hearings at Hyderabad and Sri Srinivasa Auditorium, S.V.University Campus, for hearings at Tirupati. The venues were large enough to allow the press and the general public to witness the proceedings. Notice of public hearings on 16th, 17th, 19th and 20th February, 2004 was given to APTRANSCO, the four Distribution Companies and the GoAP. All persons who had expressed their desire to be heard in person were also intimated in writing the dates on which they would be heard. General public were also informed of the dates of public hearings on 06-02-2004 through a press release. Media was also invited to attend the public hearings.

38. The Commission held public hearings from 16-02-2004 to 20-02-2004 as per the following schedule.

Table No. 3
Programme of public hearings on ARR/Tariff filings by Licensees

Place of hearing	Date	Time	Venue	Licensee (s) on whose filings the hearings were scheduled
Hyderabad	16-2-2004	9.00 AM to 1-30PM and 2-30 PM to 5-30 PM.	The Institute of Engineers	APTRANSCO
Hyderabad	17-2-2004	9.00 AM to 1-30PM and 2-30 PM to 5-30 PM.	The Institute of Engineers	APCPDCL, APNPDCL and APEPDCL.
Tirupathi	19-2-2004	10.00 AM to 1.30PM and 2.30 PM to 5.30 PM	Srinivasa Auditorium SVU Campus	APSPDCL
Tirupathi	20-2-2004	10.00 AM to 2.00 PM.	Srinivasa Auditorium SVU Campus	APSPDCL

39. The Commission directed APTRANSCO and the four DISCOMS vide its letter dated:06.02.2004 to submit replies to all the public objections by 09.02.2004 to the Commission with a copy to the objector. The APTRANSCO/DISCOMS made available copies of their written responses to the objections/suggestions of the general public appearing before the Commission well before the commencement of schedule public hearings. Written responses for the submissions made by the objectors during the public hearing, were submitted by the respective licensees after the public hearing.

During the hearings:

40. As directed by the Commission vide its letters dated 06-02-2004 and 13-2-2004,

(i). APTRANSCO and DISCOMS made short opening presentations separately at the commencement of the public hearings at Hyderabad and Tirupati.

(ii). At the end of the hearing on each day, the respective licensees responded on the issues raised by the objectors during the hearings as directed by the Commission.

(iii). After hearing all the objectors relating to the licensees, the staff of the Commission made presentations on the issues and concerns relating to the licensees i.e., APTRANSCO's filing on 16-02-2004 APCPDCL's, APNPDCL's and APEPDCL's filings on 17.02.2004 and APSPDCL's filing on 20.02.2004.

(iv). APTRANSCO and the DISCOMS gave their responses separately to the presentations made by the Commission staff on the filings made by each of the licensees.

41. The Principal Secretary, Energy, GoAP, made a statement before the Commission on 17-02-2004 expressing the views of Government on Reforms in Power Sector, payment of subsidy by Government and the issues relating to improvement of customer service, etc.

42. Many important issues concerned with the ARR/Tariff proposals of Licensees were discussed in the State Advisory Committee (SAC) meeting held on 01-03-2004, and suggestions made by the members of SAC have been taken into consideration by the Commission while finalising the Tariff Order.

CHAPTER – IV A
LEGAL ISSUES RAISED BY GENERAL PUBLIC AND RESPONSES OF LICENSEES

LEGAL ISSUES:

ISSUE 1: Expenditure of Consumer Fora & Ombudsman

43. The expenditure on Fora and Ombudsman should not be included in the ARRs of the DISCOMS.

44. The Fora and Ombudsman may be appointed by the Commission or the State Government and the related expenditure be borne by the Hon'ble Commission or the State Government directly.

DISCOMS: The licensees will abide by the decision of the Commission.

ISSUE 2: Impact of the Electricity Act 2003

45. Some of the provisions of the Electricity Act, 2003, are detrimental to larger consumer interest and their implications are:

a). The Act allows industrial companies to form associations and set up captive power plants. This will facilitate the subsidizing consumers like HT consumers to switch over to the captive option and third party sales will also take place. Act says that surcharge on transmission charge to meet cross subsidy shall not be leviable in case open access is provided to a person who has established a captive generating plant. These changes will lead to the subsidizing consumers shifting to captive generation and third party sales, with the result that the DISCOMS' ability to cross-subsidize will get eroded. It will result in hike in tariff as the Hon'ble Commission is adopting cost to serve approach. Further, the adverse impact of gradual phasing out of cross-subsidy on the domestic and agricultural consumers is imminent, unless the government gives required additional subsidy.

b). The Act, permitting levy of surcharge on transmission charges to compensate the DISCOMS for immediate loss of cross-subsidy, stipulates that the surcharge and the cross subsidies be progressively reduced and eliminated over a period of time.

c). The Act empowers the Commission to grant a license to two or more persons for distribution of electricity through their own distribution system within the same area of operation of any DISCOM within the State. It will lead to cherry-picking, shifting of subsidizing consumers to new licensees, and the DISCOMS will be left high and dry unable to provide supply of electricity to presently-subsided agricultural and life-line domestic consumers at affordable prices.

DISCOMS: The licensees fully appreciate the concerns regarding the provisions of Electricity Act, 2003 that may have an impact on the licensees' financials. However, accurate assessment of such impact is not possible at this point. The licensees are also considering various alternatives, and their pros and cons, to counter any adverse impact arising out of specific provisions of the Act such as Captive Generation, Third Party Sales, etc. and seek direction from Hon'ble Commission on insulating them from any adverse variances. Both the licensees and the state government have also taken up the issue with Central Government.

ISSUE 3: **<u>Regulatory role and powers of the Commission</u>**

46. (i). There is no rational basis to decide phasing out of cross-subsidy within a specified period of time. Request the Commission not to fix any time frame for phasing out the cross-subsidies hastily.

(ii). Request the Commission to fix surcharge on transmission charges in such a way that it makes sale of wheeled energy and third party sales unattractive, while fully compensating the requirement of cross-subsidy.

(iii). Request the Commission not to reduce the present levels of cross-subsidy as long as the power utilities continue to show revenue gaps and request for tariff revision or regulatory asset.

(iv). Commission may consider reduction of cross-subsidies only when and to the extent the DISCOMS can show revenue surplus exceeding their reasonable return.

These are requests addressed to the Hon'ble Commission.

ISSUE 4: Public hearing on PPA of APGENCO and Tariff for Non-Conventional Energy (NCE)

47. Public hearings and issuance of orders by the Commission on the PPA of APGENCO and non-conventional energy should precede hearings on ARR and tariff revision for 2004-05.

APTRANSCO: Issues with regard to Genco PPA and NCE were presented to the Commission by APTRANSCO, NEDCAP and developers and decision is awaited from APERC.

CHAPTER- IV B
IMPORTANT ISSUES RAISED DURING THE PUBLIC HEARING AND REPLIES BY LICENSEES

1. RESPONSES ON ISSUES RELATING TO APTRANSCO

ISSUE 1: Fixation of capacitors for the irrigation pump sets by APTRANSCO

48. Suitable capacitors may be provided for the irrigation pump sets by APTRANSCO, to improve voltage, decrease in current, improve PF, reduce motor burn-outs and failure of transformers.

APTRANSCO: Consumers have been advised to provide the capacitors and wide publicity was given and ratings of capacitors have been given educating the consumers for providing the same.

Efforts are made in this direction by APTRANSCO and DISCOMS.

ISSUE 2: Increase in Capital Base for the purpose of reasonable return

49. While considering the claim of APTRANSCO that the increase in capital base will be to the extent of reasonable return earned + contingencies reserve + special appropriation provided due to debt service obligation, the reasonable return may be treated as addition to capital base, only if it is actually spent for capital expenditure.

50. Special appropriation, if provided due to debt service obligation, should not be treated as addition to capital base, because it is being adjusted for debt servicing only, not for creation of capital assets.

APTRANSCO: The reasonable return is computed on the capital base of the licensee after adjusting the assets side for sources of funds from loans and sources not belonging to APTRANSCO. Special appropriation for debt redemption is a legitimate claim allowed by the Sixth Schedule to the Electricity Supply Act, 1948 and has been provided in the past. Such amount represents a source of funds which are used to pay back loans (in excess of depreciation). On paying back the excess loans, the corresponding assets would automatically make the positive side larger. Hence they represent a source of funding for the capital assets and they should result in accretion to the capital base.

51. As regards the amount pertaining to contingencies reserve, such amount is to be invested in securities within six months of the closure of the financial year. Till such time, the amount is a source of cash and may be used to fund assets and delay the ontake of loans. After being invested in securities, the same shall figure on the positive side of the capital base. In either case, it should be considered as an accretion to the Capital Base.

ISSUE 3: **<u>Claim for carrying cost of Fuel Surcharge Adjustment (FSA)</u>**

52. During the public hearing on ARR and tariff proposals for the year 2003-04 APTRANSCO had agreed to claim FSA of a particular quarter in the next immediate quarter. If this practice is adopted and if the Commission gives its order on claims for FSA within a reasonable period, the question of inclusion of carrying cost of the FSA does not arise.

APTRANSCO: As per the existing procedures, there would be a minimum delay of 2 quarters between incurrence of additional power purchase cost and its recovery through the FSA. For example, if there is an escalation in power purchase cost for the month of April, APTRANSCO would file for such escalation in the month of July (after completion of the quarter Apr-Jun). The Commission after scrutinizing the application may issue an order on the same and the amount may be recovered in the quarter beginning October (Oct-Dec) at the earliest. Thus there is a delay of 2 quarters between incidence of excess cost and its recovery. Since the working capital costs pertaining to this may be quite significant (an annual escalation of power purchase cost of Rs.300 crores @ 10% p.a. for 2 quarters would be Rs.15 crores), APTRANSCO has sought the carrying cost of the same.

ISSUE 4: **<u>Negotiations of old PPAs with IPPs</u>**

53. In the tariff order for 2003-04, Commission directed APTRANSCO to initiate negotiations with generating companies (GVK, Spectrum, LANCO Kondapalli etc.,)

whose PPAs were concluded prior to Reform Act. APTRANSCO asked for extension of time up to 31.12.2003. What is APTRANSCO's action on its action plan and the results thereof?

APTRANSCO: APTRANSCO wishes to inform that it has made very sincere efforts to renegotiate the PPAs with the IPPs. A series of negotiations have been held during the last one year. The IPPs have not agreed to any change / modifications to the existing PPAs. However, the APTRANSCO has taken certain initiatives to bring down the costs.

54. For the current year, payment of incentives has been controlled through optimum dispatch, as follows:

a). Spectrum – Rs.27.30 cr. in 2000-01 to nil in 2003-04
b). GVK – Rs.46 cr. in 2000-01 to Rs.21 cr. in 2003-04

Further, the working capital interest has been reduced by Rs.75 lakhs in case of GVK and Rs.92 lakhs in case of Spectrum in the current year.

ISSUE 5: **Merit Order Dispatch procedure**

55. APGENCO's generating stations are being backed down, though their total cost per kwh is less than that of some of the other projects, which have been accommodated in the merit order. Consumers are saddled with the burden of purchasing costlier power even when cheaper power is available from other sources for which they are paying full fixed cost. Installed capacity created with substantial cost is being kept idle.

APTRANSCO: The fixed costs of generating stations' tariff are meant for recovery of investments made by the lenders and promoters, depreciation and other fixed establishment and maintenance costs, which have to be incurred even without any generation of power. These are, therefore, to be paid irrespective of generation and this principle applies uniformly to both public sector and private sector units. Therefore, since these costs have to be incurred, the only saving that can be effected in power purchases is from variable costs. Hence, merit order guidelines stipulate that backing down shall be in order of the variable cost. Any other methodology will result in higher cost to the consumer.

ISSUE 6: Projected Surplus

56. With a projected surplus of 6136 million units (MU), including proposed outside sales, against projected requirement of 45475 MU for 2004-05, the reserve margin works out to 13.49%. What would have been the additional financial burden on the consumers, if the reserve margin of 29% as permitted by the Commission was maintained?

APTRANSCO: The APTRANSCO would like to submit that the load forecast study was carried out as per the directive of the Hon'ble Commission. The APTRANSCO understands that the Commission had sought the opinion of the Central Electricity Authority (CEA) while approving the load assumptions. The CEA had confirmed that 29% of the net capacity would be required as reserve margin for reliable power supply in AP system. Further, the CEA observed that caqpacity addition under private sector has been highly unsatisfactory and keeping this in view it would be prudent and pragmatic to plan for higher capacity addition. The Commission had also agreed with the CEA and acknowledged that if some of the projects do not achieve financial closure, to that extent, the reserve margin will come down and while this will reduce the financial burden on the consumers, it will have an adverse impact on the quality of supply.

ISSUE 7: Wheeling and Grid Support charges

57. What action is being taken by APTRANSCO to get the case pending in Supreme Court (Wheeling and Grid support charges) disposed of speedily, in view of the substantial financial implications involved? Electricity Act 2003 makes the authority of the Hon'ble Commission to fix wheeling and Grid Support charges explicitly clear.

APTRANSCO: The wheeling charges order of APERC was set aside by A.P.High Court vide common judgement and order dt:18.4.2003. APTRANSCO filed appeals in the Supreme Court against the High Court judgement. The matter is sub-judice.

ISSUE 8: **<u>Copy of Tariff Order</u>**

58. Request for sending a copy of the Tariff Order.

APTRANSCO: The Tariff Order is made available at APERC at reasonable cost.

ISSUE 9: **<u>Filing of copies</u>**

59. Commission has allowed petitioners to file only two copies vide Tariff Order 2003, para 259, page 120. APTRANSCO and DISCOMS are insisting on filing of 7 copies.

APTRANSCO: The contention of the objector is that the Commission in its tariff order 2003-04 indicated that one copy of the objection be filed with the Commission and another copy to be served on the licensee. The order of the APERC in tariff order 2003-04 was in response to an objector's suggestion.

60. However the Commission's approved public notice indicated that the objections should be filed in 5 copies. The insistence of the licensee to file five copies by the objector is based on the approved public notice for ARR 2004-05.

ISSUE 10: **<u>Opening of letter of credit</u>**

61. Letter of credit (LC) should be opened by APTRANSCO in favour of APGENCO for payments due to APGENCO as directed by the Commission.

APTRANSCO: APTRANSCO and APGENCO are both owned by GoAP. Opening letter of credit will increase transaction costs between two sister entities and will burden the consumers.

ISSUE 11: **<u>Srisailam Left Bank Power House (SLBPH) Project</u>**

62. Why SLBPH is not allowed? It should have been taken over by the Government.

APTRANSCO: APTRANSCO is of the opinion that the consumers should pay only for those assets, which are gainfully employed, and therefore SLBPH is not considered for inclusion in the common PPA. As per the direction of APERC and for effective implementation of Merit Order dispatch, station-wise PPAs are essential. A separate rate can be fixed for sale of energy generated from SLBPH.

ISSUE 12: <u>APGENCO's Pension Liabilities</u>

63. APGENCO's pension liabilities to be borne by Government of Andhra Pradesh.

APTRANSCO: Based on actuarial valuation the accumulated liability towards pension and gratuity for the employees already retired by 31.01.99 and also for the serving employees who are on the pay rolls as on 31.01.99, was estimated to be of the order of Rs.4617 crores and the same was provided for in the transfer scheme by way of bonds duly keeping the liability and the matching assets in APGENCO's balance sheet. The interest liability on these Bonds is covered in the fixed cost of APGENCO's power purchase. The monthly commitments towards pension and gratuity are being met partly from this provision and interest thereon, and partly through current contributions by the individual companies towards pension and gratuity payments. As such the pension and gratuity burden is shared by all the six unbundled entities.

ISSUE 13: <u>Reduce Power Purchase Cost</u>

64. Power purchase cost from the non-conventional energy (NCE) projects must be reduced.

APTRANSCO: APTRANSCO proposals on Tariff and other incentives applicable to NCE projects w.e.f. 1.4.2004 were submitted to APERC in September, 2003. APTRANSCO has proposed the following tariff structure for various NCE projects against the common tariff up to FY 2003-04 for all types of NCE projects:

Table No.4

Type of Project	Projects commissioned by 31.03.2003		Projects commissioned after 31.03.2003	
	Tariff (Rs./unit)	Escalation/annum	Tariff (Rs./unit)	Escalation / annum
Mini Hydel	2.42	--	2.31	--
Wind	2.52	--	2.55	--
Biomass	2.27	2%	2.27	2%
Bagasse cogeneration	2.23	2%	2.25	2%
Waste to energy	--	--	2.66	1%

ISSUE 14: Voltage regulation

65. The incoming voltages at some of the 400 kV, 220 kV and 132 kV sub-stations are reported to be as low as 370, 179 and 105 respectively. It is not known whether On-Line tap-changers are being used to maintain the secondary voltage fairly stable.

APTRANSCO: As per the code of technical interface (Grid code) 2001 norms, 3.2 d in page 2B-3, the voltages are being closely monitored and regulated to be within the permissible limits, which are:

132 kV $\pm$ 10%
220 kV $\pm$ 10%
400 kV $\pm$ 5%

132 kV and below voltage levels are maintained within the limits by operating OLTCs of power transformers.

ISSUE 15: Pooled variable cost of APGENCO for Merit Order

66. To consider the pooled variable cost of APGENCO units for merit order operation and accordingly a PPA may be entered into between APTRANSCO and APGENCO.

APTRANSCO: The variable cost of individual station is considered to ensure optimal utilization of the Asset and efficient operation of each power station and for effective implementation of Merit Order Dispatch facilitating cost-saving exercises.

If the pooled variable charge of all APGENCO units is considered, all the stations of APGENCO would have to be considered as one unit and merit order dispatch followed accordingly. Not considering the merits of individual stations would nullify efficiencies of individual stations.

ISSUE 16: Pension and P.F. Bonds

67. Interest on pension and P.F. bonds should be included in the fixed cost of APGENCO.

APTRANSCO: Depreciation is being allowed to APGENCO in the tariff. APGENCO shall meet all its debt redemption obligations from the depreciation provided. As such interest on pension and PF bonds is not to be considered separately for inclusion in the fixed charges.

ISSUE 17: Fixed costs of Srisailam Left Bank Hydro Electric Scheme (SLBHES)

68. To allow the fixed costs of SLBHES or otherwise the Government of A.P. should take over fixed cost burden of SLBHES.

APTRANSCO: APERC was requested to consider capacity equivalent to 1000 MU seasonal surplus energy of SLBHES for fixed cost repayment.

ISSUE 18: Free electricity

69. Commission may consider free supply of power to agriculture in the upland areas.

APTRANSCO: As power is purchased from various sources at cost, the consumers have to pay charges based on cost to serve. In case of agriculture consumers required subsidy is provided by the Government, charging these consumers substantially lower prices. The issue of free power is not in the purview of APTRANSCO.

ISSUE 19: Burden of PPAs signed by APTRANSCO

70. The loss arising out of PPAs signed by APTRANSCO is being borne by the consumers. Consumers should be enabled to purchase power directly.

APTRANSCO: APTRANSCO wishes to inform that it has made very sincere efforts to renegotiate the PPAs with the IPPs. A series of negotiations have been held during the last one year. The IPPs have not agreed to any change / modifications to the existing PPAs. However, the APTRANSCO has taken certain initiatives to bring down the costs.

For the current year, payment of incentives has been controlled through optimum dispatch, as follows:

a). Spectrum – Rs.27.30 cr. in 2000-01 to nil in 2003-04
b). GVK – Rs.46 cr. in 2000-01 to Rs.21 cr. in 2003-04

Further, the working capital interest has been reduced by Rs.75 lakhs in case of GVK and Rs.92 lakhs in case of Spectrum in the current year.

ISSUE 20: ARR in Telugu

71. To prepare ARR in Telugu to facilitate public to read, understand and participate in larger numbers. To study and implement the system being followed in Karnataka.

APTRANSCO: The suggestion of the objector is noted.

ISSUE 21: Result of investments by APTRANSCO under Electricity Reform Process

72. Are the investments, transmission and supply of power being implemented as per the rules? Is there transparency in international bidding and sub-contracting processes? Please furnish the details of the reduction of losses and improvement in supply of power following the investments made.

APTRANSCO: As far as bidding and contracting is concerned, transparency in the process is ensured. With the implementation of various projects in transmission and distribution system, there is substantial improvement in the voltage profile and reliability and quality of supply. There is considerable reduction in line losses, reduction of transformer failures, and increase in metered sales.

<u>Details of key benefits:</u>

a). Average frequency which was 48.7 in 1999-2000 is now maintained at 49.99.
b). Investment stepped up from Rs.613 cr. (1998-99) to Rs.1206 cr. (2002-03)
c). Cost recovery is improved from 66% in 1998-99 to 81% in 2002-03.
d). Voltage improvement at 132 kV level improved from 92 kV (1999-2000) to 131 kV (September 2003)
e). Availability factor in transmission lines improved to 99.7%.
f). Installed capacity added is substantially improved and it is 2995 MW.
g). Increased revenue from 4159 cr. (1998-99) to 7451 cr. (2002-03).
h). Decrease in losses from 38% (1998-99) to 26.13% (2002-03).

ISSUE 22: <u>Hike in gas prices</u>

73. Hike in the prices of the gas will affect the power purchase cost of the APTRANSCO. Is the APTRANSCO initiating any action so as to minimize the impact of the higher gas prices?

APTRANSCO: The Objector has raised the concern about the impact of the likely increase in the gas prices on consumer prices, particularly in the context of the recently approved gas based IPPs. The APTRANSCO has requested the Government of India to appoint a Gas Regulatory Authority to regulate the gas prices for the power sector. The State Government has also taken up this issue with the Ministry of Power.

ISSUE 23: <u>Discrimination against APGENCO</u>

74. There is discrimination against the APGENCO in the payment of fixed cost including incentive and depreciation. LCs are not being opened in favour of APGENCO. Power from RTPP and NTS must be utilized.

APTRANSCO: The APTRANSCO wishes to inform that as per the Tariff Order 2003-04, the APGENCO has been allowed a fixed cost of Rs.1738.45 cr. in which both depreciation of Rs. 486.72 cr. and return on equity of Rs.337 cr. have been included. This return on equity has been calculated at 16%, which is at par with the return on equity (ROE) allowed to other private generating stations. As per the APGENCO's own submission to the Commission, ROE and depreciation would be adequate to cover debt repayments and the interest on pension, PF and Vidyut Bonds. Hence, there is no discrimination in the fixed cost allowed to the APGENCO.

Further, the APTRANSCO wishes to inform that power shall be sourced from RTPP and NTS to avoid low voltage problem in Rayalseema region, for managing hydro-thermal variation and for inter-State sales.

ISSUE 24: <u>Payment of Fixed Cost to M/s. LVS Power Limited</u>

75. Payment of fixed cost to M/s LVS Power Limited without any energy drawl is unnecessarily burdening the consumer.

APTRANSCO: The APTRANSCO would like to clarify that M/s.LVS Power Ltd., is not Naphtha based. The fuel used is Low Sulphur Heavy Stock (LSHS). At the time of the contract, LSHS was cheaper than it is today. When the prices of LSHS increased, the APTRANSCO informed that they would not be in a position to buy this costly power. The developer has gone to the Hon'ble Supreme Court and obtained orders for APTRANSCO to pay the charges. The APTRANSCO has negotiated with the developer and is paying Rs.1.29 per unit as fixed charges for deemed generation, as variable cost from the station is extremely high at Rs.2.46 per unit.

Even in the payment of fixed costs, APTRANSCO has over the last few months, negotiated with the developer and achieved a saving of Rs.4 cr. from Rs.37 cr. per annum to Rs.33 cr. per annum.

ISSUE 25: <u>Non-conventional energy sources</u>

76. NCE projects should be given preferential treatment. Why the NCE projects have not been considered under 2-part tariff proposal? Why life-span of NCE projects has been considered as only 20 years?

APTRANSCO: The APTRANSCO would like to submit that the NCE projects are being provided preferential treatment as compared to all other sources of power purchase due to the fact that all the generation from NCE projects is being procured at the rates approved by the Hon'ble Commission, without subjecting them to any merit order.

The NCE projects are considered for single part tariff because of the following reasons:

- The NCE projects are of small capacity and it is difficult to monitor the generation and dispatches from such projects from a centralized location as most of the dispatches happen through 33 kV and 11 kV feeders
- There is no firm supply commitment from the NCE generators because of the nature of the fuel and their availability.
- Further, if a 2-part tariff is fixed, and an agreement is entered into, as in the case of the IPPs, the APTRANSCO will have to pay the fixed charges, regardless of the energy actually delivered by these generators and this will prove costly.

The life spans of the NCE projects have been fixed under the guidelines specified by the Ministry of Non-Conventional Energy Sources of the Government of India, as 20 years, extendable by another 10 years through mutual agreement.

ISSUE 26: <u>Energy efficiency</u>

77. Energy efficiency has not been given high importance by the APTRANSCO.

APTRANSCO: Energy efficiency measures require greater focus by the consumers. The APTRANSCO has been making efforts to promote DSM measures particularly for agriculture. DSM measures have been explained to farmers in sub-station meetings and the incentivised tariff for adoption of such measures has also been brought to their notice. There has been a suggestion that the APTRANSCO should install the capacitors and the frictionless foot-valves as such measures will bring in only saving and therefore savings in power purchase cost. While it is possible to install such capacitors and foot valves, it is not possible to maintain and monitor their usage. In fact in certain pilots where capacitors were installed by the

APTRANSCO, it is found that in most cases, they are not working after the initial period. Based on this experience, agriculture consumers are being motivated to take up DSM measures through meetings, demonstrations and an activised tariff.

ISSUE 27: **Increase in T&D losses**

78. Why is there increase in T & D losses estimated prior to the beginning of the reforms and actual T & D losses after the reforms have started?

APTRANSCO: The APTRANSCO would like to inform that post-unbundling of the power sector and with the implementation of major initiatives to curtail the T & D losses, necessary actions were taken to accurately account for agriculture consumption and losses, through energy audits. Part of the agricultural consumption was reclassified as losses, raising the level of losses. The APTRANSCO would like to bring to notice that this has been the experience of all the reforming States in the country, which have predominant agricultural consumption.

ISSUE 28: **Supply of surplus energy to rural areas**

79. The APTRANSCO has shown 4600 MU as surplus energy available in the system in the ARR 2004-05. Why such surplus cannot be supplied to the rural areas to ensure 24-hour supplies?

APTRANSCO: The APTRANSCO wishes to inform that the 4600 MU surplus available in the system assumes a very good hydro availability. Supply to rural areas is a definite commitment of the utilities. However, in view of hydro failure during the last year and the current year, we were not able to operationalise this commitment.

ISSUE 29: **Higher consumption of HT category**

80. How can the APTRANSCO claim higher consumption for HT category when all over the State the small scale industries are facing closure?

APTRANSCO: In the year 2002-03, the sector recorded a growth of 30% in HT industrial consumption. The growth is due to increased consumption recorded through improved metering and monitoring and significant growth on account of captive consumers returning to the grid due to tariff rationalization and introduction of incentive schemes.

The sector continues to see growth in 2003-04 and has recorded an increase of 13-14% in HT industrial sales resulting in increased revenue.

ISSUE 30: <u>Overdrawl charges for the DISCOMS</u>

81. The current mechanism being followed for overdrawl charges for the DISCOMS should be reviewed and modified, as it encourages overdrawl by the DISCOMS.

APTRANSCO: The APTRANSCO agrees with the views of the Objector and requests the Hon'ble Commission to consider appropriate action.

ISSUE 31: <u>Cost to Serve</u>

82. Cost to serve is no more an academic exercise. It is vital for estimating cross subsidies and fixing tariffs. However, APTRANSCO 'does not want to comment" on it. The present methodology adopted for working out the 'cost-to-serve' for different categories of consumers of power is defective. Fixed cost to those who do not use power during peak time is not being allocated. Excessive costs get allocated to domestic category of consumers, thereby providing an artificial ground for justification of increase in tariff for those consumers. When bulk supply tariff (BST) is more than Rs.2.00 per kwh, how can cost to serve any category of consumers be less than that? The present cost-to-serve analysis, therefore, needs to be corrected in a rational way.

Request the Hon'ble Commission to make the cost to serve analysis public and get the same corrected rationally, possibly holding a public hearing on it.

ISSUE 32: <u>Tatkal Scheme</u>

83. Government have declared reduction of electricity charges from Re.1 to 50 paise per unit for Tatkal Scheme without consent of the Commission.

APTRANSCO: A large number of representations were received by the Government from small and marginal farmers expressing their difficulty in obtaining the Agricultural service connections at a higher rate of amounts particularly during the prevailing drought conditions in the State. After careful examination of the issue, Government decided to modify the Tatkal scheme for the benefit of small and marginal farmers in the State. As per the directions of the government, APTRANSCO filed the review petition. As per the Reforms Act, government has to the power to issue policy decisions under section 12(1).

ISSUE 33: <u>Fixed costs of Srisailam Left Bank Power House (SLBPH) Project</u>

84. Fixed costs of SLBPH project should be paid to APGENCO.

APTRANSCO: It is relevant to refer to G.O.Ms.No.69 dt:15.06.96 issued by the Government of Andhra Pradesh, according to which –

- No drawls of water are to be made from Srisailam Reservoir for power generation through the Right side power house and pumped storage system on the Left side below the reservoir level of 254.2 Mts. (834 ft).
- Power generation from Srisailam Left Bank Power House is also prohibited and Srisailam Reservoir level is below 885 ft (FLR).
- APTRANSCO stated that pumped mode operation is not feasible till 2008 due to hydraulic constraints in the river bid of Krishna.

85. The Commission in its Tariff Order FY 2004 did not recognize the capacity of Srisailam Left Bank Power House (SLBPH) to provide peaking power and hence did not consider any capacity from SLBPH for the purpose of allowing fixed charges. However, the Commission directed that in the event of surplussing of Srisailam reservoir, extra energy from the Left Bank Power House over and above generation from the Right Bank Power House capacity shall be paid at agreed price as consented by the Commission considering the energy as a run-off-the-river energy.

86. Subsequent to the issue of the Tariff Order, Government of Andhra Pradesh at the instance of APGENCO issued Memo dated 07.05.2003 which gave the following clarification among others.

"APGENCO is free to operate units at either of the stations at Srisailam at its sole discretion so as to derive maximum possible benefits without affecting the interests of irrigation and within the provisions of daily releases of water as per tables prepared by CIOKRIP".

87. APTRANSCO also submitted the results of the simulation studies carried out based on the historical data and inflow data of Irrigation Department to estimate the peaking capacity of Srisailam Complex. Based on the above data APTRANSCO submitted that capacity equivalent to seasonal surplus of 1000 MU can be considered and capital cost equivalent to that capacity be permitted.

88. Based on the performance of the Station for the past 2 to 3 years and the hydrological changes as observed, the Commission is of the opinion that no capacity from SLBPH can be considered until the pumped storage operation as envisaged in the project report is established. However considering the amendment issued to G.O.Ms.No.69 which provides for greater flexibility in the operation of Srisailam Right Bank and Left Power Houses and the submission of APTRANSCO and APGENCO which considered the possibility of operation of SLBPH in the conventional mode together with Srisailam Right Bank Power House for a few hours in a day to meet the peak demand, the Commission directs as follows:

89. In the event of surplussing of the Srisailam reservoir, extra energy from Left Bank Power House over and above the generation from right bank at its full capacity shall be paid at agreed price as consented by the Commission considering the energy as a run off the river energy.

90. In addition to the above, if extra energy is generated by Left Bank Power House during peak hours over and above the effective capacity of the Right Bank Power House the energy delivered during that period will be paid at an appropriate rate to be approved by the Commission.

2. <u>RESPONSES ON ISSUES RELATING TO DISCOMS</u>

ISSUE 34: Distribution Losses and Efficiency Improvement

91. The four DISCOMS have proposed to reduce distribution losses by 0.52% to 1.83% during the next financial year. The targets of reduction of distribution losses of the four DISCOMS may be enhanced and realistic targets may be fixed. Additional revenue the DISCOMS have to achieve during the 2004-05 by means of internal efficiency improvement may also be specified.

DISCOMS: The last few years have seen a significant reduction in the system losses. The distribution losses for the companies have reduced considerably. The loss reduction proposed in ARR filing is reasonable and achievable.

ISSUE 35: Claims for corrections

92. The claims of DISCOMS for additional cost on account of excess supply to agriculture should not be permitted as a pass-through. It should be borne by the government as directed by the Commission in the past.

DISCOMS: In the year 2002-03, the cost on account of excess supply to agriculture was borne by the government. However the licensee will abide by the decision of the Commission on the issue.

ISSUE 36: Final correction of the wheeling revenue

93. The request of the DISCOMS for a final correction of the wheeling revenue for the year 2002-03 in the tariff order for 2004-05 should not be permitted.

DISCOMS: The licensee is making all efforts to get the case disposed of. However, the licensee does not agree with the view of the petitioner that the final correction is not required as "*there is every likelihood of winning the case*". In case such a favourable decision is granted and the licensee is allowed to recover charges with retrospective effect (including the carrying cost) from these consumers, there can be a further correction in the ARR of the licensee in subsequent years. At present the final correction should be allowed based on current position.

ISSUE 37: Return on Equity component of Capital Works-in-Progress (CWIP)

94. Allowing a direct return on the equity component of CWIP in the same year or an approach similar to that adopted for interest during construction (for debt component) should not be permitted as at present. The Commission should prescribe a reasonable limit on time lag between capital expenditure and creation of asset and verify whether it is put to use actually.

DISCOMS: The current provision of including the CWIP in capital base is based on the Schedule VI of the Electricity (Supply) Act, 1948. The licensee presented its view while discussing the matter of excluding CWIP from the capital base. The licensee believes that unless a return on equity is provided and it is invested in such assets (CWIP), the investment in the sector is likely to suffer and the system will deteriorate.

ISSUE 38: Interest claw-back

95. The argument of DISCOMS that in case of non-achievement of capital expenditure plan, the related financing costs should not be clawed back, unless the associated targets of T & D loss reduction and efficiency improvement are also reset at a lower level, is untenable.

DISCOMS: The licensee presented its view in the filing and still believes that the system loss reduction depends on the level of investment. The approved ARR is dependent on the approved system loss level and deviation on the loss target is borne by the licensee. Therefore, if investment does not take place up to the approved level, the licensee is already penalized in the form of a higher loss level (involving higher power purchase cost or lower revenue) and further penalty in the form of interest claw-back is not necessary.

ISSUE 39: Delayed payment surcharge

96. The request of the DISCOMS for exclusion of delayed payment surcharge from non-tariff income should not be permitted.

DISCOMS: It has been included in non-tariff income in this year's filing. However, in the earlier order, the Commission expressed the view that delayed payment surcharge should be considered as a source of finance for the working capital requirement of the Licensees. APTRANSCO will abide by the decision of the Commission.

ISSUE 40: Provision for doubtful debts

97. No provision should be made for doubtful debts – seeking a provision for a sum which is higher than the reasonable return of the DISCOMS by about ten times towards doubtful debts is highly questionable.

DISCOMS: Provision for doubtful debts is not related to the reasonable return in any way. Provisioning for such doubtful debts is a prudent financial and accounting practice. The licensee has also written off a substantial portion of the provision available under Second Transfer Scheme. In view of this the licensee believes that it is essential for the licensee to have the provision for doubtful debts as an allowable expenditure in the ARR.

ISSUE 41: Reasonable return

98. Allow reasonable return to the 4 DISCOMS and any surplus should be passed on to the consumers.

DISCOMS: It is decided not to claim the reasonable return till the DISCOMS turn around financially.

ISSUE 42: Non-Conventional Energy

99. Power purchase from non-conventional sources is expected to be 1802 MU in 2005. High tariff rates for power purchase are given to these units to encourage environmentally friendly sources of power. It is reported that many of these units are using conventional fuels like coal and also felling trees for fuel. It is requested to declare such units ineligible and impose damages on such units.

DISCOMS: In 2004-05, APTRANSCO expects to purchase 1802 MU from various NCE sources. The number of power plants of NCE projects from whom power is proposed to be purchased during 2004-05 is furnished below:

Mini Hydel projects	-	16
Wind projects	-	8
Biomass projects	-	49
Bagasse Cogen projects	-	15
Waste to energy projects	-	7

Usage of coal by Biomass Power Plant developers:

100. NEDCAP is the Nodal Agency for sanctioning NCE projects in the State. NEDCAP issues permission to establish Biomass and Bagasse Co-generation projects duly taking into account the availability of fuel.

101. Regarding usage of coal by Biomass power plants, Ministry of Non-Conventional Energy Sources, Government of India, allowed usage of coal in the Biomass and Bagasse Co-generation projects up to 30% previously and 25% from 1.4.2003. NEDCAP the Nodal Agency, is frequently monitoring the usage of coal by these plants and corrective action is also being taken by them to limit the usage of coal.

ISSUE 43: Assessment of agricultural consumption

102. The DISCOMS be directed to indicate the methodology adopted and the parameters being considered for working out LT line losses for estimating the agriculture consumption of the respective feeders.

DISCOMS: Agricultural consumption is computed by taking monthly readings of the electronic meters fixed on LV side of distribution transformers (DTRs) exclusively feeding agricultural services on sample basis in each Mandal. For example, in EPDCL, there are 1,31,188 agricultural services existing as per agricultural census reports existing in the company where electronic meters are fixed on LV side of DTRs.

103. The following procedure is followed in all the Circles for estimation of agricultural consumption every month:

i). The monthly meter readings of all the metered agriculture DTRs are collected from five Circles of the company in the APERC's prescribed format (TF_2.10) containing 30 columns and DTR consumptions are arrived at.

ii). The above consumption of the DTRs includes LT lines losses. Hence by deducting appropriate figure of LT line losses as per APERC categorization of DTRs into 9 slots (A, B, C, ………………..I), the net agriculture consumption of that particular DTR is arrived at.

iii). Accordingly for the particular Mandal, the net consumption of all metered DTRs is added.

iv). On the basis of the above consumption relating to sample agricultural DTRs and the connected HP of the pumpsets incident on the above DTRs, agricultural consumption in KWH per HP, which is specific consumption per HP of that Mandal, is arrived at for that month.

v). The total no. of pumpsets and the total connected load (HP) of the particular Mandal are available. By multiplying the specific consumption by the total connected load (HP), the total consumption in units of that particular Mandal is arrived at.

vi). Similarly for all the Mandals in a Circle, the net agricultural consumption for the Circle is arrived at.

104. Accordingly for the entire Distribution company the net agricultural consumption is arrived at by adding up the consumptions of all Mandal / Circles.

ISSUE 44: <u>Transmission & Distribution (T & D) Losses</u>

105. The T & D losses continue to be added to the agriculture consumption to show 'efficiency improvement' achieved by the licensees.

DISCOMS: The table below provides the estimate of agricultural sales and distribution losses as provided in the filing:

Table No.5

	2002-03 (Actual)	2003-04 (Estimate)	2004-05 (Projected)
Metered sales (MU)	7756	8768	9561
% of input	44.97%	49.45%	52.16%
LT agricultural sales (MU)	5584	5235	5250
Distribution loss	22.66%	21.03%	19.20%

106. As can be seen from the table (pertaining to APCPDCL), the distribution losses are brought down even when the agricultural consumption is showing a downward movement. Therefore, the allegation that "the T & D losses continue to be added to the agriculture consumption" is not correct.

ISSUE 45: Licensees to publish energy consumed

107. All the licensees to publish the energy consumed by the metered agricultural pump sets, both Tatkal and regular connections.

DISCOMS: DISCOMS are taking steps for publishing the Mandal-wise agricultural consumption as per the directive of the Hon'ble Commission.

ISSUE 46: E-Seva initiatives

108. Where from the CPDCL will get funds to pay for the expenditure of Rs.5 / bill paid to e-seva? Is there any government subsidy? Collection agents are paid 60-100 paise / bill collection, while e-seva is paid Rs.5 / bill increasing the cost by more than 10 times. Whether e-seva centers are dispatching the collected amounts immediately? Whether licensees are incurring additional expenditure because of delay in payment by e-seva?

DISCOMS: There is no Government subsidy for the e-Seva facility. APCPDCL is already collecting the customer charges from the consumers and meets the expenditure out of that. The amount collected is remitted immediately without any delay. The payments made by the consumers in e-Seva are updated on the central data server on real time basis and this facilitates the utility in giving credit in the consumer ledger without any manual intervention. The licensees are at present paying Rs. 5 per transaction to e-Seva and the monthly amount depends on the number of transactions.

ISSUE 47: Publication of Defaulters' List

109. To publish the list of consumers whose dues are more than Rs.50,000 as per guideline 11-g.

DISCOMS: The guidelines do not envisage publishing the names of the individuals.

ISSUE 48: Agriculture sector crisis

110. Electricity is being given free of cost to agricultural sector in Tamil Nadu (with some limitations) and was given in Kerala to the farmers cultivating less than 2.5 acres and totally free to paddy fields irrespective of the size of the land holding.

111. 50% irrigation in AP is dependent on wells and tube wells and hence on power and these are also backward areas and also spend about Rs.40,000 for the tube well. Farmers in upland areas are penalized by power tariff hike and these areas become more backward, creating regional disparities.

DISCOMS: As power is purchased from various sources at a cost, the consumers have to pay charges based on cost-to-serve. In case of agriculture consumers, the required subsidy is provided by the government charging the consumers at substantially lower prices.

ISSUE 49: Lift Irrigation Schemes

112. Power charges and customer charges are high in case of HT agriculture consumers (Rs.25 for LT and Rs.30 for HT).

113. Most of the LI schemes belong to SC/ST and BCs in backward and upland areas and hence request to continue the old tariff for LI schemes. Request for 12/14 hours supply per day for LI schemes.

DISCOMS: The licensee has proposed to continue with the present level of customer charges for the ensuing year and the same tariff for Lift Irrigation schemes.

ISSUE 50: Improvement in quality of supply, specifically the voltage levels

114. There is no improvement in the quality of supply, specifically in the voltage levels.

DISCOMS: Licensees are undertaking all measures including HVDS scheme at large scale for improving the voltage profiles. The voltage profile has improved significantly over the last few years. The average 132 kV voltage has improved from 110 kV in FY 1999-2000 to around 129 kV in FY2003-04.

ISSUE 51: <u>24-hours supply to rural areas</u>

115. Rural areas should be provided with 24-hour supply of power.

DISCOMS: DISCOMS are committed to providing regular supply to rural areas as well. In spite of severe hydel shortfall during the current year, arrangements have been made to purchase power from outside the State including Power Trading Corporation (PTC) to ensure reliable supply to agricultural areas during rabi season. Further, DISCOMS are undertaking segregation of feeders to provide 24-hour supply to rural domestic areas.

ISSUE 52: <u>Elimination of cross-subsidy</u>

116. What steps are being taken to reduce cross-subsidy?

DISCOMS: The progressive reduction and elimination of cross-subsidy is envisaged in the Electricity Act, 2003. However, the Hon'ble Commission is to decide on the time frame by which it is to be achieved.

ISSUE 53: <u>Treatment of past losses</u>

117. How are the past losses made up?

DISCOMS: The licensee seeks guidance from the Hon'ble Commission on treatment of uncontrollable factors leading to revenue gap in the last two years to be bridged either through additional subsidy from the government or as 'Regulatory Asset".

ISSUE 54: <u>Concerns on the provisions of the Electricity Act 2003 (specifically on wider meaning of 'captive generation ' third party sales, etc.)</u>

118. What is the impact of the provisions of the new Act especially with reference to wider meaning of captive generation and third party sales?

DISCOMS: The licensee fully appreciates the concerns regarding the provisions of Electricity Act, 2003, that may have an impact on the licensee's financials. However, accurately assessing such impact is not possible at this point. The licensees are also considering various alternatives, and their pros and cons, to counter any adverse impact arising out of specific provisions of the Act such as Captive Generation, Third Party Sales, etc and seeks direction from Commission on insulating them from any adverse variances. Both the licensees and the State government have also taken up the issue with Central government.

ISSUE 55: <u>Need for providing wide publicity for implementing Demand-Side Management (DSM) measures</u>

119. There is need for providing good publicity for undertaking DSM measures by farmers.

DISCOMS: The licensee fully supports the idea of widespread publicity for the use of capacitors in the agricultural pumpsets. The licensee, in the past, provided such publicity and remains committed to interact with its consumers. Widespread publicity through newspapers, pamphlets, meetings with farmers at individual sub-stations and by organizing live demonstrations on benefits consequential to installation of capacitors are currently being undertaken. Licensees would continue these live demonstrations to put forth the benefits of installing capacitors to farmers.

ISSUE 56: <u>Franchising of sub-stations</u>

120. The sub-station franchising has been a failure.

DISCOMS: Contrary to the claim, the licensees submit that the franchising of sub-stations has not been operationalised in any of the DISCOMS and the methodology for the same is currently being finalized.

ISSUE 57: <u>High Tariff for Railways</u>

121. Tariff for supply of power to Railways is very high

DISCOMS: The tariff for Railways has not been increased during the past 3 years. There is in effect a reduction in tariff in real terms in spite of inflation. Over and above this, there was a reduction in tariff by 10 paise/kWh in the last Tariff Order (2003-04). No increase of tariff is envisaged in the ensuing year. The Objector will appreciate that the Licensees have to balance their own finances while rationalizing rates. During the period Jan-Dec.2003 the average load factor of Railway Traction Services especially in CPDCL was less than 30% and these services often exceed their Contracted Maximum Demand (CMD). Also, in terms of comparative Tariff structures, they are different in different States; after taking into consideration the demand charge component (which is not there in AP tariff), the tariffs are higher in States like UP, Gujarat, Tamil Nadu, Madhya Pradesh and Karnataka. In fact, all the issues raised now by Railways were also raised with the Hon'ble High Court of A.P. and the High Court has ruled in favour of the Licensees and the copy of the judgement shall be submitted to the Hon'ble Commission. Moreover, power utilities have accorded various concessions to Railways as follows:-

- Railways are currently not levied demand charges based on their request made way back in 1991. In fact their actual demand exceeds CMD, which otherwise would have attracted huge penalties
- Railways being public utility is exempted from Restriction and Control (R&C) orders and does not pay electricity duty also.
- Alternate feeding arrangements are made at every point throughout the State to avoid or minimise interruptions.

3. RESPONSES ON ISSUES RELATING TO APCPDCL

ISSUE 58: Xerox is industrial activity

122. Xerox (photostat) is industrial activity as per the Industries Department. Request to consider photostat (Xerox) as industrial category instead of commercial category and bill accordingly.

APCPDCL: The present categorization of service under commercial category is done on the basis of the nature of the activity. The present category of LT commercial includes all premises like shops, business houses, offices, photo-studios and other similar premises.

ISSUE 59: **<u>Collectable and un-collectable arrears</u>**

123. The break-up of collectables and un-collectables and the nature of criteria followed for such classification needs to be explained in detail by the respondent and the authority for such classification.

APCPDCL: The audit of receivables has been undertaken as per the directive of the Commission. Case-wise analysis has been done to classify the receivables as 'collectable' and 'un-collectable' before initiating the write-off. The methodology adopted was as follows:

- The receivables from Government undertakings, Departments, Municipalities and Local Bodies have been considered as 'recoverable' irrespective of the period for which they have been outstanding.
- No provision has been considered in respect of receivables remaining outstanding up to a period of 36 months.
- All disconnected and bill-stopped services have been considered for review and provision recommended based on the disquieting features noted.

ISSUE 60: **<u>Meters provided to all except agricultural consumers</u>**

124. It is commented by the Comptroller and Auditor General of India (CAG) that the meters were provided to all except agricultural consumers. The reasons for non-provision of meters to agricultural consumers assume importance in view of heavy subsidy and cross-subsidy involved.

APCPDCL: All the services released under the "Tatkal" schemes are being provided with meters.

ISSUE 61: **<u>Separate category under HT for Universities</u>**

125. Under LT, Government educational institutions are categorized in LT VII. Universities whose load is more than 75 hp / 56 kw are forced under HT category II, being defined as not falling under any other HT category. Segregation of college and hostel loads in campus is difficult. Request to create a separate category under HT for universities.

APCPDCL: Suggestion of the petitioner is noted. APCPDCL would abide by the decision of the Commission in this matter.

ISSUE 62: **<u>Reduction of fixed charges for rural industries</u>**

126. Difficult to run rice mill with the supply conditions for LT-III (A) i.e. industries in rural areas which are given power for only 7 hours a day.

127. The fixed charges are for 24 hours per day. Hence proportionate billing of fixed charges is to be applied to rural industries.

Requested to extend 3-phase supply from 6 am to 1 pm
Requested to extend 3-phase supply for 24 hours a day in 2004-05.

APCPDCL: The Licensee is putting in all efforts, including segregation of agricultural loads, to provide continuous power supply to the industrial and other metered categories under its area of supply. The present tariff applied is common for all the consumers (of same category) in the State.

ISSUE 63: **<u>Security Deposit</u>**

128. As the high value consumers are being billed monthly, security deposit of two months' consumption is sufficient. Further, the interest on this deposit should be raised from 3% per annum to bank interest rates under RBI guidelines.

APCPDCL: The licensee will abide by the decision of the Commission on the matter.

ISSUE 64: **<u>Hotels should be categorized as industries</u>**

129. Being a part of tourism and hospitality industry, hotels should be categorized as industries by the electricity sector as it is done in Tamil Nadu and Kerala, and fix lower tariffs.

APCPDCL: The tariffs are determined based primarily on the generation costs, consumption profile and T&D network, which varies from State to State. It may not be proper to have identical tariff structure or categorization across all States.

ISSUE 65: Highest tariff towards cross-subsidy for commercial category

130. APCPDCL is penalizing the commercial consumers with the highest tariff towards cross subsidy because of its inability to curtail the pilferage of energy, and not treating commercial category equally with the other categories which is violative of Article 14 of the Constitution of India.

APCPDCL: The Electricity Act, 2003 and the A. P. Electricity Reform Act permit the APERC to consider the need for cross-subsidy while fixing the tariffs. The licensee will abide by the decision taken by the Commission in this regard.

ISSUE 66: Reduction of losses

131. The losses can be reduced by plugging the loopholes in generation, transmission and distribution.

APCPDCL: The licensee has taken significant steps towards reducing the T & D losses. The losses have reduced by 9% in CPDCL during 2000-01 to 2002-03.

ISSUE 67: Poor quality and non-availability of continuous supply in rural areas

132. The domestic consumers in rural areas are being affected due to poor quality and non-availability of continuous supply. Most of them are paying minimum charges.

133. By fixing meters to agricultural connections, the supply conditions in the rural areas can be improved and continuous 24-hour supply can be given. Till then monthly minimum charges of the rural consumers should be waived.

APCPDCL: The licensee is putting in all efforts, including segregation of agricultural loads, to provide continuous power supply to the industrial and other metered categories (including domestic consumers in rural areas) under its area of supply. The present tariff applied is common for all the consumers (of same category) in the State.

ISSUE 68: Database for Distribution Transformer repairs

134. Proper database should be implemented to standardize the Distribution Transformer repairs.

APCPDCL: A software package, named Transformer Information Management System (TIMS), is being implemented in APCPDCL. This would enable monitoring the performance of the transformers.

ISSUE 69: __**Power for cement industry**__

135. Power is one of the major inputs for cement manufacturing and it is around 40% of total production cost.

136. In order to save the cement industry in Andhra Pradesh, we propose that cement units be treated at par with Ferro Alloy units and all benefits applicable to Ferro Alloy units be extended to cement industries (i.e. the power be supplied at the rate of Rs.2.12 / kwh inclusive of all applicable charges).

137. We appreciate the concern of APCPDCL and Government of AP to provide concessional power to agricultural consumers. Even though APERC / APCPDCL has got the authority to levy differential tariff to different category of consumers, there should be reasonable basis on which tariffs are fixed for HT consumers. The concessional power has been given to agricultural consumers at the cost of HT and other category consumers. We request APCPDCL not to impose such heavy burden on HT consumers while providing power at subsidized rates to other category consumers.

APCPDCL: The licensee accepts that cross-subsidy between the consumer categories exists. However, it is not possible to eliminate the cross-subsidies immediately. The Electricity Act, 2003 and the A.P.Electricity Reform Act permits the APERC to consider the need for cross-subsidy while fixing the tariffs.

ISSUE 70: __**Request for categorisation as Cottage Industries**__

138. Request to categorise the following as Cottage Industries, under LT-IV:

1). Blacksmithy
2). Carpentry
3). Kanchari
4). Shilpi
5). Goldsmithy
6). Pottery

APCPDCL: The Cottage Industries (LT – IV) tariff is applicable to Dhobighats and bonafide small cottage industries specifically power looms having connected load not exceeding 5 HP including incidental lighting in the premises. Poultry farming units up to 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 as per the present classification. However, the licensee will abide by the decision of the Commission on this issue.

ISSUE 71: <u>Categorisation of consumption in NIMS</u>

139. The energy utilized by Nizams Institute of Medical Sciences (NIMS) is for health care and is non-commercial. Hence it is desirable to categorise the consumption of NIMS under HT Cat. VII @ Rs.4.00 per unit without demand charges.

APCPDCL: The tariff is applicable as per the present classification. However, the licensee will abide by the decision of the Commission on this issue.

ISSUE 72: <u>Interest on Security Deposit</u>

140. Whether additional expenditure due to interest on consumer's security deposit is required to be paid by the licensee at the rate equivalent to the bank rate or more as per section 47(4) of the Electricity Act, 2003.

APCPDCL: The current ARR considers the existing rate of interest on Consumer Security Deposit @3% and does not factor in the additional cost on account of the Electricity Act 2003 provision. The licensee will abide by the decision of the Hon'ble Commission on the issue.

ISSUE 73: <u>Period of notice for defaulters</u>

141. Not less than fifteen clear days' notice in writing should be given to a consumer who defaults to pay the Bill for supply of electricity as per Section 56 of the Electricity Act 2003. This is not done but announcement through mike is done. Lawfully constituted licensee and the Commission may follow or cause to be followed the law of the land.

APCPDCL: As per the existing "Terms and Conditions of Supply" 14 days' time is provided and due date for payment is printed on the bill.

ISSUE 74: <u>Charges for disconnection of supply</u>

142. Charges for disconnection of supply as required as per Section 56 of the Electricity Act 2003 are to be fixed by the Commission.

APCPDCL: The licensee will abide by the decision of the Commission.

ISSUE 75: <u>Fuel Surcharge Adjustment</u>

143. Fuel Surcharge Adjustment (FSA) is not at all billed to LT consumers (except industrial). This can be verified from the bills served on the Commission Members and staff and licensee's Directors and employees. Revenue is not assessed but tariffs are revised without looking into the ground situation.

APCPDCL: FSA is charged on all the categories of consumers (except agriculture and Central Government units). The FSA is charged based on the approval by the Commission.

ISSUE 76: <u>Proper accounting of FSA</u>

144. It is not known whether there is any review of expenditure versus revenue in respect of increase in fuel costs.

145. There are separate account codes in respect of revenue relating to FSA. Perhaps these are overlooked.

APCPDCL: The details of increase of fuel costs are submitted to the Commission for finalisation of the FSA as per the guidelines of the Commission.

FSA is accounted for separately.

ISSUE 77: <u>Fines for theft of energy</u>

146. (Page 401 of Tariff Order 2003-04) : The intention appears that 3 times the Tariff applicable should be charged in respect of theft of energy (both HT and LT categories) but the sentence is not complete. Fines to be imposed in respect of

theft of electricity are specified in Section 135 of the Electricity Act 2003. This is to be considered by the Commission and additional revenue assessed.

APCPDCL: The licensee will abide by the decision of the Commission.

ISSUE 78: **<u>Fixation of meter rent</u>**

147. Item 4 (a) of page 402 of Tariff Order requires that consumers requiring Temporary HT supply shall deposit <u>meter rent</u> for the period of supply. Meter rent (besides customer charges) is not specified by the Commission. Fixing of Meter rent besides customer charges also requires jurisdiction.

APCPDCL: Customer charges include meter rent also. Consumer has to pay Customer charges along with the other charges applicable.

ISSUE 79: **<u>Interest rate and Surcharge on belated payment</u>**

148. Surcharge for belated payment of bills (CC bills) is fixed at 25.55% per annum. Considering the reduction in interest rates in the country by all agencies, the rate of the surcharge merits reduction.

APCPDCL: Surcharge for belated payment is not only to recover the interest cost, but is also aimed at discouraging such delays.

ISSUE 80: **<u>Supplementary bills for shortfall in consumption</u>**

149. In fixing tariffs, two factors are taken into account; one is estimated consumption (KWh) and the other is average revenue per KWh. If there is shortfall in the actual consumption (category-wise) as compared to the estimates, there is no mechanism as at present to bridge the gap. In some countries, supplemental bill is issued to the consumers. Such a condition may be considered for inclusion in the tariff order (as is done in FSA).

APCPDCL: The licensee welcomes the idea and has expressed the view that change in sales mix (from the projections) is not completely within its control and requires a 'true-up' at the end of the projection period when actual figures are available.

ISSUE 81: **Supply of power to rural areas**

150. There should be 24-hour supply of power to rural areas.

APCPDCL: Works are in progress to ensure 24-hour power supply for the domestic loads in rural areas.

151. The feeders having predominantly industrial loads are being segregated by laying industrial express feeders, to extend continuous supply to industries. However, in the present circumstances, it is difficult to extend continuous supply to the isolated industrial loads on agricultural feeders.

ISSUE 82: **Speedy redressal of complaints in rural areas**

152. Request for speedy redressal of complaints and increase in the frequency of sub-station wise meetings and wider participation.

APCPDCL: Arrangements are underway to implement spot billing in rural areas also, which would reduce the consumer complaints on billing issues.

153. Necessary action will be taken to increase the frequency of the sub-station level consumers' meetings to facilitate the interaction and hence improve the grievance redressal mechanism in the rural areas.

ISSUE 83: **Investments in rural sector**

154. Investments in the rural sector for improvement in the quality of power supply are not considerable.

APCPDCL: The major part of the investments in the last few years was made in the rural areas for improvement of the supply conditions which has greatly reduced the low voltage pockets and also facilitated evacuation of power requirements even during the peak agricultural season. It is only from the last year that investments under the Accelerated Power Development and Reform Programme (APDRP) are being utilized in cities and towns for improvements.

4. RESPONSES ON ISSUES RELATING TO APNPDCL

ISSUE 84: Engineering & Iron Works industries to be brought under Cottage Industries - Cat.IV

155. The Commission may consider all the engineering & iron works industries, which consume below 10 HP as cottage industries under Category IV.

APNPDCL: Categorization of industries is under the purview of A.P.State Government.

ISSUE 85: To replace China meters with APTRANSCO meters

156. The Commission is requested to replace the China meters with APTRANSCO meters (as the China meters are causing loss to the industries).

APNPDCL: China meters mentioned by the Petitioner are high accuracy electronic meters. Previously electro-magnetic meters were used. Due to inherent inertia and friction, the recorded consumption was lower than the actual energy consumed thus causing huge loss to the Licensee. The electronic meters record energy consumption accurately.

ISSUE 86: Facility to have connected load up to 150 HP as applicable under Cat.III (A) Industrial may be allowed

157. In respect of rice mills currently categorized under Category III(B) Industrial, (75 HP to 150 HP) the facility to have connected load up to 150 HP but to apply tariff as applicable under Category III (A) Industrial (i.e. Rs. 37 HP/month and Rs.3.85 per unit consumed) may be allowed.

APNPDCL: LT Category III (B) consumers are allowed to have connected load up to 150 HP (75 HP to 150 HP) as per Tariff Order.

158. Consumers whose connected load is more than 75 HP are classified under HT Category excepting LT category – III (B) Industries i.e. LT Category – III (B) is practically an HT service with reduced tariff for demand. This is a concession given to

SSI units. In view of the concession already given, application of tariff of Category – III (A) is not possible.

ISSUE 87: Demand Charges

159. In respect of rice mills under HT-I category, demand charges @ Rs.195 / KVA / month and consumption charges @ Rs.3.71 / unit are requested to be reduced to Rs.160 / KVA / month and Rs.3.50 / unit respectively. Also the current penal charges for exceeding CMD are extremely high at 100% penalty. This is requested to be reduced to 50% penalty. Similarly, as HT tariff is already a two-part tariff consisting of a charge for contracted base load and actual consumption charge, the deemed consumption charge @ 50 units per KVA is extremely unreasonable, unjustified and severely punitive. This deemed consumption clause is requested to be deleted in the light of the current trends in the activity of the rice mills in A.P.

APNPDCL: Any reduction in HT tariffs in one category would result in increased revenue gap and indirectly affect the tariffs of other consumers.

160. The penal charges are levied for the exceeded CMD portion only. The penal charges are levied in order to prevent any excess usage of demand than the contracted demand. The consumers are expected to adhere to the terms and conditions of their agreements. The licensee does not intend to gain any revenue from penal charges, which are only intended for prevention of overloading of the system.

ISSUE 88: Rural Feeders

161. In respect of rice mills in rural feeders where power is only provided for 7 to 9 hours, the minimum demand and consumption charges may be scaled down proportionately.

APNPDCL: Demand charges are towards incidence of the load at any half-an-hour of time, as the grid has to supply the load whenever it is incident on the system. The maximum demand does not have any effect on the number of hours of supply.

5. RESPONSES ON ISSUES RELATING TO APSPDCL

ISSUE 89: Tariff for HT-IV agriculture should be the same as for LT (V) A

162. In the tariff also there is a glaring anomaly as the unit rate above 2500 units under LT-V(A) has been fixed as 50 paise per unit, while the tariff rate under HT-IV agricultural has been fixed at 35 paise. It would be logical that the tariff rate under LT-V(A) is fixed at less than 35 paise.

APSPDCL: There are no minimum charges in LT-V category (optional) while HT agricultural services have minimum charges in addition to energy charges and hence the LT and HT categories cannot be compared keeping in view the lower line losses in HT when compared with LT services and in view of balancing of the tariff structure as devised by the APERC.

ISSUE 90: Reduction in Tariff for 5 HP and above

163. Reconsideration of fixing of tariff for 5 HP and above in a single slab of Rs.375 (50% reduction) reasonably far below the HT-IV agricultural tariff.

APSPDCL: The overall yield of revenue from agricultural services is low. This sector is a subsidized category and the subsidy being reimbursed by State Government. The suggestion can be considered if the Government reimburses the amount that the DISCOMS would lose due to the tariff reduction.

ISSUE 91: Development Charges for private Lift Irrigation projects

164. The development charges should be collected from the farmers of government Lift Irrigation schemes and not from the private lift irrigation schemes.

APSPDCL: This may be considered only if the Government reimburse the charges.

ISSUE 92: Reduction in Tariff for Government LI Schemes

165. It is requested to reduce the unit rate for the Government L.I. schemes also by 50% fixing it at Re.1/- per unit as against the existing rate of Rs.2.08 as is being

reduced for the private L.I. schemes to avoid huge pending bills of government L.I. schemes.

APSPDCL: This may be considered only if the government reimburse the charges. However, the Commission will examine and decide.

ISSUE 93: APGENCO to be placed on par with IPPs

166. To safeguard interest of the APTRANSCO and to provide the APGENCO with the same infrastructure facilities, incentives, tax exemptions, concessions, subsidies and guarantees on par with private producers.

APSPDCL: This depends upon the policy of State and Central governments.

ISSUE 94: Consumption charges

167. The rate of interest for payment of arrears of CC charges in instalments should be reduced from 24% to 9%

APSPDCL: This is in the purview of APERC.

ISSUE 95: ARR and tariff proposal in Telugu

168. ARR and Tariff proposals should be published in Telugu

APSPDCL: The matter is being examined.

ISSUE 96: Reduction of agricultural consumption

169. When the number of pumpsets has increased, it is not understood as to how the agricultural consumption in 2007 will get reduced.

APSPDCL: By taking up the steps like DSM measures, metering, introducing HVDS and by educating farmers, it is possible to save on the energy consumption in the agriculture sector. Thus there will be reduction in agricultural consumption.

ISSUE 97: Seasonal Industry facility for LT III (A)

170. Seasonal industry facility is allowed for LT Cat III (B). Most of the connections are in LT III(A). This seasonal facility should be extended to the industries under LT III(A) also.

APSPDCL: The matter is being examined.

ISSUE 98: Metering of agricultural consumption

171. Meters should not be fixed for the agriculture pumpsets

APSPDCL: As per Electricity Act, 2003, every service should be provided with meter.

ISSUE 99: High bills for SC and ST consumers

173. While saying that SC, ST are given subsidy, the licensees are sending excess bills.

APSPDCL: As per the tariff order the minimum charges are payable as follows:

Domestic
Up to 250W - Rs.25p.m
Above 250W - Rs.50p.m
Customer Charges:
Up to 50units/month - Rs.15 p.m
Above 50units/month - Rs.20p.m

For the excess over the minimum consumption, the energy charges have to be paid. Electricity Duty is also included in the bills.

ISSUE 100: Electricity bills to be in Telugu

174. Bills should be printed in Telugu.

APSPDCL: Will be done.

ISSUE 101: Tariff Order in Telugu

175. Tariff order should be published in Telugu

APSPDCL: The matter will be examined by APERC.

ISSUE 102: <u>Three slabs for LT Cat. II</u>

176. The existing 2-slab structure in LT Cat II(Non-Domestic / commercial) should be modified to 3-slab structure and rates should be as follows:

0-100 - Rs.3.95 paise
101-200 - Rs.5.50 paise
Above 200 - Rs.7

APSPDCL: This needs to be examined by APERC.

ISSUE 103: <u>Upward revision of LT Cat. II</u>

177. The Commission ignored the objections raised on Tariff for LT Cat II (Non-domestic / commercial) and unilaterally changed the slab structure resulting in additional income of Rs.4 crores, and at the same time, it is published that there is no hike in power tariff and reforms should reveal results. How far this publication is justified. Is it not misleading the consumers? What is the use of the suggestions made in the public hearing? What is the use of public hearing?

APSPDCL: This will be examined by the Regulatory Commission.

ISSUE 104: <u>Customer Charges</u>

178. It is requested that the CC for LT Cat II using up to 50 units/month may be fixed at Rs.15.

APSPDCL: In domestic category, up to 50 units there is subsidy in energy charges also in CC. This is not possible in commercial category. The Commission may please examine.

ISSUE 105: <u>Free supply of power to agriculture</u>

179. Power should be supplied free of cost to Agriculture.

APSPDCL: As per the tariff order of APERC, the APTRANSCO is purchasing the power at Re.1.972 / unit and selling it to the agriculture consumers at 31 paise / unit that means subsidy @ Rs.1.662/unit. Free supply of electricity is dependent on the State Government and APERC.

ISSUE 106: Responsibility for motors burnt

180. The State Government should take responsibility for the motors burnt due to low voltage.

APSPDCL: This matter is being examined by the Commission.

ISSUE 107: Burden of losses on consumers

181. The burden on account of losses should not be put on the consumers.

APSPDCL: The existing tariff rates are proposed for 2004-05 also. Apart from that the meters are being fixed to the agriculture connections to arrive at the correct line losses.

ISSUE 108: Single unit tariff for Domestic consumption

182. For domestic category, single unit charge should be allowed for all units consumed.

APSPDCL: The slab structure is followed to extend the Government subsidy for the benefit of middle class people. However this matter is in the purview of the Commission.

ISSUE 109: Tatkal Scheme

183. Tatkal scheme should be removed and agriculture connections should be released as per seniority as done earlier.

APSPDCL: Tatkal scheme is meant for agriculture consumers who wanted connections urgently.

ISSUE 110: Public hearing at Nellore

184. Public hearing should be at Nellore.

APSPDCL: The Commission decided to conduct the hearing in Tirupathi.

ISSUE 111: <u>Metered tariff for Horticulture</u>

185. It is injustice to prescribe the metered tariff for Horticulture. It should be removed.

APSPDCL: As per tariff order, metered tariff should be paid. Removal of metered tariff is within the purview of APERC.

ISSUE 112: <u>Compensation for accidents</u>

186. It is ridiculous to fix the rate of Rs.20,000 for loss of human life and Rs.1000 for loss of cattle life in accidents.

APSPDCL: The Power Ministry of GOI is examining a scheme called "Electricity Accident Assistance Scheme" which envisages ex-gratia payment of Rs.50,000 for those who die and Rs.25,000 for those who are injured in the electrical accidents.

ISSUE 113: <u>Free electricity to handloom weavers</u>

187. For the handloom weavers, free electricity should be given up to 50 units/month.

APSPDCL: Free electricity is a policy matter of the State Government and also comes under the purview of the APERC.

ISSUE 114: <u>Defaulters' names to be published</u>

188. The names of the institutions from whom the arrears are above Rs.1 lakh should be published

APSPDCL: Necessary action will be taken as per your suggestion.

ISSUE 115: <u>Tariff for middle class consumers</u>

189. Same tariff rate up to 100 units should be fixed for the benefit of the poor and middle class consumers

APSPDCL: This is also a matter of policy of State Government and comes under the purview of the Commission.

ISSUE 116: **Losses on account of defective distribution system and accidents**

190. Losses on account of the defective distribution system and also due to accidents should be borne by the DISCOM only.

APSPDCL: The feeders and transformers are overloaded due to the increase in the depth of bores and unauthorised use of higher capacity pumpsets by the consumers. It is requested that the farmers may regularise additional and unauthorised loads so that the new transformers and substations can be installed. The Commission is examining the matter to ensure that the losses on account of the defects in the distribution system are borne by the DISCOMS only.

ISSUE 117: **Seasonal benefit to LT-III (B)**

191. In 2003, the APERC allowed seasonal benefit to LT-III (B) only. It should be allowed to LT III (A) also.

APSPDCL: The APERC will examine this matter.

ISSUE 118: **Providing T.A. and food during public hearing**

192. The Objectors attending public hearing should be given T.A and food.

APSPDCL: No comments

ISSUE 119: **Free electricity for Domestic consumers**

193. Free electricity for the consumers using up to 15 units / month.

APSPDCL: Electricity is supplied with subsidy up to 50 units / month. Free supply is dependent on the policy of State Government.

ISSUE 120: **Cancellation of Tatkal Scheme**

194. Tatkal scheme should be cancelled and the agriculture connections should be given as per seniority as given in the past.

APSPDCL: This scheme is meant for the benefit of the farmers who want immediate connection. This is a facility over the previous procedure.

ISSUE 121: Withdrawl of cross subsidy

195. Cross-subsidy should not be withdrawn. The burden will fall on agricultural and domestic consumers.

APSPDCL: The DISCOM has proposed the existing rates only for 2004-05 also. This is dependent on the Government policy and is in the purview of the Regulatory Commission.

ISSUE 122: Supply of electricity for 24 hours to farmers

196. Farmers should be given 24-hour electricity supply.

APSPDCL: There is a shortage of electricity due to drought conditions in the State. There is insufficient electricity in the neighboring States also. Hence the power supply is given for not less than 7 hours and for saving the crops, extra hours also supplied wherever necessary.

ISSUE 123: Consumer education on energy saving

197. The consumers should be educated about energy saving and the alternate energy.

APSPDCL: The DISCOM is encouraging use of :

- Energy efficient bulbs
- Frictionless foot-valves.
- HDPE pipes
- ISI Mono bloc pumpsets.
- Suitable capacitors
- Electricity during required hours only without wastage.

The concerned departments are giving publicity on the alternate energy.

ISSUE 124: Cross-examination of licensees

198. To allow cross-examination of respondent by the objectors.

APSPDCL: The public hearing is meant for hearing of the objections / suggestions of general public on ARR filing and not for any cross-examination of Licensees.

ISSUE 125: Uniform HP tariff for agriculture consumers

199. To fix uniform HP tariff for agricultural consumers.

APSPDCL: The HP of motor is directly proportional to the extent of land under cultivation and in turn assumes the paying capacity of the farmer. In general, all the farming community had been under subsidized category. Different slabs in agricultural category are comparable to domestic and non-domestic slabs and hence the seeking of uniform slabs is not rational. However, the Commission will examine and decide upon the suggestion.

ISSUE 126: Introduction of telescopic system of tariff

200. To introduce telescopic system of tariff for consumers of Category VII and fix four slabs in this category.

APSPDCL: The suggestion is not rational.

CHAPTER V
STAFF PRESENTATION

INTRODUCTION*:*

201. The Commission Staff on behalf of the consumers made a presentation to the Commission on their analysis of the ARR/ERC filings and tariff proposals of APTRANSCO and the four DISCOMS at the public hearings. The analysis was done separately for APTRANSCO and each of the DISCOMS. The Staff presentation for APTRANSCO was made on 16.2.04 and that for the DISCOMS on the following dates:

Table No.6
DATES OF STAFF PRESENTATION ON DISCOMS FILINGS

Central Power Distribution Company	**17.2.04**
Northern Power Distribution Company	**17.2.04**
Eastern Power Distribution Company	**17.2.04**
Southern Power Distribution Company	**19.2.04**

202. A notable feature of this year's filings is that in response to the Commission's Directive in the Tariff Order for FY2003-04, APTRANSCO filed a two-part Bulk Supply Tariff (BST) along with one-part BST, as per the existing practice.

Key Features:

203. At the outset, the Staff presented a gist of filings made by APTRANSCO and four DISCOMS followed by a detailed analysis on the performance of the licensees during the first three years of restructuring and the current financial year. Against this background, the analysis of the Staff on the filings for FY05 was presented, with emphasis on the key indicators filed for the ensuing year.

GIST OF FILINGS FOR FY 2005

204. APTRANSCO filed Revenue requirement at Rs.8383 Cr. for FY 2004-05, which comprised the following:

i) Bulk Supply Business;

ii) Transmission Business; and

iii) SLDC charges.

The break-up is as given in the table below:

Table No.7
Revenue Requirement for FY 05

(Rs. Crs.)

Bulk Supply Business	7,356.63
Transmission Business	970.36
SLDC charges	56.16
Total ARR	8,383.15

205. APTRANSCO proposes to recover the expenditure through an average BST of Rs1.96 / kWh on energy proposed to be sold to DISCOMS during FY 2004-05.

The two-part BST filed by APTRANSCO consists of:

- Fixed charge of Rs 511.08 per KW/month on the basis of 5659 MW,
- Peak energy charge @ Rs1.81 per kWh and off-peak energy charge @ Rs 0.82/kWh

In addition to the two-part BST, the following charges are proposed to be levied in line with the Electricity Act, 2003:

- Transmission charges at Rs 142.89/KW/month
- SLDC charges at Rs 8.27/KW/month

206. The DISCOMS in their filings have proposed a total ARR requirement of Rs.10289.13 crs for FY05, which leaves a revenue gap of Rs.1996.52 crs at current tariffs and Rs.1552 .85 crs at proposed BST, Transmission and SLDC charges. A summary of the gap and the filings is given in the tables below:

Table No.8
ARR and Revenue Gap of DISCOMS at current tariffs

(Rs. Crs.)

