



UTTAR PRADESH ELECTRICITY REGULATORY COMMISSION

Petition No.: 368, 369, 370, 371 & 372 of 2006

Filed by:

U. P. Power Corporation Limited
Pachimanchal Vidyut Vitran Nigam Limited
Dakshinanchal Vidyut Vitran Nigam Limited
Madhyanchal Vidyut Vitran Nigam Limited
Poorvanchal Vidyut Vitran Nigam Limited

VOLUME-I

IN THE MATTER OF:

APPLICATION FOR AGGREGATE REVENUE
REQUIREMENT IN FY2006-07

ORDER UNDER SECTION 64 OF
THE ELECTRICITY ACT 2003

Lucknow

10th May 2007

Notwithstanding, the discrepancies in the petition, deficiencies in the response of the licensees and the fact that the structure of UP Power Sector is still not in line with the spirit of Electricity Act, 2003, the Commission, in the larger interest of consumers as well as licensees and as a mark of respect to its own commitments to abide by the statutory obligation of tariff determination, admitted the ARR/tariff petitions filed by UP Power Corporation Limited and four Discoms on 1st December, 2006. In accordance with section 64(3), the Commission was expected to issue tariff order on above petition by 30th March, 2007. However, on the same day the Commission received an advisory letter from Chief Electoral Officer U.P. stating that the Election Commission through its letter no. 437/ up-la/2007 dated 30th March, 2007 has desired that UP Electricity Regulatory Commission may be advised not to do any thing that can disturb the level playing field and confer advantage to anyone party as between the different party in poll fray. Accordingly, the Commission held back its tariff order, which was duly complete on 30th March, 2007 for issue, and the same is being issued today i.e. On 10th May, 2007 as the voting process is complete in the state of Uttar Pradesh and therefore, the issuance of this order can in no way confer advantage to any political party or disturb the level playing field in the process of election.

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For the convenience of stakeholders, this Tariff Order is structured in two volumes, i.e. Volume-1 and Volume-2. The Volume-1 includes the main order of the Commission including analysis of the petitioners' ARR applications and Commission's views on stakeholder's objections/suggestions/comments. Volume-2 contains chapters on Tariff Design, Directions to Discoms and Transco, a chapter on Regulators Dilemma and the Rate schedule for different categories of consumers.

1 CHAPTER - 1: REFORMS POST ELECTRICITY ACT AND EMERGING ISSUES

- 1.1 After the enactment of the Electricity Act 2003, two important policy documents have been notified by the Government of India namely (a) The National Electricity Policy and (b) the Tariff Policy. As a fall out of the provisions of the Electricity Act 2003 and the above mentioned policy documents notified by the Government of India various new issues related to structure of the power sector as well as statutory compliances by the utilities are now emerging. The Commission has been highlighting these issues through its various orders and feels that for carrying out real purpose of the reforms these issues need to be addressed urgently. However, before deliberating on these issues in detail the Commission would like to comment on the evolving structure of the power sector, post reforms, within the State.

STRUCTURE OF THE POWER SECTOR

- 1.2 The basic intent of reform-restructuring exercise was to make the power sector commercially viable. The idea was to create independent, smaller, more manageable and commercially viable entities. It was considered that such smaller entities could be made more accountable, competitive and focused about their own commercial and technical issues. The ultimate aim however was to promote competition in the power sector by eventually privatizing these smaller entities, where ever possible, and thereby distancing the Government from the commercial and regulatory responsibilities of the sector. It was considered that competition would eventually promote efficiencies and result in better price discovery, which would benefit both the utilities and the consumer. Further, to promote private investment in the sector, it was considered necessary to provide some kind of certainty to the prospective investors, in terms of assured returns on achieving certain benchmarks of operation and also regarding treatment of their expenses in the determination of their annual revenue requirement and tariffs. Accordingly, concepts of long term tariff principles and Multi Year Tariffs were prescribed. Regulatory Commissions across the States have laid such principles providing certainty of treatment of expenses to the investors in the power sector along-with assured returns on achieving certain bench mark parameters of operation.
- 1.3 In pursuance of such a reform-restructuring exercise erstwhile UPSEB was unbundled under the first reforms transfer scheme dated 14th Jan 2000, into three separate entities:
- Uttar Pradesh Power Corporation Limited (UPPCL) - vested with the function of Transmission and Distribution within the State.
 - Uttar Pradesh Rajya Vidyut Utpadan Nigam Limited (UPRVUNL) - vested with the function of Thermal Generation within the State

- Uttar Pradesh Jal Vidyut Nigam Limited (UPJVNL) – vested with the function of Hydro Generation within the State.

The trifurcation of the UPSEB was accompanied by the financial restructuring of the State's Power Sector utilities involving a write-off of liabilities worth around Rs. 190 billion. Through another Transfer Scheme dated 15th January, 2000, assets, liabilities and personnel of Kanpur Electricity Supply Authority (KESA) under UPSEB were transferred to Kanpur Electricity Supply Company (KESCO), a company registered under the Companies Act, 1956.

- 1.4 Need for further unbundling of UPPCL (responsible for both Transmission and Distribution functions) along functional lines was again felt after the enactment of the EA 2003 and four new distribution companies were created vide Uttar Pradesh Transfer of Distribution Undertaking Scheme, 2003 viz.
- Dakshinanchal Vidyut Vitaran Nigam Limited (Agra Discom),
 - Madhyanchal Vidyut Vitaran Nigam Limited (Lucknow Discom),
 - Pashchimanchal Vidyut Vitaran Nigam Limited (Meerut Discom) and
 - Poorvanchal Vidyut Vitaran Nigam Limited (Varanasi Discom)

to undertake distribution and supply of electricity in the areas under their respective zones specified in the scheme. Under this scheme the role of UPPCL was specified as "Bulk Supply Licensee" as per the license granted by the Uttar Pradesh Electricity Regulatory Commission and "State Transmission Utility" under sub-section (1) of Section 27-B of the Indian Electricity Act, 1910 as notified by the State Government.

- 1.5 The structure that has evolved out of this restructuring exercise, however, deserves detailing. In the State of U.P. after the above restructuring exercise there are now separate entities managing the affairs of Generation, Transmission and Distribution. In Distribution however instead of one there are now six distribution companies i.e. five government owned Discoms (including KESCO) and one private company, Noida Power Company Limited. All the restructured entities created out of the unbundling exercise of UPSEB/UPPCL are however Government owned with a common Chairman. The gap between the intent of the reforms as envisaged and the ground realities can however be gauged from below:

(a) Independence of the restructured utilities

- 1.6 To promote independence, professionalism, better accountability, manageability, and thereby competition the erstwhile UPSEB was unbundled into smaller entities. It was considered that restructured smaller entities would start functioning independently in a more efficient manner. However, with common Chairman and some common Directors such independence is far from being visible, in contrast, it appears that the

utilities do not have sufficient autonomy and initiative to frame and pursue an independent vision. In fact, they continue to be organically linked to each other, contrary to the legal mandate, and are unable to sever the umbilical cord. Since the style, format and leadership still continue to be governed by the legacy of erstwhile government owned monolith, the very purpose of restructuring/corporatization seems to have been lost. This becomes apparent from the ARR/tariff applications, filed separately by the four distribution companies and the Transmission Company, as all are structured on similar lines. Similarly, the responses of the companies, to the key issues raised by the Commission and also on the objection/suggestions/comments by various consumer groups and the stakeholders on the ARR/tariff petitions, are also on common lines. The Commission feels that it is high time that these companies be provided with sufficient independence and autonomy to carry out their functions independently and for ensuring the same, ideally, the Board of Directors in these restructured companies should not have any common members.

- 1.7 In this context the Commission would also like to highlight the provisions of Section 39 of the Act which emphasizes the need for an independent and neutral State Transmission Utility (STU), owned either by the Government or an independent Board, without any conflicting interests with any other participants in the power sector. The Act specifies its intent very clearly by stating that STU shall provide non-discriminatory open access to all the eligible consumers and shall not engage in the business of trading in electricity. To uphold the above spirit of the Act it is essential for STU at-least to have an independent Board of Directors so that it could maintain an arms length distance from the restructured distribution, generation and trading companies.

(b) Work Culture and Governance

- 1.8 Since the initiation of reform process, there has been no change in the work culture of the restructured entities they are still working in their same old style with the age old mind set. For reforms to be effective, if not the advance concept of management, then atleast, simple reward and punishment schemes should have been implemented. Such schemes could have incentivized the officers and staff to improve their performance and which in turn could have improved the work culture also. However, in absence of any incentive/disincentive schemes, recognition of work or any clue about the carrier prospects, the officers and staff of the re-structured entities are left with no motivation to improve the performance, what to talk of competition. It is therefore, high time for the management of the restructure entities to start nurturing and caring about their most important resource i.e. human resource as absence of suitably trained and motivated workforce could mar the entire process of reforms.

- 1.9 Much before Electricity Act, 2003, to introduce an element of competition and promote accountability & efficiency in operation, the Commission has taken the initiative, way

back in 2001 itself, of directing UPPCL to draft a Good Governance Code. The terms of reference, as suggested by the Commission, laid stress on fixation of responsibilities centers, its further classification as profit centers and expenses centers, modus operandi of management audit, MIS with specific mention of Budget and Rolling Strategic Plan, Status regarding option of TQM, Performance Bench Marking and Training & Development etc., which are extremely crucial for an organization. UPPCL did appoint Indian Institute of Management, Lucknow as consultant to draft the above code but the report submitted by the consultants failed to see the light of the day and the situation has turned from bad to worse.

(c) Accounts and accountability

- 1.10 One of the fundamental purpose of corporatization of restructured entities was to improve their financial accounting and to bring them under the accounting norms of the Company's Act. After the restructuring exercise however, audited balance sheets of only UPPCL (Transco), that too for FY 2003-04 only, have been made available. For other companies only the un-audited and provisional accounts have been submitted. In absence of clean and clear accounts it is difficult to understand how the responsibility can be fixed or problem areas identified. The Commission had been, through its various orders, directing the utilities to finalize and submit the audited accounts for the past three years, clearly linking them to the transfer schemes notified by the State Government, for the validation of data but to no avail. This issue needs immediate attention of the management of the newly created entities out of the restructuring exercise and the Commission directs them to submit up-to-date audited accounts at-least with the next year's ARR/tariff filings.

(d) Improvement in efficiencies

- 1.11 The Commission had, vide its tariff order for the FY 2001-02, in consultation with the utilities, laid down long term trajectories for reduction of T & D losses and improvement of collections efficiencies. A mere glance at the targets set by the Commission and those achieved by the utilities as per the filing reveals the realities. Against targeted T&D loss of 23.7% for the FY 2005-06 the loss levels as estimated for the FY 2005-06 are 34%. The same is the situation as regard collection efficiencies whereas the targeted collection efficiency for the FY 2005-06 was 99% that indicated in the ARR/Tariff Filings for the FY 2005-06 are 79%. Since authentically validated data is not being provided regularly, the Commission suspects that the ground realities could be even more harrowing. The utilities are accordingly directed to set right their energy accounting practices and also to monitor losses due to inherent collection inefficiencies.

(e) Distancing of Government from the operations of the Utilities

1.12 There are plenty of examples that the Government has not distanced itself from the operations of the utilities. One such example is that the Commission had issued an order for the Fuel Cost Adjustment on the request of the licensee, which allowed the licensees a uniform hike in the tariff of 9 paise /unit across different categories of consumers. However, the same was never implemented. It had been submitted that due to subsidy implication arising out of that order the same was sent for the Government's assent and since the government assent was not received the order was not implemented. Further, the Government has also retained a common incumbent, for the post of Chairman for all the restructured entities i.e. Transco and the five Discoms as well as Principal Secretary (Energy) to the State Government, responsible for policy formulations and execution. By retaining a common officer in both positions, Government has effectively restrained the Managing Directors of the Companies from taking independent commercial and managerial decisions/initiatives. Such measures by the Government make the licensees even more complacent, and leave them with little urge to improve the efficiencies.

(f) Promotion to private investment

1.13 Investments from the private investors in the power sector will come only when the investors are assured of suitable cash flows. In this context distribution reforms gain added significance, as through this interface only the energy flows get converted into cash flows. If the distribution sector remains commercially un-viable, the viability of Generation and Transmission sector is also threatened. No private investor will be willing to invest in the power sector unless he sees the future prospects of the distribution sector improving. However, for making distribution reforms a success, Government's role is equally important. It is only with the government support that theft of electricity, which is a major problem area, could be arrested. The Government should accordingly take initiative to deploy/recruit special police for the purposes of registering electricity theft related cases and taking prompt action against the defaulters. In this context it is to highlight that the Government of West Bengal has taken suitable initiatives in this regards by creating separate police stations for curbing theft of power, with encouraging results.

1.14 From above discussions it becomes apparent that the emerging structure is not as per the intent of reforms and leaves much to be desired from the utilities as well as the Government.

ISSUES ARISING OUT OF STATUTORY PROVISIONS

This section highlights the issues, arising out of provisions of Act and other policy notifications:

(a) Requirement of separate licence for newly created companies

- 1.15 The Commission had been emphasizing the need for filing of applications for fresh licences by the newly created companies, in accordance with the provisions of the Act and the Transfer schemes notified by the Government on 12th August 2003 which under section on 'Rights and powers of the Transferees' provides that:

“within 60 days of the effective date of transfer, the distribution companies shall apply to the Commission for grant of license under Section 15 of the Reforms Act or under Section 14 and 15 of the Electricity Act, 2003 to undertake the business of distribution and retail supply of electricity in the area of operations specified under part I-IV of Schedule I.”

- 1.16 The Transfer Scheme notified by the State Government, on 12th August 2003 accordingly required the newly created distribution companies to apply for fresh licenses within 60 days of the notification of the scheme. This requirement was also consistent with the Section 131, read with Section 14 of the Electricity Act 2003 which exempts only Damodar Valley Corporation, established under Damodar Valley Corporation Act, 1948 (14 of 1948), and an Appropriate Government, when engaged in the act of transmitting, distributing or trading of electricity, from the requirement of applying for license. This express provision of exemption is not available to the entities created under Section 131 of the Act.

- 1.17 The Commission has been raising the above issue through its various orders. However, it has been submitted by the licensees that they are deemed licensees under the provisions of Section 131, read with the fifth proviso of Section 14 of EA 2003, and hence are not required to apply for fresh licenses. The licensees have also submitted an unsigned legal opinion, in support of their above contentions, which the Commission cannot take into cognizance. In this context the Commission would like to clarify that it does not doubt the deemed licensee status of the newly created entities out of any Transfer Scheme notified by the Government in accordance with the provisions of Section 131 of the Act. Nonetheless the Commission is also clear that provisions of Section 14 do not provide restructured entities specific exemption from applying for a fresh licence. The issue gains added importance in view of changing geographical boundaries and area of operation specific issues, which could be addressed through special conditions of the licence only. The Commission feels that seeking fresh licences under the provisions of the Act is in the interest of the licensees only as it will help reduce future litigations.

- 1.18 In this context, it also requires to be pointed out that the deemed licensee status has been granted to the Government Companies and companies created under Section 131(2). Whereas, the transfer scheme of 2003 (No. 2740/P-1-2003-24-14P-2003 dated 12th August, 2003) was notified in pursuance of Section 131(4) of Electricity Act, 2003. It is clear from Section 131(4) that for any re-vestment under Section 131(4), there is a requirement of a transferor, as derived from a transfer scheme under Section 131(2).

Since there is no transfer scheme notified under Section 131(2) therefore, applicability of Section 131(4) also gets automatically challenged.

(b) Separation of Trading and Transmission Function

1.19 The Transfer Scheme 2003, vide which UPPCL was further unbundled into UPPCL Transco and the four distribution companies, was notified on August 12, 2003. As per clause 4 of the above Transfer Scheme the transmission undertakings along with the assets and liabilities has to remain with the UPPCL. Further, under the above Transfer Scheme "UPPCL" has been defined as the Bulk Supply licensee and the State Transmission Utility under sub-section (1) of section 27-B of the Indian Electricity Act, 1910 as notified by the State Government. Hence, UPPCL has been working in the capacity of State Transmission Utility since the notification of above Transfer Scheme.

1.20 The UPPCL in reply to the queries raised by the Commission in reference to the ARR/Tariff petition for FY 05-06 and 06-07, dated 15th November 2006, indicated that the business of transmission has now been divested to a new company registered under Companies Act i.e. U.P. Power Transmission Corporation Limited and UPPCL shall now onward act as a holding company as well as a trading company.

1.21 On 20th March 2007, in reply to the queries raised by the Commission in its letter no. UPERC/SECY/ANG/2007 dated 08/02/07, UPPCL has submitted on affidavit that U.P. Power Transmission Corporation Limited has been declared an STU by an order no. 2814 dated 03/10/2006 as issued by Secretary Energy, GoUP.

1.22 The Commission's observations on the above facts were however as follows.

- In spite of repeated reminders till date UPPCL has not submitted the copy of notification of GoUP which declares U.P. Power Transmission Corporation Limited as an STU.
- Even if Commission accept the fact that U.P. Power Transmission Corporation Limited has been declared as STU, the provision of the Section 39 (1) of the Act needs to be complied with, which states the following

"The State Government may notify the Board or a Government company as the State Transmission Utility.

Provided that the State Transmission Utility shall not engage in the business of trading in electricity:

Provided further that the State Government may transfer, and vest any property, interest in property, rights and liabilities connected with, and personnel involved in transmission of electricity, of such State Transmission Utility, to a company or companies to be incorporated under the Companies Act, 1956 to function as

transmission licensee through a transfer scheme to be effected in the manner specified under Part XIII and such company or companies shall be deemed to be transmission licensees under this Act."

- 1.23 Hence as UPPCL has been the STU for State of Uttar Pradesh, any property of UPPCL can not be transferred to U.P. Power Transmission Corporation Limited to function as transmission licensee without a Transfer Scheme. Hence U.P. Power Transmission Corporation Limited cannot be considered as transmission licensee under the provisions of the Act. As there is no transfer scheme, which vests the assets of UPPCL to U.P. Power Transmission Corporation Limited, UPPCL continues to play the role of a transmission licensee.
- 1.24 The third proviso of Section 41 of the Act prohibits a Transmission Licensee from indulging in sale and purchase of power. However, under the structure that emerged out of the restructuring exercise, PPAs with the Generating Companies remained vested with the UPPCL, the company which still owns all the Transmission assets within the State. Considering practical limitations, a transition period was however provided in the Act to set systems and procedures in place to move to the stipulated sector structure. The above transition period and the further extension period granted by Central Government in exercise of power conferred under Section 183 of the Act expired on 9th June 2005. The Commission thereafter, through its various orders, had been directing UPPCL to ensure compliance with the above provision of the Act and seek necessary exemption from the Central Government for the sale and purchase of electricity carried out by it in the interim. The Commission hopes that UPPCL will take concrete steps to comply with the provisions of the Act.

(c) Allocation of PPA's to the Distribution Companies

- 1.25 The Commission, vide its order dated 2nd November, 2006, had made it clear to the UPPCL that allocation of PPAs to UPPCL, acting as a trading company, was improper and against the basic spirit of the Act. In this context the Commission had quoted clause 8.4 (2) of the Tariff Policy issued by the Ministry Power, which states that-

"The National Electricity Policy states that existing PPAs with the generating companies would need to be suitably assigned to the successor distribution companies. The State Governments may make such assignments taking care of different load profiles of the distribution companies so that retail tariffs are uniform in the State for different categories of consumers. Thereafter the retail tariffs would reflect the relative efficiency of distribution companies in procuring power at competitive costs, controlling theft and reducing other distribution losses."

- 1.26 The Commission had also quoted the Letter dated 7/14 September 2006 from Ministry of Power in this regard. The letter states that the allocation of PPAs to the trading

companies is not in the spirit of the Act. Letter written by the Central Electricity Regulatory Commission to the MoP in this regard was also cited by the Commission, which states that-

“there is a tendency among the State Governments to create trading companies in the process of unbundling of the State Electricity Board in exercise of the powers vested under Section 131 of the Electricity Act, 2003. This is a clear violation of the mandate of the Electricity Act of 2003 and will be a stumbling block in the reforms process. By this method the State Governments are avoiding to devolve PPAs on the Distribution Companies hindering their effective operation. Further, the implementation of ABT within the state will also become difficult unless the distribution companies undertake the responsibility of procuring power for supplying to their consumers”.

- 1.27 Accordingly the Commission directed UPPCL to justify its action of creating the Government trading company, which was not only legally inconsistent with the provisions of Act, but was also jeopardizing the financial and managerial independence of the distribution companies and thereby the effectiveness of power sector reforms process. It was however submitted by UPPCL that for the present this is the only tenable solution and it also cited the example of States like Madhya Pradesh etc. which have adopted a similar structure. The Commission, while agreeing with the views of UPPCL that the exercise to optimally allocate the PPAs to Discoms while maintaining uniform retail tariff in the transition period would be a difficult task, directed UPPCL to submit the response of the State Government, if any, to the above mentioned letter from the Ministry of Power. The same has not been submitted yet. The Commission is of the firm view that allocation of PPAs is not only necessary for implementation of intra-State ABT but is also a must for the independent functioning of the Distribution Companies. Allocation of PPAs will provoke the distribution licensees to think in terms of alternatives and economize their major cost i.e. power purchase.

(d) Metering of Consumers

- 1.28 The Commission had called attention of UPPCL to Section 55 of Electricity Act, 2003 which provides that:

“No licensee shall supply electricity, after the expiry of two years from the appointed date, except through installation of a correct meter in accordance with regulations to be made in this behalf by the Authority:

Provided further that the State Commission may, by notification extend the said period of two years for a class or classes of persons or for such area as may be specified in that notification.”

- 1.29 As the period of two years allowed under the provision of the Act expired on 9th June 2005, the Commission emphasized that in absence of any request from the licensees to extend the above time period it is not possible for it to specify tariffs for un-metered categories. The licensees were also directed to provide detailed information about percentage wise un-metered consumers left in different categories and likely time frame to meter those consumers.
- 1.30 During the hearing on 18th November, it was submitted by utilities that 100% metering in all consumer categories has not been completed and that the licensees will make a request before the Commission to issue a notification to extend the time limit in accordance with second proviso of Section 55(1). The Commission directed the licensees to structure their request in a manner so that it contains detailed information about percentage wise un-metered consumers left in the category and likely time frame to meter those consumers. In response to above directive utilities submitted that all new connections in urban areas & newly electrified villages are being provided with meters only. However, as far metering of old un-metered consumer are concerned, no timeframe can be ascertained at present as it will be a major policy decision for which consent of GoUP will be required, as GoUP provides subsidy to these categories of consumers. Nevertheless, metering of consumers other than subsidized categories will be done in a phased manner within a span of three year.
- 1.31 It was however clarified by the Commission vide its order dated 1st December, 2006, that subsidy has nothing to do with the metering of the consumers as the same can be utilized for the purposes of proper energy accounting. In fact, it is for this purpose that the Commission in its previous tariff orders had directed the licensees to meter distribution transformers catering to un-metered category of consumers, which has not been followed. The Commission is also constrained to disagree with the submissions of the utilities that all new connections are being provided with meters; as the ARR filing shows steady increase in the number of consumers in un-metered categories. Therefore the Commission directs the distribution licensee to submit a metering plan for 100% metering of all the consumers clearly indicating the timelines for its completion.

2 CHAPTER - 2: PROCEDURAL HISTORY

ARR PETITION FOR FY 2005-06 BY THE LICENSEES

- 2.1 On 29th April 2005, the Commission received applications for determination of Annual Revenue Requirement (ARR) for the financial year FY 2005-06 from the four distribution licensees and UPPCL (Transco). A scrutiny of above applications by the Commission indicated lot of data gaps and data inconsistencies in the submissions. The above submissions by the licensees indicated a revenue gap but no tariff proposals for bridging the revenue gap however were submitted. The filings by the licensees indicated that State Government was likely to extend a subsidy support of Rs. 1562 Crore for certain category of consumers, out of which Rs. 1012 Crore were allocated to private tube wells and rural consumers whereas Rs. 550 Crore were in view of extended hours supply to rural area as per the directions of the Government. However, no firm commitment by the Government for Rs. 550 Crore was indicated.
- 2.2 The Commission vide its letter dated 27th May 2005 served a detailed deficiency note on the licensees indicating the data gaps and data inconsistencies in the filing. The above letter also highlighted the need of submitting a suitable tariff proposal along with committed subsidy by the Government for bridging the revenue gap. The licensees were directed to submit their response within 15 days time of issuance of above letter. A letter No. 316 dated 24/25 June 2005 was also written to the Principal Secretary Energy, GoUP to clarify the stand of the Government on the additional subsidy of Rs. 550 Crore for extended hours of supply to the rural consumers. In response to the above letter licensees sought extension of time up to July 31, 2005 for submitting the information. It was submitted that the Government of Uttar Pradesh (GoUP) wanted to provide subsidy to certain categories of consumers however, in absence of any firm commitment by the Government in this regard it is not possible to submit the tariff proposals. It was also submitted that tariff proposal would be submitted after receiving the commitment of State Government on the quantum of subsidy and the categories to which it has to be allocated. A letter dated 14th July 2005, in this regard, was also received from GoUP, which intimated about the creation of a committee for ascertaining the subsidy requirements of the distribution companies. It also sought extension of time up to 31st July 2005 for submitting the information.
- 2.3 Subsequently, the licensees submitted the revised ARR Petition along with the tariff proposals on July 28, 2005. Scrutiny of the revised ARR Petitions as well as the additional information submitted by the licensees again revealed several data infirmities and data gaps in the ARR Petitions. A meeting was accordingly organized between the officers of the Commission and the licensees on August 22, 2005 to sort out all the deficiencies in the submission by the licensees. After the above meeting, another deficiency note was served on the licensees the same day. The response to

same was subsequently submitted vide letter no. 555/RPMO/ARR & TF FY 2005-06 dated August 26, 2005. A presentation before the Commission, on ARR and Tariff Petitions filed for the FY 2005-06, was also made by the Director (Finance) of UPPCL on behalf of the UPPCL (Transco) and the distribution companies, on August 31, 2005. Since certain issues still remained unresolved the Commission listed the ARR/Tariff petitions for hearing on 5th October 2005. UPPCL and the distribution companies were represented by Director (Finance) UPPCL.

- 2.4 The Commission raised a number of issues before the licensees including the issues related to applicability of uniform retail tariff across the State, requirement of advance subsidy commitment from the Government and also of bulk purchase and supply of power being carried out by UPPCL as STU, in contravention to the provision of the Act. The Commission expressed its serious concern that despite its several reminders, UPPCL was still functioning as a bulk purchaser of electricity on behalf of the discoms, which was against the spirit of the Act. The petitioner concurred with the view and mentioned that an already constituted trading company was being converted into Transmission Company whereas UPPCL will become a trading company and a holding company. The Commission directed UPPCL to make the arrangement effective at an early date and also to seek necessary exemption from the Central Government for sale and purchase of electricity undertaken by it in the interim period.
- 2.5 The response of the licensees was also sought on the issue of non-implementation of fuel-cost adjustment allowed by the Commission and submission of data related to revision of loss trajectory. The response submitted were however, not satisfactory. On the issue of non-implementation of the Commission's order on fuel-cost adjustment issued in July 2005, the licensees submitted that necessary assent of the GoUP was sought as it had subsidy related implications. Regarding loss levels, the licensees commented that the targets set by the Commission were away from reality and needed to be re-looked. But they failed to explain any concrete steps taken by them to reduce loss levels.
- 2.6 Based on the submissions during the hearing dated 5th October 2005, the Commission issued an order on 10th October 2005 admitting the petition. However, while admitting the petitions for the FY 2005-06 for further processing, the Commission, proposed to the licensees to submit the relevant data for the financial year 2006-07 also so that same could also be processed along with the ARR and tariff petitions for the FY 2005-06. The Commission proposed the same keeping in view the licensees interest, and also to restore some kind of regulatory synchronism and sanity in the process of tariff determination for the FY 2006-07. However, in view of specific request of the Director (Finance) for processing the ARR/ tariff petitions for the FY 2005-06, the Commission directed the licensees to advertise the salient features of the ARR/tariff petitions for the year FY 2005-06 in at least two newspapers widely circulating in their respective

areas of supply inviting objections/ suggestions/ comments from the interested persons and the State Government.

REJECTION OF ARR PETITION OF THE LICENSEES FOR THE FINANCIAL YEAR 2005-06

- 2.7 The licensees however, on their own without the approval of the Commission, deferred publication of salient points of the ARR/Tariff petitions for the FY 2005-06, in the news papers. Vide letter no. 403/RAU/TF/2005-06 dated 20th October 2005 it was intimated that they were considering submitting the ARR/Tariff proposals for the FY 2006-07 but the submission of the same will require change in proposed tariffs and a decision on subsidy by the Government. Thereafter UPPCL on behalf-of four distribution companies kept seeking repeated time extensions for filing the consolidated ARR/Tariff petition for the FY 2005-06 and 2006-07 without any cogent reasons.
- 2.8 Ultimately, when the determination of tariff for the FY 2005-06 lost its meaning the Commission vide its order dated 19th January 2006, dismissed the ARR/Tariff petition for the FY 2005-06. Through the same order the Commission granted time extension to the licensees for submission of their ARR/Tariff petition for FY 2006-07 up to 28th February 2006.

SUBMISSION OF ARR AND TARIFF PETITION FOR FINANCIAL YEAR 2006-07

- 2.9 The licensees, however, did not file the ARR/Tariff petition for the FY 2006-07 by 28th February, 2006. Further time extension up to 15th May, 2006 was sought on the pretext that GoUP was constituting a Committee to decide the quantum of subsidy and other issues relating to tariff for FY 2006-07. The Commission directed the licensees that they may file their ARR/Tariff petitions by the requested date i.e. 15th May, 2006. In view of provisions of tariff policy issued by the Government of India, the Commission, through above order, also emphasized that no revenue gap on account of delayed filing by the licensees, would be passed on to consumers. Subsequently, the distribution licensees and the UPPCL submitted the ARR/Tariff petitions for FY 2006-07 on 5th July 2006 under Section 64 of the Electricity Act, 2003. Deficiencies as observed by the Commission in the above filings by the distribution companies and the Transco were communicated to the licensees. Responses to the same were submitted by Transco vide its letter dated 24th August 2006 and by the Distribution Companies vide letter dated 13th October 2006.

2.10 Responses by the licensees were still far from satisfactory and there still remained many data gap. Further, no audited accounts from FY 2003-04 onwards were submitted to validate the data in the filings. The submissions by the licensees also created lot of confusion about the structure of power sector with in the State and commercial & functional independence of re-structured utilities. The Commission immediately called the Distribution Companies and UPPCL for a meeting on 18th October 2006 to sort out the data-related problems and issues related to structure of power sector within the State, which the Commission felt was not compatible with the provisions of the Electricity Act-2003. Following issues were raised by the Commission during the above hearing:

- Issue related to the proposal for bridging the revenue gap
- Structure of the U.P. power sector, which the Commission felt, was not in consonance with the provisions of the Electricity Act 2003 and conducive to the independent functioning of unbundled utilities.
- Audited Accounts and other data gaps

2.11 A summary of the issues as raised by the Commission during the above hearing and the corresponding responses by the utilities are discussed below:

Treatment of Revenue Gap

2.12 The submission by the distribution licensees on consolidated basis (four discoms taken together) indicated a revenue shortfall of Rs. 4281 Crore at existing tariff during the FY 2006-07. However, no proposal for revising the tariffs was submitted and the revenue gap of Rs. 4281 Crore was proposed to be bridged in a manner as indicated below:

- GoUP additional subsidy of Rs. 1000 Crores
- Efficiency Improvement of Rs. 781 Crores, and
- Short Term Loan of Rs. 2500 Crores.

