DELHI ELECTRICITY REGULATORY COMMISSION

Viniyamak Bhawan, C-Block, Shivalik, Malviya Nagar, New Delhi-110017

Petition No. 7/2002

In the Matter of :

Petitions for approval of Annual Revenue Requirement (ARR) for the Financial Year 2002-03 (from July 1 onwards) and Financial Year 2003-04 and for determination of Bulk Supply Tariff (BST) to be charged by Delhi Transco Limited for the power being supplied to the three Distribution Licencees viz. BSES Rajdhani Power Limited, BSES Yamuna Power Limited, North Delhi Power Limited (called Discoms) and NDMC and MES (deemed Distribution Licencees).

AND

In the Matter of :

Delhi Transco Limited
(formerly Delhi Power Supply Company Limited)
Shakti Sadan, Kotla Marg,
New Delhi 110002

Before

Delhi Electricity Regulatory Commission

Sh. V.K. Sood **Chairman**

Date of Order: 26th June 2003

Order

The Commission having deliberated on the above petitions and also the subsequent filings by the petitioner in the course of above proceedings, and having considered the responses received from the stakeholders, has in exercise of powers vested under the Delhi Electricity Reform Act, 2000, passes this Order signed, dated and issued on 26th Day of June 2003. The Petitioner shall take immediate steps to implement the Order so as to make the revised bulk supply tariffs applicable from July 4, 2003.

(V.K. Sood)
Chairman

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1 Background, Procedural History and Description of ARR Filing

1.1 About the Commission

The Delhi Electricity Regulatory Commission (hereinafter referred to as 'Commission') was constituted by the Government of National Capital Territory of Delhi (hereinafter referred to as 'Government') on 3rd March 1999 and it became operational from 10th December 1999.

1.2 Functions of the Commission

Major functions assigned to the Commission under the (hereinafter referred to as 'Act') are as follows:

- to determine the tariff for electricity, wholesale, bulk, grid or retail and for the use of the transmission facilities
- to regulate power purchase, transmission, distribution, sale and supply
- to promote competition, efficiency and economy in the activities of the electricity industry in the of Delhi
- to aid and advise the Government. on power policy
- to collect and publish data and forecasts
- to regulate the assets and properties so as to safeguard the public interest
- to issue licenses for transmission, bulk supply, distribution or supply of electricity
- to regulate the working of the licensees
- to adjudicate upon the disputes and differences between licensees

1.3 Issuance of Concept Paper on Tariff and Guidelines for Revenue and Tariff Filing

1.3.1 Concept Paper on Tariff

The Commission brought out a Concept Paper on Tariff in September 2000. The Concept Paper provided a historical background of the power sector in Delhi, gave the first tariff proposal of Delhi Vidyut Board (hereinafter referred to as 'DVB') and sought suggestions from various stakeholders on the conceptual issues on electricity tariff.

1.3.2 Guidelines for Revenue and Tariff Filings

The Commission sent 'Guidelines for Revenue and Tariff Filing' to the Delhi Vidyut Board in October 2000 for submission of their Annual Revenue Requirement and Tariff petitions. It contained about 29 data forms with guidelines to get data from utilities.

1.3.3 Regulations and Orders issued by the Commission

In its journey from inception till date, the Commission issued three Tariff Orders and notified eight Regulations as given in Tables 1.1 and 1.2, respectively. The Orders were issued

Table 1.1: Orders issued by the Commission

Sr. No.	Name of the Order	Date of issue
1.	Order on Rationalization of Tariff for Delhi Vidyut Board (DVB)	16.1.2001
2.	Order on ARR for 2001-02 and Tariff Determination Principles for the 2002-03 till 2005-06 for Delhi Vidyut Board	23.5.2001
3.	Order on Joint Petition for Determination BST and Opening Losses for DISCOMS	22.2.2002

Table 1.2: Regulation notified by the Commission		
Sr. No.	**Title of Regulations**	**Date of notification**
1.	Delhi Electricity Regulatory Commission Comprehensive (Conduct of Business) Regulations, 2001	9-3-2001
2.	Delhi Electricity Regulatory Commission (Management and Development of Human Resources) Regulations, 2001	16-4-2001
3.	Delhi Electricity Regulatory Commission (Appointment of Consultants) Regulations, 2001	6-8-2001
4.	Delhi Electricity Regulatory Commission (Delegation of Financial Powers) Regulations, 2001	6-8-2001
5.	Delhi Electricity Regulatory Commission (Grant of Consent for Captive Power Plants) Regulations, 2002	21-4-2002
6.	Delhi Electricity Regulatory Commission (Performance Standards – Metering & Billing) Regulations, 2002	19-8-2002
7	Delhi Electricity Regulatory Commission (Medical Attendance) Regulations, 2003	12-3-2003
8	Delhi Electricity Regulatory Commission (Redressal of Consumers' Grievances) Regulations, 2003	10-6-2003

after following the due process and all stakeholders were given an opportunity to present their viewpoints.

1.3.4 Constitution of Commission Advisory Committee

The Commission has constituted the Commission Advisory Committee, vide notification dated 27th March 2003, to advise the Commission on major question of policy related to electricity industry in the State and on matters such as quality of supply, continuity and extent of service provided by licensees and compliance by licensees with the conditions and requirements of their licences.

1.4 Transfer Scheme

Pursuant to the provisions of the Act, the Government notified the Delhi Electricity Reform (Transfer Scheme) Rules, 2001 (hereinafter referred to as 'Transfer Scheme') on November 20, 2001. The Transfer Scheme provided for unbundling of the functions of Delhi Vidyut Board (hereinafter referred to as "DVB") and the transfer of existing transmission assets of DVB to Delhi Transco Limited (formerly known as Delhi Power Supply Company Limited and hereinafter referred to as 'TRANSCO') and the existing distribution assets to three distribution companies (hereinafter collectively referred to as 'DISCOMs').

1.5 Policy Directions

1.5.1 Notification of Policy Directions

In exercise of powers conferred by Section 12 and other applicable provisions of the Act, the Government issued Policy Directions vide Notification No F.11 (118)/2001-Power/2889 of November 22, 2001 and as amended on May 31, 2002 (hereinafter collectively referred to as "Policy Directions"). A copy of the Policy Directions is attached hereto as Annexure 1.

1.5.2 AT&C loss as a measure of efficiency

The Government, through the Policy Directions, indicated its intent to disinvest majority shareholding in the DISCOMs to private investors with the balance 49% remaining with the Government. The Policy Directions identified the Aggregate Technical & Commercial (AT&C) losses as the measure of efficiency of the Distribution business. It further indicated that a long-term definitive loss reduction in distribution, to be achieved over a five-year period, should be settled upfront through competitive bidding to induce investors. In this regard, the Government invited the investors to submit bids for AT&C losses, which they could reduce each year for the years 2002-03 till 2006-07. However, prior to the submission of bids by investors, the Commission was required to determine the base AT&C loss levels for each DISCOM through an Order, which were to be the opening levels of AT&C losses for the purposes of bidding.

1.5.3 Framework for tariff determination

The Policy Directions indicated that the AT&C loss for the purpose of tariff computation by the Commission for each DISCOM in a year shall be the opening AT&C loss and the reduction proposed for the year in the bid submitted by the investor selected by the Government for purchase of 51% equity in the distribution company. Further, tariffs are to be determined such that the DISCOMs recover all expenses permitted by the Commission and earn a 16% return on equity.

The Policy Directions envisaged identical retail tariffs for the DISCOMs till the end of 2006-07. An amount of approximately Rs. 3450 crore was committed by the Government in the Policy Directions, as a loan to be repaid by the Transmission Company, to bridge the gap between the revenue requirement of the TRANSCO and the bulk supply price that it may receive from the distribution licensees based on the above framework.

1.6 Determination of BST and Opening Losses

The Order on opening loss levels, to be passed by the Commission, was also required to determine the bulk supply tariff (BST) applicable to each of the DISCOMs to apprise the investors of the various cost and revenue elements required in the determination of tariff.

1.6.1 Filing of Joint Petition, BST Order and submission of bids

A joint petition was subsequently filed by the TRANSCO and the three DISCOMs on 21st December 2001 for the determination of Bulk Supply Tariff for the period till 31st March 2002 and opening level of AT&C Losses for the DISCOMs. The Commission, after detailed analysis of the Petition and supporting information submitted by the Petitioners and after due consideration of the responses received from the various stakeholders and Policy Directions, issued an Order on Bulk Supply Tariff and Opening Level of AT&C Losses for the three DISCOMs on 22nd February 2002.

Thereafter, the bids were submitted by the investors. After evaluation of the bids, the Government awarded 51% of the equity of the DISCOMs to the chosen private investors.

1.7 Revision of Guidelines by the Commission

The Commission, in the meanwhile, revised the existing Guidelines for Revenue & Tariff Filing (Guidelines) to accommodate the Policy Direction framework envisaged by the Government. The revised guidelines were issued by the Commission on August 23, 2002.

The revised guidelines recognised the Sixth Schedule of the Electricity Supply Act, 1948 as amended from time to time, as the framework applicable to the TRANSCO for filing of its Annual Revenue Requirement (ARR). The framework envisaged by the Policy Directions was made applicable to the DISCOMs for ARR filing purposes. The existing data formats were accordingly modified.

These guidelines also required TRANSCO to play a lead role in facilitating a common agreement between the TRANSCO and the DISCOMs in regard to energy supply-demand position in the State for the current and the ensuing year. This was important to ensure emergence of an overall revenue gap/surplus for all the Companies from the individual filings, based on a common expectation regarding the DISCOMs demand and supply requirement for the period. The co-ordination was also required to be done well in advance of the deadline set for submission of petitions to the Commission.

1.8 Procedural History

1.8.1 ARR & Tariff filings for FY 2002-03 by DVB

Section 28(5) of the Act required the erstwhile DVB to provide to the Commission by December 31 of each year, full details of calculations of the expected revenue from charges (called as ARR) for the ensuing financial year. On non-receipt of the ARR filing by the Commission for FY 2002-03 beyond the stipulated date, the Commission, vide letter of January 16, 2002, reminded the DVB to expedite the submission of the same along with the reasons for not adhering to the deadline as set out in the Act. A further reminder on above was sent to the DVB on March 1, 2002.

The DVB, vide letter of April 1, 2002 submitted that the Government had sought proposals from interested bidders for privatisation of the distribution business of the DVB and expected to receive the bids on April 10, 2002. The Government wished to handover the distribution business to the selected bidders soon thereafter. It was stated that while the estimation of revenue requirements of the DVB for FY2002-03 was almost completed, the estimation of revenues for the year depended upon the bid values of the selected bidder and hence could not be finalized at this juncture. In addition, the process of tariff determination would take time even after the filing of the ARR. The DVB, therefore, requested the Commission that the existing tariffs as fixed in the Tariff Order dated May 23, 2001 be continued till further Orders in the matter.

The DVB, vide letter of June 20, 2002 submitted to the Commission that the privatisation of the distribution business of DVB was delayed beyond the earlier target of April 2002 of the Government on account of various reasons. It was informed that the Share Acquisition Agreement had been signed by the selected bidders on May 31, 2002 and that the distribution business was expected to be handed over to them from July 1, 2002 onwards.

On behalf of the new companies, it was contended that the TRANSCO and the DISCOMs would require some time to file their ARR and tariff filing. Further, it was prayed that the existing retail and bulk supply tariffs, as fixed by the Commission in its Orders of May 23, 2001 and February 22, 2002, respectively be continued till submission of fresh petitions and issue of Orders on the same.

1.9 ARR & Tariff filing by the Companies

1.9.1 Filing of petitions

The TRANSCO filed its petition for ARR approval and determination of Bulk Supply Tariff (BST) for FY 2002-03 on November 8, 2002.

The Policy Directions envisage uniform retail tariffs across the DISCOMs and tariffs to be determined so as to allow the DISCOMs to recover all permissible expenses and return for a year. This implies that the BST for the DISCOMs for a period cannot be determined in isolation for TRANSCO and further; one would have to take cognisance of the ARRs of the DISCOMs for further processing.

The Commission, therefore, directed the DISCOMs to file their respective ARR & Tariff petitions for FY 2002-03, latest by the end of November 2002. It further opined that the TRANSCO should co-ordinate with the DISCOMs for simultaneous filing of the DISCOMs during the currency of the Policy Directions i.e. from 2002-03 to 2006-07.

Thereafter, on December 2, 2002 NDPL filed its ARR Petition for the FY 2002-03 (9 months) and FY 2003-04. BRPL and BYPL submitted their ARR Petitions for the FY 2002-03 (9 months) and FY 2003-04 on November 30, 2002 and January 1, 2003 respectively.

The DISCOMs did not propose any retail tariff and requested the Commission to determine the same taking into account the provisions of the Transfer Scheme, the Policy Directions issued by the GNCTD and filings made thereunder. Further, the TRANSCO also did not propose any revision in bulk supply tariff and requested the Commission to determine the same.

1.9.2 Interactions with the petitioner

The submission of the filings were followed by a series of interactions, both written and oral, wherein the Commission sought additional information/ clarification and justifications on various issues, critical for admissibility of the Petitions. The Petitioner submitted its response on the issues raised through submissions on January 14, February 5 and March 3, 2003. The petitioner cited data constraints and the legacy systems of DVB for delays in submitting the desired information in a timely manner.

The Distribution Companies also provided similar information and clarifications on the issues raised in respect of their filings, on various occasions.

1.9.3 Consolidated Petition

During a meeting held with the senior management of all the four Companies, the Commission opined that a piecemeal submission of information on different occasions by the Companies would not only pose difficulties in the processing of the petitions by the Commission, but also in filing of responses by the stakeholders. The Commission, therefore, directed the Distribution Companies to submit individual single Consolidated Petition for FY 2002-03 (nine months) and for FY 2003-04, incorporating the original petition and all the additional information provided by the Companies to the Commission, subsequent to submission of the ARR Petition in November and December 2002. This was essentially meant to facilitate easy reference, internal consistency and to avoid multiplicity of documents.

NDPL filed the Consolidated Petition on March 4, 2003. BRPL and BYPL filed the Consolidated Petitions on March 6, 2003.

The Commission admitted the petitions for further processing on March 6, 2003.

1.9.4 Public Notice and response from stakeholders

Publicity given to the proposal

The Commission brought out a Public Notice on March 07, 2003 indicating salient features of the petitions for the two years, and to invite responses from the consumers and other stakeholders on the Petitions submitted by the TRANSCO and the DISCOMs, in accordance with the provisions of the Delhi Electricity Regulatory Commission Comprehensive (Conduct of Business) Regulations, 2001. The Public Notice was published on March 7, 2003 in several dailies such as:

- The Hindustan Times, The Times of India, Indian Express, The Pioneer and The Economic Times in English;
- Punjab Kesri, Navbharat Times, Rashtriya Sahara and Dainik Jagran in Hindi; and
- Milap in Urdu.

A copy of the Public Notice in English, Hindi and Urdu is attached as Annexure 2a-1, 2a-2 and 2a-3 respectively.