Items	APEPDCL	APCPDCL	APNPDCL	APSPDCL	DISCOMS
ARR	1839.37	4570.49	1533.6	2345.69	10289.15
Tariff revenue at current tariffs	1,537.17	3,705.69	162.92	1,887.36	8,293.14
Revenue gap at current tariffs	(302.21)	(865.28)	(370.68)	(458.35)	(1,996.52)

Table No.9
ARR and Revenue Gap – APTRANSCO and DISCOMS together
(Rs. Crs.)

Items	**APTRANSCO**	**T & D(*)**
ARR	8383.15	9826.81
Tariff revenue at current tariffs	8,826.82	8,293.14
Revenue gap at proposed tariffs	443.67	(1,552.85)

(*) **APTRANSCO + DISCOMS**

Note: Amounts within brackets in these tables and elsewhere denote minus figures

No tariff hike is proposed by the DISCOMS for retail supply.

Issues raised by APTRANSCO/DISCOMS

207. The following issues have been raised by APTRANSCO in its filings:

1. Methodology for true-up of financial losses for previous years is proposed as
   - P&L or Regulatory accounts whichever is lower, or
   - True-up for all components by re-defining, head-wise, the controllable and non-controllable items
2. FSA to cover all approved generating stations including short term power purchases

DISCOMS too have suggested similar methodology; they have, in addition, requested for:

1. Pass-through of justifiable deviations
   - Mitigation of risks due to deviations in capital expenditure, and;
   - Linking investment plan with loss reduction targets.
2. Due to risks likely to arise on implementation of the provisions of Electricity Act, 2003, sales projections should be treated as uncontrollable.
3. Implementation of availability based tariff (ABT) at State level and pooling of Unscheduled Interchange (UI) charges.
4. Continuance of Capital Works-in-progress (CWIP) in the capital base

Current year highlights – APTRANSCO/DISCOMS

208. The highlights of the current year as stated by APTRANSCO are reduction in the estimated transmission loss for FY04 by 0.5%, to 6.5% as against 7% approved in

the Tariff Order. APTRANSCO earned Rs.56 Cr as UI charges in the ABT regime, and Rs.216 crs as income claimed under the securitisation scheme towards payables to Central generating companies.

209. The DISCOMS' highlights of FY04 show that the projected sales are 33169 MU for current year against the approved sales of 33457 MU as per the Tariff Order, with a reduction of 288 MU. The projected sales of 33169 MU are however higher than the actual sales of 31588 MU in FY03. The distribution loss estimated for FY04 is 19.80% against 18.96% loss reckoned in the Tariff Order. The projected investments in FY04 are at Rs.909.74 Cr against Rs.544.80 Cr reckoned in the Tariff order.

An overview of performance

210. The Staff made an analysis on the performance of the sector during the first three years of restructuring and the current year. Issues such as power purchase and cost, sales and revenue, and capital and revenue expenditure were examined. An important feature of this year's Staff analysis of performance has been that it is based largely on audited accounts. While the audited accounts of FY 2000-01 and 2001-02 have been submitted by all the licensees, the provisional accounts of FY03 have been made available and the statutory audit of Accounts of FY 2002-03 too is stated to have been completed (though CAG's comments for the year were awaited).

211. A key feature on the power purchase front noted this year is the yet-again hydro failure that has resulted in substantial fall in the purchase of power from APGENCO's hydel stations. There was also shortage in power availability from NTPC (ER) and independent power producers (IPPs). The hydro shortfall was 3938 MU from APGENCO. In the case of NPTC (ER), the shortage of 761MU was because CEA reduced the allocation to Andhra Pradesh. In the case of IPPs, the shortage of 834 MUs was due to turbine problem in one of the projects, coupled with gas shortage applicable across the board to all gas – based IPPs. The above shortfall was made up by higher purchases from APGENCO's thermal stations (2626 MU), NTPC Simhadri (1114 MU), CGS (561 MU) and Talcher-Stage II (373 MU). Nonetheless, the estimated power purchase for FY 04 is 520 MU less than

the power purchase volume approved in Tariff Order mainly due to lesser sales by DISCOMS.

212. The Staff analysis of power purchase cost for FY04 shows the unit cost of power as Rs.1.85, higher than the cost of Rs.1.77 per unit approved in the Tariff Order. This increase in the purchase cost can be largely attributed to:

- Reduction in availability of hydel power
- Increase in gas price (Ravva Field)
- Increases in variable costs due to larger purchases from thermal stations in substitution of hydel power
- Increase in purchases from non-conventional energy sources
- New capacity additions

Sales and Revenue

213. An analysis of the energy sales by each of the DISCOMS and revenues thereof over the years FY 2000-01 to FY2003-04, by the Staff shows a growth rate of 7.40% per annum in actual sales. The fall, therefore, in sales of 288.13 MU in FY 04 as compared to the Tariff Order must be seen in relation to an increase of 1563.24 MU in actual sales. Growth rate of sales, voltage–wise, shows that LT has registered a growth rate of 5.90% per annum during this period, while HT sales registered a growth rate of 11.66% per annum. In LT category, Domestic LT-I (8.29%p.a.), Commercial LT-II (12.15% p.a.) and Public lighting LT-IV (25.16% p.a.) displayed robust growth rates. Industry LT-III, however, has shown a low growth rate of 4.15%p.a. In the HT segment, HT-I Industry has shown high growth rate of 11.60% p.a; the increase was sharp in FY03 when there was a jump of 1000 MU. HT-IV (Irrigation) also displays a high growth rate of 19.69% p.a.

214. Growth of revenue, in tune with the trend in sales, shows a growth rate of 11.45% which is, in fact, more robust than that of sales over the period, with actual sales revenue of Rs.7396.83 in FY03 and estimated revenue of Rs.7740.82 crs for FY04. In terms of average revenue realization per kWh, the increase is from Rs.2.09/kWh in FY01 to Rs.2.39/kWh in FY04.

Table No.10

Average revenue per kWh **(in Rs.)**

	All DISCOMS			
	Audited	Audited	Audited(*)	Estimates
	FY 2000-01	FY 2001-02	FY 2002-03	FY 2003-04
All LT categories	1.51	1.45	1.81	1.84
All Htcategories	3.85	3.85	3.97	3.79
Total (LT + HT)	2.09	2.00	2.34	2.39
(*) As audited by statutory auditors; CAG's comments were awaited				

Inter-State sale was 315 MU against 1015 MU reckoned in the Tariff Order.

215. The Energy Balance for FY02 to FY04 as shown in the table below shows a reduction of 6.48% in total system losses over the period as has been claimed in the filings. The actual numbers as filed are, however, at variance with those mentioned in the licensees' accounts and need to be reconciled.

Table No.11

Energy Balance for FY02 to 04

	FY 02		**FY 03**		**FY 04**	
	Order	**Actuals**	**Order**	**Actuals**	**Order**	**Estimates**
Purchase by TRANSCO (MU)	40,812	40,792	39,529	43,189	45,806	45,286
Purchase by DISCOM (MU)	37,347	37,439	36,367	39,842	41,286	41,285
Sales by DISCOM (MU)	27,652	27,944	28,309	31,277	33,457	33,112
Transmission losses (MU)	3,465	3,353	3,162	3,347	3,107	2,870
Distribution losses (MU)	9,695	9,494	8,058	8,565	7,829	8,173
Total energy losses (MU)	13,160	12,848	11,220	11,912	10,936	11,043
Transmission losses (%)	8.49%	8.22%	8.00%	7.75%	7.00%	6.50%
Distribution losses (%)	25.96%	25.36%	22.20%	21.50%	18.96%	19.80%
Total System losses (%)	32.25%	31.49%	28.40%	27.50%	24.63%	25.01%

Investment pattern

216. In their presentation, the Staff raised concern about the investment pattern. It has been observed that investments that have materialized have been less then what was proposed in the ARR and in the Tariff Order as can be seen from the table below. The Staff are therefore of the opinion that it is preferable to exclude CWIP from the computations.

Table No.12

Investment pattern observed the 4-Year period 2000-04 **(Rs.Cr.)**

	TOTAL T & D SECTOR **(*)**			
	2000-01	2001-02	2002-03	2003-04
ARR filings	2078.22	2233.00	1891.59	1984.99
Tariff Order	1990.77	1717.56	1888.84	925.36
Actuals	937.61	982.46	1343.07	1244.74

(*) APTRANSCO + DISCOMS

Compliance with Directives

217. Track record with regard to compliance of Directives issued by the Commission has been shown in the tables below, separately for APTRANSCO and the DISCOMS.

Table No.13
Compliance with Directives – APTRANSCO

Directive No	SUBJECT	STATUS
1	PPA negotiations	Complied.
3	Transmission losses on website	Complied
8	Capital Expenditure and CWIP discussion paper	Complied
11	Non-conventional energy sources	Complied
12	Surplus revenue adjustment to DISCOMS	Complied
13	BST two-part tariff	Complied
14	Merit Order Principles	Complied
15	Merit Order Dispatch	Complied
17	Interruptions to industrial feeders	Complied
23	Approval of boundary metering scheme	Complied
24	10 MVA HT consumers' day-ahead schedule	Complied
25	Operationalisation of master pension trusts	Complied

Table No.14
Compliance with Directives - DISCOMS

DIRECTIVE NO.	SUBJECT	STATUS
1	Audit of receivables	Not complied
2	Sales database for entire DISCOM	Complied
3	Installation of high quality meters – Towns and Mandal Headquarters	Partly complied
4	Removal of multiple connections	Under compliance
5	Local bodies sales database	Complied
8	Discussion paper on CWIP	Complied
9	MIS Report based on sales database (Customer and minimum charges)	Partly complied
10	Assessed sales – Target	Not achieved
17	Load relief	Partly complied
18	All conditions listed in Annexure 'C' in the specified time frame	Partly complied with (i). Audited accounts for FY 2000-01 and 2001-02 submitted. CAG's comments on accounts for FY 2002-03 awaited Cost-to-serve based on Long-run marginal cost to be submitted.
19	Meters to be provided on priority for Agrl consumers opting for metered tariff	Partly complied
20	Report on TOD Tariff for implementation wef 01-04-2004	Not complied
21	DISCOMS to submit capital expenditure programme to absorb excess funds availability at least by 31-05-2005	Partly complied
22	Contribution to be invested in securities under Indian Trust Act within 6 months as per para 4 of VIth Schedule	Not complied
24	Forecast of demand to be based on advance information from consumers with CMD of more than 10 MVA	Partly complied
25,27,229,31,33	Trusts to be functionalised by 30-04-2003 – Comprehensive report to be furnished	Complied
26,28,30,32,34	Comprehensive report on achievement of performance standards as on 31-03-2003	Complied

218. APTRANSCO complied with all the Directives. In the case of the DISCOMS, some of the Directives are yet to be complied with. However even among those that still remain to be complied with, the Directives being in the nature of ongoing reforms, full compliance will take time.

Financial results - Profit / Loss

219. The overall profit and loss for the sector as per audited / projected figures are given in the table below:

Table No.15
Profit / (Loss) **(Rs.crs)**

	Audited			Projected
	2000-01	**2001-02**	**2002-03**	**2003-04**
APTRANSCO	0.00	(176.90)	205.44	(53.10)
NPDCL	0.00	(51.90)	(0.68)	(23.32)
EPDCL	0.00	(14.94)	5.19	(49.96)
SPDCL	0.00	(25.44)	(2.03)	(34.64)
CPDCL	0.00	(126.13)	13.61	(231.20)
DISCOMS Total	0.00	(218.41)	16.09	(339.12)
TOTAL T&D **(APTRANSCO + DISCOMS)**	0.00	(395.31)	221.53	(392.22)

Overview of FY 2004-05 filings

Power purchases

220. The energy balance for FY05 as projected by the licensees and as estimated by the Staff differed mainly on the amount of power available and its reflection in inter-State sales. While APTRANSCO filed an availability of 51,611 MU, the Staff estimates place availability at 45,982 MU. This difference is mainly on account of projections with regard to hydel availability. Apart from hydel shortage, the Staff anticipate gas shortage of 10%, which affects the availability of energy from IPPs. Accordingly, the Staff have reduced availability for inter-State sales from 1186 MU to 508 MU.

Table No.16
Energy Balance for FY 2004-05

	Filing	Staff Estimation
Availability (MU)	51,611	47,853
Purchase by TRANSCO (MU)	46,660	45,982
Purchases for inter-State sales (MU)	1,186	508
Purchases for DISCOMS (MU)	45,474	45,474
Purchase by DISCOMS (MU)	42,632	42,632
Sales by DISCOMS (MU)	34,735	34735
Inter-State sales (MU)	1,113	476
Transmission losses (MU)	2,842	2,842
Distribution losses (MU)	7,895	7,895
Total energy losses (MU)	10,737	10,737
Transmission losses %	6.25%	6.25%

221. Consequently, the power purchase costs projected by APTRANSCO at Rs.7950 crs or Rs.1.70 / unit increase to Rs.8550 crs or Rs.1.86/unit. The incremental cost is Rs.600 crs. A major increase in costs can be attributed to the differences with regard to hydel availability. With the availability of hydel power at 6423 MU, the pooled power purchase cost projected by APTRANSCO comes to Rs.1.44 / unit. The Staff estimate of availability of hydel power at 4090 MU increases the pooled power purchase cost from APGENCO to Rs.1.68 per unit. The factors contributing to increase in power purchase costs, source-wise, are given in the table below, which is self-explanatory:

Table No.17
Basis of staff computations

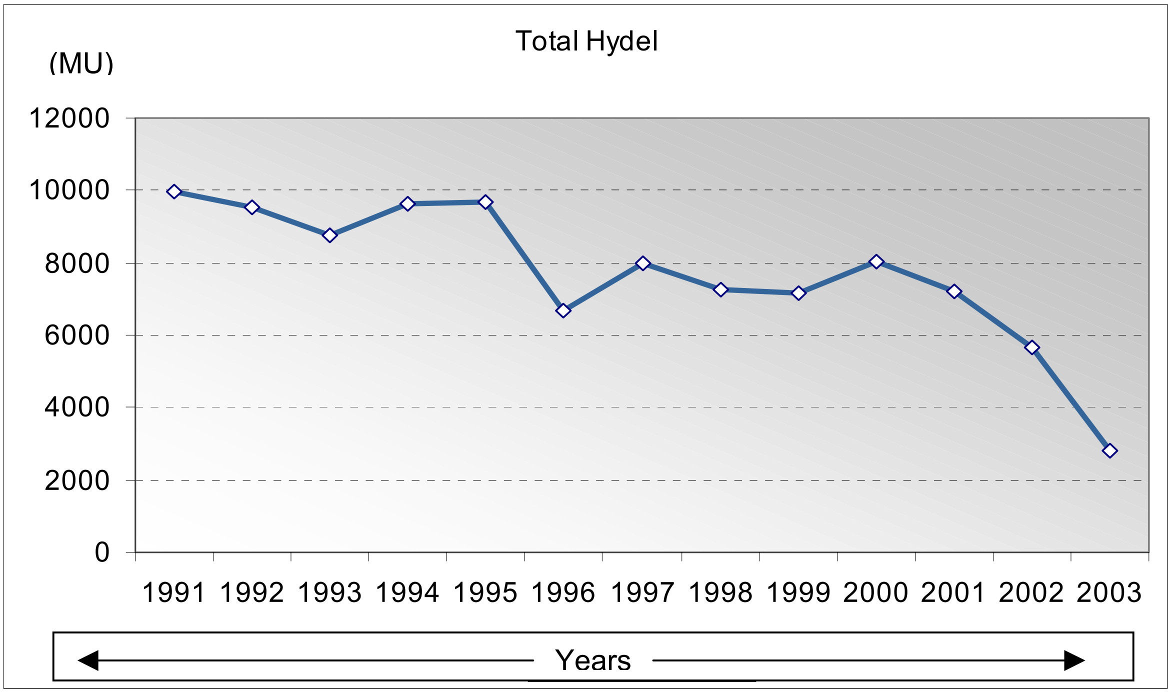
Sources of energy	**List of Modifications**
APGENCO	
Thermal	Generation adjusted to availability declared by APGENCO
Hydel	Projected SLBH generation not considered as part of the energy availability as Fixed cost is not considered by APTRANSCO.
CGS	NLC scheduled availability considered. No adjustment for lower scheduling practice of CGS has been made. NTPC (SR) Stage III infirm power is considered.
Transmission	Transmission costs of PGCIL are considered as a fixed cost including the ensuing year's assets addition e.g. Ramagundam Stage III expansion lines, second line to Jeypore- Gajuwaka etc.
APGPCL	Availability considered at 418 MU as per Filing.
Simhadri	Fixed cost considered as per CERC order at Rs 426 Crs.
IPPs	IPPs gas shortage at 10% is considered.
Talcher infirm & firm	Commissioning schedules of all units of Talcher considered. Infirm power is for 26 months' equivalent from one Unit.
Non-conventional	Current tariff subject to change in line with Commission's Orders

Review of hydel availability

222. The Staff noted that hydel availability is on the decline as can be seen both from the data and the diagram given below:

Table No.18 **(MU)**

1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
8,758	9,632	9,687	6,662	7,970	7,245	7,189	8566	7048	5,647	3,803	2819



223. A closer look highlights three distinct time spans: 1991-1996; 1996-2000 and 2002-2004. Each time span is a step downwards.

- The average for the years 1991-1995 is 9504 MU
- The average for the years 1996-2000 is 7410 MU
- The average for the last 3 years, 2002-2004, is 4090 MU

Staff observe that Hydel generation is on the downward trend primarily due to two factors:

a) Poor monsoons
b) Structural changes in the riparian use in upstream.

224. Even with improvement in monsoons, the impact of the second factor will adversely affect the benefits of good monsoon and it would, therefore, not be prudent to expect increase in hydel generation to the extent filed by APTRANSCO. Hence the Staff estimate hydel generation at 4090 MU, the average for the last three years.

Sales revenue of APTRANSCO

225. The following table gives the details of revenue expected from the sales of APTRANSCO during FY 05:

Table No.19
APTRANSCO revenue from sales - FY05

APTRANSCO	MU	Price / unit (Rs.)	Revenue (Rs. Cr)
Sales to DISCOMS -filings	42632	1.966	8383.15
Inter-State Sales –filings	1113	2.400	267.12
SALES REVENUE			8650.27
Staff Analysis			
Sales to DISCOMS	42632	2.138	9113.16
Inter-State Sales	500	2.400	120.00
SALES REVENUE			9233.16

226. As stated, Staff analysis shows that only 500 MU will be available for inter-State sales. Computed at Rs. 2.40 per kWh based on APTRANSCO's existing contracts (after PTC charge and other charges), the expected revenue for FY05 from inter-State sales will be about Rs.120 crs. This is also optimistic considering that the estimated inter-State sales in 2003-04 are only 315 MU and the revenue from these sales as filed by APTRANSCO is Rs 75.60 Crs. as against the Tariff Order figure of Rs.119.16 crs. The total sales revenue for APTRANSCO i.e. sales to DISCOMS and inter-State sales works out to Rs.9233.16 crs against the APTRANSCO projection of Rs.8650.27 crs.

Investments of APTRANSCO

227. Details of capital expenditure incurred and those projected for FY05 are given in the table below:

Table No.20
APTRANSCO-Capital expenditure details with IDC

(Rs. Crs.)

	2000-01	2001-02	2002-03	2003-04	2004-05
ARR filings of the year	959.97	763.66	907.08	644.38	530.00
Tariff Order	937.83	752.48	818.99	380.48	0.00
Projected in the ARR of next year	843.60	787.89	480.02	335.00	0.00
Staff assessment on ARR filings for next year	475.49	687.65	367.00	280.20	0.00
Actuals of the year	419.87	459.11	362.62	0.00	0.00
Actuals as a %age of approvals in Tariff Order	44.77%	61.01%	44.28%	0.00%	
Variance to:					
- Original ARR (Rs. crs.)	-540.10	-304.55	-544.46	-644.38	-530.00
- Tariff Order (Rs.crs.)	-517.96	-293.37	-456.37	-380.48	0.00
- Next year's ARR (Rs.crs.)	-423.73	-328.78	-117.40	-335.00	0.00
- Staff assessment on ARR filing for next year (Rs. crs.)	-55.62	-228.54	-4.38	-280.20	0.00

228. The Staff in their analysis of investment pattern noted that investments that have materialized have been less than what were proposed in the ARR and what were accepted in the Tariff Order. APTRANSCO achieved only 61% of the approved investments in FY 2001-02. The trend of actual achievement in investment vis-à-vis

the capital expenditure projected is only around 44%. Given the trend, the Staff are of the opinion that it is preferable to exclude CWIP from the computations.

Salient trends in capital expenditure –APTRANSCO

229. The Staff also observed that in case of APTRANSCO, the net accretion to the loan portfolio is far less than the capital expenditure and during these years, the loan repayments have been significantly higher than the depreciation funds generated, as can be seen from the table below:

Table No.21

(Rs.crs.)

	Capital expenditure	New loans drawn	Depreciation	Loan repayment	Net loans drawn
FY 2000-01 (Actuals)	420	720	105	915	(196)
FY 2001-02 (Actuals)	459	977	158	793	184
FY 2002-03 (Actuals)	363	1468	195	799	678
FY 2003-04 (Estimates)	335	926	220	836	89
FY 2004-05 (Projections)	530	767	239	788	(20)

Note: Amounts within brackets denote minus figures

Sales and Revenue of DISCOMS

230. The DISCOMS have projected a lower growth rate (GR) in sales of 4.9% for 2004-005 as against the average GR during the period 2001-2004 of 7.40%. There are however differences in GRs of individual DISCOMS largely due to differences in consumer-mix. Revenue from sales of DISCOMS has been projected at Rs.8293.93 crs with an increase of Rs.552.31 crs over FY04 estimates. Sales and revenue for individual DISCOMS are given in greater detail in the tables below:

Table No.22
Sales and Revenue of DISCOMS

Consumer categories	Sales				Revenue	
	2003-04 estimates (MU)	**FY01-04 GR (%)**	**2004-05 filing (MU)**	**Increase over 2003-04 estimates (%)**	**FY 2003-04 (Rs. Crs)**	**FY 2004-05 (Rs. Crs)**
LOW TENSION	**23,835**	**5.90**	**24,756**	**3.86**	**4,230.73**	**4,548.19**
Domestic Cat I	7,484	8.29	7,959	6.34	1,792.98	1,947.02
Non Domestic Cat II	1,719	12.15	1,871	8.83	1,011.53	1,103.76
Indl. Supply Cat III	1,906	4.15	2,030	6.52	795.55	842.79
Irri. & Agri Cat V	11,703	3.06	11,800	0.83	407.63	412.06
Public lighting Cat VI	886	25.16	942	6.30	173.70	186.34
HIGH TENSION	**9,277**	**11.69**	**9,979**	**7.57**	**3,527.40**	**3,744.64**
Indl. Seg Cat I	6,015	11.60	6,522	8.43	2,382.11	2,672.46
Indl. Non-Seg Cat II	726	6.44	737	1.51	395.34	401.55
TOTAL	**33,112**	**7.40**	**34,735**	**4.90**	**7,758.13**	**8,292.93**

APCPDCL

Table No.23
Sales & Revenue – Estimates and projections

Consumer categories	Sales				Revenue	
	2003-04 estimates (MU)	FY01-04 GR (%)	2004-05 filings (MU)	Increase over 2003-04 estimates (%)	2003-04 (Rs. Crs)	2004-05 (Rs. Crs)
LT Category						
Domestic Cat I	2774.11	12.05	2968.30	7.00	715.70	784.06
Non Domestic Cat II	818.26	13.34	902.53	10.30	491.88	542.54
Indl. Supply Cat III	794.67	5.08	826.46	4.00	371.65	385.86
Irri. & Agri Cat V	5234.62	0.99	5250.00	0.29	144.56	148.85
Public lighting Cat VI	336.86	35.19	370.55	10.00	75.49	83.06
Total LT	**10009.84**	**5.67**	**10371.19**	**3.61**	**1818.80**	**1964.48**
HT Category						
Indl. Seg Cat I	3079.12	18.87	3421.34	11.11	1280.90	1412.53
Indl. Non-Seg Cat II	439.57	8.10	433.14	-1.46	240.41	237.02
Total HT	**3993.01**	**17.35**	**4440.03**	**11.20**	**1595.31**	**1741.20**
TOTAL	**14002.85**	**8.53**	**14811.22**	**5.77**	**3414.11**	**3705.68**

Against the DISCOMS' average growth rate of 7.40% during the period 2001-04, APCPDCL sales show a higher growth rate of 8.53%. Similarly, the projections for FY05 at 5.77% for this DISCOM are higher than the average of 4.90% for all DISCOMS. In the LT category, sales are lower than the DISCOMS' average only in LT-III (industry). This stands in contrast to the HT-industry, robust growth rate of **11.11%** against the average projected growth rate of **8.43%** for all DISCOMS. Against total sales revenue of all DISCOMS projected at Rs.8292.83 Crs, APCPDCL has projected Rs.3705.68 crs.

APSPDCL

Table No.24
Sales & Revenue – Estimates and projections

Consumer categories	Sales				Revenue	
	2003-04 Estimates (MU)	FY01-04 GR (%)	2004-05 filings (MU)	Increase over 2003-04 Estimates (%)	2003-04 (Rs. Crs)	2004-05 (Rs. Crs)
LT Category						
Domestic Cat I	2068.00	7.81	2171.40	5.00	476.07	510.43
Non Domestic Cat II	435.00	9.15	463.83	6.63	255.76	272.71
Indl. Supply Cat III	640.00	7.51	700.00	9.38	219.87	240.48
Irri. & Agri Cat V	2585.24	6.25	2600.00	0.57	107.84	111.37
Public lighting Cat VI	200.00	11.48	205.00	2.50	32.33	33.83
Total LT	**5977.44**	**6.55**	**6201.98**	**3.76**	**1108.27**	**1190.05**
HT Category						
Indl. Seg Cat I	862.50	12.18	905.63	5.00	372.64	391.27
Indl. Non-Seg Cat II	143.00	5.39	155.00	8.39	75.60	81.94
Total HT	**1818.15**	**7.00**	**1896.44**	**4.31**	**666.03**	**697.31**
TOTAL	**7795.59**	**6.66**	**8098.42**	**3.88**	**1774.30**	**1887.36**

231. The projected sales growth rate for APSPDCL is lower than for the total DISCOMS' projected average growth rate. APSPDCL has projected a growth of 3.88% in sales for FY05 against the DISCOMS' average of 4.90%. In the LT segment, APSPDCL has projected robust growth rates of 6.63% and 9.38 % in LT-II (Commercial) and LT- III (Industry) respectively. Similarly, in HT segment, a higher growth rate of 8.39% has been projected in the HT-II (Commercial). The projected revenue form sales is Rs.1887.36 crs.

APNPDCL

Table No.25
Sales & Revenue – Estimates and projections

Consumer categories	Sales				Revenue	
	2003-04 estimates (MU)	FY01-04 GR (%)	2004-05 filing (MU)	Increase over 2003-04 estimates (%)	2003-04 (Rs. Crs)	2004-05 (Rs. Crs)
LT Category						
Domestic Cat I	1084.71	4.12	1182.34	9.00	252.44	276.50
Non Domestic Cat II	181.20	10.51	195.70	8.00	103.69	112.50
Indl. Supply Cat III	200.00	-2.12	224.00	12.00	85.81	95.32
Irri. & Agri Cat V	2710.58	0.81	2800.00	3.30	102.14	103.19
Public lighting Cat VI	209.06	29.49	209.06	0.00	29.94	29.93
Total LT	**4401.71**	**2.68**	**4629.31**	**5.17**	**579.69**	**624.08**
HT Category						
Indl. Seg Cat I	769.33	4.59	807.80	5.00	324.73	341.37
Indl. Non-Seg Cat II	46.16	0.02	48.47	5.00	25.64	27.01
Total HT	**1566.53**	**4.09**	**1642.82**	**4.87**	**514.84**	**538.84**
TOTAL	**5968.24**	**3.04**	**6272.13**	**5.09**	**1094.53**	**1162.92**

NPDCL has projected higher growth rate of 5.09% against the average of 4.90%with robust growth rates projected for LT-I (Domestic) at 9.00% as against the average of 6.34% and for LT-III (industry) at 12.00% against the average of 6.52%. Revenues are projected at Rs.1163 crs.

APEPDCL

Table No.26
Sales & Revenue – Estimates and projections

Consumer categories	Sales				Revenue	
	2003-04 Estimates (MU)	FY01-04 GR (%)	2004-05 filing (MU)	Increase over 2003-04 estimates (%)	2003-04 (Rs. Crs)	2004-05 (Rs. Crs)
LT Category						
Domestic Cat I	1557.52	5.92	1636.67	5.08	348.34	376.03
Non Domestic Cat II	284.78	8.46	308.87	8.46	160.39	176.01
Indl. Supply Cat III	271.16	-3.50	280.00	3.26	117.65	121.43
Irri. & Agri Cat V	1172.45	3.93	1150.00	-1.91	47.34	48.65
Public lighting Cat VI	140.26	11.83	156.85	11.83	35.36	39.52
Total LT	**3446.20**	**4.71**	**3553.60**	**3.12**	**716.83**	**769.88**
HT Category						
Indl. Seg Cat I	1303.75	-3.82	1387.87	6.45	494.68	527.29
Indl. Non-Seg Cat II	97.33	3.08	100.00	2.74	53.61	55.58
Total HT	**1899.17**	**9.41**	**2000.75**	**5.35**	**730.13**	**767.29**
TOTAL	**5345.37**	**6.29**	**5554.35**	**3.91**	**1446.96**	**1537.17**

232. The sales projections of APEPDCL for FY05 are muted at 3.91% as against the DISCOMS' projected average of 4.90%, but in line with their lower growth rate of 6.29% over the previous period from FY01 to FY04 against the average growth rate of 7.40% for all DISCOMS. In the LT segment, the robust growth rate of 11.83% is projected only for public lighting and PWS Category LT-VI.

Agricultural sales

233. A special mention needs to be made of the agricultural sales. The Staff noted that the Licensees complied with the Directive of the Commission to estimate agricultural consumption based on LV side meter readings of distribution transformers. CPDCL projected a higher volume of sales for FY05 compared with the approved volume for FY04. All other DISCOMS projected the sales volumes for FY05 at approved volumes of sales for FY04. The details are given in the Table below:

Table No.27
AGRICULTURAL SALES (MU)

Particulars	CPDCL	EPDCL	NPDCL	SPDCL	TOTAL
Sales approved for FY03-04 (Tariff Order)	4800	1150	2800	2600	**11350**
Projected actuals FY03-04 (Filing)	5235	1172	2711	2585	**11703**
Projection for FY04-05 (Filing)	5250	1150	2800	2600	**11800**
Estimate Nov.02-Oct.03 based on LV-side meter readings	**5338**	**1174**	**2568**	**2613**	**11693**

Energy Balances

234. The energy balances for individual DISCOMS are given in the tables below which are self-explanatory:

APCPDCL

Table No.28
Energy Balance

Particulars	2002-03		2003-04			
	Actuals		Tariff Order		Estimate	
	MU	%	MU	%	MU	%
Metered sales	7756	45	8972	52.6	8768	49.4
LT agricultural sales	5584	32.4	4800	28.2	5235	29.5
Total sales	13340	77.3	13772	80.8	14003	79
Add: Distribution losses	3908	22.66	3271	19.19	3730	21.03
Total purchase	17248	100	17043	100	17733	100

APEPDCL

Table No.29
Energy Balance

Particulars	2002-03		2003-04			
	Actuals		Tariff Order		Estimate	
	MU	%	MU	%	MU	%
Metered Sales	3696	62.80	4356	65.60	4173	65.60
LT agricultural sales	1200	20.39	1150	18.40	1172	18.40
Total sales	4896	83.20	5506	84.00	5345	84.00
Add: Distribution losses	989	16.80	1049	16.02	1019	16.02
Total purchase	5884	100.00	6555	100.00	6365	100.00

APNPDCL

Table No.30
Energy Balance

Particulars	2002-03		2003-04			
	Actuals		Tariff Order		Estimate	
	MU	%	MU	%	MU	%
Metered sales	3.053	40.73	3495	44.23	3258	43.36
LT agricultural sales	2,851	38.03	2800	35.43	2711	36.08
Total sales	5,904	78.77	6295	79.66	5968	79.44
Add: Distribution losses	1,592	21.23	1608	20.34	1545	20.56
Total purchase	7,496	100	7903	100	7513	100

APSPDCL

Table No.31
Energy Balance

Particulars	2002-03		2003-04			
	Actuals		Tariff Order		Estimate	
	MU	%	MU	%	MU	%
Metered sales	4697	4912	5284	54.00	5210	53.90
LT agricultural sales	2834	29.64	2600	26.60	2585	26.70
Total sales	7531	78.77	7884	80.60	7796	80.60
ADD: Distribution losses	2030	21.23	1901	19.43	1878	19.42
Total purchase	9561	100	9674	100	9674	100

Capital expenditure - All DISCOMS

235. The Staff analysis of investment patterns of DISCOMS shows that actual investments have been much lower than allowed in the Tariff Order as pointed out in the Tariff Orders of FY03 and FY04 and as may be seen from the Table below. Given this trend, the Staff suggest that CWIP may be removed from the capital base calculations.

236. The Staff also observed that long term borrowings have not been fully utilized for capital expenditure in the case of DISCOMS.

Table No.32
Capital Expenditure - All DISCOMS

(Rs. Crs.)

	2000-01	2001-02	2002-03	2003-04	2004-05
ARR filings of current year	1118.75	1469.34	984.51	1340.61	1083.72
Tariff Order	1052.94	965.08	1069.85	544.88	0.00
Projected in the ARR of next year	843.60	973.74	867.18	909.74	0.00
Staff estimation on ARR filings for next Year	550.40	581.98	482.00	662.36	0.00
Actuals of the current year (Rs. crs.)	518.04	523.35	954.49	0.00	0.00
Actuals as a %age of approvals in Tariff Order	49.20%	54.23%	89.22%	0.00%	
Variance to:					
- Original ARR (Rs. crs.)	-600.71	-945.99	-30.02	-1340.61	-1083.72
- Tariff Order (Rs. crs.)	-534.90	-441.73	-115.36	-544.88	0.00
- Next year ARR (Rs. crs.)	-325.56	-450.39	87.31	-909.74	0.00
- Staff estimation on ARR filings for next year (Rs. crs.)	-32.37	-58.63	472.49	-662.36	0.00

Treatment of projected gap for current year, FY 04

237. The Staff suggest the following treatment with regard to the projected gap for FY04 as filed. Firstly, with regard to APTRANSCO's gap of Rs.239 Crs, the Staff opine that the gap may be covered by FSA as the variance in power purchase cost projected is at Rs. 315 Crs. FSA will apply only for quantities as approved in the Tariff Order. Secondly, in the case of DISCOMS, the projected correction of Rs.362 Crs will be as per the principle outlined in the Tariff Order for FY04 with respect to controllable and non-controllable factors. It needs to be mentioned that the first correction for interest claw-back of Rs.63 Crs for FY01 will be verified with the accounts now submitted and further adjustment will be considered further subsequently.

ARR FILINGS

Table No.33
ARR computation for FY 2005 : APTRANSCO'S filing **(Rs. Crs.)**

Particulars as on 31st March of year	Bulk Supply	Transmission business	SLDC	Total
Expenditure	7540.08			7540.08
Power purchase expenses				34.34
SLDC charges			34.34	172.88
PGCIL & other transmission charges		172.88		100.71
Employee costs	4.55	80.59	15.56	100.7
Contribution to Provident Fund	0.25	9.58	0.3	10.13
Repairs & maintenance costs		35.4	4.63	40.03
Administration & general expenses	8.37	13.8	1.33	23.5
Depreciation		239.32		239.32
Interest on cash credit line & other working capital loans	49.68			49.68
Other interest & financing costs		342.5		342.5
Other expenses		2.8		2.8
Total expenditure	7602.93	896.87	56.16	8555.96
Reasonable return				
Special appropriations				

Contribution towards contingencies reserve		11.07		11.07
Debt redemption obligation taking into account the requirement of debt redemption and resource generation through Depreciation and retained Surplus		74.31		74.31
Total Special appropriations		85.37		85.37
Total Expenditure (Including Special appropriations)	7602.92	982.26	56.16	8641.35
Less: Non-tariff income	246.29	11.9		258.19
Total Aggregate Revenue Requirement	7356.63	970.36	56.16	8383.15

238. The Staff calculations of the Aggregate revenue requirement for APTRANSCO show it as Rs. 9114 crs taking into consideration the revisions in power purchase costs and other items of expenditure and with regard to sales, specifically the inter-State sales.

Table No.34
APTRANSCO's filing - FY 2004 – 05 - Staff calculations
(Rs. Crs.)

Capital base particulars	Filings	Staff
A - Positive side		
Fixed Assets (OCFA)	4414	4162
Capital Works-in-progress	493	485
Investments	21	21
Working Capital	29	34
Total - A	**4957**	**4702**
B - Negative Side		
Accumulated Depreciation	1503	1500
Loans	2037	2970
Consumer Security Deposits	0	0
Total – B	**3540**	**4469**
Net Capital base (A-B)	**1416**	**232**
Expenditure items	**Filings**	**Staff**
Power Purchase Cost	7950	8508
Wages and Salaries	101	89
Interest	392	306
Depreciation	239	236
Others	162	163
Sub total	**8844**	**9303**
Add Reasonable return	0	52
Sub-Total	**8844**	**9355**
Less: Non-tariff Income	461	431
Net Revenue Requirement	**8383**	**8924**
Revenue from Tariffs	8827	8924
Net Surplus / (Gap)	**444**	**0**

239. The Staff have however drawn attention to the required changes in the business of APTRANSCO with the Electricity Act, 2003, becoming fully effective from 10th June, 2004. The BST proposed by APTRANSCO has three components: a) Bulk supply business; b) Transmission charges, and c) SLDC charges. This will undergo a change with the full implementation of the provisions of the Electricity Act, 2003. APTRANSCO will be required to estimate transmission charges separately and these charges will apply to DISCOMS and for open access consumers.

240. Similarly, the DISCOMS will have to segregate network charges from their ARR. In this context, surcharge also will have to be determined.

241. APTRANSCO may also be required to take up other businesses.

Computation of the gap

242. Against the overall gap for FY05 of Rs.1552 .85 crs at the proposed BST, Transmission and SLDC charges of Rs. 1.966/kwh, the Staff estimation places the gap at Rs. 2151.71 Crs. at the revised BST of Rs.2.138 per kWh for the ensuing year. The DISCOMS in their filings have proposed a total ARR requirement of Rs.10289.13 crs for FY05, which leaves a revenue gap of Rs.1552.85 crs at ensuing tariffs. Staff calculations place the gap at Rs. 2152 crs. at ensuing tariffs.

243. The Staff calculations of the expenditure and revenue requirements for FY05 and the subsequent gap are given below:

Table No.35
DISCOMS' Filings - FY 2004 - 05 - Staff calculations **(Rs. Crs)**

Capital base particulars	NPDCL	EPDCL	SPDCL	CPDCL	SECTOR(*)
A-Positive Side					
Fixed Assets (OCFA)	1070	777	1211	1957	9176
Capital Works-in-Progress	226	237	222	341	1511
Investments	5	4	7	6	
Working capital	40	32	52	76	234
Total - A	**1341**	**1051**	**1491**	**2380**	**10922**
B-Negative Side					
Accumulated Depreciation	588	530	829	1155	4602
Loans	648	479	575	783	5455
Consumer Security Deposits	185	289	267	510	1251
Total – B	**1422**	**1298**	**1671**	**2448**	**11308**
Net Capital base (A-B)	**(81)**	**(248)**	**(179)**	**(68)**	**(387)**
Expenditure items					
Power purchase cost	1665	1405	2124	3919	8550
Wages and Salaries	124	121	183	204	722
Interest	78	61	93	160	698
Depreciation	70	71	110	144	630
Others	108	69	108	192	640
Sub Total	**2044**	**1726**	**2619**	**4619**	**11240**
Add Reasonable return	3	2	3	4	64
Sub Total	**2047**	**1729**	**2622**	**4623**	**11305**
Less Non-tariff income	113	68	138	259	862
Net Revenue Requirement	**1934**	**1661**	**2484**	**4364**	**10443**
Revenue from Tariffs	1163	1537	1887	3704	8291
Net Surplus / (Gap)	**(771)**	**(123)**	**(597)**	**(660)**	**(2152)(@)**

(*)DISCOMS + APTRANSCO
(@) Difference of Rs.1 cr. is due to rounding

Staff views on Regulatory treatment

244. Regarding the true-up principles, on the suggestion that Profit & Loss Account approach may be used, the Staff are of the opinion that it is appropriate and preferable for Regulatory accounts to be followed as the Profit & Loss Account approach nullifies the regulatory interventions by reversing all the adjustments made in the Tariff Order. Hence, the Staff suggest that the true-up should continue to be made on the basis of regulatory accounts, classifying the items as controllable or non-controllable.

CHAPTER – VI
RESPONSE OF LICENSEES TO COMMISSION STAFF's PRESENTATION

245. In their response to Staff presentation, the Licensees, APTRANSCO and the four DISCOMS responded as follows:-

PART A - APTRANSCO

Generation availability

246. The Staff estimated the energy availability for FY05 from all sources at 47,853 MU as against APTRANSCO's filing of 51,611 MU. The Table below shows the major differences, source-wise:

Table No.36
AVAILABILITY OF POWER – DIFFERENCES IN ESTIMATION (MU)

Source	APTRANSCO Filing	Staff estimate	Difference
APGENCO-HYDEL	6423	4090	2333
IPPs	7156	6361	795
NCE PROJECTS & OTHERS	2569	2184	385

IPPs – Independent power producers; NCE – Non-conventional energy

In support of their estimation, APTRANSCO furnished following details with regard to IPPs, captive power plants (CPPs) and NCE.

(a). Generation availability from IPPs : The difference of 795 MU availability from IPPs between Staff and APTRANSCO's estimation was clarified. APTRANSCO stressed on additional availability to the extent of 851MUs during the ensuing year 2004-05 emphasising that the staff assumption for reduced availability based on gas shortage of 10% may not be realistic in the light of (i) additional gas allocation of 0.2 Mcmd to M/s BSES adequate for additional generation of 154.5 MU and (ii) additional availability of at least 0.2 Mcmd of gas from the new gas wells of GAIL and ONGC facilitating additional generation of another 309 MU. APTRANSCO also clarified that 354 MU from M/s Spectrum Power which was not available due to outage in 2003-04 will now be fully available.

(b) **Generation availability from CPPs :** APTRANSCO did not agree to the Staff projection of zero availability from Visakhapatnam Steel Plant (VSP) and Nav Bharat Ferro Alloys (NBFA). It stated that the availability of 385 MU from the CPPs (M/s VSP and NBFA) was based on past experience of availability. APTRANSCO is confident of getting this energy from the said sources.

Non-Conventional Energy Tariff

247. The Staff assumed the existing rate of Rs. 3.48 per kWh for purchases from NCE sources pending Commission's review of NCE Tariffs as against APTRANSCO's projection of Rs.2.30 / unit in its ARR. APTRANSCO's response was that the tariff of Rs.2.30 per unit is the weighted average cost for the various NCE sources viz., mini-hydro, wind, co-generation, biomass etc., after taking into account all the cost components.

Inter-State sales

248. The Staff did not agree to the ambitious projections of APTRANSCO's inter-State sales of 1113 MU for FY05. In the past, the projections of APTRANSCO on inter-State sales did not materialize. These sales in 2003-04 are around only 315 MU yielding a revenue of only Rs.75.60 Crs. as against Rs.149.16 Crs. taken into account in the Tariff Order. Moreover the inter-State sales are effected from the residual power supply available after sales to DISCOMS. Accordingly, the Staff estimated the inter- State sales to be about 500 MU. The extent of differences is indicated in the following table:

Table No.37
INTER - STATES SALES DIFFERENCES

	ARR filing	Staff analysis	Difference
Purchases for inter-State sales (MU)	1186	508	-678
Purchases for inter-State sales (Rs.Cr.)	201.91	86.36	-115.26
Inter-State sales (MU)	1113	476	-637
Revenue from inter-State sales (Rs. Cr.)	267.23	114.24	-152.99
Profit from inter-State sales (Rs. cr.)	65.32	27.88	-37.73

249. APTRANSCO projected higher surplus of power on the assumption of normal hydro power availability and full gas availability as against the Staff estimation of lower availability of hydro power by 2333 MU and lower availability of 795 MU from IPPs due to 10% reduction in gas availability. The Staff accordingly considered

purchases of only 508 MU for inter-State sales. APTRANSCO is, however, confident of achieving the inter-State sales of 1113 MU for the following reasons:

- Additional 817 MU available from gas projects, and
- 385 MU from VSP and NBFA

Fixed assets and CWIP :

250. The Staff projected Rs.280 crs for the capital expenditure in FY04 against APTANSCO's projection of Rs.304.55 crs, based on past trends, which showed that APTRANSCO achieved only 61% of the investments in FY02, and 44% approved in FY03. In response, APTRANSCO has pointed out that the capital expenditure of Rs.304.35 crs consisted of capital expenditure of Rs.244.15 cr. (including an additional amount of Rs.5 cr. on account of expenditure on the Krishna Drinking Water Project), interest-during-construction (IDC) of Rs.27.30 cr. and capitalization of expenses of Rs.32.90 cr.

Table No.38
CAPITAL EXPENDITURE - DIFFERENCES

Particulars	ARR Filing (Rs.Cr.)	Staff Analysis (Rs. Cr.)	Revised Filing (Rs. Cr.)	Difference
Closing Balance of Fixed Assets (including CWIP) as on 31.03.03	4041	4014	4014	27
Capital Expenditure during FY03-04	335	280	304.5	30.5
Capital Expenditure during FY 04-05	530	352	530	0
Total	4906	4646	4848.5	57.5

251. Regarding capital expenditure FY 04-05, APTRANSCO have stated that all major works related to the 400 KV, 220 KV and 132 KV systems which are already underway and the required material for these works are in the stores of the APTRANSCO, and so the projected expenses of Rs.530 cr. towards capital expenditure may be allowed.

Non-Tariff Income

252. The Staff estimated a non-tariff income of Rs. 283 crs. as against Rs. 461 crs. filed by APTRANSCO. This difference is mainly on account of differences in revenue from inter-State sales.

253. APTRANSCO in its response has stated that it expects to earn a profit of Rs.64.9 cr. from inter-State sales towards non-tariff income, while Staff have considered such profit of only Rs.27.8 cr. APTRANSCO is confident of achieving 1113 MU of inter-State sales and profit of Rs.64.9 cr, and has requested the Commission to allow a credit of Rs.258 Cr. towards non-tariff income in the ARR.

Expenditure items

254. The Staff estimates of major expenditure items differ with regard to Interest, Wages and salaries, and Depreciation. Staff estimated interest of Rs. 306 crs., Wages & Salaries of Rs. 89 crs. and Depreciation of Rs. 236 crs. as against APTRANSCO's filing of Rs. 392 crs., Rs.101 crs and Rs. 239 crs, respectively.

255. APTRANSCO's response on each of these items is as follows:

- Interest - With regard to interest expenditure, APTRANSCO has claimed that the difference between its estimates and that of Staff should be Rs.61.9 crs and not Rs.86 crs as filed initially as the levels of capital works (CWIP) to be completed during the years FY2003-04 and FY2004-05 differ from those estimated by Staff.

- The computation of interest for FY2004-05 is based on closing balance of FY2003-04 and for the loans to be drawn during FY 2004-05. The Staff estimate the capital works for FY2003-04 at Rs.280.20 crs, and APTRANSCO now estimates the same at Rs.310 crs. Similarly, the Staff estimate capital expenditure of Rs.352 crs against APTRANSCO's estimate of Rs.530 crs. for FY2004-05.

256. Against the approval of Rs.818.99 Cr. in 2002-03, the actual capital expenditure was Rs.362.62 Cr. and accordingly a claw-back of interest of Rs.55 Cr. is proposed. According to APTRANSCO, the Staff have also reduced interest on reduced capital expenditure during 2003-04 and 2004-05. As per the revised submissions of APTRANSCO, the reduction in interest on account of reduced capital expenditure during 2003-04 is only Rs.6.9 cr. (12% on Rs.57.5 cr.). Therefore, the total reduction in interest cost is 61.9 cr. and not Rs.86 cr.

Table No.39

(Rs. Cr.)

ARR filing	Staff analysis	Difference	APTRANSCO's revised submissions
392	306	86	61.9

- **Wages and salaries** - Regarding wages and salaries, APTRANSCO contended that the a number of substations and transmission networks of various voltage levels were commissioned during the period 2001-02 to 2003-04 as shown in the table below and that no additional recruitment has been made to operate and maintain these substations and transmission lines, and that the same are understaffed with only temporary arrangements in place. The total associated cost against the vacant positions at various levels works out to Rs.10.7 Cr. APTRANSCO has shown a provision of Rs.9 Cr. in the ARR as it would like to take up the recruitment in a phased manner.

Table No.40

	FY2001-02	FY2002-03	F1Y2003-04	FY2004-05 (projected)
400 KV Sub-Stations (Nos.)	1	0	0	4
220 KV Sub-Stations (Nos.)	6	4	6	5
132 KV Sub Stations (Nos.)	7	8	30	24
400 KV Transmission Line (Km)	412	732	1	798
220 KV Transmission Line (Km)	716	599	175	314
132 KV Transmission Line (Km)	583	380	437	534

- **Depreciation**

257. Since APTRANSCO is confident of achieving capitalization of investment of Rs.310.6 Cr. in 2003-04 and Rs.563.8 Cr. in 2004-05, there will be no reduction of Rs.3 cr. in the depreciation as estimated by the Staff.

PART B - DISCOMS

258. In their response to the Staff presentation, the DISCOMS dwelled mainly on the following areas of difference.

CAPITAL BASE

259. The following table lists out the differences in the Staff estimates of Capital Base compared to those filed by the licensees:

Table No.41

(Rs. crs.)

	EPDCL		CPDCL		SPDCL		NPDCL	
Particulars	**Filings**	**Staff**	**Filings**	**Staff**	**Filings**	**Staff**	**Filings**	**Staff**
A-Positive Side								
OCFA (excluding consumer contribution)	952	777	2432	1957	1323	1211	1191	1070
CWIP	188	237	283	341	232	222	236	226
Investments	4	4	6	6	7	7	5	5
Working capital	65	32	62	76	60	52	50	40
Sub-total (A)	**1209**	**1050**	**2783**	**2380**	**1622**	**1492**	**1482**	**1341**
B-Negative Side								
Accumulated Depreciation	538	530	1161	1155	838	829	598	588
Loans	551	479	1212	783	588	575	652	648
Consumer Security Deposits	275	289	465	510	268	267	175	185
Sub-total (B)	**1364**	**1298**	**2838**	**2448**	1694	1671	1420	1420
Net Capital Base (A-B)	**(155)**	**(248)**	**(55)**	**(68)**	**(72)**	**(179)**	**62**	**81**

Note: Amounts within brackets denote minus figures

260. As can be seen, the major differences are in OCFA (Original Cost of Fixed Assets) and in the CWIP. The licensees' view is that this is primarily on account of a different level of Capital expenditure being adopted by the Staff in their projections. Each DISCOM'S justification for their estimation of capital expenditure is given below.

APEPDCL

261. EPDCL in their response have stated that the Capital expenditure programme of Rs.150 Crs. proposed in the ARR for 2004-05 is based on commitments already made and some of the schemes are already in the pipeline and in the process of placing orders. Scheme-wise details are as follows:

Table No.42

S.No.	Name of the scheme	Investment as proposed in ARR (Incl. Exp. Cap. and IDC)
1	Normal works (Release of new services)	25.00
2	Rural electrification works	10.00
3	SI - Meters	15.00
4	APDRP works of Eluru circle	30.00
5	Town Business Plans under APDRP for 20 towns	15.00
6	Conversion of existing LV network into HVDS	35.00
7	Energisation of pumpsets	3.00
8	T&D	2.00
9	REC – SI	8.00
10	SI-Conductors	4.00
11	Providing meters to unmetered agl services	3.00
Total		**150.00**

262. Out of the above-mentioned 11 schemes, those at serial numbers 1,2,7,8,9,10 and 11 do not require approval of the Commission since the estimated cost of each individual scheme is less than Rs.5 Crs; those at serial numbers 3 to 5 were already approved by the Commission and those at serial number 6 (conversion of existing LV network into HVDS) is under process of approval. Based on the approvals received from the Commission and in anticipation of the Commission's approval for the HVDS scheme, tenders have already been called for and finalised. For most of the works, the DISCOM has entered into agreements with successful bidders and expects the works to be completed during the next financial year.

263. The actual base capital expenditure during the year 2002-03 is Rs.143.52 Crs. and expected expenditure during 2003-04 is Rs.110.00 Crs. The reduction in expenditure during 2003-04 is mainly due to delay in finalisation of tenders relating to APDRP and HVDS works. These schemes are now in the stage of implementation.

264. The DISCOM also contends that the extent of actual expenditure as of December 2003 vis-à-vis the investments approved during the past years should not be considered as the main criteria for determining the level of capital expenditure for 2004-05. The licensee claims to have experienced difficulties in the past in funding the projects and hence the level of expenditure was low, but from 2002-03 onwards, it has been able to achieve funding levels close to the targeted levels. In 2004-05, the licensee is confident of achieving the level of investment proposed by it, that is, Rs.178.90 Crores including IDC.

265. But for the reasons stated above, the previous year's Capital expenditure would have been more than Rs.110 Crs. and an investment of Rs.150 Crs is anticipated during the ensuing financial year, on par with previous year. Any reduction in Capital expenditure during 2004-05 would hamper the progress of works and delay the utilisation of funds. Considering these facts, the licensee requests that the Capital Expenditure Plan of Rs.178.90 Crores submitted by it (for the year 2004-05) in the ARR filing be approved in toto.

266. On the negative side of Capital Base, the licensee assumes that the reduction in loans is on account of reduction in capital expenditure and requests that the Commission may revise the same also in line with the upward revision in Capital expenditure as requested by the licensee to bring them in line with the ARR filing.

APCPDCL

267. CPDCL pointed out in their response that for the year 2003-04, as per the Staff presentation, Capital expenditure of only Rs. 280.99 crores has been accepted as against Rs. 409.77 crores (base expenditure of Rs. 350 Crores plus expenses capitalization of Rs. 35 crores and IDC of Rs. 24.77 crores) filed by the licensee for the year (2003-04). The licensee is of view the that this is not reasonable for the following reasons:

i) Out of the Rs. 350 crores of base investment filed, all the schemes are either approved ones or do not require approval of the Commission, except for a small component of Rs. 3.66 crores.

ii) The actual investment (Rs. 343. 40 crores) in the previous year was much higher than the level (Rs. 280.99 crores) considered by the Staff in their presentation.

iii) The argument that the licensee's actual base expenditure till December (Rs.163.66 crores) is lower than the projected base expenditure for the next three months (Rs.186.34 crores) is not reasonable. In the previous year (2002-03) also, the actual expenditure booked till December 2002 was only Rs. 97.84 crores, but the licensee went on to achieve a total investment of Rs. 343.40 crores for the year i.e by investing (Rs.245.56 crores in the last

3 months). This is primarily due to the internal processes of the licensee whereby about 4 to 5 months are taken to prepare tenders, finalize work orders, etc. Therefore, effectively the work starts only around October/ November.

268. For the year 2004-05, the licensee has stated that it is planning its expenditure sufficiently in advance and has progressed significantly. Therefore, the licensee requests that the Capital Expenditure Plan for the year 2004-05 as submitted by it in the ARR filing be approved in full , particularly in view of the increasing level of actual capital expenditure incurred by the licensee during recent years. The status of various schemes to be taken up in the year 2004-05 is given in the following table:

Table No.43
Investment approval for 2004-05

Funding agency	Amount Rs. Crores	Status
PFC	70	Tenders for laying of 200 KM of UG cable and erection of 10 Nos. 33/11 KV Substations are under finalisation.
APDRP	100	Tenders for all works under town schemes have been finalised and works ordered for Rs. 200 crores out of which expenditure of 100 crores will be incurred.
Release of services (including Agricultural)	50	The provision of Rs. 50 crores will be utilised for the release of 2.51 lakhs of services of various categories during 2004-05.
SI	55	During 2004-05 it is programmed to erect 75 Nos. new 33/11 KV Substations both under new and ongoing schemes at estimated expenditure of Rs. 55 Crores. Tenders are also called for and are under finalisation.
RE works	15	For RE works, (Rs. 15 Crores) it is proposed to electrify all habitations, tribal hamlets and weaker section colonies.
Metering Plan	25	For the replacement of 5 lakhs Electro Mechanical meters with Electronic meters, orders have been placed for procurement of 2.25 lakh 1-phase meters and orders for another 1 lakhs 3-phase and 2.75 lakhs 1-phase meters are under finalisation.
APDRP (Hyd)	25	Works to the extent of Rs. 25 crores like replacement of existing meters with electronic meters and HVDS works are programmed for completion.
1-Phasing of Agricultural feeders	30	For extending lighting loads to all villages, segregation of all rural feeders is programmed to be completed.
T & D Works	20	Works such as erection of additional DTRs, interlinking of 33 KV and 11 KV lines, enhancement of power transformers capacities.
Laying of LT AB cable in theft prone villages	10	Continuous work. For procurement for 2500 KMs of AB cable, tenders have been called for.
Total	**400**	

269. Regarding capitalization to Fixed Assets, APCPDCL follows a policy of capitalization based only on completion of the works. For projections also, APCPDCL has considered the expected completion of projects of capitalisation. Therefore, APCPDCL requests that the OCFA and CWIP as projected by it, be approved without modification.

270. On the negative side of Capital Base, the licensee assumes that the reduction in loans are on account of reduction in capital expenditure and requests that the Commission may also revise the same in line with the upward revision in Capital expenditure as requested by the licensee to bring them in line with the ARR filing.

APNPDCL

271. The Licensee in his reply commented that the staff has taken the base of previous actual percentages with reference to the Tariff Order levels and arrived at weighted average for estimating the capital expenditure (Capex) figures for 2003-04 and 2004-05. It is noted that in the initial years i.e., in 2000-01 and 2001-02, the actuals were less than the Tariff Order levels but in 2002-03, the actuals exceeded that level and for 2003-04 also, the actuals are anticipated to of the same level. In 2003-04, the Licensee is confident of achieving the investment of Rs.139.94 crores that is proposed by it. This investment level is in fact far less than the actual proven expenditure of Rs.206.43 crores in 2002-03.

272. Further, it is evident that the expenditure up to December 2003 is Rs.69.52 crores while during the previous year, the expenditure up to December 2002, was Rs.46.76 crores and total expenditure for the year 2002-03 was Rs.190.77 crores. This is mainly due to the fact that though the expenditure is already incurred, yet there is some time lag between the actual physical work done and payment of contractors' bills for labour component of the works. As per the accounting procedure, expenditure for material is accounted for as and when it is drawn and utilized physically whereas the contractors' bills for doing the particular work are accounted for only when payment is made.

273. In addition to the Capex of Rs.69.51 crores up to December 2003, Rs.9.81 crores have been paid for HVDS work, payments of Rs.20.37 are for material

received and Rs.11.00 Crores are pending for contractors' payments. The total of all these items works out to Rs.110.69 crores. As for the material received for Rs.20.37 crores, the works are under progress and with this, the target of Rs.115.06 crores is achievable. Hence the estimated expenditure for 2003-04 may be approved.

274. For the year 2004-05, the Staff considered an investment level of only Rs.176.72 crores as against the licensee's projection of Rs.234.45 crores, which is marginally higher than the actual capital expenditure during 2002-03. Considering that the licensee has been able to invest in the year 2002-03 up to the level of its targeted plan and expects to meet the target in FY 2003-04 too, the Licensee requests that the Capital Expenditure Plan for the ensuing year 2004-05 submitted in the ARR filing be approved in full.

275. A comparative statement of expenditure incurred for the first nine months and total expenditure incurred/estimated for the years 2002-03 and 2003-04 is given in the following statement:

Table No.44
Project-wise loan and expenditure

(Rs Crs.)

Sl. No	Scheme	2002-03			2003-04		
		As per Tariff Order	Actual ex-penditure up to Dec-02	Total expenditure (PPR)	As per Tariff Order	Actual expenditure up to Dec-03	Total projected for 2003-04
1	APL-(Suppl)	13.77	6.47	15.15	15	10.2	15
2	DFID	16.74	0.9	18.41	9.5	2.6	9.5
3	OECF	34.47	0.24	37.92	-		-
4	APHM			-			-
5	Rural electrification (REC)	7.85	3.66		10	3.73	10
6	Rural electrification (PMGY)	-	-	8.64	-		-
7	Energisation of pumpsets	3.6	0.76	3.96	5	2.09	5
18	Distribution Plan	13.28	5.86	14.61	20.62		20.62
8	T&D						-
9	a) SI (Transformers)	21.82		24	9.23		9.23
10	b) SI (Conductors)	9.09	26.6	10	7	44.02	7
11	c) SI(meters)	10.91		12	5		5
12	SI (VCBs)	1.08		1.19	1.95		1.95
13	System Improvements	8.6	2.28	9.46	5.76		5.76
14	APDRP(Wgl)	-	-	-	20	2.24	20
15	APDRP(towns)	-	-	-	-		-
16	SI:LINES	13.86	-	15.25	6		6
17	HVDS	-	-	-	-	4.64	-
19	Non-plan expenditure			20.11			-
	TOTAL	**155.07**	**46.77**	**190.7**	**115.06**	**69.52**	**115.06**

276. The differences in interest and depreciation are linked to the projected levels of expenditure and need to be revised accordingly when the capital expenditure is revised as requested above.

277. In the Staff presentation, the capitalization for 2003-04 was taken as Rs.100 Crs only as against the proposed Rs.195 Crs. This is resulting in postponing the capitalization of Rs.95 crs. by one more year, which is considered to be not reasonable. The Licensee has reiterated the fact to the Commission that based on the practical conditions prevailing in the DISCOM, for "Instant capitalization of the assets completed and commissioned", the Licensee is following a procedure that Capex incurred in a year is postponed to the following year (i.e., for more than one-year period) and it is a known fact that approved schemes are of very short gestation and are definitely put to use in the following period. Hence, further postponement of capitalization is not justifiable and hence the capitalization, as filed, may be approved completely. Nevertheless, the Licensee states that it is making tangible efforts in maintenance and closure of work orders at field level. From the ensuing year, the Licensee agrees to follow the procedure for capitalization as required by the Commission.

APSPDCL

278. For the year 2003-04, as per the Staff presentation, Capital expenditure of only Rs.141.17 crores has been accepted as against Rs.181.75 crores (Base expenditure of Rs.154.50 Crores plus expense capitalization of Rs.15.45 crores and IDC of Rs.11.80 crores) filed by the licensee. The licensee views that this is not reasonable in view of the following:

1. The base investment of Rs.154.50 crores as filed is in respect of schemes, all of which are either approved ones or do not require approval of the Commission.
2. The actual investment of 180.48 crores in the previous year (Base: Rs.152.11 cr.; exp. capitalized: Rs.15.21 cr.; and IDC: Rs.13.16 cr.) was higher than the level considered by the Staff (Rs.100.00 crores) in their presentation.
3. The argument that the licensee's actual base expenditure till November 2003 (Rs.130.16 crores) is lower than the projected base expenditure for the next four months (Rs.186.34 crores) is not reasonable. In the previous year (2002-03) also, the actual expenditure booked till November 2002 was only Rs.72.81 crores but the licensee went on to achieve an investment level of Rs.180.48 crores for the year (by investing Rs.107.67 crores in the last four months). This is primarily due

to the funding pattern where most of the funds are released only towards the end of the year as also the reporting system of the licensee where during mid-year only the actual cash expenditure as booked is reported rather than the work completed (but not paid for).

4. Though past trend is the guiding principle, the exceptions to the general trend should also be recognized.

279. For the year 2004-05, the licensee has stated that it is planning the expenditure sufficiently in advance and has progressed significantly. The licensee, therefore, requests that the Capital Expenditure Plan for the year 2004-05 submitted by it in the ARR filing be approved in full, particularly in view of the increasing level of actual capital expenditure achieved during the recent years.

280. On the negative side of Capital Base, the licensee assumes that the reduction in loans is on account of reduction in capital expenditure and requests the Commission that the same may also be revised in line with the upward revision in Capital Expenditure as requested by the licensee to bring them in line with the ARR filing.

EXPENDITURE AND REVENUE

281. The Staff differences from the filings of DISCOMS in regard to the Expenditure and Revenue are shown in the table below, followed by responses of individual DISCOMS:

Table No.45

	EPDCL		CPDCL		NPDCL		SPDCL	
Particulars	**Filings**	**Staff**	**Filings**	**Staff**	**Filings**	**Staff**	**Filings**	**Staff**
Power purchase cost	1568	1405	4056	3919	1244	1631	1960	2124
Wages and Salaries	119	121	210	204	125	124	182	183
Interest	58	61	185	160	85	78	95	93
Depreciation	79	71	149	144	74	70	119	110
Others	84	69	230	192	119	108	128	108
Sub-Total	1908	1727	4830	4619	1647	2010	2484	2618
Add: Reasonable return	0	2	0	4	0	3	0	3
Gross ARR	1908	1729	4830	4623	1647	2013	2484	2621
Less: Non-tariff income	68	68	256	259	113	113	138	188
Net ARR	1840	1661	4571	4364	1534	1900	2346	2483
Revenue from Tariff	1537	1538	3706	3704	1163	1163	1887	1887
Revenue Gap	303	123	865	660	371	737	459	596

APEPDCL

282. The licensee states in response that the difference in 'Power purchase cost' is entirely on account of the different BST rate of Rs.2.138/kWh adopted by the Staff. This implies that the sales and loss estimation filed by the licensee is entirely acceptable to the Staff. The licensee does not have any comment on the BST as any additional cost on that account would be a pass-through for the licensee.

283. The other key differences in interest and depreciation are linked to the projected level of Capital expenditure and need to be revised accordingly when the Capital expenditure is revised, as requested above.

284. The licensee also differs with the projection of "Other expenditure" by the Staff, as the provision for bad and doubtful debt has been not considered. The licensee stresses that provision for bad and doubtful expense is a prudent accounting practice and in view of the current level of collections, even the requested provisioning of 1% of the projected revenues may be inadequate. Further, the licensee has already writtenoff a major portion of the provision available as part of the Second Transfer Scheme. The write-off was undertaken after audit of the receivables taken up in compliance to the directive of the Commission. Therefore, the licensee requests that the provisioning as filed, may be allowed.

APCPDCL

285. The licensee, in its response, has stated that the difference in ‘Power purchase cost’ is entirely on account of the different BST rate of Rs. 2.138/ kWh adopted by the Staff. This implies that the sales and loss estimation filed by the licensee is entirely acceptable to the Staff. The licensee does not have any comment on the BST as any additional cost on that account would be a pass-through for the licensee.

286. As regards Employee expenses, the Staff presentation considers Rs.204 crores as against the net expense of Rs. 210 crores filed by the licensee. The licensee believes that the reduction of Rs. 6 crores is too high. During interaction with the Staff, the licensee provided revised estimates of expenditure on employees according to which the net reduction is expected to be only about

Rs. 4 crores. In fact, if the capital expenditure is reduced (as in the Staff presentation), the capitalization of employee expenses will go down further and the net expenses will go up further. Therefore, the licensee requests that the expenditure of Rs.206 crores as per their revised estimates be approved in the Tariff Order.

287. The other key differences in interest and depreciation are linked to the projected level of Capital expenditure and need to be revised accordingly when the Capital expenditure is revised, as requested above.

APNPDCL

288. The DISCOM holds the same views as EPDCL. The licensee submits that provisioning for bad and doubtful debts has not been considered at all while even the requested provisioning of 1% of the projected revenue may be inadequate.

289. The Licensee understands that the difference in the power purchase cost of Rs.421 crs is entirely on account of the different BST rate of Rs.2.138/kWh adopted by the Staff. This implies that the sales and loss forecast filed by the Licensee is entirely acceptable to the Staff. The Licensee does not have any comment on the BST as any additional cost on that account would be a pass-through for the Licensee.

APSPDCL

290. The licensee understands that the difference in 'Power purchase cost' is entirely on account of the different BST rate of Rs.2.138/kWh adopted by the Staff. This implies that the sales and loss forecast filed by the licensee is entirely acceptable to the Staff. The licensee does not have any comment on the BST as any additional cost on that account would be a pass-through for the licensee.

291. The other key differences in interest and depreciation are linked to the projected level of Capital expenditure and need to be revised accordingly when the Capital expenditure is revised, as requested above.

292. Regarding bad and doubtful debts, the licensee makes the same submission as the EPDCL and regards even the proposed provisioning of 1% of the projected revenues as inadequate.

REGULATORY TREATMENTS

293. All DISCOMS have stated that:

1. Regarding true-up of expenses and other items after the year is over, the methodology adopted by them is in line with the principle of "controllable" and "uncontrollable" costs as stated in the ARR & Tariff Order for the year 2003-04 and the reference to Profit & Loss Accounts is only for two years when the GoAP paid compensation to them to meet their cash requirements. However, the licensees state that they would abide by the Commission's decision in case the Commission deems it fit that capping the claims to P&L Accounts is not desirable and the true-up is to be based only on the deviations on account of "uncontrollable" factors.
2. As regards the inclusion of Consumer Security Deposits in the negative side of Capital Base, the licensees in their filings did not consider the incremental consumer security deposits (for the year 2004-05) as a source of finance for capital expenditure and hence the same were not included in the Capital Base also. The licensees consider this as a source of finance for Working Capital over and above that allowed in the Capital Base. This is in line with the observation of the Commission in earlier Orders that additional working capital borrowing is not required as the funds requirement for financing the receivables can be met from the payables and the consumer security deposits available. Therefore, the licensees differ with the projection of the Staff which includes the total consumer security deposits in the negative side of the Capital Base.

294. In conclusion, the licensees request the Commission to favourably consider their submissions, particularly those in regard to Capital expenditure, Provision for bad and doubtful debts, and the Regulatory treatments.

CHAPTER - VII
STATEMENT OF GOVERNMENT OF ANDHRA PRADESH

295. The Government of Andhra Pradesh (GoAP) made a presentation to the Commission on 17th February, 2004. Sri Jannat Husain, Principal Secretary to the Government, Energy Department, GoAP, Hyderabad, appeared on behalf of the GoAP. At the outset, the Principal Secretary, Energy, reiterated the Government's commitment to the ongoing power sector reforms programme in the State. He stated that Andhra Pradesh is today at the forefront of reforms in power sector in the country. With the enactment of Electricity Act, it is expected to provide further impetus to power sector growth in the State. He stated that the Government has already taken a number of enabling steps to implement the provisions of the Electricity Act, such as notification of State Load Despatch Centre (SLDC), declaration of APTRANSCO as State Transmission Utility (STU), designation of special courts, constitution of District Committees, constitution of State-Level Co-ordination Forum and notifying assessment officers.

296. Sri Jannat Husain has stated that the Government of Andhra Pradesh is cognizant of the expectations of the people of Andhra Pradesh and other stakeholders and is committed to providing strategic guidance and necessary support on policy related matters of the sector so as to facilitate next generation reforms. The aim of the Government is to aid and facilitate the development of the sector so that it can serve as a vehicle for economic growth in the State with transparency, efficiency and quality service delivery to all. He pointed out that as a result of sustained reforms and institutional development initiatives, aided and facilitated by the government, commercial and operational parameters of State utilities are showing significant improvements in terms of reduction in T & D losses, increase in metered sales, improvement in collections, increase in net sales, quality of supply and improved network availability, development and augmentation of transmission and distribution network, improved cost average and increase in availability of thermal units etc. Furthermore, the service delivery of the State utilities has significantly improved and services are increasingly becoming customer focused and consumer friendly due to

initiatives such as introduction of citizen charter, establishment of call centers and customer service centers, regular holding of Vidyut Adalats, payment through e-Seva centers etc.

297. Sri Jannat Husain stated that Government of Andhra Pradesh would like to submit to the Hon'ble Commission its resolve and commitment to timely payment of committed subsidy. The Government attaches high priority to timely payment of subsidy and this is reflected in the payment record for the previous year. For the current financial year also, the entire committed subsidy of Rs.1513 cr. has already been paid quarterly, in advance. In this way, the GoAP is already fulfilling its commitment as envisaged in Section 65 of Electricity Act, 2003, which enjoins the State Government to pay the subsidy in advance in the manner indicated by the Hon'ble Commission. In addition, as has been the past practice, the Government is committed to providing necessary financial support and timely assistance in cases of additional deficits with a view to ensure reliable power supply. Sri Jannat Husain also stated that government would like to urge the Commission to continue with this approach of incentivising better performance and meeting of revenue requirement through a multi-pronged approach of efficiency and revenue improvements, significant loss reduction and overall improvements in operational parameters, particularly in power procurement and load management. Such an approach, he said, would help meet revenue requirements without tariff increases and would mitigate hardships that are being faced by the poor and the vulnerable groups in the State due to adverse seasonal conditions.

298. With regard to tariff determination for FY 2004-05, Sri Jannat Husain stated that the Government would request the Hon'ble Commission to suitably take into account the efficiency and revenue improvement process launched by the APTRANSCO and the Distribution Companies. He requested that once the Commission has determined the admissible revenue requirements and corresponding tariffs allowing for adjustment of cross subsidy to the deserving categories as per Section 26(7) of the Andhra Pradesh Electricity Reforms Act 1998, a reference to the Government may be made for policy directions for provision of subsidy to deserving classes of consumers as envisaged in Section 12(3) of the Andhra Pradesh Reforms Act.

CHAPTER - VIII
COMMISSION'S ANALYSIS ON SUBSTANTIVE ISSUES

LEGAL ISSUES:

Implications of the Electricity Act, 2003 – Determination of transmission and wheeling charges

299. It was urged by some of the respondent-consumers during the hearing that the Electricity Act, 2003 enacted by the Parliament has come into force on 10th June 2003 and the Commission has the function to determine transmission and wheeling charges for conveyance of electricity over the transmission and distribution system from the place of generation to the place of consumption, both in the case of third party sales by the generating companies and also conveyance from captive generating station to the place of use. It has also been urged by some of the respondent consumers as to what action is being taken by APTRANSCO to get the case pending in Supreme Court (wheeling and grid support charges) disposed off speedily in view of the substantial financial implications involved.