2.13 The Commission, recognizing the fact that such a treatment would shift the burden of loan repayment along with its interest on the tariffs for the consumers, asked following targeted questions:

- Documentary evidence of commitment towards additional subsidy by U.P. Government for bridging the revenue gap.
- Ways and means of generating additional revenues to the tune of Rs. 781 Crore through efficiency improvement.

- Whether any funding agency/agencies have been identified for these short-term loans? Name of the funding agency, interest rates quoted by them, other terms and conditions of the loan and also whether cost of such short term loans have been included in the present ARR filings.
 - Reasons for proposing such a weird way for bridging the revenue gap instead of proposing tariff hike in the present petition.
- 2.14 In response to above queries it was submitted by UPPCL that tariff hike has not been proposed in view of not so happy power situation in the State. When UPPCL was asked to explain the funding mechanism in such a situation, it was submitted that the matter related with funding such a huge revenue gap had been resolved to a certain extent, as Government of Uttar Pradesh (GoUP) has committed support of Rs 3512 crore (i.e Rs.1012 Crore as subsidy, Rs. 500 Crore. as additional subsidy and Rs. 2500 Crore. as equity). The Director (Finance) UPPCL submitted a copy of a letter dated 21st September, 2006 from the Government of UP in support of above. The Commission, however, observed certain discrepancies in the nature of the commitment of GoUP as given in the letter vis-à-vis submission by Director (Finance) UPPCL and the same were pointed out by the Commission. In fact, the tone of the letter far eluded the impression that the amount was committed as additional subsidy, leave aside that it could be treated as infusion of equity from the State Government. In the face of such discrepancies, Director (Finance), UPPCL committed to submit a letter from GoUP, which clearly indicates the commitment of the Government.
- 2.15 Regarding efficiency improvement, details regarding various progressive steps being taken by the licensees like independent metering outside the premises of the consumer, laying of Arial Bunched Conductors etc., were narrated. But the licensees chose not to respond when asked why the efficiency improvement measures amounting to reduction in revenue loss to the extent of Rs. 781 Crores were not factored into the main ARR computation and added as a measure of bridging the revenue gap.
- 2.16 The Commission also asked for the details of the consumer categories to which the Government has committed the subsidies. The Commission also called attention to Section 65 of Act, which provides for advance subsidy. In this regard Director (Finance) committed to submit to the Commission, the details of advance subsidy as committed by GoUP to different categories of consumers.
- 2.17 The Commission during the proceeding also inquired about the treatment of 2005-06 revenue gap to which it was submitted that the State Government has provided the necessary support and accordingly there is no requirement of bridging the gap by way of tariff.

ISSUES RELATED TO STRUCTURE OF THE POWER SECTOR

2.18 The Commission had been, through its various orders, raising the following issues linked to the structure of power sector within the State and other statutory requirements to be complied with by the licensees:

- Separation of Trading and Transmission Function
- Maintainability of UPPCL as Transmission Licensee and STU.
- Creation of Distinct Trading Company.
- Vesting of PPAs with the Discoms.
- Requirement of fresh licenses for newly created companies.

2.19 The above issues have been discussed in detail in chapter one of this tariff order.

AUDITED ACCOUNTS AND OTHER DATA GAPS:

2.20 As audited accounts are a must for validation of projected data in the filing, the Commission, through the deficiency note dated 11/14.08.2006, had asked UPPCL and the Distribution Companies to submit the audited accounts for the FY 03-04 and FY 04-05 and the provisional accounts for the FY 2005-06.

2.21 In response to the same the UPPCL (as Transco) submitted audited accounts of FY 2003-04 and provisional accounts for the FY 2004-05. However, for distribution companies only the un-audited accounts of FY 2003-04 are submitted.

2.22 The audited accounting information are important not only for truing up, but also from the point of view of correctly identifying the assets and liabilities of each of the licensees so as to enable the Commission to correctly identify and project the cost items like Operation & maintenance expenses, depreciation and interests. Therefore, the Commission, during the course of the hearing dated 18.10.2006, again raised the issue of audited accounts. The Director (Finance), UPPCL, mentioned that the Audited Accounts of all the companies, consequent to the transfer scheme, were due to be finalized within next six months for all the three years (FY 2003-04, FY 2004-05 and FY 2005-06). However, he committed submitting provisional accounts for the FY 2004-05 and FY 2005-06 shortly.

2.23 Issue related to data gaps i.e. data in the filings vis-à-vis data in the formats and data in the accounting statements was pointed out by the Commission. The Director (Finance) UPPCL committed to resolve the same through a separate meeting between the Commission's representatives and the distribution company officials. The Commission immediately arranged for its officials to visit the petitioner's office, at the

request of the petitioners. However, the petitioners in that meeting provided no significant additional data.

2.24 To summarize, the Director (Finance), during the course of hearing on 18th October 2006, had committed submitting the following documents before the Commission to enable admittance of ARR petition.

- A legal opinion validating the restructuring exercises culminating into a trading company under the provisions of Act.
- Response of the State Government, if any, to the Ministry of Power on the trading structure being adopted in the State of Uttar Pradesh along with its justification.
- An adequate proof of GoUP support, compatible with the provisions of Section 65 of the Electricity Act, 2003, in terms of commitment of funds for bridging the revenue gap for distribution companies.
- The details of the subsidy envisaged to be granted by GoUP to different categories of consumers.
- A legal opinion exempting the distribution companies from the requirement of making application for licenses due to their deemed licensee status.
- Trial Balances for FY 2002-03-04, FY 04-05 and provisional accounts for the FY 2004-05- 06.
- A corrected / final copy of the Memorandum and Article of Association regarding new companies of trading and transmission respectively.
- Status report of category wise un-metered consumers along with timeframe for their metering for consideration of the Commission.
- UPPCL/UPPTCL to submit affidavits to the effect that the petition for the transmission business may now be treated as submitted by UPPTCL.

COMMISSION'S ORDER OF 2ND NOVEMBER 2006

2.25 The Commission waited for some time for the licensees to turn up with the documents as committed by them. But, in absence of any response from them the Commission vide its order dated 2nd November 2006 directed them to submit all the information within ten days.

2.26 In that order the Commission observed,

“So far none of the above documents have been submitted and accordingly, it is not possible for the Commission to determine whether the petitions have been filed by legally compatible entities following the basic legal mandates relating to allocation of PPAs and treatment of revenue gap and in such a situation, the Commission is constricted not to admit the ARR / tariff petitions at present. Otherwise also the ARR/tariff submissions do not have any impending urgency as no change has been proposed in the existing tariff structure and therefore, petitioners may better utilize this period in making the structural arrangements in accordance with the Act and developing a culture within the organization showing genuine regulatory responsiveness.”

FURTHER SUBMISSIONS BY THE LICENSEES

- 2.27 Following the order of the Commission dated 2nd November 2006, response from UPPCL dated 15th November, 2006, on behalf of both the transmission and distribution licensees was received by the Commission. The response was however, not at all in line with the commitments made by the Director (Finance) during the hearing of 18th November 2006.
- 2.28 The response of the licensees to the key structural issues has been discussed in the Chapter-1 of this order, but the licensees changed their stand significantly on the issue related to treatment of revenue gap.
- 2.29 UPPCL submitted a letter No. 292/PSE/24-1/2006-54 P dated 14th Nov 2006 from Principal Secretary (Energy), which indicated that the liability of the principal as well as interest on the loans to be raised by the distribution licensees to meet the revenue gap of Rs. 3000 crore shall be met from the income and expenditure account of the Government.
- 2.30 The Commission accepted the commitment of the State Government communicated through the letter of the Principal Secretary (Energy) on the face value that the State Government would shoulder the responsibility of repayment of principal and interest on the loans raised by the distribution companies. It was not on the part of the Commission to take a view into the administrative jurisdiction of Energy department; however, the Commission would like to state that the confusion should be avoided in matters of such large significance.

ADMITTANCE OF ARR AND TARIFF PETITION OF THE LICENSEES FOR THE FINANCIAL YEAR 2006-07

- 2.31 In spite of all the ambiguities and infirmities in the application of tariff of the licensees the Commission took a view to admit the petitions of the licensees in the larger interest of the consumers. Thus the Commission admitted the petitions of the licensees for the financial year 2006-07 with the following observations quoted below from the admittance order issued on 1st December 2006.

“After discussing the issues raised during the hearing and subsequent responses by the UPPCL the Commission would like to deliberate on the admittance issue of the pending ARR/Tariff filling for the financial year 2006-07, by the Transmission Company and the Distribution companies. In this context the Commission would like to point out that the major stumbling block in the admittance of ARR and Tariff filling for the FY 2006-07, by the Distribution companies was the treatment of revenue gap proposed in the filling by the utilities. The Commission has now taken a view, as also expressed under issue no. 4, to accept the letter from the Principal Secretary (Energy) on its face value. With this the only remaining issue is that of seeking of fresh licenses by the restructured distribution companies, from the Commission. The Commission has suitably flagged the above issue in its various meetings with the licensees, orders and letters to the licensees as well as the government. The Commission feels that the requirement of fresh license by the restructured utilities is essential to make the power sector structure within the State legally compatible with the statutory provisions of the Electricity Act 2003, and the Transfer Scheme 2003. The Commission therefore, directs the licensees to seek and submit a fresh legal opinion regarding requirement of fresh licenses by the restructured entities pending final orders by the Commission on the ARR and Tariff filling for the FY 2006-07. The Commission also directs the licensees to clearly indicate the viewpoint of Commission in the matter while seeking such an opinion.

- 2.32 Notwithstanding the deficiencies in the response and the fact that the structure of UP power Sector is still not in line with the spirit of the Act even after passage of two years allowed by the Act, the Commission in the larger interest of consumers as well as licensees and as a mark of respect to its own commitment to abide by the major statutory obligation cast upon it by EA 2003 in form of tariff determination admits the petitions filed by the distribution companies.
- 2.33 Notwithstanding the admittance of the ARR and Tariff applications by the licensees, the directives given to the licensees in different orders as well as the admittance order of 1st December 2006 remains firm and the licensees will be held responsible for non-compliance.”
- 2.34 The Commission through above order dated 1st December 2006, also directed the licensees to advertise the salient features of their ARR/Tariff petitions in at least two newspapers widely circulating in their area of supply within seven days from the issuance of the order, inviting objections/suggestions/comments from the interested parties and the State Government. The licensees were also directed to publish the contents of the letter of the Principal Secretary (Energy) dated 14th November 2006 as that was the most vital document for the admittance of the petitions filed by the distribution companies.

3 CHAPTER - 3: PERFORMANCE REVIEW OF THE UTILITIES

- 3.1 Since past few years the Commission has been carrying out performance review of the licensees at the time of determination of tariff. The objective has been to take stock of the extent of improvement in the operations compared to the situation at the time of determination of last tariff and to explore further possibilities for performance improvement. This exercise also helps the licensees to formulate action plans to improve performance in future.
- 3.2 However, during the determination of tariff under current context, the Commission could not make any objective analysis of the prevailing situation of supply scenario in the State, because the petitions of the licensees were fraught with unsubstantiated and noticeably irreconcilable data in some cases. Also the data submitted by the licensees have not been submitted linking them with the past performance.
- 3.3 The Commission therefore vide its letter dated 19th December 2006 directed the utilities to submit key data, in prescribed formats, to carry out the above analysis. Except for PVVNL, which submitted partial information other licensees somehow preferred not to respond to above letter. The Commission again wrote a reminder letter dated 1/02/2007 asking the utilities to submit the above information but to no avail.
- 3.4 Therefore, in absence of any response from the utilities, the Commission has carried out the performance analysis based on key parameters such as T&D losses, Collection Efficiency, hours of supply, etc based on the data available in the filings and subsequent submissions made by the licensees.

T & D LOSSES

- 3.5 The licensees and UPPCL have stated that they have made concerted efforts to bring the T&D loss levels to the desired levels and also to increase their revenue realization. However, this proves to be a hollow claim when the actual performance of the licensees is compared to the self-imposed targets in their petition, and even more so when compared to the performance targets set by the Commission in mutual consultation with the licensees.
- 3.6 In the petition submitted for FY 2004-05, the utilities had estimated T&D losses for FY 2003-04 to be 32.8% and projected losses for the FY 2004-05 to be 30.82%. In contrast to the above actual loss levels for the corresponding years have been indicated as 34.9% and 34.6%, in the current petition. This is in further contrast to the data submitted by the licensees during the tariff determination process for FY 2004-05, when they submitted that the actual T&D loss level for FY 04 was 35.3%. This indicates the very poor quality of data the petitioners submit to the Commission.

- 3.7 In the current petition, the licensees have proposed T&D loss level at 34.2% for FY 2005-06 and 32% for FY 2006-07. Thus, considering their own submissions, the licensees are still far from achieving the self imposed T&D loss target of 30.82% for FY 2004-05. Even after two years having elapsed since, the licensees have been unable to achieve the target T&D loss of 30.82% that should have already been achieved in FY 2004-05 as per their own estimates.

Table 3-1: loss levels

	FY 2003-04	FY 2004-05
T&D target set by the Commission	30.4%	27.4%
T&D Loss target set by the licensees themselves	32.8%	30.82%
Actual Achievement	34.9%	34.6%

- 3.8 The performance of the licensees proves to be even more lackluster when compared to the T&D loss targets set by the Commission. The Commission had prescribed the multi-year loss levels and collection efficiency targets, in consultation with the UPPCL in its tariff order for FY 2001-02 for a period of 5 (five) years. This was done to fix achievable and quantified targets for the licensees, and also to encourage the licensees to exceed the targets and thereby retain the benefits of improved performance. For an environment where the starting levels of losses were quite high, the Commission felt that the reduction trajectory envisaged was not only desirable, but also achievable. As can be seen from the following table, the licensees are way off the mark (34.2%) from achieving the 23.9% loss target specified by the Commission for FY 2005-06. The proposed 32% target T&D losses for FY 2006-07 proposed by utilities too, stand nowhere close to the trajectory specified by the Commission.

Table 3-2: T&D Loss Comparison

T&D Losses %	FY 2003-04	FY 2004-05	FY 2005-06	FY 2006-07
Actual achieved by licensees	34.9	34.6	-	-
Proposed by licensees in current petition	-	-	34.2	32
Commission Targets	30.4	27.4	23.9	-

- 3.9 The licensees have further under their proposal to meet the revenue gap have estimated additional revenue of Rs. 781 crore through efficiency improvements. In the light of above discussions Commission however fails to understand how the licensees are going to achieve it.

3.10 The figures discussed above show that the utility is not at all serious about controlling its losses. They have not made any efforts to realize the targets, which were actually set to incentivise them with achievable targets and where they could have retained benefits by performing better than the targets set. The shortfall in achieving the multi-year targets is a cause for major concern and reflects severe lack of commitment and commercial orientation on the part of the licensees.

COLLECTION EFFICIENCY AND BAD DEBTS

3.11 The Commission has been always insisting upon the licensees to improve their collection efficiencies, which always puts up a poor show. The poor collection efficiency is clearly an administrative failure on the part of the licensees and they are not even making adequate attempts to improve upon this aspect. In all its past orders the Commission has emphasized that, in the absence of a clear cut policy and procedure for identifying and writing off the receivables, bad debts can not be allowed. The Commission has repeatedly emphasized the need for conducting such investigation and write-off periodically.

3.12 The filings by the licensees state that significant efforts are being made to improve collection efficiency through identification of large debtors, development of reporting systems, etc. However neither any documentary evidence nor impact of such measures in terms additional revenue has been provided.

3.13 In its replies to the queries raised by the Commission the licensees have submitted the following data on revenue collections against actual assessment and accumulated arrears.

Table 3-3: Revenue Collections FY 2003-04

Category	Arrear 3/03	Assessment	Realisation	Waiver	Arrear at Year End	% Realisation Considering FY04 Assessment	% Realisation Considering Arrears and Waiver
Public Light	396.32	95.36	83.72	69.69	338.27	87.79%	19.84%
Water Works	635.38	240.86	315.23	166.32	394.69	130.88%	44.40%
Irrigation	349.18	396.21	310.45	51.87	383.07	78.35%	44.76%
Total Govt	1380.88	732.43	709.40	287.88	1116.03	96.86%	38.86%
Domestic	1978.93	1863.27	1374.91	124.87	2342.42	73.79%	36.99%
Commercial	935.70	840.56	679.18	84.45	1012.63	80.80%	40.15%

Category	Arrear 3/03	Assessment	Realisation	Waiver	Arrear at Year End	% Realisation Considering FY04 Assessment	% Realisation Considering Arrears and Waiver
LMV 4	42.46	328.52	311.56	13.43	45.99	94.84%	87.14%
Small & Medium Ind	563.48	578.39	501.22	59.01	581.64	86.66%	46.29%
Large & Heavy Ind	579.27	1638.77	1632.05	6.81	579.18	99.59%	73.81%
PTW	463.16	353.38	279.67	52.06	484.81	79.14%	36.58%
Rly Traction	42.31	282.30	278.84	0.00	45.77	98.77%	85.90%
Extra State (Misc.)	18.01	2.41	1.70	0.00	18.72	70.54%	8.33%
Ex.- Licensee	1.17	-			1.17		
Total Non-Govt.	4624.49	5887.60	5059.13	340.63	5112.33	85.93%	49.74%
KesCo	589.23	495.58	372.93	4.52	707.36	75.25%	34.52%
NPCL	335.90	195.14	72.72		458.32	37.27%	13.69%
Total Bulk Supply	925.13	690.72	445.65	4.52	1165.68	64.52%	27.66%
Grand Total	6930.50	7310.75	6214.18	633.03	7394.04	85.00%	45.66%

Table 3-4: Revenue Collections FY 2004-05

Category	Arrear 3/04	Assessment	Realisation	Waiver	Arrear at Year End	% Realisation Considering Current Year Assessment	% Realisation Considering Arrears and Waiver
Public Light	338.27	84.58	12.16	0.88	409.81	14.38%	2.88%
Water Works	394.69	215.63	199.33	10.05	400.94	92.44%	33.21%
Irrigation	383.07	413.20	325.43	22.85	447.99	78.76%	42.08%
Total Govt	1116.03	713.41	536.92	33.78	1258.74	75.26%	29.90%

Category	Arrear 3/04	Assessment	Realisation	Waiver	Arrear at Year End	% Realisation Considering Current Year Assessment	% Realisation Considering Arrears and Waiver
Domestic	2342.42	1994.52	1496.79	198.44	2641.71	75.05%	36.17%
Commercial	1012.63	876.79	705.52	98.40	1085.50	80.47%	39.39%
LMV 4A	35.05	280.16	249.34	5.33	60.54	89.00%	80.46%
LMV 4B	10.94	84.50	72.72	1.52	21.20	86.06%	77.43%
Small & Medium Ind	581.64	572.83	503.61	67.91	582.95	87.92%	46.35%
Large & Heavy Ind	579.18	1808.11	1798.25	14.57	574.47	99.45%	75.79%
PTW	484.81	361.81	262.27	95.22	489.13	72.49%	34.90%
Rly Traction	45.77	282.64	282.25	0.54	45.62	99.86%	86.09%
Extra State (Misc.)	18.72	1.57	1.65	0.00	18.64	105.10%	8.13%
Ex.-Licensee	1.17	-	-	-	1.17	-	-
Total Non-Govt.	5112.33	6262.93	5372.40	481.93	5520.93	85.78%	49.32%
KesCo	707.36	446.46	150.00	-	1003.82	33.60%	13.00%
NPCL	458.32	234.73	86.95	-	606.10	37.04%	12.55%
Total Bulk Supply	1165.68	681.19	236.95	0.00	1609.92	34.78%	12.83%
Grand Total	7394.04	7657.53	6146.27	515.71	8389.59	80.26%	42.28%

Table 3-5: Revenue Collections FY 2005-06

Category	Arrear 3/05	Assessment	Realisation	Waiver	Arrear at Year End	% Realisation Considering Current Year Assessment	% Realisation Considering Arrears and Waiver
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Category	Arrear 3/05	Assessment	Realisation	Waiver	Arrear at Year End	% Realisation Considering Current Year Assessment	% Realisation Considering Arrears and Waiver
Public Light	409.81	94.23	17.08	5.47	481.49	18.13%	3.43%
Water Works	400.94	215.61	152.98	5.96	457.61	70.95%	25.05%
Irrigation	447.99	499.12	327.50	38.61	581.00	65.62%	36.05%
Total Govt	1258.74	808.96	497.56	50.04	1520.10	61.51%	24.66%
Domestic	2641.71	2078.80	1568.77	215.02	2936.72	75.47%	34.82%
Commercial	1085.50	874.00	731.44	112.62	1115.44	83.69%	39.60%
LMV 4A	60.54	332.85	302.89	8.13	82.37	91.00%	78.62%
LMV 4B	21.20	74.70	65.02	1.23	29.65	87.04%	68.68%
Small & Medium Ind	582.95	596.38	543.97	58.37	576.99	91.21%	48.53%
Large & Heavy Ind	574.47	2047.62	2040.25	11.18	570.66	99.64%	78.14%
PTW	489.13	390.61	269.82	80.19	529.73	69.08%	33.75%
Rly Traction	45.62	242.19	250.24	0.00	37.57	103.32%	86.95%
Extra State (Misc.)	18.64	2.74	2.21	0.00	19.17	80.66%	10.34%
Ex.-Licensee	1.17	-	-	-	1.17	-	-
Total Non-Govt.	5520.93	6639.89	5774.61	486.74	5899.47	86.97%	49.47%
KesCo	1003.82	458.51	0.00	-	1462.33	0.00%	0.00%
NPCL	606.10	226.69	96.65	-	736.14	42.64%	11.61%
Total Bulk Supply	1609.92	685.20	96.65	0.00	2198.47	14.11%	4.21%
Grand Total	8389.59	8134.05	6368.82	536.78	9618.04	78.30%	39.84%

- 3.14 The above submission by the licensees actually shows declining collection efficiency when measured both against the current year's assessed revenue and against total collectible dues. It is very surprising to observe that there are huge bad debts pending recovery from the Government consumers and also from the bulk supply consumers i.e. KESCO and NPCL. This clearly brings out the fact that there is no focus on the part of distribution licensees to take control on collections. A staggering Rs. 9618 Crores is pending realization at the end of FY 2005-06. Even recovery of 50% of these arrears would have allowed the licensees to tide over the projected revenue gap of Rs. 4281 Crores in FY 2006-07. The Commission is concerned and directs the licensees to immediately turn its focus to collecting all the arrears from the respective consumers.
- 3.15 The treatment of bad debts has been a persistent area of difference of opinion between the licensees and the Commission in the past. In their filing for FY 2006-07, the licensees have proposed provisioning of 10% of the incremental receivables in FY 2006-07 amounting to Rs 92 crores. The Commission, in its tariff order for FY 2004-05, pointed out that it was not averse to allowing some provision for bad and doubtful debts in the course of normal operations of the Utility, provided they clean up their books by identifying and writing-off unrecoverable arrears against the total provision. The provisioning for bad debts needs to be backed up with proper procedures for identifying consumers who are not paying and then making adequate attempts to collect from such consumers. Incidentally, in the filing made in March 2004, the petitioners committed that the new guidelines would be issued by June 2004. The Commission, till date, is unaware of such guidelines having been framed. The key requirement of the Commission on investigation and actual write-off has not been met. In the absence of this, the Commission would not be in a position to accept the contention of the utilities. The Commission would however like to reiterate that it would be inclined to permit reasonable provisions for bad and doubtful debt so long as the utilities demonstrate the will and diligence to identify and write off actual bad debt while making necessary efforts to recover the amounts that are collectable.

HOURS OF SUPPLY

- 3.16 As per the directives issued by State Government rural areas were to be provided minimum supply of 14 hours per day with effect from September 2003. Licensees have stated that although 14-hour supply is still to be achieved, but they were confident of achieving the same by FY 2006-07, through system improvements and reduction in line losses. In the petition, and replies to the queries raised by the Commission the licensees have submitted the following status and targets of supply to different supply areas:

Table 3-6: Status of Supply Hours

Area of Supply		FY 04	FY 05	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11
All	Rural	12	12	11.25	14	14	14	16	24
Tehsil	Urban	14	12	11.40	14	14	14	16	24
District	Urban	17	16	16.09	16	16	16	24	24
Commissionary	Urban	19	18	17.13	18	18	18	24	24
Maha Nagar	Urban	21	22	21.47	22	22	22	24	24
Major Cities	Urban	17	24	23.29	24	24	24	24	24
Bundelkhand	Urban	23	15	15.02	16	16	16	24	24

3.17 The Commission understands that the above data is based on the information available with the SLDC on the hours of supply to various categories of feeders. However, it does not include statistics on local outages. It also does not provide a picture of the disparities that exist in the hours of supply within a particular category. During the public hearings conducted on the ARR/tariff petitions submitted by the licensees at different locations the extremely poor supply position was repeatedly brought to the notice of the Commission. All categories of consumers, from domestic to industries, have resented the high electricity tariffs in the State despite the extremely poor quality of service. There is an overwhelming demand from all consumer categories to link demand as well as energy charges to minimum standards of service at-least in terms of hours of supply.

3.18 Further, the data in the table above is not consistent with the data in the main ARR petition. The petition submitted by the Meerut Discom indicates average supply of 7.51 hours on all rural feeders for the period April 2005 to Jan 2006. Similarly Varanasi, Lucknow, and Agra discoms also indicate average supply hours for the same period as 10.01, 10.42 and 13.09 hours respectively. The claims made by the licensees therefore, cannot be relied upon.

METERING AND BILLING

3.19 During the public hearings conducted by the Commission in various parts of the State, the consumers have pointed out several irregularities in the billing and metering, e.g. ill-functioning meters, not taking of regular MRI downloads, not providing meter reading slips/MRI reports, meter cards not being maintained regularly etc. The consumers have also submitted before the Commission that the Utilities are issuing provisional bills on the basis of MCG for months together, without taking the actual meter reading. The Utilities must realize that these malpractices are a disincentive to honest paying consumers, and they must take affirmative steps to ensure that correct meter readings (MRI based and otherwise) are taken on a regular basis and bills are delivered to the consumers in time.

4 CHAPTER - 4: COMPLIANCE WITH DIRECTIVES

- 4.1 The Commission had been issuing directives to attain the objectives of reforms and to monitor the performance of utilities within the legal framework and also to create an enabling environment for the licensee wherein it may render efficient services to the consumers. Some of these directives have been complied and some have gone a begging. The Commission realizes that many of the directives are ongoing in nature but it would be necessary at this stage to assess the extent to which UPPCL and the distribution companies have complied with the directives issued by the Commission.

DATA MANAGEMENT AND SUFFICIENCY

- 4.2 The licensees were directed to computerize their materials management and other related records. The Commission had also pointed out the need for standardization and rationalization of formats and contents of data in its earlier Tariff Order for FY 2004-05. The Commission directed UPPCL to develop simple, uniform formats focusing on key areas for which data needs to be captured (like connected load, revenue through metered and un-metered consumption, revenue through MCG, slab-wise consumption profile), to enable aggregation and comparison of data.
- 4.3 The licensees have replied that the directive is under process and tenders have been invited for the work. No time limit / progress details have been made available. The Commission feels that it is too non committal a reply from the licensee and they should detailed concrete steps taken in this regard along with progress achieved. The licensees are accordingly directed to submit a detailed report clearly indicating the extent of computerization done so far along with benefits of such computerization.

COMMERCIAL LOSSES

- 4.4 The licensees were directed to complete a feeder wise listing of consumers after removing permanent disconnection cases and to install meters at distribution transformers after regularization of connections. This directive was issued to enable the licensee to check commercial losses by way of theft, improper posting of consumer, non-installation of meters for long period, etc. The Licensees have however, replied that some meters have been installed and arrangements are being made to install meters at other locations. The above reply is indicative of utilities passiveness towards regulatory compliance and also reflects that the utilities is not at all oriented towards their own commercial interest. The Commission once again directs the utilities to comply with the above directive.
- 4.5 Continuing with its earlier directive the Commission had directed the licensees through its last tariff order for the FY 2004-05, to do the rostering in case of power shortage in such a manner so as to ensure that areas with low AT&C losses get power for more number of hours than areas with high AT&C losses. This direction was given

keeping in mind that the merit order dispatch principle should be applicable not just for purchase of energy but also while scheduling the rostering for different districts/ divisions / areas, as this would lead to maximization of revenue for the utility and also reward low loss areas with more supply. The Licensees have submitted that the supply to rural and urban areas is normally given as per directive of UP Government/UPPCL given from time to time. It has also been submitted that all out efforts are being made to reduce the AT & C losses and for which raids are being conducted regularly. For improving the billing efficiency the billing work is being awarded to outside agencies under APDRP scheme. The licensees have however submitted that it will be very difficult to curtail the supply of an area with high AT & C losses locally as the same may lead to lot of protest and agitation by the general public and which may in turn create law and order problem. Agra Discom has further indicated that Agra, Mathura, Firozabad district and part of Hatras district & Jalesar (Etah) of this zone falls in the Taj Trapezium Zone (TTZ). As per directive of Hon'ble Supreme Court, uninterrupted supply is to be given in TTZ area.

- 4.6 The Commission does not agree with the views of the licensees that the above directive cannot be implemented; it is Commission's firm belief that excluding cases where special exemptions has been granted by the Court/Government, the above directive can be effectively implemented by the licensee. Commission therefore reiterates the above directive.

ARREARS

- 4.7 The Commission directed the licensee to collate feeder wise arrears information. This would have helped the licensee in identifying defaulting consumers and to initiate appropriate action against them. This exercise could have further considerably improved the cash flows of the Licensee. The need for such exercise is highlighted by the fact that the Licensee has time and again claimed provision for bad debts, but the actions taken by the Licensee to recover them or write them off have been found to be grossly inadequate by the Commission. In this regard licensees were further directed to furnish a report, giving details of action taken by each division to recover arrears from consumers having arrears above Rs. One lakh and provide reasons as to why supply in such cases had not been disconnected.
- 4.8 The Licensee had earlier responded with details of consumers having arrears above Rs. Twenty Five Lakhs stating that details for arrears above Rs. One Lakh will be sent shortly. However, no further information has been received by the Commission.
- 4.9 Discoms were also directed to submit arrear status against Government consumers and to submit district-wise meter exception report in case of Government Consumers. No information has been received in this regard. The licensees have only vaguely stated that government connections are metered and damaged meters are being

replaced. The Commission once again directs the licensees to recover all pending arrears from Government owned departments and organizations.

METERING AND BILLING

- 4.10 The UPPCL was directed to submit status of TVM installation on small industrial consumers above 25 BHP. licensees were also directed to download MRI for all consumers with load above 25 kW and having TVM at any cost. The Commission had directed that billing of these consumers should also be done as per downloaded MRI. The compliance of the same was to be submitted to the Commission. In this context Meerut Discom has submitted that they have complied with the above directive, however, other licensees have indicated that they have initiated action to comply with the above directive. The Discoms are once again directed to complete the exercise of installation of TVM meters on all consumers with loads above 25 kW within a period of three months from the issuance of this order.
- 4.11 UPPCL was directed to meter at least 10% of state tube wells, public lighting in two cities having population of above 10 lakhs and all PTW consumers getting supply as per urban schedule. Implementation of the directive would have helped the licensee in obtaining up-to-date and reliable estimates of consumption in unmetered categories and determining the consumption profile of PTW consumers on urban feeders. This is highlighted by the fact that one of the Discoms (PVVNL) had requested the Commission for upward revision of consumption norms for unmetered category, even in face of reducing supply hours.
- 4.12 In absence of proper metering and accurate norms, the Commission has directed the Discoms to meter distribution transformers catering to unmetered category consumers including those feeding mixed loads with predominant unmetered consumption. The above directive was given to enable the licensees to prepare accurate energy accounts and to have better estimates about the distribution losses.
- 4.13 The licensees have replied that the directive for metering public lamps and state tube-wells is under implementation and installation of meters on distribution transformers is also being taken up.
- 4.14 The licensees were directed to submit distribution transformer failure rate on quarterly basis. The Discoms have provided the number and percentage failures of distribution transformers for the first three quarters of FY 2005-06 in their ARR petition.
- 4.15 The licensees were directed to submit expenditure related to replacement of burnt and damaged meters for FY 04. The estimated expenditure related to replacement of burnt and damaged meters for FY 2005-06 has been provided by the licensees. No details of the expenditure have been provided.