A detailed copy of the petition of each petitioner was also made available for purchase from the respective head-office of the Companies on any working day from March 7th 2003 onwards, between 11 a.m. to 4 p.m. on payment of Rs. 100/-. The Notice specified the deadline of April 7, 2003 for the receipt of responses/objections from the stakeholders. Complete copy of the petitions were also put up on the website of the Commission, as well as that of the Company.

Presentation to the stakeholders and revised public notice

Despite the publicity given to the petitions as mentioned above, the Commission met with a lacklustre response from the public on the petitions. It was evident that lack of a tariff filing by the Companies directly affecting the interests of the various cross-sections of the public, and low awareness and appreciation of the tariff-determination process in the Policy Directions framework of the Government amongst the public at large, was contributing to the mild response.

The Commission, therefore, decided to venture beyond the mandated process of public participation as laid out in its Comprehensive (Conduct of Business) Regulations, 2001 and held a presentation on the ARR and tariff determination process on April 5, 2003 at the Commission's premises. The presentation was made to select stakeholders including representatives of various Consumer/industrial Associations, NGOs, Public Bodies etc. who had been interacting with the Commission on various issues in the past. A list of the participants invited for participation in the presentation is attached as Annexure 3a to this Order.

During the presentation, the Commission briefed the stakeholders about the unbundling and privatisation process followed by the Government, the Policy Directions framework, the salient features of the petitions, the importance of the instant ARR petitions for the tariffs to be approved by the Commission based on these petitions received from the Companies. The Commission sought response from the participants regarding the petitions at hand, and also suggestions/responses on other related areas of concern to the consumers including rationalisation of tariff etc.

Extension of deadline for submission of responses

Considering the interest evinced and the request made by some of the stakeholders during the presentation, the deadline for the submission of responses/objections by the stakeholders was extended to April 16, 2003.

The Commission informed all the stakeholders about this extension of the deadline for submission of responses through a public notice in leading English, Hindi and Urdu newspapers on April 7, 2003 (Annexure 2b-1, 2b-2 and 2b-3).

1.9.5 Public Hearing

The Commission received 78 responses in all. Several responses were received after the deadline for submission of the responses. The Commission forwarded the responses to the petitioner for submission of comments to the Commission and a copy to the respondent. A detailed list of the respondents is attached with this Order as Annexure 3b.

The petitioner filed its responses to the comments/objections of the stakeholders on April 28, 2003.

The Commission conducted the Public Hearings on the 12th, 13th and 14th of May 2003. All the stakeholders who had submitted responses/objections on the ARR Petitions were invited to express their views in the matter. A list of the respondents who participated in the hearing process is attached with this Order as Annexure 3c. The entire proceeding was split across five different sessions catering to distinct groups of stakeholders as given in Table 1.3.

Table 1.3: Dates of public hearing

Date	Category
May 12, 2003	Industrial consumers and Associations
May 13, 2003	Domestic, Co-operative Societies, NGO's, and Commercial
May 14, 2003	Government Departments and Utilities

At the end of each session, the issues discussed were summarised, and the TRANSCO and the Distribution Companies were asked to respond to the concerns raised by the stakeholders.

1.9.6 Post admission interactions

Discussions during technical sessions

After admission of the filing, the Commission held further technical sessions with concerned staff of the Petitioner and its consultants to seek additional information and clarifications. A Meeting was held on March 21, 2003, to seek clarifications and additional information.

Petitioner's responses to queries raised by the Commission

The responses to some of the queries raised during the meeting held on March21, 2003 were submitted on April 21, 2003. On April 30, 2003, a meeting was held between the Commission and representatives of the Petitioner to seek clarifications and a status review of the balance information pending for submission by the Petitioner.

The information submitted by the Petitioner in response to the queries raised by the Commission pertain to the details of actual expenses incurred, power purchase from various sources, sale of power to the DISCOMs, investments, kVAh billing of the DISCOMs, a note on ABT etc. for FY 2002-03 (July 2002-March 2003).

Apprising the Advisory Committee

The factual position of the petitions filed by the Delhi Transco Ltd. and the three DISCOMs was brought to the notice of the Commission's Advisory Committee during its first meeting, held on the 21st of May, 2003.

An Activity Chart giving the details of various activities undertaken during the proceedings is attached as Annexure 4.

1.10 Summary of the petition

The petitioner has estimated an Annual Revenue Requirement (ARR) for FY 2002-03 (9 months) and FY 2003-04 at Rs. 3700 crore and Rs. 5249 crore, respectively. A snapshot of the ARR and revenue gap at existing tariff is provided in the Table 1.4.

Table 1.4: Summary of ARR of the petitioner (Rs Crore)

Item	July 2002-March 03	FY 2003-04
Power Purchase cost	3,504	5,142
Net expenditure including Power Purchase Cost and including special appropriations	3,679	5,341
Return on Capital Base	21.60	28.80
Less: Non Tariff Income	0.00	120.54
Net Aggregate Revenue Requirement (ARR)	**3,700**	**5,249**
Less: Revenue at existing tariff	2,199	3,143
Net Revenue Gap	**1,501**	**2,106**

1.11 Layout of this Order

This Order is organised into 5 Chapters. While the current Chapter gives the information about the Commission, the historical background and context in which current petitions were filed, the second Chapter gives a detailed account of responses from stakeholders, licensee's comments and Commission's views on the responses. Chapter 3 discusses the Annual Revenue Requirement. While Chapter 4 deals with Tariff Design. Chapter 5 reviews the Directives issued to erstwhile Delhi Vidyut Board in Commission's Order dated 23.05.03 and to TRANSCO and DISCOMs in Order dated 22.02.02 and lists down the new directives issued in this Order.

2 On the Response from Stakeholders

A number of issues were raised regarding the Petition of Delhi Transco Ltd. which included procedural issues regarding filing of the Petitions, energy requirements of the DISCOMs, power availability, power purchase expenses, proposed investment etc. All the major issues which were raised by the Stakeholders are described below:

2.1 Procedural issues

2.1.1 Objections

One of the main objections raised by the Stakeholders was that according to DERA 2000, the Commission is obligated to inform the consumers of any proposed changes in the tariff to allow them an opportunity to offer their objections. This aspect was raised by the Bhartiya Mazdoor Sangh, the Delhi Dal Mills Association and also the National Working Group on Power. In addition, some of the objectors desired that the documents, which were submitted by the Petitioner to the Commission, before the admission of the Petitions, should be made available to the consumers.

The National Working Group on Power objected to the presentation organized by the Commission before a select group of consumers on the 5th April, 2003. They were of the view that this presentation should have been given by the Petitioner themselves instead of the Commission. Further, a number of objectors brought to the notice of the Commission, the difficulties faced by them in obtaining copies of the Petitions from the offices of the Petitioner.

The DDA in their response have drawn the attention of the Commission to Section 62 of DERA, 2000 which states that every Rule made by the Commission should be placed before the House of the Legislative Assembly of the National Capital Territory of Delhi. The DDA, therefore, contended that even the modifications in tariff should be laid before the House, for approval.

2.1.2 Response of the Petitioner

The Petitioner has submitted that tariff would be decided in accordance with DERA, 2000 and the Policy Directions issued by the Government of the NCT of Delhi. Regarding the non-availability of copies of the Petitions, the Petitioner admitted that there was some problem initially but it was sorted out subsequently.

2.2 Quality of filing and additional information

2.2.1 Objections

Several respondents including the Federation of Delhi Small Industries Association have sought additional information, such as, power supply agreement between the TRANSCO and DISCOMs, assets and liability report prepared by SBI Capital/other agency, if any, in respect of the erstwhile Delhi Vidyut Board (DVB) to file their final and comprehensive response. Some objectors like the Bhartiya Mazdoor Sangh have also requested that documents such as copies of deficiency memoranda and other issues raised by the Commission to TRANSCO, copy of response with complete details filed by TRANSCO, copy of accounts of the Petitioner, duly audited as prescribed under law etc. should be made available. The Bhartiya Mazdoor Sangh further submitted that actual details of power purchase and energy realized have not been provided in the form prescribed by the Commission. Concern was also raised by the Apex Association of Wazirpur Industrial Association (AAWIA) over the non-submission of unaudited accounts of the Petitioner. The Association also asked for the details of BST and RST proposal for the financial year 2003-04.

2.2.2 Response of the Petitioner

As regards the additional information, the TRANSCO has stated that some of the documents which have been requested for by the Stakeholders are available on its website and also that of the Government of NCT of Delhi. The TRANSCO has stated that it can provide the copies, if so directed by the Commission. On the subject of audited accounts, the Petitioner submitted that audited accounts for the FY 2002-03 would be available only sometime in June/July 2003.

2.3 Energy Requirements of DISCOMs and Transmission losses

2.3.1 Objections

The PHDCCI has urged the Commission to compare the energy requirements provided by the DISCOMs and as assured by the TRANSCO, on a month wise basis to compute the acceptable energy balance so as to minimise the instances of load shedding in Delhi. The PHDCCI further states that the Commission should devise ways and means to augment the power supply during the summer season so as to minimise the extent of power cuts in the State. The Chamber has referred to the estimates of energy availability provided by the TRANSCO in its Petition, and has stated that the energy balance given by the TRANSCO does not indicate the amount of energy deficit experienced by the DISCOMs. The PHDCCI has opined that estimates of energy deficit would enable each DISCOM to correctly assess the actual energy requirements for the financial year 2003-04. Further, the objector has requested the Commission to review the power availability from the GENCO stations in order to maxmise the energy supply from GENCO stations.

On the subject of transmission losses, the PHDCCI has stated that the transmission losses of 3% may be reduced to obviate any increase in Bulk Supply Tariffs. Some other respondents have opined that the transmission losses should be between 1 to 1.5% as compared to 3% in respect of TRANSCO. The objectors have submitted that the reduction in losses to the extent of 1.5 % will result in savings of Rs.77.50 crore for the financial year 2003-04.

2.3.2 Response of the Petitioner

As far as Transmission losses are concerned, TRANSCO has submitted that objectors have not provided any basis for the suggested normative level of transmission losses. TRANSCO has stated that they have projected the transmission losses on the basis of actuals. The TRANSCO has added that the completion of the 400kV ring and subsequent transmission of more power on 400kV voltage level will help in further reducing the transmission losses. The TRANSCO has given the example of Power Grid Corporation of India Ltd., stating that their system mainly comprises of 400kV lines and the line losses are still of the order of 4.25%. On the other issues raised by the objectors regarding energy requirement of the DISCOMs and power availability, the TRANSCO has submitted that all necessary details have already been provided.

2.4 Power purchase expenses

2.4.1 Objections

The PHDCCI has highlighted the fact that in order to bridge the Petitioner's projected revenue gap of Rs 850 crore for the FY 2003-04, tariffs would have to be increased by 25% across the board, which may hurt the interests of the consumers. In this context, the objector has requested the Commission to look into avenues of reducing the power purchase cost of the Petitioner, which accounts for about 95% of its total Annual Revenue Requirement.

The National Thermal Power Corporation (NTPC) has stated that the Petitioner is buying costly power from sources such as WBPDCL, Uttaranchal, UP and Himachal Pradesh rather than buying cheaper power out of its allocation from NTPC Dadri Thermal, thus unduly burdening the consumers. The NTPC has requested the Commission to direct the Petitioner to schedule its drawal from various sources including Dadri (Thermal) on the basis of the merit order.

2.4.2 Response of the Petitioner

The Petitioner has stated that Delhi has a peculiar load pattern, as off-peak demand is about 80%-85% of the peak demand during summer, and in winter months, it is 50% of the peak demand. The Petitioner has added that the need for uninterrupted power supply has been emphasized in various PILs filed before the Supreme Court and High Court of Delhi. Thus, to ensure availability during peak hours and seasonal requirements during summer months, the Petitioner has entered into bilateral short-term agreements with Uttar Pradesh, Uttaranchal and Himachal Pradesh on a 'round-the-clock' basis as these sources were prepared to supply only on these terms. The Petitioner has stated that the Government of India has also been allocating power from unallocated quota in Central Generating Stations on 'round the clock' basis and has not agreed to the Petitioner's request for need based allocation. The Petitioner has stated that, it also has to ensure sufficient availability of Power from various sources to take care of other eventualities such as outage of Generating Units and transmission network. In the event of low demand, power from thermal stations can only be backed down upto the technical limit whereas power from atomic power stations cannot be backed down, and hence the only option available is to ask the thermal stations to back down upto the technical limit as permissible under the

ABT regime. Hence, the Petitioner has to sacrifice the surpluses from the other sources during the off-peak hours, as the bilateral exchanges are on a first charge basis. Further, the average composite rate of Dadri Thermal Station during July 2002 to March 2003 was 242.67 paise/unit (without the transmission charges and losses) which comes close to the rate of purchase of power through bilateral exchanges i.e. 260 paise/unit.

The Petitioner has also disagreed with the NTPC regarding the Petitioner's practice of drawing less than the full availability from GENCO stations. The Petitioner has stated that the Generators at Indraprastha Station has poor availability, and hence no backing down is possible there. Further, the Petitioner has mentioned that backing down is being carried out to the extent possible in Rajghat Power House, Gas Turbine and Pragati Stations.

The Petitioner has also stated that the NTPC has recently launched a Power Trading Company called NTPC Vyapar Nigam Limited (NTPCVNL) and has approached the Petitioner to sell its off-peak surplus capacity out of its allocated share in NTPC's stations. The Petitioner has stated that the same could not be done by NTPCVNL. The Petitioner has concluded that it has to enter into bilateral agreements with different utilities to fulfill its requirements, and thus the objections of the NTPC do not have any merit.

2.5 Investment and reasonable return

2.5.1 Objections

The BMS has stated that the Companies have projected substantial capital investment in their Petitions that cannot be allowed since the Commission has not approved the capital investment.

The PHDCCI has requested the Commission to take a considered view on allowing 16% return to the Petitioner, and has requested that the same may be decided in accordance with the provisions of the Sixth Schedule to the Electricity Supply Act, 1948. In the opinion of the PHDCCI, a return of 16% is high in view of the falling interest rates today.

2.5.2 Response of the Petitioner

The Petitioner has stated that it is entitled to earn return in accordance with the Sixth Schedule to the Electricity Act, 1948. The Petitioner has further urged the Commission to consider the return in line with the principles adopted in its Bulk Supply Tariff Order for financial year 2001-02

2.6 ARR for financial year 2003 and financial year 2004 and Revenue Gap

2.6.1 Objections

The PHDCCI has stated that although the Petitioner has not proposed revision in the bulk supply tariff, the BST would have to be increased by 20-25% in order to bridge the revenue gap of TRANSCO, which in turn, would get reflected through increase in Retail Tariffs. The Chamber has requested the Commission to economize in other expenses such as employee costs, A&G expenses, etc. in order to reduce the overall revenue gap, and hence obviate the need for an increase in BST. The Chamber is of the opinion that the Petitioner should be asked to improve its efficiency of operations to the extent possible and the balance Revenue gap should be met through grants from the State Government.