300. The Electricity Act repeals the earlier Central laws, namely, the Indian Electricity Act, 1910, the Electricity (Supply) Act, 1948 and the Electricity Regulatory Commissions Act, 1998 as provided in sub-section (1) of Section 185 of the Electricity Act, 2003. Sub-section (3) of Section 185 of the Electricity Act provides that the provisions of the Andhra Pradesh Electricity Reform Act shall continue to apply in the State of Andhra Pradesh to the extent its provisions are not inconsistent with the provisions of the Electricity Act, 2003.

301. The Commission has now to consider tariff fixation for the licensees for the year 2004-05 taking into account the provisions of the Electricity Act, 2003. Section 61 of the Electricity Act provides for the Commission to specify by Regulations the terms and conditions for the determination of tariff.

302. In terms of the proviso to Section 61, the terms and conditions for determination of tariff notified by the Commission earlier under the provisions of the

Reform Act as applicable immediately before 10th June 2003 shall continue to apply for a period of one year or until the terms and conditions are specified by the Commission The Commission has so far not prescribed any new terms and conditions for determination of tariff for the licensees. Accordingly, the terms and conditions for determination of tariff as was prevalent previously i.e. till 10th June 2003 will continue to apply for the purposes of consideration of the revenue requirements and Tariff Proposals of the Licensees for the financial year 2004-05.

303. Section 62 of the Electricity Act, 2003 provides for the State Commission to determine tariff in accordance with the provisions of the Act for supply of electricity by a generating company to a distribution licensee and for transmission of electricity, for wheeling of electricity and for retail sale of electricity.

304. Section 86 of the Electricity Act, 2003 provides for the functions of the Commission which include determination of the tariff for generation, supply, transmission and wheeling of electricity, wholesale, bulk or retail, as the case may be, within the State. Section 86 also provides that where open access has been permitted to a consumer, the State Commission shall determine only the wheeling charges and surcharge thereon, if any, for the said category of consumers. The Commission has also the functions of regulating the electricity purchase and procurement process of distribution licensees including the price at which electricity shall be procured from the generating companies or licensees or from other sources through agreements for purchase of power for distribution and supply within the State;

305. In addition, section 45 of the Electricity Act, inter alia, provides that the charges for electricity supplied by a distribution licensee may include a fixed charge in addition to the charge for the actual electricity supplied. Therefore the distribution licensee is entitled to claim fixed charges for providing the support from its grid to captive generating units, besides actual charges for electricity supplied.

306. In terms of the above provisions namely sections 45, 62 and 86 of the Electricity Act, the Commission can determine the tariff for the following aspects of electricity, namely;

- tariff for generation;
- tariff for supply which would include both bulk supply, retail supply, wholesale supply and also fixed charges for support provided by the Grid.;
- tariff for transmission of electricity; and
- tariff for wheeling of electricity.

307. In addition, the Commission is also to regulate the purchase and procurement process of distribution licensee including price at which the electricity shall be procured by such distribution licensee from any source including the generating companies, electricity traders, bulk suppliers of electricity.

308. Thus the Electricity Act makes the position clear in regard to the jurisdiction and scope of the functions of the Commission. The tariff determination process now clearly includes determination of tariff for all aspects of electricity namely for generation, transmission, trading, bulk supply, retail supply, wholesale supply and wheeling of electricity.

309. In the above circumstances, the Commission will proceed to determine tariff for transmission and wheeling of electricity including for the captive generating stations and the customers asking for open access for conveyance of electricity from the place of generation to the place of use in accordance with the powers vested in the Commission under the Electricity Act, 2003.

310. Some of the project developers had challenged the jurisdiction of the Commission in regard to **levy of transmission charges/wheeling charges** under the provisions of the Andhra Pradesh Electricity Reform Act, 1998 (the Andhra Pradesh Act). The Hon'ble High Court had decided these issues and has held that under the Reform Act (as compared with the Electricity Regulatory Commissions Act, 1998) the Commission has no jurisdiction to determine or impose wheeling/transmission charges. The above order of the Hon'ble High Court is under challenge before the Hon'ble Supreme Court. In the present case, the Commission is proceeding to determine tariff for transmission and wheeling of electricity in accordance with the provisions of the Electricity Act, 2003, as generally applicable to all persons including

those who wish to avail the open access or otherwise services of the transmission and wheeling of electricity from the licensees. The order passed by the Commission shall, however, be subject to the orders of the Hon'ble Supreme Court in the pending appeals which have arisen out of the interpretation of the provisions of the Reform Act and have been the subject matter of the order passed by the Hon'ble High court. This order shall be read subject to any order, directions etc. that maybe issued by the Hon'ble High Court and the Hon'ble Supreme Court in the pending proceedings.

Provisions relating to captive generation under the Electricity Act, 2003 are against consumer interest

311. Many of the respondent consumers raised the implications of the new Electricity Act, 2003 contending that the same is against consumer interest and will lead the reform process from crisis to chaos. It has been urged by the respondent consumers that the provisions in the Electricity Act, 2003, deregulating captive generation totally and giving freedom to establish captive generating plants, extending the scope of the captive generation to group captives, allowing captive and group captive the facility of transmission and wheeling through the transmission and distribution system without the requirement to pay cross-subsidy surcharge and allowing multiple licensees in the same area as a mandate (without any discretion to the Commission) will seriously affect the common consumers of the distribution licensees. The above provisions in the Electricity Act will enable the persons who can afford to move out of the distribution licensee's supply and source their requirements of electricity. This will seriously affect the financial position of the distribution licensee in the concerned area of supply which is already strained and its ability to maintain supply to the common consumers. It has been urged that the above provisions if implemented during the transition period when the distribution licensees are required to make efforts to reform, will make the position worst.

312. Similar contentions have been raised in regard to proviso 6 to Section 14 dealing with multiple licensees. It has been urged that the second licensee can cherry-pick the good area, leaving the non-remunerative area to the existing licensees. The general public and consumers in general, outside the preferred area, are dependent on the existing licensees and the existing licensees' ability to service

such consumers will be seriously affected. This could lead to a disastrous situation of large areas being discriminated as against selected area in regard to quality of service and also the tariff. If the paying consumers in the chosen area opt to go to the second licensee, the financials of the existing licensees will be seriously affected.

313. It has been contended that the provisions in the Electricity Act dealing with captive, group captive and multiple licensees are discriminatory and ultra vires as there is no rationale to allow them favourable or differential treatment as compared to the common consumers. It was contended that there is particularly no reason as to why captive, group captive and the second licensee should not be required to pay the cross subsidization surcharge under sub-section (2) of section 42 of the Electricity Act. The contention is that the above provisions are against public interest as the creamy customers will go out of the system and common consumer will be placed in more difficult position in regard to the tariff which he will have to pay and also as to the quality of supply. There will be a cascading effect on the ordinary consumers. It has also been urged that there is no reason as to why the captive generating plants (including group captive) should take advantage of the transmission system and distribution system constructed out of the contribution of common consumers of the erstwhile APSEB and the distribution licensees. The contention is also that the provisions allowing group captive will be misused and the generating company will camouflage the structure to claim group captive advantage.

314. Though a number of consumers sought the immediate intervention of the Commission in the above aspects, the Commission being a creature of the statute cannot examine the validity or vires of the provisions of the Electricity Act based on the above submissions. If the respondent consumers are aggrieved they will have to seek other remedies. The Commission will not deal with the above aspects raised by the respondent consumers in this tariff order. The Commission however is of the view that the issues raised by the respondent consumers of allowing captive generation and multiple licensees, without cross subsidization surcharge will have an adverse effect on the existing distribution licensees who have an universal service obligation for the entire area of supply. If the captive generation and second licensee take away the subsidizing consumers and the paying areas, the finances of the existing licensees will get affected without any fault of the existing licensees. This is

particularly so during the transition period envisaged under Section 61(g) of the Electricity Act, for progressive reduction and elimination of cross-subsidy prevalent in the system. In the transition period, the subsidizing consumers will move out of the existing distribution licensees making the above reduction and elimination of cross-subsidy more difficult. The Commission is of the view that the above aspects need to be considered by the Central and State Governments and the adverse implication of not charging cross-subsidy surcharge on captive generation and second licensee, may have to be seen in the light of the submissions mentioned above.

Expenditure of Consumer Fora and Ombudsman

315. Some of the consumers have urged that the expenditure on the Consumer Redressal fora and Ombudsman should not be allowed to include in the Revenue Requirements of the Licensees. The Commission is unable to accept this contention. The Licensees have to establish consumer redressal fora as per mandate contained in section 42 of the Electricity Act. Similarly the Ombudsman also is appointed as per the mandate contained in the said section 42. These fora and bodies are being constituted for the benefit of the consumers. The expenses incurred in connection therewith are necessary to provide benefit to the consumers.

Reduction of electricity charges from Re.1 to 50 paise per unit for Tatkal Scheme by Government

316. Some of the respondent consumers have objected to the announcement made by the State Government of reduction in the tariff payable under the Tatkal scheme from Re 1 to 50 paise and also the announcement that there shall be no increase in the tariff rates in the ensuing year even pending the consideration of the revenue requirement and the tariff proposals. The above action on the part of the State Government has been criticized as serious encroachment on the jurisdiction and functions of the Commission and it has been urged that the Commission should call for an explanation from the State Government.

317. Section 65 of the Electricity Act, 2003 deals with the issue. This provision reads as under: “If the State Government requires the grant of any subsidy to any consumer or class of consumers in the tariff determined by the State Commission under

section 62, the State Government shall, notwithstanding any direction which may be given under section 108, pay, in advance and in such manner as may be specified, the amount to compensate the person affected by the grant of subsidy in the manner the State Commission may direct, as a condition for the licence or any other person concerned to implement the subsidy provided for by the State Government:”

318. Accordingly the State Government is free to decide on the subsidy to be given to any class of consumers but the Licensee shall implement the same only in accordance with the above provisions, namely, if the State Government gives the subsidy amount in advance and in the manner specified by the Commission. Subject to the above, the State Government is free to decide on the grant of subsidy at any time even before the decision of the Commission on the Revenue Requirement and Tariff proposals.

Public hearing on PPA of APGENCO and tariff for Non-conventional energy (NCE)

319. It has been urged that the Commission should hold a public hearing on the Power Purchase Agreements of APTRANSCO with APGENCO and other generating companies such as Non-Conventional Energy (NCE) developers.

320. The Commission held public hearing on 25.06.2002 to discuss the PPA of APGENCO.

321. The operational and financials norms adopted by the Commission in case of other thermal power projects, the PPAs of which have been approved by the Commission have been extended to the APGENCO.

322. The Commission has held the public hearing in the case of NCE on 19.03.2004 and has passed a separate order on fixation of tariffs for NCE projects to take effect from 01.04.2004.

Re-opening of PPAs of IPPs

323. Some of the respondents have urged that the PPAs with the Independent Power Producers should be reopened as APTRANSCO has been purchasing energy

from IPPs at high cost. They have relied on the Judgement of the Hon'ble High Court of Judicature at Mumbai in Writ Petition 1205 of 2001 (Dabhol Power Company .V. MSEB) in support of the jurisdiction of the Commission to reopen the PPAs. At this stage, the Commission does not consider that any proceedings be initiated for the above purpose. The Commission however directs ***APTRANSCO to renegotiate with the IPPs to reduce the cost of power purchase keeping in view the substantial reduction in interest cost and facility of swapping of loan etc.***

SUBSTANTIVE ISSUES (OTHER THAN LEGAL) RAISED BY THE PUBLIC AND THE STAFF:

Publication of Defaulters' list

324. Some of the objectors have requested to publish the list of consumers whose dues are more than Rs.50,000, as per Commission's Guideline 11(g).

325. The Commission agrees with the request of the objectors and directs ***the DISCOMS to file the list of defaulters whose dues are more than Rs.50,000 along with the reasons for non-collection and details of litigation involved, if any, along with the ARR filings as per the Guideline 11(g) of Revenue and Tariff filing for Distribution licensees.***

Tariff Order in Telugu

326. Many objectors have suggested to publish Tariff order in Telugu.

327. The Commission accepts the suggestion and accordingly arrangements are made to publish Tariff order in Telugu also from 2004-05.

ARR in Telugu

328. Some objectors have suggested to prepare ARR in Telugu (local language) as in the case of Karnataka.

329. The ARR filings comprise huge data, which is required to be furnished in prescribed formats. The licensees are presently filing a summary of the ARR and Tariff filings in Telugu which is being supplied to the public on payment of Rs.10. The

Commission is of the view that the present arrangement of supply of summary in Telugu would facilitate the public to read, understand and participate in public hearings.

Providing TA and food during public hearing

330. Many objectors suggested to pay TA and arrange lunch for the persons coming from distant places to attend public hearings.

331. The Commission is agreeable to provide lunch for the participants in the public hearings.

Copy of Tariff Order

332. Some objectors have requested for sending copies of the Tariff Order to them. The Commission noticed the persistent demand from the objectors to supply a copy each of the tariff order. The Commission appreciates the spirit of participation of the public in the proceedings and the Commission will be pleased to send copies of the tariff order to all those who participated in the public hearings.

Filing of seven copies of objections

333. Some of the objectors have pointed out that the Commission has allowed petitioners to file only two copies vide Tariff Order 2003-04 in paragraph 259 of page 120, whereas APTRANSCO and DISCOMS are insisting on filing of seven copies. The requirement of submission of objection in six copies was inadvertently incorporated in the public notice. The Commission regrets the inconvenience caused on this account, and assures that such omission will not be allowed to occur in future.

Presence of representative of GoAP at public hearings

334. It has been represented that the Commission should ensure the presence of a responsible representative of the GoAP at the public hearings at all places and not just at Hyderabad. Many objectors appear to be under the impression that the State Government representative has to reply to the objections raised by them on the issues pertaining to Government. The Commission would like to make it clear that the

public notice was issued by the licensees calling for objections on their filings from the general public and hence basically the licensees have to answer the objections and not the State Government, while the Government is however at liberty to send its representative to the public hearings if it so chooses.

Xerox as industrial activity

335. A representation has been made during the public hearing requesting that Xeroxing (photostat) is an industrial activity as per the Industries department and so the Commission may consider Xeroxing as industrial category instead of commercial category. Xeroxing is a service activity rather than a manufacturing activity. It is more a commercial activity comparable to typing institutes, photo studios, telephone booths, etc. The Commission does not therefore find any merit in the request for classification of these units under industrial category.

Meters provided to all except agricultural consumers

336. In the tariff order of 2002-03 the Commission directed the licensees to submit a comprehensive plan for metering of Agricultural connections. The licensees have furnished the plan though belatedly. As per this plan, meters will be provided for all Agricultural connections by 2007. Section 55 of the Electricity Act, 2003, mandates metering of all the services within 2 years of the appointed date i.e. by 10.06.2005. This matter will be pursued.

337. The Commission on its part, has already initiated the process of bringing metering culture in the agriculture sector, as explained below:

- *a.* ***All new connections given from 01.04.2003 onwards for agricultural purpose under LT Category V (A) should be provided with meters.***
- *b.* ***All agricultural connections released under LT Category V(B) out-of-turn (Tatkal) scheme should be released with meters and appropriate metered tariff should be charged.***
- *c.* ***To motivate the agricultural consumers to get the meters fixed, Commission froze the meter tariff for agriculture for a period of 3 years w.e.f. 01.04.2003 and this was also made applicable to the***

existing agriculture consumers who opted for metered tariff by 30.09.2003.

338. The Commission is committed to pursue the efforts initiated in this direction to enforce the statutory mandate for metered supply to all consumers in the shortest possible time.

Separate category for Universities under HT category

339. It has been represented that under LT, Government educational institutions are categorized in LT VII. Universities whose load is more than 75 hp / 56 kw are forced under HT category II, being defined as not falling under any other HT category. Segregation of college and hostel loads in campus is difficult. It is requested to create a separate category under HT for universities. Under the existing tariff conditions, the HT consumers availing supply under category II are entitled to have separate HT connection for domestic loads within their premises under HT category VI which is charged at a lower rate than the tariff under HT category II. This facility is meant to reduce the burden of higher tariff applicable under HT category II. Thus the Commission does not find any need to provide further relief by classifying the entire University loads under a separate category with lower tariff.

Security Deposit

340. Some of the objectors have pointed out that as the high value consumers are being billed monthly, security deposit of two months' consumption is sufficient. Further, the interest on this deposit should be raised from 3% per annum to bank interest rates under RBI guidelines. The Commission has published the draft Regulation on security deposit under the provisions of the Central Act. This Regulation contemplates collection of security deposit of two months' charges only wherever monthly billing is done. The Regulation also provides for payment of interest on the security deposit at RBI rate.

Categorization of Hotels as industries

341. It is represented that hotels should be categorized as industries being a part of the tourism and hospitality industry as is done in Tamil Nadu and Kerala and lower

tariffs fixed. The electricity consumer classification and categorization for the purpose of electricity charges are made on the basis of the purpose of use of the electricity, and it are not related to the classification made by different departments of State Government or Central Government for some other purpose. Thus the classification followed either in State Government, or in other States is not a guiding principle for claiming such category for fixation of tariff for any particular class of consumers. However, the Commission recognizes the cardinal principle that any reasonable classification should have a rationale that has nexus to the objective sought to be achieved by such classification. From this point of view, the Commission believes that hotel business is to be treated as a commercial activity and classified as such.

Tariff for Cement and Caustic Soda Industries on par with Ferro Alloys

342. It is represented that power being one of the major inputs for cement and caustic soda industries, they may be treated on par with ferro alloy units and power supplied at the rate of Rs.2.12 per kwh. The Commission does not find any merit in the demand of cement and Caustic Soda industries to treat them on par with Ferro Alloys. The Commission has passed a detailed order classifying Ferro Alloys industry for a special tariff. These industries do not fall under this classification, as they do not satisfy the criteria taken into consideration in the case of Ferro Alloys industry.

Request to categorize under cottage industry

343. The All India Viswakarma Parishat have requested to classify the professions being pursued by them such as blacksmithy, carpentry, kanchari, shilpi, pottery and goldsmithy under L T Cat IV-Cottage industry with connected load up to 10 HP. Recognizing the features of these professions as cottage industries, the Commission agrees to classify these units with connected load up to 5HP only as in the case of other cottage industries already covered under L T Cat IV.

Classification of NIMS under separate HT category

344. It has been represented that energy utilized by Nizam Institute of Medical Sciences (NIMS) being for health care and non-commercial, it is desirable to categorise the consumption of NIMS under LT category VII @ Rs.4.00 per unit

without demand charges. The hospitals, including Government General hospitals like Osmania Hospital, Gandhi Hospital, are also classified under HT Cat II. The claim of NIMS that it is a non-profit institution does not merit any special consideration. The Commission is not inclined to discriminate within this class of consumers.

Fifteen days' notice for disconnection of supply

345. One of the objectors pointed out that not less than fifteen days' notice in writing should be given to consumer who defaults to pay the bill for supply of electricity as per section 56 of the Act, 2003. The Commission notified the Regulation on Electricity supply code *U/s* 50 of the Central Act, vide APERC (Electricity Supply Code) Regulation 2004, (No.5 of 2004) This Regulation provides for issue of 15 days' notice as required *u/s* 56 of the Central Act. Licensees are required to follow the procedure for disconnection as specified in the said Regulation.

Minimum charges

346. It has been represented that in respect of rice mills under HT-I category, demand charges @ Rs.195 / KVA / month and consumption charges @ Rs.3.71 / unit may be reduced to Rs.160 / KVA / month and Rs.3.50 / unit respectively. It has also represented that minimum energy condition of 50 units per KVA per month may be removed. The demand charge rate of Rs.195/KVA/month does not fully cover the fixed charge component of the expenses of the Licensees. The average fixed cost across the board would be of the order of Rs. 600 KVA/month. The minimum energy of 50 Units/ KVA/month corresponds to a load factor of about 8%. Thus any industry which runs even at a very low load factor of 8% will not have any additional burden on account of minimum energy condition. Hence the stipulation of minimum energy is justified.

Development charges for Lift Irrigation (LI) Schemes

347. It is represented that the development charges should be collected from the farmers of Government lift irrigation schemes and not from the private lift irrigation schemes. The development charges for different categories of consumers are being

collected by DISCOMS under the terms and conditions of APSEB/TRANSCO, pending approval of fresh terms and conditions by the Commission. The Commission has notified Regulation under the provisions of Sec.46 of the Central Act. Under this Regulation, the licenses are authorized to recover any expenses reasonably incurred by the Licensee to provide any electric line or electrical plant specifically for the purpose of giving supply to the applicant. The Regulation also specifies that if such expenses are covered under any scheme sanctioned with institutional finance, the licensee is not entitled to collect such expenses from the consumer.

Tariff for Government HT Lift Irrigation schemes

348. It is requested to reduce the unit rate for the government LI schemes also by 50% fixing the rate @ Re.1 per unit as against the existing rate of Rs.2.08 as for the private LI schemes to avoid huge pending bills of government LI schemes. The Commission does not find any merit in the request for reduction in the tariff for Government lift irrigation schemes, which was fixed at the level of cost-to-serve. The Commission explained the rationale for such pricing in the earlier orders. The Commission is not inclined to reduce the tariff to below the cost of supply and transfer the burden of cross-subsidy to the other consumers.

Uniform flat rate for all capacities of agricultural pumpsets

349. Many objectors have made forceful pleas before the Commission stating that use of higher horse power does not mean having higher paying capacity or irrigation of larger area of the fields. The Commission is of the view that higher capacity motor draws more power. As long as the tariff remains below the cost of supply, the principle of rationalization demands that higher price should be charged from those who use more power than those who use lesser power in the subsidised categories.

Reasonable Return

350. Some of the objectors have represented that the four DISCOMS should be allowed reasonable return and any surplus should be passed on to the consumers. APTRANSCO and DISCOMS have not claimed in the filings the Reasonable Return that they are eligible for as per the Sixth Schedule of the Electricity (Supply)

Act, 1948. APTRANSCO and DISCOMS have further submitted that since the licensees are presently under public ownership and the State Government meets the subsidy and financial needs of the sector emanating out of the financial gap, it would be appropriate to exclude the reasonable return from the ARR computations for the present. The Commission, however, considers that from the point of view of enabling these entities to operate commercially, it would be in the interest of both the Licensee and the consumers to allow reasonable return they are eligible for. The Commission, therefore, decides to allow the reasonable return calculated as per the principles of Sixth Schedule of the Electricity (Supply) Act, 1948, to all the licensees, and the same is correspondingly included in the computations of the ARR.

Delayed Payment Surcharge

351. It is proposed that the request of the DISCOMS for exclusion of delayed payment surcharge from Non-tariff income should not be permitted. DISCOMS in their filings have projected delayed payment surcharge in the Non-tariff income, with a request to exclude the same from the computations of Non-tariff income. Delayed payment surcharge is collected from consumers who have defaulted in payments. In the Non-tariff income, delayed payment surcharge shall be accounted reducing the borrowings (and the attendant cost of borrowings) to the extent of such non-tariff income. This has to be included in the non-tariff income as the benefits from such collections need to be passed on to the consumers.

Bad Debts

352. It is represented that provision for doubtful debts should not be permitted. All DISCOMS have proposed an amount of Rs.82.93 crs. towards bad and doubtful debts for FY 2004-05, being 1% of the revenue. According to the Electricity (Supply) Annual Accounts Rules, 1985 (paragraphs 4, 2 of Annexure V to Appendix V), the provision for doubtful dues from consumers is to be made as a fixed percentage of dues from consumers and not as a percentage of gross revenue. The Rules also contemplate investigation to be conducted independently and in depth at the time of actual writing off a bad debt and a detailed study to be conducted periodically to ascertain the appropriate percentage and to update the percentage as determined. In this

connection, Commission had directed the licensees to conduct an audit of receivables and then make necessary provisions. The implementation of the directive is in progress but little information provided by the licensees does not indicate any trend, etc. in details. Further, the provisions made in first (finalized) transfer scheme provided adequate amount towards bad and doubtful debts. There is still some unutilized amount available out of this provision for write-off of bad and doubtful debts. The licensees should write off bad and doubtful debts to the extent of the amount so available and only after that include further provision for write-off, if necessary, on the lines explained above. The licensees are advised to pursue vigorously the review of the receivables and put in their best efforts to collect the same.

Reduction in Tariff for Domestic Category

353. Some of the objectors have stated that the tariff for domestic consumers in the slab 0-50 is high and have requested the Commission to lower the rate. The Commission while noting the sentiment of the public would like to point out that the cost-to-serve for the domestic category is Rs.3.97/unit which is the highest as compared to other categories. The cost-to-serve is distributed among the tariffs for the 4 slabs in domestic category in a manner that it is revenue-neutral after taking into account possible paying capacity of the majority of consumers in each slab. It can be seen that the rate for 0-50 slab is kept at the lowest with tariff rising sharply in the next slabs with the last two slabs paying more than the cost-to-serve. The lowest slab tariff covers only about 37 % of the cost-to-serve for the domestic category. The tariff of Rs.1.45 is after taking the government subsidy of Rs.0.62 per unit into account. In the tariff design itself there is an element of in-built inter-slab cross-subsidy. Any further reduction in their tariff is not feasible.

Increase in the number of slabs in LT-II (Commercial)

354. A suggestion has been made that the number of slabs in LT-II be increased from the present two slabs to three slabs. It may be recalled that the number of slabs in this category was reduced from 3 slabs to 2 slabs in FY03, prompted by the fact that the data filed by the DISCOMS showed an unduly high proportion of consumers in the 0-100 slab and the existence of a large number of multiple connections. In the

Tariff Order FY04, the Commission noted that the DISCOMS have not made any headway in detecting multiple connections in this category. Moreover, this is an amorphous group consisting of small shops, big shops, studios, entertainment centers etc. The Commission while retaining the number of slabs at two, kept the first slab at 0-50 to take care of small shops, especially in the rural areas in line with the consumption patterns of rural households. Current data shows that almost 30% of consumers fall into this category. There is, therefore, no substantive justification to increase the number of slabs in this category and thereby encourage the likelihood of multiple connections in single commercial establishments.

Tatkal Scheme

355. A number of consumers have represented that Tatkal Scheme should be discontinued and agriculture connections should be released as per seniority as done earlier. The release of new agriculture connections annually has been a policy of the State Government. As such, the Commission has no comments to make. However, the Commission made a detailed examination of the implementation of the Tatkal Scheme by the DISCOMS. It has been noticed that although, about 65,000 connections have been given under Tatkal Scheme, revenue collections against the above connections have been only around 10% of the demand except in case of EPDCL. It therefore does not appear that the Tatkal Scheme is being implemented in the manner the Commission envisaged it. The Commission therefore ***directs DISCOMS to take immediate steps to make effective collections. The Commission will review the performance of the DISCOMS in this regard during 2004-05 and take a decision about the continuance of the scheme during the tariff period 2005-06.***

ARREARS

356. The Commission notes with concern that the trackrecord of DISCOMs in reducing the outstanding arrears is not satisfactory. In fact, in the last Tariff Order, the Commission had directed the DISCOMs to conduct audit of receivables and to prepare a report on those arrears which could be written off in the books. The report on quality of arrears is awaited and should be submitted by 30-4-04.

357. The outstanding arrears would decline only when collections are more than 100 percent of the current demand raised by the DISCOMs on consumers. These facts are observed in both LT and HT categories of consumers. The Commission observes the following reasons for rising volume of arrears:

- Non-payment of bills by live consumers,
- Non-payment of bills by consumers with obligation to pay minimum charges,
- Payment litigations in courts,
- Allowing the consumers to pay minimum charges in installments, and
- Dereliction in disconnecting the services of consumers for non-payment

Details of rise in arrears are given in the table below:

Table No.46
RISE IN ARREARS

ARREARS AMOUNT	CPDCL		SPDCL		NPDCL		EPDCL	
	As on	Amount (Rs. crs.)	As on	Amount (Rs. crs.)	As on	Amount (Rs. crs.)	As on	Amount (Rs. crs.)
Opening balance of arrears	01-04-03	658.25	01-04-03	406.71	31-03-02	478.29	01-04-03	106.08
Closing balance of arrears	31-12-03	914.76	31.12.03	469.52	31-03-03	426.71	31.12-03	131
Net Increase/Decrease		256.50		62.81		-51.58	NA	24.92

358. The Commission directs that,

From April 2004 onwards, the DISCOMs under normal circumstances, shall not entertain part payments from LT-II and LT-III and HT-I and HT-II categories of consumers, and shall initiate action as per terms and conditions of supply for disconnection and dismantling of service on account of non-payment of bills by these categories of consumers.

From April 2004 onwards, the DISCOMs shall delineate and show separately in the sales database the monthly demand and arrears on account of live consumers, disconnected consumers and, dismantled consumers.

The DISCOMs shall continue to bill the disconnected consumers, the minimum charges under contractual obligations for a period not exceeding 4 months (i.e. one month notice period plus 3 months disconnection period). If the consumer does not pay the amounts due and avail re-connection within 4 months, the contract (agreement) shall

be terminated with effect from date of expiry of the 4-month period from date of disconnection and the security deposit shall be adjusted against the arrears.

The Commission will monitor the DISCOMs' actions on this directive using the sales database maintained by the DISCOMS.

<u>Merit Order Dispatch</u>

359. A large number of objectors have raised the issue that the current merit order procedure based on variable cost as the basis for dispatch of power may be modified to the extent that APGENCO projects be treated as 'must-run' stations. Their suggestions have been based on the consideration that APGENCO stations being old plants and, the fixed cost thereby having already been recovered, the power available from these sources would be cheaper. Apart from concerns on fixed cost, the public expressed emotive support for APGENCO as a State public sector unit.

360. The Commission while appreciating the emotive support to the State public sector power stations would like to state at the outset that Merit Order principles approved by the Commission and implemented by APTRANSCO are beneficial to both APGENCO and the consuming public. The argument put forward by APTRANSCO in reply to this issue that the merit order selection on the basis of variable cost for dispatch of power ensures that the consumer is not burdened by extra cost is absolutely valid. As clarified, the fixed costs for generating stations are paid irrespective of whether the station is dispatched or not, based on the universally acceptable principle of efficient and optimum dispatch of power. Nevertheless, appreciating the argument put forward by the objectors, a simulation exercise has been undertaken treating APGENCO as a 'must-run' station, stacking up other stations on the basis of variable cost for dispatch. In this scenario, the power purchase costs have increased by another Rs.60 crores at the minimum and if this method is approved these costs will have to be passed on to the consumers. APGENCO therefore neither gains nor loses from the change in the merit order rescheduling as the entire fixed cost is paid to it irrespective of the schedule followed. Under these circumstances, it is appropriate and preferable to continue with merit

order dispatch based on the variable cost as the consumer does not get burdened unnecessarily and there is also no consequential loss to APGENCO.

361. The important point to note is that any criterion other than variable cost for merit order dispatch would mean that plants generating costlier power would be put into operation. In the scenario stated above, RTTP would run fully at the expense of more economical stations which will be kept idle, but earn fixed costs. However, when there is considerable shortage of hydel-power all thermal stations of APGENCO including RTPP get dispatched.

362. It may be recalled that the Commission had directed APTRANSCO in the last Order to host on its website regular reports of merit order dispatches. This was to ensure transparency in the dispatches, among others, of APGENCO. The objectors may if they so desire, monitor the merit order dispatches on the website and satisfy themselves that there are no discrepancies or inconsistencies in the present dispatch and scheduling of APTRANSCO.

Dispatch of Power from Rayalaseema Thermal Power Station

363. Some of the objectors have sought clarification regarding dispatch of power from Rayalaseema Thermal Power Station (RTPP) owned by APGENCO. Their apprehension is that RTPP power is not being dispatched and they have accordingly suggested that RTPP be declared as ‘must run’ station. In this regard, the Commission would like to point out that RTPP, like other generating stations, is being dispatched on the basis of Merit Order. The variable cost of this power station is Rs.1.40 – 1.45/kwh and it is the second highest in the system and therefore, on the basis of Merit Order, it does not get dispatched when demand is low. Optimal dispatches of power require that high cost power be backed down to economise on power purchase costs, as electricity cannot be stored. Among APGENCO stations, RTPP is indeed the costliest station (after Nellore Thermal Power Station) even when compared to other coal-based thermal power stations. In case RTPP is fully dispatched i.e. it as treated as a ‘must-run’ station, the additional cost will be as high as about Re.0.40/kwh. This will also result in FSA impact of 1.6 paise / kWh on all consumers (except agriculture) in the State. Hence, the Commission considers that it

is in the interest of the consumers, that the power from RTPP is dispatched on the basis of merit order.

Merit Order Procedure

364. Some of the objectors have questions on the merit order procedure followed by APTRANSCO on following counts:

a) Most of the generating stations of APGENCO are located in and around the load centers, thus facilitating system stability without the need to back down any generating station of APGENCO.
b) Incentives allowed for IPPs are not being taken into account for merit order operations discriminating thereby against APGENCO.
c) Strategic location of generating station will result in low T&D losses, which cannot be easily quantified in terms of economic benefits.
d) Transmission losses are lower due to location of the APGENCO's plants being closer to the load centers, while transportation costs of fuel may be higher due to their location away from pit heads.

365. The present merit order procedure being followed by APTRANSCO addresses the issue of inclusion of incentives to variable cost by loading it on to variable cost, only after the specified threshold PLF level is reached, thereby reducing the burden on the consumer.

366. As to the location of the generating station at the load centers, the Commission recognizes the economic benefits thereof. Accordingly, the Commission is inclined to factor the benefit of lower transmission losses of such stations into the variable cost and ***directs the Licensees to examine the benefits likely to accrue, by identifying the linkages between generating stations and the load centers, duly factoring the transmission losses in to the variable cost and submit a report to the Commission by 1st June 2004.***

Transmission charges, Wheeling charges and Open Access

367. APTRANSCO is at present the State Transmission Utility (STU) and also the transmission licensee in the State of Andhra Pradesh. In terms of Sections 62 and 86

of the Electricity Act, 2003, the Commission has to determine the transmission charges to be charged by the STU and the transmission licensees for the use of their transmission lines (system). Under these provisions, the Commission is also required to determine the wheeling charges for the use of the distribution system of the distribution licensees.

368. Pursuant to clause (d) of sub-section (2) of Section 39 and clause (c) of section 40 of the Electricity Act 2003, every STU and every transmission licensee is required to provide non-discriminatory open access to its transmission system for use by any licensee or generating company on payment of the transmission charges from the date of the coming into force of the Electricity Act 2003. The STU and the transmission licensees are also required to allow open access to consumers as and when such open access is provided by the Commission under sub-section (2) of section 42 of the Electricity Act.

369. In terms of sub-section (2) of section 42 of the Electricity Act, 2003, the Commission is required to introduce open access in the distribution system taking however into account the operational constraints. The open access in the transmission lines and distribution system to be allowed for the consumers is further subject to payment of cross subsidization surcharge as envisaged under sub-section (2) of section 42 ibid. Such cross subsidization surcharge is however not payable by a person, who has established a captive power plant, for carrying the power to the destination for his own use.

370. In terms of sections 39, 40 and 42 of the Electricity Act, the Commission will be framing the Regulations for open access to the transmission lines and the distribution system, including on issues such as phasing of the introduction of open access, categorization of long term and short term users of the transmission lines, the distribution system, and matters incidental or ancillary thereto.

371. In the present Tariff Order, the Commission will determine the transmission tariff payable for the use of the transmission lines and the wheeling charges payable for the use of the distribution system which will apply till the framing and implementation of the aforementioned Regulations on open access. As mentioned in

paragraph 899, the Commission will initiate a separate proceedings for determination of cross-subsidy surcharge payable in terms of Section 39(2) (d), 40(c), and 42(2), and additional surcharge under Section 42(4) of the Electricity Act, 2003.

Transmission tariffs

372. The transmission tariff has to be set at a level that fully recovers the Annual Revenue Requirement (ARR) of APTRANSCO, the transmission licensee. The charges should provide economic signals for efficient use of transmission resources as also for investment in strengthening the existing network. The rate design should be simple enough to support the existing level of information, metering and communication infrastructure. There are two components in the transmission charges i.e. recovery of ARR and compensation for transmission losses.

373. The transmission system has been planned and built up and will have to be further developed, essentially on the basis of the long term requirements of users, namely, the distribution licensees in the State who have the universal service obligation and the responsibility to discharge the obligation envisaged in sub-section (1) of section 42, to develop and maintain an efficient, coordinated and economical distribution system in their respective areas of supply. The ARR and compensation for losses to the APTRANSCO should be paid by the four distribution licensees in the proportion of their respective usage. The use of the transmission system by others is at present not a long term committed usage. The ARR and compensation for transmission losses of APTRANSCO cannot be made dependent on the possible use of the transmission lines by persons other than the distribution licensees. Further, some of the issues relating to transmission charges payable to APTRANSCO by such persons other than the four distribution licensees are subject matter of the proceedings pending in the Hon’ble Supreme Court. In the circumstances, the entire ARR and compensation for the transmission losses are allowed to be recovered from the four distribution licensees. If APTRANSCO recovers any transmission charges from persons other than the four distribution licensees for the use of its transmission lines/system following the disposal of the case pending before the Hon’ble Supreme Court, the same shall be accounted to the benefit of the four distribution licensees. This arrangement is also consistent with the earlier tariff orders passed by the

Commission that the agreement for use of the transmission system and the distribution system in the State should be reached by the intending consumer with the distribution licensee in whose area of supply the premises of the consumer is located.

374. Pending the categorization of long term and short term users and framing of detailed Regulations for open access to the transmission lines, the Commission decides that the charges for the use of the transmission lines by persons other than the four distribution licensees be levied for the capacity contracted at the rate determined in this Order which will be applicable to the four distribution licensees as and when the bulk supply function is segregated from APTRANSCO.

Treatment of transmission losses:

375. For this Tariff Order, the impact of transmission losses has been factored in the power purchase i.e. the total energy purchase of the four DISCOMS has been grossed up by the projected transmission loss of 6.25% to arrive at the total purchases to be made by APTRANSCO on behalf of the DISCOMS. This power purchase cost has been used in computing the ARRs of each of the DISCOMS.

376. The Commission is of the view that the impact of the actual energy drawals and actual loss levels being different from the projections must be settled by the system operator. The settlement period will be contingent upon the extent of data made available to the system operator and must be agreed upon among all the stakeholders. The SLDC after consultation with other stakeholders must inform the Commission of the settlement period and the methodology adopted for energy accounting.

377. For the ensuing year, APTRANSCO has projected a total transmission loss of 6.25% and this will be used for all DISCOMS and other users connected to the grid at voltage levels not below 132 kV.

378. For persons other than the four distribution licensees using the transmission lines too, the aforementioned transmission loss of 6.25% shall be taken into account and adjusted in kind i.e the quantum of energy shall be less delivered after transmission to the extent of the transmission losses.

Computation of ARR for different businesses

379. APTRANSCO in its ARR and Tariff filing has segregated the total cost among its three main businesses i.e. Transmission, Bulk Supply and System Operation. APTRANSCO has also submitted additional information regarding proposed tariff for transmission business and State Load Dispatch Centre (SLDC) vide their letter dated:4th March 2004.

380. The Commission recognises that given the short time available, these allocations of costs by APTRANSCO constitute only the preliminary data. Indeed, the final allocation will be a detailed exercise which inter alia will analyse the loan database and allocate to the transmission business only those loans that have been utilised for creating assets. For the purpose of this Tariff Order, the Commission intends to use the information to the extent it is presently available. As and when the APTRANSCO's functions are segregated pursuant to Section 39 of the Electricity Act, 2003, the Commission will consider the matter afresh.

Recovery of ARR of transmission business

381. In the absence of detailed data, the Commission has opted to use the embedded cost methodology instead of the marginal cost principles. The transmission charges have been designed to recover the total cost incurred by APTRANSCO in providing transmission service in Andhra Pradesh.

382. The costs of the transmission business comprise interest, depreciation, return on equity, operations, maintenance, interest on working capital, taxes etc. Such expenditure is largely a fixed cost. There is a need to link the tariffs with the nature of underlying costs and hence the Commission proposes a capacity linked transmission charge levied on a monthly basis.

383. The Central Electricity Regulatory Commission (CERC) in its draft Regulations dated 1st January 2004, on terms and conditions of tariff has proposed the recovery of transmission charges on a monthly basis from each of the beneficiaries on a proportionate basis as per the sum of their allocated and contracted capacity. The Commission, in deference to Section 61 (a) of the Electricity Act 2003, intends to

compute the transmission charges on similar basis. The methodology is further elaborated below:

Transmission charges = {ARR of transmission business/12} * {(allocated + contracted capacity of a beneficiary)/(allocated + contracted capacity of all the beneficiaries including discoms)}

384. Given the existing transitory nature due to the introduction of the Electricity Act 2003, for the current Tariff Order, the Commission has followed the methodology for fixation of transmission charges as mentioned below:

- The computations have been made keeping in mind the requirement of DISCOMS only.
- Till such time that the DISCOMs are allocated generation capacity as recommended to GoAP by the Commission, it is proposed that the charges be computed based on a DISCOM's recorded monthly demand. This recorded monthly DISCOM demand must correspond to the time period when the system peak occurred in the APTRANSCO network.
- Revenues from other users may be used to reduce revenue recovery from DISCOMS in a manner to be specified in the detailed Regulations on open access and transmission charges.
- These rates will also apply to users other than DISCOMS, till such time the detailed Regulations on open access, transmission charges and wheeling charges are issued.

Recovery of ARR of SLDC

385. For the purposes of this Tariff Order, the SLDC charges will be computed based on the information filed by APTRANSCO. The Commission recognizes that this information is based on preliminary findings and assumptions that APTRANSCO is yet to finalize the system operation related assets, liabilities, and expenditure thereon.

386. The SLDC charges are meant to recover the ARR pertaining to the activities of scheduling and system operation and also includes APTRANSCO's share of RLDC (Regional Load Desptach Centre) costs. For system operation activities, the underlying cost is linked more to the number of contracts to be managed, number of

metering points and number of times the demand/generation schedules are changed than to the quantum of energy managed. For the purposes of this Tariff Order, the SLDC charges are included in the transmission charges. In addition, a charge of Rs.2,000 will be levied for every change in the demand schedule submitted by a DISCOM or other user.

387. As per Section 32 (3) of the Electricity Act 2003, SLDC will levy and collect charges from generators and licensees engaged in intra-State transmission of electricity. Users other than the DISCOMS will pay as per the detailed Regulations on SLDC charges, as and when issued by the Commission.

388. Accordingly, the principles on which the transmission charges shall be levied and collected pending the finalization of the open access Regulations shall be as follows till further orders of the Commission:

389. The revenue requirements of APTRANSCO for transmission shall be met by the four DISCOMS in proportion to the capacity allocated to/contracted by the four DISCOMS during the year 2004-05.

390. The transmission system losses calculated at the rate of 6. 25% shall be compensated in kind i.e. the APTRANSCO shall deliver to the respective DISCOM quantum of energy given to it for transmission reduced by a factor of 6.25%

391. If the transmission lines are used by any person other than the four DISCOMS, the person shall pay transmission charges on the transmission capacity contracted. The transmission charges will be the same as payable by the four DISCOMS during the year 2004-05.

392. Like in the case of the four DISCOMS, APTRANSCO shall adjust in kind for use by other users the losses in the transmission lines calculated at the rate of 6.25% The transmission charges paid by such person other than the DISCOMS shall be credited to the account of the DISCOMS in proportion to the transmission charges payable by them to APTRANSCO.

393. In the case of consumers other than captive consumers seeking transmission of energy, there shall be an additional liability to pay cross subsidization surcharge

which the Commission determines under sub-section (2) of section 42 of the Electricity Act, 2003. Such surcharge shall be to the account of the distribution licensee of the area of supply where the consumer is consuming the electricity transmitted.

Wheeling charges

394. The distribution system of the distribution licensee may be used by the distribution licensee for supply of electricity to his consumers and for the purpose of wheeling energy for other licensees or consumers or generating companies or captive power plants. To the extent the distribution system is used for the purposes of supply of electricity to the consumers of the same distribution licensee, there will be no separate wheeling charge as it is already included in the retail supply tariff. However, when the distribution system is used for wheeling of electricity for purposes other than retail supply of electricity in the area of supply, the distribution licensee renders the wheeling services and he has to be compensated for such services. As in the case of transmission services, there is need to adjust for the distribution system losses too in kind and wheeling charges to be paid as network charges for the services of wheeling.

395. As mentioned above, the Commission will be framing the Regulations for open access to the transmission lines and the distribution system including on issues such as phasing of introduction of open access and terms and conditions of open access, under sub-section (2) of Section 42 of the Electricity Act, 2003, and matters incidental or ancillary thereto. As mentioned earlier in the present Tariff Order, the Commission will determine the wheeling charges payable for the use of the distribution system which will apply till the framing by it and implementation of the Regulations on open access.

Computation of wheeling charges

396. The wheeling charges will consist of two components, one to be recovered in cash for every unit of energy wheeled and the other a payment in kind as compensation for distribution losses.

397. In the absence of detailed data, the Commission has opted to use the embedded cost methodology instead of the marginal cost principles. The wheeling charges have been designed to recover the total cost incurred by the four DISCOMS in providing wheeling service in Andhra Pradesh.

398. In so far as the network charges are to be determined, the Commission will proceed on the basis that the entire distribution system is integrated and it is not necessary to determine the network cost based on the assets used at different voltage levels. It will be appropriate to have a uniform network cost for all the wheeling of electricity, irrespective of the voltage level at which the electricity is wheeled.

Treatment of distribution losses

399. The distribution licensees have submitted the losses at different voltage levels of the distribution system. With the availability of voltage level losses in the distribution system, the Commission is of the opinion that the users must share the network losses at the respective voltage levels. The losses projected by the distribution licensees for the year 2004-05 are as under:

	NPDCL	EPDCL	SPDCL	CPDCL
33kV	6.4%	8.0%	6.0%	6.4%
11kV	13.6%	13.6%	12.6%	13.6%
LT	24.3%	22.1%	21.6%	22.7%

400. The Commission accepts the above data for the purposes of determining the network losses for the year 2004-05. In doing so, the Commission has also been guided by the fact that the same aggregate losses have been used for computing the power purchase cost.

Recovery of charges

401. Accordingly, the principles on which the wheeling charges shall be levied and collected from persons using the distribution system for wheeling of electricity pending finalization of the Regulations on open access shall be as under till further orders of the Commission:

402. The network cost shall be determined equally for all purposes, namely, for distribution and retail supply of electricity by the distribution licensee in the area of supply as well as for wheeling of electricity for others including captive power plants.

403. The network cost of a DISCSOM shall be based on its revenue requirement net of the power purchase cost, non-tariff income and special appropriations. A person other than the distribution licensee in the area of supply shall be liable to pay the network cost for the quantum of energy he proposes to wheel through the distribution system during the year 2004-05

404. The losses in the distribution system shall be calculated based on voltage level to be compensated in kind i.e. the distribution licensee shall deliver the quantum of energy given to it for wheeling reduced by the distribution loss level at the voltage at which the energy is delivered.

405. If the wheeling of electricity is through the transmission system of APTRANSCO, in addition to the distribution licensee of the area of supply, the transmission charges including adjustment for transmission losses shall be levied and recovered in addition.

406. If the wheeling of electricity is through the distribution system of more than one distribution licensee, the wheeling charges shall be payable to and adjustment of losses shall be done only for the distribution licensee of the area where the electricity is delivered and consumed and not for any other distribution licensee.

407. In the case of consumers other than captive consumers seeking transmission of energy, there shall be an additional liability to pay cross subsidization surcharge which the Commission determines under sub-section (2) of section 42 of the Electricity Act, 2003. Such surcharge shall be to the account of the distribution licensee of the area of supply where the electricity transmitted is consumed.

408. As and when the Commission permits the supply to a consumer or class of consumers from a person other than the distribution licensee of that area, such consumers are liable to pay an additional surcharge which the Commission determines under subsection (4) of section 42 of the Electricity Act 2003. Such

additional surcharge shall be to the account of the distribution licensee of the area of supply where the electricity transmitted is consumed.

Distribution Losses:

409. The Licensees, in their filings, have submitted that the overall losses in Andhra Pradesh are projected to come down to 23.61% in FY2004-05 (from the 32.3% projected for the year FY 2001-02, 28.4% projected in FY 2002-03 and 24.84% in FY 2003-04), comprising transmission losses of 6.25% and distribution losses of 18.52% on gross power purchases made by the Distribution Companies for the ensuing year. The difference between the purchases made by a Distribution Company and the sales made to various categories of consumers represents the distribution losses.

410. The Commission directed the licensees to estimate the distribution losses through third party studies. This study has to be expedited as it is necessary to assess the initial level of the distribution losses for use in the Long Term Tariff Principles (LTTP) filing. As the distribution losses study was not filed before the Commission for the ensuing year, the Commission is not able to predict the distribution losses as they continue to be guesstimates till agriculture consumption is fully metered.

411. The Commission is not inclined to prescribe a specific level of distribution losses for the ensuing year and adopts the distribution losses projected by the Licensees, till the study is completed.

Licensees are directed to complete the distribution losses study initiated by them within two months of this Order. At the same time, the Commission directs the licensees to submit a consultation paper on the "Achievable levels of distribution losses in the future years" within two months of this order.

Transmission Losses:

412. APTRANSCO has submitted estimated transmission losses in 2003-04 as 6.5% compared to 7% losses fixed in the FY 04 Tariff Order. The Commission in Tariff Order, FY 04, had directed the Licensee to compute the transmission losses and post

the details on their website every month. APTRANSCO has complied with the Directive and filed the information on transmission losses besides hosting it on their website. APTRANSCO has projected transmission losses of 6.25% for 2004-05.

413. Transmission losses (losses in energy from interface points of the contracted generating station and the distribution companies) have two components. One component is measured in APTRANSCO network and the other in the Power Grid Corporation of India Limited (PGCIL) network (external to APTRANSCO). External transmission losses as a percentage of total power purchase vary in the range of 0.45% to 0.55% in different months. The variation is according to the amount of energy drawn from the Central generating stations and actual transmission losses in the grid. In the APTRANSCO grid, losses are varying in the range of 5.1% to 6.6%. In recent months, these have been hovering around 6.25%.

414. In the Tariff Order for FY 2003-04, the Commission had directed the Licensee to constitute an in-house committee to study the transmission losses and draw up an Action Plan for implementation. Accordingly, the Transmission Loss Steering Committee (TLSC) was set up and it has been giving its recommendations to APTRANSCO from FY 2003-04.

415. The Licensee has submitted the status on the implementation of recommendations of TLSC as follows:

- In all 220 KV and 400 KV feeders, the non-working meters are replaced with electronic meters and thereby accurate measurement of energy flow is being done
- Voltage-wise transmission losses are calculated and it is observed that the losses are within the limits
- For 132 KV feeders, replacement of meters is being taken up and is expected to be completed shortly.
- New EHT substations and EHT lines are added to the transmission system.
- Efforts are afoot to bring down transmission losses to 6.5% during 2004-05.
- The table below shows the progress made with regard to transmission losses:

TRANSMISSION LOSSES IN FY 2003-04

Table No.47 **(Per cent)**

Losses	April' 03	May'03	Jun '03	Jul'03	Aug'03	Sep'03	Oct'03	Nov'03	Dec'03	Jan'04
External to APTRANSCO	0.61	0.4	0.3	0.45	0.43	0.45	0.55	0.54	0.39	0.45
Within the State	6.57	6.65	6.6	5.99	5.94	6.31	5.68	5.69	5.1	5.85
Total transmission losses	7.18	7.05	6.9	6.44	6.37	6.75	6.23	6.23	5.49	6.3

416. The Licensee has also installed 0.2 class meters at the interface points of all the APGENCO stations during the year and most of the other generating stations. Progress on installation of meters is being submitted regularly. ***The Commission directs the Licensee to complete the installation of 0.2 class meters on the remaining generating stations within three months.***

417. Cumulative effect of the actions taken, including monitoring and joint energy meter readings at DISCOM-interface points, has reduced the transmission losses to even below the estimated levels in the past three years.

418. In view of the above, the Commission has adopted 6.25% transmission losses projected by APTRANSCO to estimate power purchase requirement in the ensuing year. However, the Commission believes that these losses can be brought down to 6.00% during the ensuing year. The Commission ***directs that the licensee shall take necessary steps and achieve the transmission loss target of 6.00% during the year 2004-05.***

419. To give an account of the transmission losses, the Commission ***directs the Licensee to submit Global Energy Account every month with details of the power purchases and sales to different DISCOMS and others. Gist of the Global Energy Account consisting of energy drawn from different sources and non-conventional sources of energy with percentages of energy of total purchases from different sources and consumption by different DISCOMS, inter-State sales and third party energy wheeled have to be posted on the website of the Licensee every month.***

PREPAID METERS:

420. Prepaid meters installation option in a few niche markets can be taken up by the Licensees in the ensuing year, when each distribution company may install a few

meters in its area of operation and observe the performance. Such steps will reduce the cost of service due to reduction of meter readings, bill preparation and collection of charges. The consumers opting for the pre-paid meters need not maintain any security deposit with the Licensee for electricity consumption.

Sales Database

421. The Commission felt that information availability, especially on sales front, is critical for regulation and tariff determination. Accordingly, the Commission directed the DISCOMS to build up a comprehensive sales database in electronic form for a 10-year period, with consumer level details. The Commission also supplied the format for the database prescribing 60 information columns, after consultation with DISCOMS. The database in short covers the following:

- Consumer profile, i.e. Supply area, Name, Service number, Consumer category, Connected load, Security deposit, Voltage of supply, etc.

- Metering details: The meter reading dates, meter readings, recorded units and billed units for each consumer.

- Billing details: The amounts charged to the consumer with dates in different proforma, including any surcharges on outstanding arrears.

- Payment details: The amounts paid by the consumer with dates and whether the consumer has availed any installment facility extended by DISCOMS.

- Exceptional details: Details of revised bills where there are meter reading exceptionals and units are adjusted.

422. The DISCOMS have made considerable progress in building the sales database on the above lines. To demonstrate that the required database is being built, the DISCOMS filed the database with the Commission for LT categories of consumers in full shape from April 2003 onwards for different months.

ASSESSED SALES

423. The Commission in tariff order for FY03-04 directed the DISCOMS to reduce the ratio of assessed sales to metered sales to a maximum of 2 to 3 percent and indicated that the same would be verified with the sales database. The Commission utilized the sales database filed by the DISCOMS to evaluate the assessed sales for LT categories.

424. The database filed by the DISCOMS has certain gaps in information, i.e. for some consumers, the information on meter readings, recorded units and billed units is not available. The Commission excluded these bills from the analysis. However, the magnitude of missing information is rather minimal and unlikely to alter the conclusions drawn on the basis of available information. The table below reveals the extent of missing information in terms of bills and units billed:

Table No.48

Missing information from sales database **(Per cent)**

Bills/Units	CPDCL	EPDCL	NPDCL	SPDCL
Bills issued	15.36	4.74	7.66	2.64
Units billed	17.29	14.25	7.66	2.78

Note: Totals are not worked out as the databases for different DISCOMS refer to different months

425. The Commission examined the ratio of assessed to total bills issued and units billed to LT metered categories after excluding the bills with missing information. No DISCOM achieved the target of assessed to metered sales ratio of 2 to 3 percent. The details are given below:

Table No.49

Bills issued: Ratio of assessed to metered bills (Per cent)

DISCOM	CPDCL	EPDCL	NPDCL	SPDCL
Billing months	04/03 to 11/03	04/03 to 11/03	04/03 to 12/03	04/03 to 09/03
LT01:Domestic	5.27	4.70	21.67	5.95
LT02:Non-Domestic	4.88	4.92	18.18	5.25
LT03:Industry	14.75	9.52	16.80	12.78
LT04:Cottage Industry	13.25	0.00	13.47	6.25
LT06:Public Lighting	47.10	40.00	39.52	54.76
LT07:General	6.65	9.09	25.96	7.35
TOTAL	**7.36**	**5.05**	**21.40**	**6.58**

Table No.50

Units billed: ratio of assessed to metered units (Percent)

DISCOM	CPDCL	EPDCL	NPDCL	SPDCL
Billing months	**04/03 to 11/03**	**04/03 to 11/03**	**04/03 to 12/03**	**04/03 to 09/03**
LT01:Domestic	6.61	3.31	19.71	4.62
LT02:Non-Domestic	7.55	5.05	15.05	4.71
LT03:Industry	22.86	9.28	21.67	11.59
LT04:Cottage Industry	19.15	4.20	4.95	2.64
LT06:Public Lighting	51.56	31.70	40.26	47.54
LT07:General	9.45	5.24	21.76	6.92
TOTAL	**11.74**	**5.17**	**19.64**	**7.98**

The Commission is unhappy with the high ratio specially under Industrial (LT-III). However, it is noted that there has been a gradual reduction in the ratio over the months across the categories.

METERING, BILLING AND COLLECTION EFFICIENCY

426. The Commission notes with disquiet that several bills are issued to consumers with errors. The DISCOMS should ensure that the bills issued are error-free. With the progress on sales database, it is possible for the DISCOMS to check how many bills are issued based on meter readings (Metering), how many of these are issued correctly (Billing) and how many are paid (Collection).

427. The Commission directs that the DISCOMS should make full-scale efforts to fill the gaps in sales database and achieve the stipulated 2 to 3 percent sales ratio of assessed to metered sales by 31.03.2005. The DISCOMS shall file a Metering, Billing and Collection (MBC) report based on sales database, in person, by 25th of every month without fail.

Regulatory treatment and True-Up mechanism

428. In the last Tariff Order, the Commission had outlined the principles for true-up in a two-stage approach. In the filings for FY05, the Licensees have suggested changes in the methodology to be used regarding the treatment of financial losses and gains. One suggestion is to provide for true-up on the basis of Profit and Loss Account and the Balance Sheet, which ipso-facto means that regulatory accounts should not be considered as the basis for true-up. An alternative suggestion is to modify the definition of uncontrollable factors. This suggestion more forcefully articulated by the DISCOMS in their filings is for treatment of deviations in sales

projections as an uncontrollable factor in the light of Open Access becoming permissible under Electricity Act 2003. The DISCOMS have also suggested that any shortfall in investment may be examined in relation to reduction in losses for that year. Further, the Licensees have sought special appropriation (Debt Redemption Obligation) to meet the gap between loan repayment and available depreciation. APTRANSCO has requested for Rs. 74.30 crs and NPDCL for Rs.18.36 crs as Debt Redemption Obligation in their filings.

i) Regulatory treatment on the basis of P&L Accounts

429. A distinction is always made between regulatory accounts and the Profit & Loss (P&L) accounts (and the Balance Sheet) of a Licensee. In the regulatory framework, the Commission determines the expected revenue from charges to be recovered from consumers by way of tariffs, determined on the basis of expenditure prudently incurred only for regulated business of APTRANSCO and the DISCOMS. The regulatory accounts accordingly relate to only the regulated business for which tariffs are levied in contrast to the P&L accounts which cover the total business of a Licensee and are not directly regulated in the sense that these also include items - relating to income as well as expenditure – not approved / regulated by the Commission. For example, in the case of sales, the regulated business income i.e. tariff income in the transmission sector relates to sales to DISCOMS in the case of APTRANSCO and in the distribution segment, it refers to sales to retail consumers. Purchases and sales of power for the trading activity of APTRANSCO would normally not be reckoned as expenditure of and income from regulated business. This distinction is not drawn in the case of P&L accounts where business income includes earnings from (and expenditure on) all sources. With this distinction, true-up of expenses incurred on running the regulated business will only be considered, with a further distinction between controllable and non-controllable factors. The Commission's concern is with regulated business and for this, any true-up can only be with reference to regulatory accounts. Shifting to alternative P&L accounts is contrary to the Commission's regulatory processes and interventions.

ii) Sales projections as an uncontrollable item

430. Sales projections are part of business risk and the Commission has never adjusted the projections made once agreed upon by the Licensees with the exception of categories, such as, agricultural sales, where external subsidy is involved. In their filings for FY05, the Licensees have requested that variations in sales be also considered for true-up, classifying them as uncontrollable factors. More specifically, the request relates to sales to Industry. This request has been prompted by the apprehension that with Open Access, sales projections would be up against an uncontrollable business risk, which needs to be mitigated. Adjusting to the winds of competition requires time and the DISCOMS are apprehensive about their ability to anticipate variations in sales as consumers under the Open Access regime would be free to exercise their choice with regard to sourcing of electricity. The projected sales and revenue may thus vary significantly as the consumers of DISCOMS shift to captive consumption or to sourcing power from outside the DISCOMS network. This could lead to lower revenue realization than that filed, resulting in a financial loss in the ensuing year. It is in this context that the request for treatment of variations in sales as an uncontrollable factor, eligible for true-up, has been preferred. Sales projections under these circumstances are not mere normal business risk and hence require treatment for 'risk-mitigation'.

431. The apprehensions raised by the Licensees may perhaps be an over-reaction. The Commission would like to point out at the outset, that all sales projections whether of the subsidized or subsidizing categories are treated on equal footing and the Commission has not modified the projections made by the Licensees. It is only with reference to agricultural sales that the Commission has stipulated ceilings since these are not metered sales and estimates tend to be tentative. Any purchase of extra power over and above the ceiling for sale to this category involves larger subsidy.

432. Projections are always based on assumptions after taking into account the ground realities. Two commonly used methodologies for projections are (i) based on past historical trends adjusted or modified to take into account related developments that may affect the projections and; (ii) econometric analysis using

end-use method wherein detailed scenario analysis is undertaken for making projections. Variations invariably occur between projections and actuals and are accepted within acceptable limits. It is only in the case of unforeseen circumstances that actuals tend to be completely out of line with sales projections. The present request of the Licensees to treat variations in sales especially in HT sales as an outcome of forces beyond their control would require detailed examination only after some time when National Electricity Policy and tariff policy are issued and there is more clarity on the issue. Prima facie, the variation in sales cannot be treated as 'uncontrollable', at least for the time being.

433. With the enactment of the Electricity Act 2003, full open access is permissible when the Commission permits it. There are mainly three areas that could affect the sales of a distribution licensee. These are a) captive consumption; b) third-party sales; and c) second distribution licensee. Captive consumption has earlier also been in vogue and is undertaken purely on the economics of power tariffs, and short supply of power by utilities. Nevertheless Commission does not presently consider captive consumption as an unforeseen event, though the Commission recognizes that the entry of group captives could pose quite a few problems for the licensees. With regard to third party sales, the Act permits the levy of surcharge to compensate the DISCOMS for loss of cross-subsidy, which is, however to be eliminated in a phased manner. Hence in the event of open access, the DISCOMS do not suffer any substantial and sudden loss of revenue on account of third-party sales. Regarding the last category, namely, the emergence of second distribution licencee, as stated earlier, we have to await further developments for a clearer picture to emerge. The Commission is, accordingly, of the opinion that sales projections can be considered for true-up only if the Licensee is able to prove that large variations from projections have occurred due to unexpected developments and forces beyond his control. A blanket categorization of sales projections as an uncontrollable factor is not thus possible.

iii) Investment and loss reduction

434. The DISCOMS in their filings have suggested that any claw-back of interest on account of shortfall in investment should be related to targeted reduction in losses.

The rationale put forward is that all capital investments of the Licensees are related to strengthening of the distribution system resulting in reduction of losses. Hence any shortfalls in investment may affect the loss reduction programme and claw-back of interest must necessarily be seen with respect to the Licensees' achievements towards reducing the losses.

435. The principle of relating investment to loss reduction and to allow the Licensee to retain the savings achieved by prudent and efficient utilization of resources and thereby achieving the targeted reduction in losses at lower levels of investment as an incentive is a well accepted principle. In fact, this concept is proposed in the Long Term Tariff Principles issued by the Commission. But to request for such linkage in the present Tariff Order when the LTTP comes into force only from FY06 is to suggest a deviation from the well-established principles of evaluating investments on the 'used and useful' basis for purpose of tariff fixation. So far, the Commission has never laid down a direct linkage between investments and the loss reduction programme. Such linking requires rigorous and accurate estimation of losses, fixing of benchmarks and thereafter determining the required investment levels. This exercise will be taken up as part of the evaluation of shadow LTTP filing and as such the request of the Licensees is not acceptable at present, being premature.

iv) Debt redemption versus Depreciation

436. Depreciation as a concept is meant to capture the effect of time on use-value of an asset and in any business, accumulated depreciation is used for replacing assets as and when the need arises. In real time operations, depreciation funds are used to repay loans, in case the asset was created from funds raised through loans. At times, however, the rate of depreciation and tenure of the loans may not match leaving an uncovered gap. The Sixth Schedule to the Electricity (Supply) Act, 1948, provides for Debt Redemption Obligation (presumably to treat the mismatch with depreciation) as a special appropriation, more so since the assets of a public power utility are largely created by 100% debt finance. The difference between asset value (100%) and total depreciation (90%) could be treated as Debt Redemption Obligation. It may be pointed out that correction would be necessary when the asset is retired, since the amount allowed as Debt Redemption Obligation would need to be adjusted

against the capital base reckoned for providing returns. If such corrections are not carried out, it would mean double jeopardy for the consumer, who would end up paying for revenue expenditure as also for unadjusted Capital Expenditure for which the Licensees gets a reasonable return. Taking all these factors into account, the Commission is of the opinion that Debt Redemption Obligation cannot be made as a pass-through without adjusting for depreciation and also Advance against depreciation, if any allowed, and that too only after linking the projects with their corresponding loan repayment schedules.

Controllable and non-controllable factors

437. All the Licensees in their filings have requested for defining the 'controllable' and 'uncontrollable' factors to determine as to which of the items could be considered as pass-through in the tariffs. In the last Tariff Order for FY04, the non-controllable factors had been broadly defined to cover the following:-

- Vagaries of nature ;
- Changes in laws of the land and judicial pronouncements ;
- Government policies ; and
- Wide market and economic influences beyond the direct influence of the Licensees.

438. A two-step correction methodology was set out for correcting the financial losses or gains arising out of factors beyond the control of the licensees. The First Correction would be based on the best information made available to the Commission for the operations of the current year with the actuals for first half-year and the best estimates for the second half-year. The Second and Final correction would be based on the actuals as per the audited accounts for the year.

439. The licensees are to submit the audited annual accounts duly finalized and adopted by their Board and approved in the Annual General Meeting of the Company under Section 210 of the Companies, Act 1956, as set out in the licence conditions. The Commission reserves the right to forfeit the Licensees' claims in case the accounts are not submitted by the due date. The Commission shall examine whether

to either allow or disallow the claims (either positive or negative) while determining the next year's annual revenue requirements.

440. The Licensees have by now been under the regulatory regime for five years and are familiar with the principles being adopted by the Commission in determining the tariffs and finalization of their Aggregate Revenue Requirements (ARR). The admissibility of expenditure, item-wise, with reference to controllable and uncontrollable costs is analysed in the same format as that for ARR filings to facilitate easier computations. The analysis is presented in the table placed below while the main arguments that help determine classification of an item as controllable or non-controllable are discussed, below, item-wise:

Table No.51
Controllable and non-controllable items of expenditure

Items	Controllable / non-controllable	Need for true-up
Power purchase cost	Non-controllable	FSA
	Other Expenses	
Wages & Salaries –PF	Controllable	True-up not normally required
Administration & Salaries	Controllable	True-up not normally required
Rent, Rates and Taxes	Controllable	True-up on filing of tax returns
Repairs	Controllable	No true-up
Interest	Controllable	True-up linked to investments
Depreciation	Controllable	True-up linked to investments
Other Expenses	Controllable	No true-up
Special appropriations: Debt Redemption Obligation	Controllable	No true-up
Income Tax	Non-controllable	True-up on filing of income tax returns / after finalisation of assessment
Working Capital	Controllable	No true-up
Reasonable Return	Non-controllable	Variations on account of shortfalls in investment

i) Power purchase cost

441. Variations in power purchase costs for the purpose of true-up will rarely occur as the Fuel Surcharge Adjustment (FSA) formula issued by the Commission attempts to capture both the price variance and the fuel variance during the course of the year itself. Any further variations would arise mainly on account of purchases exceeding the limits approved in the Tariff Order. All extra purchases of power do not automatically qualify for true-up. If the purchases are for categories where the

Commission has fixed a ceiling or quota as in the case of agriculture whose consumption is controllable by proper monitoring and vigilance, extra purchases will not qualify for true-up. This distinction is necessary in the light of the Licensees' request for treatment of true-up on the basis of Profit and Loss (P&L) accounts rather than on the basis of Regulatory accounts. The FSA adjustment has to be carried out every month from FY05. The final correction to power purchase cost would be carried out after the audited annual accounts for the year are made available within a reasonable period of time by the licensee. This final correction for the power purchase cost would be based on the following parameters:

a) Actual Fixed Cost for the actual generation from approved sources of generation as per the Tariff Order.
b) Actual Variable Cost for the actual generation from approved sources of generation as per the Tariff Order.
c) The actual cost of fuel variation, from Hydel to any other fuel, Thermal to any other fuel, Gas to any other fuel, Non-conventional to any other fuel, etc.
d) Procurement being in accordance with the Merit Order procedure laid down by the Commission.
e) Rates as per the approvals accorded by the Commission.
f) Exclusion of ABT gains/losses while quantifying the power purchase variance.
g) Exclusion of power purchases for any other activity, not approved by the Commission or in excess of the quantity approved.

ii) Wages and Salaries

442. It is a controllable expense since the Licensee knows the employee cost-structure and also the extent of salary increases. The only variable factor in the salary structure is the Dearness Allowance (DA), which is a guesstimate in line with estimates regarding the expected rate of inflation. The variance should not normally be far off the estimations. This item is thus clearly a controllable one. Under special circumstances, however, the Commission may consider looking into the details of the wages and salaries if the licensee is able to conclusively establish that the variance

was on account of factors beyond his control. In case any wage revision takes place, the licensee has to bring the fact to the notice of the Commission and the Commission may allow the impact of the revision once the agreement has been reached and payment has been made to the employees.

iii) Administration and General Expenses

443. This head of account is in itself controllable in nature. The Commission considers this as a controllable item and would not accede to any request for correction attributed to any variance under normal circumstances. The Commission may allow the variance if it finds that the nature of variance was beyond the control of the Licensee.

iv) Rent, Rates and Taxes

444. The nature of this head of account too in itself is controllable in nature. The Commission considers this as a controllable item and would not make any correction attributable to any variance under normal circumstances. The Commission may, however, allow the variance if it finds that the variance was beyond the control of the Licensee. For example, if there are any taxes etc. levied by any agency which were not taken into account while determining the ARR of the Licensee, and the licensee received the demand notice only subsequently and had paid it, the amount may be considered for being allowed as an expenditure item while finalising the ARR of the next year, if the justification for the payment is explained to the satisfaction of the Commission.

v) Repairs and Maintenance

445. Repairs and Maintenance expenses are directly related to the failures of the equipment and preventive maintenance of the Licensee. The Commission has been setting targets, for example, for reduction in the transformer failures and has also been allowing the expenses claimed by the licensees on this account. Moreover, the Licensees are also undertaking capital expenditure programmes for Systems Improvement etc. to reduce the losses, etc. Keeping in view all these facts, Commission has considered this head of account as controllable and would not make any correction for any variance under normal circumstances.

vi) Approved Interest on loans

446. Approved interest on loans is directly related to the loans taken into the Capital Base computations. The loans drawn for Capex and interest thereon are a pass-through in the tariffs. The interest on loans drawn for other than the regulated business or for meeting the working capital requirements over and above what has been allowed in the capital base, shall not be allowed in the tariffs. However, the loans drawn for meeting Debt Redemption Obligation for which approval has been granted by the Commission shall be allowed to figure in the Capital Base and the interest thereon shall be allowed in the tariffs.

447. The interest amount is subject to claw-back as the interest being allowed is for the capital works, and any variations in the capital expenditure programme (underspending or overspending) have to be adjusted if CWIP remains in the Capital Base computations as per the Sixth Schedule to the Electricity (Supply) Act, 1948. The Commission is of the view that excluding CWIP from the capital base computations has many advantages for all the stakeholders. The ambitious or inflated projections for Capital Works programme of the licensees are skewing the interest costs requiring claw-back of interest in later years, based on the difference between actual incidence for the capital works and the amount provided in the Tariff Order for that year.

448. Capitalisation of *Interest During Construction* (IDC) further complicates the problem. Presently, the capitalisation of interest for the projects is done based on a formula rather than on actual incurrence for the project. Keeping all this in view and to bring in efficiencies in project-completion and making the projects reflect their true costs, exclusion of CWIP is suggested to eliminate the need for interest claw-back (+/-) year after year.

449. Hence, the Commission has considered interest on approved loans as an uncontrollable item to the extent the incurrence of Capital Expenditure is concerned while loans pertaining to other activities are considered as controllable. Any corrections will be based on the audited Annual Accounts of the Licensee. The corrections effected will be in regard to the interest on loans not attributable to Capital

Expenditure. Interest for loans drawn for any other expenditure would be excluded. The variation statements of the licensees have to give full details of loans break-up relating each loan to the project and the interest thereon. ***The Licensees are directed to submit instrument-wise repayment schedules for all loans, source-wise, year-wise, instrument-wise, asset-wise, purpose-wise and date-wise.*** Interest, if any, earned on the investment of unspent loan amounts shall be set off while computing the net interest incidence on a project

vii) Non-Tariff Income - Interest on Security Deposits

450. The nature of this head of account is controllable and would not require any corrections under normal circumstances. Interest is now to be computed at Bank Rate in accordance with Section 47 (4) of the Electricity Act, 2003, instead of 3% as was being allowed hithertofore.

viii) Legal charges, Audit and other fees

451. All these charges are controllable in nature

ix) Depreciation

452. Depreciation is directly related to the capital assets. The Original Cost of Fixed Assets (OCFA) and capitalisation of capital works form the basis of the Fixed Assets. For electricity industry, the depreciation rates are the rates, notified by the Ministry of Power, Government of India. Depreciation is applied on the opening balances of the Fixed Assets for the ensuing year at specific rates applicable to particular assets subject to a limit of 90% of the Fixed Asset value (the balance being treated as scrap value). In this regard, the crucial factor that varies the computations is the additions to the Fixed Assets which are entirely dependent on the capitalization of the Capital Works-in-progress during the year. The licensees tend to capitalize the capital works towards the end of the financial year i.e. in March, irrespective of the completion stage and whether or not the assets have been put to use. In these circumstances, the variations in depreciation amounts based on the information made available to the satisfaction of the Commission, may be included in the computations of the ARR. The same would be taken to the Capital Base as Accumulated Depreciation.

x) Other expenses

453. The nature of this head of account is in itself controllable in nature.

xi) Contributions to Pension Fund

454. This is a controllable expense as it is directly related to Wages and Salaries. The Licensee knows the employee cost-structure and the expected increases in salary. In a year when Wages and Salaries are revised, corresponding corrections under this head would also be carried out

xii) Special Appropriations

- Contribution to Contingencies Reserve

455. The nature of this head of account is controllable and the Commission has treated it accordingly. The amount reckoned in the tariff has to be invested as per the provisions of the Sixth Schedule to the Electricity (Supply) Act, 1948. It is expected from the licensees that the accumulations in this Reserve would be up to a maximum of 5% and at 0.25% of OCFA on a yearly basis. In any of the years, when investments attain the required levels, further provisions may be allowed on the incremental levels only.