- 4.16 The licensees were directed to conduct a study to exactly provide the KVA requirement per ton for different rating / type of arc and induction furnaces and submit a report on the same.
- 4.17 The licensees were directed to furnish monthly average supply of April 2004 to September 2004 to all 33/11 kV sub stations. In response to the directive, the licensees have submitted the average supply for the months of April 2005-January 2006 to 33/11 kV transformers.
- 4.18 The licensees were directed to meter the consumers in LMV 10 category to reliably capture the consumption details, and provide the same with next filing. The licensees have responded that the meters are being installed and the consumption shall be known once the work is completed.

SUPPLY HOURS

- 4.19 UPPCL was directed to ensure supply for as many hours as had been assumed for the purposes of demand estimation and revenue assessment. UPPCL replied that reduction in supply hours of urban, tehsils and district headquarters classes were because of increase in rural supply hours. However the Commission observed that supply to non-rural areas was also unacceptably low without any significant increase in rural supply hours. The Commission thus directs UPPCL to appraise it of measures planned to be undertaken by the licensee and the state government to tackle the worsening demand-supply gap.

CAPITALIZATION OF EXPENSES

- 4.20 The licensee /UPPCL was directed to review its existing mechanism of capitalizing an assumed proportion of expenses and to adopt a capitalization practice based on actuals. The licensees have however not apprised the Commission of any formal capitalization practice being followed by them based on actual audited account's data. The Commission once again directs the licensees to appoint a consultant for framing a policy for capitalization of its expenses and to submit a report to the Commission within three months of issuance of this order.

FIXED ASSET REGISTER

- 4.21 UPPCL was directed to submit an action plan for compilation of fixed asset registers, to which it responded that the process is likely to be completed by December 2004. The licensees were required to submit interim report/details of the fixed asset register as have been prepared along with a concrete plan for completion of work.

FUNCTIONING OF CAPACITOR BANKS

4.22 In relation to introduction of measures like kVAh based billing, the Commission had directed UPPCL to submit a report on status of defective capacitor banks installed at 33/11 kV substations, reasons of defect and necessary actions taken. The report submitted by UPPCL regarding the status of defective capacitor banks was found to be unsatisfactory as it did not indicate necessary actions taken in this regard and also because of lack of improvement in the status compared to FY 04 levels. The Commission once again directs the licensees to submit a status report in the matter within three months. In absence of any such report the Commission may consider imposing a penalty on the basis of power factor being maintained at various substations.

TECHNICAL PERFORMANCE AND SERVICE LEVELS

4.23 In view of lack of information on quality of service being achieved by the licensee, the Commission had directed UPPCL to institute system and processes for measurement and reporting of technical performance details and defining the levels of service, separately for urban and rural areas on a multi year basis. The response of the licensee in this regard has been found to be evasive. UPPCL is thus again directed to submit a road map for improving the level of service reflecting an improving pattern, as part of next year tariff proposal. Non-submission of such performance standards tantamount to flagrant violation of section 57 of Electricity Act, 2003 and if the situation continues to exist then the Commission would be constrained to lay down its own roadmap of performance standards and accordingly, compensations would be granted to the consumers under this section for any violation of the specified performance standards.

5 CHAPTER - 5 ARR : SUMMARY - DISCOMS AND TRANSCO

- 5.1 This section of the order summarizes the filing made by the licensees in their petitions for Aggregate Revenue Requirement (ARR) for FY 2006-07. The corresponding analysis carried out by the Commission and the approved figures for each of the licensee for each expense head is presented in the following chapter. The information presented in this section is as it appears in the licensees filing, without removing any inconsistency, contradictions with respect to figures when compared with other parts of the filing and additional submissions made by the licensees.
- 5.2 This section summarizes the filing made by both Transco and Discoms.

TARIFF FILING OF DISCOMS

- 5.3 The petitions of the Discoms are structured as follows:
- Review of Tariff Order FY 2004-05 and performance to date
 - Forecast of retail sales and revenue assessment
 - Annual Revenue Requirement for FY 2006-07

The further details of each section is presented below

- 5.4 Review of Tariff Order FY 2004-05 and performance to date
- 5.5 This section of the licensees' filing consists of the following:
- Review of the Tariff Application FY 2005-06
 - Comparison of approved items & FY 2004-05 actual figures to date
 - True-up Analysis of past performance
 - Efficiency improvement plans
 - Summary of the actions undertaken by UPPCL and the Discoms to comply with Commission's directives
- (a) **Review of the Tariff Application FY 2005-06**
- 5.6 The licensees submitted their ARR for FY 2005-06 on 29 April 2005. In response to the Commission's directive dated 25 June 2005 to file the ARR with proposals to fill up the revenue gap, the Discoms submitted their revised ARR with Tariff application on 29 July 2005. The Commission in its July 2005 order had allowed 9 paise/unit rise in different category of consumers on UPPCL's proposal for fuel cost adjustment. UPPCL had sought necessary assent of GoUP regarding the same, stating that the fuel cost adjustment also has subsidy implications. The licensees have requested for the fuel cost implications to be taken care of in Tariff Order of FY 2006-07 as no response has been received from the State Government regarding the matter.

(b) **Comparison of approved items & FY 2004-05 actual figures to date**

5.7 This section of the ARR reviews the actual performance of the licensees vis-à-vis the Tariff Order for FY 2004-05.

5.8 **Sales Forecast** - The actual sales figures for FY 2004-05 show some variance from those approved by the Commission in the Tariff Order for FY 2004-05. On a consolidated basis considering all Discoms, the actual sales for FY 2004-05 are higher than the Commission approved figures by 9% as can be seen from the following table. The licensees have pointed out that the categories in which the highest variation occurs are the ones that constitute relatively small proportion of total sales.

Table 5-1: Approved and actual energy sale (FY 2004-05) - Consolidated Discom

Consumer Categories	FY 2004-05 Tariff Order	FY 2004-05 Actual	Difference	Difference %
LMV 1:Domestic	10343	10,159	184	2%
LMV 2:Commercial	2,051	2,035	16	1%
LMV 3:Public Lamps	399	322	77	19%
LMV 4:Public Institutions	1097	1,104	(7)	-1%
LMV 5:Private Tubewells	3528	3,305	223	6%
LMV 6:Small & Medium Power	1295	1,253	42	3%
LMV 7: Public Water Works	566	574	(8)	-1%
LMV 8:State Tubewells	1390	1,427	(37)	-3%
LMV 9: Temporary Supply	81	70	11	14%
LMV10:Employees & Pensioners	108	115	(7)	-6%
HV 2:Large & Heavy Power	3826	3,985	(159)	-4%
HV 4:Lift Irrigation Works	299	357	(58)	-19%
Extra State	2610	2639	(29)	-1%
Total	25570	27,970	(2400)	-9%

5.9 The average supply hours from feeders supplying to various areas was 11.25 hours in FY 2005-06, way below the targeted 14 hours of supply. The licensee has also stated that the load forecasting methodology used by it, wherein the energy consumption was derived as a function of supply hours, has been refined for FY 2006-07 based on FY 2005-06 data and the rostering schedule applicable to various rural feeders.

5.10 **Expense Items** - Considering all Discoms on a consolidated basis, the total expenses (ARR) as per the actuals for FY 2004-05 (unaudited) have overshoot those allowed by the Commission by 17%. The licensees have stated that the difference is because of the

Power Purchase Cost, which was higher because of the difference in target losses used by the Commission compared to the estimated losses used by UPPCL, and partly also due to higher than anticipated power purchase prices from central sector plants and rise in fuel and coal prices. It has also been reasoned by the licensees that as such the procurement was more as compared to the approved units for power procurement quantum by the Commission.

Table 5-2: ARR Comparison for FY 2004-05 – Consolidated Discoms

ARR Comparisons for FY 2004-05 – Consolidated Discoms				
	Tariff Order	Actual (Unaudited)	Difference	Difference (%)
Power Purchase Cost	6501	7804	(1303.00)	20%
Employee Costs	795	748	47.00	-6%
Admin & General Expenses	65	72	(7.00)	11%
Repair & Maintenance Expense	200	206	(6.00)	3%
Provision for Bad Debts	0	53	(53.00)	0%
Depreciation Expense	627	550	77.00	12%
Interest and Finance Charges	211	215	(4.00)	2%
Other Income	-237	-107	(130.00)	-55%
Capitalised Expenses	-110	-134	24.00	22%
Total	8052	9407	(1355.00)	17%

(c) True-up analysis of past performance

5.11 In this section the licensees have presented a true-up computation of their performances in the financial years FY 2003-04 and FY 2004-05. It is submitted that this exercise was according to the direction of the Commission in the last tariff order.

True-up of FY 2003-04

5.12 The licensees have submitted that there was a gap of Rs. 121 crore left unfilled by the Commission in the tariff order for FY 2003-04. Further they adjusted for true up of a special appropriation of Rs. 36 crore, which they submitted was granted by the Commission to UPPCL for additional costs incurred for power procured from the Tanda Generating Plant. An operating loss of Rs. 972 crore for the year FY 2003-04 has been shown, which after adjustment of special appropriation and the unfilled gap in tariff order called for trueing up of Rs. 1064 crores. The true up amount of Rs. 51 crore and Rs. 31 crore respectively have been projected from UPRVUNL and UPJVNL. They submitted that plant-wise true-up of analysis is possible only for UPRVUNL and UPJVNL based on Commission ordered benchmarks. However they said that small variations as regards to purchase from any particular plant could not be explained.

- 5.13 The true-up computation was further adjusted for losses as per the benchmarks specified by the Commission. It was submitted that this was a difficult adjustment to make, as the decrease in losses will be met partially by a decrease in purchased power and partially by an increase in sales. The relative proportions of these two components cannot be easily estimated. For the purpose of this exercise, the two extreme scenarios have been evaluated:
- 5.14 The decrease in losses is met 100% by an increase in sales; that is, the amount of purchased power will remain the same, but sales will increase.
- 5.15 The decrease in losses is met 100% by a decrease in the amount of purchased power; that is, the level of sales will remain the same, but purchased power will decrease.
- 5.16 To evaluate the first scenario it has been assumed that the increase in sales will be mostly in the consumers paying low tariff. With a consideration of average revenue of Rs. 2 per kWh the required true-up adjustment has been projected at Rs. 370 crore. On the other extreme under the second scenario it was assumed that all the excess purchase would have occurred from costly power purchase. Considering that average power purchase cost was Rs. 1.70 per kWh, for the purposes of true-up an average rate of Rs. 2.00 per kWh has been assumed for the excess power purchase. This led to a true-up adjustment of Rs. 532 crores. This adjustment finally gave a true-up amount of Rs. 451 crore under the first scenario and Rs. 613 crore under the second scenario. Based on such analysis the petitioners have sought for a true up of Rs. 600 crores for the FY 2003-04, which they have proposed to recover through tariff uniformly over a span of ten years.

True-up of FY 2004-05

- 5.17 A similar approach has been adopted for the computation of true-up adjustment for the FY 2004-05. An operating loss of Rs. 1657 crore has been shown. True up adjustments of power purchase from UPRVUNL and UPJVNL has been sought for Rs.127 crore and Rs. 4 crore respectively. Further under the scenarios discussed above they have computed a true up adjustment of Rs. 616 crore and Rs. 513 crore respectively. Under the first scenario a gross true up of Rs. 853 crore and under the second scenario a gross true up of Rs. 936 crores have been shown. Based on the analysis a final true-up amount of Rs. 900 crore has been sought. A deferred revenue account has been proposed to recover the amount over a period of ten years.

(d) Efficiency Improvement Plans

- 5.18 It has been stated that the Discoms have made concerted efforts to bring the T & D losses to the desired levels and to increase revenue realization.

5.19 **Distribution Losses:** The licensees have stated that the actual overall (consolidated Discoms) T&D loss during FY 2005-06 was 34.2% as against the Commission's targeted 23.9% loss. The reasons stated for these variations are:

- Increase in the rural supply hours as directed by the State Government
- State of transition in the UP power sector since the dis-aggregation of UPPCL in 2003.

5.20 The licensees have suggested the following trajectory of loss reduction to achieve the goal of 26.6% aggregate T&D loss by 2010.

Table 5-3: Proposed multi-year loss targets by Discom

MEERUT Discom	36.50%	34.00%	26.50%	24.50%	23.00%
AGRA Discom	35.70%	34.00%	27.50%	25.10%	24.00%
LUCKNOW Discom	28.60%	26.20%	24.10%	22.90%	22.00%
VARANASI Discom	33.00%	31.10%	24.00%	22.70%	22.00%
UPPCL (T & D)	34.20%	32.00%	29.50%	27.80%	26.60%

5.21 The Discom losses are based on energy received by them from UPPCL including bulk supply, and the figures for UPPCL are based on net energy received from the generators.

5.22 **Collection Efficiency:** The licensees have set the following revised collection efficiency targets for themselves:

Table 5-4: Collection Efficiency Target

	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010
MEERUT Discom	95%	96%	96%	97%	98%
AGRA Discom	80%	85%	89%	94%	98%
LUCKNOW Discom	88%	90%	93%	95%	98%
VARANASI Discom	86%	89%	92%	95%	98%
Consolidated Discoms	87%	90%	93%	95%	98%

5.23 The licensees have pointed out that the collection efficiency performance target criterion affects only provision for bad and doubtful debts with respect to ARR, which the Commission has disallowed in recent orders.

5.24 The licensees have also enlisted the efficiency improvement activities being undertaken, like drives for detecting theft of energy/unauthorized use of electricity/checking of excess load, camps to collect bill amount and solve consumers' problems, regularization of illegal connections and ledgerisation of un-ledgerised

connections, system improvement through APDRP schemes, monitoring NA/NR/IDF/ADF meters and changing defective meters, installing meters on distribution transformers, hand held billing, disconnections and reconnection activities being undertaken with help of external agencies, installation of capacitors at all industrial loads above 5 HP and repairing 11KV capacitor banks, appointment of franchisees to collect revenue and attend minor maintenance works in rural areas, etc.

(e) Summary of the actions undertaken by Discoms to comply with Commission's directives

5.25 In this section, the licensees have elaborated the actions undertaken by them to comply with the directives issued by the Commission in its FY 2004-05 Tariff Order.

(f) Forecast of retail sales and revenue assessment

5.26 The licensees have used the same methodology for calculating sales projection figures as was used in the last submission. The methodology used is described as under:

- For each division, a forecast of number of customers in each of the tariff sub-categories is prepared based on the available population data, the proposed rural electrification program, the expected conversion of unauthorized connections and a number of category specific growth factors.
- Sub-category wise specific consumption level is then forecast based on expected growth relationships to income and price, the effect of demand side management and the impact of extended hours of service.
- The specific consumption level and the number of customers in each sub-category is used to arrive at the sales figure for that particular sub-category.
- Connected load is estimated for each of the tariff sub-category.
- The division level forecasts are then aggregated to arrive at zone-wise forecasts. Aggregated zone-wise forecasts yield forecasts for various Discoms which are further aggregated to arrive at consolidated Discoms forecast.
- Bulk sales are then added to the consolidated Discoms forecast.
- Technical and commercial losses are added to the sales estimates to determine energy required at the generating end.

5.27 To meet the requirement of uniform statewide tariffs, the sales forecast is computed on a consolidated basis (all Discoms). Forecast results for each Discom are separately prepared using Discom-specific base data. The main drivers/assumptions used for the forecast are:

- (a) **Gross Domestic Product (GDP):** The GDP structure for U.P. which is 40% for agriculture, 45% for commercial/services and 15% for industry has been taken into account based on historical data. It is assumed that the UP agriculture sector will grow at annual rate of 5.2% in FY 2006-07 which is slightly lower than UP's five-year plan target, but higher than the historical average, reflecting a recovery from the negative growth experienced in the sector during FY04. Corresponding growth rates for the commercial/ services sector is estimated to be 5.5% in FY 2006-07. However, keeping in view the vast difference in the industrial sales growth rate of Meerut Discom and remaining Discoms higher industrial GDP growth rate of 15% has been considered for Meerut Discom whereas the corresponding figure for other Discom has been taken as 9%.
- (b) **Population:** It is assumed that urban and rural population will grow following historical patterns. For each Discom, urban and rural population growth rates are estimated based on 1991 and 2001 Census data. These 10-year growth rates are applied to relevant consumer data in FY 2005-06 to project consumer growth for FY 2006-07.
- (c) **Rural and Urban Supply Hours:** It is assumed that the average daily supply hours in rural areas will be 14 hours in FY 2006-07. Variations in urban supply hours are also introduced in the forecast. The average daily supply hours for Tehsil towns are 14, for District towns 16, for Commissionaires 20 and for MahaNagar 22 hours.
- (d) **Rural Electrification:** The following Discom wise rural electrification program is considered in the forecast:

Table 5-5: Discom-wise Rural Electrification Program

S.No.	DISCOM	FY 2007
1	Meerut Discom	1460
2	Agra Discom	3486
3	Lucknow Discom	7635
4	Varanasi Discom	10773
	TOTAL	23354

5.28 The licensee has stated that FY 2005-06 consolidated CS3 reports and detailed divisional CS3 reports are reconciled and "normalized" as per the following consumption norms established in UPPCL order No.2649-CUR/L, dated 20-07-2001.

Table 5-6: Consumption Norms for Un-metered Categories

Sl. No.	Category of Un-metered Consumer	Consumption of Energy per month
1	Private Tube Well	68.38 kWh/BHP or 91.66 kWh/kW
2	Domestic Rural Consumers	72 kWh/kW

Sl. No.	Category of Un-metered Consumer		Consumption of Energy per month
3	Rural Commercial Consumers		72 kWh/kW
4	Rural State Tube Well		3562.35 kWh/Pump
5	Street Light	Rural Area	300 kWh/kW/Month
		Urban Area	360 kWh/kW/Month

5.29 The “normalization” is done in order to:

- Ensure that year end number of customers, connected load and energy sales in MU are consistent with the reported consolidated CS3 sales by major tariff category level;
- Adjust the number of customers and connected load to represent annual averages in order to estimate the expected annual tariff revenues;
- Adjust the consumption of un-metered consumer categories in accordance with the adopted norms.

5.30 Following table provides category-wise tabulation of the annual average consumers, connected load and year end retail sales on a consolidated basis for FY 2005-06 and FY 2006-07, as submitted by the licensee:

Table 5-7: Commercial Data - FY 2005-06 Actuals, FY 2006-07 Projections - Consolidated Discoms

Consolidated Discoms	NUMBER OF CONSUMERS		CONNECTED LOAD (kW)		UNIT SOLDS (LAKH)	
	FY 2005-06 Actual	FY 2006-07 Projection	FY 2005-06 Actual	FY 2006-07 Projection	FY 2005-06 Actual	FY 2006-07 Projection
Domestic (LMV-1)	7,064,064	7,552,546	10,870,257	12,299,673	108,428	131,219
Commercial (LMV-2)	833,184	894,710	1,728,107	1,856,038	21,250	23,353
Public Lamps (LMV-3)	10,004	12,585	86,191	107,753	3,369	4,384
Public & Private Institutions (LMV-4)	27,528	33,464	111,138	133,324	12,351	15,407
Private Tubewells (LMV-5)	668,574	689,590	2,984,540	3,079,994	34,372	35,816
Small & Medium Power (LMV-6)	126,084	126,061	1,134,577	1,182,147	13,955	15,538
Public Water Works (LMV-7)	5,864	6,049	181,913	190,744	6,482	7,265
State Tubewells (LMV-8)	28,860	28,885	453,112	460,900	14,387	16,151
Temporary Supply (LMV-9)	4,057	4,290	22,131	23,673	551	609
Department Employees	70,044	68,153	174,985	180,896	1,194	1,330

Consolidated Discoms	NUMBER OF CONSUMERS		CONNECTED LOAD (kW)		UNIT SOLDS (LAKH)	
	FY 2005-06 Actual	FY 2006-07 Projection	FY 2005-06 Actual	FY 2006-07 Projection	FY 2005-06 Actual	FY 2006-07 Projection
(LMV-10)						
Large & Heavy Power (HV-2)	5,067	5,068	1,443,762	1,610,498	46,271	51,921
Railway Traction (HV-3)	10	13	255,124	256,264	6,227	6,352
Lift Irrigation (HV-4)	102	103	132,619	133,517	4,460	4,501
Extra State	7	7	14,100	14,100	350	353
Bulk Supply	2	2	1,180,814	1,221,532	27,456	29,901
GRAND TOTAL	8,843,451	9,421,526	20,773,370	22,751,053	301,103.50	344,101.13

5.31 Following tables provide category-wise tabulation of the annual average consumers, connected load and year end retail sales on a consolidated basis for FY 2005-06 and FY 2006-07 for each of the Discoms separately, based on their submissions:

Table 5-8: Commercial Data - FY 2005-06 Actuals, FY 2006-07 Projections - Lucknow

Discom

LUCKNOW DISOCM	NUMBER OF CONSUMERS		CONNECTED LOAD (kW)		UNIT SOLDS (LAKH)	
	FY 2005-06 Actual	FY 2006-07 Projection	FY 2005-06 Actual	FY 2006-07 Projection	FY 2005-06 Actual	FY 2006-07 Projection
Domestic (LMV-1)	1,834,566	1,976,594	2,482,971	2,841,216	27,598	33,452
Commercial (LMV-2)	209,597	225,954	416,795	449,246	4,553	4,999
Public Lamps (LMV-3)	3,509	4,354	36,359	39,388	1,280	1,371
Public & Private Institutions (LMV-4)	7,751	9,504	35,134	41,763	3,372	4,134
Private Tubewells (LMV-5)	110,282	115,639	447,953	466,742	5,020	5,367
Small & Medium Power (LMV-6)	25,855	25,849	224,296	231,264	2,226	2,465
Public Water Works (LMV-7)	1,332	1,375	41,804	43,866	1,451	1,610
State Tubewells (LMV-8)	8,742	8,750	117,340	118,334	3,968	4,462

LUCKNOW DISOCM	NUMBER OF CONSUMERS		CONNECTED LOAD (kW)		UNIT SOLDS (LAKH)	
	FY 2005-06 Actual	FY 2006-07 Projection	FY 2005-06 Actual	FY 2006-07 Projection	FY 2005-06 Actual	FY 2006-07 Projection
Temporary Supply (LMV-9)	1,837	1,922	5,313	5,646	186	203
Department Employees (LMV-10)	19,280	18,538	46,193	46,794	316	344
Large & Heavy Power (HV-2)	542	542	167,115	182,718	4,672	5,092
Railway Traction (HV-3)	1	1	14,046	14,186	262	267
Lift Irrigation (HV-4)	17	17	18,698	11,496	545	550
Extra State	1	1	5,000	5,250	53	54
Bulk Supply	0	0	0	0	0	0
GRAND TOTAL	2,223,312	2,389,040	4,059,017	4,497,907	55,504	64,370

Table 5-9: Commercial Data - FY 2005-06 Actuals, FY 2006-07 Projections - Meerut

Discom

MEERUT DISCOM	NUMBER OF CONSUMERS		CONNECTED LOAD (kW)		UNIT SOLDS (LAKH)	
	FY 2005-06 Actual	FY 2006-07 Projection	FY 2005-06 Actual	FY 2006-07 Projection	FY 2005-06 Actual	FY 2006-07 Projection
Domestic (LMV-1)	1,883,499	1,970,754	3,849,828	4,280,209	33,324	40,023
Commercial (LMV-2)	251,411	267,180	576,247	611,844	6,046	6,570
Public Lamps (LMV-3)	695	856	23,312	23,893	960	998
Public & Private Institutions (LMV-4)	6,511	7,574	25,732	30,296	2,500	3,032
Private Tubewells (LMV-5)	279,223	283,852	1,216,650	1,249,543	13,975	14,280
Small & Medium Power (LMV-6)	34,942	34,932	380,643	405,007	5,098	5,699
Public Water Works (LMV-7)	1,349	1,387	48,385	51,044	1,477	1,620
State Tubewells (LMV-8)	4,766	4,774	59,275	59,521	2,297	2,594
Temporary Supply (LMV-9)	1,504	1,588	12,776	13,613	161	181

MEERUT DISCOM	NUMBER OF CONSUMERS		CONNECTED LOAD (kW)		UNIT SOLDS (LAKH)	
	FY 2005-06 Actual	FY 2006-07 Projection	FY 2005-06 Actual	FY 2006-07 Projection	FY 2005-06 Actual	FY 2006-07 Projection
Departmental Employees (LMV-10)	19,533	19,148	59,239	61,990	331	377
Large & Heavy Power (HV-2)	2,869	2,869	786,074	891,868	24,755	28,469
Railway Traction (HV-3)	0	0	0	0	0	0
Lift Irrigation (HV-4)	2	2	279	2,709	2	2
Extra State	2	0	279	0	2	0
Bulk Supply	1	1	45,000	46,552	3,292	3,768
GRAND TOTAL	2,486,307	2,594,917	7,083,719	7,728,088	94,221	107,612

Table 5-10: Commercial Data - FY 2005-06 Actuals, FY 2006-07 Projections - Agra Discom

AGRA DISCOM	NUMBER OF CONSUMERS		CONNECTED LOAD (kW)		UNIT SOLDS (LAKH)	
	FY 2005-06 Actual	FY 2006-07 Projection	FY 2005-06 Actual	FY 2006-07 Projection	FY 2005-06 Actual	FY 2006-07 Projection
Domestic (LMV-1)	1,325,572	1,407,184	1,920,970	2,170,162	20,095	23,818
Commercial (LMV-2)	180,140	192,659	363,690	390,432	5,563	6,070
Public Lamps (LMV-3)	5,508	6,000	15,288	21,651	641	981
Public & Private Institutions (LMV-4)	5,620	6,708	22,549	27,008	2,677	3,351
Private Tubewells (LMV-5)	126,290	129,799	708,820	731,508	8,230	8,628
Small & Medium Power (LMV-6)	36,266	36,262	308,246	318,528	3,935	4,344
Public Water Works (LMV-7)	1,677	1,731	42,894	44,760	1,695	1,915
State Tubewells (LMV-8)	5,432	5,441	114,330	117,110	2,793	3,141

AGRA DISCOM	NUMBER OF CONSUMERS		CONNECTED LOAD (kW)		UNIT SOLDS (LAKH)	
	FY 2005-06 Actual	FY 2006-07 Projection	FY 2005-06 Actual	FY 2006-07 Projection	FY 2005-06 Actual	FY 2006-07 Projection
Temporary Supply (LMV-9)	680	742	3,311	3,652	182	203
Department Employees (LMV-10)	15,345	14,845	43,022	44,148	263	287
Large & Heavy Power (HV-2)	1,158	1,158	277,951	301,996	9,249	10,081
Railway Traction (HV-3)	7	9	94,354	94,580	2,178	2,221
Lift Irrigation (HV-4)	22	22	21,218	23,751	737	743
Extra State	4	4	6,100	6,600	249	251
Bulk Supply	1	1	1,135,814	1,174,980	24,164	26,134
GRAND TOTAL	1,703,722	1,802,565	5,078,557	5,470,867	82,651	92,168

Table 5-11: Commercial Data - FY 2005-06 Actuals, FY 2006-07 Projections - Varanasi Discom

VARANASI DISCOM	NUMBER OF CONSUMERS		CONNECTED LOAD (kW)		UNIT SOLDS (LAKH)	
	FY 2005-06 Actual	FY 2006-07 Projection	FY 2005-06 Actual	FY 2006-07 Projection	FY 2005-06 Actual	FY 2006-07 Projection
Domestic (LMV-1)	2,020,413	2,198,014	2,616,225	3,008,086	27,409	33,926
Commercial (LMV-2)	192,037	208,917	371,356	404,517	5,088	5,714
Public Lamps (LMV-3)	293	1,375	11,233	22,821	488	1,035
Public & Private Institutions (LMV-4)	7,647	9,678	27,725	34,258	3,803	4,890
Private Tubewells (LMV-5)	152,781	160,300	611,118	632,202	7,146	7,591
Small & Medium Power (LMV-6)	29,021	29,018	221,392	227,349	2,695	3,031
Public Water Works (LMV-7)	1,508	1,556	48,829	51,074	1,859	2,120
State Tubewells (LMV-8)	9,920	9,920	162,166	165,934	5,330	5,954
Temporary Supply (LMV-9)	37	38	732	761	21	23

VARANASI DISCOM	NUMBER OF CONSUMERS		CONNECTED LOAD (kW)		UNIT SOLDS (LAKH)	
	FY 2005-06 Actual	FY 2006-07 Projection	FY 2005-06 Actual	FY 2006-07 Projection	FY 2005-06 Actual	FY 2006-07 Projection
Department Employees (LMV-10)	15,888	15,622	26,532	27,964	283	323
Large & Heavy Power (HV-2)	499	499	212,622	233,916	7,595	8,279
Railway Traction (HV-3)	2	3	146,724	147,498	3,787	3,863
Lift Irrigation (HV-4)	62	62	92,423	95,561	3,176	3,205
Extra State	2	2	3,000	2,250	48	48
Bulk Supply	0	0	0	0	0	0
GRAND TOTAL	2,430,110	2,635,004	4,552,077	5,054,191	68,728	80,001

5.32 The licensees have stated that the Discom wise T&D loss targets discussed earlier are applied to the corresponding disaggregated sales forecast for the Discom to arrive at the estimated kWh to be delivered by UPPCL.