Some objectors have highlighted the fact that expenses other than power purchase add up to 3.87% of the power purchase cost of the Petitioner. The objectors have opined that this proportion is on the higher side and the same should not exceed 3%.

One objector has stated that the Petition for the FY 2002-03 is based on the Revenue Requirement for eight months and not nine months. The objector has submitted that the Petition should not be considered till the Petitioner submits duly audited figures for the nine-month period, and a valid Audit Report. Several objectors including the Federation of Delhi Small Industries Association have stated that the data and figures submitted by the Petitioner are imaginary / extrapolated, and hence should not form the basis for determination of tariffs.

The Senior Citizens Welfare Association have stated that the projected Revenue Gap for the FY 2003-04 at existing BST is very high, thus requiring an upward revision in Tariffs. The Association is of the opinion that such revisions in tariff would impose a heavy burden on the consumers and benefit the private Distribution Companies.

2.6.2 Response of the Petitioner

The Petitioner has submitted that as far as the Annual Revenue Requirement for the FY 2002-03 (9 Months) is concerned, the estimated gap is not appreciable, and therefore no tariff revision has been proposed. The Transmission Company has further mentioned that the accounts for this period are being compiled, and the exact position will be known shortly.

The Petitioner has submitted that a major part of the revenue requirement in the FY 2003-04 is towards power purchase cost from Central Generating Stations and the GENCO. The Petitioner has no control over this, and the source of funds is only through sale of power at the BST fixed by the Commission and the proposed loan under the Transfer Scheme. The Petitioner has further stated that the projections made in the ARR are based on the past experience and trend.

The Petitioner has submitted that since the objectors have not provided any reasoning/basis in support of the contentions pertaining to the expenditure, the concerns raised hold no merit. Further, the Petitioner has stated that the expenditure other than power purchase, as projected by the Petitioner, are based on actuals and hence reasonable.

In view of the above arguments, the Petitioner is of the opinion that the projected expenditure is reasonable, and in line with the principles accepted by the Commission in its BST order of 22 February 2002. The Petitioner has added that the contention that the ARR for FY 2002-03 is based on eight months rather than nine months is not correct as the period from July 2002 to March 2003 comprises of nine months. The Petitioner has stated that it started functioning w.e.f. 01.07.2002 and its accounts for the period 01.07.2002 to 31.03.2003 are under finalization, and shall be submitted for statutory audit in accordance with the provisions of Companies Act.

The Petitioner has also submitted that its ARR proposals are complete and comprehensive, and added that all the additional information / clarifications asked for by the Commission have been submitted. In response to the contention that no proposal for an increase in tariff has been submitted by the Petitioner and that tariff determination has been left to the Commission, the Petitioner has replied that it has forwarded all the relevant information for determining of their BST.

2.7 Other Issues

2.7.1 Objections

The Delhi State Industrial Development Corporation (DSIDC) has submitted that the Petitioner should not recover the cost of building the necessary grid infrastructure at 220 kV, and above from the consumers of DISCOMs. Further, the Corporation has opined that the Petitioner should pay for the cost of land for setting up the 220 kV grid stations at the rate fixed in the area by the DSIDC, after giving due consideration to size, development and location of the plot. In addition, the objector has requested for refund of payments already received by the Petitioner from the DSIDC on account of advance for setting up of infrastructure.

The PHDCCI has highlighted that the Petitioner has not met the deadline set by the Commission with regard to the preparation of the Fixed Asset Registers. The Chamber has requested the Commission to direct the Petitioner to prepare the Fixed Asset Registers at the earliest.

2.7.2 Response of the Petitioner

The Petitioner has submitted that the policy of the erstwhile DVB of charging the cost of establishing dedicated Grid Sub-Stations and associated lines from the land developing agencies in cases where Grid Sub-Stations were required to be established exclusively for electrification of any particular area is currently being followed. The Petitioner has added that the DSIDC has also been paying the cost of establishing the dedicated Grid Sub-Stations as was done in the DSIDC complex Narela. The Petitioner has submitted that either the land required for setting up of the 220 kV Grid Stations be provided free of cost or its cost be borne by the DSIDC, keeping in view the rationale explained above.

Regarding, refund of payments already received by the Petitioner for setting up of infrastructure, the Petitioner has stated that the payment of cost of the electrification of the Bawana DSIDC complex being developed by the DSIDC was deposited with the erstwhile DVB and not with the Petitioner. The cost of the 220 kV and 66 kV network was fully payable by the DSIDC whereas the cost of 11 kV and LV was to be shared between the DVB and the DSIDC on a 50:50 basis. The unspent amount out of the deposits made by the DSIDC excluding that for the 220 kV works to be executed by the Petitioner has already been returned by the Delhi Power Company Limited (Holding Company).

Finally, on the subject of Fixed Asset Registers, the Petitioner submitted that the registers have been prepared, and would be submitted to the Commission after obtaining internal approvals.

2.8 Commission's Views

The Commission has taken note of the various comments/objections made and appreciates the keen participation in the process by the various stakeholders to provide vital feedback to the Commission on various issues.

Ever since it commenced its operations, the Commission has made a conscious effort to bring about a degree of transparency in the tariff setting process. Such transparency is necessary for instilling confidence in the Utilities as well as to bring about a greater understanding and appreciation of the complexity of the issues involved amongst the consumers at large.

The privatisation of the distribution business of the erstwhile DVB and the multi-year Policy Direction framework laid out by the Government for the five years beginning FY 2002-03 has not only thrown up certain regulatory challenges in its wake for the Commission, but has required a higher level of interaction with the stakeholders at large than being undertaken in the existing process. As discussed in the earlier Chapter, the Commission organised an interactive session with select stakeholders before the public hearing to explain the mechanics of the framework and its implications on the rate-setting procedure traditionally being followed in Delhi. The Commission felt it necessary to encourage the level and quality of the participation within the limited time frame.

The Commission made a beginning in addressing the challenges brought in by the modifications in the regulatory framework through its BST Order dated February 22, 2002. However, the Commission felt the lack of policy precedents existing in the country to provide the required guidance and support to effectively tackle the issues at the implementation level in the privatised and multi-year framework. The Commission signed a MoU with the Public Services Commission of Maryland, USA on February 3, 2002 to tap international expertise available in the sector regulation, and had been interacting with them on various issues.

Further, the Commission has also realised that the foundation stone of any meaningful regulation of the Utilities is to have an effective platform for exchange of operational and performance related information with the Utilities throughout the year, rather than the interactions being limited to year-end submission of filings. In the instant case, the Commission required the Utilities to indicate detailed information/ reasons for their state of affairs as well as the steps proposed to be undertaken for improving the situation over an extended period. In certain cases, the Commission also undertook visits for actual ground verification of the information being submitted by the Utilities and made the Utilities aware of the shortcomings in their information systems and processes. With the objective of aiding information availability for quicker processing of the Petitions, the Commission has awarded a contract to build a Regulatory Information Management System (RIMS) to M/s Tata Consultancy Services. The contract aims at building an MIS with pre-defined information formats, accessible to the Utilities through the Internet, for periodic update. The work is likely to be completed by October 31, 2003. The Commission expects that this would help the Utilities and the Commission to come to a common understanding about the level, form and diversity of information to be made available for processing of the ARR petitions. This would also ease the pressure placed on the Utilities in the existing set-up to provide the desired information within a limited period for year-end review of operations thus, improving its reliability and consistency.

The Commission is also alive to the fact that improvement in service standards should go hand in hand with the operational improvement envisaged in the Policy Direction framework over the five-year period beginning FY 2002-03. For this purpose, such standards on various aspects have to be notified and adequately disseminated amongst the consumers to enforce and ensure compliance. The Commission, with this objective, has notified the following Regulations:

(i) Performance Standards (Metering & Billing) Regulations dated August 19, 2003. The Regulations outline the procedure for resolution of consumer complaints related to Metering & Billing including:

- Procedure for lodging of complaints by the consumer;
- Procedure for resolution of the complaint by the Utility;
- Time-frame for resolution of complaint by the Utility;
- Procedure for dissemination of information regarding the name and contact telephone number of the Utility personnel to be informed in case of delay in the redressal of the complaint;
- Periodic status update to the Commission on pending complaints

(ii) Complaint Handling Procedure dated June 3, 2003. It relates to detailed procedures in respect of all of the above, mentioned in (i), in regard to power supply failure on various accounts, voltage fluctuations, and outages.

(iii) Schedule of miscellaneous charges for rendering various services to the consumer, not covered as a part of the Tariff Schedule brought out by the Commission in the Tariff Order for a year.

Section 28(7) of the Delhi Electricity Reform Act, 2000 sets out the overall principles for the Commission to determine the tariffs to all categories of consumers defined and differentiated according to the consumer's load factor or power factor, the consumer's total consumption of energy during any specified period, or the time at which supply is required. The overall mandate of the Act to the Commission is to adopt factors which would encourage efficiency, economic use of the resources, good performance, optimum investments and other matters which the Commission considers appropriate keeping in view the salient objects and purposes of the provisions of this Act.

The Commission recognises the impact of good tariff design in promoting efficient consumption. In the Tariff Order of 23.05.01, the Commission had rationalised some of the tariff related issues including the provisions of Tariff Schedule. The Commission also introduced kVAh billing for high voltage consumers to encourage them to improve power factor. In the present Order, apart from bringing tariffs for the subsidized consumers closer to the average cost of supply, the Commission has made certain changes in the existing structure to encourage consumption efficiency and to simplify the existing structure in response to the representations being made by various respondents in this regard, during the current tariff process.

With this background, the Commission now proceeds to provide its views on the various issues raised by the respondents in the previous sections.

2.8.1 Procedural Issues

2.8.1.1 Consolidated Petition

As regards provision of a consolidated petition for FY 2002-03 and for FY 2003-04, along with incorporation of all additional information submitted by the DISCOMs during post filing interactions till admission of the petition, the Commission has already discussed the background of the same in Chapter 1 of this Order. The Commission does not agree with the views of certain respondents that not making public the original filings has led to a lack of transparency. The Commission has explained earlier that the Original Petitions required significant additional information/ clarifications, and hence were not admitted by the Commission. In the interest of simplicity and to avoid multiplicity of documents, the Commission directed the Utilities to submit a Consolidated Petition. Further, the original petitions along with the communications from the Commission and additional submissions made by the Companies during post admission interactions was available for inspection at the Commission's premises for the interested stakeholders.

2.8.1.2 Presentation by the Commission

In regard to the presentation made by the Commission to select stakeholders on the ARR and tariff determination process on April 5, 2003 at the Commission's premises, the Commission has elaborated the same in section 1.9 of Chapter 1 of this Order. As the presentation was intended to explain to the stakeholders the process of tariff determination and the framework of the Policy Directions rather than the content of the petitions, the argument that the petitioners should have made the presentation instead of the Commission is not tenable.

2.8.1.3 Time provided to stakeholders for response

The Commission also considers the time provided to the stakeholders for responding to the petitions as reasonable, considering that the public notice in the newspapers was brought out by the Commission on March 7, 2003 and the last date of submission of responses was further extended from April 15 to April 21, 2003.

The Commission would also like to inform the DDA that the section 62 of the Delhi Electricity Reform Act, 2000 (Act) requires that any proposed modifications in the Government Rules and Commission's Regulations has to be placed before the Legislative Assembly for approval. By no stretch of imagination can revision in tariff be equated to a change in the Government Rules or the Commission's Regulations. Further, determination of tariff is solely the prerogative of the Commission and the Commission does not have to seek the Government's approval for any revision in tariff.

2.8.1.4 Filing of tariff petition

Regarding the issue of filing of Tariff Petition and making it public, the Commission would like to clarify that the Policy Directions envisage a uniform retail tariff regime for all the three Distribution Companies.

The Commission clarifies here that the tariff rates applicable to various categories during a period are only a means of allocation of recovery of the ARR for the period from the consumers of the area. A revision in tariffs is required if the projected revenue from prevailing tariffs for an ensuing period (usually a financial year) is insufficient to meet the projected revenue requirement for the year approved (by the Commission). The individual Revenue Requirements and revenue gap of the TRANSCO and the Discoms would then have to be consolidated by the Commission to compute the overall revenue requirement and revenue gap for a period, and approve tariffs to recover the revenue gap either in full or partially, while bridging the remaining gap through other means, including State Government subsidy.

The tariff proposals could have been filed by the DISCOMs either to bridge their revenue gap at existing tariffs or suggesting appropriate levels and structure for various categories based on operational and administrative ease, the objective of moving towards the cost to serve, incentives or other such considerations. This could have been useful for the Commission while approving the level and structure of the uniform retail tariffs applicable to all the DISCOMs. Similarly, the TRANSCO could have proposed an appropriate structure of the Bulk Supply Tariff so as to provide efficiency signals to the DISCOMs within the overall framework of the Policy Directions.

However, all the Companies only submitted their ARRs and requested the Commission to determine the tariffs in accordance with the Policy Directions framework. The DISCOMs also suggested certain tariff rationalization measures in their petition for the consideration of the Commission. The Commission admitted the petitions of the Companies after seeking additional information/clarifications on a number of issues as elaborated in Chapter 1 of this Order. The Commission, subsequently, directed the DISCOMs to submit a comprehensive tariff rationalization proposal instead of making piecemeal recommendations through ARR petition or during post admission interactions with the Commission. This was complied with, by the DISCOMs. The Commission has taken note of the proposal as also the concerns raised by the various stakeholders on tariff related issues such as tariff rationalization, tariff structure amendment, etc. while determining the tariffs for various consumer categories in this Order.

2.8.2 Quality of Filing and Additional Information

2.8.2.1 Transaction related documents

As regards the transaction related documents like RFQ, RFP, Copy of Bids submitted by Bidders, Share Acquisition Agreement, Shareholder's Agreement, etc., the Commission would like to clarify that all these transaction documents related with the privatisation of the DISCOMs have not been made public by the

Government. The Commission is of the opinion that all information related to privatisation and pertinent to the ARR and Tariff determination process is available either in the Transfer Scheme and the Policy Directions issued by the Government or in the petitions made by the DISCOMs.

2.8.2.2 Adequacy of information

In regard to the adequacy of information, the Commission would like to bring to the notice of the stakeholders that significant information has been exchanged with the Companies in an iterative process in order to fill the data gaps in the respective ARR Petitions, even after the admission of the petitions. The Commission has also obtained the actual cost, revenue and investments related data for the period July 2002-March 2003 from the petitioners. The Commission also undertook visits to the offices of the DISCOMs to understand the process of data capture primarily in regard to billings and collections for individual districts and to serve as a cross-check for the overall numbers submitted by the petitioner for the entire DISCOM. The Commission staff further undertook field visits in petitioner's area at some select locations to review the physical progress of the Capital Works and Repairs and Maintenance works. Thus, all possible efforts have been made by the Commission to make realistic projections for FY 2003-04 considering the limited operating history available for the Companies in the instant process.