- Debt Redemption Obligation

456. The Sixth Schedule to the Electricity (Supply) Act, 1948, recognizes the fact that in some of the years the repayment liability of debt (loans) may be more than the depreciation available, but this has to be seen with regard to the term of the project and the repayment schedule. If the existing loan is swapped due to falling interest rates, the change in the terms of repayment can have an adverse impact due to the resultant mis-match between the increased repayment liability and the depreciation available for a period immediately following the swapping. Accelerating the loan repayment period does not automatically enable the assets to yield revenue and providing debt redemption obligation to cover the mismatch is also not appropriate. The mechanism of debt redemption obligation under Special Appropriation results in front-loading on tariffs. Furthermore, capital repayments will be made through the revenue (expenditure) route, not a desirable practice. It is preferable in such

circumstances to go in for fresh borrowings to bridge the difference between the redemption obligation and the depreciation available; the interest on these loans could be permitted as pass-through in the tariffs.

457. It is important to note that under normal business operations, once an asset is created out of loan funds, it provides adequate depreciation funds to meet the debt redemption obligation. If the loan redemption is accelerated by pre-closure, reduction in redemption period, etc., there will be mismatch between the repayment of obligation and the depreciation available and as a result, the Licensee would have no option other than to go in for additional borrowing. The repayment obligations of this additional borrowing can be met with the subsequent generation of depreciation funds. Just because normal rate of depreciation being provided does not match the accelerated redemption of loans, the shortfall cannot be treated as an item of expenditure in the Aggregate Revenue Requirement. Hence, the Debt Redemption obligation is not considered for corrections.

- Income Tax

458. This is treated as an uncontrollable item of expenditure since it varies with the computation of reasonable return on the recomputed capital base for the year based on the audited Annual Accounts. In order to make the necessary adjustments, the Licensees have to file a copy of the Income-tax return.

xiii) Reasonable Return

459. Reasonable return is computed on the Net Capital Base as computed on the principles of Sixth Schedule of Electricity (Supply) Act, 1948. Any changes in the Capital Base on account of shortfalls in investment will be adjusted against the reasonable return.

xiv) Captial Base

460. For computing the Reasonable Return the adjustments to the Capital Base, wherever required, are highly essential. Apart from the Regulatory adjustments, further adjustments would be necessary on the basis of audited annual accounts of the year.

- Original Cost of Fixed Assets (OCFA)

461. The adjustments required to be made to arrive at the OCFA at the end of the year are: (i) Consumer contributions, (ii) Capital grants received for the projects, (iii) other grants, etc. received for the projects. However, for computing the reasonable return as per the Balance Sheet, the actual OCFA shall be taken into account.

- Capital Works-in-progress (CWIP)

462. Capital Works-in-progress (CWIP) and their inclusion in the capital base is a contentious issue. As per the Sixth Schedule and the prevailing regulatory practices, the assets are eligible only when put into use and proved useful. As mentioned earlier, the Commission is of the opinion that by excluding CWIP along with the corresponding loans, the computation of capital base will not undergo any significant changes. On the other hand, by excluding CWIP from the computation of the Capital Base, financial and physical discipline is brought on to bear on the Licensees, encouraging the licensees to put in extra efforts to complete the project on time or even ahead of schedule. Only then, the concept of used and usefulness of the assets would have true meaning and relevance. As of now, the Commission, accepts the licensees' request for a temporary reprieve and to continue with the existing treatment of CWIP in the Capital Base computation up to 2004-05. However, CWIP will be excluded from the computation of capital base from 2005-06 onwards. The corresponding loans, consumer's contributions, etc. shall also be excluded simultaneously.

463. The physical and financial progress of capital works, which have been approved by the Commission and for which the phasing of expenditure has been given, shall be monitored by the Commission and the capitalisation of the assets would be based on the physical completion of the works. That completion certificates of the project works / work orders etc., shall be filed with the Commission for getting the projects included in the OCFA after capitalizing from the CWIP. Further, monthly physical and financial progress reports of the projects (scheme-wise, project-wise) shall be submitted by 15th of every month.

xv) Working Capital

- Average cost of stores and Average cash and bank balances

464. Considering the working capital difficulties in the initial stages of the reforms process the Commission allows the average cash and bank balance in the computation of the Capital Base at two months' level of eligible items of expenses over a period of 3 years, as a transitory measure. The level would be at 2 months level up to FY2004-05 and at 1 ½ months level for FY 2005-06. Thereafter it would revert to the one-months' level. As regards the level of Average Cost of Stores, that is already being provided at 2 month's level of the annual repair and maintenance expenses.

- Accumulated depreciation

465. Depreciation shall be charged on the original cost of the fixed assets at the rates notified by the Ministry of Power, Government of India, from time to time and shall be accumulated year after year.

- Approved loans

466. All approved loans used for creating assets shall be accounted under this head, irrespective of whether the loans are long term or short term. This treatment is necessary to enable the Commission to work out the net capital base realistically. The interest on the loans figuring on the negative side of the capital base shall be allowed as an expenditure item. While computing the reasonable return, the actual loans drawn as per the Balance Sheet shall be taken into account.

- Consumer Security Deposits

467. The Sixth Schedule of the Electricity (Supply) Act, 1948, provides for consumer security deposits to be taken into account on the negative side of the capital base for computing the reasonable return. Earlier, the licensees were allowing interest on such deposits, at 3% p.a. which has been revised to the Bank Rate under the Electricity Act, 2003. ***The Commission directs the licensees to pay interest at the Bank Rate, which is currently 6% p.a.***

xvi) Net Capital Base

468. In determining the Net Capital Base, all positive elements and negative elements would be considered. The reasonable return shall be computed on the net capital base at the rates prescribed by Government of India from time to time. While computing the reasonable return, the actuals as per the Balance Sheet shall be taken into account.

Treatment of financial losses

Corrections based on Audited Accounts

469. On the two-stage approach for treatment of financial losses, the Commission had stated in the Tariff Order, FY04, that the second corrections would be undertaken after submission of the audited Annual Accounts. The licensees have now submitted their audited Annual Accounts for the years FY 2000-01, 2001-02, 2002-03 (without the CAG's comments for FY2002-03 which are awaited). While determining the Tariffs for FY 2000-01, 2001-02, 2002-03, the Commission had relied upon the provisional accounts submitted by the licensees both for tariff calculations for the year under consideration and for loss estimation of the previous year. With the submission of audited accounts, it is now possible to undertake the stated Second Corrections to previous years' losses for adjustments in the current Tariff Order. These Accounts depict the actual performance of the licensees, taking into account all the support given by Government of Andhra Pradesh during the transition period.

The Commission noted that there were significant variations between the filed energy balances and the corresponding figures in the Audited Accounts. The Commission accordingly directs ***that the Licensees shall henceforth reconcile the energy accounting figures annually and file reconciliation statements alongwith the audited Annual Accounts every year. They shall also incorporate the necessary corrections in their annual accounts, beginning from the accounts for the year 2003-04. The reconciliation may also be done for the years 2000-01 to 2002-03 and necessary corrections be incorporated in the Accounts in hand.***

Fuel Surcharge Adjustment

470. The Licensees requested that short-term power purchases be included as part of Fuel Surcharge Adjustment (FSA) formula. Presently, the FSA is allowed as pass-through in the power purchase cost up to the approved (Tariff Order) quantities and from approved sources under long-term agreements. In case of short-term power purchases resorted to make up for non or short availability from approved sources, the Commission's Guidelines on short-term purchases clearly set out the terms and conditions for such purchases. If these conditions are met, short-term power purchases get automatically included in FSA. Hence, the request of the Licensees is not with regard to approved/permitted short-term purchases but for purchases other than those permitted under the Guidelines or approved by the Commission. The Commission is not inclined to include all short-term power purchases in the FSA formula.

471. Some objectors from the public have requested that FSA be adjusted promptly. The Commission appreciates and is in agreement with the request but would like to point out that delay has more often been due to information gaps in the FSA filing. To reduce the time lag between the incidence of expenditure and claims made on consumers, ***the Commission directs the Licensees to raise FSA bills on a monthly basis in line with the FSA formula laid down by the Commission and send details to the Commission within a week of raising the bill.*** The Commission will, within 15 days of the FSA filings, with complete information, clear the proposal. Detailed verification of the claims of FSA will be done ex poste and any variations in the submitted claims will be adjusted against the next month’s claims with final true-up at the end of the year. Last year, the FSA formula was modified to take care of any working capital problems that arose due to the earlier formula being restricted to only fuel price increases. The present directive of the Commission ensures automaticity of FSA charges and benefits both the Licensees and the consumers.

472. One of the members of the State Advisory Committee suggested that the fuel surcharge should be levied on a graded scale i.e., the consumers paying higher tariff should be levied the surcharge at a higher rate. The Commission has

carefully considered the suggestion and finds itself unable to accept it because that would mean the subsidizing categories being asked to provide still higher cross-subsidy which would be against the letter and spirit of the Electricity Act, 2003.

Inclusion of Srisailam Left Bank in the PPA of APGENCO

473. Some Objectors have raised the issue as to why Srisailam Left Bank Power House (SSLBH) is not included in the PPA of APGENCO and pleaded for allowing fixed costs of SLBH to APGENCO. The Commission in the last Tariff Order (FY 2003-04) had decided to exclude the cost of SSLBH from the computations of the fixed costs of APGENCO as it was confirmed that SSLBH cannot run as a pumped storage station for a few more years.

474. In their submissions last year, the licensee (APTRANSCO) had brought to the attention of the Commission, that the GoAP in its G.O. Ms.No.69 dated 15-06-96 restricted the operation of SSLBH during non-monsoon non-surplussing time to peak power generation by imposing the condition of reverse pumping in order to maintain the required storage levels for purposes of irrigation. Subsequently APGENCO obtained a clarification from GoAP that APGENCO is free to operate either of the power houses i.e. SSLBH or Srisailam Right Bank Power House (SSRBH) provided the requirements of irrigation are not affected. Thereupon, APGENCO filed an application for review of the order of the Commission issued in OP No.402/2002. APTRANSCO has submitted a request to consider availability of 1000MU from SSLBH and to fix a unit price for this power.

475. In view of the clarification given by Government of Andhra Pradesh, the Commission by its order dated:19.03.2004 on the review petition filed by APGENCO, directed that the energy generated from SLBH over and above the effective capacity of right bank power house from the live storage to meet the peak demand during non-monsoon months shall be paid at the rate mutually agreed and consented by the Commission. The Commission therefore, decided to consider payment at the marginal variable cost of the purchases from thermal stations by APTRANSCO. This power

from SSLBH will be priced at marginal variable cost of the purchases from Thermal Power Stations by APTRANSCO consented by the Commission.

476. Similarly, in the event of surplussing too, if and when extra energy is generated over and above the capacity of SRBH, the power shall be paid for at the lowest variable cost of the purchase from Thermal Power Stations by APTRANSCO consented by the Commission.

477. The Commission reiterates that in fairness to consumers, fixed capacity charges of SLBH will be considered for inclusion in the PPA of APGENCO only after its pump mode operation is established.

APGENCO - Pension Bonds Servicing

478. Some of the objectors have raised the issue of APGENCO's ability to finance its liabilities on account of Pension Fund and to include the interest on pension and pension fund bonds in the fixed cost of APGENCO. It was also suggested that these liabilities may be taken over by GoAP. The Commission both in its orders in OP No.402/2002 on APGENCO PPA for 2002-03 and RP13/2003 on the review petition of APGENCO on OP No.402/2002 considered in detail the issue of servicing pension liabilities, more so with the shifting of the terms of payment from reimbursement basis to that of Return on Equity (RoE). The provisions made by way of depreciation and RoE are more than sufficient to enable APGENCO to service all its liabilities including that of Pension Fund and Vidyut Bonds. Annexure-1 of the Commission's order in OP No.402/2002 provides the details of RoE and depreciation which demonstrate that with the allowance of depreciation and return on equity, there would be adequate funds to meet debt repayments including Pension Bonds, Provident Fund Bonds and Vidyut Bonds as also interest on Pension, Provident Fund & Vidyut Bonds in the next thirty years (i.e. the duration of the Bonds). The point of significance is that the Commission in the PPA has allowed depreciation and RoE on the basis of revalued assets and matching liability. Normally RoE is provided on equity prior to up-valuation. RoE on revalued assets provided by the Commission was to enable APGENCO to service its other liabilities such as Pension Funds/Vidyut Bonds. Hence, the servicing of debentures to the extent of Rs.4716 crs issued by

GoAP towards Pension Fund liability are taken care of in the PPA. Besides, in paragraph 100 of the said order, the Commission has indicated that *“any liability on account of interest on pension bonds in exess of that specified in the annexure will be allowed as a pass through in the tariff of APGENCO on a year to year basis. Similarly, any falll in the liability on this account will be adjusted in the tariff on a year to year basis”.* APGENCO can always come up with a claim if there is any increase in pension liability. The need for GoAP to take over servicing of these bonds does not arise nor is there need for any apprehension that APGENCO is left without any provision for servicing its liabilities.

Efficiency Gains by DISCOMS:

479. The impact of any of the initiatives undertaken by the DISCOMS in achieving efficiency gains will result in a reduction of costs and / or an improvement in revenues. These initiatives would be directed to address different areas of the operating environment. The Commission can suggest the broad areas from where the gains are most likely to be achieved. But it is left to the DISCOMS to formulate their own strategy for achieving the target.

480. In the absence of a credible system loss figure (due to large unmetered sales to agriculture) the Commission so far has been adopting a lumpsum amount to reflect efficiency gains. This method of application of efficiency gains in the initial years has helped by allowing the DISCOMS to extract efficiencies from any part of the system i.e power purchase, network cost, tariff revenues etc. However moving forward, the Commission recognises that the method of application of efficiency gains is a powerful tool in directing the actions of the Licensees on specific areas and hence the Commission would like to draw the attention of the DISCOMS to the aspect of reducing the Distribution energy losses.

481. Reduction in system losses can be achieved through a combination of technical and commercial loss reduction. The basis used by the Commission for allocating the total efficiency gains of Rs.300 Crs among the four DISCOMS is mentioned below. The split of the total loss between Technical and Commercial losses for the ensuing year is based on the assumptions used in the cost to service model furnished by the DISCOMS.

Technical Loss Reduction:

482. Target for reduction in technical losses has been set for all DISCOMS as given below. The efficiency gains to be achieved from this reduction in technical losses have been computed in terms of reduction in power purchase costs. The financial impact of this is Rs. 170 Crores.

483. The variable cost of the marginal stations has been used for computing the avoided cost on account of reduced quantum of power purchase.

Table No.52

DISCOMS	Filed	Target	Efficiency Gain (Rs. Cr)
APEPDCL	12.50%	12.00%	7
APSPDCL	14.05%	13.50%	41
APCPDCL	14.70%	14.00%	85
APNPDCL	15.00%	14.25%	37

Commercial Loss Reduction:

484. A reduction in the commercial losses results in an increase of revenue to the DISCOMS. The increase in revenues has been computed at the average realization for each DISCOM. The financial impact of this is a gain of Rs. 130 Crs.

Table No.53

DISCOMS	Filed	Target	Efficiency Gain (Rs. Crore)
APEPDCL	3.00%	2.90%	1
APSPDCL	4.45%	3.00%	34
APCPDCL	4.50%	3.00%	72
APNPDCL	4.50%	3.00%	23

The DISCOM-wise breakup of the total efficiency gain of Rs.300 Crores is mentioned in the table below.

Table No.54

DISCOMS	Efficiency Gains (Rs. Crore)
APEPDCL	8
APSPDCL	75
APCPDCL	157
APNPDCL	60
Total Efficiency Gains	**300**

The DISCOMS are directed to achieve the above efficiency gains of Rs.300 crs. APTRANSCO is directed to reduce its transmission loss to 6.00% during 2004-05.

Cost-to-Serve

485. Some of the objectors have raised concerns on the cost-to-serve (CoS) model used by the Commission for fixing tariffs and estimating cross-subsidies. Their apprehensions revolve around two issues. Firstly, according to them, the methodology adopted for working out CoS is defective as it does not allocate fixed costs to consumers who do not consume during peak time. Secondly, it is difficult to comprehend how the CoS for some categories of consumers is less than the average BST.

486. The Commission, since its very first Tariff Order, has adopted the CoS model as a basis for assigning costs incurred on servicing a consumer category and the tariffs to be fixed thereafter. The world over, the Regulators have used the CoS model to fix tariffs as it is designed on the basic assumption that system expansion caters to the peak demand. The cost allocation in the case of CoS is determined by the extent of consumption of each category during the designated system peak. Electricity supply being capital-intensive, the share of fixed costs in total costs tends to be higher. In per unit terms, the fixed cost is inversely related to the capacity utilisation. In these circumstances, the cost causation is always identified in terms of contribution to peak. Hence the costs of the system are assigned to consumer categories in proportion to their contribution to the peak demand. The load shapes of different consumer categories enable the calculation of a consumer category's contribution to the system's peak demand. In Andhra Pradesh, the system peak occurs between 1800 hrs and 2100 hrs. The two categories that contribute most to this evening peak are Domestic and Commercial. Apart from contribution to peak demand, the losses are also allocated to the different categories on the basis of their voltage levels. The combination of contribution to peak demand and the losses define the cost-to-serve. The exercise is detailed and lengthy and depends considerably on load analysis studies. It is a well-tested methodology for fixation of tariffs and quantification of

cross-subsidy among consumer categories. The quantification of cross-subsidy is all the more important because Section 61(g) of the Electricity Act, 2003, stipulates that the Commission shall be guided, inter-alia by the consideration '*that the tariff progressively reflects the costs of supply of electricity, and also reduces and eliminates cross-subsidies within the period to be specified by the Appropriate Commission' '.*

487. Reverting to the two issues raised during the public hearing, the Commission would like to reiterate that the only category which contributes marginally to the system peak demand is Agriculture and hence its cost-to-serve is low and, in fact, it is the only category whose CoS is lower than the BST. Supply to agriculture is considered an interruptible supply and power is supplied only during off-peak hours. An examination of the load shapes of agriculture shows that the peak for this category occurs in the mornings. Leakages in the system however show some agricultural consumption as occurring during the evening peak. If agricultural demand is removed i.e. the load curve of the system is drawn up excluding the agricultural consumption, the system's peak occurs in the evenings. It is for this very reason that the Commission has not accepted the Licensees' CoS, which is based on the morning peak too. Allocation of fixed costs is therefore scientific and objective. It needs to be appreciated that the CoS model and fixation of tariffs cannot be changed to suit individual perceptions, as expressed by some of the objectors.

Availability Based Tariffs

488. During 2003-04 Availability Based Tariff (ABT) has been implemented at Regional level between CGS and constitutent States for the full year. In the ensuing year the Commission directs that ***Availability Based Tariff should be implemented at State level also between all generators and DISCOMS.*** Power Purchase activity will not rest with APTRANSCO as per the Electricity Act, 2003 after 9th June, 2004. Hence from the date of separating the power purchase activity the Availability Based Tariff principles have to be applied on the distribution companies purchasing power.

489. As per the provisions of the Electricity Act, State Load Despatch Center (SLDC) is responsible for optimising the dispatch and schedules within the State. The provision of the Act is quoted below for reference:

> *Section 32(2)(a): The State Load Despatch Center shall be responsible for optimum scheduling and dispatch of electricity with in a state, in accordance with the contracts entered into with the licensees or the generating companies operating in the State.*

490. Irrespective of the industry structure, SLDC shall be responsible for merit order dispatch within the State, albeit in accordance with the contracts entered into with the Licensees. SLDC will facilitate centralized merit order. Transitory trading rules can be fixed by the Commission to settle the imbalances in the commercial agreements between the distribution companies and the generating companies in terms of Section 86(1)(b) of the E.Act, 2003. In the emerging Multi-buyer Model (MB), SLDC will co-ordinate the DISCOMs on day-ahead basis and finalise scheduling and dispatch based on technical and least cost options.

491. Hence, the Commission ***directs the State Load Dispatch Center to coordinate the ABT activities in Andhra Pradesh in coordination with unscheduled interchanges pool of the region. The Commission directs SLDC to develop such a pool at State level to encourage more participation in the pool.***

Status of Compliance with Directives

APTRANSCO:

492. The Commission notes that APTRANSCO has complied with most of the Directives. Among the pending directives APTRANSCO has to fix tri-vector meters with RS 232 communication port to verify that supply of power on industrial feeders is uninterrupted. Summary of the data log sheets needs to be submitted on a regular basis to the Commission. Further, APTRANSCO has to submit the final report on Long Run Marginal Cost by June 1,2004, and the related statements. APTRANSCO

has also to submit the calculation regarding allocation of external subsidy by voltage classes.

	STATUS
PPA NEGOTIATIONS The Commission directs APTRANSCO to initiate negotiations with generating companies where Power Purchase Agreements were concluded prior to the Reforms Act and constitution of the Commission and to explore areas for cost reduction within the existing PPA and furnish a report to the Commission by the 31st June 2003.	The process of negotiations is on.
TRANSMISSION LOSSES ON WEB SITE The Commission directs APTRANSCO to achieve 7% transmission losses for FY 2003-04 as against the filed projection of 7.25%. Licensee has to submit reports to the Commission monthly with details of reduction of the losses reduction. Transmission losses report should be hosted on the APTRANSCO website every month for transparency and information dissemination.	The directive is complied
CAPEX & CWIP DISCUSSION PAPER The licensees (APTRANSCO and the four DISCOMS separately) are directed to file a Discussion Paper in this regard latest by 31-08-2003 to serve as the basis for evolving an appropriate policy for adoption from tariff order 2004-05.	The directive is complied
NON-CONVENTIONAL ENERGY PROJECTS The Licensee is directed to propose new incentives including cost for the various categories of non-conventional energy viz., mini-hydel, wind, co-generation and biomass etc., taking into account the cost of the plant and the fuel used and a reasonable return by 1st August 2003.	The directive is complied
SURPLUS REVENUE The Commission directs APTRANSCO to adjust the mentioned amounts to the respective DISCOMS towards the surplus revenue received from the DISCOMS in FY 2002-03.	The directive is complied
Bulk Supply Tariff (BST) –Two-Part The Commission directs APTRANSCO to file a two-part BST for the FY 04-05.	The directive is complied
MERIT ORDER PRINCIPLES The Commission directs the licensee to institute a process where the Commission's staff can verify APTRANSCO's adherence to the merit order principles.	The directive is complied
MERIT ORDER DISPATCH The Commission directs the Licensee to examine the order of the court and contractual conditions before considering any generating Station / Company as a must run station. Licensee has to revert to the Commission with details before 15th May 2003 and any changes thereafter.	The directive is complied

INTERRUPTIONS TO INDUSTRIAL FEEDERS The Commission directs the APTRANSCO & DISCOMs that load relief shall not be taken for the purposes of grid management from feeders which have more than 50% of incumbent load due to industries. Further, The Commission directs the APTRANSCO to designate appropriate officers for 220 kV OR 132 kV feeders (having more than 50% industrial load) either for individual feeders or for groups of such feeders, and the DISCOMs to designate appropriate officer for each industrial estate, who shall be made responsible for keeping the break down rectification time within reasonable limits. The details of such designated officers shall be submitted to the Commission. The Commission also directs that all the input points to such feeders, which have more than 50% incumbent load due to industries, shall henceforth be metered by electronic tri-vector meters with RS 232 communication port. The Commission directs that APTRANSCO / DISCOMs, as the case may be, shall take data log sheets for supply conditions pertaining to the previous 30 days once in a month through RS 232 communication port either through a meter reading instrument or remotely through a modem for each industrial feeder. The APTRANSCO and DISCOMs are hereby directed that they shall submit such a log sheet along with an abstract summary statement pertaining to their company regarding interruptions to industrial feeders once in a month to the Commission. The Commission intends to observe the time being taken to restore power and the quality of power supplied to industries to ensure supply of uninterrupted quality power.	The directive is partly complied. APTRANSO has yet to establish verification mechanism for ensuring uninterrupted power supply. The statements based on data log sheets of supply need to be submitted on a regular basis.
LIST OF WAIVERS Commission directs the Licensees to comply with all the waivers listed in annexure-C in the specified time frame. (Page No. 363) 1) a) Submission of Audited Accounts for 2000-01 & 2001-02 b) Submission of Annual Accounts for FY 2003	Complied
2) Submission of Voltage wise assets (400 KV and 220/132KV)	Complied
3) Submission Marginal Cost Study and to submit along with the study the following statements A Statement showing percentage of marginal cost recovered by the current and proposed tariff: A written explanation of the manner in which the proposed tariffs improves the efficiency of the price signal provided to customers vis-à-vis the marginal unit cost	Final model on Long Run Marginal cost awaited and with it the required statements. .
4) Allocation of each type of external subsidy among voltage levels should be shown (Form 4.8 of Appendix4). The subsidy calculations shall also compare the amount of subsidy to be received in the year in which the tariff is to be implemented with the amount of subsidy received in the previous year and, where relevant, the current year.	Awaited

BOUNDARY METERING SCHEME The Licensee is directed to obtain the Commission's approval for the Boundary Metering Scheme latest by 30th June, 2003	The directive is complied.
10 MVA HT CONSUMERS The Commission directs the Licensees' estimates, may be based on the advance information obtained in respect of demand requirement of consumers with more than 10 MVA contracted demand from all sources.	The directive is complied
MASTER PENSION TRUSTS APTRANSCO is directed to furnish a comprehensive report in this regard latest by 30th May, 2003 The Licensee is directed to ensure that an amount of Rs.0.985 crores per month be remitted from month to month to the Trust. The official receipt from the Trust duly acknowledging receipt of the money may be obtained and retained by the Company for record. The fact of having done so may be confirmed to the Commission every month.	The directive is complied
SERVICE LEVELS Commission directs the Licensee to file a comprehensive report on the status regarding the achievement of the service level laid down in Commission's Regulation No. 6 Gazette on September 04, 2000 latest by 30th June 2003.	The directive is complied

DISCOMS

493. The Commission notes with concern that the trackrecord of DISCOMS' with regard to compliance of Directives is not at the same level as that of APTransco and even amongst DISCOMs the levels of compliance vary. The areas where immediate compliance is necessary are as follows:

a. Completion of MIS report on Sales Database especially with regard to HT database.
b. Quarterly report on arrears to be submitted regularly.
c. Study on Distribution Losses to be undertaken and the report to be submitted in two months' time.
d. Report on quality of arrears is still awaited and should be submitted by 30.4.04
e. A detailed metering plan for agriculture has to be submitted by June 10th, 2004. The plan should cover details of the number of meters to be procured each year and the coverage of fixing these meters district-wise.
f. Installation of high quality meters on connections in all Towns and Mandal Headquarters to be completed.
g. Efforts should be made to achieve the target of 2% of assessed to metered sales.

Directives of FY2002-03					
Directive No.	**SUBJECT**	**SPDCL**	**EPDCL**	**NPDCL**	**CPDCL**
1	Audit of receivables by independent Agency to check quality of arrears and to suggest changes in billing by Accounting system	Partially complied. Yet to receive final report.	Partially complied. Yet to receive final report.	Partially complied. Yet to receive final report.	Partially complied. Yet to receive final report.
2	Sales Database to be filed for entire DISCOM by 31-8-03	Complied	Complied	Complied	Complied
3	Installation of High Quality Meters in Towns and mandal headquarters by December, 2003 Metering plan will be filed within one month	Partially Complied	Partially Complied	Partially Complied	Partially Complied
4	Removal of Multiple connections with Door- to-Door checking of all services	Partially Complied	Partially Complied	Partially Complied	Partially Complied
5	Local bodies sales to be accounted for duly giving sub-codes to the sub-categories and to be completed by 31-8-03	Complied	Complied	Complied	Complied
DIRECTIVES OF 2003-04					
2	Estimated Agricultural consumption for the 12 months period 11/02 to 10/03. Monthly report to be presented in person. Publicity is to be given	Complied	Complied	Complied	Complied
4	Study of Distribution losses as per the methodology approved by the Commission	Not Complied	Not Complied	Not Complied	Not Complied
5	DTR failures to be reduced by 3% from 2002-03 limit for the Discoms other than EPDCL	Complied	Complied	Partially Complied	Partially Complied
6	Database of DTR failures for Rural and Urban areas separately	Complied	Complied	Complied	Complied
7a)	Arrears as on 01-04-2003 and subsequent arrears to be displayed in the bills	Complied	Complied	Complied	Complied
7b)	Quarterly report with details of collection of arrears as of 01-04-2003 and of current year demand.	Partially Complied	Partially Complied	Partially Complied	Partially Complied

8	Discussion paper on CWIP to be filed by APTRANSCO and all DISCOMS separately	Complied	Complied	Complied	Complied
9	MIS report based on sales database to be filed every month in person.	Partially Complied	Partially Complied	Partially Complied	Partially Complied
10	Billing based on assessed consumption of energy to be reduced to a maximum of 2 to 3% of metered sales.	Not Complied	Not Complied	Not Complied	Not Complied
18	All conditions listed in Annex 'C' i.e. with regard to waivers to be met in the specified time frame.	Partly Complied. Awaiting CAG reportThe waivers relating to LRMC model and the related statements have yet to be complied.	Patrtly Complied. Awaiting CAG report. LRMC model and the related statements have yet to be complied.	Partly Complied. Awaiting CAG report. LRMC model and the related statements have yet to be complied.	Partly Complied. Awaiting CAG report. LRMC model and the related statements have yet to be complied
19	Meters to be provided on priority for Agriculture consumers opting for metered tariff.	Partly Complied	Partly Complied	Partly Complied	Partly Complied
20	Report on TOD tariff for implementation w.e.f. 01-4-2004	Complied	Complied	Complied	Complied
21	DISCOMS to submit Capital Expenditure programme to absorb excess funds availability at least by 31-05-2005	No plan has been submitted. Partly Complied	No plan has been submitted. Partly Complied	Complied	No plan has been submitted Partly Complied
22	PF Contribution to be invested in securities under Indian Trust Act within 6 months as per para 4 of VIth schedule.	Complied	Complied	Complied	Complied
24	Forecast of demand to be based on advance information from the consumers with CMD of more than 10 MVA.	Complied	Complied	Complied	Complied
25,27,29, 31, 33	Trusts to be functionalised by 30-04-2003 - Comprehensive report to be furnished	Complied	Complied	Complied	Complied
26,28,30, 32,34,	Comprehensive report on achievement of performance standards as on 31-03-2003	Complied	Complied	Complied	Complied

494. Some of the directives are continuous in nature and the Commission directs that they be implemented in FY05 also.

Performance of the Licensees over the last five years

495. The Commission has completed five years since its establishment and this is the fifth Tariff Order. It is appropriate to take stock of the performance of the Licensees against the objectives that the Commission set for the sector starting with the first Tariff Order FY01 and in the context of the full implementation of the Electricity Act, 2003. Pursuant to the Act, the capacity of the Licensees to take on competition in an open access framework becomes significant. Ability to meet competition depends largely on i) reduction in technical and commercial losses; ii) reduction in the gap between revenue and expenditure; and iii) reduction of cross-subsidy with moves towards compensatory tariffs. Improvement in operational efficiency must naturally be matched with quality supply to consumers. This section reviews the performance of the licencees under three broad heads: i) Energy Balance; ii) Revenue – Expenditure components; and iii) Quality of Service.

Energy Balance

Table No.55
Energy Balance

Particulars	1999-00 Audited	2000-01 Audited	2001-02 Audited	2002-03 Audited	2003-04 Estimates	2004-05 Projected
Input of Energy in the System	42238	41716	42142	45042	45806	44809
Total Net Sales of DISCOMS	25803	26729	29402	31605	33112	34235
T & D loss levels	38.91%	35.93%	30.23%	29.83%	27.71%	23.60%

496. Noticeable progress is seen in reduction in systems losses, from 39% to 24% which is a reduction of 15% over five years i.e. 3% per year. Yet, there is scope for further reduction in losses. Decrease in losses is a combination of a large number of factors. On the technical side, investment in network and strengthening of existing networks, replacement of meters with electronic meters, and improvement of billing are important towards reduction in losses. The following table on investments shows that on an average the investment in the sector has been around Rs.1162 Crs per annum. A large portion of the gains has also come from measures such as metered billing and implementation of anti-theft Act.

Investments in Metering, Substations and Transformers

Table No.56

Particulars	2000-01	2001-02	2002-03	2003-04	2004-05
Investments					
Investments in the Sector (Rs. Crs)	937.91	982.46	1317.11	1137.51	1435.72
Total Investments in 5 years (Rs. Crs)					5810.71
Average Investment in 5 years (Rs.Crs)					1162
Meters installed					
No. New Meters installed	1784508	506612	610207	609952	N.A.
No of Defective Meters replaced	2218630	511846	719713	519483	N.A.
Transformers					
Total Transformers	201801	216453	242668	295313	N.A.
Transformers failed	58661	52663	47224	31338	N.A.
Transformer failures %	29.07%	24.33%	19.46%	10.61%	N.A.
Sub-Stations					
400 kV	2	3	3	3	4
220 kV	63	69	73	75	77
132 kV	180	187	191	199	208
33 kV	1862	1941	2123	2267	2318
Theft cases					
No of Theft Cases Detected	18505	35536	108869	84774	N.A.
No. of Cases prosecuted	18505	35536	108869	84774	N.A.
Losses in the system	35.93%	30.23%	29.83%	27.71%	23.60%

497. Another way of looking at losses is the gradual increase in metered sales from 37% to 47%, which are further expected to go up to nearly 51% in FY05. Simultaneously the percentages of agricultural sales and losses taken together have come down from 63% to 53% and are expected to further decrease to 49.15% in FY05, as detailed below:

Table No.57
Metered Sales

Particulars	1999-00 Audited	2000-01 Audited	2001-02 Audited	2002-03 Audited	2003-04 Estimated	2004-05 Projected
Metered Sales (MU)	15581	16037	17247	19137	21409	22785
Agricultural Sales (MU)	10222	10692	12155	12468	11703	11450
Percentage of Metered sales in (%)	36.89%	38.44%	40.93%	42.49%	46.74%	50.85
Percentage of Agri sales (%)	24.20%	25.63%	28.84%	27.68%	25.55%	25.55
Percentage of Agri sales and losses (%)	63.11%	61.56%	59.07%	57.51%	53.26%	49.15

Revenue & Expenditure

498. An important dimension of regulatory intervention is the need to narrow the gap between revenue and expenditure by measures that tackle both aspects. On the expenditure side, the significant aspect is to ensure that only relevant expenditure is permitted and that any investment must be shown to be useful and used. With careful monitoring of expenditure, the permitted increases have been gradual as compared to the filings as can be seen from the table below. An important concept introduced in the First Tariff Order was that of 'efficiency gains' initially proposed by the Licensees.

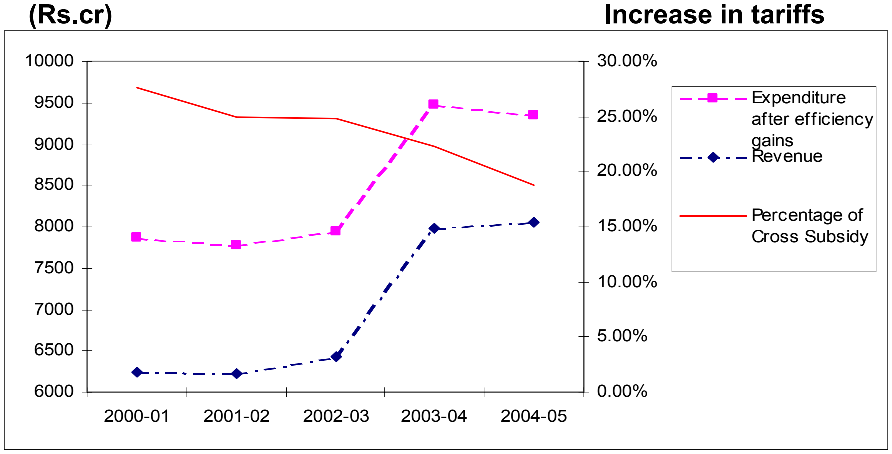
Efficiency gains is a catch-all phrase for improvements in diverse areas, including demand side management, better metering and collection efficiency, strengthening of the internal processes to minimize commercial losses, etc. These efficiency gains, which are adjusted against the revenue requirement approved by the Commission, are an attempt to discipline the functioning of the Licensees.

Table No.58

Particulars	2000-01	2001-02	2002-03	2003-04	2004-05
EXPENDITURE					
Expenditure filed by the Licensees	9519.53	8966.94	8578.62	9773.52	10289.11
Expenditure after efficiency gains	7865.31	7783.8	7943.75	9485.7	9354.43
Revenue, Cross–subsidy, Subsidy					
Revenue	6239.39	6222.37	6433.96	7972.27	8052.53
Overall Tariff increase as a percentage	14.50%	0.76%	0.71%	-0.71%	-1.5%
Cross Subsidy	2177.38	1938.54	1970.93	2109.87	1754.54
Government Subsidy	1626.26	1561.41	1509.38	1513.49	1301.86
Percentage of Cross Subsidy	27.68%	24.90%	24.81%	22.24%	18.76%
Percentage of Subsidy	20.68%	20.06%	19.00%	15.96%	13.92%
Collection Efficiency					
Revenue Billed	5987.87	6298.90	7396.83	7666.12	8051.18
Revenue Collected	5678.95	6336.59	7260.59	7078.33	8051.18
Percentage of Revenue collection	94.84%	100.60%	98.16%	92.33%	100.00%

499. The revenue-expenditure, which is depicted graphically, indicates that the gap is slowly and gradually narrowing before being covered by subsidy from GoAP. Of regulatory significance is the gradual decline in cross-subsidy, from 27.68% to 18.76%, made possible by tariff design aimed at compensatory tariffs. It may also be noted that increase in tariffs of some significance occurred only in the first Order with an increase of 14.50%. Thereafter, the increases have been less than 1% and in FY04 the increase was negative.

(Rs.cr) **Increase in tariffs**

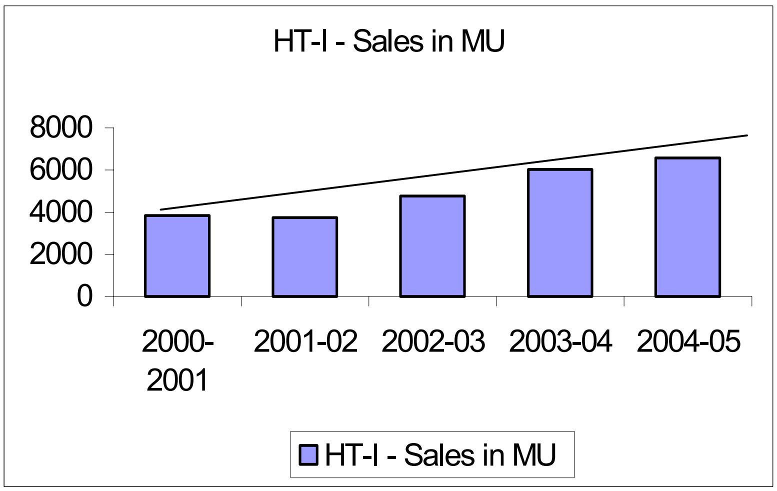


500. On the revenue side, every effort made has been more towards efficiency in metering and collection. A significant measure taken by the Commission, which

enabled an increase in revenue and decrease in cross subsidy, is the incentive scheme introduced for HT-1 in FY01-02, which was further modified in the subsequent years. The impact is clearly discernible from the sales of HT-I, which increased from 3842.18MU to 6567.43 MU.

Table No.59

	2000-2001	2001-02	2002-03	2003-04	2004-05
HT-I - Sales in MU	3842.18	3746.05	4756.29	6015	6567.43
Revenue in Rs. crs.	1734.83	1693.07	2118.20	2472.95	2672.46



Cost coverage

501. Efficiency improvements can also be seen from the cost coverage from revenue realisation. When reforms commenced in AP, the cost coverage in 1999-2000, was barely 58%. Thereafter it increased to 64% and then to 77% and is projected to further go up to 83% in the ensuing financial year.

Table No.60

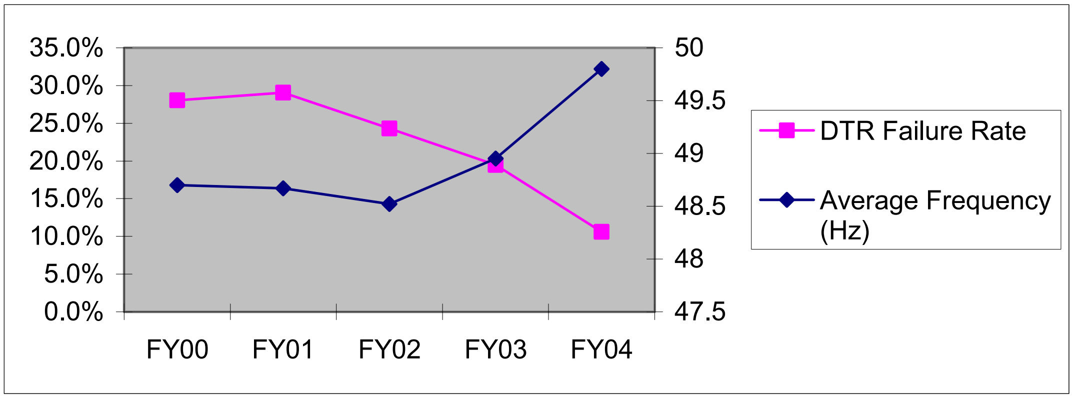
	2000-01	2001-02	2002-03	2003-04	2004-05
Average Cost of Service in Rs.	3.24	3.05	2.96	3.03	2.82
Average Revenue Realization in Rs.	2.09	2.00	2.19	2.34	2.35
Cost coverage	64%	66%	74%	77%	83%

iii) Quality of Service

502. Technical parameters indicate the following improvements over the last four years:

Table No.61

	FY00	FY01	FY02	FY03	FY04
DTR failure rate	28.05%	29.07%	24.33%	19.46%	10.61%
Average Frequency (Hz)	48.7	48.67	48.52	48.95	49.80
Voltage Profile (132 kV) – Max	129	136	134	139	139
Voltage Profile (132 kV) – Min	92	102	98	115	119



503. With the introduction of ABT, the frequency is hovering on an average at around 49.80 hz. The voltage profile shows that the recorded minimum voltage increased from 92 kV to 119kV in respect of 132 kV feeders and is within the permissible level of voltage variation. The number of interruptions has also come down both at 33kV and 11kV. As can be seen from the tables below for 33 kV the interruptions have come down from 1.35 on an average in 1999-2000 to 0.65 in 2002-03 for EPDCL; 1.07 to 1.02 in SPDCL and to 1.27 in NPDCL. CPDCL has registered higher gains with the average duration of interruptions reducing from 5.1 in 1999-00 to 2.06 in 2002-03. Similar trends are discernible in the case of interruptions on 11KV.

33 KV Interruptions

DISCOM	FY 1999-00		FY 2000-01		FY 2001-02		FY 2002-03		
	No. of Interruptions	Avg. Duration (Hrs)	No. of Interruptions	Avg. Duration (Hrs)	No. of Interruptions	Avg. Duration (Hrs)	No. of Interruptions	Duration (Hrs)	Avg. Duration (Hrs)
Eastern	15021	1.35	15760	0.95	12199	0.76	9620	6217	0.646
Southern	28722	1.07	26365	1.040	15788	1.120	14771	15081.95	1.021
Central	816	5.1	60396	1.11	25964	1.02	44404	93198	2.099
Northern	32881	1.07	24038	1.33	19155	2.090	23557	29976	1.272

11 KV Interruptions

DISCOM	FY 1999-00		FY 2000-01		FY 2001-02		FY 2002-03		
	No. of Interruptions	Avg. Duration (Hrs)	No. of Interruptions	Avg. Duration (Hrs)	No. of Interruptions	Avg. Duration (Hrs)	No. of Interruptions	Duration (Hrs)	Avg. Duration (Hrs)
Eastern	88297	2.46	101086	1.79	101741	1.48	57079	73645	1.290
Southern	291985	2.24	255012	1.64	244262	1.51	179966	233955.8	1.300
Central	6458	3.06	382281	2.53	261099	0.83	254566	628335	2.468
Northern	308174	1.85	232748	1.80	208458	2.49	218258	361326	1.655

504. As far as customer service is concerned, the Commission recognizes that the Licensees have taken good initiatives towards improving customer service. For instance, a total of 254 customer service centers have been established by the Licensees throughout the State till December 2003 and the same have been topped up with certain added features such as 24-hour helplines for lodging complaints, etc. But the Commission is aware that a lot more effort is still required in this direction, and the Commission has come out with a draft Regulation on Standards of Performance of Licensees, which enjoins upon the Licensees to maintain certain identified performance parameters, such as, quality power, reduction in interruptions, complaints handling, release of new connections within the specified time-frames, etc. failing which the Licensees shall be required to compensate the affected consumer. The draft Regulation is in the process of finalization and shall be notified shortly.

505. In order to promote transparency in the operations of licensees, the Commission has issued directions to the licensees to host on websites, the merit order dispatches, DTR failures, Transmission losses etc, as follows:

Hosted on website	Merit Order Dispatch
	Transmission losses
	DTR failures - Circle-wise
	Power supply position on daily basis, Breakdowns and duration of interruptions

506. The achievements cited above, have been possible in a stable regulatory regime and the efforts put in by all the individual licensees. The Commission is of the firm opinion that there is scope for more operational efficiencies and instructs the Licensees to comply fully with the existing directives apart from meeting the new directives issued in this Order.

CHAPTER - IX:
ERC / ARR 2004-05
TRANSMISSION AND BULK SUPPLY

507. APTRANSCO, the Licensee for transmission and bulk supply of electricity in the State, filed the ARR / ERC and Filing of Proposals for Tariff (FPT) for FY 2004-05 on 24.12.2003. The Commission has examined the Licensee's proposals and indicates herein the areas where the computations of the Licensee are found to be incorrect or unacceptable with reasons therefor and with the Commission's alternative computations.

508. Based on the finalised Second Transfer Scheme notified by the GoAP in Gazette Notification GO. MS No. 109 Energy (Power III) dated 29-9-2001, giving the opening Balance Sheet of APTRANSCO (and also of the four DISCOMS) as on 01.04.2000, the audited Annual Accounts for FY 2000-01, 2001-02 and 2002-03 (audited by statutory auditors but without CAG's comments which were awaited) as compiled and finalised by the Licensee were made available to the Commission during October - December 2003. The figures as per these Accounts have been adopted, wherever relevant, for the purposes of this Tariff Order. The audited Accounts complete in all respects for FY 2000-01, FY 2001-02 and FY 2002-03 and adopted by the shareholders of the company in Annual General Meeting have not yet been filed with the Commission as required under the terms of the licence. Audited Accounts for FY 2002-03, which should have been available by 30.09.2003 as per the Companies Act, 1956, are also yet to be filed with the Commission.

509. While the Commission appreciates the recent efforts made to bring the audit of the Company's annual accounts largely up-to-date, it urges APTRANSCO to spare no efforts to comply with the requirements of the Companies Act, 1956 in respect of the Annual Accounts for FY 2003-04 onwards.

Capital outlay on schemes during 2002-03 to 2004-05

510. The Licensee in the filings has made the following projections of capital expenditure for FY 2004-05:

Table No.62
Proposed capital outlay for FY 2004 -05

(Rs. Crs)

	Base capital expenditure	**Expenditure capitalisation**	**IDC***	**Total**
APTRANSCO	465.90	39.00	25.10	530.00

* IDC = Interest during construction.

511. Before dealing with the projections of capital expenditure for FY 2004-05, it is necessary to advert to the capital expenditure during FY 2002-03.

512. The Commission has noted that there was a shortfall of Rs. 456.37 crores in capital expenditure vis-à-vis the outlay of Rs. 818.99 crores for APTRANSCO approved in the Tariff Order for FY 03 as indicated in the Table below:

Table No.63
Capital outlay performance during 2002- 03

(Rs. Crs)

	Filing	Tariff Order	Actual	Shortfall
APTRANSCO	907.08	818.99	362.62	456.37

(Figures include IDC and expense capitalisation)

513. This shortfall has resulted in significant variation in the Capital Base calculations for FY 2002-03 as detailed in the Table below:

Table No.64
Capital Base for FY 2002-03
Comparison of actual costs with Tariff Order figures on the basis of the audited accounts for FY 2002-03

(Rs. Crs)

	Filing	**Tariff Order**	**Actual**	**Variance**
Original cost of Fixed Assets	4208.49	4030.04	3511.97	(518.07)
Capital Works-in-Progress (CWIP)	643.91	615.07	370.51	(244.56)
Stores	8.19	5.19	5.46	0.27
Cash	19.76	7.08	8.96	1.88
Total (A)	**4880.35**	**4657.38**	**3896.90**	**(760.48)**
Accumulated depreciation	1044.52	1039.65	1043.97	4.32
Borrowings	2540.55	3501.38	2292.82	(1208.56)
Other no-cost funds	-	-	520.07	520.07
Total (B)	**3585.07**	**4541.03**	**3856.86**	**(684.17)**
Capital Base (A-B)	**1295.28**	**116.35**	**40.04**	**(76.31)**

Note: The amounts within brackets denote minus figures.

514. The adjustment (necessitated due to this variance in the Capital Base) for the Reasonable Return is to be recalculated and included in the computation of the Aggregate Revenue Requirement for the Tariff of FY 2002-03, for necessary correction in Tariff Order of FY 2004-05.

515. The shortfall in capital investment during FY 2002-03 has also resulted in shortfall in interest expenditure of Rs. 52.52 crores vis-à-vis the amount provided in the Tariff Order for FY 2002-03 as detailed in the Table below:

Table No.65
Calculation of interest adjustment due to shortfall in capital expenditure during 2002-03

(Rs. Crs)

1	Capital expenditure as per Tariff Order			818.99
2	Actual capital expenditure			362.62
3	Project loans drawn during the year			677.88
4	Limiting the loan drawals to the extent of capital expenditure			362.62
5	Gross Interest allowed in the Tariff Order			467.69
6	Total interest as per Annual Accounts			366.47
7	**(a) Interest**			346.43
	(b) Other Finance Charges as detailed below			20.87
	(i)	Govt. Guarantee commission	10.09	
	(ii)	Lease rentals	3.04	
	(iii)	LC charges	3.08	
	(iv)	Other charges	4.66	
8	Total (7a+7b)			367.30
9	Interest difference (5 minus 8)			100.39
10	IDC allowed in the Tariff Order			78.19
11	IDC as per actual (Accts)			30.32
12	Difference in IDC (10 minus 11)			47.87
13	Interest expense adjusted (9 minus 12)			52.52

516. The Commission considers that the shortfall of Rs.52.52 crores in interest incidence as calculated above out of the amount reckoned towards Revenue Requirement in the Tariff Order for FY 2002-03 needs to be adjusted as special appropriation in the calculation of the Revenue Requirement for FY 2004-05 and the adjustment is accordingly done.

Capital outlay – Progress during FY 2003- 04:

517. In the ARR for FY 04-05, APTRANSCO has projected a revised capital outlay (Base expenditure) of Rs. 274.85 Crores for FY 2003-04 along with IDC and

expenditure capitalisation, which works out to Rs. 335.00 Crores as against Rs.380.48 crores reckoned in the Tariff Order for FY 2003-04. The Commission considers this projection to be on the higher side keeping in view the progress of expenditure during the first half of the year up to September 2003, and the past track record and allows an amount of Rs. 252.50 Crores towards Base expenditure on the schemes after taking into account the actual expenditure up to December 2003 as detailed in the Table below:

Table No.66

Estimated capital outlay for FY 2003-04 **(Rs. Crs)**

S.No.	Name of Scheme	APTRANSCO	APERC
1	Srisailam Transmission Scheme	2.00	2.00
2	Simhadri - Vizag Transmission Scheme	95.00	90.00
3	BPL - Ramagundam Transmission Scheme	0.25	0.10
4	Erection of 400 KV Sub-station in Mahaboobnagar.	11.75	6.00
5.	Erection of 400 KV Sub-station in Nellore and Chittoor	19.45	9.00
6.	Short Gestation Transmission Project	1.55	0.00
7.	APL-1 Main (WB/PFC)	0.07	1.50
8.	APL-1 Supplementary (WB/PFC)	18.10	14.00
9.	REC schemes	89.40	87.00
10	PFC schemes	22.50	20.00
11	DFID schemes	1.00	1.00
12	APL-2 (PFC)	6.60	3.90
13	Boundary metering (WB/PFC)	7.00	2.00
14	Parawada (Govt. loan)	2.70	3.00
15	Normal plan	15.40	13.00
	TOTAL	**292.77**	**252.50**

518. The amount to be taken to CWIP in respect of the above schemes works out to Rs. 310.43 crores as detailed in the Table below:

Table No.67

Amounts taken to CWIP for FY 2003-04

(Projected CWIP as on 31.3.2004)

(Rs. Crs)

Particulars	APTRANSCO	APERC
Base capital expenditure	274.85	252.50
Expenses capitalized	32.85	32.85
Interest (IDC) capitalized	27.30	25.08
Total	335.00	310.43

The projected CWIP as on 31-3-2004 would serve as the Opening Balance for FY 2004-05.

Capital outlay – Projections for FY 2004-05:

519. As already mentioned above, the filings project Base Capital expenditure of Rs.465.90 crores for FY 2004-05, which together with the expenditure capitalisation of

Rs. 39.00 crores and Interest During Construction (IDC) of Rs. 25.10 crores works out to Rs. 530.00 crores. It may be recalled here that the Commission in its Tariff Order for FY 2002-03 had stated in unambiguous terms that from FY 2003-04 onwards, it would allow for inclusion in the CWIP only those schemes which have its prior approval or those schemes which do not require such approval (being schemes individually costing less than Rs.5 Crores). Based on this norm, the Commission allows for inclusion in the CWIP (for Capital Base calculations for FY 2004-05) an estimated amount of Rs. 297.00 Crores as Base Capital expenditure in respect of the following schemes as against Rs. 467.10 crores projected by the Licensee:

Table No.68
Estimated Base Capital expenditure for FY 2004-05

(Rs. Crs)

S.No.	Name of Scheme	APTRANSCO	APERC
1	Simhadri - Vizag Transmission Scheme	45.00	30.00
2	BPL - Ramagundam Transmission Scheme	4.00	3.00
3	Erection of 400 KV Sub-station in Mahaboobnagar.	21.00	15.00
4	Erection of 400 KV Sub-station in Nellore and Chittoor	52.00	40.00
5	Short Gestation Transmission project-I	27.00	22.00
6	Short Gestation Transmission Project-II (Modified as 400 KV Tadikonda Sub-station)	1.00	0.00
7	APL-1 Supplementary (WB/PFC)	3.00	3.00
8	REC schemes	65.30	36.00
9	PFC schemes	2.70	2.70
10	DFID schemes	1.40	1.30
11	APL-2 (PFC)	100.00	60.00
12	Boundary metering (WB/PFC)	15.40	10.00
13	Parawada (Govt. loan)	1.10	1.10
14	Normal plan	43.20	30.00
15	Second circuit stringing of transmission lines	62.00	30.00
16	Second ckt. stringing 6 new 220 KV SS & RM	2.00	1.90
17	Group control breakers for R & M	5.00	3.00
18	Transformers rolling stock	11.50	5.00
19	Silicon rubber insulators for R & M	4.50	3.00
	TOTAL	**467.10**	**297.00**

520. ***The Commission directs that from the filings for FY 2005-06 filing onwards, the CWIP along with the corresponding loans and consumer contributions shall be excluded and not taken into account for calculating the Capital Base and the necessary corresponding adjustments shall also be carried out in the expenses to be capitalized. Further, the APTRANSCO shall***

submit monthly progress reports on physical and financial progress on each of the schemes w.e.f. 01-04-2004.

Capital base – Positive elements:

Original Cost of Fixed Assets (OCFA):

521. It may be mentioned in general about the transfers from CWIP to OCFA, that such transfers are meant to represent those assets that are completed (or commissioned where appropriate) and utilisation commenced (which are referred to as capitalized works in commercial parlance). But in the APTRANSCO, the practice appears to be to transfer to Gross Fixed Assets the balance in the CWIP too at the beginning of the year and this gives room for the apprehension that works which are in fact not completed are treated as capitalized in the Accounts while the projections made for purpose of ARR by the APTRANSCO also include capitalisation proposals of even those works which already stand capitalized in the Accounts. Secondly, the ARR projections for capitalisation are not based on a review of the scheme-wise status of progress vis-à-vis the earlier planned execution schedule and a genuine appraisal of the completion programme of works / schemes. Pending a detailed examination of the practice obtaining in this regard and its implications, an amount of Rs. 250.00 crores has been reckoned for transfer to OCFA from CWIP for FY 2003-04 representing on an ad-hoc basis the amount projected by APTRANSCO for capitalisation. Similarly, for FY 2004-05, an estimated amount of Rs.400.00 crores has been taken as transfers to OCFA from CWIP (as against Rs. 563.80 crores proposed in the filing).

522. The estimated amount to be reckoned under OCFA in the Capital Base as on 31-03-2005 is therefore as calculated in the Table below:

Table No.69
Statement of estimated of fixed assets as on 31.3.2005

(Rs. Crs)

ITEM	APTRANSCO	APERC
Gross Fixed Assets as on 31-03-2003	3552.56	3552.56
LESS: Consumer contributions and grants for Capital Assets	40.59	40.59
Original Cost of Fixed Assets (OCFA) as on 31-03-2003	3511.97	3511.97
ADD: Works likely to be completed during 2003-04	310.60	250.00
OCFA as on 31-03-2004	3822.57	3761.97
ADD: Works likely to be completed during 2004-05	563.80	400.00
OCFA as on 31-03-2005	4386.37	4161.97

Accordingly, OCFA taken to Capital Base amounts to Rs.4161.97 crores

Capital Works – in – progress (CWIP):

523. There are differences between the audited Accounts for FY 2002-03 and the numbers in the filings in respect of Capital Works-in-progress as on 31-03-03. While the Accounts show a figure of Rs.370.50 crores, the filing shows a figure of Rs.502.50 crores. The figure as per the audited Accounts has been adopted to arrive at the projected CWIP as on 31-03-05. Also, in respect of expenses to be capitalized for FY 2004-05, there is a discrepancy in the filing. The item-wise expense capitalisation proposed in the filing works out to Rs.37.70 crores as detailed in the Table below whereas the amount reckoned in the CWIP statement (in Form 1.1e) is Rs.39.00 crores.

Table No.70
Expenses capitalisation details in the filing for FY 2004-05 (Rs. crs)

	Amount	Reference to Filing
Expense Capitalized from		
i. Repairs and Maintenance	0.60	paragraph 3.3.6
ii. Employee Costs	31.80	paragraph 3.3.7
iii. Administration and General Expenses	5.30	paragraph 3.3.8
Total:	**37.70**	

The figure of Rs.39.00 crores has been adopted by the Commission.

524. As already stated above, the Commission has decided to reckon Outlays of Rs.252.50 crores for FY 03-04 and Rs.297.00 crores for FY 04-05 as Base Capital Expenditure (paragraphs 517 and 519 supra). These, together with the Expenses Capitalized and the IDC work out respectively to Rs 310.43 crores and Rs. 352.00 crores. Consequently, the amount reckoned for CWIP for FY 03-04 works out to Rs.430.93 crores and for Capital Base calculations for FY 2004-05 to Rs.382.93 crores as detailed in the Table below:

Table No.71
Statement of estimated Works- in-progress for FY 2004-05 (Rs. crs)

	APTRANSCO	APERC
Opening balance of CWIP as on 01.04.2003	502.50	370.50
Outlay during the year (FY 2003-04)	274.85	252.50
Expenses during the year capitalized	32.85	32.85
Interest during construction charged to Capital (IDC)	27.30	25.08
Total additions: Capital expenditure	335.00	310.43

Total (OB + Additions)	837.50	680.93
LESS: Works anticipated to be completed in FY 2003-04	310.60	250.00
Closing Balance of CWIP as on 31.03.04 and Opening balance as on 01.04.2004	**526.90**	**430.93**
Additional Investments during the year (FY 2004-05)	465.90	297.00
Expenses during the year capitalized	39.00	39.00
Interest during construction charged to Capital (IDC)	25.10	16.00
Total Additions: Capital expenditure	530.00	352.00
Total (OB + Additions)	1056.90	782.93
LESS: Works anticipated to be completed in FY 2004-05	563.80	400.00
Closing Balance of CWIP as on 31.03.05	**493.10**	**382.93**

Compulsory investments:

525. The Licensee has projected the compulsory investments (Contingencies Reserve) at Rs. 20.70 crores for FY 2004-05 and the same are considered in the computation of the capital base by APERC.

Working capital requirements:

526. The Licensee's plea for working capital and the interest on borrowings therefor have been considered in detail by the Commission in the context of the Discussion Paper submitted by the Licensees in response to paragraph 236 of the Commission's Tariff Order of 24th March, 2002. A detailed analysis of the position in this regard taking into account the existing billing and collection lags revealed that the working capital calculated corresponds to roughly one month's average cash and bank balance. However, considering the working capital difficulties in the transition that the Licensee represented strongly about, the Commission decided in Tariff Order FY 04 to allow the average cash and bank balance in the computation of the Capital Base at two months' level of eligible items of expenses instead of one month as hitherto. This is intended to provide a trajectory to an efficient level over a period of 3 years. The level would therefore be at 2 months' level for FY 2003-04 and FY 2004-05 and at 1½ months' level for FY 2005-06. Thereafter, it would revert to the one month's level. There will be no change in the level of Average Cost of Stores, which is already being provided at 2 months' level of the annual repair and maintenance expenses.

Average cost of stores:

527. The APTRANSCO has proposed an amount of Rs.7.00 crores towards Average Cost of Stores for inclusion in the Capital Base calculations. It may be

mentioned here that in the Tariff Order for FY 2003-04, a level of 2 months' requirement of Repair and Maintenance expenses was considered reasonable and the Commission has decided to continue the same level as detailed in the preceding Paragraph. An amount of Rs.6.67 crores calculated at two months' requirement of the Repairs and Maintenance expenses (Rs.40.00 crores) as claimed by the Licensee is therefore provided.

Average cash and bank balance:

528. The Licensee has proposed Rs.22.10 crores towards Cash and Bank Balance. As stated in paragraph 526 above, the provision under this Head is to be calculated at two months' level of eligible items of expenses for FY 2004-05. Accordingly, the average Cash and Bank Balance works out to Rs.28.66 crores as detailed in the Table below and is provided for in the calculation of the Capital Base:

Table No.72
Computation of requirement of Average cash and bank balances

(Rs. Crs)

Wages and Salaries	95.18
Admin. and General Expenses	23.50
Repairs and Maintenance	40.00
Rent, Rates and Taxes	0.90
Contribution to Employee funds	12.35
Total expenses	**171.93**
Average Cash and Bank Balances (171.93 ÷ 6)	**28.66**

Note: All amounts are net of expenses capitalized.

Capital base-Negative elements:

Accumulated Depreciation

529. The accumulated depreciation as projected by the Licensee in the filings is Rs.1503.20 crores against which Rs.1499.64 crores is admitted. The difference is due to the capitalisation of works in FY 2003-04 being taken at less than the projections in the filings as mentioned in paragraph 522.

Loans from government and approved institutions:

530. The APTRANSCO has projected an aggregate loan amount Rs. 2948.89 crores for meeting the capital expenditure during 2004-05 as indicated below:

Table No.73

(Rs. Crs)

Items	
Govt. loans	889.85
Institutional loans	
Long Term	1066.60
Short Term	717.44
Cash credit line	275.00
Total	2948.89

However, the total loan amount admitted for FY 2004-05 by the Commission is Rs. 2944.47 crores.

531. An analysis of the capital expenditure, loans, depreciation, consumer contribution, grants etc., as available in the audited Accounts for the years 2000-01, 2001-02, 2002-03 and the present filings for the years 2003-04 and 2004-05 reveals that except in 2002-03, the Licensee had always been repaying loans in excess of the scheduled repayments. This means that the Licensee had float funds much in excess of its requirements and these funds were utilised for the repayment / pre-payment (pre-closure / substitution, etc.) of project loans.

532. The Licensee's programme for loan drawals, substitution and repayment of loans (due and pre-closure) etc. is not in conformity with the Capital Expenditure programme approved by the Commission. This distorts the overall financial position. A review of the power purchase payables and receivables position as on 31st March 2003 reveals that the payables (Rs.1779.42 crores) were higher than the receivables (Rs.917.07 crores) by Rs.862.35 crores, which means that the amounts realised from the power transmitted by the APTRANSCO to four DISCOMS have been used in the business by the Licensee by defaulting on the power purchase bills. In the last Tariff Order (FY 2003-04), the Licensee was categorically advised to institute an effective control mechanism to ensure proper utilisation of funds for the purpose for which they are meant and avoid as far as possible the mix-up of long term and short term funds.

533. The year-wise actual position up to the year 2002-03 and the projected position for the years 2003-04 and 2004-05 are as follows:

Table No.74
Statement showing capital expenditure, loans, depreciation and consumer contributions

(Rs. Crs)

S.No.	Particulars	As on 1-4-2000	As on 31-3-2001	As on 31-3-2002	As on 31-3-2003	2003-04	2004-05
1	Gross Fixed Assets	1664.70	2521.24	3125.91	3552.56	3863.00	4427.00
2	Capital Work-in-progress	1016.76	580.10	434.54	370.51	526.90	493.10
3	Total	**2681.46**	**3101.34**	**3560.45**	**3923.07**	**4389.90**	**4920.10**
4	Accretions: Capital expenditure	0.00	419.88	459.11	362.62	466.83	530.20
5	Consumer contributions	15.03	15.03	30.62	40.59	30.62	30.62
6	Accretion: Net contributions received during the year	0.00	0.00	15.59	9.97	0.00	0.00
7	Balance to be funded by loan drawals (4-6)	**0.00**	**419.88**	**443.52**	**352.65**	**466.83**	**530.20**
8	Loans drawn (*)	0.00	1429.37	1745.96	2252.10	775.16	767.00
9	Excess drawals (8-7)	**0.00**	**1009.49**	**1302.44**	**1899.45**	**308.33**	**236.80**
10	Accumulated Depreciation	587.32	691.48	849.11	1043.97	1263.90	1503.20
11	Accretion: Depreciation for the year	0.00	104.16	157.63	194.86	219.93	239.30
12	Loan repayments (*)	0.00	2239.33	1561.99	1574.24	796.04	787.51
13	Balance repayments (12-11)	**0.00**	**2135.17**	**1404.36**	**1379.38**	**576.11**	**548.21**
14	Total (excess repayments) or Excess drawls on capital account (9-13)	**0.00**	**(1125.68)**	**(101.92)**	**520.07**	**(267.78)**	**(311.41)**

*** Details of loans drawn and repayments**

(Rs. Crs)

	2000-01		**2001-02**		**2002-03**		**2003-04**		**2004-05**	
Particulars	Drawn	Repaid	Drawn	Repaid	Drawn	Repaid	Drawn	Repaid	Drawn	Repaid
Payments due on Capital liabilities	709.78	967.71	783.77	821.96	784.56	814.85	0.00	0.00	0.00	0.00
Capital liabilities	318.92	589.04	428.03	410.13	1112.05	655.98	165.60	272.25	329.77	256.42
Funds from State Govt.	400.67	682.58	534.16	329.90	355.49	103.41	109.56	84.97	137.23	60.73
Short Term Loans	0.00	0.00	0.00	0.00	0.00	0.00	500.00	438.82	300.00	470.36
Total	**1429.37**	**2239.33**	**1745.96**	**1561.99**	**2252.10**	**1574.24**	**775.16**	**796.04**	**767.00**	**787.51**

The year-wise position of negative working capital (as per audited Accounts) is as follows:

Table No.75
Statement of negative working capital (Rs. Crs)

	1-4-2000 (opening balance)	2000-01	2001-02	2002-03
A. Total Current Assets	1035.53	594.19	701.81	1448.56
B. Total Current Liabilities	1890.57	2166.34	2358.22	2226.15
Negative Working Capital (B-A)	**855.04**	**1572.15**	**1656.41**	**777.59**
(+) Borrowings for Working Capital	145.88	108.68	238.76	178.55
Gross Negative Working Capital (C)	**1000.92**	**1680.83**	**1895.17**	**956.14**
(-) Subsidy Receivable	673.91	850.80	850.80	621.62
(-) Revenue Deficit	-	-	176.80	-
(D)	673.91	850.80	1027.60	621.62
Adjusted net Negative Working Capital (C-D)	**327.01**	**830.03**	**867.57**	**334.52**

Net capital base:

535. With the above changes in the positive and negative elements of the capital base, the net Capital Base works out to Rs.156.83 crores as detailed in the Table below as against Rs.1416.40 crores projected by the Licensee:

Table No.76
Capital Base calculations for FY 2004-05

(Rs. Crs)

<table>
<tr><th>ITEM</th><th colspan="2">APTRANSCO</th><th>APERC</th></tr>
<tr><td>Positive elements of capital base</td><td colspan="2"></td><td></td></tr>
<tr><td>Original cost of Fixed Assets</td><td colspan="2">4413.60</td><td>4161.98</td></tr>
<tr><td>Capital Works-in-progress</td><td colspan="2">493.10</td><td>382.93</td></tr>
<tr><td>Investments</td><td colspan="2">20.70</td><td>20.70</td></tr>
<tr><td>Working capital</td><td colspan="2"></td><td></td></tr>
<tr><td>a) Average cost of stores</td><td colspan="2">7.00</td><td>6.67</td></tr>
<tr><td>b) Average cash and bank balance</td><td colspan="2">22.10</td><td>28.66</td></tr>
<tr><td>Total of positive elements of capital base</td><td colspan="2">4956.50</td><td>4600.94</td></tr>
<tr><td>Negative elements of capital base</td><td colspan="3"></td></tr>
<tr><td>Accumulated Depreciation</td><td colspan="2">1503.20</td><td>1499.64</td></tr>
<tr><td>Government loans</td><td>847.40</td><td rowspan="3">2036.90</td><td rowspan="3">2944.47</td></tr>
<tr><td>Approved loans</td><td>1066.60</td></tr>
<tr><td>Other market borrowings for CAPEX</td><td>122.90</td></tr>
<tr><td>Total of negative elements of Capital Base</td><td colspan="2">3540.10</td><td>4444.11</td></tr>
<tr><td>Net Capital Base</td><td colspan="2">1416.40</td><td>156.83</td></tr>
</table>

EXPENDITURE*:*

Purchase of energy

536. The sales projections of the DISCOMS were analyzed category-wise and month-wise for each DISCOM. The projected losses of the DISCOMS and APTRANSCO were added on to it to arrive at the overall energy requirement for APTRANSCO.

537. Electricity Act 2003 mandates that Transmission Company cannot engage in power purchase and trading. Under these circumstances, the Commission has recommended to GoAP that the Power Purchase Agreements (PPAs) entered into by APTRANSCO may be vested with the DISCOMS from 10th June 2004. In this scenario, the Availability Based Tariff (ABT) principles which were implemented in the current year will be applicable for the DISCOMS too in the ensuing year.

Sales forecast:

538. Sales forecasts filed by DISCOMS and approved by the Commission are given below :

Table No.77 (MU)

DISCOMS	EPDCL	SPDCL	CPDCL	NPDCL	Total
Total Sales filed	5,554	8,098	14,811	6,272	**34,736**
Total Sales approved	5,651	7,879	14,549	6,156	**34,235**

539. Against the filed requirement of 34,736 MU, the Commission has approved sales of 34,235 MU on the basis of past trends and realistic growth rates attainable. Detailed discussion on the sales forecast is contained in Chapter XV. It has been clarified by APTRANSCO that these projections do not take into account the provision of 24-hour supply to rural areas.

540. In the ensuing year, DISCOMS have projected losses of 15.5% (EPDCL), 18.5% (SPDCL), 19.20% (CPDCL) and 19.50% (NPDCL), respectively. These loss estimates have been used by the Commission for computing the power purchase requirements. The power purchase requirement of each DISCOM is worked out taking into account the approved sales and losses as shown in the table below :

Table No.78
Power purchase requirements of DISCOMS in FY 2004-2005

DISCOM	Sales (MU)		Losses (%)		Purchases (MU)	
	Filed	Approved	Filed	Approved	Filed	Approved
EPDCL	5,554	5,651	15.50%	15.50%	6,573	6,688
SPDCL	8,098	7,879	18.50%	18.50%	9,937	9,668
CPDCL	14,811	14,549	19.20%	19.20%	18,331	18,006
NPDCL	6,272	6,156	19.50%	19.50%	7,791	7,646
Total	**34,736**	**34,235**	**18.52%**	**18.50%**	**42,632**	**42,008**

541. All the DISCOMS have provided details of sales forecasts, month-wise and category-wise, as part of their filings. For scheduling and drawal of energy month-wise, the DISCOMS, submitted available sources month-wise, against the demand projected. Category-wise quarterly consumption estimates approved by the Commission for all DISCOMS are shown in the Table below for FY 2004-05. Details for each DISCOM are set out in the Annexure **'E'**.