5.33 Estimated sales of Discoms as projected by the petition are detailed below:

Table 5-12: Estimated Sales to Discoms

Licencsee	FY 2005-06	FY 2006-07
Sales (MU)		
UPPCL(Consolidated Discom)	30110	34410
MEERUT (Incl. Bulk)	9,422	10,761
AGRA (Incl. Bulk)	8,265	9,217
LUCKNOW	5,550	6,432
VARANASI	6,873	8,000
T&D Losses (%of net generation)		
UPPCL(Consolidated Discom)	34.2%	32.0%
MEERUT (Incl. Bulk)	36.5%	34.0%
AGRA (Incl. Bulk)	35.7%	34.0%
LUCKNOW	28.6%	26.2%
VARANASI	33.0%	31.1%
Purchases Required (MU)-Net Generation		
UPPCL(Consolidated Discom)	45732	50603
MEERUT (Incl. Bulk)	14,839	16,314

Licencsee	FY 2005-06	FY 2006-07
AGRA (Incl. Bulk)	12,864	13,957
LUCKNOW	7,773	8,716
VARANASI	10,256	11,616
Energy Received By Discom-(MU)		
UPPCL(Consolidated Discom)	43446	48073
MEERUT (Incl. Bulk)	14,097	15,498
AGRA (Incl. Bulk)	12,220	13,260
LUCKNOW	7,385	8,280
VARANASI	9,744	11,035

5.34 The assessment revenues for FY 2005-06 and projected revenue for FY 2006- 07 based on current tariffs is shown in the following tables:

Table 5-13: Assessment revenue, sales and through rate (FY 2005-06) - Consolidated Discoms

Consumer Category	Assessment Revenue	Electricity Sales	Through Rate
	Rs. Cr	MU	Rs./kWh
LMV-1: Domestic Light, Fan & Power	2074	10843	1.91
(a) Consumer getting supply as per "Rural Schedule"	432	3,903	1.11
(b) Supply at Single Point for Bulk Loads	12	39	3.13
(c) Other Metered Domestic Consumers	1631	6,901	2.36
LMV-2: Non Domestic Light, Fan & Power	733	2125	3.45
(a)Non-Domestic as per "Rural Schedule"	192	964	1.99
(b)Non-Domestic (Urban Metered)	540	1161	4.65
LMV-3: Public Lamps	84	337	2.50
LMV-4: Insitutions	403	1235	3.26
LMV-5: Private Tube Wells	390	3437	1.14
LMV 6: Small and Medium Power	596	1395	4.27
LMV-7: Public Water Works	216	648	3.33
LMV-8: State Tubewells and Pumped Canals	351	1439	2.44
LMV-9: Temporary Supply	24	55	4.30
LMV-10: Departmental Employees and Pensioners	15	119	1.23
HV-2: Large and Heavy Power	2049	4627	4.43
HV-3: Railway Traction	242	623	3.89
HV-4: Lift Irrigation Works	148	446	3.32

Consumer Category	Assessment Revenue	Electricity Sales	Through Rate
Sub Total	7326	27330	2.68
Bulk & Extra State	562	2781	2.02
Consolidated Discom	7887	30110	2.62

Table 5-14: Assessment revenue, sales and through rate (FY 2006-07) – Consolidated Discoms

Consumer Category	Assessment Revenue	Electricity Sales	Through Rate
	Rs. Cr	MU	Rs./kWh
LMV-1: Domestic Light, Fan & Power	2606	13122	1.99
(a) Consumer getting supply as per "Rural Schedule"	548	4,927	1.11
(b) Supply at Single Point for Bulk Loads	14	44	3.12
(c) Other Metered Domestic Consumers	2044	8,150	2.51
LMV-2: Non Domestic Light, Fan & Power	795	2335	3.40
(a) Non-Domestic (Rural)	215	1085	1.98
(b) Non-Domestic (Urban Metered)	580	1250	4.64
LMV-3: Public Lamps	116	438	2.65
LMV-4: Institutions	541	1541	3.51
LMV-5: Private Tube Wells	401	3582	1.12
LMV 6: Small and Medium Power	665	1554	4.28
LMV-7: Public Water Works	309	727	4.25
LMV-8: State Tubewells and Pumped Canals	388	1615	2.40
LMV-9: Temporary Supply	26	61	4.21
LMV-10: Departmental Employees and Pensioners	15	133	1.16
HV-2: Large and Heavy Power	2303	5192	4.44
HV-3: Railway Traction	250	635	3.93
HV-4: Lift Irrigation Works	157	450	3.49
Sub Total	8571	31,385	2.73
Bulk & Extra State	613	3,025	2.03
Consolidated Discom	9184	34410	2.67

5.35 Similarly, information for projected revenue, sales and through rate for FY 2005-06 and FY 2006-07 has been developed for each of the Discoms using the forecast disaggregate consumer data.

ARR FOR FY 2006-07 - DISCOMs

- 5.36 To meet with the requirement of uniform state-wide tariff structure, the ARR for FY 2005-06 and FY 2006-07 is calculated both on a consolidated basis as well as individually for each Discom.
- 5.37 The ARR comprises of the following components:
- Power purchase costs
 - Employee costs
 - Administration and general expenses
 - Gross fixed assets (GFA) balances and capital formation assumptions
 - Repairs and maintenance expenses
 - Provision for bad and doubtful debts
 - Interest expense
 - Depreciation expense
 - Other income
 - Special appropriations
 - Return on capital base and loan balances
- 5.38 In the following section, the details of above cost elements have been summarized along with the rationale of the proposal.

Power Purchase Costs

- 5.39 The licensees have stated that the current power procurement plan is based on an exercise of merit order dispatch and probabilistic analysis conducted on a monthly basis. Short-term drawl decisions regarding UI charges have not been considered in the analysis.

Projected power purchase prices of UPRVUNL stations:

- 5.40 To project the FY 2006-07 fixed cost for UPRVUNL stations, O&M expense for these stations has been increased by 4% over the FY 2004-05 Tariff Order approved values. Incentive component for all stations has been assumed to be zero in FY 2006-07. Other components of fixed cost like depreciation expense, interest expense and return on equity have been assumed at the same level as those approved in FY 2004-05 Tariff Order.
- 5.41 For determining the variable cost for FY 2006-07, the variable cost of UPRVUNL stations for the month of March 2006 has been escalated by 4% to allow for the fuel price adjustment. Station heat rates, calorific values of coal, specific oil consumption

and station auxiliary consumption have been set at the same values as in the FY 2004-05 Tariff Order.

Projected power purchase prices of UPJVNL stations:

5.42 The total fixed cost including O & M, depreciation, interest on loan and working capital of UPJVNL plants are based on the information provided by UPJVNL vide letter no: 1604 dated: 21 December 2006. The ROE has been taken as 14%. No variable cost has been considered for UPJVNL plants. Approximately 11 MU energy from EYC (Belka & Babail) is expected to be added in FY 2006-07.

Projected power purchase prices from other sources:

5.43 For all central sector plants, fixed and variable costs have been taken from the energy bills for the month of March 2006. The variable cost of NTPC & UPRVUNL plants has been escalated by 4% to account for the fuel price increase. The cost of Power Procurement from Other Sources/ Emergency is taken as Rs.5.50/kWh. The projected FY 2006-07 central sector generation cost includes PGCIL transmission charges assuming a “postage stamp” delivery rate of 11 paisa per kWh, taken as average of past two years.

Table 5-15: Power purchase summary for FY 2005-06 and FY 2006-07:

Name of Power Station / Organisation	FY 2005-06	FY 2006-07
	Actual	Proposed
Energy Sales (MU)	30110	34410
T&D Loss %	34.2%	32.0%
Power Procurement		
UPJVNL	1,249	1,540
UPRVUNL	16,999	18,540
NPCIL(NAPP & RAPP)	1,139	1,305
NTPC	20,047	20,660
NHPC	1,759	2,095
EREB	312	311
Naptha Jhakri	673	1,097
Cogeneration and Biomass	417	500
VishnuPrayag		1,161
Tehri St.-I		600
Tala Power		675

Name of Power Station / Organisation	FY 2005-06	FY 2006-07
	Actual	Proposed
Others/PTC	1,277	2,120
UI	1,860	
Sale to DTL		
Total Power Purchase Units (MU)	45732	50603
UPJVNL	77	66
UPRVUNL	3045	3,698
NPCIL(NAPP & RAPP)	265	290
NTPC	4264	4,355
NHPC	334	408
EREB	51	56
Naptha Jhakri	160	258
Cogeneration and Biomass	114	153
VishnuPrayag		236
Tehri St.-I		210
Tala Power		236
Others/PTC	396.38	1,166
UI	764.22	
Sale to DTL		
PGCIL	261.00	334
Total Power Purchase cost (Rs cr)	9731	11466
UPJVNL	0.61	0.43
UPRVUNL	1.79	1.99
NPCIL(NAPP & RAPP)	2.33	2.22
NTPC	2.13	2.11
NHPC	1.90	1.95
EREB	1.62	1.80
Naptha Jhakri	2.38	2.35
Cogeneration and Biomass	2.74	3.06
VishnuPrayag		2.03
Tehri St.-I		3.50
Tala Power		3.50
Others/PTC	3.10	5.50
UI	4.11	
Power Purchase Cost per Unit (Rs)	2.13	2.27

- 5.44 The substantial increase in power purchase costs for FY 2006-07, projected at Rs. 11466 crore, has been attributed to the T&D loss assumptions used, load growth and high price escalation.
- 5.45 With the consolidated approach adopted for the current year filing, UPPCL has continued to adopt the practice of Single Buyer Single Seller (SBSS) model, wherein the purchased power cost derived from the same bulk supply tariff for Discoms should mirror the total power purchase cost resulting from the allocation of PPA's. The Discom wise power purchase cost derived with the above methodology are provided below. The proposed transmission charges by UPPCL are also included in the following table.

Table 5-16: Power Purchase Costs – Discom wise

Details	Agra		Lucknow		Meerut		Varanasi		UPPCL	
	FY 2005-06	FY 2006-07	FY 2005-06	FY 2006-07	FY 2005-06	FY 2006-07	FY 2005-06	FY 2006-07	FY 2005-06	FY 2006-07
Energy Procured: Net Generation (MU)	12,864	13,957	7,773	8,716	14,839	16,314	10,256	11,616	45,732	50,603
Cost of Generation (Rs.Cr)	2,737	3,163	1,654	1,975	3,157	3,696	2,182	2,632	9,731	11,466
Energy Delivered by UPPCL TransCo(MU)	12,220	13,260	7,385	8,280	14,097	15,498	9,744	11,035	43,446	48,073
Transmission Rate (Rs/Unit)	0.170	0.198	0.170	0.198	0.170	0.198	0.170	0.198	0.170	0.198
Cost of Transmission (Rs.Cr)	208	263	125	164	240	307	166	219	738	953
Total Power Acquisition Cost(Rs.Cr)	2,945	3,425	1,779	2,139	3,397	4,004	2,348	2,851	10,469	12,418

Employee Costs

- 5.46 The consolidated Discoms employee cost for FY 2006-07 has been projected at Rs. 671 crore which is lower than the Rs. 685 crore employee cost approved in the FY 2004-05 Tariff Order. The employee cost for FY 2006-07 has however increased over the actual FY 2005-06 employee cost of Rs. 623 crore. Forecasts for FY 2006-07 are derived considering the FY 2004-05 base data (provisional balance sheets).
- 5.47 The Basic Salaries, Bonus/ Ex-gratia and Other Allowances have been decreased at the rate of 5% per year as a result of continuing staff attrition and selective hiring practices.

- 5.48 Dearness Allowance (DA) is estimated to be 68.5% of basic pay in FY 2005-06, and with the merger of DA in FY 2006-07 it is assumed to be 23% assuming DA increase in FY 2006-07 and FY 2005-06 as 4.5% (3 % half yearly).
- 5.49 Arrears of DA merger which is applicable from FY04 is included in the interim relief in FY 2006-07. Amount included in FY 2006-07 is half of the total arrear & remaining will be included in FY 2007-08 as per order of the UPPCL.
- 5.50 Medical Expenses have been forecasted to increase by 6% per year from FY 2004-05.
- 5.51 Pension and Gratuity have been calculated at 16.7% and 2.38% (i.e., 19.08%) of Basic Salary and Dearness Allowance.
- 5.52 All other expenses have been forecast to grow at 3% per year.
- 5.53 Employee Expenses Capitalized has been calculated as 15% of total Employee Costs.

Table 5-17: Details of Employee Costs – Consolidated Discoms

Details (Rs crore)	FY 2004-05	FY 2004-05	FY 2005-06	FY 2006-07
	Actual (unaudited)	Tariff Order	Estimated	Projected
Basic Salaries	346.74	-	329.40	469.40
Overtime	0.00	-	0.00	0.00
Dearness Allowance	210.91	-	223.56	107.96
Other allowances	36.88	-	35.03	33.28
Bonus / Ex-gratia	0.64	-	0.60	0.57
Medical expenses re-imbursment	3.75	-	3.97	4.21
Leave travel assistance	0.01	-	0.01	0.02
Interim Relief/ Other	1.49	-	1.53	28.95
Earned leave encashment	31.17	-	32.11	33.07
Leave Salary contribution	0.16	-	0.16	0.17
Payment under workmen's compensation Act	0.31	-	0.32	0.32
Staff welfare expenses	1.00	-	1.03	1.06
Employers Contribution for Pension & Gratuity	115.54	-	105.50	110.16
Employee Costs (before charge to capital)	748.58	795.2	733.24	789.17
Less expenses capitalized	103.69	110.2	109.99	118.38
Net employee cost	644.89	685.0	623.25	670.79

Administration and General Expenses

5.54 The Consolidated Discoms A&G expenses for FY 2006-07 are projected to be Rs. 111 crore, an increase of approximately 2% over the actual A&G expense of Rs. 109 crore in FY 2005-06. However, the A&G expenses increased by approximately 68% over the FY 2004-05 approved expense of Rs. 65 crore (actual A&G expense in FY 2004-05 was Rs. 62 crore). The licensee has stated that this sharp rise was on account of introduction of FBT by the GoI in FY 2005-06. The capitalization of A&G costs has been assumed to be 15%.

Table 5-18: A&G expenses - Consolidated Discoms

Details (Rs crore)	FY 2004-05	FY 2004-05	FY 2005-06	FY 2006-07
	Actual (unaudited)	Tariff Order	Estimated	Projected
Rent, Rates & Taxes	1.14	-	41.46	42.29
Insurance	0.81	-	0.83	0.84
Telephone, Postage & Telegrams, Telex charges	4.07	-	4.15	4.24
Legal charges	2.86	-	2.92	2.98
Audit fees	0.11	-	0.11	0.12
Consultancy charges	0.04	-	0.04	0.05
Technical fees and professional charges	0.40	-	0.41	0.42
Conveyance and traveling	8.38	-	8.54	8.71
Regulatory Expenses	0.00	-	4.13	4.34
Electricity Charges	45.61	-	46.52	47.45
Other expenses	5.68	-	5.80	5.91
Billings and Collection Expenses	3.33	-	13.40	13.66
Total	72.44	64.53	128.31	131.01
Capitalized	10.94		19.25	19.65
Net	61.50		109.07	111.36

GFA balances and capital formation assumptions

5.55 To estimate the R&M expenses for FY 2006-07, the licensee has computed the opening balance of GFA for FY 2006-07 based on the assumptions detailed below:

Table 5-19: Consolidated Discom Investment Plan

Fund/ Source		FY 2005-06				FY 2006-07			
		Loan	Grant	Equity	Total	Loan	Grant	Equity	Total
GoUP	IBRD	0.00			0.00	0.00		0.00	0.00
	APDRP	0.00	89.95		89.95	0.00	200.00		200.00
	Rural Electrification	-	-	400.00	400.00	-		2342.00	2342.00
	PMGY	-	-	0.00	0.00	-			0.00
	Others	-	-	0.00	0.00	-	0.00	400.00	400.00
NCR/RDA	System Improvement	20.00	-	-	20.00	30.00	-	-	30.00
PFC	System Improvement	26.62	-	-	26.62	30.00	-	-	30.00
	APDRP	125.41	-	-	125.41	331.59	-	-	331.59
REC	APDRP	42.33	-	-	42.33	179.52	-	-	179.52
IDBI	System Improvement	0.00	-	-	0.00	30.00	-	-	30.00
Others	System Improvement	4.00	10.00	-	14.00	4.00	10.00	-	14.00
TOTALS		218.35	99.95	400.00	718.30	605.11	210.00	2742.00	3557.11

5.56 Assuming capitalization of 70% of the total investments in the first year and remaining 30% in the next year, and depreciation at the rate of 7.84% of opening GFA, the assets capitalized during FY 2005-06 is as follows:

Table 5-20: Assets Capitalization during FY 2005-06

Rs crore	Balanc e 31-Mar-05	Invest-ments	Cap interest	Cap expense s	To GFA	Depre-ciation	Balanc e 31-Mar-06
Gross Fixed Assets	1	2	3	4	5	6	7
Agra	1683	-	-	-	224	-	1906
Lucknow	1604	-	-	-	509	-	2113
Meerut	2377	-	-	-	511	-	2889
Varanasi	1999	-	-	-	261	-	2261
Total	7663	-	-	-	1506	-	9169
Accumulated Depreciation							
Agra	888	-	-	-	-	132	1020
Lucknow	814	-	-	-	-	126	940

Rs crore	Balance 31-Mar-05	Investments	Cap interest	Cap expense	To GFA	Depreciation	Balance 31-Mar-06
Meerut	1380	-	-	-	-	186	1566
Varanasi	966	-	-	-	-	157	1123
Total	4047	-	-	-	-	601	4648
Work in Progress							
Agra	82	171	5	26	-224	-	61
Lucknow	343	195	8	35	-509	-	71
Meerut	383	144	8	31	-511	-	55
Varanasi	86	209	5	37	-261	-	75
Total	894	718	27	129	-1506		262

Repair and Maintenance (R&M) expenses

5.57 R&M expenses have been forecast as 2.5% of the opening balance of GFA. The projected R&M expenses are summarized below:

Table 5-21: R&M expenses - Consolidated Discoms

Rs crore	FY 2004-05	FY 2004-05	FY 2005-06	FY 2006-07
	Un-audited accounts	Tariff Order	Estimated	Projected
Plant & Machinery	92.46	-	80.84	95.76
Building	3.85	-	3.24	3.87
Civil works	0.10	-	0.11	0.14
Other Expenses	0.00	-	0.00	0.00
Lines, Cable Network, etc	103.19	-	100.51	121.05
Vehicles	5.82	-	6.78	8.27
Furniture & Fixtures	0.03	-	0.03	0.04
Office equipment	0.07	-	0.07	0.09
Total	205.53	199.99	191.58	229.22

Provision for Bad and Doubtful Debts

5.58 The licensees have projected the Collection Efficiency in FY 2006-07 to be 90%, an improvement of 2% over the estimated 88% collection efficiency in FY 2005-06. Based on this collection efficiency, the incremental receivables for the year have been estimated. Bad and doubtful debts are assumed to be 10% of such incremental

receivables. The Discoms have submitted that they have made significant efforts to improve collection efficiency by identifying large debtors, developing reporting systems, applying updated norms to various consumer categories, etc. The Discoms (consolidated) have projected the following bad debts.

Table 5-22: Provision for bad and doubtful debts

All figures are in Rs. crore

Description	FY 2005-06	FY 2006-07
	Estimated	Projected
Sale of power during the year	7887	9184
Collection efficiency	87%	90%
Cash receipts	6862	8266
Incremental receivables	1025	918
Provision for bad debts	103	92

Depreciation Expense

5.59 Opening GFA balance for FY 2006-07 as calculated under GFA balances and capital formation assumptions has been used to calculate the depreciation expense for FY 2006-07. Depreciation expense has been computed at the rate of 7.84% of the opening balance of GFA. Accordingly, an expense of Rs. 719 crore has been estimated in FY 2006-07 for consolidated Discoms.

Interest and Financing Cost

5.60 The interest and finance cost for FY 2005-06 & FY 2006-07 are based on current schedule of long term debt repayment and new debt requirements. The Discoms debt is linked to the investment plan as discussed in GFA balances and capital formation assumptions. Based on the loan balances in FY 2005-06 and FY 2006-07, the interest and finance cost (post capitalization) is estimated at Rs. 232 crore in FY 2005-06 and Rs. 303 crore in FY 2006-07.

Table 5-23: Projected interest and finance cost

Rs. Crore	FY 2004-05 (Unaudited)	FY 2004-05 (Tariff Order)	FY 2005-06 (Estimated)	FY 2006-07 (Projected)
Agra Discom	43.51	41.7	52	72
Lucknow Discom	60.41	110.7	69	88
Meerut Discom	57.23	47.5	71	94
Varanasi Discom	52.17	74.8	66	84
Total	213.32	274.7	258	338

Other Income

5.61 As per the Financial Restructuring Plan (FRP) of 2003, the GOUP has agreed to provide a subsidy of Rs 1,012 crore in FY2006-07 to at least partially cover revenue shortfalls arising from below-cost tariffs for the Rural Domestic and PTW categories. This subsidy is allocated to Discoms on the basis of number of PTW and Rural Domestic consumers. For FY 2006-07, any additional subsidy amount is yet undefined.

Table 5-24: Summary of other income – Consolidated Discom

Rs. Crore	FY 2004-05	FY 2004-05	FY 2005-06	FY 2006-07
	Un-audited accounts	Tariff Order	Estimated	Projected
Other Income from Retail Sources	42	n.a.	108	117
Non Tariff Income	9	n.a.	9	9
Sub Total	51	237	118	126
GOUP Subsidy – Rural Domestic and PTW	-	1504	1252	1012
GOUP Subsidy – Repayment of Loan to REC	-	54	-	-
GOUP Subsidy – Employees and Pensioners	-	18	-	-
Subtotal	-	1576	1252	1012
Total		1813	1370	1138

Special Appropriations

5.62 The licensees have considered true-up under this head. The licensees have stated that based on their analysis, the licensees should be permitted an amount of Rs. 600 crore and Rs. 900 crore for FY 2003-04 and FY 2004-05 respectively. The licensees have also stated that such a claim would be rather significant in terms of a corresponding tariff increase or GoUP subsidy. The licensees have thus decided to claim only FY 2003-04 share and hold FY 2004-05 claim in abeyance. Therefore, the licensees have submitted claims under special appropriations for Rs. 60 crore for consolidated Discoms, considering that Rs. 600 crore of true-up amount in FY 2003-04 will be recovered in next ten years in equal instalments.

Reasonable Return

5.63 The licensees have not claimed any reasonable return, return on capital base or return on long term loans. Although licensees have mentioned that the electricity supply

industry in UP is under funded through tariffs and they have not proposed any tariff revision.

- 5.64 The reasonable return, as calculated in accordance with the provisions outlined in the Electricity Supply Act, has been shown in the filing as follows:

Table 5-25: Capital Base Calculations - Consolidated Discoms

Consolidated Discoms (Rs Crore)	FY 2005-06	FY 2006-07
Gross Fixed Assets	7,663	9,169
Intangible Assets	0	0
Less: Consumer Contribution	-592	-714
Capital work-in-progress	894	262
Investment from contingency reserve	0	0
Cash & Stores	1,385	1,657
Sub-total (A)	9,349	10,374
Accumulated Depreciation	4,047	4,648
Loan advanced by the Board	0	0
Other loans	2,699	4,014
Debentures issued by the licensee	0	0
Consumers' security deposit	748	785
Sub-total (B)	7,494	9,447
Capital base = A - B	1,855	927
Return on Capital Base at 16.0%	297	148
Return on long-term debt at 0.5%	13	20
Total return permitted	310	168
Total return proposed	0	0

- 5.65 Projections for consumer contribution for FY 2005-06 & FY 2006-07 have been assumed to grow at the same rate as GFA and consumer security deposits at the rate of 5% over FY 2004- 05 figures. The permitted rate of return on Capital Base is assumed to be 16% in accordance with GoI notification published in Part-II, Section-3, Subsection (ii) of the Gazette of India Extraordinary, dated May 5, 1999. In addition, a return of 0.5% on the outstanding balance of long-term loans from government and institutional sources has been assumed.

ARR Summary

- 5.66 The ARR comprising of the various expenses as discussed above are summarized as under:

Table 5-26: ARR summary

ARR Summary - Consolidated Discom (Rs.Cr)	FY 2005-06	FY 2006-07
Power purchase (MU)	45,732	50,603
Power purchase cost	9,731	11,466
Transmission charges	738	953
Employee Costs	623	671
A&G Costs	109	111
Repair & Maintenance expense	192	229
Interest & Finance Charges	232	303
Provision for Bad & Doubtful Debts	97	92
Depreciation	601	719
Special appropriations	0	60
Return on capital base and loans balances	0	0
Total Expenses	12,322	14,603
Less Other Income	-118	-126
Less GOUP subsidy	-1,252	-1,012
Total ARR	10,952	13,465
Revenue from Existing Tariffs	7,887	9,184
Remaining Gap	3,065	4,281

5.67 As is evident from the above table, the total expenses have shown an increase of 18.51% in FY 2006-07 over the previous year. Similarly, the aggregate revenue requirement has swollen to Rs. 13,465 crore in FY 2006-07 as compared to Rs. 10,952 in FY 2005-06, representing an increase of 23%. The revenue gap has jumped 40% to Rs. 4,281 crore in FY 2006-07 vis-à-vis Rs. 3,065 crore in FY 2005-06.

5.68 The licensees have informed that a decision on quantum of subsidy to Rural and PTW categories is pending with the GoUP. The decision on quantum of subsidy to 'Handloom Weavers' and urban domestic consumers is also pending with the government.

5.69 The licensee wise break up of ARR is provided in the following tables, separately for FY 2005-06 and FY 2006-07:

Table 5-27: Discom-wise ARR FY 2006-07

FY 2007 ARR Summary (Rs.Cr)	AGRA Discom	LUCKNO W Discom	MEERUT Discom	VARANASI Discom	CONSOLIDATE D Discom
Power purchase (MU)	13,957	8,716	16,314	11,616	50,603
Power purchase cost	3,163	1,975	3,696	2,632	11,466

FY 2007 ARR Summary (Rs.Cr)	AGRA Discom	LUCKNO W Discom	MEERUT Discom	VARANASI Discom	CONSOLIDATE D Discom
Transmission charges	263	164	307	219	953
Employee Costs	128	182	161	200	671
A&G Costs	28	30	27	25	111
Repair & Maintenance expense	48	53	72	57	229
Interest & Finance Charges	64	79	82	77	303
Provision for Bad & Doubtful Debts	37	17	12	24	92
Depreciation	149	166	226	177	719
Special appropriations	14	11	20	15	60
Return on capital base and loans balances	0	0	0	0	0
Total Expenses	3,893	2,677	4,605	3,426	14,603
Less Other Income	-25	-14	-44	-44	-126
Less GOUP subsidy	-152	-231	-265	-365	-1,012
Total ARR	3,716	2,432	4,297	3,018	13,465
Revenue from Existing Tariffs	2,376	1,600	3,043	2,165	9,184
Remaining Gap	1,340	831	1,254	852	4,281

Table 5-28: Discom-wise ARR FY 2005-06

FY 2006 ARR Summary Rs.Cr)	AGRA Discom	LUCKNO W Discom	MEERUT Discom	VARANASI Discom	CONSOLIDATE D Discom
Power purchase (MU)	12,864	7,773	14,839	10,256	45,732
Power purchase cost	2,737	1,654	3,157	2,182	9,731
Transmission charges	208	125	240	166	738
Employee Costs	118	169	149	187	623
A&G Costs	28	30	27	25	109
Repair & Maintenance expense	42	40	59	50	192
Interest & Finance Charges	47	61	62	61	232
Provision for Bad & Doubtful Debts	42	16	13	26	97
Depreciation	132	126	186	157	601
Special appropriations	0	0	0	0	0
Return on capital base and loans balances	0	0	0	0	0
Total Expenses	3,353	2,221	3,894	2,853	12,322

FY 2006 ARR Summary Rs.Cr)	AGRA Discom	LUCKNO W Discom	MEERUT Discom	VARANASI Discom	CONSOLIDATE D Discom
Less Other Income	-24	-13	-41	-40	-118
Less GOUP subsidy	-188	-286	-328	-451	-1,252
Total ARR	3,142	1,923	3,526	2,362	10,952
Revenue from Existing Tariffs	2,086	1,359	2,599	1,843	7,887
Remaining Gap	1,056	563	927	518	3,065

Tariff Design

5.70 The Petitioner has not proposed any change in tariff structure for FY 2006-07 and proposes to continue with the Tariff structure approved for FY 2004-05.

Proposal to meet the gap

5.71 Since no Tariff increase is proposed, the Petitioner has suggested meeting the Gap as under:

- a. Short term Loan from Financial Institutions
- b. Additional Subsidy from State Government.
- c. By Efficiency Improvements.

5.72 The original proposal of the licensees, as submitted in the ARR petition, to meet the revenue gap through a combination of the three measures listed above was as follows:

Table 5-29: Licensees' original proposal to meet revenue gap

Details	AGRA Discom	LUCKNO W Discom	MEERUT Discom	VARANASI I Discom	CONSOLIDATE D Discom
GoUP Additional Subsidy	150	228	262	360	1000
Efficiency Improvement	313	143	103	221	780
Short term loan	877	460	889	273	2500

ARR FOR FY 2006-07 - TRANSCO

5.73 This section of the order summarizes the filing made by the Transmission Licensee in its petition for Aggregate Revenue Requirement for FY 2006-07.

5.74 The first chapter of this petition is on review of tariff order FY 2004-05 and the same has been detailed below

Review Of Tariff Order FY 2004-05 And Performance To Date

5.75 This section of the Licensee's filing consists of the following:

- Review of UPERC Tariff Order for FY 2004-05
- Comparison of estimated cost and actual figures to date
- An action plan undertaken by UPPCL Transco for improvement of Transmission Loss
- Investments detail plan
- Compliance with the Commission's directives

Review of UPERC Tariff Order for FY 2004-05

5.76 Tariff Order for FY 2004-05 (covering all five successor companies – four Discoms and Transco) was issued by the UPERC on November 10, 2004. The Licensee has enlisted following salient points of the Tariff Order with respect to the Transco:

5.77 Approval of transmission tariff of Rs. 0.145 per kWh as against the transmission tariff of Rs. 0.1524 per kWh requested in the Transco tariff petition. The methodology followed by the Commission to arrive at the tariff was to divide the total Transco ARR by the energy delivered by the Transco.

5.78 The tariff was designed to meet Transco's revenue gap. The Transco's ARR was calculated with a zero return on capital base.

5.79 Pending the framing of detailed regulations regarding open access, the Commission directed that same tariff (Rs. 0.145 per kWh) may be levied for use of transmission lines by users other than the existing licensees in the State.

5.80 The licensee has stated that the issue of backup charges for open access remains outstanding with the commission. Regarding aspects of performance review discussed in Chapter 2 of the order, the licensee has stated that the pace of improvement has slowed down since FY 2002-03 on account of restructuring of the erstwhile UPPCL in August 2003, imposition of GoUP's 14 hour power supply policy in September 2003, continuing load growth and lack of sufficient generating capacity to meet the load growth.

b) **Comparison of estimated cost and actual figures to date**

5.81 In this section, the licensee has compared the expenses for FY 2004-05 with the corresponding figures approved by the Commission in its Tariff Order for FY 2004-05.

Table 5-30: Approved and actual expense items Transco FY 2004-05

Discom	FY 2004-05 Tariff Order	FY 2004-05 Actual	Difference	Difference %
Employee Cost	226.05	232.11	(6)	-3%
A&G Cost	5.96	22.22	(16)	-273%
R&M Cost	53.96	38.09	16	29%
Interest & Finance Cost	135.99	217.90	(82)	-60%
Provision for Bad Debts				
Depreciation Expense	189.58	211.90	-	-12%
Other Expenses	-	-	-	
Non-Tariff Income	-21	-15.36	(6)	27%
Total	590.54	706.86	(94)	-20%

5.82 The licensees have stated that the actual figures are on higher side as compared to the Commission approved figures because of higher than expected proportion of loans and A&G expenses of erstwhile UPPCL being transferred to Transco.

c) **Efficiency Improvement Plan**

5.83 UPPCL has stated that concerted efforts to bring the AT&C losses to desired levels and to increase revenue realization are being made.