2.8.2.3 Audited accounts

Regarding the non-availability of the audited accounts along with the ARR Petition, the Commission concurs with the Petitioner's view that the filing and finalisation of ARR involves projections for ensuing period on the basis of the past trends and the actual data available for the current year. The Commission is of the opinion that it is not possible for the Petitioner to provide the audited accounts for the current year along with the ensuing year petition, because according to the Commission's Guidelines Revenue and Tariff Filing (Guidelines for ARR and Tariff Filing), the ARR Petition for the ensuing year should be filed before 31st December of the current year, and the audited accounts are finalised only after the completion of the financial year. The audited accounts of the Companies for the previous year were not available as the Companies were not in existence during the period.

2.8.3 Policy Directions and reform process

The policy formulated and Directions issued thereto by the Government of NCT of Delhi in exercise of its powers under section 12 of the Act are binding on the Commission. The Commission, therefore, does not have any further view in the matter. Furthermore, this aspect has been discussed and addressed in the BST Order.

2.8.4 Compliance with Directives

The Commission would like to inform the objectors that the directives in the RST Order dated 23rd May 2001 pertained to the erstwhile DVB, while the BST Order dated 22nd February 2002 pertained to TRANSCO/DISCOMs. The Commission has revisited the directives made earlier, and has issued fresh directives to the petitioner in this Order incorporating the earlier ones, wherever relevant. These directives are discussed in Chapter 7 of this Order.

2.8.5 ARR and Revenue Gap for FY 03 and FY04

2.8.5.1 Revenue gap estimations

As regards the concerns raised by the respondents relating to expenses and Revenue Gap estimations/projections of the Petitioner, the Commission has already elaborated on this aspect earlier while dealing with the concerns regarding the quality of information and additional information.

The Commission reiterates that the BST and RST have been determined in line with the Policy Directions of the Government. The Commission has explored various practical means of bridging the revenue gap, before deciding the extent of revenue gap to be met through increase in tariffs. The Commission has examined the petitions critically and has accepted the petitions with due regard to the provisions of the Act as well as the ARR and Tariff Guidelines issued by the Commission.

2.8.5.2 Scrutiny of expenditure and revenue components

The Commission has considered the prudence of expenditure projected by the Utilities, the actual expenditure in FY 2002-03, as well as the committed Government support, while determining the revenue requirement and the category-wise tariffs to meet the revenue requirement. Detailed analysis of all the expenses and the revenue components, in regard to its prudence and methodology of projections, has been provided in the relevant sections of Chapters 4 3 and 5 4 respectively.

The Commission has critically examined all the heads of expenditure and revenue while determining the ARR as discussed in Chapters 3 and 54. As a result of detailed analysis of various expenses, the Commission has seen the prudence of each item. The final numbers are as under:

Table 2.1: ARR excluding power purchaseAnnual Revenue Requirement

Description	FY 02-03		FY 03-04	
	Petition	Commission	Petition	Commission
Expenses	3678	3314	5341	4876
Return	22	21	29	6
NTI	0	60	121	12
ARR	3700	3275	5249	4870

The Commission would like to inform the objectors that the R & M expenses have been validated to the extent possible and projections have been made after considering the available actual data for FY 03. The Commission directs the DISCOMs and TRANSCO to maintain separate data of actual items issued from stores for R & M activities.

2.8.6 Treatment of past Arrears Collected

The Commission would like to clarify that 20% of the past arrears of DVB collected by the Petitioner DISCOMS has been considered as revenue for meeting the Annual Revenue Requirement. The Commission has opined that 80% of collected arrears payable to Holding Company under the Transfer Scheme should remain in the sector and be passed on to TRANSCO. Accordingly, the Government has been asked to revisit the issue and make suitable amendment in the public interest.

2.8.7 Depreciation charges

The Companies Act, 1956 allows the DISCOMs to claim depreciation even for assets added during the year on a proportionate basis. However, under the Schedule VI, the depreciation for a year is allowed only on assets at the beginning of the year. For the purpose of ARR and tariff determination, the Commission has considered depreciation only on assets at the beginning of the year as per details in para… of the Order.

2.8.8 Investments

The Commission has held detailed discussions with the DISCOMs TRANSCO and scrutinized the investments already made as well as the investments proposed to be made by the DISCOMsTRANSCO. , especially their preparedness for the summer months. The Commission has also conducted sample checks on the investments – starting from the material procurement process to installation of equipment and issue of completion certificates.

The Commission has obtained the details with respect to scheme wise investment proposed by the Petitioner, details of actual investments undertaken during the period July 2002 to March 2003, and the Petitioner's preparedness for executing the works proposed under the capital investments for the FY 2003-04. The Commission has taken into account these details while determining the capital investments for the purpose of determination of the ARR as detailed out in para…..

However, the Commission would like to bring to the notice of the Petitioner that mere consideration of the investments in the ARR does not imply approval of such investment by the Commission. The Commission had directed the Petitioner to obtain the approval of all the capital investment schemes completed during the FY 2002-03, and proposed during the FY 2003-04 (Reference para…..).

The Commission would also like to clarify to the objector that the capital investments are not considered under the revenue expenditure. In the revenue expenses, only the capital related charges, viz. interest payable on the loans as well as the depreciation are considered.

2.8.9 Non-Tariff Income

The Commission has considered the rebate on early payment of power purchase bills as well as the 20% of the arrears of DVB collected by DISCOMs, while computing the income of the DISCOMs. Meter rent is not exactly charged to recover the cost of the meter and provides a source to meet to some extent the fixed costs for the DISCOM. If the meter rent is not charged, then this part of the revenue requirement will have to be recovered through some other charges or through tariffs. The Commission has eliminated the meter rent and has introduced two-part tariff with the fixed charge component as has been elaborated in Chapters 4 and 5.

The Commission has scrutinized all the components of Non-Tariff Income in detail for prudence and methodology adopted for estimation. The Commission has also considered the actual non-tariff income for the period July 2002-March 2003 for making the projections for FY 2003-04. Detailed analysis of the Non tariff Income is provided in the relevant section of Chapter 3.

2.8.10 Return on EquityReturn

The Commission would like to inform the objector that the system of ARR and Tariff determination being followed by the Commission gives due weightage to the efficiency of operations and only prudent expenditure is allowed to be recovered though tariffs. The paying capacity of the DISCOMs will be determined after considering the prudently incurred expenses as well as the revenue. The Policy Directions issued by the Government before privatization of the DISCOMs clearly lays down that the 16% return is applicable on the equity and free reserves of the DISCOM. In this instance, the Schedule VI provisions of return on capital base will not be applicable for the five-year transition period.

The Commission would like to clarify that the Policy Directions issued by the GNCTD stipulates 16% Return on Equity for the Distribution Licensees, and not for the TRANSCO. As TRANSCO is the transmission licensee, the reasonable return provisions of the Sixth Schedule to the Electricity Supply Act, 1948 are applicable, and the same has been considered by the Commission, while computing the Return allowable to TRANSCO.

2.8.11 Energy Requirement of DISCOMS and Transmission losses

The Commission has undertaken a detailed analysis of the energy requirement of each Distribution Company to arrive at the total energy requirement of the TRANSCO, with an objective to minimize power shortages in the State. Detailed analysis of the energy requirement of the TRANSCO has been given in the relevant section of the Order. The Commission has projected the demand and the energy input requirement of each DISCOM for FY 2003-04, considering the actual category-wise sales during the year FY 2002-03, and the extent of total load shedding undertaken during FY 2002-03.

The Commission has obtained the details of the actual energy purchased by TRANSCO from various sources, and the total energy sold to the Distribution Companies and the Licensees during the period July 2002 - March 2003. The details of actual transmission losses for the period July 2002 – March 2003 and the energy balancing for the period has been detailed out in the relevant section of the Order.

2.8.12 Power Purchase Expenses

The Commission has undertaken a detailed analysis of all the elements of power purchase cost, and has attempted to optimize the overall power purchase cost of the TRANSCO from various sources including GENCO stations.

The Commission would further like to mention that the actual power purchase expenses incurred by TRANSCO during the period July 2002 - March 2003 have been considered while projecting the power purchase cost for 2003-04.

As regards the power purchases from NTPC Stations including Dadri, the Commission has considered power purchase from all Central Generating Stations on the basis of allocated and unallocated share from each station. A detailed analysis of all the elements of the Power Purchase expenses from various sources is provided in the relevant section of the Order.

2.8.13 Fixed Asset Register

The Commission has taken a serious note of non-submission of Fixed Asset Register by the TRANSCO. The Commission directs the TRANSCO to submit the detailed Fixed Assets Register to the Commission by the end of July, 2003.

2.8.14 Development charges and Cost of Land

The Commission notes that the mechanism of development charges ensures that the development work is undertaken only when required. Further, contribution by consumers in the form of development charges for the infrastructure development for supplying electricity to new areas is an established practice in most of the States. However, the share of consumer contribution towards the development cost varies across States. In case of Delhi, the development cost of new areas has been shared in the ratio of 50:50 between the Utility and the developing agency. In case of areas where the development cost is not being shared by the developing agency, the same is to be borne by the consumers.

The Commission feels that it is not appropriate to change the condition pertaining to the sharing of the development cost of new area, as it will tantamount to differentiation in share cost borne by the consumers who had taken the connections earlier and those who would be taking the connections henceforth. Therefore, the existing provisions of sharing of developing costs between the Utility and the consumers for the new works is retained.

At the time of restructuring of DVB, there existed some incomplete capital works (deposit works) pending execution by the DVB. The contributions by the developing agencies/consumers for all such works were, however, made to the erstwhile DVB. The Shared Facilities Agreement executed at the time of restructuring stipulate that " *All capital works below 33 kV voltage level shall be to the account of DISCOMs whether such capital works are in progress or nearing completion or otherwise yet to commence. The Government, Transco, Holding Company or any other entity will not be called upon to contribute any amount towards such capital works notwithstanding that advances have been received in the past and have not been fully utilised for execution of such work.*"

The Petitioner has considered these deposit works as part of the capital investments, and consequently proposed the funding of such works in the Annual Revenue Requirement. During the public hearing proceedings TRANSCO mentioned that for capital works to be completed by the DISCOMs, the contribution made by some developing agencies towards execution of these deposit works have been refunded by TRANSCO to these agencies.

The Commission also approached the Government for seeking clarifications and position on the issue of deposit works. The Government in its response has reproduced the relevant provisions of the Shared Facilities Agreement as mentioned above and has not elucidated in the matter further.

In view of the above, the Commission is of the opinion that it is not appropriate to consider the funding of the total cost of deposit works as capital investments in the ARR has to be limited to 50% of the cost of works. Considering that the cost of these deposit works to be shared in the proportion of 50:50 between the Utility and the consumers/developers, the Commission has taken the funding to the extent of 50% of the cost of these deposit works while estimating the ARR.

The Commission is also concerned about the non-completion of these pending deposit works by the Petitioner particularly in case for DDA and DSIDC.

In this context, the Commission requests the Government to resolve the issue of deposit works execution within a period of two months from the date of this Order, in consultation with the TRANSCO, DISCOMs and the developing agencies such as DSIDC,DDA etc., A specific forward path needs to be drawn for executing these works, addressing various issues such as:

- Details of deposit works to be executed
- Works to be executed by TRANSCO and each DISCOM
- Funding arrangements

In case the matter does not get resolved amicably between the Government, TRANSCO, DISCOMs and development agencies, it may be referred to the Commission.

As regards the cost of the land to be recovered by DSIDC or DDA for the existing land transferred to NDPL, the Commission is of the view that this issue may be settled amicably between the DSIDC, NDPL and Government. The cost of new land to be paid by NDPL to DSIDC or DDA may be bilaterally negotiated and agreed between the two parties, as the matter does not fall within the purview of the Commission.

3 Commission's Analysis of the Annual Revenue Requirement

Section 28 (5) of Delhi Electricity Reform Act, 2000, requires a licensee to provide to the Commission at least 3 months before the ensuing financial year, full details of its calculation of the expected aggregate revenue from charges for that financial year, during which the licensee is permitted to recover pursuant to the terms of its license. The section further stipulates that the licensee shall also furnish such further information as the Commission may reasonably require to assess the licensee's calculations.

Pursuant to the above stipulation, and consequent to restructuring of the DVB in July 2002, the Commission, in August 2002, issued the revised guidelines for methodologies and procedures to be adopted by the TRANSCO and DISCOMs for filing of the ARR. As already explained in ***Chapter 2***, according to the Policy Directions issued by the Govt. of NCT of Delhi, bulk supply tariff for supply of energy from TRANSCO to DISCOMs is required to be determined on the basis of the paying capacity of each DISCOM. The forms contained in the guidelines call for a variety of information/data relating to expenditure, return, various performance parameters etc. Typically, the Annual Revenue Requirement of the transmission licensee consists of the following major items:-

a) Power Purchase Costs

b) Expenses: -
   - Employee expenses
   - Administrative and general expenses
   - Repair and maintenance expenses
   - Interest expenditure
   - Depreciation

c) Return on Equity

d) Taxes on Income

The Commission has considered various submissions made by the Petitioner over the course of the tariff determination process, and has carefully analyzed the different heads of the expenditure to project the realistic level of allowable expenditure in FY 2002-03 (9 month period from July 2002 - March 2003) and FY 2003-04. The process of ARR determination extended beyond 31 March 2003, and therefore the Commission obtained the details of actual expenses and revenue for the nine month period July 2002-March 2003. The detailed analysis of each head of expense is discussed in the sections below. The Annual Revenue Requirement (ARR) has been determined on the following broad principles:

- For FY 2002-03, the Commission has considered the actual expenses and income of TRANSCO to determine the ARR, after ensuring that the expenses satisfy the requirement of reasonable prudence.
- For FY 2003-04, the Commission has estimated the expenses by considering a reasonable increase in operating expenses, including heads such as Employee, A&G and R&M allowed for FY 2002-03 after annualization and considering the extent of capital and R&M works to be executed during FY 2003-04

In the following paragraphs, the various elements of Annual Revenue Requirement are discussed:-

3.1 Power Purchase Quantum and Costs

The power purchase cost comprises around 95% of the total estimated revenue requirement of the transmission company (TRANSCO). Hence, it is imperative that this element of cost is estimated with utmost care based on the most efficient way of procuring power from the successor generating company of DVB and other generating stations.

3.2 Sources of Power

The Delhi TRANSCO Limited (TRANSCO) buys power from the following sources:

- State Generating Thermal Stations (GENCO)
- Pragati Power Corporation Limited (PPCL)
- Badarpur Thermal Power Station
- Central Generating Stations of NTPC, NHPC and NPC
- Power Trading Corporation
- Bilateral Purchases from Other States

3.3 Power Purchase from GENCO Stations

3.3.1 Petitioner's Submission

GENCO with a total installed capacity of 648 MW has three thermal power stations viz., Inder Prastha thermal power station (248 MW), Rajghat thermal power house (135 MW) and Inder Prastha Gas Turbine power station (265).

TRANSCO has submitted Draft Power Purchase Agreement along with the Petition that has not been approved by its Board. In the Petition, TRANSCO has considered a single composite rate for the power purchased from all the GENCO stations.

For the period July 2002 to March 2003, the TRANSCO has considered actual generation by each station during July – October 2002 and estimated generation for the next five months from November 2002 to March 2003. The basis and operational parameters for estimating the generation and variable costs have not been provided by TRANSCO in the Petition.