Table No.79
Category-wise quarterly sales projections for all DISCOMS in FY 2004-2005 (MU)

CATEGORY	Qtr 1	Qtr 2	Qtr 3	Qtr4	TOTAL
HT					
HT-industrial	1,395.83	1,425.76	1,394.31	1,433.53	5,649.43
HT- Ferro alloys	228.00	228.00	231.00	231.00	918.00
HT non-industrial	196.40	193.11	174.01	166.09	729.61
Irrigation and agri	32.70	39.18	52.73	63.41	188.02

Railway traction	285.83	290.49	285.45	290.56	1,152.33
Colony lighting	49.06	48.06	48.84	51.16	197.12
RESCOs	271.43	284.72	285.09	279.77	1,121.01
Temporary	-	-	0.49	0.49	0.98
HT total	**2,452.83**	**2,502.66**	**2,465.92**	**2,509.92**	**9,956.50**
LT					
Domestic	2,007.99	2,011.30	1,986.90	1,880.78	7,886.97
Non-domestic	468.52	449.70	450.98	426.12	1,795.32
Industrial	512.05	465.27	456.31	516.84	1,950.47
Cottage industries	8.55	8.36	8.91	9.52	35.34
Agri	2,403.31	2,735.00	3,077.98	3,233.71	11,450.00
Local bodies	255.46	257.42	265.97	274.87	1,053.72
Gen purpose	24.07	24.62	24.67	24.21	97.57
Temporary	2.04	2.32	2.19	2.44	8.99
LT total	**5,681.99**	**5,953.99**	**6,273.92**	**6,368.49**	**24,278.39**
Total sales	**8,141.24**	**8,463.31**	**8,745.84**	**8,884.50**	**34,234.89**
DISCOM losses (MU)	1,843	1,921	1,989	2,021	7,774
DISCOM input (MU)	9,984	10,384	10,735	10,905	42,008
DISCOM loss (%)	18.50%	18.50%	18.50%	18.50%	18.50%
Purchase for DISCOMS by APTRANSCO (at 6.25% transmission loss)	10,649.60	11,076.27	11,450.67	11,632.00	44,808.54

542. The sales projections on a quarterly basis for each DISCOM with a break-up of agricultural consumption are as follows :

Table No.80
Sales in DISCOMS in FY 2004-05

(in MU)

	EPDCL		**SPDCL**		**CPDCL**		**NPDCL**		**All DISCOMS**	
	LT Agri-culture	**Total**	**LT Agri-culture**	**Total**	**LT Agri-culture**	**Total**	**LT Agri-culture**	**Total**	**LT Agriculture**	**Total**
Qtr 1	268.20	1,427.44	652.05	1,945.53	1,028.04	3,440.79	455.02	1,327.48	2,403.31	8,141.24
Qtr 2	240.74	1,415.67	583.91	1,935.12	1,205.61	3,552.11	704.74	1,560.40	2,735.00	8,463.31
Qtr 3	303.90	1,396.66	660.05	1,989.37	1,355.14	3,733.01	758.89	1,626.81	3,077.98	8,745.84
Qtr 4	337.15	1,411.49	704.00	2,009.23	1,411.21	3,822.93	781.35	1,640.85	3,233.71	8,884.50
Total	1,150.00	5,651.26	2,600.00	7,879.25	5,000.00	14,548.84	2,700.00	6,155.54	11,450.00	34,234.89

RESCOs

543. The nine Rural Electric Supply Co-operative Societies (RESCOs) are supplying power to the consumers in their franchisee areas. Category-wise consumption forecasts made by the RESCOs are given in the following table.

Table No.81
Category-wise sales forecasts of RESCOS for FY 2004-05

Sl. No.	**Name of the RESCO**	**Cat – I Domestic**	**Cat – V Irri & Agrl**	**Balance LT Categories**	**Total LT Sales**	**Power purchases**	**Distribution Losses (%)**
1	Anakapalli (MU)	30.06	26.67	11.35	68.06	82	17.00
	% of Total	44.16	39.19	16.65	100.00		
2	Chipurupalli (MU)	9.01	10.52	3.71	23.24	28	17.00
	% of Total	38.79	45.27	15.95	100.00		
3	Kadiri-East (MU)	7.27	43.37	1.37	52.01	65	19.99
	% of Sales	13.98	83.40	2.62	100.00		

4	Kadiri-West (MU)	7.87	37.46	1.07	46.40	58	20.00
	% of Sales	16.96	80.74	2.31	100.00		
5	Sanjay (MU)	13.73	121.34	5.21	140.28	167	16.00
	% of Sales	9.78	86.50	3.72	100.00		
6	Sircilla (MU)	44.00	264.40	33.30	341.70	402	15.00
	% of Sales	12.88	77.38	9.75	100.00		
7	Atmakur (MU)	10.46	30.62	7.32	48.40	59	18.00
	% of Sales	19.23	67.32	13.46	100.00		
8	Kuppam (MU)	10.86	105.10	11.09	126.99	155	18.07
	% of Sales	12.12	79.61	8.28	100.00		
9	Rayachoty (MU)	21.20	58.75	5.66	85.61	105	18.47
	% of Sales	24.76	68.63	6.61	100.00		
	Total (MU)	**147.08**	**704.20**	**73.43**	**924.71**	**1121**	**17.50**
	% of all Sales	**15.91**	**76.15**	**7.94**	**100.00**		

544. The Commission approves a total power purchase of 42,008 MUs for retail supply by the DISCOMS (including RESCOs) to specific end-consumers during FY 2004-05.

545. DISCOMS have entered into a Bulk Supply Agreement (BSA) with APTRANSCO for the supply of energy. Under the present single buyer system, APTRANSCO, the Transmission and Bulk supply licensee alone, is authorized to supply the entire requirement of the DISCOMS which will be suitably amended on or before 10^{th} June 2004 in line with the Electricity Act 2003. APTRANSCO has projected transmission losses of 6.25% for the ensuing year and the same has been accepted by the Commission for estimation of power purchases.

546. Total system losses are 10,574 MU (23.6%), consisting of transmission losses of 2,801 MU (6.25%) and distribution losses of 7,773 MU (17.35%). This translates into power purchase requirement of 44,809 MUs by APTRANSCO for the DISCOMS.

Availability of power:

547. As per the filings, APTRANSCO has projected an availability of 51,644 MU. The Commission has determined the same at 50,293 MU as shown in the table below:

Table No.82
Availability of energy from different sources for FY 2004-05

Source of power	APTRANSCO (MU)	APERC (MU)	Remarks
APGENCO			
Hydel	6,422.63	6,423.49	
Thermal	20,113.81	19,789.27	
Total	26,536.44	26,212.76	
CGS (Southern Region)	6,214.57	6,670.00	NTPC (SR) availability taken into consideration; 170 MUs available from NTPC – Ramagundam Expansion.
NTPC (ER)	365.00	332.10	Availability adjusted to allocated capacity from ER stations.
Simhadri	6,169.54	6,046.15	Availability from NTPC Simhadri as per NTPC declaration.
NTPC Talcher 2	2,181.64	1,900.06	As per NTPC availability declaration adjusted for commercial operation date of Unit-2
APGPCL	417.95	417.95	Based on current year approved levels
IPPs	7,156.07	6,480.87	The availability from IPPs adjusted for expected gas shortage and 0.2mmscmd new gas availability submitted by APTRANSCO.
Others	2,585.33	2,233.26	Non-conventional energy projects considered at 1850 MU as per the trend.
			VSP & NBFA total availability of 385 MU not considered. Other CPPs not considered.
Total	**51,643.54**	**50,293.15**	

VSP = Visakhapatnam Steel Plant NBFA = Nava Bharat Ferro Alloys

548. Details of the power available from each of the sources are provided in the following paragraphs:

A. APGENCO:

549. Failure of hydel has been one of the major factors for power purchase variations from APGENCO. Data of the recent past shows a marked difference from the historical trends rendering the accurate estimation of hydel availability a difficult task. The data for the last four years shows that hydro availability has been continuously decreasing. The variation between tariff order and the actuals has increased from 17% in FY01 to 58% in FY04 (estimated). The comparative position is set out in the table below :

Table No.83
Hydro availability in the recent years

	Filing MU	Tariff Order MU	Actual MU*	Variation between Tariff Order and Actuals
FY2000-01	8,541	8,538	7,048	-17%
FY2001-02	8,994	8,694	5,647	-35%
FY2002-03	7,494	6,999	3,803	-46%
FY2003-04*	6,757	6,757	2,819	-58%

* Based on actuals for 1st half and estimates for 2nd half as filed by APTRANSCO.

The station-wise hydro availability is shown in the table below :

Table No.84
APGENCO availability – Hydel Power Stations

Name of Unit	Capacity (MW)	PLF (%)	APTRANSCO (MU)	APERC (MU)
Machkund (AP share)	84	54%	475.20	475.20
Tungabadra Dam (AP share)	57.6	26%	155.43	155.43
Upper Sileru	240	17%	376.20	376.20
Donkarayi	25	34%	82.17	82.17
Lower Sileru	460	23%	1,054.35	1,054.35
Srisailam RB	770	29%	653.40	1,437.00
N'Sagar (NSPH)	816	19%	1861.20	1,587.00
NS RCPH	90	13%	158.40	91.00
NS LCPH	60	9%	65.34	40.00
PABR	20	6%	9.90	9.90
Pochampad PH	27	37%	90.09	90.09
Nizamsagar PH	10	17%	10.89	10.89
Singur	15	7%	10.40	10.40
Mini Hydel	10	16%	13.86	13.86
Srisailam LB	900	8%	1405.80	990.00
TOTAL	**3575**	**21%**	**6422.63**	**6423.49**

550. The thermal generation from generating stations of APGENCO is estimated as under :

Table No.85
APGENCO Thermal Stations Availability

Name of Unit	Capacity (MW)	PLF percentage (Net)	APTRANSCO (MU)	APERC (MU)
VijayawadaTS-I (VTS-I)	420.0	71%	2,889.25	2,832.10
VijayawadaTS-II (VTS-II)	420.0	83%	2,910.18	2,852.62
VijayawadaTS-III (VTS-III)	420.0	82%	2,909.27	2,851.72
RayalaseemaTPS (RTPS)	420.0	78%	2,923.15	2,881.16
KothagudemTS-D(KTS-A)	240.0	73%	1,535.30	1,480.65
KothagudemTS-D(KTS-B)	230.0	80%	1,472.70	1,492.67
KothagudemTS-D(KTS-C)	220.0	47%	1,537.18	1,523.50
KothagudemTS-D(KTS-D)	500.0	79%	3,420.90	3,371.76
Ramagundam-B (RTS-B)	62.5	67%	383.44	365.72
NelloreTS (NTS)	30.0	60%	132.44	137.37
Total	**2962.5**		**20,113.81**	**19,789.27**

B. Central Generating Stations:

551. Power generated by Central Generating Stations (CGS) is available to Andhra Pradesh from three sources.

552. The first source is the Southern Regional Pool consisting of NTPC Ramagundam, Neyveli Lignite Corporation's Thermal Station II, Stages I & II, Madras Atomic Power Station, Kaiga Atomic Power Station and Talcher Stage-II exclusively built for Southern Region. Ramagundam Stage III, is also expected to be synchronized with the grid in the year FY 2004-05 and hence infirm power from it at 25% PLF has also been considered. The prevailing arrangement is to allocate shares to each State; thereafter, the unallocated energy is further distributed among the

needy States as per their share and with special allocations, if any. Andhra Pradesh has commercial arrangements with all the power generating stations and the details are shown in the following Table. At present allocation for AP from Kaiga Power Station is nil.

Table No.86
AP share in Central Generating Station (Filing)

Station	Capacity (MW)	AP share allocated (%)	AP share (MW)	AP share-Unallocated (MW)	AP share including unallocated (% of capacity)
NTPC- Ramagundam	2100	27.60%	580	160	32.5%
NTPC – Ramagundam Expansion	500	34.35%	172		
NLC TPS-2	1470	18.80%	276	59	20.1%
MAPS	340	8.20%	28	52	9.0%
Kaiga	440	0.00%	0	0	0
Sub Total	**4850**	**21.8%**	**1056**	**0**	**23.2%**
Talcher Stage-2*	2000	25%	500		100%
Simhadri	1000	100%	1000	-	

(*) Two Units of 500 MW each are in commercial operation, Unit -3 and Unit-4 of 500 MW each are expected to be synchronized in Aug-04 and in Mar-05, respectively.

553. Unit -2 of Talcher Stage-II, has started commercial operation from March 2004 and hence firm power will be available from this Unit in FY 2004-05. Till the commercial dates of operation (COD), energy is likely to be available as infirm power from Unit-3 and Unit-4.

554. The second source of energy is from NTPC (Eastern Region). In the filings, APTRANSCO has submitted that as per existing PPAs, its share in the Eastern Region is 60 MW. The total availability from NTPC (ER) based on APTRANSCO's share of 60 MW is 365 MU. As per the information made available to APTRANSCO by NTPC, the availability after considering auxiliary consumption is 332 MUs and same has been accepted.

555. The third source is Simhadri Power Station which is exclusively meant for Andhra Pradesh. As per the filing, the availability for Simhadri has been projected at 6,170 MU. As per the APTRANSCO, the availability after considering auxiliary consumption is 6,046 MUs and same has been accepted.

To summarize, Central Generating Stations are expected to contribute 14,949 MU, i.e. nearly 30% of the energy requirement in the ensuing year.

Table No.87
Power availability from Central Generating Stations (MU)

	Name of Station	APTRANSCO	APERC
Southern Region	NTPC – Ramagundam	4,717.30	4,717.60
	NTPC – Ramagundam Stage III	-	170.65
	NLC STG I	482.88	580.83
	NLC STG II	874.87	1,057.24
	NPC – MAPS	139.52	143.69
	NPC – KAPP	-	-
Sub-Total		**6,214.57**	**6,670.01**
NTPC Talcher 2		**2,181.64**	**1,900.06**
NTPC (ER)	Farakka	121.67	111.33
	Kahalgaon	188.58	170.67
	Talcher 1	54.75	50.10
Sub-Total		**365.00**	**332.10**
NTPC Simhadri		6,169.54	6,046.15
Grand Total		**14,930.75**	**14,948.32**

C. APGPCL:

556. Availability of 418 MU from APGPCL has been projected by the licensee. The same has been accepted by the Commission.

D. Independent power producers (IPPs):

557. The power availability from IPPs is estimated as under after taking into account lower availability of gas.

Table No.88
Power availability from IPPs

SOURCE	Filed capacity (MW)	Accepted capacity (MW)	APTRANSCO filing (MU)	APERC (MU)
GVK	216	216	1,566.40	1,439.64
Spectrum	208	208	1,502.46	1,382.10
Kondapalli	368*	355	2,504.79	2,284.20
BSES Andhra	220	220	1,582.43	1,374.94
TOTAL			**7,156.08**	**6,480.88**

* In a separate filing, APTRANSCO has pleaded to consider the installed capacity as 351 MW. Till disposal of the pleading, installed capacity considered in FY 04 has been adopted.

558. The Licensee has projected an aggregate availability of 7,156 MU from Spectrum, GVK, Lanco Kondapalli and BSES Andhra gas power stations. The availability from these sources has been determined taking into consideration the actual generation for the current year till January 2004 and licensee's submission of excess gas availability to the tune of 0.2 MMSCMD for FY 2004-05 over and above that for FY 2003-04. These power stations are to be dispatched on merit order. Merit order variable costs have to be revised on the basis of the fuel costs revisions from

time to time. Tariff order calculations are on the basis of least cost using merit order principles.

E. (i) Other sources:

559. The Licensee has filed availability of surplus energy from the captive stations of Visakha Steel Plant and Nava Bharat Ferro Alloys. Since these PPAs have expired, the Commission has not considered the availability from these stations. M/s. LVS and Srivathsa have, however, been considered as available as per the Licensee's filings.

Table No.89
Power availability from Other Sources (in MU)

SOURCE	FILING	APERC	Remarks
VSP	210	-	Agreement expired.
NBFA & Kesoram	175	-	Agreement expired.
CPP (Sponge iron etc.)	15	-	No agreement exists.
RCL	24	24	-
Non-Conventional	1,802	1,850	Submitted by APTRANSCO & NEDCAP. Corrected to the trend in biomass generation.
LVS	246	246	-
Srivathsa	97	97	-
NCL Tungabhadra	16	16	Must-run up to the capacity of the station.
TOTAL	2,585	2,233	-

E. (ii) <u>NON-CONVENTIONAL ENERGY SOURCES:</u>

560. Licensee has projected 1,802 MU power purchases from non-conventional energy (NCE) sources. M/s Non-conventional Energy Development Corporation of Andhra Pradesh (NEDCAP), nodal agency for NCE projects has submitted its estimates of generation from each source separately. The Commission has examined the proposals with respect to actual generation during the current year and corrected the generation available from bio-mass stations.

561. The details of energy expected to be available from different sources is shown in following table :

Table No.90
Availability of power from non-conventional sources

	Wind	Mini Hydel	Bagasse	Biomass Co-gen	Biomass	Industrial waste	Municipal waste	Total
Capacity as on 31.3.2004 (MW)	18.24	21.12	25.00	16.38	129.24	2.45	11.34	223.97
Capacity as on 31.3.2005 (MW)	20.22	44.84	144.1	19.58	221.49	18.35	11.34	479.92
Energy from existing plants (MU)	28.99	69.51	321.84	76.56	833.32	0.00	0.00	1330.22
Energy from new plants (MU)	2.10	43.38	124.81	37.54	163.84	78.52	69.58	519.77
Total (MU)	31.09	112.89	446.65	114.10	997.16	78.52	69.58	1849.99

562. The Commission approved power purchase of 1,850 MUs from the NCE sources constitutes 4.4% of the approved total power purchase of 42,008 MUs by the DISCOMS.

F. Inter-State Sales:

563. The power purchase of 46,662 MU as filed by APTRANSCO includes purchases for proposed inter-State sales to the extent of 1,114 MU. For FY 2003-04, inter-State sales of 1,015 MU were considered by the Commission based on the projections made by APTRANSCO. The actual inter-State sales for FY 2003-04 are now estimated at only 315 MU. In terms of revenue, as against the projection of Rs 50.8 Crs for FY 2003-04, APTRANSCO will be able to get only Rs 13.4 Crores.

564. Considering the total availability of power at 50,259 MU and after taking into account DISCOMS' sales, the systems losses and a spinning margin of 5% on the total availability, the estimated surplus available for inter-State sales would be 1,114 MU. Furthermore, this surplus is largely available in the months of August, October, December and January as shown in the following table:

Table No.91
Available energy for inter-State sales (MU)

Interstate Sales	**APTRANSCO**	**APERC**
April-04	0	0
May-04	0	0
June-04	0	0
July-04	0	0
August-04	84	84
September-04	0	0
October-04	272	272
November-04	95	95
December-04	211	211
January-05	292	292
February-05	0	0
March-05	160	160
Total for 2004-05	**1114**	**1,114**

565. The power purchase cost as computed in Table No.96 includes the power purchase for Inter-State Sales. The revenue from these sales has been computed at Rs. 2.10 per unit against Rs 2.40 per unit projected by APTRANSCO after accounting for PTC charges, PGCIL charges and discount for prompt payment.

Energy Balance:

566. Energy Balance for the ensuing year is as shown in the Table below:

Table No.92
Energy Balance (MU)

	Filings	Approved by APERC
EPDCL	5,554	5,651.26
SPDCL	8,098	7,879.25
CPDCL	14,811	14,548.84
NPDCL	6,272	6,155.54
DISCOM sales	34,735.00	34,234.89
DISCOM losses	18.52%	18.50%
Power purchase for DISCOMS	42,630.73	42,008.30
Inter-state Sales	1,114.00	1,114.00
Transmission losses	6.25%	6.25%
Power purchase for DISCOMS	45,472.78	44,808.85
System losses	23.61%	23.60%
Total power purchase (with inter-State sales)	46,661.04	45,997.12

Source-wise power purchases:

567. For the approved total power purchases, the per quarter generator-wise break-up is shown in the Table below :

Table No.93
Summary of generating station-wise power purchases as approved by APERC FY 2004-05
(MU)

		Apr – Jun 04	Jul – Sep 04	Oct – Dec 04	Jan – Mar 05	Total
APGENCO	Thermal	4,520.91	4,131.12	3,784.19	4,390.96	16,827.17
	Hydel	376.00	2,041.17	2,441.24	1,565.08	6,423.49
CGS	NTPC-SR	1,060.58	1,061.75	1,376.18	1,389.74	4,888.25
	NLC	465.19	386.99	326.58	459.31	1,638.06
	NPC-MAPS	36.55	34.41	36.83	35.90	143.69
	Talcher	386.88	497.14	413.48	602.57	1,900.06
NTPC - ER	NTPC – ER	82.79	83.70	83.70	81.88	332.09
NTPC-Simhadri	NTPC- Simhadri	1,638.07	1,102.48	1,665.68	1,639.91	6,046.15
APGPCL	APGPCL	75.66	27.60	27.60	27.00	157.86
IPPs	IPPs	1,556.61	1,348.63	1,413.10	1,358.92	5,677.26
OTHERS	OTHERS	450.18	451.14	498.46	563.26	1,963.04
Grand Total		10,649.42	11,166.13	12,067.04	12,114.53	45,997.12

Power purchase cost:

568. Given the energy requirement as above, power purchase cost has been determined by following the economic merit order dispatch principles. Load dispatch is carried out on the basis of station-wise costs.

569. The total cost of power purchases is estimated after taking into consideration the following changes:

A. Fixed costs

Table No.94
Power purchases Fixed costs in FY 2004-05

Sources	APTRANSCO Filing (Rs. Crs.)	APERC (Rs. Crs.)	Remarks
AP Genco Thermal	1738	1,689.52	APGENCO fixed costs determined on the basis of norms and depreciation on assets available on record.
AP Genco Hydel			For Srisailam Left Bank, instead of fixed cost, infirm variable cost has been considered.
CGS (SR) **Generation** **Transmission** **Sub total**	 542.0 229.0 723.0	 260.62 256.68 517.30	Additional transmission assets transmission charges added as per supplementary filings
NTPC Simhadri	517	457.82	Based on CERC interim order.
NTPC (ER) **Generation** **Transmission** **Sub Total**	 46.3 10.1 56.4	 35.77 5.08 40.95	Based on allocation of NTPC (ER).
NTPC Talcher 2 Generation	192	184.64	Adjusted as per COD of units.
Other SEBs Transmission assets	16.74	16.74	SEB assets are used for evacuation of the power from central generators and delivering to beneficiaries. Accepted at original level.
IPPs	852.1	852.1	-
APGPCL	21.9	21.9	-
Others	49.48	49.48	-
Total Fixed Costs **Generation** **Transmission**	**3,957** 3,701 256	**3,923.45** 3643.75 279.70	As explained above

Transmission

570. Licensee submitted additional transmission asset charges in a supplementary filing. Under ABT, transmission charges are fixed in nature.

571. In the ensuing year, a few new assets are expected to be added to the transmission network by PGCIL, namely, the Ramagundam Stage III (expansion) evacuation lines, Talcher-Gajuwaka second pole and additional assets in Southern Region. Licensee has filed the projections for transmission charges for these additional assets.

572. CERC is yet to approve charges for 2004 onwards for the transmission assets of PGCIL. Current year PGCIL tariffs have, therefore, been adopted for computation of ensuing year transmission charges for the existing assets and projected transmission charges for additional assets have been added on to arrive at the total PGCIL transmission charges for the ensuing year.

B. Variable costs

573. Variable cost as submitted in the filings has been adopted for individual stations. The weighted average variable cost for the ensuing year is estimated as Rs 0.907 per kWh against the projected cost Rs.0.910 per kWh.

574. For Srisailam Left Bank, instead of fixed cost, infirm differentiated variable cost for surplus energy and peak energy has been considered.

575. NCL, Tungabhadra, new hydel station is expected to be commissioned in the ensuing year. The Commission gave consent to the PPA in the current year. The tariffs for this project have been considered for the variable cost in the ensuing year.

576. Details of the power purchases from different sources as filed by the Licensee and adopted by the Commission for estimating the power purchase costs during FY 2004-05 are summarized in the following tables:

Table No.95
Power purchase costs as filed by APTRANSCO

Stations	Power purchases (MU)	Fixed costs (Rs Crs)	Variable costs (Rs Crs)	Total cost (Rs Crs)	Rs/Kwhr
APGENCO Thermal	17,066	1,738	1,686	3,424	1.46
APGENCO Hydel	6,423				
CGS(SR)	6,214	354	581	935	1.50
NTPC Simhadri	6,170	517	538	1,055	1.71
NTPC (ER)	132	35	11	46	3.48

Talcher 2	2,182	192	102	294	1.35
IPPs	6,149	852	604	1,456	2.37
APGPCL	418	22	45	67	1.60
Others	1,908	49	427	476	2.50
Total- Generation	**46,662**	**3,759**	**3,994**	**7,753**	**1.66**
PGCIL Transmission		239		239	
Other SEBs (Transmission)	-	17	-	17	-
Total Purchases	46,662	4,015	3,994	8,009	1.72

Table No.96
Power purchase costs as approved by APERC

Stations	**Power purchases (MU)**	**Fixed costs (Rs. Crs)**	**Variable costs (Rs. Crs)**	**Total cost (Rs. Crs)**	**Rs/Kwh**
APGENCO Thermal	16,827.17	1,689.52	1,789.89	3,479.41	1.50
APGENCO Hydel	6,423.49				
CGS (SR) - Generation	6,670	344.92	621.32	966.24	1.45
NTPC Simhadri	6,046	457.82	526.98	984.80	1.63
NTPC (ER)	332	35.77	34.82	70.59	2.13
Talcher 2- Generation	1,900.06	192.03	89.30	281.33	1.48
IPPs	5,677.26	852.31	558.72	1,411.03	2.49
APGPCL	157.66	21.90	17.55	39.45	2.50
Non Conventionals	1,849.99		520.04	520.04	2.81
Others	113.05	49.48	13.37	62.85	5.56
Generation costs	45,997.12	3,643.75	4,171.99	7,815.74	1.70
Transmission associated with Generation other than APTRANSCO		279.70		279.70	0.0608
Total	45,997.12	3,923.45	4,171.99	8,095.44	1.76

Table No.97
Summary power purchase costs

	Fixed cost filed & revised (Rs. Crs.)	Fixed cost approved (Rs. Crs.)	Variable cost filed (Rs/Kwh)	Variable cost approved (Rs/Kwh)	Power purchase cost as filed (Rs/Kwh)	Approved power purchase cost (Rs/kWh)
Generation	3,759	3,643.75	0.86	0.9070	1.72 (including 0.0549 for Transmission)	1.76 (including 0.0608 for Transmission)
Transmission	256	279.70				

577. The Commission directed licensees to charge FSA every month in accordance with the existing formula. The allowable power purchase for each month of the ensuing year and the variable cost to be adopted for this calculation have been provided in the following table:

Table No.98
Monthly total power purchase requirement for FY 2004-05

Month	DISCOMS power purchase (MU)	APTRANSCO power purchase (MU)	Total dispatch including inter-State sales (MU)	Variable cost (Rs per unit) (MU)
April 04	3,373	3,598	3,598	0.992
May 04	3,375	3,600	3,600	0.987
June 04	3,236	3,452	3,452	0.981

July 04	3,287	3,506	3,506	0.938
August 04	3,457	3,688	3,777	0.857
September 04	3,640	3,883	3,883	0.815
October 04	3,606	3,847	4,137	0.829
November 04	3,586	3,825	3,926	0.885
December 04	3,543	3,779	4,004	0.879
January 05	3,606	3,846	4,158	0.885
February 05	3,598	3,838	3,838	0.909
March 05	3,701	3,948	4,119	0.953
Total	**42,008**	**44,809**	**45,997**	**0.907**

Wages, salaries and other allowances:

578. The Licensee has projected an amount of Rs. 100.70 crores towards wages, salaries and other allowances (net of capitalisation) for inclusion in the ARR of FY 2004-05 and Rs.10.10 crores (net of capitalisation) towards Employee funds for pension and gratuity aggregating to Rs. 110.80 crores.

579. Regarding capitalisation, the Licensee has proposed a total capitalisation of Rs. 31.80 crores including capitalisation out of provision for employees' pension and gratuity funds. In order that the provision towards employee's pension and gratuity funds is reflected at gross (and not net of capitalisation), the capitalisation out of employees' pension and gratuity funds has been taken into account under Salaries and Wages. Thus, an amount of Rs. 95.18 crores as calculated in the Table below is taken towards salaries and wages for calculating the Aggregate Revenue Requirement.

Table No.99

(Rs. Crs)

Wages, salaries & allowances	128.28
Expense Capitalisation	33.10
Net of capitalisation- Wages and salaries	95.18

580. The provision towards Employee funds is shown separately in the subsequent paragraphs of this Chapter.

Administration and general expenses (excluding rent, rates & taxes, legal charges, audit fees, lease rentals etc.):

581. The filing has under Administration and General Expenses clubbed together four items namely, Rent, rates and taxes, Legal charges, Audit fees, and Other

administration and general expenses. According to the guidelines laid down by the Commission, the filings are to provide details for these four distinct items separately. The position reflected in the filings is as follows:

Table No.100
Administration and general expenses
as in the ARR filing for FY 2004-05

(Rs. Crs)

Particulars	**2004**	**2005**
Rent, rates and taxes	5.60	1.20
Legal charges	0.90	1.10
Audit fees	1.30	1.30
Other administration and general expenses	16.60	28.00
Total Administration & general expenses - Gross	24.40	31.60
LESS: Corporate allocation	8.50	0.00
LESS: Expenses capitalised	4.10	5.30
Total Administration & general expenses – Net	11.80	26.30

582. The Licensee has claimed (in Form 1.3 of the filing) Rs.23.50 crores towards Administration and General Expenses (net of capitalisation). This is considered reasonable and is provided.

Repairs and maintenance:

583. APTRANSCO has projected Rs.40.00 crores (net of capitalisation) towards Repairs and maintenance for FY 2004-05 for inclusion in the computation of the Revenue Requirement. This is considered reasonable and is provided.

Rent, rates and taxes:

584. APTRANSCO has projected (in Form 1.3) Rs.0.90 crore for inclusion in the computation of the Revenue Requirement for FY 2004-05 towards Rent, rates and taxes. This is accepted and accordingly provided.

Interest on Loans and other Finance Charges (including lease rentals):

585. APTRANSCO has projected Rs.392.10 crores (net of capitalisation of IDC) towards interest on various loans and other finance charges for the calculation of the Revenue Requirement for FY 2004-05 as detailed in the Table below:

Table No.101
Interest and other finance charges claimed in the ARR filed for FY 2004-05

(Rs. Crs)

Interest on project loans	224.70
Interest on other market borrowings (CAPEX)	8.20
Interest on other market borrowings (Revenue Deficit)	21.30
Interest on cash credit line	33.00
Interest on borrowing for working capital	16.70
Interest on short term loans	96.90
Total interest	400.80
Other finance charges (including lease rentals)	16.40
Total	417.20
LESS: Interest capitalized (IDC)	25.10
Net taken to revenue requirement computation	392.10

586. The Commission has provided interest on all loans taken into account on the negative side in the computation of the Capital Base. An amount of Rs.2944.47 crores has been reckoned as loans on the negative side in the computation of the Capital Base (paragraph 531 supra) as against Rs.2036.90 crores shown in the ARR filing in form 1.1 and the interest is calculated accordingly. The licensee in its filing has requested for a provision of Rs.74.30 crores for debt redemption obligation. However, for the reasons stated in paragraph 596 infra, the Commission does not consider this amount in the Aggregate Revenue Requirement but provides for interest of Rs.4.27 crores on fresh borrowings to meet the requirement. The total interest (gross) works out to Rs.305.46 crores after taking into consideration the interest benefit of swapping of loans (Rs.26.70 crores) and interest on debt redemption obligation (Rs.4.27 crores).

587. The amount of Rs.16.40 crores claimed in the ARR towards "Other Finance Charges" (including Lease rentals) is considered reasonable and allowed in full.

588. Regarding capitalisation of interest during construction (IDC), the licensee has proposed an amount of Rs.39.00 crores for FY 2004-05. Capital works programme of the Licensee is likely to be of levels lower than what are projected in the ARR, both for FY 2003-04 and FY 2004-05. Accordingly, the IDC to be charged to capital for FY 2004-05 is estimated at Rs.16.00 crores.

589. The net amount reckoned towards Interest and Other Finance charges in the calculation of the Revenue Requirement for FY 2004-05 therefore works out to Rs.305.86 crores as detailed in the Table below:

Table No.102
Interest (net) and other finance charges for FY 2004-05

(Rs. Crs)

Particulars	APTRANSCO	APERC
Interest on loans	400.80	305.46
Other finance charges	16.40	16.40
Total	417.20	321.86
LESS: IDC capitalized	25.10	16.00
Amount taken for ARR computation	392.10	305.86

Legal charges:

590. The Licensee has claimed (in Form 1.3) Rs. 0.90 crore (net of capitalisation) towards Legal charges. This is accepted as reasonable.

Audit and other fees:

591. The Licensee has claimed Rs.1.00 crore (net of capitalisation) towards Audit and other fees. This is accepted as reasonable.

Depreciation:

592. The Licensee has projected Rs. 239.30 crores and the amount admitted is Rs. 235.78 crores. The difference is on account of the difference in the level of capitalisation for FY 2003-04 as explained earlier under Original Cost of Fixed Assets.

Contribution to employee funds:

593. The Licensee has projected the Contribution to employee funds at Rs.13.10 crores (gross) and Rs.10.10 crores (net of capitalisation). An amount of Rs.12.35 crores has been included on this account in the computation of the Revenue Requirement for FY 2004-05 for reasons elaborated in paragraph 578 supra on Wages and salaries.

Contribution to Contingencies reserve:

594. APTRANSCO has proposed Rs.11.10 crores as Special Appropriation towards contribution to Contingencies reserve to be provided in the computation of the Revenue Requirement. The amount has been calculated at 0.25% of the Original

Cost of Fixed Assets (OCFA) projected in the filing. As the OCFA has undergone a change due to the reasons mentioned in the paragraphs 521 and 522 supra on OCFA, the amount accepted towards Contingencies reserve is Rs.10.40 crores (0.25% of Rs. 4161.97 crores).

595. ***The Commission reiterates that paragraph 4 of the Sixth Schedule to the Electricity (Supply) Act, 1948 requires that the contributions towards Contingencies Reserve must be invested in securities authorized under the Indian Trusts Act, 1882, within a period of six months from the close of the year of account in which the appropriation is made. The Licensee is directed to comply with this requirement.*** The attention of the Licensee is also drawn to paragraph V of the Sixth Schedule that any drawal from the Contingencies Reserve can be made only with the prior approval of the Commission.

Adjustments pertaining to previous years:

(a) Interest:-The interest adjustment amounts of Rs.39.51 crores for FY 2000-01, Rs.32.65 crores for FY 2001-02 and Rs. (-) 52.52 crores for FY 2002-03 aggregating to Rs.19.64 crores have been taken as Special Appropriation in the calculation of the Revenue Requirement for FY 04-05.

(b). Depreciation:- The depreciation adjustment amounts of Rs. 13.49 crores for FY 2000-01, Rs. 57.49 crores for FY 2001-02 and Rs. (-) 6.73 crores for FY 2002-03 aggregating to Rs.64.25 crores have been taken as Special Appropriation in the calculation of the Revenue Requirement for FY 04-05.

(c). Income Tax:- The income tax adjustment amounts of Rs.(-) 31.99 crores for FY 2000-01 and Rs.18.05 for FY 2002-03 aggregating to Rs. (-) 13.94 have been taken as Special Appropriation in the calculation of the Revenue Requirement for FY 04-05.

(d).Wage revision:- The wage revision adjustment amount of Rs.(-)14.78 crores for FY 2002-03 has been taken as Special Appropriation in the calculation of the Revenue Requirement for FY 04-05.

(e). Reasonable Return:- The reasonable return adjustment amounts of Rs. (-) 52.33 crores for FY 2000-01, Rs. (-) 119.09 crores for FY 2001-02 and Rs. (-) 18.25 crores for FY 2002-03 aggregating to Rs. (-) 189.67 crores have been taken as Special Appropriation in the calculation of the Revenue Requirement for FY 04-05.

(f). APGENCO fixed cost:- An amount of Rs.14.32 crores towards O & M escalation for the year 2003-04 has been provided towards APGENCO's fixed cost in accordance with the Commission's Order on the review petition filed by APGENCO.

Debt redemption obligation

596. APTRANSCO has proposed provisions of Rs. 102.20 crores and Rs. 74.30 crores as Special Appropriation towards Debt Redemption obligation. In the past, except in the Tariff Order for FY 2000-01, the Licensee did not make any claim for Debt Redemption obligation and consequently, the Commission did not provide for the same. The Licensee stated that during this period, it had to raise short-term loans to meet this obligation. Further, it has also cited the provisions of Sixth Schedule in support of the claim for Debt Redemption Obligation.

597. As already stated in paragraph 533 the Licensee's loan drawals, repayment etc., are not in conformity with its Capital Expenditure programme. Further, there has been gross mix-up of long-term funds with short-term funds and vice-versa. It is important to note that under normal business operations, once an asset is created out of loan funds, it will provide adequate depreciation funds to meet the debt redemption obligation. If the loan redemption is accelerated, by pre-closure, reduction in redemption period etc. there will be mis-match and as a result, the loanee would have no option other than to go in for additional borrowing to cover the resultant gap. The repayment obligations of this additional borrowing can be met with the subsequent generation of depreciation funds. Just because the normal depreciation being provided does not match the accelerated redemption of loans, the shortfall cannot be

treated as an item of expenditure in the Aggregate Revenue Requirement. Hence, the Debt Redemption obligations of Rs.102.20 crores for FY 2003-04 and Rs.74.30 crores for FY 2004-05 are not accepted. However, the interest on this debt redemption obligation for FY 2004-05 Rs.4.27 crores has been considered.

Total expenditure:

598. In view of the above changes, the total expenditure works out to Rs.8701.13 crores as against Rs. 8641.20 crores projected by the Licensee as summarised in the following table:

Table No.103
Statement of expenditure and special appropriations

(Rs. Crs)

Expenditure items	APTRANSCO	APERC	Bulk Supply	Transmission and SLDC
Purchase of energy	7747.30	8095.44	7815.44	0.00
PGCIL charges	0.00	0.00	0.00	280.00
Wages and salaries	100.70	95.18	4.30	90.88
Administration and general expenses	23.50	23.50	8.37	15.13
Repairs and maintenance	40.00	40.00	0.00	40.00
Rent, rates and taxes	0.90	0.90	0.10	0.80
Approved loan interest	392.10	305.86	40.18	265.68
Legal charges	0.90	0.90	0.00	0.90
Audit & other fees	1.00	1.00	0.00	1.00
Depreciation	239.30	235.78	0.00	235.78
Contribution to employee funds	10.10	12.35	0.30	12.05
Special Appropriations				
Contribution to contingencies reserve	11.10	10.40	0.00	10.40
Debt redemption obligation	74.30	0.00	0.00	0.00
Sub total	**8641.20**	**8821.31**	**7868.69**	**952.62**
Adjustments pertaining to previous years:				
Interest				
Depreciation	0.00	19.64	0.00	19.64
Income Tax	0.00	64.25	0.00	64.25
Wage revision	0.00	(13.94)	0.00	(13.94)
Reasonable Return	0.00	(14.78)	0.00	(14.78)
APGENCO fixed cost	0.00	(189.67)	0.00	(189.67)
	0.00	14.32	0.00	14.32
TOTAL EXPENDITURE	**8641.20**	**8701.13**	**7868.69**	**832.44**

Note: The amounts within brackets denote minus figures.

Reasonable return:

599. APTRANSCO has not claimed in the filings Reasonable Return it is eligible for as per the Sixth Schedule to the Electricity (Supply) Act, 1948. It may be recalled here that there was no claim for Reasonable Return in the filing for FY 2003-04 also but as stated in the Tariff Order for that year, the Commission allowed the

Reasonable Return as, in the opinion of the Commission, it was not in the interest of either the consumers or the Licensee to forgo the Reasonable Return. The Commission wishes to emphasise that one of the prime objectives of reforms undertaken by the State in the electricity sector is to bring in a commercial orientation in the methods of operation as well as in the general approach to management decisions by the unbundled entities. The Commission considers it necessary to provide for the Reasonable Return in the calculation of the Revenue Requirement to reinforce this commercial orientation and hopes that this would act as a motivating factor and a morale-booster at all levels leading to more operational efficiency all round. The Commission accordingly allows an amount of Rs.39.81 crores as Reasonable Return to APTRANSCO as per Sixth Schedule and includes it in the calculation of the Revenue Requirement for FY 2004-05.

Non-tariff income:

600. The Licensee has projected an amount of Rs.258.30 crores as Non-Tariff income (Form 1.4). The Commission has reckoned an amount of Rs.397.34 crores including an amount of Rs.51.50 crores towards rebate on power purchases as detailed below:

Table No.104

(Rs. Crs)

Items	**APTRANSCO**	**APERC**	**Bulk supply**	**Transmission and SLDC**
(a) Interest on contingency reserve	0.90	0.90	0.00	0.90
(b) Interest on investments	0.80	0.80	0.00	0.80
(c) Incidental income	8.90	8.90	0.00	8.90
(d) Transmission charges	1.40	1.40	0.00	1.40
(e) Inter-State sale of power	64.90	233.94	233.94	0.00
(f) Incentive on securitisation scheme	97.40	97.40	97.40	0.00
(g) Rebate on power purchase	81.50	51.50	51.50	0.00
(h) Other rebates	2.50	2.50	2.50	0.00
TOTAL	**258.30**	**397.34**	**385.34**	**12.00**

Grid support charges:

601. No income has been estimated by the Commission as accruing from grid support charges for FY 2004-05 as the Commission's Order on this matter has been set aside by the Hon'ble High Court and the appeals against the orders of the High Court are pending in the Hon'ble Supreme Court.

Inter-State sale of power:

602. After careful consideration, the Commission has considered the surplus power available in the State as 1114 MU, (as filed by the APTRANSCO) and this power is expected to be sold at Rs.2.10 per unit. The revenue from the Inter-State sale of power reckoned for tariff purpose is Rs.233.94 crores as against Rs.267.36 crores projected by the Licensee at the rate of Rs.2.40 per unit.

Aggregate revenue requirement:

603. The Aggregate Revenue Requirement therefore works out to Rs.8343.60 crores as against Rs.8382.90 crores projected by the Licensee as detailed in the table below:

Table No.105

	(Rs. Crs)
Total expenditure	8701.13
Reasonable return	39.81
MINUS: Non-tariff income	397.34
Total net Aggregate revenue requirement	**8343.60**

CHAPTER – X

ERC / ARR 2004-05: DISTRIBUTION AND RETAIL SUPPLY
Andhra Pradesh Eastern Power Distribution Company Limited (APEPDCL)

604. APEPDCL, the Licensee company for distribution and retail supply of electricity in the territory assigned to it in Andhra Pradesh as per the licence granted by the Commission, filed the ARR / ERC on 24.12.2003. The Commission has examined the Licensee's proposals and indicates herein the areas where the computations of the Licensee are found to be incorrect or unacceptable with reasons therefor and the Commission's alternative computations.

605. Based on the finalised Second Transfer Scheme notified by the GoAP in Gazette Notification GO. MS No. 109 Energy (Power III) dated:29.09.2001, giving the opening Balance Sheet of APEPDCL (and also of APTRANSCO and the other three DISCOMS) as on 01.04.2000, the audited Annual Accounts for FY 2000-01, and 2001-02, and 2002-03 (audited by statutory auditors but without CAG's comments which were awaited) as compiled and finalised by the Licensee were made available to the Commission during October - December 2003. The figures as per these Accounts have been adopted, wherever relevant, for the purposes of this Tariff Order. The audited Accounts complete in all respects for FY 2002-03 adopted by the shareholders of the Company in the Annual General Meeting have not yet been filed with the Commission, as required under the terms of the licence. Audited Accounts for FY 2002-03, which should have been available by 30.09.2003 as per the Companies Act, 1956, are also yet to be filed with the Commission.

606. While the Commission appreciates the recent efforts made to bring the audit of the Company's annual accounts largely up-to-date, it urges APEPDCL to spare no efforts to comply with the requirements of the Companies Act, 1956 in respect of the Annual Accounts for FY 2003-04 onwards.

Capital outlay on schemes during 2002-03 to 2004-05

607. The Licensee in the filings has made the following projections of capital expenditure for FY 2004-05:

Table No.106
Proposed capital outlay for FY 2004 – 05

(Rs. Crs)

	Base capital expenditure	Expenditure capitalisation	IDC*	Total
APEPDCL	**150.00**	**15.00**	**13.90**	**178.90**

* Interest during construction (IDC)

608. Before dealing with the projections of capital expenditure in FY 2004-05, it is necessary to advert to the capital expenditure during FY 2002-03.

609. The Commission has noted that there was a shortfall of Rs.40.64 crores in capital expenditure vis-à-vis the outlay of Rs.236.83 crores for APEPDCL approved in the Tariff Order for FY 03 as indicated in the Table below:

Table No.107
Capital outlay-performance during 2002- 03

(Rs. Cr)

	Filing	Tariff Order	Actual	Shortfall
APEPDCL	151.49	236.83	196.19	40.64

(Figures include IDC and expense capitalisation)

610. This shortfall has resulted in significant variation in the Capital Base calculations for FY 2002-03 as detailed in the Table below:

Table No.108
Capital Base for FY 2002-03
Comparison of actual costs with Tariff Order figures
on the basis of the audited accounts for FY 2002-03

(Rs. Crs)

	Filing	Tariff Order	Actual	Variance
Original cost of Fixed Assets	738	555	628.13	73.13
Capital Works-in-Progress (CWIP)	148	351	194.20	(156.80)
Stores	22	2	1.54	(0.46)
Cash	10	10	11.26	1.26
Total (A)	**918**	**918**	**835.13**	**(82.87)**
Accumulated depreciation	395	388	396.76	8.76
Borrowings	335	397	388.57	(8.43)
Other no-cost funds	0	262	261.83	(0.17)
Total (B)	**730**	**1047**	**1047.16**	**0.16**
Capital Base (A-B)	**188**	**(129)**	**(212.03)**	**83.03**

Note: The amounts within brackets denote minus figures.

611. The adjustment (necessitated due to this variance in the Capital Base) for the Reasonable Return is to be recalculated and included in the computation of the Aggregate Revenue Requirement for the Tariff of FY 2002-03, for necessary correction in Tariff Order of FY 2004-05.

612. The shortfall in capital investment during FY 2002-03 has also resulted in shortfall in interest expenditure of Rs.6.44 crores vis-à-vis the amount provided in the Tariff Order for FY 2002-03 as detailed in the Table below:

Table No.109
Calculation of interest adjustment due to shortfall in capital expenditure during 2002-03

(Rs. Crs)

Particulars	Amount	Amount
Interest as per tariff order for FY 2002-03		
Gross Interest and Finance Charges		46.14
LESS: IDC charged to Capital works		23.15
Net Interest		**22.99**
Actual as per audited accounts for FY 2002-03		
Gross Interest and Finance Charges	55.41	
LESS: Interest on Consumer Security Deposits	7.09	
Discount to consumers	6.48	
Other interest (sub-accounts)	0.45	
Balance	41.39	
LESS: IDC charged to capital works	24.84	
		16.55
Shortfall		**6.44**

613. The Commission considers that the shortfall of Rs.6.44 crores in interest incidence as calculated above out of the amount reckoned towards Revenue Requirement in the Tariff Order for FY 2002-03 needs to be adjusted as special appropriation in the calculation of the Revenue Requirement for FY 2004-05 and the adjustment is accordingly done.

Capital outlay – Progress during FY 2003- 04:

614. In the ARR for FY 2004-05, the DISCOM has projected a revised capital outlay (Base expenditure) of Rs.150.00 crores for FY 2003-04 along with IDC and

expenditure capitalization, which works out to Rs.178.28 crores as against Rs.131.20 crores reckoned in the Tariff Order for FY 2003-04. The Commission considers this projection to be on the higher side keeping in view the progress of expenditure during the first half of the year, up to September 2003 and the past track record and allows an amount of Rs.110.00 crores towards base expenditure on the schemes after taking into account the actual expenditure up to December 2003 as detailed in the Table below:

Table No.110
Estimated capital outlay for FY 2003-04 (Rs. Crs)

S.No.	Name of Scheme	APEPDCL	APERC
	A. Schemes approved by the Commission or schemes which do not require approval		
1	APL – 1 Suppl.	11.00	8.00
2	T&D Improvements	4.50	4.50
3	Normal works	18.00	17.55
4	Rural electrification	10.00	15.25
5	Segregation of Agricultural Feeders	10.00	10.00
6	Pump-set energisation	6.00	5.00
7	SI meters	10.00	10.00
8	SI VCBs	4.00	2.00
9	REC / SI	10.00	10.00
10	11 KV Feeder Metering	0.50	0.50
11	APDRP – Works of Eluru Circle	20.00	6.00
12	Town business plans under APDRP for 20 towns	10.00	8.00
13	Providing metering for unmetered agricultural services	2.00	0.50
	Total (A)	**116.00**	**97.30**
	B. Other Schemes		
14	DTR LV side metering	1.00	0.20
	Total (B)	**1.00**	**0.20**
	C. Schemes not yet approved		
15	Conversion of existing LV network into HVDS	25.00	8.00
16	APL-2	0.00	0.00
17	APDP	0.00	0.00
18	SI Transformers	4.00	2.50
19	SI Conductors	4.00	2.00
	TOTAL (C)	**33.00**	**12.50**
	GRAND TOTAL (A+B+C)	**150.00**	**110.00**

615. The amount to be taken to CWIP in respect of the above schemes works out to Rs. 130.74 crores as detailed in the Table below:

Table No.111
Amounts taken to CWIP for FY 2003-04
(Rs. Crs)

Particulars	APEPDCL	APERC
Base capital expenditure	150.00	110.00
Expenses capitalized	15.00	11.00
Interest (IDC) capitalized	13.28	9.74
Total	**178.28**	**130.74**

616. The projected CWIP as on 31-03-2004 would serve as the Opening Balance for FY 2004-05.

CAPITAL OUTLAY – Projections for FY 2004-05:

617. As already mentioned above, the filings project a Base Capital expenditure of Rs.150.00 crores for FY2004-05, which together with the expenditure capitalization of Rs.15.00 crores and Interest During Construction (IDC) of Rs.13.90 crores works out to Rs.178.90 crores. It may be recalled here that the Commission in its Tariff Order for FY 2002-03 had stated in unambiguous terms that from FY 2003-04 onwards, it would allow for inclusion in the CWIP only those schemes which have its prior approval or those schemes which do not require such approval (being schemes, each costing less than Rs. 5 Crores). Based on this norm, the Commission allows for inclusion in the CWIP (for Capital Base calculations for FY 2004-05) the full amount of Rs.150.00 crores in respect of the following schemes projected by the Licensee as Base Capital expenditure; together with expenses capitalized and IDC, the capital outlay for 2004-05 works out to Rs. 178.90 crores:

Table No.112
Scheme-wise details for Base capital expenditure for FY 2004-05

(Rs. Crs)

S.No.	Name of Scheme	APEPDCL	APERC
	A. Schemes approved by the Commission or schemes which do not require approval		
1	T&D improvements	2.00	2.00
2	Normal works	25.00	25.00
3	Rural electrification	10.00	10.00
4	Pump-set energisation	3.00	3.00
5	REC / SI	8.00	8.00
6	SI meters	15.00	15.00
7	APDRP – Works of Eluru Circle	30.00	30.00
8	Town business plans under APDRP for 20 towns	15.00	15.00
9	Providing metering for unmetered agricultural services	3.00	3.00
	Total (A)	**111.00**	**111.00**
	B. Scheme under process (Commission approval awaited)		
10	Conversion of existing LV network into HVDS for rural feeders	35.00	35.00
	Total (B)	**35.00**	**35.00**
	C. Scheme not yet approved		
11	SI Conductors	4.00	4.00
	TOTAL (C)	**4.00**	**4.00**
	GRAND TOTAL (A+B+C)	**150.00**	**150.00**

618. The Commission directs that from the filings for FY 2005-06 onwards, the CWIP along with the corresponding loans and consumer contributions shall be excluded and not taken into account for calculating the Capital Base and the necessary corresponding adjustments shall also be carried out in the expenses to be capitalized. Further, the DISCOM shall submit monthly progress reports on physical and financial progress on each of the schemes w.e.f. 01-04-2004. Such reports shall also indicate the cost of the assets (works commissioned) capitalized against each scheme during the month.

Capital base – Positive elements:
Original Cost of Fixed Assets (OCFA):

619. The Licensee has proposed an amount of Rs.951.59 crores as the Original Cost of Fixed Assets (excluding consumer contributions) to be reckoned in the Capital Base calculations for FY 2004-05. It may be mentioned in general about the transfers from CWIP to OCFA, that such transfers are meant to represent those assets that are completed (or commissioned where appropriate) and utlisation commenced (which are referred to as capitalized works in commercial parlance). But in the DISCOMS, the practice appears to be to transfer to Gross Fixed Assets the balance in the CWIP too at the beginning of the year and this gives room for the apprehension that works which are in fact not completed are treated as capitalized in the Accounts while the projections made for purpose of ARR by the DISCOMS also include capitalization proposals of even those works which already stand capitalized in the Accounts. Secondly, the ARR projections for capitalization are not based on a review of the scheme-wise status of progress vis-à-vis the earlier planned execution schedule and a genuine appraisal of the completion programme of works / schemes. Pending a detailed examination of the practice obtaining in this regard and its implications, an amount of Rs.100.00 crores has been reckoned for transfer to OCFA from CWIP for FY 2003-04 on an ad-hoc basis. Similarly, for FY 2004-05, an estimated amount of Rs.125.00 crores has been taken as transfers to OCFA from CWIP.

620. The estimated amount to be reckoned under OCFA in the Capital Base as on 31-03-2005 is therefore, as calculated in the Table below:

Table No.113
Statement of estimated fixed assets as on 31-03-2005

(Rs. Crs.)

ITEM	APEPDCL	APERC
Gross Fixed Assets as on 31-03-03 **LESS**: Consumer contributions for capital assets	817.40 178.18	817.40 189.27
Original Cost of Fixed Assets (OCFA) as on 31.03.03	639.22	628.13
ADD: Works likely to be completed during 2003-04	201.38	100.00
Gross OCFA as on 31.03.04	840.60	728.13
LESS: Consumer contributions	24.00	34.82
OCFA as on 31.03.2004	816.60	693.31
ADD: Works likely to be completed in FY 2004-05	161.99	125.00
Gross OCFA as on 31.03.2005	978.50	818.31
LESS: Consumer contributions	27.00	41.32
OCFA as on 31.03.2005	**951.59**	**777.00**

Accordingly, OCFA taken to Capital Base amounts to Rs.777.00 crores.

Capital works – in – progress (CWIP):

621. As already stated above, the Commission has decided to reckon Outlays of Rs.110.00 crores for FY 03-04 and Rs.150.00 crores for FY 04-05 as Base Capital expenditure (paragraphs 615 and 617 supra). These, together with the Expenses capitalized and the IDC work out to Rs.130.74 crores and Rs.178.90 crores respectively. Consequently, the amount reckoned for CWIP for FY 2003-04 works out to Rs.224.95 crores and for Capital Base calculations for FY 2004-05 to Rs.278.84 crores as detailed in the Table below:

Table No.114
Statement of estimated works-in-progress for FY 2004-05

(Rs. crs)

	APEPDCL	APERC
Opening Balance of CWIP as on 01.04.2003	194.20	194.20
Outlay during the year (FY 2003-04)	150.00	110.00
Expenses during the year capitalized	15.00	11.00
Interest during construction charged to Capital (IDC)	13.28	9.74
Total additions: Capital expenditure	178.28	130.74
Total (OB + Additions)	372.48	324.94
LESS: Works anticipated to be completed in FY 2003-04	201.38	100.00
Closing Balance of CWIP as on 31.03.04 and Opening balance as on 01.04.2004	171.10	224.94
Additional investments during the year (FY 2004-05)	150.00	150.00
Expenses during the year capitalized	15.00	15.00

Interest during construction charged to Capital (IDC)	13.90	13.90
Total additions: Capital expenditure	178.90	178.90
Total (OB + Additions)	350.00	403.84
LESS: Works anticipated to be completed in FY 2004-05	161.99	125.00
Closing Balance of CWIP as on 31.03.05	**188.01**	**278.84**

Compulsory investments:

622. The Licensee has projected the compulsory investments (Contingencies Reserve) at Rs. 4.15 crores for FY 2004-05 and the same are considered in the computation of the capital base by APERC.

Working capital requirements:

623. Considering the working capital difficulties in the initial stages of the reforms process that the Licensees represented strongly about, the Commission decided in Tariff Order, FY 04, to allow the average cash and bank balance in the computation of the Capital Base at two months' level of eligible items of expenses instead of at one month's level hitherto. This is intended to provide a trajectory to an efficient level over a period of 3 years. The level would therefore be at 2 months' level for FY 2003-04 and FY 2004-05 and at 1½ months' level for FY 2005-06. Thereafter it would revert to one month's level. There will be no change in the level of Average Cost of Stores, which is already being provided at 2 months' level of the annual repair and maintenance expenses.

Average cost of stores*:*

624. The DISCOM has proposed an amount of Rs.35.42 crores towards Average Cost of Stores for inclusion in the Capital Base calculations for FY 2004-05 by considering 2 months' level of the annual maintenance expenses and 2 months' level of the annual capital expenditure programme, while the Commission in its Tariff Order 2003-04 (paragraph 449) had clearly stated that the Average Cost of Stores would continue to be provided at 2 months' level of the annual repairs and maintenance expenses. The proposed inventory level of Rs.35.42 crores to support the repair and maintenance activities of Rs.14.75 crores projected in the filings for FY 2004-05 is manifestly too high as the inventory works out to more than 2 years' consumption. An

amount of only Rs.2.46 crores for FY 2004-05, calculated at two months' requirement of the repairs and maintenance expenses (Rs.14.75 crores) is therefore provided.

Average cash and bank balance:

625. The Licensee has proposed Rs.29.30 crores towards Cash and Bank Balance for FY 2004-05 (paragraph 2.3.4 of the filings) on the basis of one month's 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 (net of expenses capitalized) for the year. As stated in the Tariff Order 2003-04 (paragraph 205), the provision under this Head is to be calculated at two months' level of eligible items of expenses for FY 2004-05 instead of one month. Computed on that basis, the average Cash and Bank Balance works out to Rs.29.32 crores as detailed in the Table below and is provided for in the calculation of the Capital Base:

Table No.115
Computation of requirement of Average cash and bank balance

(Rs. Crs)

	2004-05
Wages and salaries	117.66
Admin. and General Expenses	22.72
Repairs and maintenance	14.75
Contribution to employee funds	13.40
Total expenses	**175.89**
Average Cash and Bank Balances (175.89 ÷ 6)	**29.32**

Note: All amounts are net of expenses capitalised.

Capital base-Negative elements*:*

Accumulated Depreciation

626. The accumulated depreciation as projected by the Licensee in the filings is Rs. 538.37 crores for FY 2004-05 against which Rs.530.31 crores is admitted. The difference is due to the capitalization of works to be completed in FY 2003-04 being taken at less than the projections in the filings as already mentioned in paragraph 620 supra.

Loans from government and approved institutions:

627. The APEPDCL has projected Rs. 125.95 crores as Government loans, Rs.371.95 crores as loans from approved institutions and Rs.52.89 crores as "Other market borrowings for capital expenditure" aggregating to Rs. 550.79 crores for FY 2004-05. However, the total loan amount admitted by APERC is Rs.462.63 crores.

628. It is seen that APEPDCL in the past years had drawn loans far in excess of the capital expenditure incurred during the year, as can be seen from the Table below:

Table No.116
Statement showing capital expenditure, loans, depreciation and consumer contributions

(Rs. Crs.)

S.No.		As on 1.4.2000	As on 31.3.2001	As on 31.3.2002	As on 31.3.2003
1.	Gross Fixed Assets	497.38	580.87	693.30	817.40
2.	Capital Works-in-Progress	85.41	115.37	122.11	194.20
3.	**Total**	**582.79**	**696.24**	**815.41**	**1011.60**
4.	Accretions: Capital expenditure		113.45	119.17	196.19
5.	Consumer contributions	46.64	97.94	128.95	178.18
6	Accretions: Net contributions received during the year		51.30	31.01	49.23
7	Balance to be funded by loan drawals (4 minus 6)		62.15	88.16	146.96
8	Loans drawn *		111.59	119.49	192.64
9	Excess drawals (8 minus 7)		49.44	31.33	45.68
10	Accumulated Depreciation	263.05	299.16	343.53	396.76
11	Accretion: Depreciation for the year		36.11	44.37	53.22
12	Loan repayments *		10.19	20.74	37.57
13	Balance Depreciation funds available (11-12)		25.92	23.63	15.65
14	Total funds overdrawn on Capital account (9+13)		75.36	54.96	61.33
*** Details of loans drawn and repayments**					

(Rs. Crs)

	2000-01		**2001-02**		**2002-03**	
	Drawn	Repaid	Drawn	Repaid	Drawn	Repaid
Payments due on capital liabilities (Govt. loans)	24.13	3.86	27.62	4.33	32.32	2.90
Capital liabilities (approved institutions)	87.46	6.33	91.87	16.41	160.32	34.67
TOTAL	**111.59**	**10.19**	**119.49**	**20.74**	**192.64**	**37.57**

629. Though funds drawn but unspent on capital account were thus around Rs.191.65 crores (Rs.75.36 crores + Rs.54.96 crores + Rs.61.33 crores) as on 01-04-2003, the filings in fact project drawal of further loans of Rs.131.78 crores during FY 2003-04 and Rs.393.22 crores during FY 2004-05.

630. In the Tariff Order for FY 2003-04, the Commission expressed its concern over the way the financial affairs of the DISCOM had been conducted during the two years FY 01 and FY 02 and advised the DISCOM not to draw any further loans from 01-04-2003 till the excess funds available on capital account were absorbed by way of expenditure on capital works.

631. ***The Commission directs the DISCOM to submit a detailed capital expenditure programme (for the consideration of the Commission) to absorb the excess funds available on capital account at least by 31-12-2004.***

632. For the Capital Base calculations for FY 2004-05, the Commission has reckoned the loans of Rs.462.63 crores. This has been calculated starting with the loans figure of Rs.388.58 crores as on 31-03-2003 in the audited Balance Sheet for FY 2002-03 made available to the Commission. After taking into account the consumer contributions, depreciation etc., for the purpose of funding the capital expenditure and the working capital allowed to the extent included in the capital base, the closing balance of the loan to be taken in the capital base works out to Rs.462.63 crores as against Rs.550.79 crores projected by the licensee.

Consumer Security Deposits*:*

633. The Licensee has projected Rs.274.92 crores towards consumer security deposits. However, the Licensee has not shown any amount towards incremental Consumer Security Deposits in the calculation of the Capital Base. The Commission for reasons already detailed in paragraph 207 of the Tariff Order 2003-04 does not agree that Consumer Security Deposits are to be excluded from the negative side of the Capital Base. Consumer security deposits at the end of FY 2003 figuring in the books of the licensee are Rs.261.82 crores and amount of Rs.27.00 crores towards incremental consumer security deposit for FY 2004 and FY 2005 is taken on this account to the negative side of the Capital Base. Thus the total Consumer Security Deposits reckoned for Capital Base are Rs.288.82 crores.

Net capital base*:*

634. With the above changes in the positive and negative elements of the Capital Base, the Net Capital Base works out to Rs. (-) 190.00 crores as detailed in the Table below as against Rs. (-) 155.61 crores projected by the Licensee.

Table No.117
Capital Base computations for FY 2004-05

(Rs. Crs)

<table>
<tr><th>ITEM</th><th colspan="2">APEPDCL</th><th>APERC</th></tr>
<tr><td>Positive elements of Capital Base</td><td colspan="2"></td><td></td></tr>
<tr><td>Original cost of Fixed Assets (excluding consumer contributions, etc.)</td><td colspan="2">951.59</td><td>777.00</td></tr>
<tr><td>Capital Works-in-Progress</td><td colspan="2">188.01</td><td>278.84</td></tr>
<tr><td>Statutory investment (of Contingencies Reserve)</td><td colspan="2">4.15</td><td>4.15</td></tr>
<tr><td>Working Capital</td><td colspan="2"></td><td></td></tr>
<tr><td>a) Average cost of stores</td><td colspan="2">35.42</td><td>2.46</td></tr>
<tr><td>b) Average cash and bank balance</td><td colspan="2">29.30</td><td>29.32</td></tr>
<tr><td>Total of positive elements of Capital Base</td><td colspan="2">1208.47</td><td>1091.77</td></tr>
<tr><td>Negative elements of Capital Base</td><td colspan="2"></td><td></td></tr>
<tr><td>Accumulated Depreciation</td><td colspan="2">538.37</td><td>530.31</td></tr>
<tr><td>Government loans</td><td>125.95</td><td rowspan="3">550.79</td><td rowspan="3">462.63</td></tr>
<tr><td>Approved loans</td><td>371.95</td></tr>
<tr><td>Other market borrowings for CAPEX</td><td>52.89</td></tr>
<tr><td>Consumer Security Deposits</td><td colspan="2">274.92</td><td>288.82</td></tr>
<tr><td>Total of negative elements of Capital Base</td><td colspan="2">1364.08</td><td>1281.76</td></tr>
<tr><td>Net Capital Base</td><td colspan="2">(155.61)</td><td>(190.00)</td></tr>
</table>

Note: The amounts within brackets denote minus figures.

EXPENDITURE

Purchase of energy

635. APEPDCL has projected a requirement of 5554.35 MU of energy against which the Commission has allowed 5651.26 MU. The corresponding cost has been arrived at as Rs.1328.33 crores as against Rs.1568.18 crores shown in the ARR.

Wages, salaries and other allowances:

636. The Licensee has projected an amount of Rs.118.79 crores towards wages, salaries and related costs and Rs.12.20 crores towards Employee funds for pension and gratuity (both, net of capitalization) aggregating to Rs.131.00 crores for inclusion in the ARR of FY 04-05 and furnished the following details in the filings at paragraph 2.3.2.3 thereof:

Table No.118

	(Rs. Crs) 2004-05
Wages, salaries and allowances	130.38
Contribution to Employee funds	13.40
Total	143.78
LESS: Capitalization	12.78
Net employee costs	**131.00**

637. In order that the provision towards employees' pension and gratuity funds are reflected at gross (and not net of any amount), the capitalization out of employees' pension and gratuity funds have been taken into account under Salaries & Wages itself. Taking this factor into account, the amount taken for Revenue Requirement towards Salaries & Wages is Rs.117.66 crores as shown in the Table below:

Table No.119
Revenue Requirement – Net Salaries & Wages

Item	(Rs. Crs)
Wages, salaries & allowances	130.44
Less: Capitalisation	12.78
Net of capitalisation-Salaries & Wages	**117.66**

638. The provision towards Employee Funds is shown separately in the subsequent paragraphs of this Chapter.

Administration and general expenses (excluding rent, rates & taxes, legal charges, audit fees, lease rentals etc.)

639. For FY 2004-05, the Licensee has claimed (in Form 1.3 of the filing) Rs.22.72 crores (net of capitalization) towards Administration and General Expenses, comprising a gross amount of Rs. 24.94 crores less the capitalization of Rs.2.22 crores. This is considered reasonable and provided for in the computation of the Aggregate Revenue Requirement.

Repairs and maintenance

640. APEPDCL has projected Rs.14.75 crores towards Repairs and Maintenance for FY 2004-05 for inclusion in the computation of the Revenue Requirement. This is considered reasonable and provided.

Rent, rates and taxes

641. APEPDCL has projected (in Form 1.3) Rs.7.36 crores for inclusion in the computation of the Revenue Requirement for FY 2004-05 towards Rent, Rates and Taxes. This is accepted and accordingly provided.

Interest on loans (including lease rentals)

642. APEPDCL has projected the interest amount of Rs.57.78 crores. However, APERC has worked out the amount as Rs.51.37 crores as indicated in the Table below:

Table No.120
Interest (net) and Other Finance Charges

(Rs. Crs)

Particulars	**Amount**
Interest (Rs. 47.55 crores less interest reduction of Rs.1.88 crores due to swapping of loans)	45.67
Lease rentals	0.71
Other Finance Charges	18.89
Total	65.27
LESS: IDC capitalization	13.90
TOTAL INTEREST	**51.37**

Interest on consumer security deposits

643. An amount of Rs.16.90 crores as detailed below, has been provided, calculated at 6% p.a. the prevailing Bank Rate on the average Security Deposits taken in the Capital Base, as per Section 47 (4) of the Electricity Act, 2003, as against 3% p.a. provided by the Licensee:

Table No.121

(Rs. Crs)

Security Deposits	
Closing balance (2003-04)	274.92
Closing balance (2004-05)	288.67
Average balance	281.80
Interest@ 6% p.a.	16.90

Legal charges

644. The Licensee has claimed (in Form 1.3) an amount of Rs.0.07 crore towards Legal charges. This is accepted as reasonable.

Audit and other fees

645. The Licensee has claimed an amount of Rs.0.04 crore towards Audit and other fees. This is accepted as reasonable.

Depreciation

646. Licensee has projected an amount of Rs.78.64 crores and the amount admitted is Rs.70.58 crores. The difference is on account of the difference in the level of capitalization for FY 2003-04, as explained earlier under Original Cost of Fixed Assets.

Other expenses

647. From this year onwards, there will not be any separate allocation of corporate office expenses by APTRANSCO to DISCOMS as the same have been taken into account while calculating the BST. Hence, Other expenses are to be taken as nil.

Provision for doubtful debts

648. The DISCOM has proposed 1% of the sales revenue of FY 2004-05 i.e. Rs. 15.37 crores towards provision for Bad and doubtful debts in their ARR filing (paragraph 2.3.2.6). Since the existing provision of Rs.46.90 crores (as on 31-03-2003) is not fully used, the Commission does not consider any additional provision.

Contribution to employee funds

649. The provision towards Employee Funds is made at 13% of basic pay plus D.A. based on the actuarial study relied upon for the Tariff Order of FY 2001-02. The Licensee has projected (vide paragraph 2.3.2.3 of the ARR) Rs.13.40 crores (gross) and Rs.12.20 crores (net of capitalization) towards contribution to Employee Funds. An amount of Rs.13.40 crores has however been admitted on this account towards the computation of the Revenue Requirement for FY 2004-05.

Special Appropriations

Contribution to Contingencies reserve

650. APEPDCL has proposed an amount of Rs.2.95 crores as Special Appropriation towards Contribution to Contingencies Reserve to be provided in the computation of the Revenue Requirement. The amount has been calculated at 0.25% of the Original Cost of Fixed Assets (OCFA) projected in the filing. As the amount of OCFA has undergone a change due to the reasons mentioned in the preceding paragraphs 619 and 620 on OCFA, the amount accepted towards Contingencies Reserve is Rs.1.94 crores. This is calculated at 0.25% (at the same rate as adopted by the Licensee) on the amount of OCFA allowed by the Commission as detailed in paragraphs 619 and 620 supra. The amount is yet to be invested by the DISCOM as specified and directed by the Commission earlier.

651. The Commission reiterates that paragraph 4 of the Sixth Schedule to the Electricity (Supply) Act, 1948 requires that the contributions towards Contingencies Reserve must be invested in securities authorized under the Indian Trusts Act, 1882, within a period of six months from the close of the year of account in which the appropriation is made. The Licensee is directed to comply with this requirement. The attention of the Licensee is also drawn to paragraph V of the Sixth Schedule that any drawal from the Contingencies Reserve can be made only with the prior approval of the Commission.

652. Adjustments pertaining to previous years:

(a).Interest:-The interest adjustment amounts of Rs.7.13 crores for FY 2000-01, Rs. (-) 0.86 crore for FY 2001-02 and Rs. (-) 6.44 crores for FY 2002-03 aggregating to Rs.(-) 0.17 crore have been taken as Special Appropriation in the calculation of the Revenue Requirement for FY 04-05.

(b).Depreciation:- The depreciation adjustment amounts of Rs. (-) 2.66 crores for FY 2000-01, Rs. (-) 0.57 crore for FY 2001-02 and Rs. 7.25 crores for FY 2002-03 aggregating to Rs.4.02 crores have been taken as Special Appropriation in the calculation of the Revenue Requirement for FY 04-05.

(c) Income Tax:- The income tax adjustment amounts of Rs. (-) 0.10 crore for FY 2000-01 and Rs. 0.32 crore for FY 2002-03 aggregating to Rs. 0.22 crore have been taken as Special Appropriation in the calculation of the Revenue Requirement for FY 04-05.

(d) Wage revision:- The wage revision adjustment amount of Rs.(-) 1.15 crores for FY 2002-03 has been taken as Special Appropriation in the calculation of the Revenue Requirement for FY 04-05.

(e) Reasonable Return:- The reasonable return adjustment amounts of Rs. (-) 0.04 crore for FY 2000-01, Rs. (-) 5.53 crores for FY 2001-02 and Rs. (-) 0.05 crore for FY 2002-03 aggregating to Rs. (-) 5.62 crores have been taken as Special Appropriation in the calculation of the Revenue Requirement for FY 04-05.

Total expenditure

653. In view of the above changes, the total expenditure works out to Rs.1642.42 crores as against Rs.1907.30 crores projected by the Licensee, as summarized in the following table:

Table No.122
Statement of expenditure and special appropriations

(Rs. Crs)

Expenditure Items	**APEPDCL**	**APERC**
Purchase of energy	1568.18	1328.33
Wages and Salaries (net of capitalization)	118.79	117.66
Administration and General Expenses (Net of capitalization)	22.72	22.72
Repairs and maintenance	14.75	14.75
Rent, rates and taxes	7.36	7.36
Approved loan interest (Net of capitalization)	57.78	51.37
Interest on Security Deposits	8.45	16.90
Legal charges	0.07	0.07
Audit and other fees	0.04	0.04
Depreciation	78.64	70.58
Other expenses	0.00	0.00
Provision for doubtful debts	15.37	0.00
Contribution to employee Funds (Net of capitalization)	12.20	13.40
Special Appropriations		
Contribution to Contingencies Reserve	2.95	1.94
Adjustments pertaining to previous years:		
Interest	0.00	(0.17)
Depreciation	0.00	4.02
Income Tax	0.00	0.22
Wage Revision	0.00	(1.15)
Reasonable Return	0.00	(5.62)
TOTAL EXPENDITURE	**1907.30**	**1642.42**

Note: The amounts within brackets denote minus figures.