5.84 As per data submitted by Transco, during FY 2004-05, 79.7 MVAR of capacitor banks were repaired. By March 2006, additional 329.54 MVAR of repair was completed on capacitor banks. The Licensee has stated that 1053 MVAR of new capacitor banks are scheduled to be installed by March 2006. With the improvements in the functioning of capacitor banks, the Licensee expects the payment of reactive power charges to go down as considerable voltage improvement in low voltage areas is expected. The commissioning of Capacitor Banks is expected to reduce load current, improve power factor and voltage profile, minimize equipment loading and create additional capacity in transmission lines. With reduction in transformer loading it is expected that quantum of power to be purchased shall be reduced, thus reducing power deficit and power purchase cost.

d) **Investments**

5.85 The licensee has proposed to complete works costing Rs. 625 crore in FY 2005-06. Of this, Rs. 313.78 crore is to be incurred on lines, Rs. 283.64 crore on sub-stations and balance on capacitor banks and R&M related works. The licensee has proposed investment of Rs. 1168 crore in FY 2006-07 for transmission works. The investments will be funded with the help of World Bank.

e) **Compliance with Commission's Directives**

5.86 In this section, the licensee has elaborated the actions undertaken by it to comply with the directives issued by the Commission in its FY 2004-05 Tariff Order. The same has been discussed by the Commission in this Tariff Order in Chapter 4 dealing with compliance with Directives.

5.87 The total ARR of Transco comprises of the following nine components:

- Employee costs
- Administration and general expenses
- Gross Fixed Assets (GFA) Balances and Capital Formation Assumptions
- Repairs and maintenance expenses
- Interest expense
- Depreciation expense
- Other income
- Special appropriations
- Return on capital base and loan balances

5.88 In the following section, the details of above cost elements have been summarized along with the rationale of the proposal.

Employee Costs

5.89 The Transco employee cost for FY 2006-07 has been projected at Rs. 175 crore, which represents an increase of 7.36% over the FY 2005-06 employee cost of Rs. 163 Crore.

- The Basic Salaries, Bonus/ Ex-gratia and Other Allowances have been decreased at the rate of 5% per year as a result of continuing staff attrition and selective hiring practices.
- Dearness Allowance (DA) is estimated to be 68.5% of basic pay in FY 2005- 06, and with the merger of DA in FY 2006-07 it is assumed to be 23% assuming DA increase in FY 2006-07 and FY 2005-06 as 4.5% (3 % half yearly).

- Arrears of DA merger which is applicable from FY 2003-04 is included in the interim relief in FY 2006-07. Amount included in FY 2006-07 is half of the total arrear & remaining will be included in FY 2007-08 as per order of the UPPCL.
- Medical Expenses have been forecast to increase by 6% per year from FY 2004-05.
- Pension and Gratuity have been calculated at 16.7% and 2.38% (i.e., 19.08%) of Basic Salary and Dearness Allowance.
- All other expenses have been forecast to grow at 3% per year.
- Employee Expenses Capitalized has been calculated as 29% of total Employee Costs.

Table 5-31: Details of Employee Costs

Details (Rs. Crore)	FY2004-05	FY2004-05	FY2005-06	FY2006-07
	Actual (unaudited)	Tariff Order	Estimated	Projected
Basic Salaries	107.21		101.85	145.14
Overtime	0.00		0.00	0.00
Dearness Allowance	66.45		69.77	33.38
Other allowances	11.49		10.92	10.37
Bonus / Ex-gratia	0.98		0.93	0.88
Medical expenses reimbursement	2.37		2.51	2.66
Leave travel assistance	0.02		0.02	0.02
Interim Relief/ Other	0.58		0.60	9.08
Earned leave encashment	10.56		10.88	11.20
Leave Salary contribution	0.00		0.00	0.00
Payment under workmen's compensation Act	0.14		0.14	0.15
Staff welfare expenses	0.65		0.67	0.69
Employers Contribution for Pension & Gratuity	31.64		32.74	34.06
Employee Costs (before charge to capital)	232.11	226.05	231.03	247.64
Less expenses capitalized	67.87	54.50	67.55	72.41
Net employee cost	164.24	171.55	163.47	175.23

Administration and General (A&G) Expenses

5.90 The Transco A&G expenses for FY 2006-07 are projected to be Rs. 32.00 crore, an increase of approx. 2.5% over the actual A&G expense of Rs. 31.22 Crore in FY 2005-06.

However, the A&G expenses increased by approx. 423% in FY 2005-06 over the FY 2004-05 approved expense of Rs. 5.97 Crore (actual A&G expense in FY 2004-05 was Rs. 18.05 crore). The licensee has stated that this sharp rise was on account of introduction of FBT by the GoI in FY 2005-06. The capitalization of A&G costs has been assumed to be 19% on the basis of actual A&G expenses capitalized in FY 2004-05.

Table 5-32: A&G Expenses

Details (Rs. Crore)	FY2004-05	FY2004-05	FY2005-06	FY2006-07
	Actual (unaudited)	Tariff Order	Estimated	Projected
Rent, Rates & Taxes	1.29		12.32	12.56
Insurance	0.07		0.07	0.07
Telephone, Postage & Telegrams, Telex charges	1.55		1.58	1.61
Legal charges	0.70		0.71	0.73
Audit fees	0.07		0.07	0.07
Consultancy charges	3.19		3.25	3.32
Technical fees and professional charges	0.01		0.01	0.01
Conveyance and traveling	5.05		5.15	5.25
Regulatory expenses			2.27	2.50
Electricity Charges	2.38		2.43	2.48
Other expenses	7.91		8.07	8.23
Billings and Collection Expenses	0.00		2.50	2.55
Total	22.22	5.97	38.44	39.39
Capitalized	4.17		7.21	7.39
Net	18.05		31.22	32.00

Gross Fixed Assets (GFA) balances and capital formation assumptions

5.91 To estimate the R&M expenses for FY 2006-07, the licensee has computed the opening balance of GFA for FY 2006-07 based on the assumptions detailed below:

Table 5-33: Transco investment plan (Rs. Crore)

Fund/ Source		FY 2005-06				FY 2006-07			
Rs. Crore		Loan	Grant	Equity	Total	Loan	Grant	Equity	Total
GoUP	IBRD	0.00			0.00	0.00			0.00
	Others			116.00	116.00		0.00	300.00	300.00

Fund/ Source		FY 2005-06				FY 2006-07			
Rs. Crore		Loan	Grant	Equity	Total	Loan	Grant	Equity	Total
PFC	Evacuation of power from Vishnu Prayag	28.08			28.08	0.00			0.00
	System Improvement	525.30			525.30	350.00			350.00
REC	System Improvement	0.00			0.00	323.00			323.00
NCR	System Improvement	40.00			40.00	52.00			52.00
IDBI	System Improvement	37.04			37.04	35.00			35.00
Hudco	System Improvement	100.00			100.00	100.00			100.00
Others		2.00	15.00		17.00	2.00	18.00		20.00
Total (A)		732.42	15.00	116.00	863.42	862.00	18.00	300.00	1180.00

5.92 Assuming transfer to GFA of 40% of the opening WIP, total investments, capitalized interest, capitalized employee costs and capitalized A&G expenses, and depreciation at the rate of 5.27% of opening GFA, the capital formation during FY 2005-06 is as follows:

Table 5-34: Capital formation during FY 2005-06

Rs. Crore	Balance 31-Mar-05	Investments	Capitalized interest	Capitalized expenses	To GFA	Depreciation	Balance 31-Mar-06
Gross Fixed Assets	3264.97				735.15		4000.12
Accumulated Depreciation	1406.60					172.06	1578.66
Work in Progress	865.78	863.42	33.90	74.77	(735)		1102.72

Repair and Maintenance (R&M) Expenses

5.93 R&M expenses have been forecast as 1.5% of the opening balance of GFA. The projected R&M expenses are summarized below:

Table 5-35: R&M expenses

Details (Rs. Crore)	FY2004-05	FY2004-05	FY2005-06	FY2006-07
	Actual (unaudited)	Tariff Order	Estimated	Projected
Plant & Machinery	30.47		39.18	48.00
Building	4.38		5.63	6.90
Civil works	0.05		0.06	0.08
Other Expenses	0.00		0.00	0.00
Lines, Cable Network, etc	3.08		3.96	4.85
Vehicles	0.00		0.00	0.00
Furniture & Fixtures	0.01		0.01	0.02
Office equipment	0.10		0.13	0.16
Total	38.09	53.96	48.97	60.00

Depreciation Expense

5.94 Opening GFA balance for FY 2006-07 as calculated previously (under the section 'GFA balances and capital formation assumptions') has been used to calculate the depreciation expense for FY 2006-07. Depreciation expense has been computed at the rate of 5.27% of the opening balance of GFA. Accordingly, an expense of Rs. 210.80 crore has been estimated in FY 2006-07 for the Transco.

Interest and Financing Costs

5.95 The interest and finance cost for FY 2005-06 & FY 2006-07 are based on current schedule of long term debt repayment and new debt requirements. As can be seen from the following table, the I&F expenses have increased to Rs. 454.10 Crore in FY 2006-07 as compared to Rs. 338.22 Crore in FY 2005-06, representing an increase of 34.26%. Even the FY 2005-06 I&F expenses have grown by a huge 67.17% over the FY 2004-05 actual figures.

Table 5-36: Details of Interest and Finance Cost

Details (Rs. Crore)	FY2004-05	FY2004-05	FY2005-06	FY2006-07
	Actual (unaudited)	Tariff Order	Estimated	Projected
GoUP - Loan	-		-	-
GoUP - APDRP	1.56		1.56	1.56
GoUP - APDRP	1.56		1.56	1.56
IBRD	14.19		32.08	32.08
PFC - Transmission	25.78		54.16	88.82

Details (Rs. Crore)	FY2004-05	FY2004-05	FY2005-06	FY2006-07
	Actual (unaudited)	Tariff Order	Estimated	Projected
PFC - Distribution	9.19		6.39	4.96
PFC - APDP - Distribution	-		-	-
NCR	3.37		5.32	7.27
NOIDA	-		-	-
UPSIDC	-		-	-
Greater NOIDA	-		-	0.50
HDFC	-		-	-
REC	9.77		9.77	9.77
REC New Loans	2.53		4.54	4.54
IDBI	1.75		3.22	6.29
HUDCO	21.25		30.69	31.63
Working capital Loans	56.28		139.07	195.78
Working capital Loans PFC	24.19		23.58	24.75
Bonds to UPRVUNL	-		-	-
Others	0.29		0.29	0.29
Sub Total Interest (A)	171.74		312.23	409.81
Cost of Raising Finance	45.04		58.55	70.26
Other Charges	1.12		1.34	1.61
Interest to Consumer on Security Deposits	-		-	2.04
Sub Total Finance Charges (B)	46.16		59.89	73.91
Interest & Finance Cost (A + B)	217.90	176.85	372.12	483.72
Less interest capitalized	15.58	40.86	33.90	9.62
Interest & Finance Cost	202.32	135.99	338.22	454.10

Other Income

5.96 This includes non-tariff income, which comprises of interest on loans and advances to employees, income from fixed rate investment deposits and interest on loans and advances to licensees. The other income has been projected to increase at the rate of 3% year-on-year.

Table 5-37: Summary of Other Income

Details (Rs. Crore)	FY2004-05	FY2004-05	FY2005-06	FY2006-07
	Un-audited accounts	Tariff Order	Estimated	Projected
Other income	15.36	21.00	15.82	16.30

Reasonable Return

- 5.97 The Commission ordered a zero return for the licensee in FY 2004-05 on the basis that no return had been requested, the performance targets set by the Commission had not been met and the overall power sector was not yet viable, requiring subsidy support from the government. The licensee has stated that similar conditions prevailed in FY 2005-06, and thus has not claimed any return for the financial year FY 2005-06.
- 5.98 However, for FY 2006-07 the licensee has proposed return on capital base at the rate of 16% and return on long term loans at the rate of 0.5%. The Transco has stated that as a result of restructuring, it no longer suffers from inefficiencies of the Discoms.

Table 5-38: Capital Base Calculations

Details (Rs. Crore)	FY2004-05 Tariff Order	FY2005-06 Estimate	FY2006-07 Proposed
Gross Fixed Assets	-	3,265	4,000
Intangible Assets	-		
Less: Consumer Contribution	-	(39)	(39)
Capital work-in-progress	-	1,407	1,103
Investment made out of contingency reserve	-		
Cash & Stores	-	608	744
Sub-total (A)	-	5,240	5,809
Accumulated Depreciation	-	1,407	1,579
Loan advanced by the Board	-		
Loan borrowed from organization or institution approved by the State Govt.		2,676	4,128
Debentures issued by the licensee	-		
Consumers' security deposit	-		
Sub-total (B)	-	4,082	5,707
Capital base = A - B	-	1,158	102
Return on Capital Base at 16.0%	-	185	16
Return on long-term debt at 0.5%	-	13	21
Total return permitted	-	199	37
Total return proposed	0	199	37

- 5.99 The ARR comprising of the various expenses as discussed above are summarized as under:

Table 5-39: Aggregate Revenue Requirement

Details (Rs. Crore)	FY2004-05 Tariff Order	FY2005-06 Estimated	FY2006-07 Proposed
Employee Costs (net of capitalization)	171.55	163.47	175.23
A&G Costs	5.97	31.22	32.00
Repair & Maintenance Expense	53.96	48.97	60.00
Depreciation	189.58	172.06	210.81
Interest & Finance Charges	135.99	338.22	454.10
Less Other Income	(21.00)	(15.82)	(16.30)
Special Appropriations	0.00	0.00	0.00
Return on Capital Base and Loans Balances	0.00	0.00	36.91
Annual Revenue Requirement	536	738	953

5.100 As can be observed from the above table, the ARR for FY 2006-07 has increased by 29% over the previous year. Even in FY 2005-06, the ARR increased by 37.70% over the ARR for FY 2004-05.

Transmission/Open Access Tariff

5.101 Based on the Transco ARR derived in the earlier section, the proposed transmission / open access tariff has been derived. For the “postage stamp” tariff, the aggregate revenue requirement of the Transco is divided by the total kWh energy delivered by it to its Discom and Bulk Supply customers. The licensee has stated that as directed by the commission, the same tariff would be applicable for open access, until the Commission frames detailed regulations for open access.

Table 5-40: Transmission / Open Access Tariff

Details (Rs.Crore)	FY2005-06 Estimated	FY2006-07 Proposed
UPPCL Transco ARR	738	953
Total Energy Delivered	43446	48073
Transmission/Open Access Tariff (Rs/kWh)	0.170	0.198

5.102 Thus, the transmission tariff of Rs. 0.198 per kWh for FY 2006-07 represents an increase of 16.5% over the tariff of Rs. 0.170 per kWh for FY 2005-06.

SLDC Charges

5.103 UPPCL Transco operates a central load dispatch center in Lucknow and four regional load dispatch centers at Panki, Sahupuri, Modipuram and Moradabad. The estimated cost associated with these centers is as follows:

Table 5-41: SLDC Charges

Details (Rs.Crore)	FY2005-06 Estimated	FY2006-07 Proposed
Employee Costs	5.1	5.6
A&G Costs	0.2	0.2
Repair & Maintenance Expense	0.0	0.0
Subtotal	5.4	5.9
Depreciation	3.8	4.5
Interest & Finance Charges	3.2	3.5
Less Other Income	(0.3)	(0.4)
Return on Capital Base and Loans Balances	0.0	0.8
Total SLDC Annual Revenue Requirement	12.0	14.4

5.104 For the above estimates, all direct cash expenses including employee costs, A&G costs and R&M costs have been obtained from central load dispatch center. However, a proper segregation of capital related charges pertaining to SLDC operations is not available. These charges, including I&F charges, depreciation and return on capital base have been estimated as follows:

- Depreciation expense has been calculated as 71% and 77% for FY 2005-06 and FY 2006-07 respectively, of the sum of direct cash expenses. This percentage has been derived from the Transco expenses.
- Similar methodology has been used for estimating I&F expenses, but by using FY 2004-05 data as reference. The licensee has submitted that this has been done because the I&F charges for FY 2005-06 for the Transco are tainted by the amount of debt undertaken by it. I&F charges have thus been estimated at 59% of the total direct cash expenses.
- Similar methodology has been followed to allocate a part of Transco other income to SLDC.

5.105 The licensee has estimated that these SLDC costs comprise only about 2% in FY 2005-06 and 1.5% in FY 2004-05, of the total transmission costs. The licensee has also admitted that pending a better delineation of capital charges, the above SLDC estimates are the 'best available'.

6 CHAPTER - 6: OBJECTIONS TO ARR FILING FOR FY 2006-07

- 6.1 The combined reading of various provisions of Electricity Reforms Act 1999, Electricity Act 2003 and UPERC (Conduct of Business) Regulation shows that the statute has unequivocally provided the consumers a right to be heard and that of filing representation in matters related to tariff determination. The Commission, in order to achieve the twin objective that has been conferred upon it under the Act i.e. “to observe transparency in its proceedings and functions” and “to ensure fair deal to consumers”, has always attached paramount importance to the objections/suggestions/comments of public on the ARR/Tariffs petitions submitted by the licensees. The process gains significant importance in a “cost plus regime”, where the entire cost allowed to the licensee gets transferred to the consumer. The consumers therefore have a locus-standi to comment on what costs that are being allowed vis-à-vis the kind of services that are being offered to them.
- 6.2 In order to broad base the public participation and also to render transparency to the process of tariff determination, the Commission conducted several public hearing from January 11, 2007 to February 4, 2007 at different places in the State to get the views of the various stakeholders on the proposals submitted by the licensee. The Commission has also considered various objections/suggestions/comments received from various stakeholders through post while disposing the ARR/Tariff petitions filed by the licensees.
- 6.3 All the objections/suggestions/comments received by the Commission from the public on the ARR filings, were forwarded to the Discoms for their response on the same. The Commission acknowledges the fact that the rate design has to have a meaningful correlation with the quality of electricity supply and the services provided to the consumers by the licensees and in this context, the comments of consumers play a pivotal role in leading the Commission to embark upon a reasoned rate structure. Accordingly, it is also incumbent upon the licensees to respond to individual comments not only in the capacity of a licensee but also as a petitioner. To give proper shape to such an exercise, the Commission has collated different consumer representations and categorized them issue wise for getting categorical replies from Discom. A list of the consumers, who have submitted their objections/suggestions/comments, is appended at the end of this chapter. Category wise issues along with response of Discoms against are detailed below:

I. Poor Supply Position

- 6.4 Complaints have been received from all types of consumers, whether household, agricultural, commercial or industrial, about the extremely poor electricity supply condition all over the state. It has been complained that due to extensive rostering,

breakdowns/shutdowns etc electricity is never available in the most important hours of the day. Consumers have also submitted that in order to meet their electricity requirements they have to in addition to the minimum consumption charges bear the extra cost in the form of fuel for gensets, inverters, etc.. The consumers have accordingly resented the high electricity tariffs in the State in view of extremely poor quality of electricity supply and service. There is an overwhelming demand from all consumer categories to link demand as well as energy charges to minimum standards of service at least in terms of hours of supply. The consumers have also represented that the electricity tariffs for various categories, especially industrial should be made comparable to those existing in the neighboring States by reducing the level of cross-subsidy, etc. Various trade associations and representatives have claimed that high electricity tariffs and poor supply is adversely affecting the competitiveness of the industries, and for the same reasons industries are either migrating out of the State or getting shut down.

- 6.5 The consumers have also pointed out that although a large amount have been spent under APDRP and other schemes, there have been no tangible benefits from the same. UPPCL and licensees should inform the people about various schemes completed, the benefits being derived from them and future investments planned under various schemes.

Licensees' Submission

- 6.6 In reply to the Commission's query regarding the poor supply position in the State, the licensees have stated that all efforts are being made in the field of generation, transmission and distribution to improve the overall power supply scenario. They have stated that schemes like Multi buyer, Multi seller, Availability Based Tariff, Energy Accounting and Settlement System are being launched and various steps are being taken to strengthen the existing distribution network through internally available resources and schemes like APDRP, etc. The licensees have also stated that computerization of the system and efforts to check electricity theft and line losses are also being taken up. These efforts by the licensees are expected to improve the supply position in the State in the near future.
- 6.7 The licensees have stated that industrial consumers pay little more than the cost of service to partially compensate other categories of consumers whose tariffs are less than the cost of service. If reduction in tariff of industrial consumers is done, the tariffs of some other category of consumers will have to be increased proportionately. However, efforts have been made to rationalize the tariffs of various categories, which has resulted in keeping the rate of this category more or less unchanged since FY 2000-01. Moreover, GoUP has launched various industry friendly incentive schemes to check their exodus.

Commission's View

- 6.8 In view of representations received from various groups regarding poor supply position and also variations in hour of supply across different regions of the state, the Commission feels that it is necessary to link tariffs with the hours of supply. The Commission has also relied on provisions of Section 62 of the Act to design the tariff in this order.
- 6.9 Accordingly, the Commission in its current order has gone on to apply the already utilized factors in a more focused manner keeping in view the ground realities specially related with the power supply availability in various parts of the State and has also used the unutilized parameters of "consumption of electricity during specified period" and "the time at which the supply is required", to a large effect in order to capture the widely discriminatory supply position within its rate schedule while emphasizing on the requirement of efficient consumption.
- 6.10 In this order, Commission has accordingly linked the tariff of LMV-1, LMV-2, LMV-6 and HV-2 (11 kV) with the hours of supply. The rate design has accordingly been discussed in detail under chapter 8 of this order.
- 6.11 Regarding various works being carried out under the APDRP and other schemes the response submitted by the licensee is far from satisfactory. The Commission accordingly directs the licensees to submit a detailed report indicating clearly the different works being taken up under the APDRP and other schemes and the progress achieved so far. The report shall also indicate the likely benefits for the consumers.

II. Differential Hours of Supply

- 6.12 Consumers have represented that some cities are receiving power supply for greater number of hours than others even when they are paying the same tariff. The consumers have demanded that electricity supply should be equitable all across the state.
- 6.13 Rural consumers have claimed that 10 % rebate for rural schedule is too less as the most rural areas are getting significantly less supply than that committed by UPPCL. On the other hand, some urban/semi-urban consumers have pointed out that in view of assurance of 14 hour supply to rural areas the tariff differentials between the urban and rural areas does not make much sense as most urban/semi-urban areas (except a few big cities) get supply for similar number of hours as rural.

Licensees' Submission

- 6.14 The licensees have stated that Uttar Pradesh is a very big State and accordingly, need of different categories of consumers in different areas are also different. Taking into

account the power availability scenario in the State vis-à-vis its demand by different categories of consumers licensees develop a supply schedule to cater to the needs all consumers in an equitable manner. The licensees have further stated that only Noida, Taj Trapezium area (in compliance with the Supreme Court's order) and Lucknow have been exempted from the schedule in the best interest of State and that the schedule is sometimes changed in order to cope with local problems/special occasions.

Commission's View

- 6.15 The Commission is of the view that ideally there should not be any discrimination in terms of hours of supply and the electricity shall be supplied to all consumers equitable (unless backed by special directions by the Court /Government or for some categories which require un-interrupted supply like hospitals etc.)
- 6.16 Through its previous tariff orders Commission has been directing the utilities to do the rostering in cases of emergency based on AT&C loss levels of a particular area, so as to incentivize the honest consumers of a particular area where AT&C losses are low. As no plausible justification to the satisfaction of the Commission has been placed by the licensee as to why the directive cannot be implemented, the directive continues and in case of further non-compliance the Commission may think in terms of invoking the relevant provisions of the Act related to non-compliance. However the Commission in this order has attempted to address the issue by atleast protecting the rights of the consumers in terms of reduction in tariff in case the hours of supply is below 14 hours.

III. Minimum Consumption Guarantee Charges

- 6.17 A large number of industrial consumers have voiced their concern over the change in computation of Minimum Consumption Guarantee Charges (MCG) from annual to monthly basis. Seasonal industries like ice factories, cold storage, sugar mills etc. which operate only for 6-8 months in a year claim that this is detrimental to them as they have to pay MCG even for the months in which they are not operational. All industries whether small, medium or heavy, and especially seasonal industries have represented that MCG computation should be reverted to annual basis, and both demand and energy charges should be considered for annual adjustment in MCG. They have represented that this would allow them to compensate lower consumption due to business cycle / short supplies in certain months by higher consumption in other months. Given the poor supply position, the small and medium industrial consumers have also suggested that MCG should be linked to the hours of supply because otherwise the licensee is ensured of a minimum revenue even for supplying no power at all and is rewarded even for its inefficiencies. Currently such small industrial consumers are receiving electricity supply only for 4 hours effectively because of heavy rostering of power during the 8 AM to 5 PM working hours. They have thus represented that minimum charge and fixed charges should not be levied

unless the utility can ensure supply of electricity at least between 8AM to 5PM, as it amounts to unfair exploitation of such industrial consumers.

Licensees' Submission

- 6.18 The licensees have stated that Minimum Consumption Guarantee (MCG) and fixed charges are levied to compensate the fixed expenses of the corporation, which have to be incurred on the installed infrastructure for supply and maintenance of power to the consumers. The licensees have stated that because of this reason MCG cannot be linked with the seasonal closure of any industry or less consumption due to restricted supply hours. The licensees have also mentioned that as per Tariff Order for FY 2003, UPERC has calculated the fixed expenses of the corporation around 40% of the total expenses, whereas about only 20% of these charges are being levied as fixed charges/MCG.
- 6.19 As regards annual adjustment of MCG, the licensees have stated that this comes under the purview of the Commission, and the corporation has no objection if the MCG is adjusted annually as per the requirement of the Industries Department.

Commission's View

- 6.20 The Commission feels that minimum charges (MCG) are there to compensate the risk of the licensee arising out of its honoring the contractual obligation, as is also upheld by the honourable Supreme Court. The Commission has accordingly retained the concept of minimum charges in certain categories but at the same time it has done away with application of minimum charges in few of the categories / sub-categories. The Commission has however, removed MCG for certain category of consumers as it feels that licensee can not be allowed to collect MCG charges in an unbridled manner, in lieu of electricity consumed for the purposes of generating additional revenues. Accordingly, the minimum charges has been withdrawn from those sub-categories of LMV-2 and LMV-6 where energy rebates have been given for achieving specified load factors. The minimum charges have also been withdrawn from LMV-7 category i.e. Public Water Works, HV-2 category, private institutions (LMV-4B) and seasonal industries under LMV-6 and HV-2 category for the off season period. The detailed reasons for the removal of MCG from selected categories are provided in chapter 8 while describing the issues related to tariff design.

IV. Issues related to Billing, Metering and collection of revenues

- 6.21 Consumers have pointed out several irregularities in the billings, e.g. not downloading MRI for every month, ill-functioning meters, not providing meter reading slips/MRI reports, etc. Consumers have also objected that meter readers have no ID cards and that meter cards are not maintained regularly. It has been pointed out that in some cases, the bills are reaching the consumers just 4-5 days before the due date whereas as

per the provisions of supply code, the licensee has to provide at-least 15 days time for making payment of the bills.

- 6.22 The consumers have also suggested that 10% rebate for timely payment of electricity bills should be reintroduced. The consumers have requested for reintroduction of this scheme on the grounds that the rebate was meant to act as an incentive to induce honest consumers to make timely payments of bills. Also, the current electricity bills should show the latest payment amount received by the licensee from the consumer. This way the consumers will be able to confirm that the payment made by them was received by the utility, thus reducing cases of fraud and undue harassment of consumers.

Licensees' Submission

- 6.23 The Discoms have submitted that billing agents have been advised to adhere to the billing schedule as per the provisions of Supply Code. It has been intimated that for Large and Heavy consumers, 100% MRI based billing has been implemented and that the efforts are being made for improving the MRI based billing for remaining power connections. Licensees have also intimated that the billing agents and their staff have been advised to always carry dully certified Identity Cards with them. Moreover the collection centers of the Discom are being upgraded to improve the infrastructure as well as other facilities.
- 6.24 The Discoms have said that the bill collection through Banks has been discussed exhaustibly with several National Banks but the Banks are interested in collection only in their branches. Moreover different districts have different lead Banks.

Commission's View

- 6.25 The Commission on this issue of timely payment has already clarified its view in its last few orders, that the same can not be provided. The Commission had stated that *"while discharging its function under the Act "to improve economy and efficiency of the electricity industry" the Commission introduces rebates on account of technical considerations such as load factor rebate and power factor rebate but as far as revenue related rebates are concerned, the same should be proposed by the licensee if it leads to better realization. Therefore, if a proposal to this effect is submitted by Discoms in future filings, the same may be considered by the Commission."*
- 6.26 The Commission feels that in the field of metering and collection licensee needs to make significant improvement and they should comply with the Commission's directives on the same expeditiously. Further, since the issues linked to metering and billing are essentially not tariff linked, the Commission would deal with them in

accordance with the provisions of Supply Code and may also make suitable amendments in the Supply Code, if considered necessary.

V. Electricity Theft, Corruption

- 6.27 The consumers have represented that there is rampant corruption prevailing in the ranks of the organization and that there is misappropriation of recoveries under PD cases. Even though several cases of theft and corruption have been registered, no action has been taken by UPPCL. It has been pointed out that there are several cases where payments to the tune of 50-80 lakhs have been pending, but the electricity supply has still not been disconnected. It should be explained why arrears of such consumers were allowed to mount to such huge amounts, instead of taking timely corrective action against them.
- 6.28 Consumers have also pointed out that officers of licensees have been posted in their areas for the past 15-20 years, without a transfer. UPPCL and other licensees should disclose proper information about transfer policies of its employees.
- 6.29 Consumers have represented that the loss figures of UPPCL are understated due to huge unmetered consumption. To arrest such losses, electronic meters should be installed on all transformers and readings should be recorded regularly. Also, in areas where AT&C losses are low, electricity should be supplied for greater number of hours as compared to areas where there are higher losses due to theft / low collections. UPPCL and the licensees should intimate the Commission as well as the people about the steps being taken or any proposal to implement the same.

Licensees' Submission

- 6.30 The licensees have projected the loss level for FY 2006-07 at 32%. They have stated that while supply hours have been increased from 10 hours to 14 hours, the assessment of consumption of the unmetered consumers is being made on the basis of old norms of 8-10 hours of supply. The licensees have stated that sample meters have been installed for certain consumers in the unmetered category, to record the latest average consumption level with increase in supply hours. After the availability of this data, the norms shall be revised accordingly, which should result in a considerable decrease in the present loss levels. It has also been stated that the Discoms are putting great emphasis on strengthening of distribution network through their own resources and with the help of APDRP, in order to reduce the technical losses.
- 6.31 In order to check the power theft menace, various steps have been taken by the Discoms like installation of the meters on the distribution transformers, double metering of large and heavy consumers, providing aerial bunched conductors, replacing LT with HT distribution system and by using more and more single phase

distribution transformers. Surprise raids and checking through vigilance squads are also being conducted by the licensees. In addition, efforts are being made by the licensees through various modes of advertisement to get the cooperation of consumers in checking the unauthorized power connections/power theft.

Commission's View

The Commission has noted the measures being taken by the petitioner to reduce theft of electricity. The Commission however, fails to appreciate the efforts of the licensee in this regard as there is no commensurate reduction in the AT & C losses. The Commission feels that the licensees should, in its own commercial interest, take earnest steps to curb theft of power and distribution losses. The Commission has also, through this tariff order, introduced a scheme wherein incentives and disincentives have been prescribed for both consumers as well as staff of the licensees to curb distribution losses. It has been prescribed that in all cases where difference between meter reading of the distribution transformer and sum of units billed to the consumers (excluding cases of NA/NR/meter defective/any normative billing) connected to that transformers is less than 15% of the energy supplied by the transformers then an incentive of 2.5% of revenue billed would be given to the Junior Engineer and lower Staff responsible for bringing down the distribution loss. Further, 2.5% of revenue billed from the same transformer would also be allowed as rebate to the consumers connected to the same transformer and the same would accrue to the consumers in the relevant month subject to its adjustment and crediting thereof on six monthly basis. Further, in case the difference between meter reading of the distribution transformer and sum of units billed to the consumers (excluding cases of NA/NR/meter defective/any normative billing) connected to that transformers is more than 25% in a month then a surcharge of 5% on the rate of charge for that particular month shall be levied on all the consumers connected to that transformer. The bill for such surcharge shall be levied on six monthly basis. The licensee shall also prepare a report on the divisional basis indicating such transformers and the same would be submitted to the Managing Director of the licensee with a copy of the same to the vigilance cell of UPPCL. The Managing Director of the licensee is directed to investigate the reasons of such high losses and make the Executive Engineer responsible, if required.