3.3.2 Commission's Analysis

During the technical validation sessions, the Commission directed the TRANSCO to submit the details of monthwise actual generation, generation parameters and the fuel costs in the prescribed format. Subsequently, TRANSCO obtained these details from GENCO and submitted the same to the Commission. The TRANSCO submitted the actual details for the period July 2002 to March 2003, and also the projected generation and assumptions for other operational parameters and fuel costs for FY 2003-04.

For the period July 2002 to March 2003, the Commission has considered the actual generation from each station of GENCO. The Commission also compared the actual generation in FY 2002-03 with the targets approved by CEA for that period. The Commission has noted that the generation from IP Station during FY 2002-03 has been lower than the CEA targets because rotor of two units have been replaced and units were under maintenance for six months during this period. For RPH and GT Stations, the actual generation in FY 2002-03 was almost equal to the CEA's targets. The Commission has, therefore, taken in to consideration the targets set by CEA while estimating the generation from GENCO stations during FY 2003-04.

Generation from Indra Prastha Power Station (IP)

The actual generation from the Station during the last three years and during July 2002-March 2003, and the generation considered by the Commission for FY 2003-04 along with the other operational parameters such as PLF and Auxiliary Consumption is given below in the Table 3.1given below:

Table 3.1 ***Generation from IP Station***

Description	**Actuals**				**Commission**	**Commission**
Period→	**1999-00**	**2000-01**	**2001-02**	**July 2002-Mar 03**	**July 02-Mar 03**	**2003-04**
Gross Generation (MU)	847	865	813	460	460	614
PLF (%)	39.0%	39.8%	37.49%	28.3%	28.3%	28.3 %
Aux. Consumption (%)	11.50%	11.60%	12.48%	11.62%	11.64%	11.64%
Net Generation (MU)	749	765	711	406	406	542

The Commission is aware that as per the Hon'ble Supreme Court's Order, IP Station has to be closed down on Pragati Power Station becoming fully operational. However, Government of Delhi has requested the Hon'ble Supreme Court that considering the prevailing acute power shortage in the state, it may be allowed to run the IP station. Hon'ble Court has agreed to the same provided NOX level of the station being kept lower than 50 ppm. This would require extensive maintenance and long unit shut downs. Therefore, the station may not be able to achieve the CEA Target (800 MU) and the generation projected by the TRANSCO (860 MU) and on the same plea the actual PLF perhaps would also be of the same order as achieved during FY 02-03 i.e.28.3%. Further as observed from the above table, the actual auxiliary consumption during last three years remained between 11.5% to 12.5% and for the period July 02 – March 03 it was 11.64%, the Commission has accepted this value for the period July 02 – March 03 and also for FY 03-04

The Haryana Vidyut Prasan Nigam Limited (HVPNL) has 1/3rd share in units nos. 2, 3 &4 of IP Station and, therefore, 1/3rd of the energy generation by these units is booked to HVPNL . Petitioner has informed that 172 MU have been booked to HVPNL during July 02 – March 03 and only 234 MU were available to TRANCO. Petitioner has also informed that 204 MU would be booked to HVPNL during FY 2003-04 from this station. Thus remaining 338 MU would available to TRANSCO.

Generation from Rajghat Power Station (RPH)

The actual generation from the Station during the last three years and during July 2002-March 2003, and the generation considered by the Commission for FY 2003-04 along with the other operational parameters such as PLF and Auxiliary Consumption is provided in the Table 3.2 given below:

Table 3.2: Generation from RPH Station

Description	Actuals				Commission	Commission
Period→	**1999-00**	**2001-02**	**2001-02**	**July 02-Mar 03**	**July 02-Mar 03**	**2003-04**
Gross Generation (MU)	942	791	699	695	695	858
PLF (%)	79.7%	66.9%	56.12%	78.1%	78.1%	71.70%
Aux. Consumption (%)	10.8%	11.0%	13.01%	11.28%	11.28%	11.28%
Net Generation (MU)	840	704	608	617	617	752

The Commission has accepted the actual auxiliary consumption of 11.28% for the period July 2002 to March 2003 and has also considered the same for FY 2003-04.

Generation from Indra Prastha Gas Turbine Station (GT)

The actual generation from the Station during the last three years and during July 2002-March 2003, and the generation considered by the Commission for FY 2003-04 along with the other operational parameters such as PLF and Auxiliary Consumption is provided in the Table 3.3 given below

Table 3.3: Generation from Indra Prastha Gas Turbine Station

Description	3.3.2.1.1.1.1	Actuals			Commission	Commission
Period→	**1999-00**	**2000-01**	**2001-02**	**July 02-Mar 03**	**July 02-Mar 03**	**2003-04**
Gross Generation (MU)	743	1139	1167	916	916	1200
PLF (%)	32.0%	48.5%	47.24%	49.33%	49.33%	48.58%
Aux. Consumption (%)	2.2%	2.6%	1.63%	2.19%	2.19%	2.19%
Net Generation (MU)	727	1109	1148	896	896	1174

As observed from the above Table, the actual auxiliary consumption during the period July 2002 to March 2003 was lower than the auxiliary consumption norm of 3% for the Combined Cycle Station. Therefore, the Commission has accepted the actual auxiliary consumption for the period July 2002 to March 2003 and has also considered the same auxiliary consumption for FY 2003-04.

Though the Petitioner has taken a single composite rate for the power purchased from all GENCO stations the Commission has separately estimated the total Fixed Costs of GENCO and variable cost of each station for estimating the total power purchase cost from GENCO as accurately as possible.

3.3.3 Fixed Costs of GENCO

As per the draft Power Purchase Agreement (PPA) between GENCO and TRANSCO, the fixed charge comprises the following elements:

- ➔ Interest on Loans
- ➔ Depreciation @ 7.84% of GFA
- ➔ Interest on Govt. Loan @ 13% p.a.
- ➔ Return on Equity @ 16%
- ➔ O&M Costs
- ➔ Interest on Working Capital

Depreciation: The depreciation rate considered in the draft PPA is 7.84%. While estimating the fixed costs, GENCO has estimated depreciation by applying this rate on the opening value of Gross Fixed Assets of Rs. 510 crore as specified in the Transfer Scheme.

As elaborated in Section 3.27, the Commission has considered and applied the principle of depreciating the asset over its fair life such that 90% of the asset value is depreciated over the fair life of the asset. The average fair life of the thermal stations and combined cycle plants has been considered as 25 years and 15 years respectively for the purpose of estimating the depreciation. In this method, the average deprecation will be in the range of 4%. The Commission has thus considered the depreciation rate as 4% for the purposes of this ARR. The Commission will take a considered view in the matter when the PPA between TRANSCO and GENCO is submitted to the Commission for approval.

Interest on Government Loan: As per the Transfer Scheme and Policy Directions, the loans outstanding as on 1st July 2002 have a moratorium period of four years on interest and repayments. GENCO in the PPA has considered an additional loan of Rs 97.53 crore during the nine-month period July 2002 to March 2003 and estimated corresponding interest of Rs 6.34 crore.

The actual loan drawn by GENCO during the period July 2002 to March 2003 is Rs. 40.37 crore and the interest expense is Rs 1.78 crore. For FY 2002-03, the Commission has considered the actual interest expense and for FY 2003-04, the interest expense has been estimated considering 13% interest on actual loan drawn during FY 2002-03. The interest expense for FY 2003-04 as estimated by the Commission works out to Rs. 4.72 crore.

Return on Equity: The Draft PPA provides for 16% Return on Equity, which is in line with the Ministry of Power Notification applicable for other generating stations including Central Generating Stations. Therefore, the Commission has accepted the Return on Equity estimated by GENCO.

Operation & Maintenance Costs:

The O&M Costs consists of Employee Expenses, A&G Expenses and Repairs and Maintenance (R&M) expenses. For the period July 2002 to March 2003, the Commission has considered the actual expenses as per the provisional accounts of GENCO for FY 2001-02. For FY 2003-04, the Commission has estimated these expenses considering an increase of 6%, 8% and 10% for Employee Expenses, A&G Expenses and R&M Expenses, respectively on the basis of past trends of these expenses for entire DVB.

Interest on Working Capital

The assumptions considered in the Draft PPA for estimating the working capital requirement are as follows:

- One month's Fuel Cost
- One month's O&M Cost
- Two month's receivables
- Maintenance Spares

The assumptions for estimating the Working Capital are reasonable and within the norms specified in the MoP Notification for other thermal stations. Therefore, the Commission has also estimated working capital considering these norms. GENCO has considered an interest rate of 12.5% for computing working capital interest which is in line with the prevailing short term lending rates and hence the Commission has considered this rate for estimating interest on working capital.

The Summary of the Fixed Costs estimated in the PPA and the fixed costs considered by the Commission is given in Table 3.4 given below:

Table 3.4 Fixed Charges GENCO Stations

(Rs crore)

Item	**PPA**	**Commission**	
		July 02 to Mar 03	**2003-04**
Interest on Govt Loan	6.3	1.8	4.7
Depreciation	40.0	15.3	20.4
O&M	104.6	56.2	80.2
Return on Equity	22.4	16.8	22.4
Int on Work. Cap	20.8	11.89	16.83
Total Fixed Cost	**194.1**	**101.95**	**144.53**

3.3.4

3.3.5 Variable Costs of GENCO

Petitioner's Submission

In its Petition, the TRANSCO has considered the composite variable cost of Rs 168 paise/kwh for purchase of power from all the GENCO Stations. Subsequently, TRANSCO submitted the actual details of the operational parameters and the actual costs for each Station for the period July 2002 to March 2003.

Commission's Analysis

The Commission has estimated the station-wise variable cost based on the actual average fuel cost and considering the other operational parameters such as Heat Rate, Secondary Fuel Consumption, etc.

Indra Prastha Power Station (IP)-Variable Cost of Generation

The actual operational parameters, fuel prices and calorific value of fuel for the period July 2002 to March 2003, as considered by GENCO for FY 2003-04 and as approved by the Commission are shown in the Table 3.5 given below:

Table 3.5: Operational Parameters : IP Station

Description	July 2002- Mar 2003		2003-04	
	Actual	Commission	GENCO	Commission
Heat Rate (kcal/kwh)	3448	3235	3410	3235
Coal calorific value (kcal/kg)	4190	4190	4175	4190
Coal Price (Rs/MT)	1674	1674	1680	1674
Sec. Fuel Cons. (ml/kwh)	10.21	10	10	10
Sec. Fuel Price (Rs/KL)	14747	14747	15528	15337

The heat rate approved by the Commission in its RST Order is 3200 kcal/kwh. The actual heat rate during July 2002 to March 2003 has increased substantially as compared to the heat rate approved by the Commission in its Retail Supply Tariff (RST) Order of May 2001. The PPA specifies a heat rate as 3235 kcal/kwh. As the heat rate specified in the PPA is marginally higher than the heat rate approved in the RST Order and considering the vintage of the Station, the Commission has considered the heat rate of 3235 kcal/kWh. The Commission has considered the secondary fuel consumption at the level approved by the Commission in its RST Order.

For the period July 2002 to March 2003, the Commission has considered the actual price and calorific value of coal and secondary fuel for estimating the variable cost. For FY 2003-04, based on past trends, the Commission has considered the price of coal at the same level and an increase of 4% in the price of secondary fuel. The actual variable cost of generation per unit and the cost of energy sent out per unit for the period July 2002 to March 2003, as considered by GENCO for FY 2003-04 and as approved by the Commission are shown in the Table 3.6 given below:

Table 3.6: Variable Cost per unit : IP Station

Description	July 2002- Mar 2003		2003-04	
	GENCO	Commission	GENCO	Commission
Cost of Generation (Rs/kwh)	1.49	1.40	1.49	1.40
Cost of Energy Sent Out* (Rs/kwh)	1.69	1.58	1.69	1.58

** Net energy after accounting for auxiliary consumption*

Rajghat Power Station (RPH)-Variable Cost of Generation

The actual operational parameters, fuel prices, calorific value of fuel for the period July 2002 to March 2003, as considered by GENCO for FY 2003-04 and as approved by the Commission are shown in the Table 3.7 given below:

Table 3.7: Operational Parameters: RPH

Description	Draft PPA	July 2002- Mar 2003		2003-04	
		GENCO	Commission	GENCO	Commission
Heat Rate (kcal/kwh)	3200	3539	3200	3476	3200
Sec. Fuel Cons. (ml/kwh)	10	5.93	5.93	15	5.93
Coal Price (Rs/MT)	----	1879	1675	1879	1675
Coal calorific value (kcal/kg)	----	4186	4186	4000	4186
Sec Fuel Price:					
'- LDO (Rs/KL)	----	15527	15527	15527	16148
'- LSHS (Rs/MT)	----	11033	11033	13540	11474

The Commission is its RST Order has approved the heat rate of 3200 kcal/kwh. The actual heat rate during July 2002 to March 2003 has increased substantially as compared to heat rate approved by the Commission in its RST Order. Further, the PPA specifies heat rate as 3200 kcal/kwh. The Commission has considered the heat rate of 3200 kcal/kwh as specified in the PPA. The Commission has considered the actual secondary fuel consumption for FY 2003-04.

In the Petition GENCO has given Rs 1879/MT as coal price for RPH against Rs 1674 for IP Station. During technical validation session the Commission asked for the reason for variation in price of the two stations, which are situated quite close to each other. GENCO informed that coal price for both stations are of the same order i.e. Rs 1674 for IP Station and Rs 1675 for RPH. Commission accepted these values. For the period July 2002 to March 2003, the Commission has considered the actual price and calorific value of coal and secondary fuel for estimating the variable cost. For FY 2003-04, based on past trends, the Commission has considered the price of coal at the same level and an increase of 4% in the price of secondary fuel.
The variable cost of generation per unit and the cost of energy sent out per unit for the period July 2002 to March 2003 and for FY 03-04 as considered by GENCO and as approved by the Commission are shown in the Table 3.8 given below:

Table 3.8: Variable Cost per unit: RPH

Description	July 2002- Mar 2003		FY 2003-04	
	GENCO	Commission	GENCO	Commission
Cost of Generation (Rs/kWh)	1.63	1.33	1.70	1.33
Cost of ESO (Rs/kWh)	1.84	1.50	1.91	1.50

Indra Prastha Gas Turbine Station - Variable Cost of Generation

The operational parameters, fuel prices, calorific value of fuel as considered by the Petitioner in the Draft PPA, actuals for the period July 2002 to March 2003, and as approved by the Commission are shown in Table 3.9 given below:

Table 3.9: Operational Parameters: GT

Description	Draft PPA	July 2002- Mar 2003		FY 2003-04
		Actual	Commission	Commission
Heat Rate (kcal/kWh)	2800	2346	2346	2346
Gas Price (Rs/SCM)	----	3.78	3.78	4.00
Calorific value (kcal/SCM)	----	8423	8423	8423

As observed from the above table, the actual heat rate during July 2002 to March 2003 has reduced substantially as compared to heat rate considered in the Draft PPA. The Commission has, therefore, considered the actual heat rate for the period July 2002 to March 2003 and also for FY 2003-04.