Reasonable return:

654. APEPDCL has not claimed in the filings Reasonable Return it is eligible for as per the Sixth Schedule to the Electricity (Supply) Act, 1948. It may be recalled here that there was no claim for Reasonable Return in the filings for FY 2002-03 and FY 2003-04 also but as stated in the Tariff Orders for the respective years, the Commission allowed the Reasonable Return as, in the opinion of the Commission, it was not in the interest of either the consumers or the Licensee to forgo the Reasonable Return. The Commission wishes to emphasise that one of the prime objectives of reforms undertaken by the State in the Electricity Sector is to bring in a commercial orientation in the methods of operation as well as in the general approach to management decisions by the unbundled entities. The Commission considers it necessary to provide for the Reasonable Return in the calculation of the Revenue Requirement to reinforce this commercial orientation and hopes that this would act as a motivating factor and a morale-booster at all levels leading to more operational efficiency all round. The Commission accordingly allows an amount of Rs.2.31 crores as Reasonable Return to APSPDCL and includes it in the calculation of the Revenue Requirement for FY 2004-05.

Non-tariff income

655. The Licensee has projected an amount of Rs.67.93 crores as Non-Tariff income (Form 1.4). The Commission has reckoned an amount of Rs.88.70 crores, including Rs.20.77 crores as revenue realisation from wheeling of energy.

Aggregate revenue requirement

656. The Aggregate Revenue Requirement works out to Rs.1556.03 crores as against Rs.1839.37 crores projected by the Licensee as detailed in the Table below:

Table No.123

(Rs. Crs)

Total expenditure	1642.42
Reasonable Return	2.31
MINUS: Non-Tariff income	88.70
Total net aggregate revenue requirement	**1556.03**

Revenue from tariff and the gap

657. Determination of the Aggregate Revenue Requirement is the first step in the process of tariff formulation. Subsequent Chapters of this Tariff Order (Chapters XV and XVI) discuss the sales projections by the DISCOMS, the revenue gap, the tariff approved by the Commission taking into account the cross-subsidy and the government subsidy, the bulk supply tariff (BST) applicable to each DISCOM and other aspects.

CHAPTER – XI
ERC / ARR 2004-05:
DISTRIBUTION AND RETAIL SUPPLY
Andhra Pradesh Central Power Distribution Company Limited (APCPDCL)

658. APCPDCL, the Licensee company for distribution and retail supply of electricity in the territory assigned to it in Andhra Pradesh as per the licence granted by the Commission, filed the ARR / ERC on 24-12-2003. The Commission has examined the Licensee's proposals and indicates herein the areas where the computations of the Licensee are found to be incorrect or unacceptable with reasons therefor and the Commission's alternative computations.

659. Based on the finalised Second Transfer Scheme notified by the GoAP in Gazette Notification GO. MS No. 109 Energy (Power III) dated 29-09-2001, giving the opening Balance Sheet of APCPDCL (and also of APTRANSCO and the other three DISCOMS) as on 01-04-2000, the audited Annual Accounts for FY 2000-01, and 2001-02, and 2002-03 (audited by statutory auditors but without CAG's comments which were awaited) as compiled and finalised by the Licensee were made available to the Commission during October - December 2003. The figures as per these Accounts have been adopted, wherever relevant, for the purposes of this Tariff Order. The audited Accounts complete in all respects for FY 2002-03 adopted by the shareholders of the Company in the Annual General Meeting have not yet been filed with the Commission, as required under the terms of the licence. Audited Accounts forFY2002-03,which should have been available by 30-09-2003 as per the Companies Act, 1956, are also yet to be filed with the Commission.

660. While the Commission appreciates the recent efforts made to bring the audit of the Company's annual accounts largely up-to-date, it urges APCPDCL to spare no efforts to comply with the requirements of the Companies Act, 1956 in respect of the Annual Accounts for FY 2003-04 onwards.

Capital outlay on schemes during 2002-03 to 2004-05

661. The Licensee in the filings has made the following projections of capital expenditure for FY 2004-05:

Table No.124
Proposed capital outlay for FY 2004 – 05

(Rs. Crs)

	Base capital expenditure	Expenditure capitalisation	IDC*	Total
APCPDCL	400.00	40.00	23.21	463.21

* Interest during construction (IDC)

662. Before dealing with the projections of capital expenditure in FY 2004-05, it is necessary to advert to the capital expenditure during FY 2002-03.

663. The Commission has noted that there is a shortfall of Rs.72.51 crores in capital expenditure vis-à-vis the outlay of Rs.443.92 crores for APCPDCL approved in the Tariff Order for FY 03 as indicated in the Table below:

Table No.125
Capital outlay performance during 2002- 03

(Rs. Crs)

	Filing	Tariff Order	Actual	Shortfall
APCPDCL	443.92	443.92	371.41	72.51

(Figures include IDC and expense capitalisation)

664. This shortfall has resulted in significant variation in the Capital Base calculations for FY 2002-03 as detailed in the Table below:

Table No.126
Capital Base for FY 2002-03
Comparison of actual costs with Tariff Order figures on the basis of the audited accounts for FY 2002-03

(Rs. Crs)

	Filing	Tariff Order	Actual	Variance
Original cost of Fixed Assets	1774.00	1533.00	1757.03	224.03
Capital Works-in-Progress (CWIP)	535.00	562.00	237.50	(324.50)
Stores	49.00	11.00	14.74	3.74
Cash	58.00	20.00	27.38	7.38
Total (A)	**2416.00**	**2126.00**	**2036.65**	**(89.35)**
Accumulated depreciation	805.00	787.00	886.49	99.49
Borrowings	1117.00	934.00	672.27	(261.73)
Other no-cost funds	354.00	354.00	435.03	81.03
Total (B)	**2276.00**	**2075.00**	**1993.79**	**(81.21)**
Capital Base (A-B)	**140.00**	**51.00**	**42.86**	**(8.14)**

Note: The amounts within brackets denote minus figures.

665. The adjustment (necessitated due to this variance in the Capital Base) for the Reasonable Return is to be recalculated and included in the computation of the Aggregate Revenue Requirement for the Tariff of FY 2002-03, for necessary correction in Tariff Order of FY 2004-05.

666. The shortfall in capital investment during FY 2002-03 has also resulted in shortfall in interest expenditure of Rs.1.71 crores vis-à-vis the amount provided in the Tariff Order for FY 2002-03 as detailed in the Table below:

Table No.127
Calculation of interest adjustment due to shortfall in capital expenditure during 2002-03

(Rs. Crs)

Particulars	Amount	Amount
A.Interest as per tariff order for FY 2002-03		
Gross Interest and Finance Charges		106.80
LESS: IDC charged to Capital works		51.22
Net Interest		**55.58**
B. Actual as per audited accounts for FY 2002-03		
Gross Interest and Finance Charges	128.22	
LESS: Interest on Consumer Security Deposits	12.99	
Discount to consumers	43.91	
Balance	**71.32**	
LESS: IDC charged to capital works	17.45	**53.87**
Shortfall		**1.71**

667. The Commission considers that the shortfall of Rs.1.71 crores in interest incidence as calculated above out of the amount reckoned towards Revenue Requirement in the Tariff Order for FY 2002-03 needs to be adjusted as special appropriation in the calculation of the Revenue Requirement for FY 2004-05 and the adjustment is accordingly done.

Capital outlay – Progress during FY 2003- 04:

668. In the ARR for FY 2004-05, the DISCOM has projected a revised capital outlay (Base expenditure) of Rs.350.00 crores for FY 2003-04 along with IDC and expenditure capitalisation, which works out to Rs.409.77crores as against

Rs.203.38 crores reckoned in the Tariff Order for FY 2003-04. The Commission considers this projection to be on the higher side keeping in view the progress of expenditure during the first half of the year, up to September 2003, and the past track record and allows an amount of Rs.320.00 crores towards base expenditure on the schemes after taking into account the actual expenditure up to December 2003 as detailed in the Table below:

Table No.128
Estimated capital outlay for FY 2003-04

(Rs. Crs)

S.No.	Name of Scheme	APCPDCL	APERC
1	HUDA works	0.03	0.03
2	DFID Tranche-1	3.56	3.56
3	DFID Tranche-2	25.59	25.50
4	SI (Existing)	15.21	15.15
5	SI (New)	6.00	6.00
6	Pump-set energisation	12.00	12.00
7	Metering	30.43	24.15
8	Rural electrification (P:IE)	10.00	10.00
9	Distribution works-Release of services	35.00	35.00
10	SI Transformers	50.66	50.62
11	APL-1 Suppl.	10.00	10.00
12	PFC	28.00	20.00
13	APL-2	1.00	1.00
14	Material schemes	46.16	46.16
15	HVDS Hyderabad	30.00	30.00
16	HVDS Rural areas, Agriculture	16.36	5.83
17	Town schemes in 6 operation circles	30.00	25.00
	Total	**350.00**	**320.00**

669. The amount to be taken to CWIP in respect of the above schemes works out to Rs. 374.65 crores as detailed in the Table below:

Table No.129
Amounts taken to CWIP for FY 2003-04

(Rs. Crs)

Particulars	APCPDCL	APERC
Base capital expenditure	350.00	320.00
Expenses capitalized	35.00	32.00
Interest (IDC) capitalized	24.77	22.65
Total	**409.77**	**374.65**

The projected CWIP as on 31-03-2004 would serve as the Opening Balance for FY 2004-05.

CAPITAL OUTLAY – Projections for FY 2004-05:

670. As already mentioned above, the filings project a Base Capital expenditure of Rs.400.00 crores for FY2004-05 which together with the expenditure capitalization of Rs.40.00 crores and Interest During Construction (IDC) of Rs.23.21 crores works out to Rs.463.21 crores. It may be recalled here that the Commission in its Tariff Order for FY 2002-03 had stated in unambiguous terms that from FY 2003-04 onwards, it would allow for inclusion in the CWIP only those schemes which have its prior approval or those schemes which do not require such approval (being schemes, each costing less than Rs. 5 Crores). Based on this norm, the Commission allows for inclusion in the CWIP (for Capital Base calculations for FY 2004-05) the full amount of Rs.400.00 crores in respect of the following schemes projected by the Licensee as Base Capital expenditure; together with expenses capitalized and IDC, the capital outlay for 2004-05 works out to Rs.463.21 crores:

Table No.130
Scheme-wise details for Base capital expenditure for FY 2004-05
(Rs. Crs)

S.No.	Name of Scheme	APCPDCL	APERC
1	SI (Existing)	9.11	9.11
2	SI (New)	46.04	46.04
3	Pump-set energisation	15.09	15.09
4	Metering	23.64	23.64
5	Rural electrification (P:IE)	15.00	15.00
6	Distribution works-Release of services	35.00	35.00
7	SI Transformers	41.94	41.94
8	PFC	50.00	50.00
9	APL-2	10.00	10.00
10	Material schemes	24.18	24.18
11	HVDS Hyderabad	25.00	25.00
12	HVDS Rural areas, Agriculture	5.00	5.00
13	Town schemes in 6 operation circles	100.00	100.00
	Total	**400.00**	**400.00**

671. The Commission directs that from the filings for FY 2005-06 onwards, the CWIP along with the corresponding loans and consumer contributions shall be excluded and not taken into account for calculating the Capital Base and the necessary corresponding adjustments shall also be carried out in the expenses to be capitalized. Further, the DISCOM shall submit monthly progress reports on physical and financial progress on each of the schemes w.e.f. 01-04-2004.

Such reports shall also indicate the cost of the assets (works commissioned) capitalized against each scheme during the month.

Capital base – Positive elements:

Original Cost of Fixed Assets (OCFA):

672. The Licensee has proposed an amount of Rs.2432.03 crores as the Original Cost of Fixed Assets (excluding consumer contributions) to be reckoned in the Capital Base calculations for FY 2004-05. It may be mentioned in general about the transfers from CWIP to OCFA, that such transfers are meant to represent those assets that are completed (or commissioned where appropriate) and utlisation commenced (which are referred to as capitalized works in commercial parlance). But in the DISCOMS, the practice appears to be to transfer to Gross Fixed Assets the balance in the CWIP too at the beginning of the year and this gives room for the apprehension that works which are in fact not completed are treated as capitalized in the Accounts while the projections made for purpose of ARR by the DISCOMS also include capitalization proposals of even those works which already stand capitalized in the Accounts. Secondly, the ARR projections for capitalization are not based on a review of the scheme-wise status of progress vis-à-vis the earlier planned execution schedule and a genuine appraisal of the completion programme of works / schemes. Pending a detailed examination of the practice obtaining in this regard and its implications, an amount of Rs.250.00 crores has been reckoned for transfer to OCFA from CWIP for FY 2003-04 on an ad-hoc basis. Similarly, for FY 2004-05, an estimated amount of Rs.275.00 crores has been taken as transfers to OCFA from CWIP.

673. The estimated amount to be reckoned under OCFA in the Capital Base as on 31-03-2005 is therefore, as calculated in the Table below:

Table No.131

Statement of estimated fixed assets as on 31-03-2005 (Rs. Crs)

ITEM	APCPDCL	APERC
Gross Fixed Assets as on 31-03-03	2070.05	2070.05
LESS: Consumer contributions for capital assets	295.04	313.02
Original Cost of Fixed Assets (OCFA) as on 31.03.03	1775.01	1757.03
ADD: Works likely to be completed during 2003-04	398.40	250.00
Gross OCFA as on 31.03.04	2173.41	2007.03
LESS: Consumer contributions	80.00	101.25

OCFA as on 31.03.2004	2093.41	1905.78
ADD: Works likely to be completed in FY 2004-05	428.62	275.00
Gross OCFA as on 31.03.2005	2522.03	2180.78
LESS: Consumer contributions	90.00	223.75
OCFA as on 31.03.2005	**2432.03**	**1957.03**

Accordingly, OCFA taken to Capital Base amounts to Rs.1957.03 crores.

Capital works – in – progress (CWIP):

674. As already stated above, the Commission has decided to reckon Outlays of Rs.320.00 crores for FY 03-04 and Rs.400.00 crores for FY 04-05 as Base Capital expenditure (paragraphs 668 and 670 supra). These, together with the Expenses capitalized and the IDC work out to Rs.374.65 crores and Rs.463.21 crores respectively. Consequently, the amount reckoned for CWIP for FY 2003-04 works out to Rs.362.15 crores and for Capital Base calculations for FY 2004-05 to Rs.550.36 crores as detailed in the Table below:

Table No.132
Statement of estimated Works-in-progress for FY 2004-05

(Rs. crs)

	APCPDCL	APERC
Opening Balance of CWIP as on 1-4-2003	237.50	237.50
Outlay during the year (FY 2004-05)	350.00	320.00
Expenses during the year capitalized	35.00	32.00
Interest during construction charged to Capital (IDC)	24.77	22.65
Total additions: Capital expenditure	409.77	374.65
Total (OB + Additions)	647.27	612.15
LESS: Works anticipated to be completed in FY 2003-04	398.40	250.00
Closing Balance of CWIP as on 31.03.04 and Opening balance as on 01.04.2004	248.87	362.15
Additional investments during the year (FY 2004-05)	400.00	400.00
Expenses during the year capitalized	40.00	40.00
Interest during construction charged to Capital (IDC)	23.21	23.21
Total additions: Capital expenditure	463.21	463.21
Total (OB + Additions)	712.08	825.36
LESS: Works anticipated to be completed in FY 2004-05	428.62	275.00
Closing Balance of CWIP as on 31.03.05	**283.46**	**550.36**

Compulsory investments:

675. The Licensee has projected the compulsory investments (Contingencies Reserve) at Rs. 6.17 crores for FY 2004-05 and the same are considered in the computation of the capital base by APERC.

Working capital requirements:

676. Considering the working capital difficulties in the initial stages of the reforms process that the Licensees represented strongly about, the Commission decided in Tariff Order, FY 04, to allow the average cash and bank balance in the computation of the Capital Base at two months' level of eligible items of expenses instead of at one month's level as hitherto. This is intended to provide a trajectory to an efficient level over a period of 3 years. The level would therefore be at 2 months' level for FY 2003-04 and FY 2004-05 and at 1½ months' level for FY 2005-06. Thereafter it would revert to one month's level. There will be no change in the level of Average Cost of Stores, which is already being provided at 2 months' level of the annual repair and maintenance expenses.

Average cost of stores:

677. The DISCOM has proposed the amount of Rs.30.96 crores towards Average Cost of Stores for inclusion in the Capital Base calculations for FY 2004-05 by considering four months' level of the annual maintenance expenses, while the Commission in its Tariff Order 2003-04 (paragraph 449) had clearly stated that the Average Cost of Stores would continue to be provided at 2 months' level of the annual repairs and maintenance expenses. The proposed 4 months' level of maintenance expenses is thus not acceptable and an amount of only Rs.15.48 crores for FY 2004-05, calculated at two months' requirement of the repairs and maintenance expenses (Rs.92.88 crores) is provided.

Average cash and bank balance:

678. The Licensee has proposed Rs.30.67 crores towards Cash and Bank Balance for FY 2004-05 on the basis of (paragraph 3.1.19 of the filings) one month's 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 (net of expenses capitalized) for the year. As stated in the Tariff Order 2003-04 (paragraph 205), the provision

under this Head is to be calculated at two months' level of eligible items of expenses for FY 2004-05 instead of one month. Computed on that basis, the average Cash and Bank Balance works out to Rs.58.56 crores as detailed in the Table below and is provided for in the calculation of the Capital Base:

Table No.133
Computation of requirement of Average cash and bank balance
(Rs. Crs)

	2004-05
Wages and salaries	194.45
Admin. and General Expenses	35.37
Repairs and maintenance	92.88
Rent, rates and taxes	4.97
Contribution to employee funds	23.69
Total expenses	**351.36**
Average Cash and Bank Balances (351.36 ÷ 6)	**58.56**

Note: All amounts are net of expenses capitalized

Capital base-Negative elements:

Accumulated Depreciation

679. The accumulated depreciation as projected by the Licensee in the filings is Rs.1160.52 crores for FY 2004-05 against which Rs.1155.16 crores is admitted. The difference is due to the capitalization of works to be completed in FY 2003-04 being taken at less than the projections in the filings as already mentioned in paragraph 16 supra.

Loans from government and approved institutions:

680. The APCPDCL has projected Rs. 252.83 crores as Government loans, Rs.879.55 crores as loans from approved institutions and Rs.79.75 crores as "Other market borrowings for capital expenditure" aggregating to Rs. 1212.13 crores for FY 2004-05. However, the total loan amount admitted by APERC is Rs.876.83 crores.

681. It is seen that APCPDCL in the past years had drawn loans far in excess of the capital expenditure incurred during the year, as can be seen from the Table below:

Table No.134
Statement showing capital expenditure, loans, depreciation and consumer contributions

(Rs. Crs)

S.No.		As on 1.4.2000	As on 31.3.2001	As on 31.3.2002	As on 31.3.2003
1.	Gross Fixed Assets	1272.66	1560.53	1743.71	2070.05
2.	Capital Works-in-Progress	285.37	186.92	192.43	237.50
3.	Total	1558.03	1747.45	1936.14	2307.55
4.	Accretions: Capital expenditure		189.42	188.69	371.41
5.	Consumer contributions	64.01	140.69	218.49	313.02
6	Accretions: Net contributions received during the year		76.68	77.80	94.53
7	Balance to be funded by loan drawals (4 minus 6)		112.74	110.89	276.88
8	Loans drawn *		239.37	238.74	432.12
9	Excess drawals (8 minus 7)		126.63	127.85	155.24
10	Accumulated Depreciation	605.89	687.92	780.81	886.49
11	Accretion: Depreciation for the year		82.03	92.89	105.68
12	Loan repayments *		96.24	111.81	158.58
13	Balance Depreciation funds available (11-12)		(14.21)	(18.92)	(52.90)
14	Total funds overdrawn on Capital account (9+13)		**112.42**	**108.93**	**102.34**

*** Details of loans drawn and repayments**

(Rs. Crs)

	2000-01		2001-02		2002-03	
	Drawn	**Repaid**	**Drawn**	**Repaid**	**Drawn**	**Repaid**
Payments due on capital liabilities (Govt. loans)	48.12	48.12	74.54	74.54	70.19	70.19
Capital liabilities (approved Institutions)	123.56	40.78	127.43	28.87	242.67	82.48
Govt. loans	67.69	7.34	36.77	8.40	119.26	5.91
Total	239.37	96.24	238.74	111.81	432.12	158.58

682. Though funds drawn but unspent on capital account were thus around Rs.323.69 crores (Rs.112.42 crores + Rs.108.93 crores + Rs.102.34 crores) as on 01-04-2003, the filings in fact project drawal of further loans of Rs.390.34 crores during FY 2003-04 and Rs.1259.75 crores during FY 2004-05 i.e. much in excess of requirements.

683. In the Tariff Order for FY 2003-04, the Commission expressed its concern over the way the financial affairs of the DISCOM had been conducted during the two years FY 01 and FY 02 and advised the DISCOM not to draw any further loans from

01-04-2003 till the excess funds available on capital account were absorbed by way of expenditure on capital works.

684. ***The Commission directs the DISCOM to submit a detailed capital expenditure programme (for the consideration of the Commission) to absorb the excess funds available on capital account at least by 31-12-2004.***

685. For the Capital Base calculations for FY 2004-05, the Commission has reckoned the loans of Rs.876.83 crores. This has been calculated starting with the loans figure of Rs.672.27 crores as on 31-03-2003 in the audited Balance Sheet for FY 2002-03 made available to the Commission. After taking into account the consumer contributions, depreciation etc., for the purpose of funding the capital expenditure and the working capital allowed to the extent included in the capital base, the closing balance of the loan to be taken in the capital base works out to Rs.876.83 crores as against Rs.1212.13 crores projected by the licensee.

Consumer Security Deposits:

686. The Licensee has projected Rs.465.03 crores towards consumer security deposits. However, the Licensee has not shown any amount towards incremental Consumer Security Deposits in the calculation of the Capital Base. The Commission for reasons already detailed in paragraph 207 of the Tariff Order 2003-04 does not agree that Consumer Security Deposits are to be excluded from the negative side of the Capital Base. An amount of Rs.510.03 crores towards incremental consumer security deposit is therefore taken on this account to the negative side of the Capital Base. Consumer security deposits at the end of FY 2003 figuring in the books of the licensee are Rs.435.03 crores and amount of Rs.75.00 crores towards incremental consumer security deposit for FY 2004 and FY 2005 is taken on this account to the negative side of the Capital Base. Thus the total Consumer Security Deposits reckoned for Capital Base are Rs. 510.03 crores.

Net capital base:

687. With the above changes in the positive and negative elements of the Capital Base, the Net Capital Base works out to Rs.45.58 crores as detailed in the Table below as against Rs (-) 54.38 crores projected by the Licensee.

Table No.135
Capital Base computations for FY 2004-05

(Rs. Crs)

ITEM	APCPDCL		APERC
Positive elements of Capital Base			
Original cost of Fixed Assets (excluding consumer contributions, etc.)		2432.03	1957.03
Capital Works-in-Progress		283.47	550.36
Statutory investment (of Contingencies Reserve)		6.17	6.17
Working Capital			
a) Average cost of stores		30.96	15.48
b) Average cash and bank balance		30.67	58.56
Total of positive elements of Capital Base		2783.30	2587.60
Negative elements of Capital Base			
Accumulated Depreciation		1160.52	1155.16
Government loans	252.83		
Approved loans	879.55	1212.13	876.83
Other market borrowings for CAPEX	79.75		
Consumer Security Deposits		465.03	510.03
Total of negative elements of Capital Base		2837.68	2542.02
Net Capital Base		(54.38)	45.58

Note: The amounts within brackets denote minus figures.

EXPENDITURE

Purchase of energy

688. APCPDCL has projected a requirement of 14811.22 MU of energy against which the Commission has allowed 14548.84 MU. The corresponding cost has been arrived at as Rs.3576.31 crores as against Rs.4055.60 crores shown in the ARR.

Wages, salaries and other allowances:

689. The Licensee has projected amounts of Rs.210.49 crores towards wages, salaries and related costs and Rs.22.08 crores towards Employee funds for pension and gratuity (both, net of capitalization) aggregating to Rs.232.57 crores for inclusion in the ARR of FY 04-05 and furnished the following details in the filings at paragraph 3.1.3 thereof:

Table No.136

(Rs. Crs)

	2004-05
Wages, salaries and allowances	237.97
Contribution to Employee funds	29.03
Total	267.00
LESS: Capitalization	**34.43**
Net employee costs	232.57

690. In order that the provision towards employees' pension and gratuity funds are reflected at gross (and not net of any amount), the capitalization out of employees' pension and gratuity funds have been taken into account under Salaries & Wages itself. Taking this factor into account, the amount taken for Revenue Requirement towards Salaries & Wages is Rs.194.45 crores as shown in the Table below:

Table No. 137
Revenue Requirement – Net Salaries & Wages

Wages, salaries & allowances	228.88
Less: Capitalisation	34.43
Net of capitalisation-Wages and salaries	194.45

691. The provision towards Employee Funds is shown separately in the subsequent paragraphs of this Chapter.

Administration and general expenses (excluding rent, rates & taxes, legal charges, audit fees, lease rentals etc.)

692. For FY 2004-05, the Licensee has claimed (in Form 1.3 of the filing) Rs.37.64 crores (net of capitalization) towards Administration and General Expenses, comprising a gross amount of Rs. 43.21 crores less the capitalization of Rs.5.57 crores. However, e-seva cost of Rs.2.27 crores is excluded, as the revenue towards customer charges collected by licensee should be sufficient as also the correct source to meet such costs. The balance amount of Rs.35.37 crores (net of capitalization) is considered reasonable and provided for in the computation of the Aggregate Revenue Requirement.

Repairs and maintenance

693. APCPDCL has projected Rs.92.88 crores towards Repairs and Maintenance for FY 2004-05 for inclusion in the computation of the Revenue Requirement. This is considered reasonable and provided.

Rent, rates and taxes

694. APCPDCL has projected (in Form 1.3) Rs.4.97 crores for inclusion in the computation of the Revenue Requirement for FY 2004-05 towards Rent, Rates and Taxes. This is accepted and accordingly provided.

Interest on loans (including lease rentals)

695. APCPDCL has projected the interest amount of Rs.184.59 crores. However, APERC has worked out the amount as Rs.152.90 crores as indicated in the Table below:

Table No.138
Interest (net) and Other Finance Charges

(Rs. Crs)

Particulars	Amount
Interest (Rs. 89.71 crores less interest reduction of Rs.4.14 crores due to swapping of loans)	85.57
Lease rentals	8.69
Other Finance Charges	81.85
Total	**176.11**
LESS: IDC capitalization	23.21
TOTAL INTEREST	**152.90**

Interest on consumer security deposits

696. An amount of Rs.28.80 crores as detailed below has been provided, calculated at 6% p.a. the prevailing Bank Rate on the average Security Deposits taken in the Capital Base, as per Section 47 (4) of the Electricity Act, 2003, as against 3% p.a. provided by the Licensee:

Table No.139

(Rs. Crs)

Security Deposits	
Closing balance (2003-04)	465.03
Closing balance (2004-05)	495.03
Average balance	480.03
Interest @ 6% p.a.	**28.80**

Legal charges

697. The Licensee has claimed (in Form 1.3) an amount of Rs.13.58 crores towards Legal Charges. This is accepted as reasonable.

Audit and other fees

698. The Licensee has claimed an amount of Rs.0.05 crore towards Audit and other fees. This is accepted as reasonable.

Depreciation

699. Licensee has projected an amount of Rs.149.21 crores and the amount admitted is Rs.143.85 crores. The difference is on account of the difference in the level of capitalization for FY 2003-04, as explained earlier under Original Cost of Fixed Assets.

Other expenses

700. From this year onwards, there will not be any separate allocation of corporate office expenses by APTRANSCO to DISCOMS as the same have been taken into account while calculating the BST. Hence, Other expenses are to be taken as nil.

Provision for doubtful debts

701. The DISCOM has proposed 1% of the sales revenue of FY 2004-05 i.e. Rs.37.06 crores towards provision for Bad and doubtful debts in their ARR filing (paragraph 2.3.2.6). Since the existing provision of Rs.9.22 crores (as on 31-3-2003) is not fully used, the Commission does not consider any additional provision.

Contribution to employee funds

702. The provision towards Employee Funds is made at 13% of basic pay plus D.A. based on the actuarial study relied upon for the Tariff Order of FY 2001-02. The Licensee has projected (vide paragraph 3.1.3 of the ARR) Rs.25.35 crores (gross) and Rs.22.08 crores (net of capitalization) towards contribution to Employee Funds. An amount of Rs.23.69 crores has however, been admitted on this account towards the computation of the Revenue Requirement for FY 2004-05.

Special Appropriations

Contribution to Contingencies reserve

703. APCPDCL has proposed an amount of Rs.7.24 crores as Special Appropriation towards Contribution to Contingencies Reserve to be provided in the computation of the Revenue Requirement. The amount has been calculated at 0.25% of the Original Cost of Fixed Assets (OCFA) projected in the filing. As the amount of OCFA has undergone a change due to the reasons mentioned in the preceding paragraphs 672 and 673 on OCFA, the amount accepted towards Contingencies Reserve is Rs.4.89 crores. This is calculated at 0.25% (the same rate as adopted by the Licensee) on the amount of OCFA allowed by the Commission as detailed in paragraphs 672 and 673 supra. The amount is yet to be invested by the DISCOM as specified and directed by the Commission earlier.

704. The Commission reiterates that paragraph 4 of the Sixth Schedule to the Electricity (Supply) Act, 1948 requires that the contributions towards Contingencies Reserve must be invested in securities authorized under the Indian Trusts Act, 1882, within a period of six months from the close of the year of account in which the appropriation is made. The Licensee is directed to comply with this requirement. The attention of the Licensee is also drawn to paragraph V of the Sixth Schedule that any drawal from the Contingencies Reserve can be made only with the prior approval of the Commission.

705. **Adjustments pertaining to previous years:**

(a) **Interest:-** The interest adjustment amounts of Rs.23.21 crores for FY 2000-01, Rs. 1.52 crores for FY 2001-02 and Rs. (-) 1.71 crores for FY 2002-03 aggregating to Rs.23.02 crores have been taken as Special Appropriation in the calculation of the Revenue Requirement for FY 04-05.

(b) **Depreciation:-** The depreciation adjustment amounts of Rs. (-) 6.04 crores for FY 2000-01, Rs. 0.64 crore for FY 2001-02 and Rs. 10.02 crores for FY 2002-03 aggregating to Rs.4.62 crores have been taken as Special Appropriation in the calculation of the Revenue Requirement for FY 04-05.

(c) Income Tax:- The income tax adjustment amount of Rs.(-) 3.63 crores for FY 2000-01 has been taken as Special Appropriation in the calculation of the Revenue Requirement for FY 04-05.

(d) **Wage revision:-** The wage revision adjustment amount of Rs.1.22 crores for FY 2002-03 has been taken as Special Appropriation in the calculation of the Revenue Requirement for FY 04-05.

(e) **Reasonable Return:-** The reasonable return adjustment amounts of Rs. (-) 1.29 crores for FY 2000-01, Rs. 29.87 crores for FY 2001-02 and Rs. (-) 1.70 crores for FY 2002-03 aggregating to Rs.26.88 crores have been taken as Special Appropriation in the calculation of the Revenue Requirement for FY 04-05.

Total expenditure

706. In view of the above changes, the total expenditure works out to Rs.4323.85 crores as against Rs.4829.79 crores projected by the Licensee, as summarized in the following table:

Table No.140
Statement of expenditure and special appropriations

(Rs. Crs)

Expenditure Items	**APCPDCL**	**APERC**
Purchase of energy	4055.60	3576.31
Wages and Salaries (net of capitalization)	210.49	194.45
Administration and General Expenses (Net of capitalization)	37.64	35.37
Repairs and maintenance	92.88	92.88
Rent, rates and taxes	4.97	4.97
Approved loan interest (Net of capitalization)	184.59	152.90
Interest on Security Deposits	14.40	28.80
Legal charges	13.58	13.58
Audit and other fees	0.05	0.05
Depreciation	149.21	143.85
Other expenses	0.00	0.00
Provision for doubtful debts	37.06	0.00
Contribution to employee Funds (Net of capitalization)	22.08	23.69
Special Appropriations		
Contribution to Contingencies Reserve	7.24	4.89
Adjustments pertaining to previous years:		
Interest	0.00	23.02
Depreciation	0.00	4.62
Income Tax	0.00	(3.63)
Wage Revision	0.00	1.22
Reasonable Return	0.00	26.88
TOTAL EXPENDITURE	**4829.79**	**4323.85**

Note: The amounts within brackets denote minus figures.

Reasonable return:

707. APCPDCL has not claimed in the filings Reasonable Return it is eligible for as per the Sixth Schedule to the Electricity (Supply) Act, 1948. It may be recalled here that there was no claim for Reasonable Return in the filings for FY 2002-03 and FY 2003-04 also but as stated in the Tariff Orders for the respective years, the Commission allowed the Reasonable Return as, in the opinion of the Commission, it was not in the interest of either the consumers or the Licensee to forgo the Reasonable Return. The Commission wishes to emphasise that one of the prime objectives of reforms undertaken by the State in the Electricity Sector is to bring in a commercial orientation in the methods of operation as well as in the general approach to management decisions by the unbundled entities. The Commission considers it necessary to provide for the Reasonable Return in the calculation of the Revenue Requirement to reinforce this commercial orientation and hopes that this would act as a motivating factor and a morale-booster at all levels leading to more operational efficiency all round. The Commission accordingly allows an amount of Rs.11.68 crores as Reasonable Return to APCPDCL and includes it in the calculation of the Revenue Requirement for FY 2004-05.

Non-tariff income

708. The Licensee has projected an amount of Rs.259.30 crores as Non-Tariff income (Form 1.4). The Commission has reckoned an amount of Rs.300.80 crores, including Rs.41.50 crores as revenue realisation from wheeling of energy.

Aggregate revenue requirement

709. The Aggregate Revenue Requirement works out to Rs.4034.73 crores as against Rs.4570.49 crores projected by the Licensee as detailed in the Table below:

Table No.141

(Rs. Crs)

Total expenditure	4323.85
Reasonable Return	11.68
MINUS: Non-Tariff income	300.80
Total net aggregate revenue requirement	**4034.73**

Revenue from tariff and the gap

710. Determination of the Aggregate Revenue Requirement is the first step in the process of tariff formulation. Subsequent Chapters of this Tariff Order (Chapters XV and XVI) discuss the sales projections by the DISCOMS, the revenue gap, the tariff approved by the Commission taking into account the cross-subsidy and the government subsidy, the bulk supply tariff (BST) applicable to each DISCOM and other aspects.

CHAPTER – XII
ERC / ARR 2004-05:
DISTRIBUTION AND RETAIL SUPPLY
Andhra Pradesh Northern Power Distribution Company Limited (APNPDCL)

711. APNPDCL, the Licensee company for distribution and retail supply of electricity in the territory assigned to it in Andhra Pradesh as per the licence granted by the Commission, filed the ARR / ERC on 24.12.2003. The Commission has examined the Licensee's proposals and indicates herein the areas where the computations of the Licensee are found to be incorrect or unacceptable with reasons therefor and the Commission's alternative computations.

712. Based on the finalised Second Transfer Scheme notified by the GoAP in Gazette Notification GO. MS No. 109 Energy (Power III) dated:29.09.2001, giving the opening Balance Sheet of APNPDCL (and also of APTRANSCO and the other three DISCOMS) as on 01.04.2000, the audited Annual Accounts for FY 2000-01, and 2001-02, and 2002-03 (audited by statutory auditors but without CAG's comments which were awaited) as compiled and finalized by the Licensee were made available to the Commission during October - December 2003. The figures as per these Accounts have been adopted, wherever relevant, for the purposes of this Tariff Order. The audited Accounts complete in all respects for FY 2002-03 adopted by the shareholders of the Company in the Annual General Meeting have not yet been filed with the Commission, as required under the terms of the licence. Audited Accounts for FY 2002-03, which should have been available by 30-9-2003 as per the Companies Act, 1956, are also yet to be filed with the Commission.

713. While the Commission appreciates the recent efforts made to bring the audit of the Company's annual accounts largely up-to-date, it urges APNPDCL to spare no efforts to comply with the requirements of the Companies Act, 1956 in respect of the Annual Accounts for FY 2003-04 onwards.

Capital outlay on schemes during 2002-03 to 2004-05

714. The Licensee in the filings has made the following projections of capital expenditure for FY 2004-05:

Table No.142
Proposed capital outlay for FY 2004 – 05

(Rs. Crs)

	Base capital expenditure	Expenditure capitalisation	IDC*	Total
APNPDCL	199.00	19.90	15.55	234.45

* Interest during construction (IDC)

715. Before dealing with the projections of capital expenditure in FY 2004-05, it is necessary to advert to the capital expenditure during FY 2002-03.

716. The Commission has noted that there is an excess capital expenditure of Rs.11.91 crores vis-à-vis the outlay of Rs.194.58 crores for APNPDCL approved in the Tariff Order for FY 03 as indicated in the Table below:

Table No.143
Capital outlay-performance during 2002- 03

(Rs. Crs)

	Filing	Tariff Order	Actual	Excess
APNPDCL	194.58	194.58	206.49	11.91

(Figures include IDC and expense capitalisation)

717. This excess has resulted in significant variation in the Capital Base calculations for FY 2002-03 as detailed in the Table below:

Table No.144
Capital Base for FY 2002-03
Comparison of actual costs with Tariff Order figures on the basis of the audited accounts for FY 2002-03

(Rs. Crs)

	Filing	Tariff Order	Actual	Variance
Original cost of Fixed Assets	1002.82	859.18	892.30	(33.12)
Capital Works-in-Progress (CWIP)	188.16	292.12	190.21	101.91
Stores	27.51	4.94	5.24	(0.30)
Cash	13.25	12.75	15.45	(2.70)
Total (A)	**1231.74**	**1168.99**	**1103.20**	**65.79**
Accumulated depreciation	481.86	477.86	456.34	(21.52)
Borrowings	570.94	530.81	514.00	(16.81)
Other no-cost funds	0.00	146.65	165.48	18.83
Total (B)	**1052.80**	**1155.32**	**1135.82**	**(19.50)**
Capital Base (A-B)	**178.94**	**13.67**	**(32.62)**	**46.29**

Note: The amounts within brackets denote minus figures.

718. The adjustment (necessitated due to this variance in the Capital Base) for the Reasonable Return is to be recalculated and included in the computation of the Aggregate Revenue Requirement for the Tariff of FY 2002-03, for necessary correction in Tariff Order of FY 2004-05.

719. The excess in capital investment during FY 2002-03 has also resulted in excess in interest expenditure of Rs.22.66 crores vis-à-vis the amount provided in the Tariff Order for FY 2002-03 as detailed in the Table below:

Table No.145
Calculation of interest adjustment due to excess in capital expenditure during 2002-03

(Rs. Crs)

Particulars	Amount	Amount
Interest as per tariff order for FY 2002-03		
Gross Interest and Finance Charges		64.62
LESS: IDC charged to Capital works		23.62
Net Interest		41.00
Actual as per audited accounts for FY 2002-03		
Gross Interest and Finance Charges	89.71	
LESS: Interest on Consumer Security Deposits	4.62	
Discount to HT consumers	5.67	
Balance	79.42	
LESS: IDC charged to capital works	15.76	63.66
Excess		22.66

720. The Commission considers that the excess interest incidence of Rs.22.66 crores as calculated above, over and above the amount reckoned towards Revenue Requirement in the Tariff Order for FY 2002-03 needs to be adjusted as special appropriation in the calculation of the Revenue Requirement for FY 2004-05 and the adjustment is accordingly done.

Capital outlay – Progress during FY 2003- 04*:*

721. In the ARR for FY 2004-05, the DISCOM has projected a revised capital outlay (Base expenditure) of Rs.115.06 crores for FY 2003-04 along with IDC and expenditure capitalization, which works out to Rs.139.94 crores as against

Rs.143.35 crores reckoned in the Tariff Order for FY 2003-04. The Commission considers this projection is reasonable keeping in view the progress of expenditure during the first half of the year, up to September 2003, and the past track record and allows an amount of Rs.115.06 crores towards base expenditure as filed by APNPDCL on the schemes after taking into account the actual expenditure up to December 2003 as detailed in the Table below:

Table No.146
Estimated capital outlay for FY 2003-04

(Rs. Crs)

S.No.	Name of Scheme	APNPDCL	APERC
1	APL-1 (Supplemental)	12.78	12.78
2	APEEP (DFID)	2.60	2.60
3	Distribution Plan (Release of Services other than agricultural services)	14.21	14.21
4	Rural electrification (P:IE)	9.73	9.73
5	SI Transformers	10.00	10.00
6	SI Conductors	7.43	7.43
7	SI lines	6.00	6.00
8	Release of AGL services (SPA:PE)	4.46	4.46
9	SI VCBs	1.06	1.06
10	33 / 11 KV substations (PSI)	5.99	5.99
11	SI meters	7.77	7.77
12	HVDS	5.00	5.00
13	APDRP – Warangal district	20.00	20.00
14	APDRP – Town plans	8.03	8.03
	GRAND TOTAL	**115.06**	**115.06**

722. The amount to be taken to CWIP in respect of the above schemes works out to Rs. 139.94 crores as detailed in the Table below:

Table No.147
Amounts taken to CWIP for FY 2003-04

(Rs. Crs)

Particulars	APNPDCL	APERC
Base capital expenditure	115.06	115.06
Expenses capitalized	11.51	11.51
Interest (IDC) capitalized	13.37	13.37
Total	**139.94**	**139.94**

723. The projected CWIP as on 31-03-2004 would serve as the Opening Balance for FY 2004-05.

CAPITAL OUTLAY – Projections for FY 2004-05:

724. As already mentioned above, the filings project a Base Capital expenditure of Rs.199.00 crores for FY2004-05 that together with the expenditure capitalization of Rs.19.90 crores and Interest During Construction (IDC) of Rs.15.55 crores works out to Rs.234.45 crores. It may be recalled here that the Commission in its Tariff Order for FY 2002-03 had stated in unambiguous terms that from FY 2003-04 onwards, it would allow for inclusion in the CWIP only those schemes which have its prior approval or those schemes which do not require such approval (being schemes, each costing less than Rs. 5 Crores). Based on this norm, the Commission allows for inclusion in the CWIP (for Capital Base calculations for FY 2004-05), the full amount of Rs.199.00 crores in respect of the following schemes projected by the Licensee as Base Capital expenditure; together with expenses capitalized and IDC, the capital outlay for 2004-05 works out to Rs. 234.45 crores:

Table No.148
Scheme-wise details for Base capital expenditure for FY 2004-05
(Rs. Crs)

S.No.	Name of Scheme	APNPDCL	APERC
1	Distribution Plan (Services other than agricultural services)	24.00	24.00
2	Rural electrification (P:IE)	10.00	10.00
3	AGL Services (SPA:PE)	5.00	5.00
4	33 / 11 KV substations (PSI)	20.00	20.00
5	SI Transformers	9.78	9.78
6	SI Conductors	7.00	7.00
7	SI meters	8.00	8.00
8	SI lines	6.00	6.00
9	SI VCBs	1.22	1.22
10	HVDS	30.00	30.00
11	APDRP – Warangal district	50.00	50.00
12	APDRP – Town plans	28.00	28.00
	GRAND TOTAL	**199.00**	**199.00**

725. The Commission directs that from the filings for FY 2005-06 onwards, the CWIP along with the corresponding loans and consumer contributions shall be excluded and not taken into account for calculating the Capital Base and the necessary corresponding adjustments shall also be carried out in the expenses to be capitalized. Further, the DISCOM shall submit monthly progress reports on physical and financial progress on each of the schemes w.e.f. 01-04-2004.

Such reports shall also indicate the cost of the assets (works commissioned) capitalized against each scheme during the month.

Capital base – Positive elements:

Original Cost of Fixed Assets (OCFA):

726. The Licensee has proposed an amount of Rs.1191.04 crores as the Original Cost of Fixed Assets (excluding consumer contributions) to be reckoned in the Capital Base calculations for FY 2004-05. It may be mentioned in general about the transfers from CWIP to OCFA, that such transfers are meant to represent those assets that are completed (or commissioned where appropriate) and utlisation commenced (which are referred to as capitalized works in commercial parlance). But in the DISCOMS, the practice appears to be to transfer to Gross Fixed Assets the balance in the CWIP too at the beginning of the year and this gives room for the apprehension that works which are in fact not completed are treated as capitalized in the Accounts while the projections made for purpose of ARR by the DISCOMS also include capitalization proposals of even those works which already stand capitalized in the Accounts. Secondly, the ARR projections for capitalization are not based on a review of the scheme-wise status of progress vis-à-vis the earlier planned execution schedule and a genuine appraisal of the completion programme of works / schemes. Pending a detailed examination of the practice obtaining in this regard and its implications, an amount of Rs.100.00 crores has been reckoned for transfer to OCFA from CWIP for FY 2003-04 on an ad-hoc basis. Similarly, for FY 2004-05, an estimated amount of Rs.150.00 crores has been taken as transfers to OCFA from CWIP.

727. The estimated amount to be reckoned under OCFA Assets in the Capital Base as on 31-03-2005 is therefore, as calculated in the Table below:

Table No.149

Statement of estimated fixed assets as on 31-03-2005 **(Rs. Crs)**

ITEM	APNPDCL	APERC
Gross Fixed Assets as on 31-03-03 LESS: Consumer contributions for capital assets	1004.10 103.67	1004.10 111.80
Original Cost of Fixed Assets (OCFA) as on 31.03.03	900.43	892.30
ADD: Works likely to be completed during 2003-04	194.09	100.00
Gross OCFA as on 31.03.04	1094.52	992.30
LESS: Consumer contributions	14.21	20.13

OCFA as on 31.03.2004	1080.31	972.17
ADD: Works likely to be completed in FY 2004-05	134.73	150.00
Gross OCFA as on 31.03.2005	1215.04	1122.17
LESS: Consumer contributions	24.00	52.63
OCFA as on 31.03.2005	**1191.04**	**1069.54**

Accordingly, OCFA taken to Capital Base amounts to Rs.1069.54 crores.

Capital works – in – progress (CWIP):

728. As already stated above, the Commission has decided to reckon Outlays of Rs.115.06 crores for FY 03-04 and Rs.199.00 crores for FY 04-05 as Base Capital expenditure (paragraphs 721 and 724 supra). These, together with the Expenses capitalized and the IDC work out to Rs.139.94 crores and Rs.234.45 crores respectively. Consequently, the amount reckoned for CWIP for FY 2003-04 works out to Rs.230.15 crores and for Capital Base calculations for FY 2004-05 to Rs.314.60 crores as detailed in the Table below:

Table No.150
Statement of estimated Works-in-progress for FY 2004-05 (Rs. crs)

	APNPDCL	APERC
Opening Balance of CWIP as on 01.04.2003	190.21	190.21
Outlay during the year (FY 2003-04)	115.06	115.06
Expenses during the year capitalized	11.51	11.51
Interest during construction charged to Capital (IDC)	13.37	13.37
Total additions: Capital expenditure	139.94	139.94
Total (OB + Additions)	330.15	330.15
LESS: Works anticipated to be completed in FY 2003-04	194.09	100.00
Closing Balance of CWIP as on 31.03.04 and Opening balance as on 01.04.2004	136.06	230.15
Additional investments during the year (FY 2004-05)	199.00	199.00
Expenses during the year capitalized	19.90	19.90
Interest during construction charged to Capital (IDC)	15.55	15.55
Total additions: Capital expenditure	234.45	234.45
Total (OB + Additions)	370.51	464.60
LESS: Works anticipated to be completed in FY 2004-05	134.73	150.00
Closing Balance of CWIP as on 31.03.05	**235.78**	**314.60**

Compulsory investments:

729. The Licensee has projected the compulsory investments (Contingencies Reserve) at Rs. 5.36 crores for FY 2004-05 and the same are considered in the computation of the capital base by APERC.

Working capital requirements:

730. Considering the working capital difficulties in the initial stages of the reforms process that the Licensees represented strongly about, the Commission decided in Tariff Order, FY 04 to allow the average cash and bank balance in the computation of the Capital Base at two months' level of eligible items of expenses instead of at one month's level hitherto. This is intended to provide a trajectory to an efficient level over a period of 3 years. The level would therefore be at 2 months' level for FY 2003-04 and FY 2004-05 and at 1½ months' level for FY 2005-06. Thereafter it would revert to one month's level. There will be no change in the level of Average Cost of Stores, which is already being provided at 2 months' level of the annual repair and maintenance expenses.

Average cost of stores:

731. The DISCOM has proposed an amount of Rs.33.58 crores towards Average Cost of Stores for inclusion in the Capital Base calculations for FY 2004-05 by considering 2 months' level of the annual maintenance expenses and 2% of the closing balance of gross fixed assets, while the Commission in its Tariff Order 2003-04 (paragraph 449) had clearly stated that the Average Cost of Stores would continue to be provided at 2 months' level of the annual repairs and maintenance expenses. The proposed inventory level of Rs.33.58 crores to support the repair and maintenance activities of Rs.41.56 crores projected in the filings for FY 2004-05 is manifestly too high as the inventory works out to over nine months' consumption. An amount of only Rs.6.93 crores for FY 2004-05, calculated at two months' requirement of the repairs and maintenance expenses (Rs.41.56 crores) is therefore provided.

Average cash and bank balance:

732. The Licensee has proposed Rs.16.46 crores towards Cash and Bank Balance for FY 2004-05 as one month's 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 (net

of expenses capitalized) for the year. As stated in the Tariff Order 2003-04 (paragraph 205), the provision under this Head is to be calculated at two months' level of eligible items of expenses for FY 2004-05 instead of one month. Computed on that basis, the average Cash and Bank Balance works out to Rs.31.98 crores as detailed in the Table below and is provided for in the calculation of the Capital Base:

Table No.151
Computation of requirement of Average cash and bank balance
(Rs. Crs)

	2004-05
Wages and salaries	118.83
Admin. and general expenses	14.48
Repairs and maintenance	41.56
Rent, rates and taxes	2.94
Contribution to Employee Funds	14.10
Total expenses	191.91
Average Cash and Bank Balances (191.91 ÷ 6)	**31.98**

Note: All amounts are net of expenses capitalised.

Capital base-Negative elements:

Accumulated Depreciation

733. The accumulated depreciation as projected by the Licensee in the filings is Rs. 592.49 crores for FY 2004-05 against which Rs.587.99 crores is admitted. The difference is due to the capitalization of works to be completed in FY 2003-04 being taken at less than the projections in the filings as already mentioned in paragraph 726 supra.

Loans from government and approved institutions:

734. The APNPDCL has projected Rs. 129.35 crores as Government loans, Rs.461.67 crores as loans from approved institutions and Rs.61.01 crores as "Other market borrowings for capital expenditure" aggregating to Rs. 652.03 crores for FY 2004-05. However, the total loan amount admitted by APERC for is Rs.661.48 crores, after considering the debt redemption obligation of Rs.18.36 crores.

735. It is seen that APNPDCL in the past years had drawn loans far in excess of the capital expenditure incurred during the year, as can be seen from the Table below:

Table No.152
Statement showing capital expenditure, loans, depreciation and consumer contributions

(Rs. Crs)

Sl. No.		As on 1.4.2000	As on 31.3.2001	As on 31.3.2002	As on 31.3.2003
1.	Gross Fixed Assets	694.37	792.27	888.10	1004.10
2.	Capital Works-in-Progress	98.05	95.31	99.72	190.21
3.	Total	792.42	887.58	987.82	1194.31
4.	Accretions: Capital expenditure		95.16	100.24	206.49
5.	Consumer contributions	26.38	51.79	78.26	111.80
6	Accretions: Net contributions received during the year		25.41	26.47	33.54
7	Balance to be funded by loan drawals (4 minus 6)		69.75	73.77	172.95
8	Loans drawn *		135.91	157.91	186.13
9	Excess drawals (8 minus 7)		66.16	84.14	13.18
10	Accumulated Depreciation	309.47	358.33	401.65	456.34
11	Accretion: Depreciation for the year		48.86	43.32	54.69
12	Loan repayments *		41.33	66.49	81.22
13	Balance Depreciation funds available (11-12)		7.53	(23.17)	(26.53)
14	Total funds overdrawn (excess repayment) on Capital account (9+13)		73.69	60.97	(13.35)

Note: The amounts within brackets denote minus figures.
*** Details of loans drawn and repayments**

(Rs. Crs)

	2000-01		**2001-02**		**2002-03**	
	Drawn	Repaid	Drawn	Repaid	Drawn	Repaid
Payments due on capital liabilities	17.95	17.95	5.55	16.08	8.39	10.58
Capital liabilities (approved Institutions)	81.84	17.95	117.15	43.56	138.94	66.70
Govt. loans	36.12	5.43	35.21	6.85	38.80	3.94
Total	135.91	41.33	157.91	66.49	186.13	81.22

736. Though funds drawn but unspent on capital account were thus around Rs.121.31 crores (Rs.73.69 crores + Rs.60.97 crores - Rs.13.35 crores) as on 01-04-03, the filings in fact project drawal of further loans of Rs.198.70 crores during FY 2003-04 and Rs.647.23 crores during FY 2004-05.

737. In the Tariff Order for FY 2003-04, the Commission expressed its concern over the way the financial affairs of the DISCOM had been conducted during the two years FY 01 and FY 02 and advised the DISCOM not to draw any further loans from 01-04-2003 till the excess funds available on capital account were absorbed by way of expenditure on capital works.

738. ***The Commission directs the DISCOM to submit a detailed capital expenditure programme (for the consideration of the Commission) to absorb the excess funds available on capital account at least by 31-12-2004.***

739. For the Capital Base calculations for FY 2004-05, the Commission has reckoned the loans of Rs.661.48 crores. This has been calculated starting with the loans figure of Rs.526.72 crores as on 31-3-2003 in the audited Balance Sheet for FY 2002-03 made available to the Commission. After taking into account the consumer contributions, depreciation etc., for the purpose of funding the capital expenditure and the working capital allowed to the extent included in the capital base, the closing balance of the loan to be taken in the capital base works out to Rs.661.48 crores as against Rs.652.03 crores projected by the licensee.

Consumer Security Deposits:

740. The Licensee has projected Rs.175.48 crores towards consumer security deposits. However, the Licensee has not shown any amount towards incremental Consumer Security Deposits in the calculation of the Capital Base. The Commission for reasons already detailed in paragraph 207 of the Tariff Order 2003-04 does not agree that Consumer Security Deposits are to be excluded from the negative side of the Capital Base. Consumer security deposits at the end of FY 2003 figuring in the books of the licensee are Rs.165.48 crores and amount of Rs.20.00 crores towards incremental consumer security deposit for FY 2004 and FY 2005 is taken on this account to the negative side of the Capital Base. Thus the total Consumer Security Deposits reckoned for Capital Base are Rs. 185.48 crores.

Net capital base:

741. With the above changes in the positive and negative elements of the Capital Base, the Net Capital Base works out to Rs. (-) 6.54 crores as detailed in the Table below as against Rs.62.22 crores projected by the Licensee.

Table No.153
Capital Base computations for FY 2004-05

(Rs. Crs)

ITEM		**APNPDCL**	**APERC**
Positive elements of Capital Base			
Original cost of Fixed Assets (excluding consumer contributions, etc.)		1191.04	1069.54
Capital Works-in-Progress		235.78	314.60
Statutory investment (of Contingencies Reserve)		5.36	5.36
Working Capital			
a) Average cost of stores		33.58	6.93
b) Average cash and bank balance		16.46	31.98
Total of positive elements of Capital Base		1482.22	1428.41
Negative elements of Capital Base			
Accumulated Depreciation		592.49	587.99
Government loans	129.35	652.03	661.48
Approved loans	461.67		
Other market borrowings for CAPEX	61.01		
Consumer Security Deposits		175.48	185.48
Total of negative elements of Capital Base		**1420.00**	**1434.95**
Net Capital Base		**62.22**	**(6.54)**

Note: The amounts within brackets denote minus figures.

EXPENDITURE

Purchase of energy

742. APNPDCL has projected a requirement of 6272.13 MU of energy against which the Commission has allowed 6155.54 MU. The corresponding cost has been arrived at as Rs.1518.76 crores as against Rs.1243.52 crores shown in the ARR.

Wages, salaries and other allowances:

743. The Licensee has projected an amount of Rs.125.44 crores towards wages, salaries and related costs and Rs.13.04 crores towards Employee funds for pension and gratuity (both, net of capitalization) aggregating to Rs.138.48 crores for inclusion in the ARR of FY 04-05 and furnished the following details in the filings at paragraph 3.1.3 thereof:

Table No.154

(Rs. Crs)

	2004-05
Wages, salaries and allowances	141.76
Contribution to Employee funds	14.74
Total	**156.50**
LESS: Capitalization	18.02
Net employee costs	**138.48**

744. In order that the provision towards employees' pension and gratuity funds are reflected at gross (and not net of any amount), the capitalization out of employees' pension and gratuity funds have been taken into account under Salaries & Wages itself. Taking this factor into account, the amount taken for Revenue Requirement towards Salaries & Wages is Rs.118.83 crores as shown in the Table below:

Table No.155
Revenue Requirement – Net Salaries & Wages
(Rs. Crs)

Wages, salaries & allowances	136.85
Less: Capitalisation	18.02
Net of capitalisation-Wages and salaries	**118.83**

745. The provision towards Employee Funds is shown separately in the subsequent paragraphs of this Chapter.

Administration and general expenses (excluding rent, rates & taxes, legal charges, audit fees, lease rentals etc.)

746. For FY 2004-05, the Licensee has claimed (in Form 1.3 of the filing) Rs.14.48 crores (net of capitalisation) towards Administration and General Expenses, comprising a gross amount of Rs. 16.36 crores less the capitalization of Rs.1.88 crores. This is considered reasonable and provided for in the computation of the Aggregate Revenue Requirement. APNPDCL has not claimed any amount towards e-seva cost in the ARR. Otherwise too, e-seva cost is to be excluded, as the revenue towards customer charges collected by licensee should be sufficient as also the correct source to meet such costs.

Repairs and maintenance

747. APNPDCL has projected Rs.41.56 crores towards Repairs and Maintenance for FY 2004-05 for inclusion in the computation of the Revenue Requirement. This is considered reasonable and is provided.

Rent, rates and taxes

748. APNPDCL has projected (in Form 1.3) Rs.2.94 crores for inclusion in the computation of the Revenue Requirement for FY 2004-05 towards Rent, Rates and Taxes. This is accepted and accordingly provided.

Interest on loans (including lease rentals)

749. APNPDCL has projected the interest amount of Rs.84.63 crores. However, APERC has worked out the amount as Rs.70.18 crores (inclusive of interest of Rs.1.06 crores on debt redemption obligation) as indicated in the Table below:

Table No.156
Interest (net) and Other Finance Charges

(Rs. Crs)

Particulars	Amount
Interest (Rs. 67.60 crores less interest reduction of Rs.2.26 crores due to swapping of loans) including cost of debt redemption obligation	65.34
Lease rentals	6.58
Other Finance Charges	13.81
Total	85.73
LESS: IDC capitalization	15.55
TOTAL INTEREST	**70.18**

Interest on consumer security deposits

750. An amount of Rs.10.82 crores as detailed below, has been provided, calculated at 6% p.a. the prevailing Bank Rate on the average Security Deposits taken in the Capital Base, as per Section 47 (4) of the Electricity Act, 2003, as against 3% p.a. provided by the Licensee:

Table No.157

(Rs. Crs)

Security Deposits	
Closing balance (2003-04)	175.48
Closing balance (2004-05)	185.48
Average balance	180.48
Interest@ 6% p.a.	10.82

Legal charges

751. The Licensee has claimed (in Form 1.3) an amount of Rs.8.28 crores towards Legal Charges. This is accepted as reasonable.

Audit and other fees

752. The Licensee has claimed an amount of Rs.0.10 crore towards Audit and other fees. This is accepted as reasonable.

Depreciation

753. Licensee has projected an amount of Rs.74.13 crores and the amount admitted is Rs.69.63 crores. The difference is on account of the difference in the level of capitalization for FY 2003-04, as explained earlier under Original Cost of Fixed Assets.

Other expenses

754. From this year onwards, there will not be any separate allocation of corporate office expenses by APTRANSCO to DISCOMS as the same have been taken into account while calculating the BST. Hence, Other expenses are to be taken as nil.

Provision for doubtful debts

755. The DISCOM has proposed 1% of the sales revenue of FY 2004-05 i.e. Rs. 11.63 crores towards provision for Bad and doubtful debts in their ARR filing (paragraph 2.3.2.6). Since the existing provision of Rs.70.98 crores (as on 31-3-2003) is not fully used, the Commission does not consider any additional provision.

Contribution to employee funds

756. The provision towards Employee Funds is made at 13% of basic pay plus D.A. based on the actuarial study relied upon for the Tariff Order of FY 2001-02. The Licensee has projected (vide paragraph 3.1.3 of the ARR) Rs.14.74 crores (gross) and Rs.13.04 crores (net of capitalization) towards contribution to Employee Funds. An amount of Rs.14.10 crores has however been admitted on this account towards the computation of the Revenue Requirement for FY 2004-05.

Special Appropriations

Contribution to Contingencies reserve

757. APNPDCL has proposed an amount of Rs.3.33 crores as Special Appropriation towards Contribution to Contingencies Reserve to be provided in the computation of the Revenue Requirement. The amount has been calculated at 0.25% of the Original Cost of Fixed Assets (OCFA) projected in the filing. As the amount of OCFA has undergone a change due to the reasons mentioned in paragraphs 726 and 727 on OCFA, the amount accepted towards Contingencies Reserve is Rs.2.67 crores. This is calculated at 0.25% (at the same rate as adopted by the Licensee) on the amount of OCFA allowed by the Commission as detailed in paragraphs 15-16 supra. The amount is yet to be invested by the DISCOM as specified and directed by the Commission earlier.

758. The Commission reiterates that paragraph 4 of the Sixth Schedule to the Electricity (Supply) Act, 1948 requires that the contributions towards Contingencies Reserve must be invested in securities authorized under the Indian Trusts Act, 1882, within a period of six months from the close of the year of account in which the appropriation is made. The Licensee is directed to comply with this requirement. The attention of the Licensee is also drawn to paragraph V of the Sixth Schedule that any drawal from the Contingencies Reserve can be made only with the prior approval of the Commission.

Debt redemption obligation

759. APNPDCL has proposed an amount of Rs. 18.36 crores as Special Appropriation towards Debt Redemption obligation to be provided for FY 2004-05. In the past, the Licensee did not make any claim for Debt Redemption obligation and consequently, the Commission did not provide for the same. The Licensee stated that during this period, it had to borrow short-term loans to meet this obligation. Further, it has also cited the provisions of Sixth Schedule for claiming this Debt Redemption Obligation.

760. As already stated in paragraphs 736 and 737 supra, the Licensee's loan drawals, repayments etc., are not commensurate with the capital expenditure programme. Further, there has been gross mix-up of long-term funds with short-term funds and vice-versa. It is important to note that under normal business operations, once an asset is created out of loan funds, it provides adequate depreciation funds to meet the debt redemption obligation. If the loan redemption is accelerated i.e. by pre-closure, reduction in redemption period, etc., there will be mismatch between the repayment of obligation and the depreciation available and as a result, the Licensee has no option other than to go in for additional borrowing. The repayment obligations of this additional borrowing can be met with the subsequent generation of depreciation funds. Just because normal rate of depreciation being provided does not match the accelerated redemption of loans, the shortfall cannot be treated as an item of expenditure in the Aggregate Revenue Requirement. Hence, the Debt Redemption obligation of Rs.18.36 crores claimed by APNPDCL for FY 2004-05 is not allowed. However, the interest of Rs.1.06 crores on this obligation has been considered.

761. **Adjustments pertaining to previous years:**

(a). **Interest**:- The interest adjustment amounts of Rs.14.36 crores for FY 2000-01, Rs. (-) 0.14 crore for FY 2001-02 and Rs. 22.66 crores for FY 2002-03 aggregating to Rs.36.88 crores have been taken as Special Appropriation in the calculation of the Revenue Requirement for FY 04-05.

(b). **Depreciation**:- The depreciation adjustment amounts of Rs.(-)3.60 crores for FY 2000-01, Rs. 1.47 crores for FY 2001-02 and Rs.(-) 6.83 crores for FY 2002-03 aggregating to Rs. (-) 8.96 crores have been taken as Special Appropriation in the calculation of the Revenue Requirement for FY 04-05.

(c) **Income Tax**:- The income tax adjustment amount of Rs. (-) 1.24 crores for FY 2000-01 has been taken as Special Appropriation in the calculation of the Revenue Requirement for FY 04-05.

(d) **Wage revision**:-The wage revision adjustment amount of Rs.(-)1.49 crores for FY 2002-03 has been taken as Special Appropriation in the calculation of the Revenue Requirement for FY 04-05.

(e) **Reasonable Return**:- The reasonable return adjustment amounts of Rs.(-) 0.44 crore for FY 2000-01, Rs. (-) 1.40 crores for FY 2001-02 and Rs. (-) 2.74 crores for FY 2002-03 aggregating to Rs. (-) 4.58 crores have been taken as Special Appropriation in the calculation of the Revenue Requirement for FY 04-05.

Total expenditure

762. In view of the above changes, the total expenditure works out to Rs.1892.96 crores as against Rs.1646.85 crores projected by the Licensee, as summarized in the following table:

Table No.158
Statement of expenditure and special appropriations

(Rs. Crs)

Expenditure Items	APNPDCL	APERC
Purchase of energy	1243.52	1518.76
Wages and Salaries (net of capitalization)	125.44	118.83
Administration and General Expenses (Net of capitalization)	14.48	14.48
Repairs and maintenance	41.56	41.56
Rent, rates and taxes	2.94	2.94
Approved loan interest (Net of capitalization)	84.63	70.18
Interest on Security Deposits	5.41	10.82
Legal charges	8.28	8.28
Provision for doubtful debts	11.63	0.00
Audit and other fees	0.10	0.10
Depreciation	74.13	69.63
Other expenses	0.00	0.00
Contribution to employee Funds (Net of capitalization)	13.04	14.10
Special Appropriations		
Contribution to Contingencies Reserve	3.33	2.67
Debt redemption obligation	18.36	0.00
Adjustments pertaining to previous years: Interest Depreciation Income Tax Wage Revision Reasonable Return	 0.00 0.00 0.00 0.00 0.00	 36.88 (8.96) (1.24) (1.49) (4.58)
TOTAL EXPENDITURE	1646.85	1892.96

Note: The amounts within brackets denote minus figures.

Reasonable return:

763. APNPDCL has not claimed in the filings Reasonable Return it is eligible for as per the Sixth Schedule to the Electricity (Supply) Act, 1948. It may be recalled here that there was no claim for Reasonable Return in the filings for FY 2002-03 and FY 2003-04 also but as stated in the Tariff Orders for the respective years, the Commission allowed the Reasonable Return as, in the opinion of the Commission, it was not in the interest of either the consumers or the Licensee to forgo the Reasonable Return. The Commission wishes to emphasise that one of the prime objectives of reforms undertaken by the State in the Electricity Sector is to bring in a commercial orientation in the methods of operation as well as in the general approach to management decisions by the unbundled entities. The Commission considers it necessary to provide for the Reasonable Return in the calculation of the Revenue Requirement to reinforce this commercial orientation and hopes that this would act as a motivating factor and a morale-booster at all levels leading to more operational efficiency all round. The Commission accordingly allows an amount of Rs.3.31 crores as Reasonable Return to APNPDCL and includes it in the calculation of the Revenue Requirement for FY 2004-05.

Non-tariff income

764. The Licensee has projected an amount of Rs.113.31 crores as Non-Tariff income (Form 1.4). The Commission has reckoned an amount of Rs.113.93 crores including Rs.0.67 crore as revenue realisation from wheeling of energy.

Aggregate revenue requirement

765. The Aggregate Revenue Requirement works out to Rs.1782.34 crores as against Rs.1533.54 crores projected by the Licensee as detailed in the Table below:

Table No.159

	(Rs. Crs)
Total expenditure	1892.96
Reasonable Return	3.31
MINUS: Non-Tariff income	113.93
Total net aggregate revenue requirement	**1782.34**

Revenue from tariff and the gap

766. Determination of the Aggregate Revenue Requirement is the first step in the process of tariff formulation. Subsequent Chapters of this Tariff Order (Chapters XV and XVI) discuss the sales projections by the DISCOMS, the revenue gap, the tariff approved by the Commission taking into account the cross-subsidy and the government subsidy, the bulk supply tariff (BST) applicable to each DISCOM and other aspects.

CHAPTER – XIII

ERC / ARR 2004-05:
DISTRIBUTION AND RETAIL SUPPLY
Andhra Pradesh Southern Power Distribution Company Limited (APSPDCL)

767. APSPDCL, the Licensee company for distribution and retail supply of electricity in the territory assigned to it in Andhra Pradesh as per the licence granted by the Commission, filed the ARR / ERC on 24.12.2003. The Commission has examined the Licensee's proposals and indicates herein the areas where the computations of the Licensee are found to be incorrect or unacceptable with reasons therefor and the Commission's alternative computations.

768. Based on the finalised Second Transfer Scheme notified by the GoAP in Gazette Notification GO. MS No. 109 Energy (Power III) dated 29-9-2001, giving the opening Balance Sheet of APSPDCL (and also of APTRANSCO and the other three DISCOMS) as on 01.04.2000, the audited Annual Accounts for FY 2000-01, and 2001-02, and 2002-03 (audited by statutory auditors but without CAG's comments which were awaited) as compiled and finalised by the Licensee were made available to the Commission during October - December 2003. The figures as per these Accounts have been adopted, wherever relevant, for the purposes of this Tariff Order. The audited Accounts complete in all respects for FY 2002-03 adopted by the shareholders of the Company in the Annual General Meeting have not yet been filed with the Commission, as required under the terms of the licence. Audited Accounts for FY 2002-03, which should have been available by 30-09-2003 as per the Companies Act, 1956, are also yet to be filed with the Commission.

769. While the Commission appreciates the recent efforts made to bring the audit of the Company's annual accounts largely up-to-date, it urges APSPDCL to spare no efforts to comply with the requirements of the Companies Act, 1956 in respect of the Annual Accounts for FY 2003-04 onwards.

Capital outlay on schemes during 2002-03 to 2004-05

770. The Licensee in the filings has made the following projections of capital expenditure for FY 2004-05:

Table No.160
Proposed capital outlay for FY 2004 – 05

(Rs. Crs)

	Base capital expenditure	Expenditure capitalisation	IDC*	Total
APSPDCL	174.89	17.49	14.78	207.16

* Interest during construction (IDC)

771. Before dealing with the projections of capital expenditure in FY 2004-05, it is necessary to advert to the capital expenditure during FY 2002-03.

772. The Commission has noted that there an excess capital expenditure of Rs.15.03 crores vis-à-vis the outlay of Rs.194.52 crores for APSPDCL approved in the Tariff Order for FY 03 as indicated in the Table below:

Table No.161
Capital outlay-performance during 2002- 03

(Rs. Crs)

	Filing	Tariff Order	Actual	Excess
APSPDCL	**194.52**	**194.52**	**209.55**	**15.03**

(Figures include IDC and expense capitalisation)

773. This excess has resulted in significant variation in the Capital Base calculations for FY 2002-03 as detailed in the Table below:

Table No.162
Capital Base for FY 2002-03
Comparison of actual costs with Tariff Order figures on the basis of the audited accounts for FY 2002-03

(Rs. Crs)

	Filing	Tariff Order	Actual	Variance
Original cost of Fixed Assets	1320.57	1090.71	1055.85	(34.86)
Capital Works-in-Progress (CWIP)	54.50	278.40	207.67	(70.73)
Stores	37.58	6.22	5.62	(0.60)
Cash	19.23	18.18	20.41	2.23
Total (A)	**1431.88**	**1393.51**	**1289.55**	**(103.96)**
Accumulated depreciation	623.35	609.94	524.74	(85.20)
Borrowings	492.92	473.97	568.84	94.87
Other no-cost funds	0.00	234.41	252.56	18.15
Total (B)	**1116.27**	**1318.32**	**1346.14**	**27.82**
Capital Base (A-B)	**315.61**	**75.19**	**(56.59)**	**(131.78)**

Note: The amounts within brackets denote minus figures.

774. The adjustment (necessitated due to this variance in the Capital Base) for the Reasonable Return is to be recalculated and included in the computation of the Aggregate Revenue Requirement for the Tariff of FY 2002-03, for necessary correction in Tariff Order of FY 2004-05.

775. The excess in capital investment during FY 2002-03 has also resulted in excess in interest expenditure of Rs.0.47 crore vis-à-vis the amount provided in the Tariff Order for FY 2002-03 as detailed in the Table below:

Table No.163
Calculation of interest adjustment due to excess in capital expenditure during 2002-03

(**Rs. Crs)**

Particulars	Amount	Amount
A. Interest as per tariff order for FY 2002-03		
Gross Interest and Finance Charges		72.32
LESS: IDC charged to Capital works		6.97
Net Interest		65.35
B. Actual as per audited accounts for FY 2002-03		
Gross Interest and Finance Charges	103.56	
LESS: Interest on Consumer Security Deposits	6.40	
Discount to HT consumers	10.94	
Interest on GPF balance	7.24	
Balance	78.98	
LESS: IDC charged to capital works	13.16	65.82
Excess		**0.47**

776. The Commission considers that the excess of Rs.0.47 crore in interest incidence as calculated above out of the amount reckoned towards Revenue Requirement in the Tariff Order for FY 2002-03 needs to be adjusted as special appropriation in the calculation of the Revenue Requirement for FY 2004-05 and the adjustment is accordingly done.