- 6.32 Further, to promote proper energy accounting, the Commission has also introduced an incentive scheme for reducing meter exception under NA/NR category under the LMV-1 category. According, to this scheme, If NA/NR in a division is less than 5% of LMV-1 consumer base in a billing cycle than an incentive of Rs. 1/kW per billing cycle is being allowed to the concerned division on the basis of the total contracted load of LMV-1 consumers in the division for that billing cycle. The amount of incentive so

given by the licensee may be recovered in the next ARR filing. The licensee shall devise a scheme for suitable allocation of the incentive amount among the officers & staff of the division responsible for bringing down NA/NR figures.

- 6.33 Regarding transfer and posting of officers the Commission is of the view that it is an administrative matter of the licensee and accordingly can be best dealt by the licensee itself. Further, since there is a Hon'ble Supreme Court Committee looking after the transfer and posting of the officers and Staff of the utilities the Commission feels that there should be no cause of concern in this regard.

VI. Metering of Departmental Employees

- 6.34 The consumers have pointed out that despite clear and repetitive directions by the Commission, UPPCL has been avoiding the metering of its employees and offices on one pretext or the other. There are several cases in which theft of electricity and consumption of unmetered power by staff/officers of UPPCL has been established. There are no meters installed in their official/private premises but no action to correct the same has been initiated. Since lack of quantification of energy so supplied amounts to misuse, it should therefore be discontinued.

Licensees' Submission

- 6.35 The unmetered category of Departmental Employees of the corporation who are using electricity for domestic purpose, has been compared by the licensees with the unmetered category of the common LMV-1 consumers comprising of urban and rural consumers. The licensees have submitted that the average monthly payment by Class IV and Class III employees is 40% higher than average payment made by rural consumers. Average payment in case of Class I and Class II employees also has been computed to be higher than the average payment made by urban consumers. The licensees have thus suggested that there is no need to change the current system of realization which involves no collection and billing charges for the Departmental Employees. It has also been mentioned by the licensees that 30% rebate applicable to the departmental employees has not been taken into account while making the above comparison.
- 6.36 The licensees have submitted that before the prevailing fixed charges being realized from the departmental employees, without involving billing and realization expenditure on them, the departmental employees were being charged on the basis of meters installed on their premises. However, the revenue collection was very poor. The revenue collection from departmental employees has improved a lot since adopting the present mode of realization of revenue. The licensees have thus submitted and requested that the present fixed charges option may be continued in the larger interest of the corporation. It has been submitted that the Corporation will

however provide energy meters at various places to account for the energy being consumed under this category.

Commission's View

- 6.37 The Commission would like to reiterate that the Discoms should take up installation of meter on this category of consumers seriously. The Commission directs the Discoms to install the meters at establishments of its all employees to measure the correct consumption of electricity, which in turn will help the licensees in energy accounting. To incentivise metering, the Commission in this order has increased the rebate of 30%, as applicable in previous tariff order, to 50% on rate of charge for metered consumers under this category.
- 6.38 On the issue of concessional tariff to the departmental employees, Commission had clarified its stand in its earlier order.

VII. Leading Power Factor

- 6.39 It has been pointed out by the Railways and industrial consumers like steel rolling mills, that TVMs record leading power factor (which actually improves the system power factor) also as lagging and thus penalizes the consumer by adding to the kVAh consumption and resulting in low average power factor. The leading power factor should thus be identified separately from lagging power factor and should not be penalized. UPPCL and the licensees should also clarify whether the metering technology caters to this issue of identifying the leading and lagging power factor separately.

Licensees' Submission

- 6.40 The licensees have submitted that all tri vector meters record average power factor in a particular duration set for the periodic recording. The licensees have stated that there is already a provision for incentive for consumers having power factor above 0.95. By connecting leading load (shunt capacitor), a consumer gets benefited in the form of less kVAh consumption. However, there may be a situation where a consumer might be compensating more than required by its load. In such a situation, the consumer may have to install some controlled device to disconnect immediately its extra shunt capacitor unit to avoid unwanted/over consumption.

Commission's View

- 6.41 The Commission recognizes the fact that there could be some situations when the power factor at the load end is leading. This happens when a consumer over-compensate its reactive consumption. Such a situation however can not be encouraged

as this leads to over-voltages at the consumer end and also increases the voltages of nearby connected consumers. In the long run it may harm the apparatus of the consumers and also damage the electrical equipment of the licensees as well as other consumers connected with the network. The Commission accordingly advises for the consumers to install automatic reactive compensation devices so that leading power factor doesn't go beyond 0.95 lead.

- 6.42 However to address the issue has in its rate design provided that if the power factor of the consumer is leading and is within the range of 0.95-1 than for tariff application purposes the same shall be treated as unity.

VIII. Penalty on exceeding contracted load

- 6.43 The consumers have represented that excess demand (over contract demand) should not be charged more than twice the normal rate. Currently it amounts to thrice the charge (additional demand plus penalty of two times). Also, the penalty should be applicable only in case the demand rises above 15% of the contracted load.
- 6.44 Additionally, in case the demand exceeds the contracted load, load factor rebate is no longer applicable. This should not be done as the consumer is already paying penalty for exceeding the contracted load.

Licensees' Submission

- 6.45 The licensees have submitted that in the present scenario of shortage of power and poor revenue realization it may not be possible to change or modify the existing penalty clause which is the most appropriate in the present circumstances.

Commission's View

- 6.46 In view of various representations received the Commission has made the penalty for exceeding demands by the consumers less stringent. The provision of levying excess demand on twice the normal rate has been made applicable only when the maximum demand exceeds the contracted demand by more than 10% and if it exceeds by less than 10% then excess demand charges shall be levied at normal rate as charge for exceeding contracted demand apart from the demand charge recovery as per the maximum demand recorded by the meter. The change has been introduced with an intention to impose lower penalty if it is a marginal violation, which may be unintentional, as the same is not likely to put a major strain on the system.

IX. Bulk Supply to MES

- 6.47 Military Engineering Services (MES) has represented that since it receives single point bulk electricity supply from UPPCL at 33/11 kV, maintains its own billing and

collection, distribution network and equipment, and maintains a power factor of 0.95 and above, it should be charged at a preferential rate of supply. Also, the fixed charges should be levied as per the recorded maximum demand of the month instead of the maximum sanctioned load.

Licensees' Submission

- 6.48 The licensees have submitted that presently the MES is charged with "other urban metered (LMV-1)" consumers (except for DVVNL which is billing them under the LMV -4 category). Regarding the rebate, 5% rebate at 11 kV and 7.5% rebate above 11 kV is already available to MES, which is more than the collection and billing charges etc. The licensees have also submitted that MES has been given concession in the tariff by way of low fixed charges and energy charges. Even there is no MCG to them

Commission's View

- 6.49 The Commission has observed that DVVNL is wrongly billing MES under LMV-4 category and directs them to rectify the same. The Commission further feels that under LMV-1, MES has been provided sufficient rebates in fixed charges and variable charges. However, if MES wants to function as a deemed distribution licensee as per the status conferred on it under the provisions of the Act it has also to carry out all other regulatory requirements set out for a licensee in terms of filing of ARR & making arrangement for procuring power from different sources.

X. Power loom consumers

- 6.50 Powerloom industries in UP are being supplied electricity at the rate of Rs. 3.90/unit in addition to fixed charges of Rs. 80/HP. Combining the two, electricity costs Rs.5-6/unit to powerloom consumers. Whereas in some other states, the tariff for powerloom consumers is as follows:

- MP: Rs. 2.20/unit (Rs. 3.20/unit – Re. 1.00/unit subsidy by GoMP)
- Maharashtra: Rs. 1.10/unit

- 6.51 Powerloom industries have represented that tariffs in other states should be considered while fixing the tariff for powerloom consumers and that power factor rule should not be considered for them.

Licensees' Submission

- 6.52 The Licensee has not submitted any response in this regard.

Commission's View

6.53 The powerloom consumers are subsidised as per the subsidy provided by the Government and the Government has announced a subsidy package for the powerloom consumers vide its order dated 14th June 2006. The Commission has accordingly directed the utilities vide an order dated 11th July 2006 to implement the scheme announced by the Government. Accordingly, powerloom consumers are been charged at flat rates.

XI. Railways

6.54 The Railways has represented that the following points may be considered for determination of tariff applicable to railways:

Traction Power

- The traction tariff should be linked to CoS. The 2-5% rebate given to HT Consumers should be extended to Railways as well.
- No fixed charge should be levied on railways (single part tariff).
- Adoption of Simultaneous Maximum Demand (SMD) for billing.
- Penalty charges for drawing in excess of contract demand should be withdrawn for railways or atleast made less harsh. Also, a cushion should be provided in percent form of contract demand and penalty should be applicable only on breaching the threshold.
- Special consideration should be adopted by UPERC and UPPCL towards newly electrified sections as has been done by other state Commissions like RSERC, KSEB, etc.
- Time-bound schedule (within 30 days of date of application by Railways) should be formulated for the revision of contract demand for traction load. Revision of contract demand should be made effective from the date of application.
- Incentives should be given for timely payments by railways.
- Energy conservation and CDM benefit should be availed and passed on to railways.

General Power

6.55 Electricity duty/tax should not be levied on railways as per provision of Article 287 (a) & (b) of the Constitution of India.

- At least 1 month's time should be given for payment of bills from the date of bill receipt.
- To help railways expedite the bill payments, consolidated single bills should be issued incorporating the consumption of all connections under one XEN. Alternatively, a system of payment at a flat rate based on last year's consumption may be made and reconciliation done later.
- Time bound schedule should be fixed for new connections/change of load/revision of contract demand/changing defective meters, etc. also, revision of contract demand should be made effective from the date of application.
- No meter testing charges should be levied for new connections/enhancement of load as railways has its own electrical inspectors to the GoI whose approval is taken before changing the installations.

Licensees' Submission

- 6.56 The licensees have submitted that railways being a commercial organization and among the few profit earning PSUs, review of tariff for railways may not be considered till the tariff of all categories of consumers are rationalized and every consumer is being charged at least at par with its cost of service.

Commission's View

- 6.57 Firstly, the Commission would like to reiterate its displeasure on the manner in which the licensee has responded to a very categorical submission of the Railways, which was also backed up by the Commission urging the licensee to provide a comprehensive and clear reply on the issues.
- 6.58 Nevertheless, the Commission would like to state that in its last tariff order for FY 2004-05 it had gone ahead and tried to accommodate objections of the railways in its rate design by lowering the tariff for this category to lowest possible extent, in given circumstances. The Commission had tried its best to rationalize the structure for this category valuing Railways as precious consumer. However, the Commission has further attempted to rationalize the tariffs in this order by slightly lowering the fixed charges as well as energy charges. The details of the same have been provided in Chapter-8.
- 6.59 The Commission understands the requirement of SMD based tariff as proposed by the Railways, but it also recognizes the implementation issues as highlighted by the licensees. Considering the numerous issues involved in implementing SMD, the Railways may file a fresh petition addressing to all the implementation issues as raised

by the licensees. The Railways may also highlight other technical issues specific to this category in its petition.

XII. Waterworks

- 6.60 The electricity tariffs for public water works have been hiked continuously over the past few years. Public waterworks make water and sewage facilities available to the public at subsidized rates. The waterworks have represented that following points may be considered in setting tariffs for the category:
- 6.61 Billing should be done on the basis of actual number of units consumed, and the fixed charges should be removed as the contracted load is used only in mornings or emergencies for 4 hours a day on an average, while the consumption is much less for most of the other time, although it is consumed round-the-clock.
- 6.62 Considering the nature of services provided by the waterworks (LMV7), electricity tariffs should be set similar to those for private tubewells/pumping sets for irrigation purposes (LMV5).
- 6.63 Capacitor charges that were not imposed earlier should be removed.

Licensees' Submission

- 6.64 In relation to the points raised by waterworks, the licensees submitted that average supply cost for waterworks comes out to be Rs. 4.48/unit against the rate of Rs. 4.25/unit in existing tariff for LMV-7. Thus, waterworks are already being cross subsidized by other categories of consumers. The licensees have suggested that these rates can be reduced only if the waterworks approach the Government to provide them subsidy for this purpose.

Commission's View

- 6.65 The Commission cannot accept the suggestion of removing fixed charges from the tariff of this category, as fixed charges are paid to the utilities to compensate them for the fixed costs they incur to provide supply. However in this order, the fixed charges and energy charges for metered category of LMV-7 have been slightly re-balanced by decreasing the fixed charges from Rs. 56/BHP/Month to Rs. 50/BHP/month and increasing the energy charges from Rs. 2.50/unit to Rs. 2.80/unit in order to bring it closer to cost of service. In fact, it would have been ideal to bring these rates at par with the rates of other public utilities but the Commission has refrained from giving a sharp increase in rates in view of various representations from these consumers asking for a rate in line with PTW consumers. Although, the Commission has not hiked their rates to bring it in line with public utilities but at the same time it is clarified that the rates for this category cannot be lowered to the level of PTW as PTW consumers are

subsidized by the State Government whereas there is absolutely no subsidy commitment for this category. In absence of a subsidy commitment from the State Government, the Commission cannot specify a highly subsidized rate for these consumers more so in view of the fact that being Government owned consumers, they cannot be cross subsidized also.

XIII. Rationalization of tariff for HV 2 category

6.66 Large and heavy industry associations have represented that the tariff differential between sub-categories supplied at different voltages is not significant enough to cover up for the capital expenditure incurred by consumers who draw electricity at higher voltages. To rationalize the tariffs at various voltage levels, the following slabs may be established for consumers having load more than 2000 kVA:

- Loads of more than 2,000 kVA should be compulsorily supplied at 33 kV
- Loads of more than 10,000 kVA should be compulsorily supplied at 132 kV
- Loads of more than 20,000 kVA should be compulsorily supplied at 220 kV
- Tariff for consumers contracting loads as per the above categories at the specified voltages may be fixed such that the through rate is Rs. 2.50-2.75 per unit.
- It has also been represented that the following issues pertinent to the category may be considered:
 - Meter reading and billing should be done twice each month, allowing 7 days for payment of each bill.
 - Peak hours have been increased from 4 to 5 hours. It is proposed that peak hours be reduced to 3 hours, i.e. 6 PM to 9 PM.
 - Rebate in night tariff should be increased from current 5% (approx. 17 paise) to a level comparable to states like Maharashtra which offer night tariff rebate of around 100 paise per unit.
 - Load factor rebate should be reinstated to 2003 pattern to encourage large and heavy consumers and curb malpractice.
 - Minimum period before a connection can be surrendered should be reduced from current 2 years to 6 months from the date of agreement.
 - For induction furnaces, it has been specifically mentioned that load should be proportional to its capacity, i.e. 600 kVA per ton. This is discriminatory as they already have demand-based billing and double metering (metering in the

premises as well as at the double pole outside the premises). This provision should be accordingly removed.

Licensees' Submission

- 6.67 The licensees have submitted that existing tariff is also based on voltage differential among various consumer categories as per provisions given in Chapter-3 (System of Supply and classification of consumers) of Electricity Supply Code, 2005 and rationalization of tariff on the basis of voltage is done according to the above provision. The licensees have further stated that fixing of voltage levels with quantum of load may not be implementable as it may not be technically feasible to adhere to these norms and may cause problems for consumers as well as the company. The licensees have submitted that other issues regarding meter reading/billing frequency, peak hours, rebate, load factor, etc. have been considered at the time of finalization of tariff proposals and thus need no further consideration.
- 6.68 Regarding peak and off-peak tariff for HV-2 consumers, the licensees have submitted that the existing provision of penalty as well as incentive with TOD tariff is reasonable under present grid condition/availability of power. In future it would be possible that TOD time slot is suitably synchronized with the ABT tariff regime and match with the demand in such a way that will benefit the consumers and will avoid unwanted levy of UI charges on the companies.

Commission's View

- 6.69 The Commission feels that many of the issues raised above are not directly tariff related and pertains to the Supply Code issued by the Commission. The same may therefore need to be addressed differently. The Commission has however tried to address the remaining issues by suitably changing the tariff structure; explanations thereof are accordingly available under Chapter-8 of this tariff order.

List of Individuals and Organizations who have submitted their Objections/suggestions/comments on the ARR and Tariff Petition

S.No.	Name of Individuals/Organizations
1	Santosh Kumar Chaturvedi, C-53, Sector B, Aliganj, Lucknow
2	Upbhokta Sanrakshan Samiti, Green House, Krishna Ganj Paschim, Pilkhuwa
3	Chaudhary Naimullah Rwan, Chairman, Nagar Panchayat, Sahaspur
4	Aligarh Vyapar Mandal, Mahamantri Uday Singh Jain Road, Bahardwari, Aligarh
5	Avdhesh Kumar Verma, President, UP Rajya Vidyut Upbhokta Parishad, A-1391/7, Indira Nagar, Lucknow
6	Indian Industries Association, IIA Bhawan, Vibhuti Khand, Phase-II, Gomti Nagar, Lucknow
7	BB Jindal, Dhruv Apartments, 16 Chandralok Colony, Aliganj, Lucknow
8	UP Nursing Home Association, Gomti Hospital Jankipur, Ring Road, Lucknow
9	Associated Chambers of Commerce and Industry of UP, 2/210, Vikas Khand, Post Box No. 17, Gomti Nagar, Lucknow
10	Jai Krishna Singh, 69A, Krishna Kunj, Jungle Salikram, Shivpur Sehbajganj, Gorakhpur
11	Young rural Industries Association, Industrial Estate, Loni, Ghaziabad
12	Mohan Steels Limited, Industrial Area, Lucknow Road, Unnao
13	Cold Storage Association Uttar Pradesh, Waterworks Road, Aishbagh, Lucknow
14	Pioneer Leather Finishers Private Limited, 89/75, Jajmau, Kanpur
15	Hitech Chemicals, 56, Gwynne Road, Pul Jhaulal, Aminabad, Lucknow
16	Provincial Industries Association, J-24, Panki Industrial Area, Site-III, Kanpur
17	Rajendra Singh Kushwaha, Naglapadi Agra
18	Chief Engineer Lucknow Zone, 17 Cariappa Marg, Lucknow Cantt
19	Uttar Pradesh Matsya Vikas Nigam Limited, 46/3, Gokhale Vihar Marg, Lucknow
20	Inox Air Products Ltd, Unit-I, Surajpur Kasna Road, Greater Noida, Distt. Gautam Budh Nagar
21	Ramesh Chandra Khare, Civil Engineering Deptt., DLW Varanasi
22	Powerloom Vastra Utpadak Association, Pilkhuwa
23	The Hathras Merchants Chamber, Ghantaghar Mursan Gate, Hathras
24	Narendra Kumar Gupta, Moradabad
25	Agra Cold Storage Owners Association, 1/193, Bagh farjana, Civil Lines, Agra
26	UP Architects Association, 118/S-3, 2nd Floor, Maruti Plaza, Sanjay Place, Agra
27	Central UP Chamber of Commerce & Industry, 95-A, Civil Lines, Bareilly
28	Besco Rubber Industries Pvt Ltd, Village Sonaya, Post Madhoganj, Pratapgarh
29	Shrikar Hotels Pvt Ltd, Pilibhit House, 6, Shahnajaf Road, Hazratganj, Lucknow
30	Western UP Chamber of Commerce & Industry, PO Box No. 12, Bombay Bazar, Meerut Cantt
31	Indo Gulf Fertilisers, Jagdishpur Industrial Area, Dist. Sultanpur

32	Kanpur Jal Sansthan, Kanpur
33	Chamber of Steel Industries, 120/192 (6), Lajpat Nagar, Kanpur
34	Shyam Ferrous Ltd, Gopal Nagar, GT Road, Fatehpur
35	Bhartiya Jan Kalyan Sanstha, Pavitrapuri, Anupshehar, Bulandshehar
36	Manju Gupta, Chief Elect. Dist. Engineer, NR Hd. Qrs. Office, Baroda House, New Delhi
37	Chitrakootdham Mandal Jal Sansthan, Bhuragarh, Banda
38	Jhansi Division Jal Sansthan, Jhansi
39	Allahabad Jal Sansthan, Khushrubagh, Allahabad
40	Uttar Pradesh Rajya Vidyut Parishad Abhiyanta Sangh, Hydrel Field Hostel, 17, Rana Pratap Marg, Lucknow
41	Janhit Manch, B-1076, Indira Nagar, Lucknow
42	Rajya Vidyut Parishad Junior Engineers Sangathan, Sahyog Sadan, 6-Gokhale Marg, Lucknow
43	Surya Pharmaceuticals, 71, Krishna Bagh, Nagwa, Varanasi
44	Vinod Malik, Meerut
45	Satish, Muzaffarnagar
46	Neeraj Tyagi, Sanyukt Vyapar Sangh, Meerut
47	Prasad, Farmer, Kankarkhera
48	MP Singh, IIA, Meerut
49	Shyam Mehrotra, Varanasi
50	Manniya Vidhayak, Varanasi
51	Dr. Manidh Kumar, Varanasi
52	Ajay Rai, Varanasi
53	Amit Maurya, Varanasi
54	BB Jindal, Lucknow
55	RC Verma, Assocham, Lucknow
56	AM Khan, President - Nursing Home Association, Lucknow
57	Kamal Negi, Lucknow
58	Gaurav Mathur, Northern Railways, Lucknow
59	TN Kaul, Lucknow
60	DK Agarwal, Industry Association, Lucknow
61	Krishna Kumar, Lucknow
62	Piyush Verma, Lucknow
63	Arun Mishra, Lucknow
64	Brijesh Shukla, Lucknow

7 CHAPTER -7: ANALYSIS OF ARR FOR FY 2006-07

- 7.1 The summary of ARR petitions as submitted by the licensees has already been presented in the chapter 5. In the current chapter, the Commission has determined and approved the ARR of the licensees and has elaborated upon the approach followed for the same.
- 7.2 However before elaborating the exercise of ARR/Tariff determination of the distribution companies, the Commission would like to make it clear at the outset that as FY 2006-07 has already passed, and in a way, the proposal as submitted by the distribution company of no tariff hike and that of bridging the Revenue Gap with the help of Government Support has already been implemented. In this context the Commission would also like to clarify that since the licensees have not proposed any tariff hike for meeting the revenue gap, rather all the gap is proposed to be bridged through efficiency improvements, committed Government subsidy including additional subsidy and through the Government support in the form of short term loans, therefore, any short fall in revenues or excess revenues will have to be adjusted against the Government support and the Commission shall not take into account any such gap for computation of tariffs in the future years.
- 7.3 The present exercise of ARR determination therefore is being carried out with the view only to validate the ARR requirements as submitted by the licensees.

POWER PURCHASE

Power procurement from State Generating Stations

- 7.4 The State of Uttar Pradesh has got both thermal as well as hydro generating stations. The total power available to the State from the State Thermal Generating Stations is 4087 MW and that from State Hydro Stations is 516.5 MW. Uttar Pradesh Rajya Vidyut Utpadan Nigam Limited (UPRVUNL) owns the entire thermal generating stations within the State and the Hydro Stations are owned by Uttar Pradesh Jal Vidyut Nigam Limited (UPJVNL).
- 7.5 The Commission has and issued separate multiyear tariff orders for the period FY 2005-06 to FY 2007-08, for UPRVUNL (order dated 13.03.2007) and UPJVNL (order dated 22.03.2007) for their different power stations. The cost of power procured by the Discoms from these stations has been derived based on the tariffs as approved by the Commission in the above referred tariff orders. A summary of approved costs of these generating stations is given below in a tabular form.

Table 7-1: Approved Cost of Power Procured from UPRVUNL Stations

Source of Power	MW Available	PLF (%)	MU Available	MU Procurement	Fixed Cost (Rs. Cr.)	Variable Cost (Rs. / kWh)	Variable Cost (Rs. Cr.)	Total Cost (Rs. Cr.)
Anpara A	630	75.00%	3561	3561	162.41	0.90	320.07	482.48
Anpara B	1000	80.00%	6065	6065	574.25	0.97	588.18	1162.44
Harduagunj	375	28.00%	496	496	81.69	2.28	113.13	194.82
Obra A	442	24.00%	1430	1430	85.82	1.42	203.33	289.15
Obra B	1000	55.00%	4192	4192	177.36	1.15	481.37	658.73
Panki	210	50.00%	784	784	50.33	1.97	154.15	204.49
Parichha	220	50.00%	994	994	52.68	1.31	130.48	183.16
Parichha Extn. (Available from 24th Nov 2006)	210	80.00%	1016	1016	45.41	1.05	107.12	152.52
	4087		18538	18538	1229.95	1.13	2097.83	3327.78

Table 7-2: Cost of Power Purchase from UPJVNL Stations

Source of Power	MW Available	MU Available	MU Procurement	Fixed Cost (Rs. Cr.)	Variable Cost (Rs. / kWh)	Variable Cost (Rs. Cr.)	Total Cost (Rs. Cr.)
Rihand	300.00	770	770	15.43	0.00	0.00	15.43
Obra (H)	99.00	270	270	6.78	0.00	0.00	6.78
Matatila	30.00	130	130	3.62	0.00	0.00	3.62
Khara	72.00	345	345	21.36	0.00	0.00	21.36
UGC Stations	15.50	25	25	3.93	0.00	0.00	3.93
	516.50	1540.00	1540	51.12	0.00	0.00	51.12

Obligatory Purchase from State Co-generation Facilities

7.6 In an effort to encourage renewable generation the Commission has mandated that the distribution licensees shall, based on availability, procure power to the tune of 7.5 % of their total power purchase requirement from the co-generating stations available in the State. Based on availability on such power, UPPCL has projected procurement of 500 MUs from such sources within the State at a total cost of Rs. 153.15 Crore . The Commission accepts the same.

Table 7-3: Approved power purchase from State Co-Gen facilities

Source of Power	MU Available	MU Procurement	Fixed Cost (Rs. Cr.)	Variable Cost (Rs. kWh)	Variable Cost / (Rs. Cr.)	Total Cost (Rs. Cr.)
Cogen Plants in UP	500.00	500.00	0.00	3.06	153.15	153.15

Power Procurement from Central Generating Stations

7.7 The filing by the licensees indicates UP's share in various Central Sector Generating Stations as below:

Table 7-4: Allocated Generation Capacity

Station Name	Installed Capacity (MW)	UP Share (MW)
NTPC		
Anta	419.3	104.80
Auriya	663.4	231.10
Dadri Gas	840.0	259.40
Dadri Thermal	829.8	84.00
Rihand-I	1000.0	361.10
Rihand-II	1000.0	331.50
Singrauli	2000.0	824.60
Tanda	440.0	440.00
Unchahar I	420.0	254.70
Unchahar II	420.0	143.80
Unchahar-III	210.0	69.60
NHPC		
Chamera	540.0	109.50
Chamera-II	300.0	74.80
Dhauliganga	280.0	65.90
Dulhasti	390.0	85.00
Salal I&II	690.0	48.00
Tanakpur	94.2	21.30
Uri	480	96.30
NPC		
NAPP	440	152.9
RAPP	400	78.32

Station Name	Installed Capacity (MW)	UP Share (MW)
Eastern Region		
Farakka	1630	23.7
Kahalgaoon	840	12.3
Talchar	1000	14.8
JV & IPP		
Naptha Jhakri	1500	256.0
Tala Power	1020	300.0
Tehri Stage-I	1000	350.0
Vishnuprayag	400	352.0

7.8 For projecting the cost of power purchase UPPCL from these generating stations licensees have made certain assumptions which are detailed below:

- The fixed and variable costs of Central Sector Hydro Plants have been taken from the actual energy bills of NHPC for the month of March 2006 and various tariff orders of CERC.
- Tariff for the new Hydro plants Commissioned in FY 2007 has been taken as

Table 7-5: Tariff for new hydro plants

Dulhasti	Rs. 4.00 / kWh
Tehri St – I	Rs. 3.50 / kWh
Tala Power	Rs. 3.50 / kWh
Vishnuprayag	Rs. 2.03 / kWh

- The variable costs of CGS thermal plants and other plants have been taken from the energy bills for the month of March 2006. The fixed costs have been taken from various tariff orders issued by CERC.
- The tariff for Narora Atomic Power Station has been taken as Rs. 1.92 / kWh as stated vide their letter no. NPCIL/COMML/2005-06/27 dated 3rd January 2006.
- Tariff for new Power station Unchahar-III has been taken as Rs. 2.95 / kWh. The variable cost of Unchahar-III has been taken as same as that of Unchahar – II.
- All variable costs of FY 2005-06 have been escalated @ 4% for inflation to arrive at the variable cost of FY 2006-07

7.9 Subject to assumptions stated above licensees have drawn a merit order schedule for procuring 50603 MU of power.

7.10 While the Commission provisionally accepts the merit order schedule and the petitioners' projection of fixed and variable costs for the central sector generating

stations, it directs the petitioner to submit all the details pertaining to the power purchase costs with supporting bills and other documents for the FY 2006-07. The petitioner must submit all such details relating to power purchase costs latest by 31st May 2007 capturing the impact of recent CERC orders wherein the fixed costs of the Central Generating Stations have gone down. UPPCL shall also submit the details of refunds, if any, received by it, as fallout of recent CERC orders.

Procurement from Other Sources/Emergency Purchases

7.11 The Commission has noted that licensees have included energy procurement of 2120 MU from 'other sources' at the rate of Rs. 5.50/unit. This cost is significantly higher than the average cost of power purchase of Rs. 2.20/unit as stated by the licensees in their submission. For the purpose of this order, the Commission has allowed the power procurement from other sources as projected by the Discoms. However, in future the Commission will go by the UPERC (Terms and Conditions of Distribution Tariff) Regulations, 2006, which are under notification. The Commission however, directs the Discoms to adopt a transparent procedure based on competitive bidding for procuring power on short term basis also.