For the period July 2002 to March 2003, the Commission has considered the actual price and calorific value of gas. For estimating the variable cost for FY 2003-04, the Commission has considered an increase of 5% in the gas price, based on past trends.

The actual variable cost of generation per unit and the cost of energy sent out per unit for the period July 2002 to March 2003 and as approved by the Commission are shown in the Table 3.10 given below:

3.3.8

Table 3.10: Variable Cost per unit: GT

Description	July 2002- Mar 2003		FY 2003-04
	Actual	Commission	Commission
Cost of Generation (Rs/kwh)	1.0526	1.0526	1.1052
Cost of ESO (Rs/kwh)	1.0766	1.0766	1.1299

3.3.9 Total Cost of Power Purchase from GENCO

The summary of total cost of power purchase from GENCO as estimated in the Petition and as approved by the Commission is summarised in Table 3.11 given below:

Table 3.11: Cost of Power Purchase from Genco Stations

Description	9.1.1.1.1 Petition		1.1.1.2 Commission	
Period→	Jul 02-Mar 03	2003-04	Jul 02-Mar 03	2003-04
Units Purchased (MU)	1663	2290	1719	2264
Total Cost (Rs crore)	411.99	572.44	327.14	443.51
Cost per unit (Rs/kwh)	2.48	2.50	1.88	1.96

3.3.10 Power Purchase from Pragati Power Corporation Limited (PPCL)

Petitioner's Submission

The Pragati Power Corporation Ltd. (PPCL) is a combined cycle station of 330 MW capacity consisting of two gas turbines and one steam turbine. The first gas turbine unit was commissioned in the month of May 2002, the second gas turbine unit was commissioned in November 2002 and the combined cycle plant was commissioned in March 2003.

In its Petition, the TRANSCO has considered purchase of 751 MU from PPCL during the period July 2002 to March 2003. For FY 2003-04, the TRANSCO has estimated total power purchase of 1706 MU from PPCL. The TRANSCO has further submitted the Draft Power Purchase Agreement (PPA) along with the Petition. Till date, TRANSCO has not submitted the PPA approved by its Board for approval of the Commission.

In its Petition, TRANSCO has considered the entire power purchase at a single composite rate of Rs 2.76/kWh (open cycle rate) for the period July 2002 to March 2003. For FY 2003-04, the TRANSCO has estimated the Fixed Cost of PPCL as Rs 283.02 crore and variable cost as Rs 1.05/kWh.

Commission's Analysis

During the technical validation sessions, the Commission directed the TRANSCO to submit the details of month wise actual generation, generation parameters and the fuel costs in the prescribed Format. Subsequently, TRANSCO obtained these details from PPCL and submitted the same to the Commission. Along with the details of actuals for the period July 2002 to March 2003, the PPCL also submitted its assumptions for operational parameters and fuel costs for FY 2003-04.

For the period July 2002 to March 2003, the Commission has considered the actual net generation from PPCL. For the year 2003-04, the Commission has estimated the generation based on the CEA target. The actual auxiliary consumption for the period July 2002 to March 2003 works out to 1.6%, however, the draft PPA specifies the auxiliary consumption of 1% for open cycle. Since the ST unit of the station was under commissioning, the Commission has approved the actual auxiliary consumption of 1.6% for the period July 2002 -03. For FY 2003-04 the Commission approved heat rate of 3% for combined cycle operation. The summary of net power purchase from PPCL is given in the Table 3.12 given below:

Table 3.12: Generation from PPCL

Description	July 2002 – March 2003		2003-04	
	PPCL	Commission	PPCL	Commission
Gross Generation (MU)	780	780	2312	1998
Aux. Consumption (%)	1.6%	1.6%	3%	3%
Net Generation (MU)	767	767	2243	1938

3.3.11 Fixed Cost of PPCL

The Commission has analysed the draft PPA submitted for purchase of power from PPCL. The parameters for computing the Fixed Charges as specified in the draft PPA and as considered by the Commission for estimating the Power Purchase Cost are summarized in the Table 3.13 given below:

3.3.12

Table 3.13 Parameters for Fixed Charges

Parameter	Draft PPA	Commission
O&M Charges (% of Project Cost)	2.50%	2.50%
Depreciation (% of Project Cost)	8.24%	5%
% of Debt to Project Cost	70%	70%
% of Equity to Project Cost	30%	30%
Interest on Loan	14%	13%
Return on Equity	16%	16%
Interest on Working Capital	11%	12.5%
3.3.12.1.1 Working Capital		
Fuel Expenses (days)	30	30
O&M Expenses (month)	1	1
Receivables (Month)	1	1
Spares (month)	0.50%	0.50%

The Commission has observed that most of the above parameters specified in the PPA are in line with the MoP notification applicable for other generating stations and hence the Commission has accepted these norms for computing the Fixed Charges. The Interest Rate on long-term loans as specified in the PPA appears to be on higher side and the interest rate on working capital loan considered is on lower side. The Commission has rationalised the interest rates considering the prevalent short term and long term lending rates. The summary of Fixed Costs as estimated by TRANSCO in the Petition and as considered by the Commission is provided in the Table 3.14 given below:

Table 3.14: Fixed Charges for PPCL

(Rs crore)

Description	3.3.12.1.2 3.3.12.1.3 July 2002 – Mar 2003 (for GTs only)		2003-04 (for combined cycle)	
	PPA	Commission	PPA	Commission
O&M Charges	17.80	17.78	26.90	26.93
Depreciation	58.59	35.55	88.77	53.87
Interest Charges	69.68	59.72	105.58	90.49
Return on Equity	34.13	34.13	51.71	51.71
Interest on Working Capital	6.05	6.30	7.35	8.22
Fixed Fuel Cost	1.93	1.93	1.93	1.93
Total Fixed Cost	**188.10**	**155.2***	**282.30**	**232.8**

* 1st GT was commissioned in May 2002 and 2nd GT was commissioned in Nov 2002. Accordingly actual fix charges for the period have been worked out as Rs 99 crores only.

Depreciation: The depreciation rate considered in the draft PPA is 8.24%. The issue of depreciation has been elaborated in Section 3.27. As mentioned in Section 3.27, the Commission has considered and applied the principle of depreciating the asset over its fair life such that 90% of the asset value is depreciated over the fair life of the asset. The average fair life of the gas turbines and steam turbine including other equipments has been considered as 15 years and 25 years respectively for the purpose of estimating the depreciation. In this method, the average deprecation will be in the range of 5%. The Commission has hence considered the depreciation rate as 5% for the purposes of this ARR.

3.3.13 Variable Cost of Generation: PPCL

The actual details of operational parameters, fuel prices, calorific value of fuel for period July 2002 to March 2003, as approved by the Commission for the period July 2002-March 2003 and for the year 2003-04 are shown in Table 3.15 given below:

3.3.14 **Table 3.15: Operational Parameters: PPCL**

Description	**July 2002- Mar 2003**		**2003-04**	
	Actual	**Commission**	**PPCL**	**Commission**
Heat Rate (kcal/kwh)	2807	2807	2000	2000
Gas Price (Rs/SCM)	3.85	3.85	4.25	4.04
Calorific value (kcal/SCM)	8251	8251	8190	8251

As observed from the above table, the actual heat rate during July 2002 to March 2003 is 2807 kcal/kwh, which is lower than the MoP heat rate norm of 2900 kcal/kwh for open cycle mode of operation. Further, the PPA specifies the heat rate of 2900 kcal/kwh and 2000 kcal/kwh for open cycle and combined cycle, respectively. The Commission has considered the actual heat rate for the period July 2002 to March 2003 and for FY 2003-04, the Commission has considered the heat rate of 2000 kcal/kwh in line with the draft PPA.

For the period July 2002 to March 2003, the Commission has considered the actual price and calorific value of gas. For estimating the variable cost for FY 2003-04, the Commission has considered an increase of 5% in gas price based on past trends.

The variable cost of generation per unit and the cost of energy sent out per unit ,actuals for the period July 2002 to March 2003 and as approved by the Commission are shown in the Table 3.16 given below:

Table 3.16: Variable Cost per unit: PPCL

Description	**July 2002- Mar 2003**		**2003-04**	
	Actual	**Commission**	**PPCL**	**Commission**
Cost of Gen (Rs/kWh)	1.31	1.31	1.04	0.98
Cost of ESO (Rs/kWh)	1.33	1.32	1.07	1.01

The summary of net purchase from PPCL, fixed costs, variable costs and total costs as estimated in the Petition and as estimated by the Commission is provided in the Table 3.17 given below:

Table 3.17 Summary of Power Purchase from PPCL

Desciption	3.3.14.1.1.1.1 July 02 - Mar 03		2003-04	
	Petition	Commission	Petition	Commission
Net Purchase (MU)	751	772	1706	1938
Fixed Cost (Rs Cr)		99	283	268
Variable Cost (Rs Cr)		102	179	196
Total Cost (Rs Cr)	**213**	**201**	**462**	**464**
Total Cost per unit (paise per unit)	**284**	**261**	**271**	**239**

3.3.15 Badarpur Thermal Power Station

3.3.16 Petitioner's Submission

In its Petition, TRANSCO has estimated purchase of 3578 MU from Badarpur Thermal Power Station (BTPS) for the period July 2002 to March 2003 and 4600 MU for FY 2003-04, respectively. TRANSCO has estimated the power purchase cost considering the composite power purchase rate of Rs 2.37/unit. Subsequently TRANSCO submitted the actual power purchased and power purchase cost of Badarpur station for the period July 2002 to March 2003.

3.3.17 Commission's Analysis

The cost of Badarpur Station is governed by the notifications issued by GOI from time to time regarding the structure and level of the tariff. For the period July 2002 to March 2003, the Commission has considered the actual power purchase and the cost of power purchase. For FY 2003-04, the Commission has estimated the power purchase based on generation targets prescribed by CEA. For estimating power purchase cost for FY 2003-04, the Commission has considered an increase of 4% on the actual power purchase rate for the period July 2002 to March 2003. The summary of power purchase and power purchase cost as estimated in the Petition and as estimated by the Commission is given in the Table 3.18 given below:

Table 3.18 Power Purchase from Badarpur Thermal Power Station

Description	3.3.17.1.1.1.1 July 2002-March 2003			2003-04	
	Petition	Actual	Commission	Petition	Commission
Power Purchase (MU)	3578	3577	3577	4600	4695
Power Purchase Rate (Rs/kWh)	2.37	2.23	2.23	2.37	2.32
Power Purchase Cost (Rs crore)	**848**	**797**	**797**	**1090**	**1087**

3.4 Power Purchase from Central Generating Stations

The Power Purchase Agreements signed by the erstwhile DVB with Central Generating Stations got transferred to the successor entity, viz. TRANSCO. TRANSCO has a firm share in the Central Generating Stations. In addition to the firm share allocation, most of the NTPC stations have 15% unallocated power. The distribution of this unallocated power among the constituents of Northern Region is decided by the Central Electricity Authority (CEA) from time to time based on power requirement and power shortage in different States. TRANSCO also gets a substantial portion of the unallocated share.

3.4.1 Energy Purchase during July 2002 to March 2003

Petitioner's Submission

In its Petition, TRANSCO has estimated the energy purchase from the Central Generating Stations considering the effective share (allocated + unallocated) and the PLF of the stations at the same level as considered by the Commission in its BST Order dated 22nd February 2002.

Commission's Analysis

During the technical validation sessions, the Commission directed TRANSCO to submit the details of actual power purchase and power purchase cost from all the sources for the period July 2002 to March 2003. Subsequently, TRANSCO submitted these details to the Commission. The actual energy purchased from CGS during the July 2002- March 2003 by TRANSCO has been considered by the Commission.

The energy purchases from the Central Generating Stations proposed by the Petitioner and as approved by the Commission for the period July 2002 to March 2003 is provided in the table 3.19 given below:

Table 3.19 Energy Purchase from Central Generating Stations for July 2002 to Mar 2003 (in MU)

Sl. No	Station	Petition	Actual	Commission
3.4.1.1.1	**NTPC**			
1	Singrauli	1099	1113	1113
2	Anta	310	257	257
3	Rihand	631	654	654
4	Auraiya	497	407	407
5	Dadri (Gas)	587	411	411
6	Unchahar -1	177	133	133
7	Unchahar -2	215	241	241
8	Dadri (Thermal)	3456	3625	3625
	Sub- total	***6972***	***6840***	***6840***
B	**NHPC**			
1	Bairasul	33	46	46
2	Salal	208	232	232

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Table 3.19 Energy Purchase from Central Generating Stations for July 2002 to Mar 2003 (in MU)				
Sl. No	**Station**	**Petition**	**Actual**	**Commission**
3	Tanakpur	37	31	31
4	Chamera	117	111	111
5	Uri	110	154	154
	Sub-total	***505***	***574***	***574***
C	**NPC**			
1	NAPP	154	215	215
2	RAPP-3	73	26	26
3	RAPP-4		129	129
	Sub-total	***227***	***370***	***370***
	TOTAL	**7704**	**7784**	**7784**

Energy Availability for FY 2003-04

3.4.2 Petitioner's Submission

The energy available to TRANSCO from Central Generating stations is governed by the total share of TRANSCO (allocated + unallocated) in various Stations, projected gross generation and estimated auxiliary consumption of each Station.

The Petitioner has considered the fixed allocation as well as unallocated quota in accordance with the Government Notification dated 1st December 2002 for the purpose of projecting the capacity available from the Central Generating Stations. The Petitioner has considered unallocated quota from each Station based on the weighted average unallocated quota available to Delhi during the various time slots of the day.

3.4.3 Commission's Analysis

Effective share

For estimating the energy availability from CGS, the Commission has first estimated the effective share of TRANSCO in CGS. As described in the earlier section, energy available to TRANSCO from Central Generating Stations depends upon the allocated share of the State in each of the sources of power and the unallocated share in each of the stations, which keep varying from time to time. TRANSCO has submitted that with the implementation of the ABT with effect from the 1st December 2002, the Northern Region Electricity Board (NREB) communicated the percentage allocation of capacity (allocated and unallocated quota) from the Central Generating Stations to TRANSCO during different time intervals of the day.

On 1st April 2003, CEA revised the share of various beneficiaries in the unallocated quota. The share of Delhi in the unallocated quota has been increased to 25 % (for 24 hrs a day) to meet the summer load requirement in the State of Delhi. On 14th April 2003, CEA again revised the allocation and allocated full 15% unallocated power from RAPP unit 3 & 4 to Delhi. Commission also learnt that the concept of 'Time slot allocation from unallocated power' has been dispensed with and henceforth all allocations would be on round the clock basis. For the purpose of making projections of power purchases from various CGS, the Commission has assumed the availability of unallocated quota during the summer months (5 months) as per the unallocated quota issued by the NREB on 14th April 2003. For the remaining 7 months of the year, the Commission has assumed the unallocated quota as 11% of total unallocated quota of the respective Stations based on past trends. The fixed share in each of the Stations has been considered at the levels stipulated by the Government.