Capital outlay – Progress during FY 2003- 04:

777. In the ARR for FY 2004-05, the DISCOM has projected a revised capital outlay (Base expenditure) of Rs. 154.50 crores for FY 2003-04 along with IDC and expenditure capitalization, which works out to Rs.181.75 crores as against

Rs.66.95 crores reckoned in the Tariff Order for FY 2003-04. The Commission considers this projection to be reasonable keeping in view the progress of expenditure during the first half of the year, up to September 2003, and the past track record and allows the amount of Rs.154.50 crores towards base expenditure on the schemes in full, after taking into account the actual expenditure up to December 2003 as detailed in the Table below:

Table No.164
Estimated capital outlay for FY 2003-04

(Rs. Crs)

S.No.	Name of Scheme	APSPDCL	APERC
1	Village electrification (Electrification of colonies)	5.00	5.00
2	HVDS	10.00	10.00
3	APL-1 Suppl.	10.00	10.00
4	System improvement – Erection of 33/11 KV feeders	11.19	11.19
5	Distribution schemes	10.00	10.00
6	System improvement -T & D	5.00	5.00
7	SI-lines (Providing 24-hour supply to Mandal Headquarters and all villages)	18.00	18.00
8	Releasing of agricultural services	9.31	9.31
9	APDRP-Tirupathi	40.00	40.00
10	APDRP-Town business plans	30.00	30.00
11	Providing HV metering to LT services	6.00	6.00
	TOTAL	154.50	154.50

778. The amount to be taken to CWIP in respect of the above schemes works out to Rs.181.75 crores as detailed in the Table below:

Table No.165
Amounts taken to CWIP for FY 2003-04

(Rs. Crs)

Particulars	**APSPDCL**	**APERC**
Base capital expenditure	154.50	154.50
Expenses capitalised	15.45	15.45
Interest (IDC) capitalised	11.80	11.80
Total	**181.75**	**181.75**

779. The projected CWIP as on 31-03-2004 would serve as the Opening Balance for FY 2004-05.

CAPITAL OUTLAY – Projections for FY 2004-05:

780. As mentioned above, the filings project a Base Capital expenditure of Rs.174.89 crores for FY2004-05, which together with the expenditure capitalization of

Rs.17.49 crores and Interest During Construction (IDC) of Rs.14.78 crores works out to Rs.207.16 crores. It may be recalled here that the Commission in its Tariff Order for FY 2002-03 had stated in unambiguous terms that from FY 2003-04 onwards, it would allow for inclusion in the CWIP only those schemes which have its prior approval or those schemes which do not require such approval (being schemes, each costing less than Rs. 5 Crores). Based on this norm, the Commission allows for inclusion in the CWIP (for Capital Base calculations for FY 2004-05) the full amount of Rs.174.89 crores in respect of the following schemes projected by the Licensee as Base Capital expenditure; together with expenses capitalised and IDC, the capital outlay for 2004-05 works out to Rs. 207.16 crores:

Table No.166
Scheme-wise details for Base capital expenditure for FY 2004-05

(Rs. Crs)

S.No.	Name of Scheme	APSPDCL	APERC
1	Village electrification (Electrification of colonies)	15.00	15.00
2	HVDS	20.00	20.00
3	System improvement – Erection of 33/11 KV feeders	20.00	20.00
4	Distribution schemes	15.00	15.00
5	System improvement -T & D	5.00	5.00
6	SI-lines (Providing 24-hour supply to Mandal Headquarters and all villages)	13.00	13.00
7	Releasing of agricultural services	10.00	10.00
8	APDRP-Tirupathi	40.00	40.00
9	APDRP-Town business plans	35.00	35.00
10	Providing HV metering to LT services	1.89	1.89
	TOTAL	**174.89**	**174.89**

781. ***The Commission directs that from the filings for FY 2005-06 filing onwards, the CWIP along with the corresponding loans and consumer contributions shall be excluded and not taken into account for calculating the Capital Base and the necessary corresponding adjustments shall also be carried out in the expenses to be capitalised. Further, the DISCOM shall submit monthly progress reports on physical and financial progress on each of the schemes w.e.f. 01-04-2004. Such reports shall also indicate the cost of the assets (works commissioned) capitalized against each scheme during the month.***

Capital base – Positive elements:

Original Cost of Fixed Assets (OCFA):

782. The Licensee has proposed an amount of Rs.1322.57 crores as the Original Cost of Fixed Assets (excluding consumer contributions) to be reckoned in the Capital Base calculations for FY 2004-05. It may be mentioned in general about the transfers from CWIP to OCFA, that such transfers are meant to represent those assets that are completed (or commissioned where appropriate) and utlisation commenced (which are referred to as capitalised works in commercial parlance). But in the DISCOMS, the practice appears to be to transfer to Gross Fixed Assets the balance in the CWIP too at the beginning of the year and this gives room for the apprehension that works which are in fact not completed are treated as capitalised in the Accounts while the projections made for purpose of ARR by the DISCOMS also include capitalization proposals of even those works which already stand capitalised in the Accounts. Secondly, the ARR projections for capitalization are not based on a review of the scheme-wise status of progress vis-à-vis the earlier planned execution schedule and a genuine appraisal of the completion programme of works / schemes. Pending a detailed examination of the practice obtaining in this regard and its implications, an amount of Rs.75.00 crores has been reckoned for transfer to OCFA from CWIP for FY 2003-04 on an ad-hoc basis. Similarly, for FY 2004-05, an estimated amount of Rs.200.00 crores has been taken as transfers to OCFA from CWIP.

783. The estimated amount to be reckoned under OCFA in the Capital Base as on 31-03-2005 is therefore, as calculated in the Table below:

Table No.167

Statement of estimated fixed assets as on 31-03-2005 (Rs. Crs)

ITEM	APSPDCL	APERC
Gross Fixed Assets as on 31-03-03	1313.22	1313.22
LESS: Consumer contributions for capital assets	239.83	257.37
Original Cost of Fixed Assets (OCFA) as on 31.03.03	1073.39	1055.85
ADD: Works likely to be completed during 2003-04	182.57	75.00
Gross OCFA as on 31.03.04	1255.96	1130.85
LESS: Consumer contributions	67.00	58.23
OCFA as on 31.03.2004	1188.96	1072.62
ADD: Works likely to be completed in FY 2004-05	181.62	200.00
Gross OCFA as on 31.03.2005	1370.57	1272.62
LESS: Consumer contributions	48.00	61.96
OCFA as on 31.03.2005	**1322.57**	**1210.66**

Accordingly, OCFA taken to Capital Base amounts to Rs.1210.66 crores.

Capital works – in – progress (CWIP):

784. As already stated above, the Commission has decided to reckon Outlays of Rs.154.50 crores for FY 03-04 and Rs.174.89 crores for FY 04-05 as Base Capital expenditure (paragraphs 777 and 780 supra). These, together with the Expenses capitalised and the IDC work out to Rs. 181.75 crores and Rs.207.16 crores respectively. Consequently, the amount reckoned for CWIP for FY 2003-04 works out to Rs.314.42 crores and for Capital Base calculations for FY 2004-05 to Rs.321.58 crores as detailed in the Table below:

Table No.168
Statement of estimated Works-in-progress for FY 2004-05
(Rs. crs)

	APSPDCL	APERC
Opening Balance of CWIP as on 01.04.2003	207.67	207.67
Outlay during the year (FY 2003-04)	154.50	154.50
Expenses during the year capitalized	15.45	15.45
Interest during construction charged to Capital (IDC)	11.80	11.80
Total additions: Capital expenditure	181.75	181.75
Total (OB + Additions)	389.42	389.42
LESS: Works anticipated to be completed in FY 2003-04	182.57	75.00
Closing Balance of CWIP as on 31.03.04 and Opening balance as on 01.04.2004	206.85	314.42
Additional investments during the year (FY 2004-05)	174.89	174.89
Expenses during the year capitalized	17.49	17.49
Interest during construction charged to Capital (IDC)	14.78	14.78
Total additions: Capital expenditure	207.16	207.16
Total (OB + Additions)	414.01	521.58
LESS: Works anticipated to be completed in FY 2004-05	181.62	200.00
Closing Balance of CWIP as on 31.03.05	**232.39**	**321.58**

Compulsory investments:

785. The Licensee has projected the compulsory investments (Contingencies Reserve) at Rs. 6.86 crores for FY 2004-05 and the same are considered in the computation of the capital base by APERC.

Working capital requirements:

786. Considering the working capital difficulties in the initial stages of the reforms process that the Licensees represented strongly about, the Commission decided in

Tariff Order, FY 04, to allow the average cash and bank balance in the computation of the Capital Base at two months' level of eligible items of expenses instead of at one month's level hitherto. This is intended to provide a trajectory to an efficient level over a period of 3 years. The level would therefore be at 2 months' level for FY 2003-04 and FY 2004-05 and at 1½ months' level for FY 2005-06. Thereafter it would revert to one month's level. There will be no change in the level of Average Cost of Stores, which is already being provided at 2 months' level of the annual repair and maintenance expenses.

Average cost of stores:

787. The DISCOM has proposed an amount of Rs.41.94 crores towards Average Cost of Stores for inclusion in the Capital Base calculated at 2.83% of the closing balance of Gross Fixed Assets for FY 2004-05 while the Commission in its Tariff Order 2003-04 (paragraph 449) had clearly stated that the Average Cost of Stores would continue to be provided at 2 months' level of the annual repairs and maintenance expenses. The proposed inventory level of Rs.41.94 crores to support the repair and maintenance activities of Rs.39.56 crores projected in the Filings for FY 2004-05 is manifestly too high as the inventory works out to more than one year's consumption. The amount of only Rs.6.59 crores for FY 2004-05, calculated at two months' requirement of the repairs and maintenance expenses (Rs.39.56 crores) is therefore provided.

Average cash and bank balance:

788. The Licensee has proposed Rs.18.20 crores towards Cash and Bank Balance for FY 2004-05 on the basis of (paragraph 2.3.4 of the filings) one month's 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 (net of expenses capitalised) for the year. As stated in the Tariff Order 2003-04 (paragraph 205), the provision under this Head is to be calculated at two months' level of eligible items of expenses for FY 2004-05 instead of one month. Computed on this basis, the average Cash

and Bank Balance works out to Rs.44.47 crores as detailed in the Table below and is provided for in the calculation of the Capital Base:

Table No.169
Computation of Requirement of Average cash and bank balance
(Rs. Crs)

Items	2004-05
Wages and Salaries	178.15
Admin. and General Expenses	24.49
Repairs and Maintenance	39.56
Rent, rates and taxes	3.79
Contribution to employee funds	20.83
Total expenses	**266.82**
Average Cash and Bank Balances (266.82 ÷ 6)	**44.47**

Note: All amounts are net of expenses capitalised.

Capital base-Negative elements:

Accumulated Depreciation

789. The accumulated depreciation as projected by the Licensee in the filings is Rs.838.41 crores for FY 2004-05 against which Rs.829.81 crores is admitted. The difference is due to the capitalization of works to be completed in FY 2003-04 being taken at less than the projections in the filings as mentioned in paragraph 782 supra.

Loans from government and approved institutions:

790. The APSPDCL has projected Rs.85.01 crores as Government loans and Rs.502.72 crores as loans from approved institutions for capital expenditure aggregating to Rs. 587.73 crores for FY 2004-05. However, the total loan amount admitted by APERC for FY 2004-05 is Rs. 582.91 crores.

791. It is seen that APSPDCL in the past years had drawn loans far in excess of the capital expenditure incurred during the year, as can be seen from the Table below:

Table No.170
Statement showing capital expenditure, loans, depreciation and consumer contributions

(Rs. Crs)

S.No.		As on 1.4.2000	As on 31.3.2001	As on 31.3.2002	As on 31.3.2003
1.	Gross Fixed Assets	799.58	1046.51	1171.81	1313.22
2.	Capital Works-in-Progress	273.54	146.61	139.63	207.67
3.	Total	1073.12	1193.12	1311.44	1520.89
4.	Accretions: Capital expenditure		120.00	118.32	209.45
5.	Consumer contributions	55.74	111.74	157.10	257.37
6	Accretions: Net contributions received during the year		56.00	45.36	100.27
7	Balance to be funded by loan drawals (4 minus 6)		64.00	72.96	109.18
8	Loans drawn *		171.34	178.12	282.87
9	Excess drawals (8 minus 7)		107.34	105.16	173.69
10	Accumulated Depreciation	382.32	444.00	524.74	614.88
11	Accretion: Depreciation for the year		61.68	80.74	90.14
12	Loan repayments *		45.66	85.50	112.66
13	Balance Depreciation funds available (11-12)		16.02	(4.76)	(22.52)
14	Total funds overdrawn on Capital account (9+13)		123.36	100.40	151.17

*** Details of loans drawn and repayments**

(Rs. Crs)

	2000-01		2001-02		2002-03	
	Drawn	Repaid	Drawn	Repaid	Drawn	Repaid
Payments due on capital liabilities	22.83	22.83	42.75	42.75	56.33	56.33
Capital liabilities (include Govt. loans)	148.51	22.83	135.37	42.75	226.54	56.33
Total	**171.34**	**45.66**	**178.12**	**85.50**	**282.87**	**112.66**

792. Though funds drawn but unspent on capital account were thus around Rs.374.93 crores (Rs.123.36 crores + Rs.100.40 crores + Rs.151.17 crores) as on 01-04-2003, the filings in fact project drawal of further loans of Rs. 84.86 crores during FY 2003-04 and Rs.112.68 crores during FY 2004-05.

793. In the Tariff Order for FY 2003-04, the Commission expressed its concern over the way the financial affairs of the DISCOM had been conducted during the two years FY 01 and FY 02 and advised the DISCOM not to draw any further loans from 01-04-2003 till the excess funds available on capital account were absorbed by way of expenditure on capital works.

794. ***The Commission directs the DISCOM to submit a detailed capital expenditure programme (for the consideration of the Commission) to absorb the excess funds available on capital account at least by 31-12-2004.***

795. For the Capital Base calculations for FY 2004-05, the Commission has reckoned the loans of Rs.582.91 crores. This has been calculated starting with the loans figure of Rs. 568.84 crores as on 31-03-2003 in the audited Balance Sheet for FY 2002-03 made available to the Commission. After taking into account the consumer contributions, depreciation etc., for the purpose of funding the capital expenditure and the working capital allowed to the extent included in the capital base, the closing balance of the loan to be taken in the capital base works out to Rs.582.91 crores as against Rs.587.73 crores projected by the licensee.

Consumer Security Deposits:

796. The Licensee has projected Rs.267.71 crores towards consumer security deposits. However, the Licensee has not shown any amount towards incremental Consumer Security Deposits in the calculation of the Capital Base. The Commission for reasons already detailed in paragraph 207 of the Tariff Order 2003-04 does not agree that Consumer Security Deposits are to be excluded from the negative side of the Capital Base. Consumer security deposits at the end of FY 2003 figuring in the books of the licensee are Rs.234.63 crores and amount of Rs.32.00 crores towards incremental consumer security deposit for FY 2004 and FY 2005 is taken on this account to the negative side of the Capital Base. Thus the total Consumer Security Deposits reckoned for Capital Base are Rs. 266.63 crores.

Net capital base:

797. With the above changes in the positive and negative elements of the Capital Base, the Net Capital Base works out to Rs. (-) 89.19 crores as detailed in the Table below as against Rs. (-) 71.89 crores projected by the Licensee.

Table No.171
Capital Base computations for FY 2004-05

(Rs. Crs)

ITEM		APSPDCL	APERC
Positive elements of Capital Base			
Original cost of Fixed Assets (excluding consumer contributions, etc.)		1322.57	1210.66
Capital Works-in-Progress		232.39	321.58
Statutory investment (of Contingencies Reserve)		6.86	6.86
Working Capital			
a) Average cost of stores		41.94	6.59
b) Average cash and bank balance		18.20	44.47
Total of positive elements of Capital Base		1621.96	1590.16
Negative elements of Capital Base			
Accumulated Depreciation		838.41	829.81
Government loans	85.01	587.73	582.91
Approved loans	502.72		
Consumer Security Deposits		267.71	266.63
Total of negative elements of Capital Base		**1693.85**	**1679.35**
Net Capital Base		**(71.89)**	**(89.19)**

Note: The amounts within brackets denote minus figures.

EXPENDITURE

Purchase of energy

798. APSPDCL has projected a requirement of 8098.42 MU of energy against which the Commission has allowed 7879.25 MU. The corresponding cost has been arrived at as Rs.1920.20 crores as against Rs.1959.52 crores shown in the ARR.

Wages, salaries and other allowances:

799. The Licensee has projected an amount of Rs.182.02 crores towards wages, salaries and related costs and Rs.20.77 crores towards Employee funds for pension and gratuity (both, net of capitalization) aggregating to Rs.202.79 crores for inclusion in the ARR of FY 04-05 and furnished the following details in the filings at paragraph 3.1.5 thereof.

Table No.172

(Rs. Crs)

ITEM	2004-05
Wages, salaries and allowances	196.02
Contribution to Employee funds	22.37
Total	218.39
LESS: Capitalization	15.60
Net employee costs	**202.79**

800. In order that the provision towards employees' pension and gratuity funds are reflected at gross (and not net of any amount), the capitalization out of employees' pension and gratuity funds have been taken into account under Salaries & Wages itself. Taking this factor into account, the amount taken for Revenue Requirement towards Salaries & Wages is Rs.178.15 crores as shown in the Table below:

Table No.173
Revenue Requirement – Net Salaries & Wages

(Rs. Crs)

Wages, salaries & allowances	193.76
Less: Capitalisation	15.61
Net of capitalisation-Wages and salalries	**178.15**

801. The provision towards Employee Funds is shown separately in the subsequent paragraphs of this Chapter.

Administration and general expenses (excluding rent, rates & taxes, legal charges, audit fees, lease rentals etc.)

802. For FY 2004-05, the Licensee has claimed (in Form 1.3 of the filing) an amount of Rs.24.49 crores (net of capitalization) towards Administration and General Expenses, comprising a gross amount of Rs.26.37 crores less the capitalization of Rs.1.88 crores. This is considered reasonable and provided for in the computation of the Aggregate Revenue Requirement.

Repairs and maintenance

803. APSPDCL has projected Rs.39.56 crores towards Repairs and Maintenance for FY 2004-05 for inclusion in the computation of the Revenue Requirement. This is considered reasonable and provided.

Rent, rates and taxes

804. APSPDCL has projected (in Form 1.3) Rs.3.79 crores for inclusion in the computation of the Revenue Requirement for FY 2004-05 towards Rent, Rates and Taxes. This is accepted and accordingly provided.

Interest on loans (including lease rentals)

805. APSPDCL has projected the interest amount of Rs.95.01 crores. However, APERC has worked out the amount as Rs.84.12 crores as indicated in the Table below:

Table No.174
Interest (net) and Other Finance Charges

(Rs. Crs)

Particulars	**Amount**
Interest (Rs. 62.26 crores less interest reduction of Rs.2.63 crores due to swapping of loans)	59.63
Lease rentals	7.08
Other Finance Charges	32.19
Total	98.90
LESS: IDC capitalization	14.78
TOTAL INTEREST	**84.12**

Interest on consumer security deposits

806. An amount of Rs.16.46 crores as detailed below, has been provided, calculated at 6% p.a. the prevailing Bank Rate on the average Security Deposits taken in the Capital Base, as per Section 47 (4) of the Electricity Act, 2003, as against 3% p.a. provided by the Licensee:

Table No.175

(Rs. Crs)

Security Deposits Closing balance (2003-04)	267.71
Closing balance (2004-05)	281.10
Average balance	274.41
Interest@ 6% p.a.	16.46

Legal charges

807. The Licensee has claimed (in Form 1.3) an amount of Rs.8.50 crores towards Legal Charges. This is accepted as reasonable.

Audit and other fees

808. The Licensee has claimed an amount of Rs.0.15 crore towards Audit and other fees. This is accepted as reasonable.

Depreciation

809. Licensee has projected Rs.118.92 crores and the amount admitted is Rs.110.32 crores. The difference is on account of the difference in the level of capitalization for FY 2003-04, as explained earlier under Original Cost of Fixed Assets.

Other expenses

810. From this year onwards, there will not be any separate allocation of corporate office expenses by APTRANSCO to DISCOMS as the same have been taken into account while calculating the BST. Though, the APSPDCL has exhibited Rs.(-) 0.31 crore as an extraordinary item, the amount is not considered by Commission.

Provision for doubtful debts

811. The DISCOM has proposed 1% of the sales revenue of FY 2004-05 i.e.Rs. 18.87 crores towards provision for Bad and doubtful debts in their ARR filing (paragraph 2.3.2.6). Since the existing provision of Rs.7.61 crores (as on 31-3-2003) is not fully used, the Commission does not consider any additional provision.

Contribution to employee funds

812. The provision towards Employee Funds is made at 13% of basic pay plus D.A. based on the actuarial study relied upon for the Tariff Order of FY 2001-02. The Licensee has projected (vide paragraph 3.1.5 of the ARR) Rs.22.37 crores (gross) and Rs.20.77 crores (net of capitalization) towards contribution to Employee Funds. The amount of Rs.20.83 crores has however been admitted on this account towards the computation of the Revenue Requirement for FY 2004-05.

Special Appropriations

Contribution to Contingencies reserve

813. APSPDCL has proposed an amount of Rs.4.19 crores as Special Appropriation towards Contribution to Contingencies Reserve to be provided in the computation of the Revenue Requirement. The amount has been calculated at 0.25% of the Original Cost of Fixed Assets (OCFA) projected in the filing. As the amount of OCFA has undergone a change due to the reasons mentioned in the preceding paragraphs 782 and 783 on OCFA, the amount accepted towards Contingencies Reserve is Rs.3.03 crores. This is calculated at 0.25% (the same rate as adopted by the Licensee) on the amount of OCFA allowed by the Commission as detailed in paragraphs 782 and 783 supra. The amount is yet to be invested by the DISCOM as specified and directed by the Commission earlier.

814. The Commission reiterates that paragraph 4 of the Sixth Schedule to the Electricity (Supply) Act, 1948 requires that the contributions towards Contingencies Reserve must be invested in securities authorized under the Indian Trusts Act, 1882, within a period of six months from the close of the year of account in which the appropriation is made. The Licensee is directed to comply with this requirement. The attention of the Licensee is also drawn to paragraph V of the Sixth Schedule that any drawal from the Contingencies Reserve can be made only with the prior approval of the Commission.

815. **Adjustments pertaining to previous years:**

(a) Interest:- The interest adjustment amounts of Rs.15.79 crores for FY 2000-01, Rs. (-) 2.06 crores for FY 2001-02 and Rs. 0.47 crore for FY 2002-03 aggregating to Rs.14.20 crores have been taken as Special Appropriation in the calculation of the Revenue Requirement for FY 04-05.

(b).Depreciation:- The depreciation adjustment amounts of Rs. (-) 4.54 crores for FY 2000-01, Rs. 24.01 crores for FY 2001-02 and Rs. 5.56 crores for FY 2002-03 aggregating to Rs.25.03 crores have been taken as Special Appropriation in the calculation of the Revenue Requirement for FY 04-05.

(c) **Income Tax:-** The income tax adjustment amount of Rs. (-) 7.96 crores for FY 2000-01 has been taken as Special Appropriation in the calculation of the Revenue Requirement for FY 04-05.

(d) **Wage revision:-** The wage revision adjustment amount of Rs. (-) 2.76 crores for FY 2002-03 has been taken as Special Appropriation in the calculation of the Revenue Requirement for FY 04-05.

(e) **Reasonable Return:-** The reasonable return adjustment amounts of Rs. (-) 2.82 crores for FY 2000-01, Rs. 2.24 crores for FY 2001-02 and Rs. (-) 11.88 crores for FY 2002-03 aggregating to Rs. (-) 12.46 crores have been taken as Special Appropriation in the calculation of the Revenue Requirement for FY 04-05.

Total expenditure

816. In view of the above changes, the total expenditure works out to Rs.2425.65 crores as against Rs.2483.71 crores projected by the Licensee, as summarized in the following table:

Table No.176
Statement of expenditure and special appropriations

(Rs. Crs)

Expenditure Items	**APSPDCL**	**APERC**
Purchase of energy	1959.52	1920.20
Wages and Salaries (net of capitalization)	182.02	178.15
Administration and General Expenses (Net of capitalization)	24.49	24.49
Repairs and maintenance	39.56	39.56
Rent, rates and taxes	3.79	3.79
Approved loan interest (Net of capitalization)	95.01	84.12
Interest on Security Deposits	8.23	16.46
Legal charges	8.50	8.50
Audit and other fees	0.15	0.15
Depreciation	118.92	110.32
Other expenses	(0.31)	0.00
Provision for doubtful debts	18.87	0.00
Contribution to employee Funds (Net of capitalization)	20.77	20.83
Special Appropriations		
Contribution to Contingencies Reserve	4.19	3.03
Adjustments pertaining to previous years: Interest Depreciation Income Tax Wage Revision Reasonable Return		 14.20 25.03 (7.96) (2.76) (12.46)
TOTAL EXPENDITURE	2483.71	2425.65

Note: The amounts within brackets denote minus figures.

Reasonable return:

817. APSPDCL has not claimed in the filings Reasonable Return it is eligible for as per the Sixth Schedule to the Electricity (Supply) Act, 1948. It may be recalled here that there was no claim for Reasonable Return in the filings for FY 2002-03 and FY 2003-04 also but as stated in the Tariff Orders for the respective years, the Commission allowed the Reasonable Return as, in the opinion of the Commission, it was not in the interest of either the consumers or the Licensee to forgo the Reasonable Return. The Commission wishes to emphasise that one of the prime objectives of reforms undertaken by the State in the Electricity Sector is to bring in a commercial orientation in the methods of operation as well as in the general approach to management decisions by the unbundled entities. The Commission considers it necessary to provide for the Reasonable Return in the calculation of the Revenue Requirement to reinforce this commercial orientation and hopes that this would act as a motivating factor and a morale-booster at all levels leading to more operational efficiency all round. The Commission accordingly allows an amount of Rs.2.91 crores as Reasonable Return to APSPDCL and includes it in the calculation of the Revenue Requirement for FY 2004-05.

Non-tariff income

818. The Licensee has projected an amount of Rs.138.02 crores as Non-Tariff income (Form 1.4). The Commission has reckoned an amount of Rs.147.22 crores, including Rs.9.20 crores as revenue realisation from wheeling of energy.

Aggregate revenue requirement

819. The Aggregate Revenue Requirement works out to Rs.2281.34 crores as against Rs.2345.69 crores projected by the Licensee as detailed in the Table below:

Table No.177

(Rs. Crs)

Total expenditure	2425.65
Reasonable Return	2.91
MINUS: Non-Tariff income	147.22
Total net aggregate revenue requirement	2281.34

Revenue from tariff and the gap

820. Determination of the Aggregate Revenue Requirement is the first step in the process of tariff formulation. Subsequent Chapters of this Tariff Order (Chapters XV and XVI) discuss the sales projections by the DISCOMS, the revenue gap, the tariff approved by the Commission taking into account the cross-subsidy and the government subsidy, the bulk supply tariff (BST) applicable to each DISCOM and other aspects.

CHAPTER - XIV
CONSOLIDATED POSITION OF THE FOUR DISCOMS

821. The consolidated position of the Net Aggregate Revenue Requirement (ARR) of the four DISCOMS taken together works out to Rs.9654.44 crores as detailed in the table below:

Table No.178
Aggregate Revenue Requirement for the four DISCOMS for FY 2004-05

(Rs. Crs)

	APNPDCL	APEPDCL	APSPDCL	APCPDCL	TOTAL
Total Expenditure	1892.96	1642.42	2425.65	4323.85	10284.88
Reasonable Return	3.31	2.31	2.91	11.68	20.21
Less:Non-Tariff Income	113.93	88.70	147.22	300.80	650.65
Total Net ARR	1782.34	1556.03	2281.34	4034.74	9654.44

822. The aggregate revenue of the four DISCOMS from current tariffs is as follows:

Table No.179

(Rs. Crs)

DISCOMS	Filing	APERC
APNPDCL	1162.92	1153.79
APEPDCL	1537.17	1539.95
APSPDCL	1887.36	1825.73
APCPDCL	3705.69	3655.95
Total	8293.14	8175.42

823. The resultant gap is Rs.1479.02 crores (Rs.9654.44 crores minus Rs.8175.42 crores) to be covered through tariff, efficiency gains and GoAP subsidy.

CHAPTER : XV

SALES PROJECTIONS, REVENUES AND REVENUE GAP

Sales projections:

824. The DISCOMS filed their estimated sales in MU for each category for FY2004-05. The sales forecast for the Current Year (FY 2003-04) is based on actual sales for first six months and the estimated sales for the next six months of the year. For FY05, the estimated sales to each category are extrapolations based on previous actual sales and estimated sales for FY04, duly incorporating consumer category specific factors such as increase in metered sales, increase in number of services, applications on hand for new releases, new releases in the past, etc. The Commission makes the following observations on sales forecast:

- The DISCOMs still follow aggregate approach in sales forecast at DISCOM level rather than drilling down the forecasting exercise to section level. This will have some forecast error since such aggregate approach for sales forecast does not reckon the details.

- The DISCOMs are yet to ascertain the sales growth on account of existing consumers and new consumers separately, and sales substitution to consumers of DISCOMs by third parties and captive generators. This will lead to uncertainty in sales forecast.

- The DISCOMs need to focus on sub units, i.e. districts, divisions, subdivisions and sections, and, analyze the consumer consumption behavior across time, income levels, line of activity, and other relevant information for accurate sales forecast.

825. The Commission directs that:

From 2005-06 filing onwards, the sales forecast for each category of consumers shall be made at each operation section/division level and them aggregated for the entire company. The DISCOMs shall file the section-wise sales for each category of consumers from the sales database for the period 04/04 to 09/04 by not later than 31-11-2004 without fail, with monthly progress reports thereafter.

Cross-validation with Sales database:

826. Though the sales database is not complete in all respects, i.e. it does not fully capture the consumer profile, metering, billing and collection details, yet the database contains the units billed to each consumer in a billing cycle. The Commission has reckoned the units billed to consumers in each month for LT categories except agriculture for the purpose of cross-validating the actual sales filed and also in evaluating the sales forecast for FY05. This validation reveals that the consumer-wise aggregated sales are in the vicinity of audited sales volumes.

LT Agriculture

827. The DISCOMs estimated the consumption based on LV side meter readings for the period 11/02 to 10/03 as directed by the Commission. Taking the estimated consumption as reference, the DISCOMs filed the anticipated sales for FY04-05 for this category. Except CPDCL, all DISCOMs filed the sales for FY04-05 at approved volumes for FY03-04. CPDCL filed additional 450 MU sales to this category and filed the consumption estimate based on LV side meter readings at 5338 MU for 12 months.

828. The Commission noted with disquiet the data quality and coverage for estimation of consumption which is poor in case of CPDCL and NPDCL. Further, the average usage hours in CPDCL are higher, indicating extensive additional supplies beyond 9/7 hours and/or usage of phase converters. Both NPDCL and CPDCL need to improve a lot on data collection and analysis procedures with regard to LV side meter readings for consumption estimation. Given the circumstances, the Commission approves 5000 MU (-250) for CPDCL and 2700 MU (-100) for NPDCL for FY05.

829. The DISCOMS, after filing, indicated higher volumes of agricultural consumption for FY04-05 on account of release of new services under Tatkal scheme. Even for these services, the DISCOMs have no service-wise information in support of the consumption estimate on account of services released under Tatkal

scheme. Hence, the Commission has not reckoned the request for additional sales volumes on account of services under Tatkal scheme. The Commission expects that the DISCOMs may meet this additional consumption out of efficiencies to be achieved in supplies to agriculture for FY04-05.

830. The Commission directs that: ***the DISCOMs shall file the monthly agricultural consumption estimate in two parts, a) consumption estimate for unmetered services based on LV Side DTR meters, and b) consumption on account of services released under Tatkal scheme and metered services. The estimate shall be filed in person to the Commission by 25th of every month. Both CPDCL and NPDCL need to improve their data collection and analysis procedures significantly.***

Sales volumes for FY04-05

831. The Commission, after examining the previous sales history and after comparison of the sales in the form of sales database and additional information filed by the DISCOMs, approved the sales volume for FY04-05. On aggregate, the Commission approval is less than the sales forecasted by DISCOMs in the filing and the lower volumes are mostly in LT categories. The details are given below:

Table No.180

Sales forecast for all DISCOMS FY 04-05 (MU)

CONSUMER CATEGORY	FILINGS	COMMISION	DIFFERENCE
LT I:DOMESTIC	7959	7887	-72
LT II:NON-DOMESTIC AND COMMERCIAL	1871	1795	-75.63
LT III:INDUSTRY: NORMAL, OPTIONAL AND OTHERS	2030	1950	-80
LT IV:COTTAGE INDUSTRIES AND DOBIGHATS	38	35	-2.92
LT V:AGRICULTURE	11800	11450	-350
LT VI:STREET LIGHTING AND PWS SCHEMES	941	1054	112.25
LT VII:GENERAL	110	98	-12.47
LT VIII:TEMPORARY	6	9	2.78
SUB TOTAL:LOW TENSION	**24756**	**24278**	**-477.73**
HT I: INDUSTRIAL-General	6523	6567	44.82
HT II: INDUSTRIAL-Others	737	730	-7
HT IV: AGRICULTURE AND IRRIGATION	187	188	1.03
HT V: RAILWAY TRACTION	1154	1152	-2
HT VI: TOWNSHIPS AND RESIDENTIAL COLONIES	199	197	-1.85
RESCOS	1181	1121	-60.45
TEMPORARY	1	1	-0.03
SUB TOTAL: HIGH TENSION	**9982**	**9956**	**-25.48**
GRAND TOTAL	**34738**	**34235**	**-503.21**

Revenue from Tariffs

832. The revenue from tariffs comprises three sub-components: a) revenue from the sale of energy at applicable tariff, b) revenue from application of minimum charges under certain tariff conditions, and c) revenue from application of fixed charges on connected/contracted load/demand. The DISCOMs estimated the revenue from both energy and minimum charges together and fixed charges separately and filed the revenue for each sub-component for the ensuing year FY05.

833. The Commission earlier directed the DISCOMs to file monthly MIS reports on minimum charges derived from databases. The DISCOMs could build the sales database but were unable to derive the minimum charges correctly on account of certain information gaps on connected load for some categories of consumers. With the database in place, the DISCOMS should now be in a position to derive the minimum charges from the databases.

834. The Commission directs that:

> ***The DISCOMS shall delineate the minimum charges from energy charges for all categories of consumers every month and file a monthly summary report with the Commission by 25th of every month. Such report shall be derived only from the database being built and maintained by the DISCOMS.***

Revenue from Tariff for FY04-05

835. The Commission has reckoned the minimum charges estimated and filed by the DISCOMs for computation of revenue. The energy charges and fixed charges are recomputed, based on volumes of electricity to be sold and load at the tariffs proposed by the DISCOMS. Wherever the Commission altered the sales volume and/or tariffs, the revenue changed accordingly from the level filed by the DISCOMS. In case of LT I:Domestic and LT II:Non-Domestic categories of consumers where

slab rates are applicable, the Commission adopted the slab proportions from the sales database filed by the DISCOMs. The details are given below:

Table No.181
Revenue from tariffs for FY04-05 **(Rs.Cr)**

CONSUMER CATEGORY	FILINGS	APERC
LT I:DOMESTIC	1947.02	1901.83
LT II:NON-DOMESTIC AND COMMERCIAL	1103.75	1018.94
LT III:INDUSTRY: NORMAL, OPTIONAL AND OTHERS	843.10	801.62
LT IV:COTTAGE INDUSTRIES AND DOBIGHATS	7.87	7.35
LT V:AGRICULTURE	412.06	409.17
LT VI:STREET LIGHTING AND PWS SCHEMES	186.33	205.31
LT VII:GENERAL	44.49	39.60
LT VIII:TEMPORARY	3.86	5.58
SUB TOTAL:LOW TENSION	**4548.48**	**4389.40**
HT I: INDUSTRIAL-General	2672.46	2607.44
HT II: INDUSTRIAL-Others	401.55	391.18
HT IV: AGRICULTURE AND IRRIGATION	29.58	33.91
HT V: RAILWAY TRACTION	519.44	507.03
HT VI: TOWNSHIPS AND RESIDENTIAL COLONIES	63.67	68.99
RESCOS	57.55	52.73
TEMPORARY	0.53	0.51
SUB TOTAL: HIGH TENSION	**3744.78**	**3661.79**
GRAND TOTAL	**8293.26**	**8051.19**

Revenue Gap: Projections

836. As per the filing, the revenue gap (aggregate revenue requirement in excess of tariff revenue) at proposed tariffs is computed at Rs.1996 cr for FY05. With the Commission's calculations on sales and other issues, the revenue gap at approved tariffs for FY05 is Rs.1303 Cr after taking into account the directed efficiency gains of Rs.300 cr. The details are given below.

Table No.182
Revenue gap for all DISCOMS for FY04-05 **(Rs.Cr)**

Sl.No.	Items	2004-05	
		DISCOMS	APERC
1	Reasonable Return	0	20.21
2	Expenditure	10867.65	10284.87
3	Non-Tariff Income	578.56	578.56
4	Wheeling Charges	0	72.09
5	Revenue Requirement (1+ 2 – 3 - 4)	10289.09	9654.43
6	Revenue	8293.14	8051.18
7	Efficiency Gains	0	300.00
8	**Net Revenue Gap (5 - 6 - 7)**	**1995.95**	**1303.25**

EASTERN POWER DISTRIBUTION COMPANY LIMITED:

837. The Commission approved sales of 5651 MU against the projected sales of 5555 MU for FY04-05. The increase in forecasted sales is on account of forecasted additional sales to HT Category-I consumers. The revenue gap as per the filing is Rs.302 Cr and with the Commission's calculations on expenditure and revenue, the revenue gap is computed at Rs.31.48 cr after taking into account the directed efficiency gains of Rs.8 Cr. The details are given in the tables below:

Table No.183
APEPDCL: SALES AND REVENUE FOR FY04-05

CONSUMER CATEGORY	SALES(MU)		REVENUE(Rs.Cr)	
	APEPDCL	APERC	APEPDCL	APERC
LT I:DOMESTIC	1636.69	1636.69	376.04	353.06
LT II:NON-DOMESTIC AND COMMERCIAL	308.88	308.88	176.01	173.30
LT III:INDUSTRY: NORMAL, OPTIONAL AND OTHERS	280.00	280.01	121.43	118.82
LT IV:COTTAGE INDUSTRIES AND DOBIGHATS	1.21	1.21	0.29	0.29
LT V:AGRICULTURE	1150.00	1150.00	48.64	47.92
LT VI:STREET LIGHTING AND PWS SCHEMES	156.85	156.85	39.53	39.53
LT VII:GENERAL	20.00	20.00	7.95	8.05
LT VIII:TEMPORARY	0.00	0.30	0.00	0.19
SUB TOTAL:LOW TENSION	**3553.63**	**3553.94**	**769.89**	**741.16**
HT I: INDUSTRIAL-General	1387.86	1483.87	527.29	539.46
HT II: INDUSTRIAL-Others	100.00	100.00	55.58	54.57
HT IV: AGRICULTURE AND IRRIGATION	14.57	14.57	2.89	3.33
HT V: RAILWAY TRACTION	363.01	363.01	163.35	159.72
HT VI: TOWNSHIPS AND RESIDENTIAL COLONIES	25.87	25.87	8.28	9.05
RESCOS	110.00	110.00	9.90	9.25
TEMPORARY	0.00	0.00	0.00	0.00
SUB TOTAL: HIGH TENSION	**2001.31**	**2097.32**	**767.29**	**775.39**
GRAND TOTAL	**5554.94**	**5651.26**	**1537.18**	**1516.55**

Table No.184
APEPDCL: REVENUE GAP FOR FY04-05 **(Rs.Cr.)**

Sl.No.	Items	2004-05	
		APEPDCL	APERC
1	Reasonable Return		2.31
2	Expenditure	1907.30	1642.42
3	Non-Tariff Income	67.93	67.93
4	Wheeling Charges	0.00	20.77
5	Revenue Requirement (1+ 2 – 3 - 4)	1839.37	1556.03
6	Revenue	1537.17	1516.55
7	Efficiency Gains	0.00	8.00
8	**Net Revenue Gap (5 - 6 - 7)**	**302.20**	**31.48**

SOUTHERN POWER DISTRIBUTION COMPANY LIMITED:

838. The Commission approved sales of 7879 MU against the projected sales of 8098 MU FY04-05. The reduction in forecasted sales is on account of forecasted sales reduction for both LT and HT categories of consumers. The revenue gap as per the filing is Rs.458 Cr and with the Commission's calculations on expenditure and revenue, the revenue gap is computed at Rs.410 cr after taking into account the directed efficiency gains of Rs.75 Cr. The details are given in the tables below:

Table No.185
APSPDCL: SALES AND REVENUE FOR FY04-05

CONSUMER CATEGORY	SALES(MU)		REVENUE(Rs.Cr)	
	APSPDCL	APERC	APSPDCL	APERC
LT I:DOMESTIC	2171.41	2100.00	510.43	498.92
LT II:NON-DOMESTIC AND COMMERCIAL	463.83	440.00	272.71	250.66
LT III:INDUSTRY: NORMAL, OPTIONAL AND OTHERS	700.01	620.00	240.47	212.12
LT IV:COTTAGE INDUSTRIES AND DOBIGHATS	19.92	17.00	3.84	3.31
LT V:AGRICULTURE	2599.99	2600.00	111.37	110.24
LT VI:STREET LIGHTING AND PWS SCHEMES	204.99	235.00	33.82	34.43
LT VII:GENERAL	40.47	28.00	16.55	11.56
LT VIII:TEMPORARY	1.36	1.25	0.84	0.78
SUB TOTAL:LOW TENSION	**6201.98**	**6041.25**	**1190.03**	**1122.02**
HT I: INDUSTRIAL-General	905.62	895.00	391.27	378.86
HT II: INDUSTRIAL-Others	155.00	148.00	81.94	77.37
HT IV: AGRICULTURE AND IRRIGATION	6.97	8.00	1.35	1.65
HT V: RAILWAY TRACTION	412.00	410.00	185.40	180.40
HT VI: TOWNSHIPS AND RESIDENTIAL COLONIES	59.84	58.00	19.15	20.30
RESCOS	355.97	319.00	17.80	15.28
TEMPORARY	1.00	0.00	0.53	0.00
SUB TOTAL: HIGH TENSION	**1896.40**	**1838.00**	**697.44**	**673.86**
GRAND TOTAL	**8098.38**	**7879.25**	**1887.47**	**1795.88**

Table No.186
APSPDCL: REVENUE GAP FOR FY 04-05 **(Rs.Cr)**

Sl.No.	Items	2004-05	
		APSPDCL	APERC
1	Reasonable Return	0.00	2.91
2	Expenditure	2483.71	2425.64
3	Non-Tariff Income	138.02	138.02
4	Wheeling Charges	0.00	9.20
5	Revenue Requirement (1+ 2 – 3 - 4)	2345.69	2281.33
6	Revenue	1887.36	1795.88
7	Efficiency Gains	0.00	75.00
8	**Net Revenue Gap (5 - 6 - 7)**	**458.33**	**410.45**

NORTHERN POWER DISTRIBUTION COMPANY LIMITED:

839. The Commission approved sales of 6156 MU against the projected sales of 6274 MU FY04-05. The reduction in forecasted sales is on account of forecasted sales reduction for both LT and HT categories of consumers. The revenue gap as per the filing is Rs.371 Cr and with the Commission's calculations on expenditure and revenue, the revenue gap is computed at Rs.580 cr after taking the directed efficiency gains of Rs.60 Cr. The details are given below in the tables.

Table No.187
NPDCL: SALES AND REVENUE FOR FY04-05

CONSUMER CATEGORY	SALES(MU)		REVENUE(Rs.Cr)	
	APNPDCL	APERC	APNPDCL	APERC
LT I:DOMESTIC	1182.33	1182.34	276.50	267.12
LT II:NON-DOMESTIC AND COMMERCIAL	195.70	195.70	112.50	108.96
LT III:INDUSTRY: NORMAL, OPTIONAL AND OTHERS	224.00	224.00	95.31	93.07
LT IV:COTTAGE INDUSTRIES AND DOBIGHATS	4.25	4.25	0.84	0.84
LT V:AGRICULTURE	2800.00	2700.00	103.18	102.52
LT VI:STREET LIGHTING AND PWS SCHEMES	209.08	209.06	29.91	29.92
LT VII:GENERAL	12.96	12.96	5.18	5.18
LT VIII:TEMPORARY	1.00	1.00	0.62	0.62
SUB TOTAL:LOW TENSION	**4629.32**	**4529.31**	**624.04**	**608.24**
HT I: INDUSTRIAL-General	807.80	807.80	341.36	337.54
HT II: INDUSTRIAL-Others	48.47	48.47	27.01	26.53
HT IV: AGRICULTURE AND IRRIGATION	15.67	15.67	2.14	2.41
HT V: RAILWAY TRACTION	304.90	304.90	137.20	134.16
HT VI: TOWNSHIPS AND RESIDENTIAL COLONIES	47.39	47.39	15.16	16.59
RESCOS	420.01	402.00	15.96	16.67
TEMPORARY	0.00	0.00	0.00	0.00
SUB TOTAL: HIGH TENSION	**1644.24**	**1626.23**	**538.83**	**533.90**
GRAND TOTAL	**6273.56**	**6155.54**	**1162.87**	**1142.14**

Table No.188
NPDCL: REVENUE GAP FOR FY04-05 **(Rs.Cr)**

Sl.No.	Items	2004-05	
		APNPDCL	APERC
1	Reasonable Return	0.00	3.31
2	Expenditure	1646.85	1892.96
3	Non-Tariff Income	113.31	113.31
4	Wheeling Charges	0.00	0.62
5	Revenue Requirement (1+ 2 – 3 - 4)	1533.54	1782.34
6	Revenue	1162.92	1142.14
7	Efficiency Gains	0.00	60.00
8	**Net Revenue Gap (5 - 6 - 7)**	**370.62**	**580.20**

CENTRAL POWER DISTRIBUTION COMPANY LIMITED:

840. The Commission approved sales of 14548 MU against the projected sale of 14810 MU FY04-05. The reduction in forecasted sales is on account of forecasted sales reduction for both LT and HT categories of consumers. The revenue gap as per the filing is Rs.865 Cr and with the Commission's calculations on expenditure and revenue, the revenue gap is computed at Rs.281 cr after taking into account the directed efficiency gains of Rs.157 Cr. The details are given in the tables below:

Table No.189

CPDCL: SALES AND REVENUE FOR FY04-05

CONSUMER CATEGORY	SALES(MU)		REVENUE(Rs.Cr)	
	APCPDCL	APERC	APCPDCL	APERC
LT I:DOMESTIC	2968.29	2967.95	784.08	782.73
LT II:NON-DOMESTIC AND COMMERCIAL	902.54	850.74	542.54	486.02
LT III:INDUSTRY: NORMAL, OPTIONAL AND OTHERS	826.46	826.46	385.86	377.60
LT IV:COTTAGE INDUSTRIES AND DOBIGHATS	12.89	12.89	2.90	2.90
LT V:AGRICULTURE	5249.18	5000.00	148.84	148.49
LT VI:STREET LIGHTING AND PWS SCHEMES	370.55	452.81	83.08	101.43
LT VII:GENERAL	36.60	36.60	14.81	14.81
LT VIII:TEMPORARY	3.86	6.45	2.40	4.00
SUB TOTAL:LOW TENSION	**10370.37**	**10153.90**	**1964.51**	**1917.98**
HT I: INDUSTRIAL-General	3421.33	3380.76	1412.53	1351.58
HT II: INDUSTRIAL-Others	433.14	433.14	237.02	232.70
HT IV: AGRICULTURE AND IRRIGATION	149.79	149.79	23.19	26.52
HT V: RAILWAY TRACTION	74.42	74.42	33.49	32.74
HT VI: TOWNSHIPS AND RESIDENTIAL COLONIES	65.87	65.86	21.08	23.05
RESCOS	295.47	290.00	13.89	11.52
TEMPORARY	0.00	0.97	0.00	0.51
SUB TOTAL: HIGH TENSION	**4440.02**	**4394.94**	**1741.20**	**1678.63**
GRAND TOTAL	**14810.39**	**14548.84**	**3705.71**	**3596.61**

Table No.190

CPDCL: REVENUE GAP FOR FY04-05 **(Rs.Cr)**

Sl.No.	Items	2004-05	
		APCPDCL	APERC
1	Reasonable Return	0.00	11.68
2	Expenditure	4829.79	4323.85
3	Non-Tariff Income	259.30	259.30
4	Wheeling Charges	0.00	41.50
5	Revenue Requirement (1+ 2 – 3 - 4)	4570.49	4034.73
6	Revenue	3705.69	3596.61
7	Efficiency Gains	0.00	157.00
8	**Net Revenue Gap (5 - 6 - 7)**	**864.80**	**281.12**

CHAPTER : XVI
TARIFF DESIGN

TARIFF STRUCTURE FOR RETAIL SUPPLY TARIFF

841. APERC is perhaps among the few Commissions in India to have used the category-wise Cost-of-Service (CoS) model to fix tariffs. The pricing principles of CoS using the approved embedded cost followed by the Commission for determination of retail supply tariffs for Distribution & Retail Supply business and also Bulk Supply Tariff (BST) are widely accepted as one of the scientific and objective ways of fixing tariffs. Electricity Act 2003, Section 61(g) requires the State Commissions to ensure *that the tariff progressively reflects the cost of supply of electricity, and also reduces and eliminates cross-subsidies within the period to be specified by the Appropriate Commission.* Sections 39, 40 and 42 of the Electricity Act, 2003, which permit open access, enjoin upon Commissions to fix the surcharge which shall be utilized to meet the current level of cross-subsidy. The CoS model is an important tool, both for tariff fixation and identification of cross-subsidy. The Commission continues to use the CoS as basis for design of retail tariffs.

842. The basic objective of the Commission to use the CoS with regard to tariff design in the first Tariff Order was to move towards cost-reflective tariffs.

843. The CoS model has enabled the Commission to:

- Identify costs attributable to each category
- Identify the extent of cross subsidy
- To design the rate structure of final tariffs

In any modeling exercise, the critical factor is the quality of data on which the model is developed. The load flow studies undertaken by the Licensees in their filings have shown considerable improvement in quality. The feeders from which data have been taken have increased in number as also the geographical coverage of the feeders, with almost all districts of Andhra Pradesh covered.

844. In the CoS model filed with the ARR, the Licensees have once again proposed:

- Shift to morning peak; and
- The use of class non-coincident peak loads to allocate demand related costs.

845. The Commission examined the filings of the DISCOMS together with all the supporting information and has preferred to retain the evening peak, as the data submitted by the DISCOMS does not provide substantive evidence of a shift in peak. Examination of the load curves for individual consumer categories indicates that if agriculture demand is not taken into consideration (as supply to agriculture is largely during off-peak hours), the evening peak continues. Since no major shifts in consumption patterns are discernible since last year, the Commission is of the opinion that shift to a morning peak is not an acceptable proposition, especially since a category's contribution to peak demand entails the allocation of fixed costs attributable to it and the resultant tariff to be fixed. Any shift in demand unless well-substantiated by way of detailed load studies, would change the cost allocation pattern and would perhaps be inconsistent with the prevailing structure of tariff design.

846. Regarding the use of class non-coincident peak demand to allocate costs suggested by the Licensees, the Commission prefers to continue with coincident peak demand. This decision to continue with coincident peak demand as against the proposal to shift to non-coincident peak demand is based on considerations similar to what was stated in the earlier Tariff Orders. As mentioned then, the division of distribution business into four business companies is a juridical decision and in terms of market structure, the prevailing power system functions as an integrated transmission and distribution business. Since all investments in the Generation and Transmission are so planned to cater to the system peak, it is only rational to consider coincident peak demand for allocation of cost among consumer categories in the different DISCOMS.

847. The emphasis, as always, has been to move tariffs closer to cost-to-serve and more importantly to reduce cross-subsidy with reduction in tariffs of the subsidizing categories of consumers. In this Order, the Commission has further progressed towards rationalizing tariffs closer to the cost-to-serve in some of the subsidizing categories.

848. It may be appropriate to mention here that although the quality of supporting data in terms of derivation of load curves has improved considerably and gets reflected as we shall observe later, in the full cost tariffs of different consumer categories, the Licensees have still been using the aggregate level load factors of the DISCOMs to estimate the peak load of the system. The companies have to undertake separate studies on each category to study the shapes of the load curves of individual consumer categories, their consumption patterns, and DSM opportunities to identify their contribution to the peak. All the DISCOMs and APTRANSCO have to monitor and develop the system so that on a continuous analytical base, it is possible to capture seasonal peaks and shifts in peaks.

849. The Commission noted with concern that the progress on Load Research front is slow especially with respect to DISCOMs. The cost of service model which is in place since the first tariff order is based on load shapes derived from data obtained from feeder metering. Instead, the data obtained from consumer meters is much more reliable with high precision and the Commission feels that it is time to make some beginning in load research in the State. In this context, the Commission directs that:

850. ***The DISCOMs shall provide trivector / load survey capability electronic meters for all categories of consumers on sample basis to measure the load shapes, load duration and consumption patterns. The DISCOMs shall arrive at the sample size based on statistical procedures and file the sampling plan and method of data collection (including plan for implementation) with the Commission within 45 days from the date of receipt of this tariff order.***

Full Cost Tariff and Efficiency Gains

851. The full cost tariff approved by the Commission for FY05 is Rs.9654.46 cr. Efficiency gains of Rs.300 crs. directed by the Commission are then deducted from the total revenue requirements and the costs allocated to different consumer categories. The fully allocated costs after efficiency gains are Rs.9354 cr. The *fully allocated costs* are again assigned to each consumer category to derive the unit cost to serve a category.

Cross subsidy / Subsidy by GoAP

852. The required cross-subsidy as determined by the Commission is taken into account before determining the fully allocated cost tariff of each category. The quantum of cross-subsidy is set by the Commission by decrease in tariffs or by fixing constraints on increase in tariffs of subsidizing categories. The available cross-subsidy is distributed among the subsidized categories in proportion to the difference between the prevailing tariff and the cost-to-serve (CoS). After taking into account the cross-subsidy generated by the subsidizing categories, if there is a gap between the CoS and the revenue from current tariffs and cross-subsidy for the subsidized categories, the tariffs are increased to cover the gap for the respective subsidized categories. This gives the fully allocated cost tariffs, category-wise. This is notified to the GoAP for policy directions, if any, in respect of provision of subsidy for any class or classes of consumers under Sec.12(3) of the Reform Act and Section 65 of the Electricity Act, 2003. The GoAP decides the levels to which the *fully allocated cost tariffs* in respect of the subsidized categories are to be reduced and makes good the resultant gap in the revenue requirement by way of subsidy. The tariffs so finalized are notified.

853. The Commission in its tariff design maintains a delicate balance between tariff charges and subsidy. It sets for itself the objective of gradually reducing cross-subsidy

while moving towards full cost tariffs. In the first tariff order, a cap of 5-6% was put on increases in tariffs in respect of subsidizing categories. Since then the attempt has been to gradually decrease the tariffs of subsidizing categories as it has been observed that further increases in tariffs of the subsidizing categories prevailing at the time of pre-Reforms, rather than increasing the desired quantum of cross-subsidy result in driving the subsidizing consumers out of the grid, thereby defeating the purpose of increasing the tariffs. The Commission's attempt to rationalize tariffs, has been restricted to decrease tariffs of subsidizing categories only as GoAP continued to provide subsidy for subsidized categories leaving no room to increase the tariffs for subsidized categories. But by prescribing efficiency targets, regulating captive generation and third party sales and providing incentives for higher load factor, the sales, especially to HT-I industry, have gone up considerably, providing nearly the same level of cross-subsidy, in spite of reduction in energy tariff.

854. The quantum of cross-subsidy available for FY05 is Rs.1754 cr. as compared to Rs.2110 cr. for FY 2003-04. On the issue of Government subsidy also, the Commission is of the opinion that it should be reduced gradually if the tariffs are to be rationalized. In this order, the government subsidy has also taken a downward trend, from Rs.1513.49 crs. in FY04 to Rs.1303.27 crs. for FY05.

855. The table below gives the Fully Allocated Cost Tariff communicated to GoAP.

Table No.191
Fully Allocated Cost Tariffs – FY 2003-04

	SALES	Current Tariff		Proposed Tariff		Fully Allocated Cost Tariff		Total Revenue		
CATEGORY	MU s	Demand charges	Energy charges	Demand	Energy	Demand	Energy	Current	Proposed	APERC
LOW TENSION		Rs./HP/Yr	Ps. / Unit	Rs./HP/Yr	Ps. / Unit	Rs./HP/Yr	Ps. / Unit	Amount in Rs. Crores		
Category I: Domestic										
0 – 50	4445.04		**145**		**145**		**220**	750.06	750.06	1083.44
51 - 100	1682.67		**280**		**280**		**330**	471.15	471.15	555.28
101 - 200	1085.15		**305**		**305**		**349**	330.97	330.97	378.72
201 - 300	281.53		**475**		**475**		**515**	133.73	133.73	144.99
> 301	392.59		**550**		**550**		**575**	215.92	215.92	225.74
SUB TOTAL	**7886.98**							**1901.83**	**1901.83**	**2388.16**
Category II: Non-Domestic and Commercial										
0 - 50	502.88		**395**		**395**		**395**	211.17	211.17	211.17
> 51	1292.44		**660**		**660**		**625**	853.01	853.01	807.78
SUB TOTAL	**1795.32**							**1064.18**	**1064.18**	**1018.94**
Category III (a & b) Industrial										
Category III (a): Industrial-Normal										
All Units		**444**	**385**	**444**	**385**	**444**	**375**	696.31	696.31	681.02
Seasonal Industries - Optional Tariff		**1200**	**385**	**1200**	**385**	**1200**	**375**	100.34	100.34	98.23
Pisciculture			**90**		**90**		**90**	17.82	17.82	17.82
Sugarcane Crushing			**50**		**50**		**50**	0.00	0.00	0.00
SUB TOTAL OF CATEGORY III (a & b)	**1950.47**	**444**	**385**	**444**	**385**	**444**	**375**	**819.14**	**819.14**	**801.62**
Category IV:										
Cottage Industries	**35.35**	**120**	**180**	**120**	**180**	**120**	**231**	**7.35**	**7.35**	**9.15**
Category V: Agriculture										
DPAP areas										
Up to 3 HP (2.25kw)		**225**		**225**		**800**		5.86	5.86	20.85
> 3 HP up to 5 HP (2.25to 3.75kw)		**375**		**375**		**900**		92.14	92.14	221.13
> 5 HP up to 10 HP (375 to 7.5kw)		**475**		**475**		**950**		19.51	19.51	39.01
> 10 HP (7.5kw)		**575**		**575**		**1050**		0.63	0.63	1.16
0 - 2500 Units per annum			**20**		**20**		**20**	0.00	0.00	0.00
> 2500 Units per annum			**50**		**50**		**50**	0.00	0.00	0.00
SUB TOTAL								118.14	118.14	282.15
Other areas										
Up to 3 HP (2.25kw)		**275**		**275**		**975**		43.94	43.94	155.80
> 3 HP up to 5 HP (2.25to 3.75kw)		**425**		**425**		**1075**		164.43	164.43	415.90
> 5 HP up to 10 HP (375 to 7.5kw)		**525**		**525**		**1150**		44.88	44.88	98.31
> 10 HP (7.5kw)		**625**		**625**		**1200**		31.73	31.73	60.92
0 - 2500 Units per annum			**20**		**20**		**20**	0.02	0.02	0.02
> 2500 Units per annum			**50**		**50**		**50**	0.00	0.00	0.00
SUB TOTAL								**285.00**	**285.00**	**730.96**
Tatkal			**100**		**50**		**100**	**5.82**	**2.91**	**5.82**
Horticulture			**50**		**50**		**50**	**3.12**	**3.12**	**3.12**
SUB TOTAL (DPAP and NDPAP)	**11450.00**							**412.08**	**409.17**	**1022.05**
Category-VI & Local Bodies										
Street Lighting										
Minor Panchayats	**222.56**		**156**		**156**		**316**	34.72	34.72	70.33
Major Panchayats	**84.23**		**208**		**208**		**430**	17.52	17.52	36.22
Nagarpalikas and Municipalities Gr.3	**28.41**		**274**		**274**		**430**	7.78	7.78	12.21
Municipalities Gr.1 & 2	**50.83**		**326**		**326**		**450**	16.57	16.57	22.87
Municipalities Selection Spl.Gr.	**24.32**		**353**		**353**		**500**	8.59	8.59	12.16
Corporations	**176.29**		**379**		**379**		**550**	66.81	66.81	96.96
PWS Schemes										
Minor Panchayats & Major Panchayats	**370.27**							9.84	13.55	9.84
0 - 2500 Units per annum	165.46		**20**		**20**		**20**	2.29	3.31	2.29
> 2500 Units per annum	204.81		**50**		**50**		**50**	7.55	10.24	7.55
Nagarpalikas and Municipalities Gr.1, 2, 3										
Upto 1000 units	**21.31**	**240**	**375**	**240**	**375**	**240**	**460**	8.31	2.33	2.84
Balance units	**67.29**	**240**	**405**	**240**	**405**	**240**	**525**	27.62	6.00	7.77
Corporations										
Upto 1000 units	**0.34**	**240**	**405**	**240**	**405**	**240**	**525**	0.16	0.16	0.20
Balance units	**7.92**	**240**	**460**	**240**	**460**	**240**	**600**	**3.69**	**3.69**	**4.80**
SUB TOTAL	**1053.72**							**205.31**	**205.31**	**315.10**
Category VII: General Purpose	**97.56**		**400**		**400**		**400**	**39.60**	**39.60**	**39.60**
Category VIII: Temporary Supply	**9.00**		**620**		**620**		**620**	**5.58**	**5.58**	**5.58**
TOTAL LOW TENSION	**24278.41**							**4452.16**	**4452.16**	**5597.30**
HIGH TENSION										
Category I: Industry - General	**6567.43**							**2657.28**	**2657.28**	**2607.44**
(a) Industrial General		**2340**	**360**	**2340**	**360**	**2340**	**350**			
(b) Ferro Alloys			**212**		**212**		**212**			
Category II: Industry – Other	**729.61**	**2340**	**450**	**2340**	**450**	**2340**	**440**	**398.47**	**398.47**	**391.18**
Category IV: Irrigation and Agriculture	**188.03**							**29.71**	**29.71**	**38.28**
Government Lift Irrigation schemes	127.26		**208**		**208**		**241**	26.47	26.47	30.67
Private HT Agri	22.83	**430**		**430**		**430**		1.92	1.92	1.92
Metered Consumption	37.94		**35**		**35**		**150**	1.33	1.33	5.69
Category V: Railway Traction	**1152.33**		**450**		**450**		**440**	**518.55**	**518.55**	**507.03**
Category VI: Townships and Residential Colonies	**197.12**		**320**		**320**		**350**	**63.08**	**63.08**	**68.99**
Rural Electric Co-operatives	**1121.00**							**52.73**	**52.73**	**143.74**
Anakapalle	82.00		**97**		**97**		**152**	7.95	7.95	12.46
Chipurupally	28.00		**80**		**80**		**147**	2.24	2.24	4.12
Kadiri – East	65.00		**37**		**37**		**124**	2.41	2.41	8.06
Kadiri – West	58.00		**40**		**40**		**125**	2.32	2.32	7.25
Sanjay	167.00		**40**		**40**		**128**	6.68	6.68	21.38
Sircilla	402.00		**38**		**38**		**119**	15.28	15.28	47.84
Atmakur	59.00		**42**		**42**		**125**	2.48	2.48	7.38
Kuppam	155.00		**45**		**45**		**132**	6.98	6.98	20.46
Rayachoti	105.00		**61**		**61**		**141**	6.41	6.41	14.81
Temporary	**0.97**	**3510**	**525**	**3510**	**525**	**3510**	**525**	**0.53**	**0.53**	**0.51**
TOTAL HIGH TENSION	**9956.49**							**3720.36**	**3720.36**	**3757.16**
SYSTEM TOTAL (LT & HT)	**34234.90**							**8175.42**	**8172.51**	**9354.46**

Policy Directions of GoAP on Subsidy:

856. The Commission after working out the fully allocated cost, communicated the same to GoAP for policy directions if any, under section 12(3) of the Reform Act and Section 65 of the Electricity Act, 2003, GoAP have directed that the tariff in respect of the subsidized categories may be reduced to the levels proposed by the DISCOMS. The GoAP was intimated that such reduction in tariffs would require a subsidy of Rs.1303.27 cr. Accordingly, GoAP agreed to make available the same amount as subsidy to DISCOMS. The table below gives the details of subsidy allocation for FY 2004-05 to the various subsidized categories:

Table No.192
Details of subsidy allocation in FY 2004-05

Particulars	**Amount (Rs.Crs)**
Domestic	486.33
Cottage Industries	1.80
Local Bodies	109.79
LT Agriculture	609.97
RESCOS	91.01
HT Agriculture	4.37
Total	**1303.27**

The DISCOM-wise distribution of subsidy is given in the table below:

Table No.193
DISCOM-wise subsidy for FY 2004-05

Name of the DISCOM	Amount **(Rs.Crs.)**
NPDCL	310.54
EPDCL	194.38
SPDCL	334.05
CPDCL	464.30
TOTAL	1303.27

857. The GoAP subsidy as in the earlier Tariff Orders has been mainly for Domestic, Agriculture and RESCOs. The details of revenue recovery, cross-subsidy and subsidy for the various subsidized categories are given in the table below:

Table No.194
Details of revenue, cross-subsidy and Government subsidy for FY 2004-05 **(Rs. Crs.)**

Subsidised categories	Revenue	Cross-subsidy	Government subsidy
Domestic	1901.83	655.06	486.33
Cottage Industry	7.35	2.40	1.80
Agriculture	409.17	821.15	609.97
Local Bodies	205.31	147.94	109.79
HT Agriculture	33.91	6.51	4.37
RESCOS	52.73	121.49	91.01

Administration of Subsidy:

858. Subsidy provided by the GoAP is administered as follows:

a) The subsidy given by the GoAP as per Section 12(3) of Reform Act is for maintaining the tariffs at the level proposed by the DISCOMS in respect of the subsidized categories.

b) Each DISCOM gets the subsidy commensurate to the extent of energy sales projected in each subsidised category.

c) The subsidy allocation to each DISCOM as calculated in (b) above must be paid by the GoAP to the respective DISCOMS in monthly instalments, in advance.

859. The Commission feels that it is time to link the flow of subsidy from GoAP to the units actually sold to the consumers for whom the subsidy has been provided. For this purpose, the Commission draws the following subsidy administration mechanisms for DISCOMs and GOAP.

860. The DISCOMs shall file before the Commission the actual sales to subsidized categories of consumers for whom the GOAP agreed to pay the subsidy every month and the Commission will monitor the units actually sold by the DISCOMS vis-à-vis the subsidy provided. At the end of the year, subsidy adjustments will be made based on the consumption of units in respect of various subsidized categories.

861. For measuring the sales to the subsidized categories, the agricultural consumption estimate based on LV side meter readings on DTRs shall be the basis. For measuring the sales to metered categories of consumers, the sales database shall be the basis.

862. The Commission reiterates that in case the subsidy is not paid regularly on monthly basis, in advance, by GoAP, the DISCOMS shall revert to the full cost tariff fixed by the Commission.

863. The GOAP obligation towards subsidy payments to DISCOMs is limited to the quantities mentioned in this order. If the DISCOMs exceed tariff order quantities and thus the subsidy requirement, the Commission will not entertain any request for additional quantities of energy to subsidized categories unless the permission of the GoAP is taken for additional subsidy if the excess consumption relates to agriculture. In other categories, if there is excess consumption, no additional subsidy will be recommended by the Commission to GoAP.

864. The Commission directs the DISCOMS that they should ensure that each bill issued to consumers shows the component of subsidy, and cross-susbidy provided. This is in addition to the instruction regarding position of arrears to be displayed on the consumers' bills. DISCOMS are directed to implement the directive immediately.

Final Retail Tariffs:

865. Section 26 of the Reform Act, as well as Section 62(3) of the Electricity Act, 2003, while stipulating that the Commission should not show any undue preference to any consumer of electricity, permit differentiation based on certain factors like load factor, power factor, voltage, total consumption of electricity etc. Accordingly, the Commission followed the prescribed criteria while differentiating among consumers.

866. As the tariffs for subsidized categories could not be increased due to subsidy provided by GoAP, the Commission has continued with its efforts to align tariff rates with cost-to-serve, especially where the subsidising categories are concerned. The important changes in the present tariffs are:

i) The tariffs for all HT categories wherever higher than the cost-to-serve have been reduced.

ii) The tariffs of those HT categories where the tariffs are below the cost-to-serve, the tariffs are increased to the level of cost-to-serve, so that the Government / other subsidizing categories do not subsidize such categories.

Category -LT-I : Domestic:

867. The tariff rates remain unchanged, as the GoAP have decided to provide the required subsidy. The cost-to-serve for this category is Rs. 3.97 per unit, and after efficiency gains the cost-to-serve is Rs.3.86 per unit.

Table No.195

CAT-LT-I : DOMESTIC

Slab units/month	Current Energy charge (ps/unit)	DISCOMS	APERC
		Proposed Energy charge (ps/unit)	Energy charge (ps/unit)
0-50	145	145	145
51-100	280	280	280
101-200	305	305	305
201-300	475	475	475
Above 300	550	550	550

Category LT-II: Non-Domestic and Commercial

868. The non-domestic and commercial category LT-II is an amorphous category, which includes all consumers who are not categorized under domestic, agriculture and industry and includes shops, offices, commercial establishments, entertainment center, studios etc. The A.P Hotel Association had represented to the Commission for re-categorisation of hotels from LT-II to LT-III on the plea that GoAP recognized them as industry. The DISCOMS have clarified that hotels for purpose of use of

electricity are not classified as industry, be it HT or LT. The Commission has considered the matter and for reasons explained elsewhere in this Order, agrees with the view taken by DISCOMS, as it is not an industrial activity but only a commercial activity.

869. In the Tariff Order of 2002-03, the Commission reduced the slabs in this category from three to two, clubbing the last two slabs then existing. This was done keeping in mind small shop owners especially in the rural areas. A suggestion was made in the public hearing to increase the number of slabs in this category. The Commission examined this request and noted that there is no substantial basis for increasing the number of slabs in this category and it may, on the other hand, tend to encourage multiple connections. The Commission prefers to continue the first slab at 0-50 units. Among the subsidizing categories, LT-II had the highest tariff rate as was also pointed out during the public hearing. The tariff to this category is being reduced gradually in order to align the rates with the cost-to-serve. The cost-to-serve for this category is Rs.3.82 per unit and after efficiency gains the cost-of-serve is Rs.3.70 per unit. The rate for the first slab remains unchanged at Rs. 3.95 per unit while for the second slab it has been reduced from Rs.6.60 to Rs. 6.25 per unit.

Table No.196
CAT-LT-II: NON-DOMESTIC AND COMMERCIAL

Slab	Current Energy charge (ps/unit)	DISCOMS	APERC
		Proposed Energy charge (ps/unit)	Energy charge (ps/unit)
0 - 50	395	395	395
51 & above	660	660	625

Category LT III (A) –Industry

870. This category consists entirely of industrial loads in the LT category. The cost-to-serve for this category is Rs. 3.50 per unit and after efficiency gains the cost-to-serve is Rs.3.39 per unit, and it is a subsidizing category. DISCOMS have not suggested any changes in the tariff for this category. The Commission in line with its philosophy to make tariffs closer to cost-to-serve and gradually reduce cross-subsidy has reduced the energy charges by 10 paise, from

385 paise per unit to 375 paise per unit. It **also reiterates *its previous directive (Tariff Order for 2002-03) that a) for loads of 20HP and above but below 50HP, LT demand meters should be fixed; and b) for loads of 50HP and above but up to 75HP, tri-vector meters be fixed and the metering should be on the HT side.***

871. The industrial consumers under LT III (A) with load of 50 HP and above were given an option to choose a tariff based on demand charge per KVA instead of the fixed charge per HP. A doubt has arisen whether these consumers can declare a demand less than the minimum qualifying level of 50 HP. The Commission examined this issue and is of the opinion that the demand charges payable shall not be less than the applicable fixed charges at a contracted load of 50 HP. Accordingly, the Commission specifies that the contracted demand declared shall not be less than 25 KVA for those who opt for the demand tariff.

Category LT III (B) –Industry:

872. LT-III (B) is a separate category created in LT-III Industrial for those industries whose connected load is more than 75HP and below 150 HP, which would normally qualify as HT-I category. As the actual load on the system differs from the connected load due to diversity factor, a separate category was created in the LT – III Industry segment. Metering for this category is on the HT side and must necessarily have tri-vector meters. As stated in the earlier Order, the consumer is given the benefit of declaring a contracted demand lower than the connected load. A two-part tariff is levied which consists of demand charges and energy charges. The energy charges have been reduced by 10 paise, from 385 paise per unit to 375 paise per unit for the reasons stated above. As discussed in LT III (A), Commission specifies that the contracted demand declared shall not be less than 50 kVA.

LT-III (B) – Seasonal Industry:

873. In the last Tariff Order (FY04), the Commission on request from consumers and the DISCOMS had extended the benefit of the off-seasonal tariff to seasonal industries under LT-IIIB also, on the lines of HT-I seasonal for which the Commission had fixed off-season demand and energy charges. Representatives of LT-Fruit

Processing Industry have requested for extension of this facility to LT-IIIA also during public hearing. The Commission examined the matter and on the basis of the recommendation put forward by the DISCOMS decides to extend the seasonal category benefit under LT-III (A) also, with the same conditions and charges as applicable to LT-IIIB seasonal industry. The demand charges during the off-season will be on the basis of recorded maximum demand or 30% of the contracted demand whichever is higher if it is optional category; otherwise, fixed charges shall be payable at 30% of the contracted load. The energy charges applicable will be those of HT-II. The definition of "seasonal industry" will be the same as for HT-I category.