7.12 In view of acute power crisis prevailing in the State, the Commission feels that the licensee shall procure all the power that becomes available to it from different sources at reasonable rates. Since, the licensees have indicated availability of 50603 MU of power, the Commission approves the same. The Commission has further, depending on the fixed and variable charges as projected by the petitioner for central sector generating stations and the cost as approved by the Commission for the State Sector Generating Stations, reworked the total cost of power purchase for 50603 MU of power as indicated in Table 7-6 below:

Table 7-6: Approved power purchase cost

Source of Power	MW Available	PLF (%)	MU Available	MU Procurement	Fixed Cost (Rs. Cr.)	Variable Cost (Rs./kWh)	Variable Cost (Rs. Cr.)	Total Cost (Rs. Cr.)
Procurement of power from State Sector Generating Stations								
Thermal Stations								
Anpara A	630	75.00%	3561	3561	162.41	0.90	320.07	482.48
Anpara B	1000	80.00%	6065	6065	574.25	0.97	588.18	1162.44
Harduaganj	375	28.00%	496	496	81.69	2.28	113.13	194.82
Obra A	502	24.00%	1430	1430	85.82	1.42	203.33	289.15
Obra B	1000	55.00%	4192	4192	177.36	1.15	481.37	658.73
Panki	210	50.00%	784	784	50.33	1.97	154.15	204.49

Source of Power	MW Available	PLF (%)	MU Available	MU Procurement	Fixed Cost (Rs. Cr.)	Variable Cost (Rs./ kWh)	Variable Cost (Rs. Cr.)	Total Cost (Rs. Cr.)
Parichha	220	50.00%	994	994	52.68	1.31	130.48	183.16
Parichha Extn. (Available from 24th Nov 2006)	210	80.00%	1016	1016	45.41	1.05	107.12	152.52
	4147		18538	18538	1229.95	1.13	2097.83	3327.78
Per unit Avg Rate of Thermal Generation								1.80
Hydro Stations								
Rihand	300		770	770	15.43	0.00	0.00	15.43
Obra (H)	99		270	270	6.78	0.00	0.00	6.78
Matatila	30		130	130	3.62	0.00	0.00	3.62
Khara	72		345	345	21.36	0.00	0.00	21.36
UGC Stations	15.5		25	25	3.93	0.00	0.00	3.93
	516.50		1540.00	1540	51.12	0.00	0.00	51.12
Per unit Avg Rate from hydro generating stations								0.33
Co-Generation Plants within the State								
Cogen Plants in UP			500	500	0.00	3.06	153.15	153.15
Sub-Total Own generation	4663.50		20578	20578	1281.07		2250.98	3532.05
Procurement of power from State Sector Generating Stations								
Chamera	109.50		410	410	52.99	0.000	0.00	52.99
Chamera-II	74.80		338	338	2.00	2.280	77.06	79.06
Dhauligan ga	65.90		223	223	43.52	0.000	0.00	43.52
Salal I&II	48.00		240	240	17.68	0.000	0.00	17.68
Tanakpur	21.30		102	102	11.26	0.000	0.00	11.26
Uri	96.30		534	534	104.15	0.000	0.00	104.15
Dulhasti	85.00		248	248	0.00	3.000	74.40	74.40
Sub-total NHPC	500.80		2095	2095	231.60		151.46	383.06
Auriya	231.10		1493	1493	47.99	3.585	535.24	583.23
Dadri	84.00		663	663	38.91	1.743	115.56	154.47

Source of Power	MW Available	PLF (%)	MU Available	MU Procurement	Fixed Cost (Rs. Cr.)	Variable Cost (Rs./ kWh)	Variable Cost (Rs. Cr.)	Total Cost (Rs. Cr.)
Thermal								
Dadri Gas	259.40		1851	1851	68.72	3.556	658.22	726.94
Rihand-I	361.10		2122	2122	206.28	0.857	181.86	388.14
Rihand-II	331.50		2042	2042	47.68	0.947	193.38	241.06
Singrauli	824.60		5824	5824	162.75	0.949	552.70	715.45
Tanda	440.00		2920	2920	215.14	1.734	506.33	721.47
Unchahar I	254.70		1830	1830	110.11	1.289	235.89	346.00
Unchahar II	143.80		1020	1020	72.65	1.303	132.91	205.56
Unchahar-III	69.60		180	180	29.30	1.303	23.45	52.75
Sub-Total NTPC	3104.60		20660	20660	1022.39		3371.42	4393.81
Others								
NAPP	152.9		865.00	865.00	0.00	1.915	165.65	165.65
RAPP	78.32		440.00	440.00	0.00	2.834	124.70	124.70
ER								
Talchar	14.8		109.00	109.00	7.25	0.722	7.87	15.12
Kahalgaon	12.3		74.00	74.00	5.25	1.291	9.55	14.80
Farakka	23.7		129.00	129.00	9.04	1.323	17.07	26.11
Nathpa Jhakri			1097.00	1097.00	0.00	2.350	257.80	257.80
Tala Power			675.00	675.00	0.00	3.500	236.25	236.25
Vishnuprayag			1161.00	1161.00	0.00	2.190	254.26	254.26
Tehri Stage-I			600.00	600.00	0.00	3.500	210.00	210.00
Others			2120.00	2120.00		5.500	1166.00	1166.00
Sub-total Others	282.02		7270.00	7270.00	21.54		2449.15	2470.69
Total Purchases from CGS	3887		30025	30025	1276		5972	7248
Grand Total of Power Purchase	8550.92		50603.00	50603.00	2556.60		8223.01	10779.61

7.13 According to the computations shown above the total cost of power purchase cost stands at Rs. 10779.61 crore as against the projections of licensees of Rs. 11466 crore. The cost as indicated for Central Sector Generating Stations is inclusive of Transmission charges to be paid to Power Grid Corporation of India Ltd.

TRANSMISSION CHARGES

7.14 The licensees have computed intra-state transmission charges as Rs. 0.198/unit as discussed in chapter 5. For approving the transmission charges, the Commission has assumed that the entire ARR of the Transco would be recovered through transmission charges from the licensees. The Commission has approved total transmission charges of Rs. 802.05 crore against Rs.953 crore claimed by the Transco in its petition. The detailed computations of determination of Transmission Charges are detailed in subsequent sections of this chapter.

TRANSMISSION & DISTRIBUTION LOSSES

7.15 The Commission had, in consultation with UPPCL, prescribed the following multi-year loss levels and collection efficiency targets in its tariff order for FY 2001-02 for a period of 5 (five) years. This was done to fix achievable and quantified targets for UPPCL, and also to encourage UPPCL to exceed the targets and thereby retain the benefits of improved performance. For an environment where the starting levels of losses were quite high, the Commission felt that the reduction trajectory envisaged was not only desirable, but also achievable. The efficiency parameters established by the Commission are stated in the table below.

Table 7-7: Transmission and Distribution Loss Targets of licensees

	FY 2001-02	FY 2002-03	FY 2003-04	FY 2004-05	FY 2005-06
T&D Losses %	36.4	33.4	30.4	27.4	23.9
Reduction %		3.00	3.00	3.00	3.50
Collection Efficiency %	85	88	91	94	99
Collection Improvement %		3.00	3.00	3.00	5.00

7.16 The losses for FY 2001-02 were set at the base level of loss for FY 2000-01, less the loss reduction for FY 2001-02 proposed by the licensee in its petition. The very purpose of the setting multi year targets to the licensee was to prescribe a long-term business plan that was reasonable and achievable. However, the licensee has not made efforts to realize the targets and therefore now appear to be unachievable.

7.17 The licensees have submitted that the targeted level of losses could not be achieved because of various constraints during the transitional period of reform. They have proposed T&D losses of 32% for Discoms and Transco combined for FY 2006-07 and it has been submitted that the same is achievable.

7.18 The Commission however, does not find any justification to depart from the loss reduction targets prescribed for Consolidated UPPCL in tariff order for FY 2001-02, which were specified in consultation with the licensees. However, since the T&D loss trajectory, as specified by the Commission, has expired in the financial year, 2005-06 with the loss level of year 2005-06 never applied in absence of a tariff order for the year due to reasons attributable to the licensee, and the Commission has to specify a new trajectory for loss reduction under the new UPERC (Terms and Conditions for determination of distribution tariff) Regulation 2006 (under notification) after a proper loss study is being carried out in the State, the Commission therefore, for the year under consideration, retains the loss level of financial year 2004-05 i.e. 27.4% for the purposes of this tariff order also. **Thus, T&D losses in this Tariff Order have been considered as 27.4% for Consolidated Discoms.**

7.19 The approved Discom wise T&D losses have been assessed by the Commission in proportion to the losses proposed for each of the licensees for FY 2006-07 in the petition:

Table 7-8: Approved T&D Loss for FY 2006-07

FY 2006-07 Approved	Consolidated UPPCL	Meerut	Agra	Lucknow	Varanasi
T&D Losses %	27.4	29.1	29.1	22.4	26.7

7.20 At this stage it may be appropriate to mention that the losses in the Transmission Network have been considered as 5% by the licensees, though no rationale and justification for the same has not been provided.

7.21 The Commission would like to reiterate that, in the future, any Transmission & Distribution loss proposal of the licensees will be liable to be rejected unless and until based on correct energy audit data. Obviously, to comply with such requirement licensees will have to install meters at all the interface points as well as the distribution transformers and feeders.

ENERGY BALANCE

7.22 The Commission has already approved the total power purchase requirement of 50603 MU as submitted by the licensees. Starting from this approved power purchase quantum, the Commission has applied the approved T&D loss figure of 27.4% to arrive at the quantum of sales. As against the petitioners' projection of energy sales of 34410 MUs the Commission has computed energy sales of **36738 MUs** for the Discoms.

Table 7-9: Approved Energy Balance for FY 2006-07

Licencsee	FY 2006-07 Petition	FY 2006-07 Approved
Sales (MU)		
UPPCL(Consolidated Discom)	34410	36738
MEERUT (Incl. Bulk)	10,761	11,559
AGRA (Incl. Bulk)	9,217	9,898
LUCKNOW	6,432	6,760
VARANASI	8,000	8,520
T&D Losses (%of net generation)		
UPPCL(Consolidated Discom)	32.0%	27.4%
MEERUT (Incl. Bulk)	34.0%	29.1%
AGRA (Incl. Bulk)	34.0%	29.1%
LUCKNOW	26.2%	22.4%
VARANASI	31.1%	26.7%
Purchases Required (MU)-Net Generation		
UPPCL(Consolidated Discom)	50603	50603
MEERUT (Incl. Bulk)	16,314	16,314
AGRA (Incl. Bulk)	13,957	13,957
LUCKNOW	8,716	8,716
VARANASI	11,616	11,616
Energy Received By DisCom-(MU)		
UPPCL(Consolidated Discom)	48073	48073
MEERUT (Incl. Bulk)	15,498	15,498
AGRA (Incl. Bulk)	13,260	13,260
LUCKNOW	8,280	8,280
VARANASI	11,035	11,035

7.23 Accordingly, the Discom wise power purchase requirement and approved sales are as given below in the table.

Table 7-10: Approved energy requirement

	MERUT	AGRA	LUCKNOW	VARANASI	TOTAL DISCOM
Energy Sales	11,559	9,898	6,760	8,520	36,738
Distribution Loss	25.4%	25.4%	18.4%	22.8%	23.6%
T&D Loss approved	29.14%	29.08%	22.44%	26.65%	27.40%
Energy Input to Discom	15498	13259	8280	11035	48,072
Transmission Loss	5%	5%	5%	5%	5%
Energy Input Before Transmission	16314	13957	8716	11616	50,603
Power Purchase (MU)	16314	13957	8716	11616	50,603

Revenue from sale of power

7.24 Revised sales figures correspond to additional sales of 2328 MU over and above the licensees' projections. This quantum of additional sales has been allocated among all the categories in proportion to the contribution in the total sales (as projected by the petitioner). The category-wise break-up of approved sales is as given below:

Table 7-11: Approved Sales FY 2006-07

Summary FY 2006-07	Sales (Approved) - (MU)				
	Meerut	Agra	Lucknow	Varanasi	Total
LMV 1: Domestic Light, Fan and Power	4,299	2,558	3,593	3,644	14095
LMV 2: Non-Domestic Light, Fan and Power	706	652	537	614	2510
LMV 3: Public Lamps	107	105	147	111	471
LMV 4: Public/Private Institutions	326	360	444	525	1655
LMV 5: Private Tubewells	1,534	927	571	815	3847
LMV 6: Small and Medium Power	612	467	265	326	1669
LMV 7: Public Water Works	174	206	173	228	780

Summary FY 2006-07	Sales (Approved) - (MU)				
	Meerut	Agra	Lucknow	Varanasi	Total
LMV 8: State Tubewells	279	337	479	640	1735
LMV 9: Temporary Supply	19	22	22	2	65
LMV 10: Department Employees/Pensioners	40	31	37	35	143
HV 2: Large and Heavy Power	3058	1083	547	889	5,577
HV 3: Railway Traction	0	239	29	415	682
HV 4: Lift Irrigation Works	0	80	59	344	483
Sub-Total	11155	7066	6903	8589	33713
Bulk and Extra Supply	377	2639	5	5	3025
Total	11532	9705	6909	8593	36738

7.25 Based on the above approved sales projections, revenue from sale of power has been computed for consolidated Discoms based on the category-wise demand charges and energy charges as per the Tariff Order for FY 2004-05. The category-wise revenue for consolidated Discoms has then been allocated to each Discom in proportion to the sales of a particular Discom in each category. For bulk and extra supply category, revenue has been accepted as proposed by the licensees. The category-wise and Discom-wise revenue from sale of power as approved by the Commission for FY 2006-07 is as below:

Table 7-12: Approved revenue from sale of power

FY 2006-07: Revenue (Approved)					
	Meerut	Agra	Lucknow	Varanasi	Total
LMV 1: Domestic Light, Fan and Power	948	564	792	804	3109
LMV 2: Non-Domestic Light, Fan and Power	220	203	167	191	780
LMV 3: Public Lamps	27	27	37	28	119
LMV 4: Public/Private Institutions	112	123	152	180	568
LMV 5: Private Tubewells	152	92	56	81	380

FY 2006-07: Revenue (Approved)					
	Meerut	Agra	Lucknow	Varanasi	Total
LMV 6: Small and Medium Power	276	210	119	147	752
LMV 7: Public Water Works	59	70	59	77	266
LMV 8: State Tubewells	60	72	102	137	371
LMV 9: Temporary Supply	8	9	9	1	26
LMV 10: Department Employees/Pensioners	4	3	4	4	15
HV 2: Large and Heavy Power	1,357	481	243	395	2475
HV 3: Railway Traction	0	107	13	186	306
HV 4: Lift Irrigation Works	0	35	26	152	213
Sub-Total	3,222	1,996	1,780	2,381	9379
Bulk and Extra Supply	111	501	1	0	613
Total	3,333	2,497	1,781	2,381	9992

7.26 As can be seen from the above table, the revenue from sale of power is Rs. 9992 crore as against the licensees' petitioned revenue from sale of power of Rs. 9184 crore.

7.27 For determining the revenue projection for FY 2006-07, the Commission has applied the existing tariff on the projected sales and connected load as mentioned by the licensees in their petition.

ANNUAL REVENUE REQUIREMENT FOR FY 2006-07 - DISCOMS

7.28 The ARR comprises of the following components:

- Power purchase costs
- Employee costs
- Administration and general expenses
- Gross fixed assets (GFA) balances and capital formation assumptions
- Repairs and maintenance expenses
- Provision for bad and doubtful debts
- Interest expense
- Depreciation expense

- Other income
- Special appropriations
- Return on capital base and loan balances

7.29 In the following section, the details of above cost elements as approved by the Commission have been summarized along with its rationale.

Power Purchase Costs

7.30 The power purchase quantum as well as costs approved by the Commission for FY 2006-07 has already been discussed above.

Employee Expenses

7.31 The employee expenses for the FY 2006-07 have been forecasted by the licensees based on provisional accounts of the respective licensees for the FY 2004-05. Licensees have further made certain assumptions for forecasting the employee expenses which are detailed below:

- Basic Salaries, Bonus/ Ex-gratia and Other Allowances will decrease by 5% per year. This decrease is a result of continuing staff attrition and selective hiring practices.
- Dearness Allowance (DA) is estimated to be 68.5% of basic pay in FY 06 and with the merger of DA in FY 07 it is assumed to be 23% anticipating an equal DA increase in FY 07 as in FY 06 i.e. 4.5% (3 % half yearly).
- Arrears of D A merger which is applicable since FY04 is included in the interim relief reflecting a higher value in FY07 as compared to FY06 & FY05. Amount included in FY07 is half of the total arrear & remaining will be included in FY08 as per order of the UPPCL.
- Likewise, Medical Expenses have been forecast to increase by 6% per year from FY05.
- Pension and Gratuity have been calculated at 16.7% and 2.38% (i.e., 19.08%) of Basic Salary and Dearness Allowance.
- All other expenses have been forecast to grow at 3% per year.
- Employee Expenses Capitalised has been calculated as 15% of total Employee Costs, although the capitalization rates actually used by the DisComs in FY05 have varied.

In absence of any finalized accounts for the FY 2003-04 onwards the commission accepts the employee expenses as projected by the licensees based on the provisional accounts for the FY 2004-05. The Commission has however, based on applicable DA rates considered average DA @29.25% for the year under consideration instead of the licensees projected rate of 23%.

7.32 The Commission thus approves the employee expenses (before capitalization) of Rs. 818.51 crore as against Rs. 789.17 crore projected by the licensees. It may be pointed out here that the employee expenses projected by the licensees for FY 2006-07 are even less than the employee expenses of Rs. 795.2 crore approved by the Commission in its last Tariff Order for FY 2004-05.

7.33 Licensees have capitalized Employee expenses @ 15% of the total employee expenses. In this context the Commission would like to reiterate that the licensees need to have a clear policy of capitalization of salaries & wages and suggests that the licensees appoint a reputed firm to suggest an appropriate policy on capitalization of salaries & wages. For the purposes of this tariff order, capitalization @15% of the total employee expenses has been accepted by the Commission. This is consistent with the approach adopted by the Commission in its last Tariff Order for FY 2004-05. The net employee expense (after capitalization) accordingly becomes Rs. 695.73 crore for FY 2006-07.

Table 7-13: Approved employee expenses

Discom	Employee Expenses - FY 2006-07					
	Petitioner			Commission		
	Gross Employee Expenses	Capitalized	Net	Gross Employees Exp with DA @29.25%	Capitalized	Net Employees Expenses
Agra	150.10	22.52	127.58	155.69	23.35	132.33
Lucknow	213.91	32.09	181.82	221.87	33.28	188.59
Meerut	189.48	28.42	161.06	196.54	29.48	167.06
Varanasi	235.68	35.35	200.33	244.41	36.66	207.75
Total	789.17	118.38	670.79	818.51	122.78	695.73

7.34 The Commission in the previous tariff order had directed the licensees to undertake a fresh actuarial valuation study. The study being adopted for the purposes of estimating employers' contribution towards pension and gratuity are outdated and therefore require revalidation.

Administration and General Expenses (A&G Expenses)

7.35 The expense figures submitted under this head by the licensees are based on provisional accounts of the respective licensees for FY 2004-05. The projected A&G expenses include an amount of Rs. 40 Crore towards the Fringe Benefit Tax (FBT) for the FY 2005-06. The amount of FBT has been merged with the expenses under the head "Rent, Rates & Taxes" in the total A&G expenses. The licensees have submitted that A&G expenses are forecasted to increase by 2% per year across the board and that such an increase is much lower compared to current inflation rate.

- 7.36 In reply to the deficiency memo issued by the Commission, the licensees submitted that the amount of FBT paid during FY 2005-06 for all the four Discoms was Rs.1.42 Crore as against the provision of Rs. 40 Crore. Accordingly, the Commission disallows the balance amount of Rs. 38.58 Crore for the FY 2005-06. Allowing an escalation of 2% on above the Commission disallows an amount of Rs. 39.35 Crore from the total projected A&G expenses of 131.01 Crores for the FY 2006-07.
- 7.37 For the purpose of this Tariff Order, the Commission has adopted the provisional accounts figures submitted by the licensees and the Commission believes that the assumptions made by the licensee in determining the projected figures are reasonable.
- 7.38 The Commission would like to point out that since the figures are based on the Discom specific provisional balance sheets, the variation in A&G expenses between the Commission approved figures and the actual expenses incurred for FY 2006-07 will be subject to true-up once audited accounts for FY 2006-07 are finalized.
- 7.39 The Commission thus accepts A&G expense (before capitalization) of Rs. 91.66 crores as against Rs. 131.01 crore projected by the licensees and A&G expense (after capitalization) of Rs. 77.91 crores as against Rs. 111.36 crore projected by the licensees.

Table 7-14: Approved A&G expenses

Administrative & General Expenses (A&G) - FY 2006-07								
	Gross A&G Expenses	Rent, Rates & Taxes	Allocation of FBT of Rs. 40.80 Lacs	Gross A&G Expenses without FBT	Actual FBT during 05-06 with 2% escalation	Gross A&G Expense s wit FBT	Capita lised	Net Employee s Expenses
Agra	33.26	9.14	8.82	24.44	0.43	24.87	3.73	21.14
Lucknow	35.72	10.56	10.19	25.53	0.14	25.67	3.85	21.82
Meerut	32.32	9.69	9.35	22.97	0.43	23.40	3.51	19.89
Varanasi	29.71	12.89	12.44	17.27	0.45	17.72	2.66	15.06
Total	131.01	42.28	40.80	90.21	1.45	91.66	13.75	77.91

GFA balances and capital formation assumptions

- 7.40 The Commission in its last tariff order for the FY 2004-05 had approved the gross fixed assets (GFA) of Rs. 8000 crores as on 31st March 2005 for the Discoms together. Now, as per the provisional accounts for the FY 2005-06, the closing GFA is Rs. 7663 crores which is accepted by the Commission for the purpose of this tariff order.
- 7.41 The Commission would like to state that since the figures are based on the Discom specific provisional balance sheets, the variation in GFA between the Commission approved figures and the actual expenses incurred for FY 2005-06 will be subject to true-up once audited accounts for FY 2005-06 are finalized.

7.42 The Commission has scrutinized the investment plan and assets capitalization as submitted by the Discoms. The licensees have considered investments of Rs. 718.30 crore in FY 2005-06 for consolidated Discoms. However, the licensees have not submitted any details of the activities undertaken under the investment plans. The Commission has not considered investments to the extent funded by grants (Rs. 99.95 crore), as they are not eligible for depreciation as per the Accounting Standard -12 for "Accounting for Government Grants" issued by the Institute of Chartered Accountants of India. Also, the licensees have mentioned investments funded through equity to the extent of Rs. 400 crore (rural electrification) for which no details have been submitted. The Commission has thus disallowed the same for lack of sufficient supporting information. The Commission has thus approved investments of Rs. 219 crore for FY 2005-06. This is shown in the following table:

Table 7-15: Approved capitalization of investments for FY 2005-06

(Rs. Crore)	Investments (Petition)	Approved Investments	Expenses	Interest	Total (A)	70% of A	Opening WIP	Total Capitalized
Agra	171	52.10	24.50	5.00	81.60	57.12	82.00	139.12
Lucknow	195	59.41	33.60	8.00	101.01	70.71	343.00	413.71
Meerut	144	43.87	29.78	8.00	81.65	57.16	383.00	440.16
Varanasi	209	63.67	35.55	5.00	104.23	72.96	86.00	158.96
Total	719	219.05	123.44	26.00	368.49	257.94	894.00	1151.94

7.43 The Commission has considered total investments (including capitalized expenses and interest) of Rs. 368.49 crore for FY 2005-06. The licensees have considered capitalization of investments as the sum of opening WIP and 70% of the investments made during the year, expenses capitalized and interest capitalized. This approach has been accepted by the Commission and as illustrated in the above table, total capitalization of Rs. 1151.94 crore has been approved by it for consolidated Discoms for FY 2005-06.

7.44 Considering the total capitalization approved by the Commission for FY 2005-06 as above, the capital formation for the Discoms is as following:

Table 7-16: Approved GFA & Depreciation for FY 2005-06

Gross Fixed Assets and Depreciation: FY 2005-06									
	Depreciation Rate	Opening as on 01.04.05 - As per Petition	Opening Accumulated Depreciation	Net Fixed Assets	Addition	Depreciation on Op GFA	Closing Accumulated Depreciation	Closing GFA	Closing NFA
Agra	7.84%	1683.00	888.00	795.00	139.12	131.95	1019.95	1822.12	802.17
Lucknow	7.84%	1604.00	814.00	790.00	413.71	125.75	939.75	2017.71	1077.96
Meerut	7.84%	2377.00	1380.00	997.00	440.16	186.36	1566.36	2817.16	1250.80

Gross Fixed Assets and Depreciation: FY 2005-06									
	Depreciation Rate	Opening as on 01.04.05 - As per Petition	Opening Accumulated Depreciation	Net Fixed Assets	Addition	Depreciation on Op GFA	Closing Accumulated Depreciation	Closing GFA	Closing NFA
Varanasi	7.84%	1999.00	966.00	1033.00	158.96	156.72	1122.72	2157.96	1035.24
Total		7663.00	4048.00	3615.00	1151.94	600.78	4648.78	8814.94	4166.16

7.45 Similar methodology has been followed by the Commission for estimating the capital formation for the Discoms for FY 2006-07. The Commission has not considered investments to the extent funded by grants (Rs. 210 crore), as they are not eligible for depreciation as per the Accounting Standard -12 of Accounting for Government Grants issued by the Institute of Chartered Accountants of India. Also, the licensees have mentioned investments funded through equity to the extent of Rs. 2342 crore (rural electrification) for which no details have been submitted whatsoever. The Commission has thus disallowed the same for lack of sufficient supporting information. The Commission has thus approved investments of Rs. 1005.11 crore for FY 2006-07. This is represented in the following table:

Table 7-17: Approved capitalization of investments for FY 2006-07

(Rs. Crore)	Investments (Petition)	Approved Investments	Expenses	Interest	Total (A)	70% of A	Opening WIP	Total Capitalized
Agra	845.99	239.05	27.08	14.61	280.74	196.51	24.48	221.00
Lucknow	964.72	272.60	37.13	18.99	328.72	230.10	30.30	260.41
Meerut	712.41	201.30	32.99	18.11	252.40	176.68	24.50	201.17
Varanasi	1033.99	292.17	39.32	16.76	348.24	243.77	31.27	275.04
Total	3557.11	1005.11	136.53	68.46	1210.10	847.07	110.55	957.61

7.46 Considering the opening WIP, investment plans, expenses capitalized and interest capitalized approved by the Commission for FY 2006-07, total assets capitalization of Rs. 957.61 crore has been approved by the Commission for consolidated Discoms for the corresponding year.

7.47 The CWIP for FY 2006-07 is summarized in the following table:

Table 7-18: Approved WIP for FY 2006-07

	Opening WIP as on 01.04.06	Investments	Capitalized		Total	Transferred to GFA	Closing WIP as on 31.03.07
			Expenses	Interest			
Agra	24.48	239.05	27.08	14.61	305.22	221.00	84.22
Lucknow	30.30	272.60	37.13	18.99	359.02	260.41	98.62
Meerut	24.50	201.30	32.99	18.11	276.89	201.17	75.72
Varanasi	31.27	292.17	39.32	16.76	379.51	275.04	104.47
Total	110.55	1005.11	136.53	68.46	1320.64	957.61	363.03

7.48 Considering the total capitalization approved by the Commission for FY 2006-07 as discussed above, the projected asset capitalization for the Discoms approved by the Commission is as following:

Table 7-19: Approved GFA & Depreciation for FY 2006-07

Gross Fixed Assets and Depreciation: FY 2006-07									
	Depreciation Rate	Opening as on 01.04.06	Opening Accumulated Depreciation	Net Fixed Assets	Addition	Depreciation on Op GFA	Closing Accumulated Depreciation	Closing GFA	Closing NFA
Agra	7.84%	1822.12	1019.95	802.17	221.00	142.85	1162.80	2043.12	880.31
Lucknow	7.84%	2017.71	939.75	1077.96	260.41	158.19	1097.94	2278.12	1180.17
Meerut	7.84%	2817.16	1566.36	1250.80	201.17	220.86	1787.22	3018.33	1231.11
Varanasi	7.84%	2157.96	1122.72	1035.24	275.04	169.18	1291.91	2433.00	1141.09
Total		8814.94	4648.78	4166.16	957.61	691.09	5339.87	9772.56	4432.69

Repair and Maintenance (R&M) Expenses

7.49 The licensees have estimated the R&M expenses for FY 2006-07 as 2.5% of opening GFA for distribution assets in the corresponding year. This was also the methodology adopted by the Commission in the previous tariff order(s). The Commission has considered the investments financed by the grants for the purpose of R&M only and accordingly allowed additional R&M on Rs. 99.95 crores of investments during FY 2005-06.

- 7.50 Considering the opening GFA as computed in the previous section, the R&M expense approved by the Commission for FY 2006-07 are as given below:

Table 7-20: Approved R&M expense for FY 2006-07

% of Opening GFA		
Discom	Petitioner	Approved
Agra	47.66	46.07
Lucknow	52.83	51.01
Meerut	72.21	71.23
Varanasi	56.52	54.56
Total	229.22	222.87

- 7.51 The Commission considers repairs & maintenance expense as critical and therefore approves repairs & maintenance expense of Rs. 222.87 crore. However this amount is provisional in nature and the actual approval would be based on amount spent prudently in R&M works over the year.

Escalation Index

- 7.52 The Commission has suggested formulation of an escalation index linked to WPI and CPI as notified by the Central Government for different years in its UPERC (Terms and Conditions of Distribution Tariff) Regulations, 2006, which are under notification. As per above Regulations for determination of the O&M expenses (which includes employee, A&G and R&M expenses) for the year under consideration, the O & M expenses of the base year shall be escalated at inflation rates notified by the Central Government for different years. The inflation rate for above purpose shall be the weighted average of Wholesale Price Index and Consumer Price Index in the ratio of 60:40. While approving the future ARR, the Commission shall adopt the escalation index as prescribed under above referred Regulations.

Provision for bad and doubtful debts

- 7.53 Treatment of bad debts has been a persistent area, on which there has always been a difference of opinion between the licensees and the Commission in the past. In their filing for FY 2006-07, the licensees have proposed provisioning of 10% of the incremental receivables in FY 2006-07 amounting to Rs 92 crore.
- 7.54 In the tariff order for the FY 2004-05, the Commission has pointed out that it is not averse to allowing some provision for bad and doubtful debts in the course of normal operations of the Utility. However such provisioning needs to be backed up with

processes to identify consumers who are not paying and then making adequate attempts to collect from such consumers.

- 7.55 In all its past orders the Commission has emphasized that, in the absence of a clear policy and procedure for identifying and writing off the receivables, the provisioning for bad and doubtful debts can not be allowed. The Commission has repeatedly emphasized the need for conducting such investigation and write-off periodically. Unless this basic requirement is adhered to, it is not feasible for the Commission to permit fresh provisions. **The Commission hereby directs the licensees to form a clear policy as defined in UPERC (Terms and Conditions of Distribution Tariff) Regulations, 2006, which are under notification.**
- 7.56 In absence of any clear cut policy the Commission disallows the provision for bad and doubtful debts for the FY 2006-07 also.

Depreciation Expense

- 7.57 In the previous tariff order, on account of lack of details of fixed assets register, the Commission had assessed depreciation on the basis of weighted average depreciation rates as against specific depreciation rates for each class of asset. In absence of any additional information, for the purposes of this order also the Commission is compelled to continue with the practice of adopting weighted average depreciation rates. In its previous tariff order the Commission had mentioned that the weighted average depreciation rate was 7.84% for distribution. The Commission has adopted these depreciation rates for the purposes of this tariff order as well.
- 7.58 The opening GFA considered is as per the Commission's approved figures computed in the section on GFA and capital formation. Based on the above specified weighted average depreciation rate of 7.84% and the opening approved GFA figures the Commission approves depreciation expense of Rs. 691.09 crore for FY 2006-07 for consolidated Discoms.
- 7.59 The Commission reiterates its direction to the licensees to ensure that they maintain proper and detailed fixed assets registers to work out the depreciation expense as specified in the UPERC (Terms and Conditions of Distribution Tariff) Regulations, 2006 which are under notification. Licensees are directed to submit a report to the Commission citing clearly as to how they are maintaining fixed assets registers for the various assets.

Interest and Financing Cost

- 7.60 The Commission has computed the interest and finance charges for FY 2006-07 based on the approved investment plan for Discoms. This has already been discussed in the section on GFA and capital formation. A debt-equity ratio of 70:30 has been considered

for investment under various plans, in consonance with the UPERC (Terms and Conditions of Distribution Tariff) Regulations, 2006, which are under notification.