The effective share in various Central Generating Stations as considered in the Petition and as estimated by the Commission for FY 2003-04 as explained above is shown in the Table 3.20 given below:

3.4.4

Table 3.20 Effective Share in Central Generating Stations

S No	Station		Petition			Commission		
		Installed Cap (MW)	Fixed Allocation	Share of Unallocated Capacity	Effective share	Fixed Allocation	Share of Unallocated Capacity	Effective Share
A	**NTPC**							
1	Singrauli	2000	7.50%	2.06%	9.56%	7.50%	2.53%	10.03%
2	Anta	419	10.50%	1.06%	11.56%	10.50%	2.53%	13.03%
3	Rihand	1000	10%	2.06%	12.06%	10%	2.53%	12.53%
4	Auriya	663	10.88%	2.05%	12.93%	10.88%	2.05%	12.93%
5	Dadri (Gas)	829	10.96%	0.47%	11.43%	10.96%	1.19%	12.15%
6	Unchahar -1	280	17.91%	2.05%	19.96%	5.71%	0.80%	6.51%
7	Unchahar -2	420	11.19%	2.06%	13.25%	11.19%	2.53%	13.72%
8	Dadri (Thermal)	840	90%	0%	90.00%	90%	0.00%	90.00%
B	**NHPC**							
1	Bairasul	180	11.10%	0%	11.10%	11.10%	0.00%	11.10%
2	Salal	690	11.62%	0%	11.62%	11.62%	0.00%	11.62%
3	Tanakpur	94.5	12.81%	0%	12.81%	12.81%	0.00%	12.81%
4	Chamera	540	7.90%	0%	7.90%	7.90%	0.00%	7.90%
5	Uri	480	11.04%	0%	11.04%	11.04%	0.00%	11.04%
C	**NPC**							
1	NAPP	440	10.68%	2%	12.68%	10.68%	2.44%	13.12%
2	RAPP-3	220	0	2.05%	2.05%	0	7.21%	7.21%
3	RAPP-4	220	20%	0%	20.00%	20%	7.21%	27.21%

The Table 3.21 given below shows the share of Delhi in the CGS as proposed by the Petitioner and as considered by the Commission for FY 2003-04

Table 3.21 Share in Central Generating Stations			
Sl No	**Station**	**Petition (MW)**	**Commission (MW)**
A	**NTPC**		
1	Singrauli	191.2	201
2	Anta	48.4	55
3	Rihand	120.6	125
4	Aurya	85.8	86
5	Dadri (Gas)	94.8	101
6	Unchahar -1	26.75	18
7	Unchahar -2	55.7	58
8	Dadri (Thermal)	756.0	756
	Sub- total	*1379*	*1399*
B	**NHPC**		
1	Bairasul	20.0	20
2	Salal	80.2	80
3	Tanakpur	12.1	12
4	Chamera	42.7	43
5	Uri	53.0	53
	Sub-total	*2343*	*2362*
C	**NPC**		
1	NAPP	55.8	58
2	RAPP-3	4.5	16
3	RAPP-4	44.0	60
	Sub-total	*104*	*133*
	TOTAL	**3827**	**3895**

3.5 Generation (Plant Load Factor) and Auxiliary Consumption

3.5.1 Petitioner's Submission

The Petitioner has estimated the generation and energy available from various Central Generating Stations based on the performance of the Station during the year 2001-02 for the purpose of PLF and auxiliary consumption.

3.5.2 Commission's Analysis

The Commission compared the targets prescribed by CEA for year 2002-03 and the actual generation during the year 2002-03, obtained from NREB. From the comparison it was observed that the variation in actual generation and target prescribed by CEA was very nominal except in few cases where the variation was mainly due to forced outages. The Commission has, therefore, considered the generation from NTPC and NPC stations based on the generation targets prescribed by CEA for FY 2003-04. The auxiliary consumption for each Station has been considered at the actual 2001-02 level as proposed in the Petition.

The generation from NHPC Stations has been estimated based on the design energy of each Station and considering the auxiliary consumption as 1% on normative basis.

The effective share of TRANSCO is applied on the ESO to estimate the energy purchases from the respective Stations. The Table 3.22 given below provides the values of the key parameters considered by the Commission to project the energy available from the Central Generating Stations during FY 2003-04 and TRANSCO's share.

Table 3.22 Energy Availability from Central Generating Stations

		TOTAL				TRANSCO SHARE in ESO	
Sl No	**Station**	**PLF (%)**	**Gross Gen (MU)**	**Aux. Cons. (%)**	**Energy Sent Out (MU)**	**Petition (MU)**	**Commission**
A	**NTPC**						
1	Singrauli	87.7%	15365	6.63%	14346	1370	1438
2	Anta	82.9%	3000	2.03%	2939	375	383
3	Rihand	86.5%	7577	7.67%	6996	850	876
4	Aurya	80.5%	4600	1.48%	4532	600	586
5	Dadri (Gas)	79.6%	5700	2.56%	5554	640	675
6	Unchahar -1	86.7%	3190	8.75%	2911	190	126
7	Unchahar -2	86.7%	3190	8.86%	2907	400	399
8	Dadri (Thermal)	86.7%	6380	7.98%	5871	5065	5284
	Sub- total		*49001*		*46056*	*9490*	*9767*
B	**NHPC**						
1	Bairasul		780	1%	*772*	86	86
2	Salal		3100	1%	*3069*	358	357
3	Tanakpur		452	1%	*447*	58	57
4	Chamera		2000	1%	*1980*	132	156
5	Uri		2200	1%	*2178*	286	219
	Sub-total		*8532*		*8447*	*920*	*875*
B	**NPC**						
1	NAPP	78.7%	3033	9.72%	2739	386	359
2	RAPP-3	77.4%	1492	9.44%	1351	28	97
3	RAPP-4	77.4%	1492	9.44%	1351	276	368
	Sub-total		*6017*		*5440*	*690*	*824*
	TOTAL		**55018**		**51496**	**11100**	**11466**

3.6 Cost of Power Purchase from Central Generating Stations

The cost of power purchase from the CGS is governed by the Notifications issued by GoI/CERC from time to time regarding the structure and level of the tariff, and the terms of the Power Purchase Agreement entered into with CGS.

3.6.1 Cost of Power Purchase for the period July 2002-March 2003

3.6.2 Petitioner's Submission

In its Petition, TRANSCO has submitted that prior to implementation of Availability Based Tariff the billing for each of the Central Generating Stations was done on the basis of the total actual drawl of energy by TRANSCO from respective Central Generating Station. Thus is as per prevailing tariff and not on the allocated share.

For estimating the costs of power purchase from NTPC stations, TRANSCO has estimated the fixed costs for FY 2002-03 at the same level of FY 2001-02 and projected the variable costs considering an increase of 5% over the costs in FY 2001-02 for each Station. For estimating the costs of power purchase from NHPC stations, TRANSCO has considered the fixed costs for FY 2002-03 to remain at the levels of FY 2001-02. For NPC stations, the costs of power purchase have been increased by 5% over the costs of FY 2001-02 for NAPP Station, and for RAPP station, the costs have been considered as per the Agreement.

3.6.3 Commission's Analysis

During the technical sessions, the Commission directed TRANSCO to submit the details of actual power purchase and power purchase cost from all the sources for the period July 2002 to March 2003. Subsequently, TRANSCO submitted these details to the Commission. The actual fixed and variable cost for each Station has been considered by the Commission for the purpose of estimating the power purchase cost for purchase of power from CGS during the period July 2002 to March 2003.

The summary of total energy purchased, fixed costs, variable costs and total costs as estimated by the Petitioner and as considered by the Commission is provided in Table 3.23 given below:

Table 3.23 Fixed and Variable Costs of Central Generating Stations for July 2002 to March 2003

Station	Power Purchase (MU)		Fixed Costs (Rs crore)		Variable Cost (Rs/kWh)		Total Costs (Rs/kWh)	
	Petition	Commission	Petition	Commission	Petition	Commission	Petition	Commission
NTPC								
Singrauli	1099	1113	28	26	0.80	0.69	1.05	0.93
Anta	310	257	12	10	1.00	1.15	1.37	1.55
Rihand	631	654	52	48	0.76	0.67	1.59	1.40
Auriya	497	407	19	17	1.39	1.25	1.77	1.67
Dadri Gas	587	411	24	19	1.53	1.50	1.94	1.97
Unchahar-1	177	133	12	10	1.05	1.03	1.71	1.82
Unchahar-2	215	241	0	8	2.45	1.70	2.45	2.04
Dadri Thermal	3456	3625	269	292	1.46	1.49	2.24	2.30
sub-total	**6972**	**6840**	**415**	**432**	**1.29**	**1.25**	**1.89**	**1.89**
NHPC								
Bairasul	33	46	2	1	0.00	0.24	0.61	0.53
Salal	208	232	14.7	13	0.00	0.14	0.71	0.71
Tanakpur	37	31	5	4	0.00	0.17	1.25	1.39
Chamera	117	111	29	15	0.00	0.18	2.51	1.53
Uri	110	154	52	37	0.00	0.25	4.73	2.67
sub-total	**505**	**574**	**103**	**70**	**0.00**	**0.99**	**2.03**	**1.41**
NPC								
NAPP	154	215	0	0	0.00	2.37	2.44	2.37
RAPP 3	73	26	0	0	0.00	3.12	3.21	3.12
RAPP 4	0	129	0	0	0.00	3.22	0.00	3.22
sub-total	227	370	0	0	0.00	2.72	2.69	2.72
Total	**7704**	**7784**	**518**	**502**			**1.92**	**1.89**

3.6.4 Other Costs of CGS – Income Tax and Incentives

3.6.5 Petitioner's Submission

In its Petition, TRANSCO has submitted that in addition to fixed and variable costs built into the tariff, the Central Generating Stations claim income tax, incentives, etc. The TRANSCO has estimated these charges based on total incentive and income tax billed during the previous years and the energy purchased during that year.

3.6.6 Commission's Analysis

The Commission has compared the income tax per unit and incentive per unit estimated by the Petitioner with the actual income tax and incentives billed by CGS during the previous years. The rates estimated by the Petitioner are in line with the actuals for the previous years and hence the Commission has considered the same rates as estimated by the Petitioner. The summary of Income tax and incentive as estimated in the Petition and as considered by the Commission is provided in the Table 3.24 given below:

Table 3.24 Income Tax and Incentive for the period July 2002 to March 2003

	Income Tax	Income Tax (Rs Cr)		Incentive	Incentive (Rs Cr)	
	(paise/ kWh)	Petition	Commission	(paise/kWh)	Petition	Commission
NTPC	12	83.7	82.1	7	48.8	47.9
NHPC	5	2.5	2.9	3	1.3	1.4
NPC	5	1.1	1.1			
PGCIL	1	7.7	7.7	1	4.6	4.7
Total		**95.0**	**93.8**		**54.7**	**54.0**

3.7 Cost of Power Purchase for CGS Stations for FY 2003-04

3.7.1 3.7.1 Fixed Charges for CGS Stations for FY 2003-04

3.7.2 Petitioner's Submission

In its Petition, TRANSCO has submitted that with the implementation of Availability Based Tariff with effect from 1st December 2002, the beneficiaries have to pay the capacity (fixed) charges based on availability and the energy charges will be applicable on the committed drawal schedule.

TRANSCO has considered the Fixed Costs for NTPC Stations as decided by Central Electricity Regulatory Commission and estimated the energy charges based on the recent claims of CGS in line with CERC rates. For NHPC Stations, the TRANSCO has considered the Annual Fixed Charges as decided by CERC.

3.7.3 Commission's Analysis

For FY 2003-04, the Commission has estimated the fixed cost for the various Stations in proportion to the share allocation of TRANSCO in the respective Stations. The approved fixed cost of NTPC stations, TRANSCO's effective share allocation and fixed cost considered for FY 2003-04 is summarized below in Table 3.25 given below:

Table 3.25 Fixed Cost for NTPC Stations for FY 2003-04 (Rs crore)				
Station	**Annual Fixed Charges**	**Effective Share**	**Fixed Charges for TRANSCO**	
	Rs Cr.	**%**	**Petition**	**Commission**
NTPC				
Singrauli	334	10.03%	39.5	33.5
Anta	100	13.03%	15.3	13.0
Rihand	506	12.53%	65.9	63.3
Auryia	172	12.93%	25.3	22.2
Dadri Gas	240	12.15%	28.1	29.2
Unchahar-1	226	6.51%	15.9	14.7
Unchahar-2	184	13.72%	0.0	25.3*
Dadri Thermal	458	90.00%	412.4	412.4
Sub-total	**2220**		**602.4**	**613.6**

* Fixed charges for Unchahar II have now been notified and the Commission has considered the same.

For NHPC Stations, the TRANSCO has considered the Annual Fixed Charges based on CERC Orders and as communicated by NREB/NRLDC in proportion to their share allocation. The Commission has estimated the power purchase cost for NHPC Stations based on the recent orders issued by the CERC on the two-part tariff basis. The Orders given by CERC specifies the Annual Fixed Charges comprising of energy charge and capacity charge. In line with the CERC Orders, the energy charges for hydel stations has been estimated at 60.32 paise/kwh (90% of the lowest variable cost of thermal stations in the region). The Capacity Charge for each station has been estimated by deducting the total energy charges from the Annual Fixed Charges. The approved annual fixed charges of NTPC stations, Energy Charges, Capacity Charges, TRANSCO's effective share allocation and estimated fixed cost for TRANSCO for FY 2003-04 is summarized below in Table 3.26 given below:

Table 3.26: Annual Capacity Charges for NHPC Stations:					
Station	**Annual Fixed Charge (Rs core)**	**Total Energy Charge (Rs core)**	**Total Capacity Charge (Rs core)**	**Effective Allocation of TRANSCO**	**Capacity Charges for TRANSCO (Rs. Core)**
Salal	173.25	162.90	10.35	11.6%	1.20
Bairasul	46.86	40.99	5.87	11.1%	0.65
Tanakpur	44.67	23.75	20.92	12.8%	2.68
Chamera	209.00	105.09	104.23	7.9%	8.23
Uri	514.00	115.60	397.99	11.0%	43.94

3.7.4 3.7.2 Variable cost for CGS stations during FY 2003-04

3.7.5 Petitioner's Submission

The Petitioner has submitted that the variable charges for Central Generating Stations for the year 2003-04 has been estimated based on the recent claims of Central Generating Stations in line with CERC orders.