Table No.197
CAT-LT-III : INDUSTRIAL

Slab	Current charges		DISCOMS Proposed charges		APERC	
	Fixed charges	Energy charge (paise/unit)	Fixed charges	Energy charge (paise/unit)	Fixed charges	Energy charges (paise/ unit)
Category III(A): Industrial						
(i). Industrial – normal up to 75 HP	Rs.37/HP/month	385	Rs.37/HP/ month	385	Rs.37/HP/ month	375
(ii). Industrial – Optional 50-75 HP	Rs.100/kVA/month	385	Rs.100/ KVA/month	385	Rs.100/ KVA/month	375
(iii). Pisciculture and Prawn Culture (below 10HP)	--	90	--	90	--	90
(iv). Sugarcane Crushing (coming under agricultural services)	--	50	--	50	--	50
Category III (B): Industrial						
Above 75 HP up to 150 HP	Rs.100/kVA/month	385	Rs.100/kVA/ month	385	Rs.100/kVA/m onth	375
Category III (A&B) Seasonal Industries – Off-seasons tariffs (During seasons the applicable tariff of the respective categories will apply)						
LT-IIIA(i)	--	--	--	--	Rs.37/HP/ month on 30% of the CL	440
LT-IIIA(ii)	--	--	--	--	Rs.100/kVA/ per month on 30% of the CMD or RMD which ever is higher	440
LT-III(B)	Rs.100/kVA/ per month on 30% of the CMD or RMD which ever is higher	450	Rs.100/kVA/ per month on 30% of the CMD or RMD which ever is higher	450	Rs.100/kVA/ per month on 30% of the CMD or RMD which ever is higher	440
CL: contracted Load; CMD: Contracted maximum demand; RMD: Recorded maximum demand						

Category-LT-IV : Cottage Industries:

874. The cost to serve this category is Rs. 3.29 /unit, and after efficiency gains the cost-to-serve is Rs.3.26 per unit. The rates remain unchanged and the Commission has accepted the proposals of DISCOMS for this category as given in the table below. The important additions to this category are blacksmithy, kanchari, goldsmithy, carpentry, pottery and shilpi with connected load of up to 5HP. This addition is made on request of the representatives of their Associations at the public hearing.

Table No.198
CAT-LT-IV : COTTAGE INDUSTRIES & DHOBIGHATS

Current charges		DISCOMS Proposed charges		APERC	
Fixed Charges (Rs/HP/ month)	Energy charge (ps/ unit)	Fixed charges (Rs/HP/ month)	Energy charge (ps/ unit)	Fixed charges (Rs/HP/ Month)	Energy charges (ps/ unit)
10	180	10	180	10	180

Category-LT-V: Agriculture:

a) Agriculture

875. The cost-to-serve for this category is Rs.1.68 /unit, and after efficiency gains the cost-to-serve is Rs.1.61 per unit. The rates remain unchanged as GoAP have decided to provide subsidy for this category and the Commission has accepted the proposals of DISCOMS for this category.

Table No.199
CAT-LT-V: AGRICULTURE

	Current charges		DISCOMS Proposed charges		APERC	
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						
Up to 3 HP (2.25kw)	225	@	225	@	225	@
> 3 HP up to 5 HP (2.25to 3.75kw)	375	@	375	@	375	@
> 5 HP up to 10 HP (375 to 7.5kw)	475	@	475	@	475	@
> 10 HP (7.5kw)	575	@	575	@	575	@
Other Areas (OA)						
Up to 3 HP (2.25kw)	275	@	275	@	275	@
> 3 HP up to 5 HP (2.25to 3.75kw)	425	@	425	@	425	@

> 5 HP up to 10 HP (375 to 7.5kw)	525	@	525	@	525	@
> 10 HP (7.5kw)	625	@	625	@	625	@
@ Metered Tariff Optional – The metered tariff for LT – V (A) agriculture category will not be increased for a period of 3 years from 2003-04, provided the meters are applied for by 30th Sept. 2003.						
0 – 2500 Units per annum		20		20		20
> 2500 Units per annum		50		50		50
Horticulture – Agricultural metered tariff is mandatory for Horticulture						
Out-of-turn allotment Scheme (metered tariff is compulsory)		100		50		50

Note:50% discount is admissible for DSM measures till 31.03.05 for flat rate tariff as well as metered tariffs

b) Metered tariff for Agriculture

876. At present the metered tariff fixed for agriculture is 20 paise per unit up to 2500 units and 50 paise thereafter. In the flat rate, a differentiation is made between DPAP and other areas which is not so in the case of metered tariff.

877. Despite wide publicity to metering and the gains from the metered tariff, the response has not been encouraging. Some farmer groups have written to the Commission that they are inclined to opt for metered Tariff. The response to out-of-turn allotment scheme corroborates this fact. To encourage metering, the Commission reiterates its decision that for farmers who opted for meters by September 2003, the metered tariff will remain frozen for three years from 2003-04.

c) Horticulture

878. This category continues with metered tariff as mandatory

d). Out-of-Turn Scheme

879. The Commission introduced the out-of-turn allotment scheme for Agricultural connections in the Tariff Order of 2002-03. The energy charge fixed at 125 paise/unit was reduced to 100 paise / unit in 2003-04. In the review meeting with DISCOMs, the Licensees informed that the scheme has received good response from the consumers. During the public hearing, representations were made to reduce the metered tariff for this category to encourage more consumers to opt for it. The Licensees have requested that the tariff to this Scheme should be lowered to 50 paise / unit with appropriate revision in the development charges. GoAP have agreed to

provide subsidy to this category and the tariff has been fixed at 50 paise per unit and the development charges are also reduced from Rs.2000 to Rs.1000.

Category-LT-VI : Local Bodies:

880. The cost-to-serve for this category is Rs.4.52 /unit, and after efficiency gains cost-to-serve is Rs.4.40 per unit. The rates remain unchanged and the Commission has accepted the proposals of DISCOMS for this category, with the required subsidy being given by GoAP:

Table No.200
CAT-LT-VI : LOCAL BODIES

Slab	Current charges		DISCOMS Proposed charges		APERC	
	Fixed charges (Rs/HP/ Month)	Energy (paise/ unit)	Fixed charges (Rs/HP/ Month)	Energy (paise/ unit)	Fixed charges (Rs/HP/ month)	Energy (paise/ unit)
Local Bodies Street Lighting & PWS schemes						
Local Bodies						
Street Lighting						
Minor Panchayats		156		156		156
Major Panchayats		208		208		208
Nagarpalikas and Municipalities Gr.3		274		274		274
Municipalities Gr.1 & 2		326		326		326
Municipalities Selection Spl.Gr.		353		353		353
Corporations		379		379		379
PWS Schemes						
Panchayats (Major and Minor)						
Up to 2500 Units		20		20		20
Above 2500 Units		50		50		50
All Nagarpalikas and Municipalities						
Up to 1000 Units	20	375	20	375	20	375
Balance Units		405		405		405
Corporations						
Up to 1000 Units	20	405	20	405	20	405
Balance Units		460		460		460

Category-LT-VII : General Purpose:

881. The LT General Purpose category covers places of workship 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 Societies Registration Act running educational and medical institutions on a no-profit

basis), recognised service institutions, and social welfare hostels run by Government of Andhra Pradesh.

882. The cost-to-serve for this category is Rs.3.37/unit and after taking efficiency gains the cost-to-serve is Rs.3.24 per unit. The rates remain unchanged and the Commission has accepted the proposals of DISCOMS for this category.

Table No.201
CAT-LT-VII: GENERAL PURPOSE
(Paise/Unit)

Current Energy charge	DISCOMS	APERC
	Proposed Energy charge	Energy charge
400	400	400

Category-LT-VIII: Temporary Supply:

883. The cost-to-serve for this category is Rs.3.83/unit, and after efficiency gains the cost-to-serve is Rs.3.71 per unit. The rates remain unchanged and the Commission has accepted the proposals of DISCOMS for this category.

Table No.202
CAT-LT-VIII: TEMPORARY SUPPLY (General)
(Paise/Unit)

Current Energy charge	DISCOMS	APERC
	Proposed Energy charge	Energy charge
620	620	620

Table No.203
CAT-LT-VIII: TEMPORARY SUPPLY (Agriculture)
(Paise/Unit)

Current Energy charge	DISCOMS	APERC
	Proposed Energy charge	Energy charge
230	230	230

HIGH TENSION

Category–HT-I: Industry

884. In keeping with its tariff philosophy of aligning tariff of cross subsidizing consumers to cost-to-serve, the Commission reduces the basic energy charges from Rs. 3.60/unit to Rs. 3.50/unit, a decrease of 2.77 percent, and 6.77 percent in real terms, taking inflation into account. The cost-to-serve for this category is Rs.2.71/unit, and after efficiency gains the cost-to-serve is Rs.2.63 per unit. The incentive scheme introduced in Tariff Order for FY 2001-02 and refined in Tariff Order FY 2002-03 continues to be operative as the Commission notes that the Scheme has made a positive impact to boost the sales in this category by attracting the captive/third party consumers to the grid supply of Licensees. The scheme will remain effective till 31st March, 2005.

885. This tariff is applicable to all HT-Industrial consumers including IT industry certified by the Consultative Committee of IT Industry (CCITI).

886. There have been representations from cement industry to provide for further incentives in the energy charges by shifting the base .The Commission examined in detail each of the modifications suggested and is of the opinion that any modifications to the incentive must be (i) fair to all consumers; and (ii) consistent with the design on the basis of which the incentives were originally conceived. The incentive was also based on the principle of cost reduction due to increased turnover. In terms of these principles, the Commission prefers to continue with the existing incentive scheme.

887. The Tariff for the approved quantity of Ferro Alloys Units remains unchanged at Rs. 2.12 ps/unit. These consumers are not entitled for the incentive mentioned above.

Table No.204
CAT-HT-I: INDUSTRIAL SEGMENT

	Current charges		DISCOMS Proposed charges		APERC	
Slab	Demand charges (Rs/KVA/ month)	Energy charge (ps/unit)	Demand charges (Rs/KVA/ month)	Energy charge (ps/ unit)	Demand Charges (Rs/KVA/ month)	Energy charge (ps/ unit)
(a). Industry – General	195	360	195	360	195	350
(b). Ferro Alloys		212*		212*		212*

* - Based on 85% Load Factor. Energy falling short of 85% Load Factor will be billed as deemed consumption.

Category –HT-II: Others

888. The cost to serve this category is Rs.2.55/unit, and after efficiency gains the cost-to-serve is Rs.2.47 per unit. In line with its philosophy to bring tariffs closer to cost-to serve, the Commission has reduced the tariff by 10 paise, from Rs.4.50 per unit to Rs.4.40 per unit.

Table No.205
CAT-HT-II: INDUSTRIAL NON-SEGMENTED

Current charges		DISCOMS Proposed charges		APERC	
Demand Charges (Rs/KVA/month)	Energy charge (ps/ unit)	Demand Charges (Rs/KVA/ month)	Energy charge (ps/ unit)	Demand Charges (Rs/KVA/ month)	Energy charge (ps/ unit)
195	450	195	450	195	440

Category –HT-IV: Irrigation and Agriculture:

889. The cost to serve this category is Rs. 2.49/unit , and after efficiency gains the cost-to-serve is Rs.2.41 per unit. This category has been classified into Government Lift Irrigation Schemes [HT-IV (A)] and other Irrigation Schemes [HT-IV (B)]. The charges for Government Lift Irrigation Schemes will cover the fully allocated cost in line with the decision taken in the Order for FY 2001-02 that all Government Schemes will be charged at cost–to–serve which after efficiency gains is currently Rs. 2.41/unit. FSA will be applicable if it is for purposes other than agriculture. For the other irrigation schemes, there is no change in the proposals given by the DISCOMS which is Rs.430 / HP/ annum or an optional metered tariff of 35 paise/unit. The Commission accepts the DISCOMS proposal as GoAP have agreed to provide the required subsidy. The metered tariff for HT – IV (B) Agricultural category as in the case of LT – V(A) will remain frozen for a period of three years from 2003-04 for those who opted for meters by September, 2003.

Table No.206
CAT-HT-IV: IRRIGATION AND AGRICULTURE

Category	Current charges		DISCOMS Proposed charges		APERC	
	Fixed charges (Rs/KVA/annum)	Energy charge (ps/ unit)	Fixed charges (Rs/KVA/ annum)	Energy charge (ps/ unit)	Fixed charges (Rs/KVA/ annum)	Energy charge (ps/ unit)
A: Govt. Lift Irrigation Schemes		208		208		241
B: Others	430	35*	430	35*	430	35*

* The metered tariff is optional and is subject to a minimum of Rs. 300/HP/Year of Contracted Load

Category – HT-V: Railway Traction:

890. The cost-to-serve for this category is Rs.3.13/unit, and after efficiency gains the cost-to-serve is Rs.3.07 per unit. The Commission reduces the energy charges for railway traction from Rs. 4.50 / unit to Rs. 4.40/unit bringing it closer to the cost-to-serve. There is no demand charge for HT Railway Traction.

Table No.207
CAT-HT-V: RAILWAY TRACTION
(Paise/Unit)

Current Energy charge	DISCOMS	APERC
	Proposed Energy charge	Energy charge
450	450	440

<u>Category – HT-VI: Townships / Colonies:</u>

891. The cost to serve this category has risen from Rs.2.29 / unit to Rs. 3.28 / unit, and after the efficiency gains the cost-to-serve is Rs.3.23 per unit which is more than the current tariff of paise 320 / unit. Hence this tariff has been fixed at Rs.350 / unit.

Table No.208
CAT-HT-V: TOWNSHIPS/COLONIES
(Paise/Unit)

Current Energy charge	DISCOMS	APERC
	Proposed Energy charge	Energy charge
320	320	350

TIME OF DAY (TOD) METERING:

892. In the last Order, the Commission had considered adoption of Time of Day (TOD) Tariff as an economic measure for optimal utilization of available electrical energy and had directed that all DISCOMs explore and identify all such consumers who are using higher quantum of energy and select cases where T.O.D. Tariff can be effectively implemented to the advantage of both the utility and the consumers. A report to this effect was submitted by every DISCOM but no specific proposals were made for introducing this scheme. ***The Commission however feels that in the light***

of ABT implementation at the DISCOM level, the DISCOMS should come up with specific proposals for introducing TOD metering for large consumers with details on a) metering facility; b) consumption patterns; and c) proposed incentive. The Commission directs that a specific plan be submitted within 3 months of this Order. During the year, mock billing should be done for the targeted consumers.

<u>Rural Electric Cooperative Societies (RESCOs):</u>

893. The RESCOs are a subsidized category as their area of operation covers predominantly the Domestic and Agricultural consumers. The average full cost per unit for the nine RESCOs is Rs. 2.44/unit and after taking into account the efficiency gains fixed for each RESCO, the cost-to-serve comes to Rs.2.36/unit. The Commission however calculates the Power Purchase Cost separately for each RESCO, after taking into account the subsidy paid by the Government, and accordingly fixes the RESCO-wise costs for the year 2004-05 as follows:

Table No.209
Rural Electric Co-operative Societies
(Paise/Unit)

RESCOs	Current Energy charges	Energy charge for 2004-05
Anakapalle	97	85
Chipurupally	80	80
Kadiri - East	37	37
Kadiri - West	40	40
Sanjay	40	40
Sircilla	38	41
Atmakur	42	42
Kuppam	45	41
Rayachoty	61	61

894. The schedule of tariffs for FY2004-05 is finalised on the above lines. The table below gives the schedule of tariffs for FY2004-05 after adjusting the GoAP subsidy among different categories of consumers:

Table No. 210
Schedule of Electricity Tariffs-FY2004-05

LT Categories

Category No.	Purpose	Rates for the year 2004-2005		
		Fixed Charges	Energy Charge Paise/Unit	Total Revenue in Rs Crs.
I	**Domestic**			
	0 - 50 Units/Month	--	145	750.06
	51- 100 Units/Month	--	280	471.15
	101 - 200 Units/Month	--	305	330.97
	201 - 300 Units/Month	--	475	133.73
	More than 300 Units/Month	--	550	215.92
	Total			**1901.83**
II	**Non-Domestic / Commercial**			
	0 – 50 Units/Month	--	395	211.17
	Above 50 Units/Month	--	625	807.78
	Total			**1018.94**
III (A)	**Industrial**			**801.62**
(i)	Industrial – Normal upto 75HP	Rs.37/HP/Month of connected Load **Or**	375	
(ii)	Industrial-Optional 50 to 75 HP	Rs.100/ KVA per month of contracted Demand (Optional)	375	
(iii)	Pisciculture and Prawn culture below 10 HP	--	90	
(iv)	Sugarcane crushing (under agricultural services)	--	50	
	Off-season tariff for seasonal loads under (i)	Rs.37/HP/month on 30% of contracted load	440	
	Off-season tariff for seasonal loads under (ii)	Rs.100/kVA/month on recorded demand or 30% of contracted demand, whichever is earlier	440	
III (B)	**Industrial – Optional category** Above 75 HP upto 150 HP	Rs.100/ kVA per month of Contracted Demand	375	
	Off-season tariff for Seasonal loads	Rs.100/ KVA per month of recorded demand or 30% of contracted demand whichever is higher.	440	
IV	**Cottage Industry and Dhobi Ghats**			**7.35**
	All Units	Rs.10/HP/Month	180	
V (A)	**Agriculture**			**409.17**
	<u>Flat rate Tariff</u>			
	DPAP Areas			
	1)Upto 3 HP	Rs.225/HP/Year		5.86
	2)Above 3 HP upto 5 HP	Rs.375/HP/Year		92.14
	3)Above 5 HP and upto 10 HP	Rs.475/HP/Year		19.51
	4) Above 10 HP	Rs.575/HP/Year		0.63
	Other Areas (OA)			
	1)Upto 3 HP	Rs.275/HP/Year		43.94
	2)Above 3 HP upto 5 HP	Rs.425/HP/Year		164.43
	3)Above 5 HP and upto 10 HP	Rs.525/HP/Year		44.88
	4) Above 10 HP	Rs.625/HP/Year		31.75

Category No.	Purpose	Rates for the year 2004-2005		
		Fixed Charges	Energy Charge Paise/Unit	Total Revenue in Rs Crs.
	Metered Tariff (optional)			
	0-2500 units per annum	--	20	
	More than 2500 units per annum	--	50	
V (B)	**Agriculture - Out of turn allotment: Mandatory Metered tariff**	--	50	2.91
V (C)	**Horticulture (Mandatory Meter Tariff)**	--		
	0-2500 units per annum		20	3.12
	Above 2500 units per annum		50	
VI (A)	**Local Bodies Street Lighting**			**205.31**
	Minor Panchayats	--	156	34.72
	Major Panchayats	--	208	17.52
	Nagarpalikas and Municipalities Gr 3	--	274	7.78
	Municipalities Gr 1 & 2	--	326	16.57
	Municipalities Selection & Special Grade	--	353	8.59
	Corporations	--	379	66.81
VI (B)	**Local bodies/PWS Scheme**			
	Minor / Major Panchayats			
	Upto 2500 units / year		20	3.31
	Above 2500 units / year		50	10.24
	All Nagarpalikas and Municipalities			
	Upto 1000 units / month	Rs.20/HP/Month	375	8.31
	Balance Units		405	27.62
	Corporations			
	Upto 1000 Units / month	Rs.20/HP/Month	405	0.16
	Balance Units		460	3.69
VII	**General Purpose**	--	400	**39.60**
VIII	**Temporary Supply**			**5.58**
	Agriculture Purpose	--	230	
	Other than Agriculture	--	620	

HT CATEGORIES Category No.	Purpose	Demand Charges	Energy Charge Paise/Unit	Total Revenue in (Rs. Crs.)
I	**Industrial #**			**2607.44**
	(A) Industry – General	195/KVA/month	350	
	(B) Ferro Alloys – applicable to entire off take from DISCOMs and without Load Factor incentives.	Based on 85% Load Factor. Energy falling short of 85% Load Factor will be billed as deemed consumption	212	
II	**Others**	195/KVA/month	440	**391.18**

IV	**Irrigation and Agriculture**			**33.91**
IV(A)	Govt. Lift Irrigation Schemes	--	241	30.67
IV(B)	Others	430/HP/Year	--	1.92
	Optional metered tariff	--	35*	1.33
V	**Railway Traction**	--	440	**507.03**
VI	**Townships/colonies**	--	350	**68.99**
	Temporary Supply	**$**	**$**	**0.51**
	Rural Cooperatives			**52.73**
	Anakapalle	--	85	7.00
	Chipurupally	--	80	2.25
	Kadiri-East	--	37	2.43
	Kadiri-West	--	40	2.34
	Sanjay	--	40	6.75
	Sircilla	--	41	16.67
	Atmakur	--	42	2.48
	Kuppam	--	41	6.36
	Rayachoty	--	61	6.45
TOTAL OF ALL CATEGORIES				**8051.18**

1. Fuel Surcharge Adjustment (FSA) is applicable to all categories except agriculture. FSA is applicable as notified by the Commission from time to time as per the regulations made by the Commission in this behalf.
2. Metering is mandatory for Agriculture consumers availing connection on or after 1.4.03.
3. Agricultural metered tariff is mandatory for Horticulture.
4. A discount of 50% on monthly energy charges in slab system or metered system will be given as incentive if the agriculture consumer provides the following demand side management measures as applicable for his pumping system viz., submersible and surface pump sets. This discount will be available up to 31st March 2005.

   (i) Frictionless foot valve (exempted for submersible pumpsets)
   (ii) HDPE or RPVC piping suction and/or delivery
   (iii) ISI marked monobloc pumpset or submersible pumpset
   (iv) Capacitor of adequate rating for the pumpset

5. The metered tariff for LT- V (A) agriculture category and HT–IV(B) agriculture category will not be increased for a period of 3 years from 2003-04 provided the application for meters were registered by 30th September, 2003.
6. * HT Irrigation and Agriculture optional metered tariff subject to a minimum of Rs.300/HP/Year of the Contracted Load.
7. # Category HT I(A): The following incentives are applicable for consumers for use of APTRANSCO supply:

Load factor	**Discount applicable on the energy rates**
More than 30% but up to 50%	10%
More than 50% but up to 60%	15%
More than 60% but up to 70 %	20%
More than 70%	25%

The incentive is applicable only for the consumption in excess of the average monthly consumption for FY 2000-01. The discount rate will be applied on the entire consumption, which is eligible for incentives, on a non-telescopic basis. This scheme will be effective till 31 March 2005

8. [$] 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

9. Minimum charges – 2004-05

LT categories			
Category No.	**Purpose**		
I	Domestic	Single Phase upto 250 W	Rs.25/Month
		above 250W	Rs.50/Month
		Three Phase	Rs.150/Month
II	Non-domestic/ Commercial	Single Phase	Rs.65/Month
		Three Phase	Rs.200/Month
III (A) III (B)	Industrial Optional 75–150HP		Recorded demand during the month or 80% of contracted demand whichever is higher and 50 Units/KVA of Billing Demand per month
VI (A)	Street Lighting	Panchayats Municipalities and Corpns.	Rs.2/Point/Month Rs.6/Point/Month
VII	General Purpose	Single Phase	Rs.50/Month
		Three Phase	Rs.150/Service/Month
VIII	Temporary Supply	Agl.	Rs.100/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
		Others	Rs.125/KW or part thereof of contracted for first 30 days or part thereof and Rs. 75 per KW or part thereof contracted load for every subsequent period of 15 days or part thereof
HT Categories			
Min. Billing Demand			Recorded demand during the month or 80% of contracted demand, whichever is higher
Min.Energy Charges			
I	Industrial		50 Units/KVA of billing demand per month
I B	Ferro alloy		Guaranteed energy off-take at annual 85% load factor on contracted demand or actual demand whichever is higher during the year.
II	Non-Industrial		25 Units/KVA of billing demand per month
IV(B)	Agriculture – others optional metered supply		Rs.300/HP/Year of contracted load
V	Railway Traction		32 Units/KVA of Contracted demand
VI	Townships/Colonies		25 Units/KVA of contracted demand

10. VOLTAGE SURCHARGE

(A) H.T. consumers who are now getting supply at voltages 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 Licensee and other sources (in KVA)	Voltage at which supply should be availed (in KV)	Voltage at which consumer is availing supply (in KV)	Rates % extra over the normal rates	
				Demand charges	Energy charges
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%

For HT consumers availing supply from all sources through independent feeders

1.	70 to 2500 KVA	11	6.6 or below	12%	10%
2.	2501–10,000 KVA	33	11 or below	12%	10%
3.	Above 10000 KVA	132 or 220	66 or below	12%	10%

CUSTOMER CHARGES:

11. The Customer charges are as given below. Meter and all other charges as existing shall continue.

For all LT Categories inclusive of Agricultural Services	**Rs. 20/- per month ***
* Domestic consumers in the first slab	**Rs.15/- per month**
H.T.Categories	
(a) 66 KV and below	**Rs.750/- per month**
(b) 132 /220 K.V.	**Rs.1500/- per month**
Urgency charges for Temporary supply at short notice	**Rs.100/-**

12. All other conditions as in the Annexure 'D' of this order shall be applicable for the respective categories under HT and LT supply.

TARIFF STRUCTURE FOR THE BULK SUPPLY TARIFF

895. The Commission regulates the Transmission Charges and Bulk Supply Tariffs. APTRANSCO in its filings for Bulk Supply Tariff (BST) has proposed uniform single-part bulk supply tariff of Rs.1.966/kWh to the DISCOMs. With the Electricity Act, 2003, coming into force from 10th June 2003, Transmission company can no longer carry on with the business of Bulk Supply. The Commission has hence identified the transmission cost from the ARR filed by APTRANSCO and accordingly fixed the charges for transmission. The transmission charges to be paid by all consumers who access the transmission network is fixed at Rs.84.65 / KW / month, for the contracted capacity with APTRANSCO.

896. The Bulk Supply business of APTRANSCO would be taken out and its PPAs would be allocated to the DISCOMS, as recommended to GoAP by the Commission, or to some other entity/entities. However, the Commission for the present has

determined the Bulk Supply Tariff after taking into account Transmission Charges payable to the APTRANSCO and the Inter-State sales to be done by the DISCOMs during the FY 2004-05. The weighted average Bulk Supply Tariff for the DISCOMS as determined by the Commission is Rs.1.986 per kWh. 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.211

Schedule of Bulk Supply Tariffs **(Rs. Crs)**

Particulars	APNPDCL	APEPDCL	APSPDCL	APCPDCL	DISCOMS TOTAL
Revenue	1142.14	1516.55	1795.88	3596.61	8051.18
Subsidy	310.54	194.38	334.05	464.30	1303.27
Total of Revenue and Subsidy (A)	1452.68	1710.93	2129.93	4060.91	9354.45
Sales in MU	**6155.54**	**5651.26**	**7879.25**	**14548.84**	**34234.89**
Power Purchase Cost	1249.10	1491.23	1843.80	3759.49	8343.62
Other Cost	374.20	314.09	505.44	747.54	1941.27
Reasonable Return	3.31	2.31	2.91	11.68	20.21
Revenue Requirement	1626.61	1807.63	2352.15	4518.71	10305.10
Non-Tariff Income	113.93	88.70	147.22	300.80	650.65
Net Revenue Requirement	1512.68	1718.93	2204.93	4217.91	9654.45
Efficiency gains	60.00	8.00	75.00	157.00	300.00
Total Expenditure allowed (B)	1452.68	1710.93	2129.93	4060.91	9354.45
Surplus / (Deficit) [B - A]	0.00	0.00	0.00	0.00	0.00
Mus purchased by each DISCOM	**7646.63**	**6687.89**	**9667.80**	**18005.99**	**42008.31**
Bulk Supply Tariff (Ps/kWh)	**163.4**	**223.0**	**190.7**	**208.8**	**198.6**

897. The overdrawal rates for the excess requirements will be paid directly by the DISCOMs depending upon the requirements and the capacity allocated to them at the rates negotiated by them and approved by the Commission.

Tariff Structure for Transmission and Wheeling

898. As discussed in Chapter VIII, the Commission is required to determine the transmission charges, wheeling charges and the cross-subsidization surcharge (in case of open access) under various provisions of the Electricity Act, 2003.

899. As to the cross-subsidisation surcharge, the Commission will initiate separate proceedings prior to fixing the surcharge.

900. In the present tariff order the Commission has determined the transmission tariff payable for the use of the transmission lines and the wheeling charges payable for the use of the distribution system for FY2004-05 the details of which are given below:

Transmission and Wheeling Tariffs

901. The Transmission charges are Rs.84.65/KW/month **Plus** Energy losses in kind at 6.25%.

902. The weighted Wheeling charges of all the four Distribution Companies (DISCOMS) in the State is 51 paise /unit. The individual wheeling charges DISCOM-wise are as shown below:

(paise/unit)

	NPDCL	EPDCL	SPDCL	CPDCL
Wheeling charges	58	49	60	45

plus

Losses in kind up to the respective voltage level at which the wheeled energy is delivered as follows:

	NPDCL	EPDCL	SPDCL	CPDCL
33kV	6.4%	8.0%	6.0%	6.4%
11kV	13.6%	13.6%	12.6%	13.6%
LT	24.3%	22.1%	21.6%	22.7%

903. These rates passed by the Commission shall, however, be subject to the orders of the Hon'ble Supreme Court in the pending appeals, which have arisen out of the interpretation of the provisions of the Reform Act and have been the subject matter of the order passed by the Hon'ble High court. This order shall be read subject to any order, directions etc. that may be issued by the Hon'ble High Court and the Hon'ble Supreme Court in the pending proceedings.

Grid Support Charges

904. Persons operating captive power plants (CPPs) in parallel with A.P.Grid have to pay 'Grid Support Charges' on the difference between the capacity of CPP in KVA and the contracted maximum demand in kVA with licensee and all other sources of supply, at a rate equal to 50% of the prevailing demand charges for HT consumers. In case of CPPs exporting firm power to APTRANSCO, the capacity, which is dedicated to such export, will also be additionally subtracted from the CPP capacity. This levy is however subject to the orders of the Hon'ble Supreme Court in the pending appeals before it.

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 23rd March, 2004.

(SURINDER PAL)	**(K. SREERAMA MURTHY)**	**(G.P.RAO)**
MEMBER	**MEMBER**	**CHAIRMAN**

ANNEXURE-A

List of Directives Carried Forward and requiring Continuing Compliance

1. APTRANSCO shall conduct regular and thorough energy audit to ensure accountability. The Energy Audit Reports to be filed.

2. The Commission hereby directs that the licensee shall ensure that:

(i). Metering for individual agricultural services is completed by March 2005.

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

(iii). All dysfunctional meters are set right within 3 months. 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.

3. The DISCOMS shall disconnect all unauthorized and not regularized agricultural services within three months and file a compliance report with the Commission.

4. All new connections given from 01.04.2003 onwards for agricultural purpose under LT Category V (A) should be provided with meters.

All agricultural connections released under LT Category V(B) out-of-turn (Tatkal) scheme should be released with meters and appropriate metered tariff should be charged.

To motivate the agricultural consumers to get the meters fixed, Commission froze the meter tariff for agriculture for a period of

3 years w.e.f. 01.04.2003 and this was also made applicable to the existing agriculture consumers who opted for metered tariff by 30.09.2003.

5. 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.

6. The DISCOMS shall give wide publicity for metered tariff for Agricultural consumption. The applications for meters by Agricultural Consumers shall be attended to on a priority basis and the meters shall be installed within fifteen days from the date of application of the consumer.

7. The Commission directs the DISCOMS to pursue vigorously the review of receivables stated as having been already instituted and collect the arrears on priority basis, 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.

8. The Commission directs that 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 paragraph 10 of the licence where according to extant Licence conditions, the value of the project/scheme exceeds Rs.5 crores.

9. The Commission directs that all Power Purchase Agreements (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.

10. The DISCOMS shall install high quality meters on connections in all towns and Mandal headquarters by September 2005. A comprehensive metering plan shall be filed with the Commission within one month from the date of this order.

11. The Commission directs the DISCOMS to conduct a door-to-door checking of all services and to remove all multiple connections and on a continuous basis. Depending upon the progress made by the DISCOMS the Commission will examine the need for further rationalizing the slab structure in the future tariff orders.

12. The Commission directs the APTRANSCO & DISCOMS that load relief shall not be taken for the purposes of grid management from feeders which have more than 50% of incumbent load due to industries.

13. Commission directs the APTRANSCO to designate appropriate Officers for 220 kV or 132 kV feeders (having more than 50% industrial load) either for individual feeders or for groups of such feeders, and the DISCOMS to designate appropriate officer for each industrial estate, who shall be made responsible for keeping the breakdown rectification time within reasonable limits. The details of such designated officers shall be submitted to the Commission and posted on website.

14. The Commission also directs that all the input points to such feeders, which have more than 50% incumbent load due to industries, shall henceforth be metered by electronic trivector meters with RS 232 communication port. The Commission directs that APTRANSCO/DISCOMS, as the case may be, shall take data log sheets for supply conditions pertaining to the previous 30 days once in a month through RS 232 communication port either through a meter reading instrument or remotely through a modem for each industrial feeder. The APTRANSCO and DISCOMS are hereby directed that they shall submit such log sheets along with an abstract summary statement pertaining to their company regarding interruptions to industrial feeders once in a month to the

Commission. The Commission intends to observe the time being taken to restore power and the quality of power supplied to industries to ensure supply of uninterrupted quality power.

15. APTRANSCO to renegotiate with the IPPs to reduce the cost of power purchase keeping in view the substantial reduction in interest cost and facility of swapping of loan etc.

16. The Commission directs the Licensees to prepare databases of Distribution Transformer failures for rural and urban areas separately for each circle for the purpose of benchmarking the companies' performance in this regard.

17. The DISCOMS shall separately indicate on each bill (pertaining to each consumer), the opening balance as on the 1st of April 2003, the arrears, which accrued from 1st of April, till the date of the bill and current consumption charges pertaining to the bill. The money paid by the consumer shall be adjusted against arrears as on the 1st April first and secondly against the arrears, which accrued from 1st of April till the date of the bill and lastly against the current consumption charges of the corresponding bills which shall be followed. The Commission further directs that DISCOMS shall file with the Commission a quarterly report giving the details separately for arrear collections against outstanding arrears as of 01.04.2003 and the current collection against the current demand FY 2003-04, and arrears as of 01.04.2004 and the current collection against the current demand of FY 2004-05.

18. The Commission reiterates that paragraph 4 of the Sixth Schedule to the Electricity (Supply) Act, 1948 requires that the contributions towards Contingencies Reserve must be invested in securities authorized under the Indian Trusts Act, 1882, within a period of six months from the close of the year of account in which the appropriation is made. The Licensee is directed to comply with this requirement.

19. The Commission also reiterates its previous directive (Tariff Order for 2002-03) that a) for loads of 20HP and above but below 50HP, LT demand meters should be fixed; and b) for loads of 50HP and above but up to 75HP, tri-vector meters be fixed and the metering should be on the HT side.

ANNEXURE-B

List of Directives for FY2004-05

APTRANSCO and DISCOMS

Global Energy Account

1. The Licensee to submit Global Energy Account every month with details of the power purchases and sales to different DISCOMS and others. Gist of the Global Energy Account consisting of energy drawn from different sources and non-conventional sources of energy with percentages of energy of total purchases from different sources and consumption by different DISCOMS, inter-State sales and third party energy wheeled, have to be posted on the website of the Licensee every month. (Para 419)

SLDC

2. State Load Dispatch Center to coordinate the ABT activities in Andhra Pradesh in coordination with unscheduled interchanges pool of the region. The Commission directs SLDC to develop such a pool at State level to encourage more participation in the pool. (Para 491)

Fuel Surcharge Adjustment

3. The Licensees to raise FSA bills on a monthly basis in line with the FSA formula laid down by the Commission and send details to the Commission within a week of raising the bill. (Para 471)

Loan details

4. To submit instrument-wise details for all loans, source-wise, year-wise, asset-wise, purpose-wise, and date-wise, along with the repayment schedules. (Para 449)

Energy Accounting Reconciliation

5. The Commission directs that the Licensee shall henceforth reconcile the energy accounting figures annually and file reconciliation statements along with the audited Annual Accounts every year. They shall also incorporate the necessary corrections in their Annual Accounts, beginning from the accounts for the year 2003-04. The reconciliation may also be done for the years 2000-01 to 2002-03 and necessary corrections be incorporated in the Accounts in hand. (Para 469)

Capital Expenditure

6. The Commission directs that from the filings for FY 2005-06 filing onwards, the CWIP along with corresponding loans and consumer contributions shall be excluded and not taken into account for calculating the Capital Base and the necessary corresponding adjustments shall also be carried out in the expenses to be capitalised. Further, the DISCOM shall submit monthly progress reports on physical and financial progress on each of the schemes w.e.f. 01-04-2004. Such reports shall also indicate the cost of the assets (works commissioned) capitalised against each scheme during the month.

(Paras 520, 781, 725, 618, 671)

APTRANSCO

Installation of Meters

1. The Licensee to complete the installation of 0.2 class meters on the remaining generating stations within three months.

(Para 416)

Transmission Losses

2. The licensee shall take necessary steps and achieve the transmission loss target of 6.00% during the year 2004-05. (Para 418)

Merit Order Procedure

3. The Licensees to examine the benefits likely to accrue, by identifying the linkages between generating stations and the load centers, duly factoring the reduction in transmission losses in to the variable cost and submit a report to the Commission by 1st June 2004. (Para 366)

DISCOMS

Distribution Losses

4. To complete the distribution losses study initiated by them within two months of this Order. At the same time, the Commission directs the licensees to submit a consultation paper on the "Achievable level of distribution losses in the future years" within two months of this order. (Para 411)

Capital Expenditure

5. The Commission directs the DISCOM to submit a detailed capital expenditure programme (for the consideration of the Commission) to absorb the excess funds available on capital account at least by 31-12-2004. (Paras 631, 684, 738, 794)

Efficiency Gains

6. The DISCOMS are directed to achieve the above efficiency gains of Rs.300 crs. (Para 484)

Tatkal Scheme

7. The Commission directs the DISCOMS to take immediate steps to make effective collections. The Commission will review the performance of the DISCOMS in this regard during 2004-05 and take a decision about the continuance of the scheme during the tariff period 2005-06.

(Para 355)

Sales Data Base and agricultural sales

8. From FY 2005-06 filings onwards, the sales forecast for each category of consumers shall be made at each operation section/division level and then aggregated for the entire company. The DISCOMS shall file the section-wise sales for each category of consumers from the sales database for the period 04/04 to 09/04 by not later than 31-11-2004 without fail with monthly progress reports thereafter.

(Para 825)

9. The DISCOMS shall file the monthly agricultural consumption estimate in two parts, a) consumption estimate for unmetered services based on LV side DTR meters, and b) consumption on account of services released under Tatkal scheme and metered services. The estimate shall be filed in person to the Commission by 25th of every month. Both CPDCL and NPDCL need to improve their data collection and analysis procedure significantly. (Para 830)

Sales Database: Revenue and Arrears

10. From April 2004 onwards, the DISCOMS under normal circumstance shall not entertain part payments from LT-II and LT-III and HT-I and HT-II categories of consumers, and shall initiate action as per terms and conditions of supply for

disconnection and dismantling of service on account of non-payment of bills by these categories of consumers.

From April 2004 onwards, the DISCOMS shall delineate and show separately in the sales database the monthly demand and arrears on account of live consumers, disconnected consumers, and arrears from dismantled consumers.

The DISCOMS shall continue to bill the disconnected consumers, the minimum charges under contractual obligations for a period not exceeding 4 months (i.e. one-month notice period plus 3 months' disconnection period). If the consumer does not pay the amounts due and avail re-connection within 4 months, the contract (agreement) shall be terminated with effect from date of expiry of the 4-month period from date of disconnection and the security deposit shall be adjusted against the arrears.

The Commission will monitor the DISCOMS' actions on this directive using the sales database maintained by the DISCOMS.

(Para 358)

Metering and Billing

10. The Commission directs that the DISCOMS should make full-scale efforts to fill the gaps in sales database and achieve the stipulated 2 to 3 percent sales ratio of assessed sales of total metered sales by 31.03.2005. The DISCOMS shall file a Metering, Billing and Collection (MBC) report based on sales database, in person, by 25th of every month without fail.

(Para 427)

12. The DISCOMS shall delineate the minimum charges from energy charges for all categories of consumers every month and file a monthly summary report with the Commission by 25th of every month. Such report shall be derived only from the database being built and maintained by the DISCOMS. (Para 834)

Subsidy Administration

13. The DISCOMS shall file before the Commission the actual sales to subsidized categories of consumers for whom the GOAP agreed to pay the subsidy every

month and the Commission will monitor the units actually sold by the DISCOMS vis-à-vis the subsidy provided. At the end of the year, subsidy adjustments will be made based on the consumption of units in respect of various subsidized categories. (Para 860)

14. For measuring the sales to the subsidized categories, the agricultural consumption estimate based on LV side meter readings on DTRs shall be the basis. For measuring the sales to metered categories of consumers, the sales database shall be the basis. (Para 861)

15. The Commission reiterates that in case the subsidy is not paid regularly on monthly basis, in advance, by GoAP, the DISCOMS shall revert to the full cost tariff fixed by the Commission. (Para 862)

16. The GOAP obligation towards subsidy payments to DISCOMS is limited to the quantities mentioned in this order. If the DISCOMS exceed tariff order quantities and thus the subsidy requirement, the Commission will not entertain any request for additional quantities of energy to subsidized categories unless the permission of the GoAP is taken for additional subsidy if the excess consumption relates to agriculture. In other categories, if there is excess consumption, no additional subsidy will be recommended by the Commission to GoAP. (Para 863)

Interest on Security Deposit

17. The licensees to pay interest on consumers security deposits at the prevailing Bank Rate, as on 01.04.2004, which is currently 6% p.a. (Para 467)

Details to be shown in Bills

18. The Commission directs the DISCOMS that they should ensure that each bill issued to consumers shows the component of subsidy, and cross-subsidy provided. This is in addition to the instruction regarding position of arrears to be displayed on the consumer's bill. DISCOMS are directed to implement the directive immediately. (Para 864)

Defaulters' list

19. The DISCOMS to file the list of defaulters whose dues are more than Rs.50,000 along with the reasons for non-collection and details of litigation involved, if any, along with the ARR filings as per the Guideline11(g) of Revenue and Tariff filing for Distribution licensees. (Para 325)

Load Survey

20. The DISCOMS shall provide trivector / load survey capability electronic meters for all categories of consumers on sample basis to measure the load shapes, load duration and consumption patterns. The DISCOMS shall arrive at the sample size based on statistical procedures and file the sampling plan and method of data collection (including plan for implementation) with the Commission within 45 days from the date of receipt of this tariff order.

(Para 850)

TOD metering

21. The Commission however feels that in the light of ABT implementation at the DISCOM level the DISCOMS should come up with specific proposals for introducing TOD metering for large consumers with details on a) metering facility; b) consumption patterns; and c) proposed incentive. The Commission directs that a specific plan be submitted within 3 months of this Order. During the year, mock billing should be done for the targeted consumers. (Para 892)

Annexure - C

COMMISSION'S ORDERS ON WAIVERS SOUGHT BY APTRANSCO AND DISCOMS

APTRANSCO			
Sl.No.	**Section/Form Ref of ERC/ARR filing**	**Waivers requested by APTRANSCO**	**Commission's Decision**
1	Section 3.4.1	The Licensee sought waiver to file audited accounts for financial year FY 2003	Licensee is directed to submit Audited Accounts approved by the Board FY 2003 with in one month of the Order and FY 2004 audited accounts by end of September 2004.
2	Section 3.4.1	The Licensee has sought waiver to estimate figures for the 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. Licensee have to submit the details before 15th June 2004 on the basis of audited figures of FY2003 last six months and actual figures of for the first six months of FY 2004.
3	Section 8.2 (g)	Submitting final Marginal cost study	Licensee has to finalize the marginal cost study and submit within two months of this order.
6	Section 8.2(h)	Statement of efficiency of price signals by the proposed tariff vis-à-vis marginal cost per unit	Waiver granted for this fling only. Licensee has to submit these details before 15th August 2004 along with marginal cost study.
7	Section 9.1.1	Cross subsidy statement with marginal cost revenue	Waiver granted for this filing only. Licensee has to submit these details before 15th August 2004 along with marginal cost study.
8	Section 9.2	Allocation of external subsidy by voltage classes	Waiver granted for this filing only future filings details must be provided.

ALL DISCOMS			
Sl.No.	**Section/Form Ref of ERC/ARR filing**	**Waivers requested by DISCOMS**	**Commission's Decision**
1	Section 8.5	The Licensee sought waiver to file audited accounts for financial year FY 2003	Licensee is directed to submit Audited Accounts for FY 2003 within one month of the order and FY 2004 audited accounts by end of September 2004.
2	Section 8.5	The Licensee has sought waiver to estimate figures for the 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. Licensee have to submit the details before 15th June 2004 on the basis of audited figures of FY2003 last six months and actual figures of the first six months of FY 2004.
3	Forms 1.1a, 1.1b	Licensee has sought waiver for providing information regarding Voltage-wise breakup of Fixed Assets and Depreciation in the projections of 2003-04 and 2004-05 as required by the Guidelines due to deficiencies in the accounting and information systems. The provisional data for 2002-03 is also available with the licensee	Waiver granted for this filing as part information was provided. Licensee is directed to ensure that the deficiencies in the accounting system are rectified and company directed to file details up to FY03 voltage wise assets by 15th July 2004 and FY04 voltage wise assets by 30th September 2004.
4	Section 8.2(g) Form 4.5	The Licensees to submit a study of marginal costs of the Licensees business, including time-differentiated marginal costs by a) voltage levels or b) consumer classes and a written explanation of the methods used to calculate marginal costs. In addition, the statement shall include: i) a comparison of the percentage or marginal cost recovered by the current and proposed tariff for each tariff class. ii) the manner in which the proposed tariffs improve the efficiency of the price signal provided to consumers vis-à-vis the unit marginal cost	Waiver granted for this filing as part information was provided. Licensee is directed to ensure that the deficiencies in the accounting system are rectified and company directed to file details up to FY03 voltage wise assets by 15th July 2004 and FY04 voltage wise assets by 30th September 2004.

Annexure D

SCHEDULE OF RETAIL TARIFF RATES AND TERMS & CONDITIONS AND WHEELING CHARGES IN RESPECT OF THE FOUR DISTRIBUTION COMPANIES AND TRANSMISSION CHARGES OF APTRANSCO FOR FY - 2004-05

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 LT III (B) industrial optional category.

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, Theatres, 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 Government organisations come under this category. The Information Technology units identified and approved by the Consultative Committee on IT industry (CCITI) constituted by Govt. of AP also fall under this category.

A) INDUSTRY – GENERAL

(i) DEMAND CHARGES

Per KVA of Billing Demand **Rs.195** per KVA per

PLUS

(ii) ENERGY CHARGES

For all units consumed during the month .. **350** 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

B) FERRO ALLOY UNITS

(i) DEMAND CHARGES .. –NIL—

(ii) ENERGY CHARGES

For all units consumed during the month .. **212** Paise per Unit

Conditions

1. Guaranteed energy off-take at 85% annual Load Factor on Contracted Maximum Demand or Actual Demand whichever is higher. The energy falling short of 85% Load Factor will be billed as deemed consumption.
2. The consumer shall draw his entire power requirement from DISCOMS only.
3. Not eligible for HT-I Load Factor incentive.
4. FSA will be extra as applicable

Notes:

1) Incentive

a) The following non-telescopic incentives are applicable for HT-category-I (A) consumers:

Load Factor (LF)	Discount applicable on the energy rates
More than 30% upto 50%	10%
More than 50% upto 60%	15%
More than 60% upto 70%	20%
More than 70%	25%

b) The incentive is applicable for the consumption in excess of the average monthly consumption for the FY 2000 – 01. The discount rate will be applied on the entire consumption eligible for incentives i.e., such consumption as is in excess of the average monthly consumption for the FY 2000-01 and is above the threshold LF level of 30% on a non-telescopic basis. This scheme will be effective till 31st March 2005.

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 **440** 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 light and fan loads has not been done, **15%** of the total energy consumption shall be billed at **440** 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 **350** 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, fruit processing, tobacco processing and re-drying 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.

<u>DEMAND CHARGES</u>	
Based on the Recorded Maximum Demand or **30%** of the Contracted Demand whichever is higher	Rs.**195** per KVA/Month.
PLUS	
ENERGY CHARGES	
For all the units of energy consumed	**440** 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. However, consumer can declare longer seasonal period as per actuals.

iii) Existing eligible consumers who have not opted earlier for 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 declared cannot be changed , during the Tariff year in which it is declared.

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.

viii) Development charges @ Rs.500/- per KVA, shall be paid by the consumer in advance for availing supply under the above said category with seasonal benefits.

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.**195** /KVA/Month

PLUS

B) ENERGY CHARGES

For all units consumed during the month .. **440** 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 Theatres run by public charitable institutions for purpose of propagation of art and culture which are not let out with a profit motive and in respect of other Public 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 (A)- GOVT. LIFT IRRIGATION SCHEMES

This tariff is applicable to lift irrigation schemes managed by Government.

ENERGY CHARGES:	
For all units consumed during the month	.. **241 paise/unit**
FSA will be extra as applicable if it is for purposes other than agriculture.	

H.T. Category-IV (B)- AGRICULTURAL

This tariff is applicable for consumers availing H.T. Supply for Irrigation and Agricultural purposes and not covered under HT Category IV(A).

Rates:	
Flat Rate Tariff	.. **Rs.430/- 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 General Terms and conditions of supply notified by the licensees from time to time.

2. The metering is mandatory for both categories A&B and Energy reading shall 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 under part 'A' HT – Tariffs shall be applicable for Govt. lift irrigation schemes and others 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 ..**440** 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 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 .. **350** 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 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:

(i) HT consumers, availing supply on common feeders 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

(ii) HT Consumers availing supply through independent feeders from the substations shall be:

For total contracted Demand with the licensees and all other sources like APGPCL, Mini Hydel, Wind Power, MPPs, co-generating plants etc

Upto 2500 KVA	11000 Volts
2501 KVA to 10,000 KVA	33000 Volts
Above 10000 KVA	132000 Volts or 220000 Volts

The relaxations are subject to the fulfillment of following conditions:

(a) The consumer should have an exclusive dedicated feeder from the substation;

(b) The consumer shall pay full cost of the service line as per standards specified by APTRANSCO/DISCOM including take off arrangements at substation;

(c) The consumer shall not use captive generation except as permitted by the APERC.

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 DISCOM and other sources	Voltage at Which supply should be availed	Voltage at Which Consumer is availing supply	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

For HT consumer availing supply from through independent feeders.

Sl. No	Contracted Demand with DISCOM and other sources	Voltage at Which supply should be availed	Voltage at Which Consumer is availing supply	Rates % Extra Over Normal Rate	
				Demand Charge	Energy Charge
	KVA	KV	KV	KVA	Kwh
1	70 to 2500 kVA	11	6.6 or below	12%	10%
2	2501 to 10,000 kVA	33	11 or below	12%	10%
3	Above 10,000 kVA	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 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.

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.

(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) <u>Existing consumers requiring temporary supply or temporary increase in supply</u> : 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 Seven (7) paise per One hundred rupees 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) FUEL SURCHARGE ADJUSTMENT

Fuel Surcharge Adjustment (FSA) is applicable to all categories except agriculture. FSA is applicable as notified by the Commission from time to time as per the regulations made by the Commission in this behalf.

(12). GRID SUPPORT CHARGES

Persons operating Captive Power Plants (CPPs) in parallel with A.P. Grid have to pay 'Grid Support Charges' on the difference between the capacity of CPP in kVA and the contracted Maximum Demand in kVA with Licensee and all other sources of supply, at a rate equal to 50% of the prevailing demand charge for HT Consumers. In case of CPPs exporting firm power to APTRANSCO, the capacity, which is dedicated to such export, will also be additionally subtracted from the CPP capacity. This levy is subject to the orders of the Hon'ble Supreme Court in the pending appeals before it.

(13). The Tariffs are exclusive of Electricity duty payable as per the provisions of AP Electricity Duty Act.

(14). These rates are applicable in the areas of operation of 4 (four) Distribution Companies viz., 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. (The jurisdiction of the DISCOMs extends to the RESCOs areas also for purpose of supply to HT Consumers).

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 including the LT-III (B) Industrial optional category.

L.T. Category-I-Domestic

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	**145** paise per unit
51-100 Units/month	**280** paise per unit
101-200 Units/month	**305** paise per unit
201-300 Units/month	**475** paise per unit
Above 300 Units/month	**550** paise per unit
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. For loads less than 3KW single phase supply only will be given.
2. If electricity supplied in domestic premises is required to be used for non-domestic and commercial purposes a separate connection should be taken for such loads under LT – II failing which the entire supply shall be charged under L.T.Category-II

tariff apart from liability for penal charges as per the terms and conditions of the supply.

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 complexes.

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 average monthly consumption per dwelling unit in the complex.

d). Meter reading shall be taken monthly in all such cases.

e). Customer charges calculated at Rs.20 per month for each dwelling unit shall be billed.

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

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 50 Units /month	.. **395 Paise** per Unit
Above 50 Units/ month	.. **625 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 on HT side of the Distribution Transformer feeding the Load. 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 the 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 cutting 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:

(i) Industrial – Normal

(a) Fixed Charges **-- Rs. 37 Per HP/Month of connected Load**

Plus

(b) For all units consumed/Month - **375 Paise per unit**

(ii) Industrial – Optional

(a) Demand Charges - **Rs.100/kVA per month**

Plus

(b) Energy Charges **- 375 Paise per unit for units consumed/month**

(iii) Tariff for Pisciculture and Prawn culture units with Contracted Load below 10HP - 90 Paise per unit

(iv) Sugar cane crushing - **50 paise per unit**

Note: Consumers with connected load between 50 and 75 HP can opt for a two part optional tariff. FSA will be extra as applicable

IMPORTANT FOR LT III(A) INDUSTRIAL –OPTIONAL Demand Tariff Consumers

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

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. In the case of Industrial - optional two-part tariff the consumer can declare a contracted demand different from the contracted load but shall not be less than 25 KVA. If the consumer opts for a two part demand tariff the billing demand shall be 80% of the Contracted Demand or Recorded Demand whichever is higher. If the recorded demand exceeds the Contracted Demand such excess demand shall be billed at the demand charge prescribed under HT Category-I.

(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 (Operation).

(v) (a) A demand meter shall be provided for the consumers with connected load 20HP to below 50HP.

(b). For loads 50 HP to 75 HP the metering will be provided on HT side of the Distribution Transformer.

(c). The Low Power Factor (LPF) surcharge is applicable as in the case of HT consumers for LT Category III (A) Industrial – Optional demand tariff category.

L.T. CATEGORY - III(B) - INDUSTRIAL - OPTIONAL CATEGORY

(I) This Optional tariff is applicable to Small Scale Industrial Units which have been licenced by the Industries Department as bonafide Small Scale Industries and given registration No. under SSI 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 - 375 Ps/Unit.

Plus

Demand Charges - Rs.100/kVA/Month

FSA will be extra as applicable.

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

Conditions:

i) The maximum Connected Load under this Category shall not exceed 150 HP including incidental lighting load of not more than 5% of the total connected load. The contracted load shall be as specified in the agreement as per sanction accorded for the service. The consumer shall declare his contracted maximum demand, which shall not be less than 50KVA and shall also be specified in the Agreement.

ii) If the recorded demand exceeds the Contracted Demand mentioned in (i) above, such excess demand shall be billed at the demand charge prescribed under HT Category-I.

iii) The consumer should erect his own Distribution Transformer and structure initially along with necessary switch gear. The transformer will be maintained by the Licensee.

iv) For new/additional loads the consumer has to comply with the procedures as per the terms and conditions of supply of the Licensee as applicable to HT Industrial consumers.

v) The metering will be on HT side of the Distribution Transformer with a Trivector Meter together with MD indicator. The energy recorded in the meter will be billed at the energy charge mentioned above.

vi) The Low Power Factor (LPF) surcharge is applicable as in the case of HT consumers for LT III (B) Industrial Optional Category.

vii) Customer charges shall be as applicable for HT consumers.

viii) The conditions (i) & (iii) mentioned in the NOTE under LT Category-III(A) shall be applicable for LT III (B) Industrial Optional Category also.

(II) Seasonal Industries

Where a consumer avails supply of energy under LT III (A)(i)(ii) and LT III(B) for manufacture of sugar or ice or salt, decorticating, fruit processing, 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.

LT III(A)(i)

FIXED CHARGES	
on 30% of contracted load	Rs.37/HP/Month
ENERGY CHARGES	
For all units of energy consumed	Rs.440ps/unit
FSA will be extra as applicable	

LTIII(A)(ii) & LT III(B)

DEMAND CHARGES	
Based on the Recorded Maximum Demand or **30% of** the Contracted Demand	Rs.**100**per KVA/Month. whichever is higher
PLUS	
ENERGY CHARGES	
For all the units of energy consumed	440 **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. However, consumer can declare longer seasonal period as per actuals.

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.

viii) Development charges @ RS. 500/- per kVA shall be paid by the consumer in advance for availing supply under the above said category with seasonal benefits.

L.T. Category-IV

Cottage Industries and Dhobighats

Applicable for supply of energy to Dhobighats & bonafide small Cottage Industries specifically power looms, Carpentry, blacksmithy, Kanchari, Gold smithy, shilpi and pottery 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	.. **180 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.

<u>L.T. CATEGORY – V(A) – Agricultural</u>

This tariff is applicable only to those consumers who were existing before 01.04.2003. These Consumers shall pay electricity charges as shown below:

Applicable for supply of electricity for irrigation and agricultural purposes upto a connected load of 75 HP.

(i) Flat Rate Tariff

Capacity of Pumpset	Tariffs (Rs. per HP/Year)	
	In DPAP Areas	**In other Areas**
Up to 3 HP	**Rs.225/-**	**Rs.275/-**
Above 3 HP and Up to 5 HP	**Rs.375/-**	**Rs.425/-**
Above 5HP and Up to10HP	**Rs.475/-**	**Rs.525/-**
Above 10 HP	**Rs.575/-**	**Rs.625/-**

(ii) Metered Tariff (Optional)

0-2500 units per annum **20** ps/unit

above 2500 units per annum **50** ps/unit

LT Category V (B) – Agriculture -Mandatory Metered Tariff

Out of turn allotment – Tatkal Scheme : Energy charges at 50 paise per unit

<u>L.T. Category V (c) – Horticulture</u> <u>Mandatory metered tariff</u>

0-2500 units per annum	**20** ps/unit
above 2500 units per annum	**50** ps/unit

Note:

1. Agricultural consumers are permitted to use 1 or 3 lamps of 5 watts each near the main switch as pilot lamp/s.
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.20/- 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 demand side management measures as applicable for his pumping system viz. submersible and surface pump sets.

   (v) Frictionless foot valve (exempted for submersible pumpsets)
   (vi) HDPE or RPVC piping suction and/or delivery
   (vii) ISI marked monobloc pumpset or submersible pumpset
   (viii) Capacitor of adequate rating for the pumpset

This discount would be continued for a period up to 31st March 2005.

L.T. CATEGORY-VI

Applicable for supply of energy for lighting on public roads, streets, thoroughfares including parks, markets, cart-stands, taxi 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:

For all units consumed

Minor Panchayats	..	**156 Paise** per unit
Major Panchayats	..	**208 Paise** per unit
Nagarpalikas & Municipalities Gr.3	:	**274 Paise** per unit
Municipalities Gr. 1 & 2:	..	**326 Paise** per unit
Municipalities Selection / Spl. Gr.	.:..	**353 Paise** per unit
Corporations	..	**379 Paise** per unit

Minimum charges

Panchayats	Rs.2 per point per month
Municipalities/Corporations	Rs.6 per point per month

FSA will be extra as applicable

B. PWS Schemes:

Minor / Major Panchayats

Up to 2500 units/year – 20 paise per unit

Above 2500 units -- 50 paise per unit

All Nagarpalikas & Municipalities

	Energy charges	**Fixed charges**
Upto 1000 Units	**375 Paise/Unit**	**Rs.20/HP/Month of**
Balance Units	**405 Paise/Unit**	contracted load subject to a minimum of Rs.100

Municipal Corporations:

Up to 1000 Units ..	**405 Paise/Unit**	**Rs.20/HP/Month of**
Balance Units	**460Paise/Unit**	contracted load subject to a minimum of Rs.100

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, fluorescent tubes, mercury vapour 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. However, where 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	Fluorescent 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 run by Government agencies, 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	.. **400 Paise per unit**
Minimum charges	Rs.50 per month for 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.

L.T. CATEGORY-VIII - L.T. Temporary supply

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 of 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) Estimated cost of works and estimated energy charges.

These charges shall be paid in advance by the consumer in accordance with the procedure prescribed in clause VI of part C along with any other charges payable as specified therein.

(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 under a separate connection and charged as such in accordance with the procedure prescribed in clause VI of part C.

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 except in case of LT category III(A) optional and III(B) and if the connected load of the consumer is found to be in excess of his contracted load, the provisions of General Terms and Conditions of supply separately 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. 15 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 Seven (7) Paise per One hundred rupees per day of delay calculated from due date mentioned in the bill up to the date of payment.

c) If the C.C. bills amount is not paid within 15 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. Fuel Surcharge Adjustment (FSA) is applicable to all categories except agriculture. FSA is applicable as notified by the Commission from time to time as per the regulations made by the Commission in this behalf.

5. The Tariffs are exclusive of Electricity duty payable as per the provisions of AP Electricity Duty Act.

6. These rates are applicable in the areas of operation of 4 (four) Distribution Companies viz., 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 by the licensee from time to time. However, the meter and cutout shall be provided by the licensee.

(3) Service connection wires for L.T. Category- V 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	Rs.20/-	Rs.200/-

the installation or to non-compliance of the conditions of supply.

(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 Licensee's 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 Licensee's 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. Rs. 20/-

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 General Terms and conditions of supply.

(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 Rs.100/-

(The aforesaid charges do not include the additional charges payable by the consumer for breaking the seals)

	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.20/- per month*

* Domestic Consumer in the first slab Rs. 15/- per month

H.T. Categories:

a) 66 KV and below Rs.750/- per month

b) 132/220 K.V.. Rs.1500/- per month

(h) Urgency charges for temporary supply at short notice Rs. 100/-

(i) **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 till 09.06.2004 and thereafter as provided in the Electricity Act 2003.

(j) 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 specified in clause V(h) above.

(2) Estimated cost of the works means the cost of 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 as mentioned in para (2) above shall be paid by the consumer in advance. After the works are dismantled and retrievable materials returned to stores, 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 addition to the aforesaid charges payable by 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. These charges will be claimed along with the consumption bills.

(4) (a) The consumer requiring supply on temporary basis shall be required to deposit in advance, in addition to the estimated cost of works mentioned in 3(a), the estimated

consumption charges at the rate stipulated in Tariff Order for Temporary supply, and worked out on the basis for use of electricity by the consumer for 6 hours per day for a period of 2 months in case the supply is required for more than 10 days. If the period of temporary supply is for 10 days or less, the advance consumption charges for the actual period requisitioned shall be paid.

(b) The Bill for electricity consumed in any month shall be prepared at the tariff applicable plus hire charges as mentioned in 3(b) above. The consumers have to pay monthly CC charges regularly during the period of availing temporary supply and the estimated energy consumption deposit shall be adjusted with the last month consumption and the balance if any shall be refunded.

(c) 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.

(d) 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

Every L.T. Consumer using induction motors and welding transformers shall install L.T. Shunt Capacitors of specified rating as given below:

(a) Motors

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

(b) 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
15	15	12
16	16	12
17	17	13
18	18	14
19	19	15
20	20	15
21	21	16
Sl.No	Rating of Welding Transformer In KVA	Rating of Capacitor in KVAR
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 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, such consumer shall attract penal provisions as per General Terms and conditions of supply notified by the licensee from time to time.
2. Low Power factor surcharge is to be levied for the consumers falling under LT III (A) Industrial (Optional) and LT III (B) Industrial Optional categories as applicable to HT consumers.
3. In case the rated capacity of the induction motor or 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.

PART – 'E'
TRANSMISSION CHARGES AND WHEELING CHARGES

1. TRANSMISSION CHARGES

The transmission charges as given below are applicable for the use of transmission lines (system) of a transmission licensee by Generating companies, distribution licensees, other Licensees, and also consumers who are permitted open access u/s42 (2) of the Electricity Act 2003.

Rates:

Transmission charges --------- **Rs.84.65/KW/month**

Plus

Energy losses in kind at 6.25%

Notes:

i) The Distribution Companies availing bulk supply from APTRANSCO need not pay Transmission charges separately as long as they avail such bulk supply since the Transmission charges are already factored in the bulk supply tariff.

ii) The Transmission licensee shall deliver the quantum of energy given to it by a generating company or a captive plant or a licensee for transmission after taking into account the transmission loss of 6.25%.

iii) The transmission of energy through the transmission system of the transmission licensee for a person other than the distribution licensee shall amount to providing open access within the meaning of Sections 39(2)(d) and 40(c) of the Electricity Act, 2003. If such open access is for use by a consumer (other than a captive generating plant for carrying the electricity to the destination of his own use), in addition to transmission charges mentioned above, there shall be an obligation to pay a surcharge to meet the requirements of the prevalent level of cross subsidy within the area of the distribution licensee, where the consumer is situated. Such obligation to pay the surcharge is effective from 10th June 2003. The surcharge shall be to the benefit of the Distribution Licensee of the area of supply and shall be treated as non-tariff income of the distribution licensee

iv) Further, to the extent the provisions of Section 42(4) are attracted, the consumers including the captive generating plants shall be liable to pay additional surcharge to meet the fixed cost of the concerned distribution licensee arising out of his obligation to supply.

v) The matters relating to the cross subsidy surcharge and additional surcharge for the period from 10.6.2003 have been dealt with in paragraph-3 below.

2. WHEELING CHARGES

The wheeling charges as given below are applicable for use of distribution system of a licensee by other licensees or generating companies or captive power plants, or consumers permitted open access u/s 42 (2) of the Electricity Act 2003.

Rates:

Weighted wheeling charges of Distribution Companies ….**51 paise /unit**

paise/unit

	NPDCL	EPDCL	SPDCL	CPDCL
Wheeling charges	**58**	**49**	**60**	**45**

Plus

Losses in kind up to the respective voltage level at which the wheeled energy is delivered are as follows:

	NPDCL	EPDCL	SPDCL	CPDCL
33kV	6.4%	8.0%	6.0%	6.4%
11kV	13.6%	13.6%	12.6%	13.6%
LT	24.3%	22.1%	21.6%	22.7%

Notes:

i) The Distribution licensee shall deliver the quantum of energy given to it for wheeling reduced by the distribution loss level at the voltage at which the energy is delivered to consumer in the area of the distribution licensee.

ii) If the wheeling involves transmission of energy through transmission system of a Transmission Licensee, the consumer or the supplier as the case may be, has to pay the applicable transmission charges also.

iii) If the wheeling of electricity is through the distribution system of more than one distribution licensee, the wheeling charges shall be payable to the distribution licensee of the area where the electricity is delivered.

iv) The wheeling of energy through the distribution system of the distribution licensee to a consumer shall amount to providing open access within the meaning of Sections 42(2) of the Electricity Act, 2003. If such open access is for use by a consumer other than a captive generating plant for carrying the electricity to the destination of his own use, in addition to wheeling charges mentioned above, there shall be an obligation to pay a surcharge to meet the requirements of the prevalent level of cross subsidy within the area of the distribution licensee, where the consumer is situated. Such obligation to pay the surcharge is effective from 10th June 2003. The surcharge shall be to the benefit of the Distribution Licensee of the area of supply and shall be treated as non-tariff income of the distribution licensee.

v) Further, to the extent the provisions of Section 42(4) are attracted the consumers including the captive generating plant shall be liable to pay additional surcharge to meet the fixed cost of the concerned distribution licensee arising out of his obligation to supply.

vi) The matters relating to the cross subsidy surcharge and additional surcharge for the period from 10.6.2003 have been dealt herein.

These rates passed by the Commission shall, however, be subject to the orders of the Hon'ble Supreme Court in the pending appeals, which have arisen out of the interpretation of the provisions of the Reform Act and have been the subject matter of the order passed by the Hon'ble High court. This order shall be read subject to any order, directions etc. that may be issued by the Hon'ble High Court and the Hon'ble Supreme Court in the pending proceedings.

Cross Subsidy Surcharge and Additional Surcharge

In regard to the determination of the cross subsidy surcharge payable for availing open access to the transmission system and the distribution system as envisaged under sections 39(2)(d) 40(c) and 42(2) of the Electricity Act, including in the case of existing open access for the use by consumers the Commission will initiate a separate proceedings and invite suggestions and Objections from the interested parties. The additional surcharge under section 42(4) of the Electricity Act, 2003 shall be applicable on case-to-case basis.

ANNEXURE-E

Category-wise quarterly sales of each DISCOM – 2004-05

APEPDCL

Category	Qtr1	Qtr2	Qtr3	Qtr4	Total
LT					
CAT-I	434.21	441.40	411.97	349.12	1,636.69
CAT-II	82.91	81.32	73.73	70.91	308.88
CAT-III	79.15	65.89	58.51	76.46	280.01
CAT-IV	0.31	0.31	0.29	0.31	1.21
CAT-V	268.20	240.74	303.90	337.15	1,150.00
CAT-VI	37.43	38.90	36.51	44.00	156.85
CAT-VII	4.50	5.26	5.17	5.08	20.00
CAT-VIII	0.07	0.07	0.08	0.08	0.30
TOTAL	**906.78**	**873.89**	**890.16**	**883.10**	**3,553.94**
HT					
CAT-I	223.09	239.36	211.08	234.34	907.87
CAT-I (Ferro Alloys)	144.00	144.00	144.00	144.00	576.00
CAT-II	27.79	27.66	22.80	21.75	100.00
CAT-IV	1.05	5.64	5.33	2.56	14.57
CAT-V	90.04	92.75	89.48	90.74	363.01
CAT-VI	6.77	6.80	6.08	6.22	25.87
Cat-VIII HT-Temp	-	-	-	-	-
CAT-VII RESCOS	27.92	25.57	27.73	28.78	110.00
TOTAL	**520.66**	**541.79**	**506.49**	**528.38**	**2,097.32**
GRAND TOTAL	**1,427.44**	**1,415.67**	**1,396.66**	**1,411.49**	**5,651.26**
Losses	15.50%	15.50%	15.50%	15.50%	15.50%
Power purchase	1,689.28	1,675.35	1,652.85	1,670.40	6,687.88

APSPDCL

Category	Qtr1	Qtr2	Qtr3	Qtr4	Total
LT					
CAT-I	505.53	541.44	551.27	501.76	2,100.00
CAT-II	108.97	117.03	111.42	102.57	440.00
CAT-III	160.88	157.77	143.64	157.71	620.00
CAT-IV	4.18	4.10	4.26	4.45	17.00
CAT-V	652.05	583.91	660.05	704.00	2,600.00
CAT-VI	55.31	55.00	60.35	64.34	235.00
CAT-VII	7.66	6.62	6.79	6.93	28.00
CAT-VIII	0.31	0.31	0.31	0.31	1.25
TOTAL	**1,494.90**	**1,466.17**	**1,538.10**	**1,542.08**	**6,041.25**
HT					
CAT-I	215.17	229.52	217.13	233.18	895.00
CAT-I (Ferro Alloys)	-	-	-	-	-
CAT-II	38.93	38.95	36.03	34.09	148.00
CAT-IV	0.86	0.92	3.11	3.11	8.00
CAT-V	101.76	102.43	100.14	105.67	410.00
CAT-VI	13.87	14.65	13.78	15.70	58.00
Cat-VIII HT-Temp	-	-	-	-	-
CAT-VII RESCOS	80.04	82.48	81.08	75.40	319.00
TOTAL	**450.63**	**468.95**	**451.27**	**467.15**	**1,838.00**
GRAND TOTAL	**1,945.53**	**1,935.12**	**1,989.37**	**2,009.23**	**7,879.25**
Losses	18.50%				
Power purchase	2,387.15	2,374.38	2,440.94	2,465.31	9,667.79

APCPDCL

Category	Qtr1	Qtr2	Qtr3	Qtr4	Total
LT					
CAT-I	776.00	729.00	720.95	742.00	2,967.95
CAT-II	223.49	203.06	219.50	204.69	850.74
CAT-III	208.39	193.24	205.36	219.48	826.46
CAT-IV	3.10	2.96	3.31	3.52	12.89
CAT-V	1,028.04	1,205.61	1,355.14	1,411.21	5,000.00
CAT-VI	112.03	109.72	115.03	116.03	452.81
CAT-VII	9.07	9.30	9.49	8.74	36.60
CAT-VIII	1.38	1.66	1.56	1.86	6.45
TOTAL	**2,361.49**	**2,454.54**	**2,630.34**	**2,707.53**	**10,153.90**
HT					
CAT-I	745.00	761.76	765.00	767.00	3,038.76
CAT-I (Ferro Alloys)	84.00	84.00	87.00	87.00	342.00
CAT-II	117.02	114.02	104.02	98.08	433.14
CAT-IV	27.94	29.00	40.46	52.39	149.79
CAT-V	18.42	18.27	18.51	19.22	74.42
CAT-VI	17.20	15.43	16.70	16.53	65.86
Cat-VIII HT-Temp	-	-	0.49	0.49	0.97
CAT-VII RESCOS	69.72	75.08	70.50	74.70	290.00
TOTAL	**1,079.30**	**1,097.57**	**1,102.67**	**1,115.40**	**4,394.94**
GRAND TOTAL	**3,440.79**	**3,552.11**	**3,733.01**	**3,822.93**	**14,548.84**
Losses	19.20%				
Power purchase	4,258.40	4,396.17	4,620.06	4,731.35	18,005.99

APNPDCL

Category	Qtr1	Qtr2	Qtr3	Qtr4	Total
LT					
CAT-I	292.26	299.46	302.71	287.90	1,182.34
CAT-II	53.15	48.29	46.33	47.94	195.70
CAT-III	63.63	48.38	48.80	63.19	224.00
CAT-IV	0.96	1.00	1.05	1.24	4.25
CAT-V	455.02	704.74	758.89	781.35	2,700.00
CAT-VI	50.69	53.81	54.07	50.50	209.06
CAT-VII	2.83	3.43	3.23	3.46	12.96
CAT-VIII	0.28	0.28	0.24	0.19	1.00
TOTAL	**918.82**	**1,159.39**	**1,215.32**	**1,235.77**	**4,529.31**
HT					
CAT-I	212.57	195.11	201.11	199.01	807.80
CAT-I (Ferro Alloys)					
CAT-II	12.66	12.47	11.16	12.17	48.47
CAT-IV	2.85	3.63	3.84	5.36	15.67
CAT-V	75.61	77.03	77.32	74.94	304.90
CAT-VI	11.21	11.18	12.28	12.72	47.39
Cat-VIII HT-Temp					
CAT-VII RESCOS	93.75	101.59	105.78	100.88	402.00
TOTAL	**408.66**	**401.01**	**411.49**	**405.08**	**1,626.23**
GRAND TOTAL	**1,327.48**	**1,560.40**	**1,626.81**	**1,640.85**	**6,155.54**
Losses	19.50%				
Power purchase	1,649.04	1,938.39	2,020.88	2,038.32	7,646.63