Table 7-21: Approved Interest charges for FY 2006-07

	Meerut	Agra	Lucknow	Varanasi	Total	Rate of Interest
GoUP Loan						
GoUP APDRP	12.65	7.11	10.67	11.86	42.28	12.50%
GoUP APDRP	13.38	7.48	11.32	12.59	44.78	12.50%
IBRD	115.65	63.36	170.26	52.33	401.6	13.50%
PFC - Distribution	97.58	92.53	76.02	90.01	356.1	9%
PFC - APDP - Distribution	0	0	0	0	0	0
UPSIDC	26.31	3.21	2.31	2.35	34.19	12%
REC	239.32	210.6	239.32	268.0	957.3	10.11%
REC New Loans	24.07	25.1	23.22	19.02	91.42	9.25%
IDBI	2.89	2.42	2.79	3.05	11.14	11.75%
Working Capital Loans Banks	0	0	0	0	0	0
Working Capital Loans PFC	150	138	150	175	613	7%
Working Capital Loans REC	350	350	350	350	1400	7.50%
Others	11.52	6.95	22.57	20.84	61.88	12%
Total as on 01.04.06 as per Petition	1043.4	907	1059	1005	4014	
Total as on 31.03.07 as per Petition	1398.4	1217	1327.3	1270	5212	
Average Loans - FY 2005-06-07	1220.9	1062	1192.9	1137	4613	
Total Interest on existing Loans as per Petition (Formats)	84.56	66.81	83.56	73.21	308	
Weighted average Interest & Finance Charges on average loans	6.93%	6.29%	7.00%	6.44%	6.68%	
Debt Portion of Investments approved	70.00%	70.00%	70.00%	70.00%		

	Meerut	Agra	Lucknow	Varanasi	Total	Rate of Interest
Addition of Loans during FY 2006-07	176.68	196.5	230.10	243.8	847	
Total as on 31.03.07 as per Commission	1220	1103	1288.6	1249	4861	
Average Loans - FY 2005-06-07 as per Commission	1131.7	1005	1173.5	1127	4437	
Total Interest Charges as per Commission	78.38	63.25	82.20	72.54	296.41	
Rate of Capitalization as approved by Commission in Last Tariff Order	23%	23%	23%	23%	23%	
Capitalization of Interest	18.11	14.61	18.99	16.76	68.46	
Net Interest Charges	60.28	48.64	63.21	55.79	227.9	

7.61 The licensees have however not submitted any information on the loan-wise/ source-wise debt funding for various investment plans envisaged for FY 2006-07. In absence of actual details of loans and advances, the Commission has assumed the opening & closing loan balances for FY 2006-07 and also total interest charges for various loans as submitted by the licensees in their petition. Discom-wise weighted average interest charges have been computed on the basis of total interest charges on average of opening & closing of loans as submitted by the licensees. This average rate of interest charges has been applied on the new loans for FY 2006-07 (corresponding to the debt component of approved investments) and also on opening loans to compute the interest charges for the total loans. Total interest charges of Rs. 296.41 crore has thus been approved by the Commission for FY 2006-07 for consolidated Discoms.

7.62 Interest charges have been capitalized at the rate of 23%, consistent with the methodology followed by the Commission in the last Tariff Order for FY 2004-05. Accordingly, interest and financing charges (net of capitalization) of Rs. 227.95 crore are approved by the Commission for FY 2006-07.

7.63 In the context of other interest and finance charges, the Commission has approved cost of raising finance as 1% of the loan drawals for the year. This is as per the methodology followed by the Commission in its last Tariff Order for FY 2004-05. The Commission has approved other charges as projected by the licensees. Interest to

consumer on security deposits has been computed at the bank rate as per RBI, which is 6% at present. Other interest and finance charges as approved by the Commission are thus, as given below:

Table 7-22: Approved Other Interest & Finance Charges FY 2006-07

	Meerut		Agra		Lucknow		Varanasi		Consolidated	
	Petitioner	Commission	Petitioner	Commission	Petitioner	Commission	Petitioner	Commission	Petitioner	Commission
Cost of raising finance	2.41	1.77	2.30	1.97	1.69	2.30	1.85	2.44	8.25	8.47
Other charges	0.45	0.45	0.35	0.35	0.35	0.35	0.50	0.50	1.65	1.65
Interest to consumers on Security Deposits @ Bank Rate	6.82	18.06	2.64	6.48	2.30	5.46	8.19	17.10	19.95	47.10
Total	9.68	20.28	5.29	8.80	4.34	8.11	10.54	20.04	29.85	57.22

Other Income

7.64 As per the licensee, 'other income' includes other miscellaneous income from retail sources, non-tariff income and revenue support from the GoUP. The 'other income from retail sources' includes miscellaneous revenues from consumers, but excludes Delayed Payment Surcharges, and is assumed to grow in line with the increase in sales revenue. Accordingly, other income from retail sources has been projected by the licensees at Rs. 117 crore for FY 2006-07. Non-tariff income includes interest on loans and advances to employees and income from fixed rate investment deposits and interest on loans and advances to licensees. The licensees have projected a non-tariff income of Rs. 9 crore for FY 2006-07.

7.65 The Commission has accepted Other Income for each Licensee at the levels submitted in the petition. The details of the same are tabulated below

Table 7-23: Approved other income for FY 2006-07

Other Incomes - FY 2006-07		
	Petitioner	Approved
Agra	25	25
Lucknow	14	14
Meerut	44	44
Varanasi	43	43
Total	126	126

- 7.66 The licensees have also submitted that as per Financial Restructuring Plan (FRP) of 2003, the GoUP has agreed to provide a subsidy of Rs. 1012 crore in FY 2006-07 towards subsidized Tariffs for Rural Domestic and PTW categories.
- 7.67 UPPCL submitted a letter (no. 291/PSE/24/1/206/54P) dated 14th November 2006 from Principal Secretary (Energy), which indicated that a further support of Rs. 500 crore as subsidy will be provided to meet the revenue gap. The detail allocation for the same to distribution companies has not been provided in the letter.

True Up And Special Appropriations

- 7.68 As per the UPERC (Terms and Conditions of Distribution Tariff) Regulations, 2006 which are under notification,

“Subject to other provisions of these regulations, the ARR determined by the commission for any financial year shall be trued up on the basis of actual financial and operational results. Any deficit or surplus arising out of such true up shall be adjusted while determining the tariff for the subsequent years.

Provided that the Commission may allow higher expenditure actually incurred by the licensee in any financial year on account of non controllable factors i.e. factors beyond the control of licensee after due verification of such expenses and prudence check.”

- 7.69 Accordingly, the Commission has in principle accepted the philosophy of truing up however, the same needs to be done keeping in view the over all proposal of the licensee. The proposal of no tariff hike in itself is contradictory to the requirement of truing up as a true up would necessarily mean a transfer of commensurate burden on consumers in terms of hike in the retail tariffs, which has not been sought by the licensees. Licensees have instead proposed to bridge the revenue gap from the state government subvention, which the licensee is at liberty to do. Further, the exercise of true up carries no significance in absence of audited accounts as such a true up without firm base line figures would remain merely an academic exercise. In fact, by submitting a proposal of no tariff hike, the licensee has itself forfeited its right to claim any true up arising out of the actuals for the financial year 2004-05 & 2005-06. It is further clarified that the true up exercise may only be undertaken by the Commission, if the audited balance sheet of the companies are submitted before the issuance of next tariff order otherwise, carrying out true up on the basis of a submission as delayed as 2 to 3 years would certainly bring about in-coherent impacts in the tariff structure, which is not at all desirable.

Reasonable Return

7.70 The licensees have not asked for any reasonable return for the year under review. They have stated that it is unlikely that the utilities will be able to meet the targets set by the Commission, and also that power sector in the State is not expected to be viable by FY 2006-07 and they would continue requiring subsidy support from the GoUP. The Commission has accordingly not considered the returns in the computation of ARR of Discoms, as the same has not been asked for.

ARR Summary - Discoms

7.71 In the preceding sections, the Commission has detailed expenses under various heads as per the licensees' petition, as well as those approved by the Commission. As can be seen from the tables below, the approved ARR for consolidated Discoms is Rs. 12416.40 crore after considering the subsidy from GoUP, and the revenue gap is Rs. 2423.93 crore for FY 2006-07. Discom-wise summary of the expenses under different heads as approved by the Commission for FY 2006-07 is provided below:

Table 7-24: Approved ARR for Meerut Discom - FY 2006-07

	Meerut		Consolidated	
	Petitioner	Commission	Petitioner	Commission
Power Purchase Costs	3696.00	3475.26	11466.00	10779.61
Transmission Charges	307.00	258.57	953.00	802.05
Employees Costs	189.48	196.54	789.17	818.51
A & G Costs	32.32	23.40	131.01	91.66
Repair & Maintenance Expenses	72.21	71.23	229.22	222.87
Interest Charges	84.56	78.38	308.14	296.37
Other Interest & Finance Charges	9.68	20.28	29.85	57.22
Provision for Bad & Doubtful Debts	12.00	0.00	92.00	0.00
Depreciation	226.00	220.86	719.00	691.09
Special Provisions	20.00	0.00	60.00	0.00
Reasonable Return	0.00	0.00	0.00	0.00
Total Expenses	4649.25	4344.53	14777.39	13759.39
Less: Expenses Capitalized	(45.05)	(51.10)	(173.31)	(204.99)
Net Expenditure	4604.20	4293.43	14604.08	13554.40
Less: Other Income	(44.00)	(44.00)	(126.00)	(126.00)
Less: GoUP Subsidy*	(395.93)	(395.93)	(1512.00)	(1512.00)

	Meerut		Consolidated	
	Petitioner	Commission	Petitioner	Commission
Total ARR	4164.27	3853.50	12966.08	11916.40
Revenue from Existing Tariffs	3043	3,333	9184	9992
Revenue Gap	1121.27	520.62	3782.08	1923.93

* The subsidy for which the discom wise allocation is not provided, is not considered in the above computation.

Table 7-25: Approved ARR for Agra Discom - FY 2006-07

	Agra		Consolidated	
	Petitioner	Commission	Petitioner	Commission
Power Purchase Costs	3163.00	2973.16	11466.00	10779.61
Transmission Charges	263.00	221.22	953.00	802.05
Employees Costs	150.10	155.69	789.17	818.51
A & G Costs	33.26	24.87	131.01	91.66
Repair & Maintenance Expenses	47.66	46.07	229.22	222.87
Interest Charges	66.81	63.25	308.14	296.37
Other Interest & Finance Charges	5.29	8.80	29.85	57.22
Provision for Bad & Doubtful Debts	37.00	0.00	92.00	0.00
Depreciation	149.00	142.85	719.00	691.09
Special Provisions	14.00	0.00	60.00	0.00
Reasonable Return	0.00	0.00	0.00	0.00
Total Expenses	3929.12	3635.91	14777.39	13759.39
Less: Expenses Capitalized	(35.56)	(41.69)	(173.31)	(204.99)
Net Expenditure	3893.56	3594.22	14604.08	13554.40
Less: Other Income	(25.00)	(25.00)	(126.00)	(126.00)
Less: GoUP Subsidy*	(227.10)	(227.10)	(1012.00)	(1012.00)
Total ARR	3641.46	3342.12	12966.08	11916.40
Revenue from Existing Tariffs	2376	2,497	9184	9992
Revenue Gap	1265.46	845.41	3782.08	1923.93

* The subsidy for which the discom wise allocation is not provided, is not considered in the above computation.

Table 7-26: Approved ARR for Lucknow Discom - FY 2006-07

	Lucknow		Consolidated	
	Petitioner	Commission	Petitioner	Commission
Power Purchase Costs	1975.00	1856.71	11466.00	10779.61
Transmission Charges	164.00	138.15	953.00	802.05
Employees Costs	213.91	221.87	789.17	818.51
A & G Costs	35.72	25.67	131.01	91.66
Repair & Maintenance Expenses	52.83	51.01	229.22	222.87
Interest Charges	83.56	82.20	308.14	296.37
Other Interest & Finance Charges	4.34	8.11	29.85	57.22
Provision for Bad & Doubtful Debts	17.00	0.00	92.00	0.00
Depreciation	166.00	158.19	719.00	691.09
Special Provisions	11.00	0.00	60.00	0.00
Reasonable Return	0.00	0.00	0.00	0.00
Total Expenses	2723.36	2541.91	14777.39	13759.39
Less: Expenses Capitalized	(46.29)	(56.12)	(173.31)	(204.99)
Net Expenditure	2677.07	2485.79	14604.08	13554.40
Less: Other Income	(14.00)	(14.00)	(126.00)	(126.00)
Less: GoUP Subsidy*	(345.13)	(345.13)	(1512.00)	(1512.00)
Total ARR	2317.94	2126.60	12966.08	11916.40
Revenue from Existing Tariffs	1600	1,781	9184	9992
Revenue Gap	717.94	345.24	3782.08	1923.93

* The subsidy for which the discom wise allocation is not provided, is not considered in the above computation.

Table 7-27: Approved ARR for Varanasi Discom - FY 2006-07

	Varanasi		Consolidated	
	Petitioner	Commission	Petitioner	Commission
Power Purchase Costs	2632.00	2474.48	11466.00	10779.61
Transmission Charges	219.00	184.11	953.00	802.05
Employees Costs	235.68	244.41	789.17	818.51
A & G Costs	29.71	17.72	131.01	91.66
Repair & Maintenance	56.52	54.56	229.22	222.87

	Varanasi		Consolidated	
	Petitioner	Commission	Petitioner	Commission
Expenses				
Interest Charges	73.21	72.54	308.14	296.37
Other Interest & Finance Charges	10.54	20.04	29.85	57.22
Provision for Bad & Doubtful Debts	26.00	0.00	92.00	0.00
Depreciation	178.00	169.18	719.00	691.09
Special Provisions	15.00	0.00	60.00	0.00
Reasonable Return	0.00	0.00	0.00	0.00
Total Expenses	3475.66	3237.05	14777.39	13759.39
Less: Expenses Capitalized	(46.41)	(56.08)	(173.31)	(204.99)
Net Expenditure	3429.25	3180.97	14604.08	13554.40
Less: Other Income	(43.00)	(43.00)	(126.00)	(126.00)
Less: GoUP Subsidy*	(543.84)	(543.84)	(1512.00)	(1512.00)
Total ARR	2842.41	2594.13	12966.08	11916.40
Revenue from Existing Tariffs	2165.00	2,381	9184	9992
Revenue Gap	677.41	213.13	3782.08	1923.93

* The subsidy for which the discom wise allocation is not provided, is not considered in the above computation.

ANNUAL REVENUE REQUIREMENT FOR FY 2006-07 - TRANSCO

7.72 The summary of ARR submissions of the licensees has already been presented in Chapter 5. In the current chapter, the Commission has approved the ARR of the licensees and has elaborated upon the approach followed for the same.

7.73 The total ARR comprises of the following nine components:

- Employee costs
- Administration and general expenses
- Gross Fixed Assets (GFA) Balances and Capital Formation Assumptions
- Repairs and maintenance expenses
- Interest expense
- Depreciation expense
- Other income
- Special appropriations
- Return on capital base and loan balances

7.74 In the following section, the Commission has analyzed the submission made by UPPCL Transco and approved expenses under various heads, along with justification for the same.

Employee Costs

7.75 The Licensee have projected the employee expense figures for the FY 2006-07 based on un-audited accounts for the FY 2004-05. The Commission has adopted the un-audited accounts figures submitted by the licensees and approves the employee expenses for FY 2006-07 on the basis that the assumptions made by the licensee in determining the projected figures. The Commission has however considered average DA @29.25% against the licensee claimed rate of 23% for the FY 2006-07. The Commission would like to point out here that since the figures are based on the un-audited balance sheet, the variation in employee expenses between the Commission approved figures and the actual expenses incurred for FY 2006-07 shall be subject to true-up once audited accounts for FY 2006-07 are finalized.

7.76 The Commission has thus approved the employee expenses (before capitalization) of Rs. 256.70 crore against Rs. 247.64 projected by UPPCL.

7.77 The licensee has capitalized employee expenses @ 29% of the total employee expenses. The Commission reiterates that the licensee needs to have a clear policy of capitalization of salaries & wages and suggests that the licensee appoint a reputed firm to suggest an appropriate policy on capitalization of salaries & wages. For the purposes of this tariff order, the Commission has accepted capitalization @ 29% of the total employee expenses. The Commission accordingly approves net employee expense (after capitalization) of Rs. 181.64 crore for FY 2006-07.

Table 7-28: Approved Employee Expenses

Employees Expenses - FY 2006-07 (Rs Crores)		
	Petitioner	Commission
Basic Salaries	145.14	145.14
Overtime	0	0
Dearness Allowance	33.38	42.45
Other allowances	10.37	10.37
Bonus/Ex-gratia	0.88	0.88
Medical expenses reimbursement	2.66	2.66
Leave travel assistance	0.02	0.02
Interim relief/other	9.08	9.08
Earned leave encashment	11.2	11.2
leave salary contribution	0	0
Payment under workmen's compensation act	0.15	0.15
staff welfare expenses	0.69	0.69

Employees Expenses - FY 2006-07 (Rs Crores)		
	Petitioner	Commission
Employers contribution for pension and gratuity	34.06	34.06
Employee Costs (before charge to capital)	247.63	256.70
Expenses Capitalized	72.41	75.06
Net Employee Cost	175.22	181.64

7.78 As in the previous tariff order the Commission directs the licensees to undertake a fresh actuarial valuation study as the study being adopted for the purposes of estimating employers' contribution towards pension and gratuity is outdated and requires revalidation.

Administration and General (A&G) Expenses

7.79 The figures submitted by the Licensee are based on un-audited accounts of the licensee for FY 2004-05. It has been submitted that A&G expenses are forecasted to increase by 2% per year across the board and that such an increase is much lower compared to current inflation rate.

7.80 For FY 2004-05 the actual rent, rate and taxes as approved by the Commission was Rs. 1.29 crore. UPPCL has however, projected the A&G expense as Rs. 12.56 crore for FY 2006-07. Large increase in rent, rate and taxes has been justified on account of Fringe Benefit Tax. However in the subsequent submissions UPPCL has indicated burden on account of FBT as Rs. 1.00 Crores/annum. In absence of any other data the Commission allows UPPCL, under rent, rate and taxes, an expense equal to Rs. 1.29 as approved for the FY 2004-05.

7.81 UPPCL has submitted that the capitalization of A&G expenses in the balance sheet (un-audited) for the FY 2004-05, has been done @ 19%. For the purpose of this tariff order, capitalization of 19% of the total A&G expenses has been accepted by the Commission. The Commission would however, like to reiterate that the licensees need to have a clear policy of capitalization of various expenses and suggests that the licensees appoint a reputed firm to suggest an appropriate policy on capitalization.

7.82 The Commission thus accepts A&G expense, before capitalization, of Rs. 28.07 crore and after capitalization of Rs. 22.80 crore.

Table 7-29: Approved A&G Expenses

Administrative & General Expenses - FY 2006-07		
Rs. Crore	Petitioner	Commission
Rent, Rates & Taxes	12.56	1.29
Insurance	0.07	0.07
Telephone, Postage & Telegrams, Telex	1.61	1.61

Administrative & General Expenses - FY 2006-07		
Rs. Crore	Petitioner	Commission
charges		
Legal charges	0.73	0.73
Audit fees	0.07	0.07
Consultancy charges	3.32	3.32
Technical fees and professional charges		0
Conveyance and traveling	5.25	5.25
Regulatory expenses	2.47	2.47
Other expenses	10.71	10.71
Billings and Collection Expenses	2.55	2.55
Total	39.34	28.07
Expenses Capitalized	7.39	5.27
Total	31.95	22.80

- 7.83 The Commission would like to point out here that since the figures are based on the un-audited balance sheets, the variation in A&G expenses between the Commission approved figures and the actual expenses incurred for FY 2006-07 shall be subject to true-up once audited accounts for FY 2006-07 are finalized.

Gross Fixed Assets (GFA) balances and capital formation assumptions

- 7.84 The Commission in its last tariff order for the FY 2004-05 had approved the GFA of Rs. 3597.33 crores as on 31st March 2005 for UPPCL. The provisional accounts for the FY 2005-06, however indicate the closing GFA as Rs. 3264.97 crores. The Commission accepts the same for the purposes of this tariff order.
- 7.85 The Commission would however, like to point out here that since the figures are based on the Discom specific provisional balance sheets, the variation in GFA between the Commission-approved figures and the actual expenses incurred for FY 2005-06 will be subject to true-up once audited accounts for FY 2005-06 are finalized.
- 7.86 The Commission has scrutinized the investment plan and capital formation as submitted by the licensee. The licensee has considered investments in FY 2005-06 as Rs. 863.42 crore and in FY 2006-07 as Rs. 1180 crore. The licensee has considered investments to the tune of Rs. 116 crore in FY 2005-06 and Rs. 300 crore in FY 2006-07 under 'Others', for which no details have been submitted. The Commission is thus not inclined to consider these investments for the purposes of this tariff order. The Commission accordingly approves investments worth Rs. 747 crore in FY 2005-06 and Rs. 880 crore in FY 2006-07.
- 7.87 The approved capitalization of employee, A&G and interest and finance expenses is discussed in the corresponding sections of this order. The licensees have considered

capitalization of investments as 40% of the opening WIP, investments made during the year, expenses capitalized and interest capitalized. This approach has been accepted by the Commission, as illustrated in the following table:

Table 7-30: Approved CWIP, Investments and Capitalization (Rs. Crore)

	FY 2005-06		FY 2006-07	
	Petitioner	Commission	Petitioner	Commission
Opening WIP	865.78	865.78	1102.71	1033.12
Investment	863.42	747.42	1180.00	880.00
Expenses	74.76	74.76	79.80	80.34
Interest	33.90	33.90	29.62	94.57
Total	1837.86	1721.86	2392.13	2088.02
Capitalized	(735.15)	(688.74)	(956.85)	(835.21)
Closing WIP	1102.71	1033.12	1435.28	1252.81

7.88 The Commission has thus approved total capitalization (addition to GFA) of Rs. 688.74 crore for FY 2005-06 as against Rs. 735.15 crore in the petition. For FY 2006-07, the Commission has approved total capitalization of Rs. 835.21 crore as against Rs. 956.85 crore in the petition.

7.89 The corresponding GFA and depreciation as approved by the Commission are as follows:

Table 7-31: Approved GFA and Depreciation (Rs. Crore)

	FY 2005-06		FY 2006-07	
	Petitioner	Commission	Petitioner	Commission
Opening Balance	3264.97	3264.97	4000.12	3953.71
Addition	735.15	688.74	956.85	835.21
Adjustments	0.00	0.00	0.00	0.00
Closing	4000.12	3953.71	4956.97	4788.92
Rate of Depreciation on Op GFA	5.27%	5.27%	5.27%	5.27%
Op Accumulated Depreciation	1406.60	1406.60	1578.66	1578.66
Depreciation (on opening GFA)	172.06	172.06	210.81	208.36
Closing Accumulated Depreciation	1578.66	1578.66	1789.47	1787.02

Repair and Maintenance (R&M) Expenses

7.90 The licensee has estimated the R&M expenses for FY 2006-07 as 1.5% of opening gross fixed assets for transmission assets in the corresponding year. This was also as per the methodology adopted by the Commission in the previous tariff order(s).

- 7.91 Considering the opening GFA as computed in the previous section, the R&M expense approved by the Commission for FY 2006-07 is as given below:

Table 7-32: Approved R&M Expense FY 2006-07

	FY 2006-07	
	Petitioner	Commission
Rate of R&M - % of Opening GFA	1.50%	1.50%
R & M Expenses	60.00	59.31

- 7.92 The amount as approve above is however provisional in nature and the actual approval would be based on amount actually spent in R&M works based on audited results.

Depreciation Expense

- 7.93 In the previous tariff order, on account of lack of details of fixed assets register, the Commission had assessed depreciation on the basis of weighted average depreciation rates as against specific depreciation rates for each class of asset. In absence of any additional information, for the purposes of this order also the Commission is compelled to continue with the practice of adopting weighted average depreciation rates. In its previous tariff order the Commission had approved the weighted average depreciation rate of 5.27% for transmission licensee. The Commission has adopted the same depreciation rates for the purposes of this tariff order as well.
- 7.94 The opening GFA considered is as per the Commission's approved figures computed in the section on GFA and capital formation. Based on the above specified weighted average depreciation rate of 5.27% and the opening approved GFA figures the Commission approves depreciation expense of Rs. 208.36 crore for FY 2006-07.
- 7.95 The Commission again directs the licensee to ensure that it maintains proper and detailed fixed assets registers.

Interest and Financing Costs

- 7.96 The Commission has computed the interest and finance charges for FY 2006-07 based on the approved investment plan for Transco. This has already been discussed in the section on GFA balances and capital formation. A debt-equity ratio of 70:30 has been considered for investment under various plans.

Table 7-33: Approved Interest Charges for FY 2006-07

	FY 2006-07	
	Petitioner	Commission
Total Interest	428.58	411.18
Less: Capitalized	-48.39	-94.57
Net Interest Charges	380.19	316.61
Total Loans		
As on 01.04.06	5038.00	5038.00
Additions	1196.00	738.44
As on 31.03.07	6234.00	5776.44
Weighted Avg Interest Charges	7.60%	7.60%

- 7.97 For the computation of weighted average rate of interest, the opening and closing loan balances for FY 2006-07 and total interest charges for various loans have been considered as submitted by the licensees in their petition. The licensees have however not submitted any information on the loan-wise / source-wise debt funding for various investment plans envisaged for FY 2006-07, in absence of such information detailed examination of Interest and Finance costs is not possible. Accordingly, the Commission has determined weighted average interest charges for Transco's on the basis of total interest charges and average of opening & closing loans as submitted by the licensees. This average rate of interest charge has been applied on the new loans for FY 2006-07 (corresponding to the debt component of approved investments, expenses capitalized and interest capitalized) and also on opening loans to compute the interest charges for the total loans. Total interest charges (before capitalization) of Rs. 411.18 crore have accordingly been approved by the Commission for FY 2006-07 for UPPCL.
- 7.98 Interest charges have been capitalized at the rate of 23%, consistent with the methodology followed by the Commission in the last Tariff Order for FY 2004-05. Accordingly, interest and financing charges (net of capitalization) of Rs. 316.61 are approved by the Commission for FY 2006-07.
- 7.99 The other interest and finance charges considered by the licensee consists of expenses under the following three heads:
- Cost of raising finance
 - Other charges
 - Interest on consumer security deposits

- 7.100 The Commission has allowed cost of raising finance as 1% of the amount drawn. This is consistent with the approach followed by the Commission in the last tariff order for FY 2004-05. The licensee has not provided any details for the 'other expenses' included under this head. The Commission however allows the same with the condition that licensee will submit the details for the same with the next filing. The interest to consumer security deposits has not been allowed as it is not relevant to the UPPCL. The other interest and finance charges as approved by the commission for FY 2006-07 are as follows:

Table 7-34: Approved other interest and Finance Charges:

	FY 2006-07	
	Petitioner	Commission
Cost of Raising Finance	70.26	7.38
Other Charges	1.61	1.61
Interest on Consumer Security Deposits	2.04	0
Total	73.91	8.99

Other Income

- 7.101 As per the licensee, 'other income' includes non-tariff income. The non-tariff income includes interest on loans and advances to employees and income from fixed rate investment deposits and interest on loans and advances to licensees. The licensees have projected a non-tariff income of Rs. 16.30 crore for FY 2006-07.
- 7.102 The Commission has assessed Other Income for the Transco at the level submitted in the petition. 'Other Income' of Rs. 16.30 crore for UPPCL is thus approved by the Commission for FY 2006-07.

Table 7-35: Approved other income:

	FY 2006-07	
	Petitioner	Commission
Other Income	16.30	16.30

Reasonable Return

- 7.103 The Commission has computed capital base for the UPPCL as per the Sixth Schedule of the Electricity Supply Act, 1948. For the various components of capital base, the respective values approved by the Commission have been considered. The capital base and reasonable return computations are as follows:

Table 7-36: Approved Reasonable Return

	FY 2006-07	
	Petitioner	Commission
Opening Gross Fixed Assets	4000.12	3953.71
Intangible Assets	0	0
Less: Consumer Contribution	(39.00)	(39.00)
Opening CWIP	1102.71	1033.12
Investment made out of Contingency Reserve	0	0
Cash & Stores	744	744
Sub- Total (A)	5807.83	5691.83
Opening Accumulated Depreciation	1578.66	1578.66
Loan advanced by Board		
Opening Loans borrowed from Organization or Institution approved by the State Govt	4128.43	4128.43
Debentures issued by the Licensee	0	0
Consumer Security Deposit	0	0
Sub- Total (B)	5707.09	5707.09
Capital Base (A-B)	100.74	(15.26)
Return on Capital Base	16.12	0.00
Return on Long-term Debt at 0.5%	20.64	20.64
Total Returns permitted	36.76	20.64
Total Returns Proposed/Approved	36.76	20.64

7.104 As can be seen from the above table, the capital base for UPPCL computed on the basis of figures approved by the Commission is negative. The Commission has thus approved zero return on capital base for the licensee in FY 2006-07. The return on long-term debt at 0.5% has however been allowed to Transco, which works out to Rs. 20.64 crore. The total return thus permitted by the Commission for Transco is Rs. 20.64 crore for FY 2006-07.

Summary of Aggregate Revenue Requirement - Transco

7.105 In the preceding sections, the Commission has detailed expenses under various heads as per the Licensee' petition, as well as those approved by the Commission. A summary of the expenses under different heads as approved by the Commission for FY 2006-07 is provided below:

Table 7-37: Approved ARR Transco FY 2006-07

	Petitioner	Commission
Employees Expenses	175.22	181.64
A & G Expenses	31.95	22.80
R & M Expenses	60.00	59.31
Depreciation	210.81	208.36
Interest Charges	380.19	316.61
Other Interest and Finance Charges	73.91	8.99
Less: Other Income	(16.30)	(16.30)
Special Appropriations	0	0
Reasonable Return	36.76	20.64
ARR	952.54	802.05

Transmission/Open Access Tariff

7.106 The commission has determined transmission tariff considering the Transco ARR approved by it and the total energy supplied by it to Discoms. The transmission tariff is computed as follows:

Table 7-38: Approved Transmission Charge

	Petitioner	Commission
Transco ARR	952.54	802.05
Energy Delivered to Discoms (MUs)	48073	48073
Transmission Charges (Rs./unit)	0.198	0.167

7.107 The Commission thus approves a transmission tariff of Rs. 0.167/unit. The transmission tariff approved by the Commission in FY 2004-05 Tariff Order was Rs. 0.145/unit. The transmission tariff for FY 2006-07 thus represents an increase of 15.06% over the transmission tariff for FY 2004-05.

7.108 The Commission understands the requirement of notifying the short term and long term transmission open access charges on per MW basis. But Commission is of the opinion that as there are numerous issues involved in the computation of the same. Hence, it will arrive at per MW open access transmission charges via a separate order.

SLDC CHARGES

7.109 UPPCL vide its letter dated 15th September 2006, confirmed that the SLDC charges are included in the ARR of UPPCL.

BULK SUPPLY TARIFF

7.110 Based on the approach followed in the last tariff order for FY 05, the Commission has adopted similar approach for FY 07 also to work out the bulk supply tariff. Accordingly the bulk supply tariff is worked out as under:

Table 7-39: Approved Transmission Charge

Bulk Supply Tariff FY 2006-07		
	Petitioner	Commission
Power Purchase Expenses (Rs. Crore)	11466.00	10779.61
Transco's ARR (Rs. Crore)	952.54	802.05
Total	12418.54	11581.66
Sales to Discoms (MU)	48073	48073
Bulk Supply Tariff (Rs./kWh)	2.58	2.41

(R. D. Gupta)
Member

(P. N. Pathak)
Member

(Vijoy Kumar)
Chairman