3.7.6 Commission's Analysis

The Commission has analysed the variation in monthly variable costs of NTPC stations for the four months from December 2002 to March 2003, i.e., post ABT regime in the Northern Region. The variable costs have changed from month to month and no direct trend could be established. The variation on monthly basis may be mainly because of the Fuel Cost Adjustment component in the variable costs. The Commission has, therefore, projected the variable cost of coal based stations considering an increase of 4% over the average variable cost in the four month period from December 2002 to March 2003, while for gas based stations, the variable costs have been increased by 6%. The summary of variable cost as estimated in the Petition and as considered by the Commission is given in the Table 3.27 given below:

3.7.7

Table 3.27 Variable Costs for 2003-04 (Paise/kwh)

Station	Petition	Commission
Singrauli	80	71
Anta	120	117
Rihand	70	69
Auriya	120	127
Dadri Gas	180	158
Unchahar-1	105	108
Unchahar-2	226*	107
Dadri Thermal	146	147

* Total composite cost including fixed and variable cost

As elaborated in earlier section, the energy charge for NHPC stations has been estimated at 60.32 paise/kWh. For NPC Stations, the Commission has estimated the power purchase cost considering single part tariff based on the notifications. The summary of power purchase from Central Generating Stations and the total fixed and variable cost as projected in the Petition and as considered by the Commission is given in the Table 3.28 given below:

3.7.8

Table 3.28 Power Purchase and Power Purchase Cost for FY 2003-04

Station	Energy Purchase (MU)		Total Cost (Rs crore)		Total Cost (Rs/kWh)	
	Petition	Commission	Petition	Commission	Petition	Commission
NTPC						
Singrauli	1370	1438	149	136	1.09	0.95
Anta	375	383	60	58	1.61	1.51
Rihand	850	876	125	124	1.47	1.42

Table 3.28 (cont.) Power Purchase and Power Purchase Cost for FY 2003-04						
Station	**Energy Purchase (MU)**		**Total Cost (Rs crore)**		**Total Cost (Rs/kWh)**	
	Petition	**Commission**	**Petition**	**Commission**	**Petition**	**Commission**
Auriya	600	586	97	96	1.62	1.65
Dadri Gas	640	675	143	136	2.24	2.01
Unchahar-1	190	126	36	28	1.88	2.24
Unchahar-2	400	399	90	68	2.26	1.71
Dadri Thermal	5065	5284	1152	1189	2.27	2.25
sub-total	**9490**	**9767**	**1853**	**1835**	**1.95**	**1.88**
NHPC						
Bairasul	86	86	5	6	0.63	0.68
Salal	358	357	21	23	0.59	0.64
Tanakpur	58	57	6	6	1.04	1.07
Chamera	132	156	17	18	1.32	1.13
Uri	286	219	60	57	2.08	2.61
sub-total	**920**	**875**	**109**	**109**	**1.19**	**1.25**
NPC						
NAPP	386	359	93	85	2.40	2.37
RAPP 3	28	97	8	29	2.98	2.98
RAPP 4	276	368	90	120	3.25	3.25
sub-total	**690**	**824**	**191**	**234**	**2.76**	**2.84**
Total	**11100**	**11460**	**2154**	**2178**	**1.96**	**1.890**

3.8 Other Costs of CGS – Income Tax and Incentives

The Income Tax for FY 2003-04 has been estimated in accordance with the approach outlined in Section 3.6 The total income tax for the FY 03-04 is given in Table 3.29 given below:

Table 3.29 Income Tax for FY 2003-04			
Utility	**Income Tax paise/unit**	**Petition Rs Cr**	**Commission Rs Cr**
NTPC	12	113.9	117.2
NHPC	5	4.6	4.4
NPC	5	3.5	4.1
PGCIL	1	11.1	11.4
Total		**133.0**	**137.2**

3.8.1 Petitioner's Submission

In its Petition, TRANSCO has submitted that with the introduction of ABT, the incentives payable may comedown in FY 2003-04 as the performance levels have been revised and the incentive charges are accordingly estimated at Rs 56.03 crore.

3.8.2 Commission's Analysis

The Commission has estimated the incentives for NTPC stations based on the revised norms of performance as per the CERC notification. As per the revised performance norms the incentive for NTPC stations is applicable as follows:

For PLF between 77%-90%: 50% of Fixed Cost per unit at nominal PLF upto a maximum of 21.5 paise/kWh

For PLF between 90% - 100% : 50% of the above incentive rate

The incentives for NTPC stations estimated on the above basis is summarised in the Table 3.30 given below:

Table 3.30 Incentive for NTPC Stations

Station	PLF	Gen at 77% PLF (MU)	Units Applicable for Incentive (MU)	TRANSCO's share (MU)	Fixed Cost/unit (Rs/ kwh)	Incentive Rate (Rs kwh)	Incentive (Rs Cr)
Singrauli	87.70%	13490	1875	187.93	0.247	0.1235	2.33
Anta	82.91%	2786	214	27.86	0.359	0.1795	0.50
Rihand	86.50%	6745	832	104.23	0.750	0.215	2.24
Auriya	80.54%	4398	202	26.14	0.390	0.195	0.51
Dadri Gas	79.64%	5511	189	22.96	0.436	0.215	0.49
Unchahar-1	86.70%	2833	357	23.24	0.797	0.215	0.50
Unchahar-2	86.70%	2833	357	48.95	0.651	0.215	1.05
Dadri Thermal	86.70%	5666	714	642.39	0.809	0.215	13.81
Total							**21.43**

For NHPC and Power Grid the incentives *have been estimated at 2.5paise/kwh and 0.8 paise/kWh respectively*

The total incentives for Central Sector Utilities as estimated in the Petition and as estimated by the Commission is summarised in Table 3.31 given below:

Table 3.31 Incentive for CGS Stations for 2003-04 (Rs. crore)

	Petition	Commission
NTPC	--	21.43
POWERGRID	--	6.88
NHPC	--	2.19
Total	56	30.50

3.9 Power Purchase from Other Sources

3.9.1 Petitioner's Submission

In its Petition, TRANSCO has submitted that the erstwhile DVB entered into Power Purchase Agreements with Power Trading Corporation to purchase power from Malana, an independent power producer in Himachal Pradesh, Uttaranchal Power Corporation Limited (UPCL) and West Bengal Power Development Corporation Limited (WBPDCL). In addition the TRANSCO also buys power from the Himachal Pradesh State Electricity Board (HPSEB) under a bilateral arrangement.

3.9.2 Commission's Analysis

During the technical validation sessions, the Commission directed TRANSCO to submit the details of actual power purchase and power purchase cost from all the sources for the period July 2002 to March 2003.

Subsequently, TRANSCO submitted these details to the Commission. The Commission has examined the agreements entered by TRANSCO with PTC and HPSEB for purchase of power.

The Commission has considered actual energy purchased and the actual costs has been considered for the purpose of estimating the energy purchases from other sources during FY 2002-03 (nine months). The energy purchases from the Other Sources and the power purchase cost proposed by the Petitioner and as approved by the Commission for the period July 2002 to March 2003 is provided in Table 3.32 given below:

3.9.3

Table 3.32 Power Purchase from Other Sources during July 2002 to March 2003

Source	Units Purchased (MU)		Total Cost (Rs Cr)		Total Cost (Rs/kWh)	
	Petition	Commission	Petition	Commission	Petition	Commission
WBPDCL	489	409	91.69	76.87	1.88	1.88
Malana	7	7.21	1.85	1.91	2.64	2.65
ER	50	0.41	12.56	0.10	2.51	2.39
UPCL	324	496	84.32	129.22	2.60	2.60
HPSEB	227	198	56.71	49.58	2.50	2.50
Total	**1097**	**1111**	**247.13**	**257.67**		

3.10 Power Purchase from other sources for FY 2003-04

3.10.1 Petitioner's Submission

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In its Petition for FY 03-04, the Petitioners have submitted that they have entered into Power Purchase Agreements (PPA) with Power Trading Corporation (PTC) to purchase 150 MW power from Utaranchal Power Corporation Ltd. (UPCL) and 140 MW power from West Bengal Power Development Corporation Ltd. (WBPDCL) on 'first charge and round the clock basis'. TRANSCO further mentioned that the erstwhile DVB entered into an Agreement for purchase of power from with HPSEB and it has renewed the agreement with HPSEB for purchase of power from April 2003 to September 2004 again on 'first charge and round the clock basis'.

TRANSCO has submitted that due to its foresight and prompt action in tying up these sources of power, Delhi is one of the very few States in the country to have surplus power availability, when most other States are suffering from substantial shortages. The TRANSCO has stated that it has been actively campaigning with all sources of power, including the Central Sector to get additional allocation of power to tide over the expected power crisis during the summer.

The TRANSCO has been engaged in constant negotiations with all the sources of surplus power for tying up additional power supply. In the process, it has tied-up with selected sources one by one and has managed to achieve a surplus supply situation. In the meantime, in response to TRANSCO's request, CEA also increased its share in the unallocated quota of the Central Generating Stations. This has resulted in the TRANSCO having surplus availability of around 500 MU as compared to the Petition.

The TRANSCO has stated that since the State now has surplus energy, it has tied-up with the PTC to sell 200 MW of power for 9.5 hours each day for the period 15th May 2003 to 30th September 2003 equivalent to around 260 MU at a rate of 2.05 Rs/kWh during off-peak hours, so that additional revenue can be earned which would reduce the effective power purchase cost.

TRANSCO has invited reference of the Commission to the meeting convened by Secretary, Union Ministry of Power on 18th March 2003, wherein the power suplly position in Delhi was reviewed. It was desired that the Govt. of NCT of Delhi should plan for availability of 4000 MW of power for meeting a peak demand of 3500 MW expected to reach during summer months of 2003.

3.10.2 Commission's Analysis

During technical validation sessions the Petitioner informed that in order to meet the summer load requirement, it has also entered into an agreement with Uttar Pradesh Power Corporation Limited (UPPCL) for purchase of 100 MW power on 'round the clock and first charge' basis from 01.04.2003 to 30.09.2003. The Petitioner has entered into agreements with these sources without prior approval from the Commission. However, considering the supply constraints prevailing in Delhi, the Commission allow the cost of purchase from these sources for the time being.

The Commission is of the opinion that considering the severe shortage of power and incidences of load shedding last year during the summer peak season, the TRANSCO has tied-up additional sources of power supply so that situation on power supply front during FY 02-03 is not repeated. However, with increase in allocation from unallocated power of CGS stations w.e.f 1st April 2003 by CEA and further allocation of full 15% unallocated power from RAPP unit 3 & 4, it has become surplus in powers. As most of linkages under bilateral agreements are on 'round the clock and first charge basis,' TRANSCO could not requisition its full allocation from cheaper NTPC stations and had been underdrawing from the grid. Since TRANSCO had tied up about 500 – 800 MW additional power on round-the-clock and first charge basis, it could have returned the additional allocation of CGS' unallocated quota and/or allocation from RAPP 3 & 4 (77 MW) which is most expensive power as on date. With such step TRANSCO could have been able to give its full requisition from cheaper NTPC stations and also avoided underdrawals during high frequency periods.

In order to reduce its underdrawal from the grid during offpeak period, the TRANSCO is selling its surplus power (200 MW) to Punjab through the PTC for 9.5 hrs a day during off peak periods. Though the rate received by PTC does not compensate fully for the cost of additional power purchase, there is a reduction in the revenue requirement on account of the reduction in power purchase costs.

As regard to surrender of power from RAPP unit 3 & 4, Commission has noted from CEA's Load Generation Balance Report for FY 03-04, that during winter months of Jan – Feb 04 Delhi system would be facing peaking shortages of the order of 10-11%. Short term PPAs signed by TRANSCO would be terminated in Oct 03 and no surplus power would then be available. In view of above TANSCO may reassess its requirements and consider surrendering power from RAPP only for months of June – Dec 03.

The Commission has projected the energy purchase from other sources considering the actual drawals from these sources during FY 2002-03 and the bilateral arrangements made by TRANSCO with other States. The Commission has considered the entire surplus energy available as sale of power to other States.

The Commission hereby directs the Petitioner to approach the Commission for a post-facto approval of Power Purchase Agreements (PPA) from all new sources during 2003-04. The Commission also directs the Petitioner to refrain from entering into 'round-the-clock' type of PPA's, to the extent possible and also to approach the Commission in future for its approval of a new PPA being entered from any source.

3.10.2.1 Power Purchase from WBPDCL

TRANSCO has estimated power purchase of 878 MU from WBPDCL during FY 2003-04. Agreement with WBPDCL is to draw 140 MW on 'round the clock basis' during 1st April to 30th June 2003 at Rs 1.88/kWh at inter-connection point between Eastern Region and Northern Region (Sasaram back to back station). TRANSCO is thus entitled to draw 306 MU from WBPDCL up to June 2003. It is understood that TRANSCO is negotiating to extend the agreement up to September 2003. Since the rate of power purchase is lower that that of BTPS and Dadri (Thermal), the Commission accept such arrangement provided full schedule is given to cheaper power stations. Based on proposed extended agreement the Commission has estimated power purchase of 545 MU during FY 03-04. .

3.10.2.2 Power Purchase from UPCL

Agreement with UPCL is to draw 150 MW on 'round the clock basis' during 1st April to 30th September 2003 at Rs 2.60/kWh at periphery of TRANSCO system (i.e. POWERGRID's transmission charges to be borne by UPCL) TRANSCO has estimated power purchase of 575 MU from UPCL for FY 03-04 which has been accepted by Commission.

3.10.2.3 Himachal Pradesh State Electricity Board

The actual power purchase during July 2002 to March 2003 was 198 MU. TRANSCO has estimated power purchase of 440 MU from HPSEB. For FY 2003-04, the Commission has considered power purchase of 440 MU as considered by the Petitioner. The power purchase cost from HPSEB has been estimated at Rs 2.50/kWh as per the Agreement

3.10.2.4 Power Purchase from UPPCL

TRANSCO has entered in to agreement with UPPCL for supply of 100 MW of power from 1st April 2003 to 30th September 2003 again on 'round the clock and first charge basis' at Rs 2.60/kWh. The agreement was executed on 24th March 2003 and power from this source was not considered in the Petition. During technical validation session on 24th May 2003 Petitioner informed the Commission about this agreement and had further stated that actual purchase from UPPCL during the month of April 2003 was 68.64 MU. Considering that TRANSCO had tied up for additional sources of power to avoid repeat of last year's large-scale load shedding, the Commission accept the purchase of power from UPPCL and has considered 412 MU during FY 2003-04. **However, the Commission reiterate that the Petitioner should refrain from entering into such 'round-the-clock' type of PPA's, to the extent possible and obtain approval from the Commission before entering into such agreements**

3.10.2.5 Nathpa Jhakri Power Corporation (NJPC)

In its Petition, TRANSCO has mentioned that the Nathpa Jhakri Hydel Station is likely to be commissioned in a phased manner from FY 03-04. TRANSCO has estimated the energy purchase of 45 MU during July 2002 to March 2003 and 160 MU for FY 2003-04 at a composite rate of Rs 3.02/kwh. However, TRANSCO has not been supplied any power from this Station during July 2002 to March 2003. Further, the allocation of this Station is yet to be finalised by the Government of India. Hence, the Commission has not considered any power purchase from NJPC while estimating the power purchase and power purchase costs.

The summary of power purchase and costs from other sources for FY 2003-04 as estimated in the Petition and as considered by the Commission is given in Table 3.33 given below:

Table 3.33 Power Purchase from other sources for FY 2003-04

Source	Units Purchased (MU)		Total Cost (Rs Cr)		Cost per unit (Rs/kWh)	
	Petition	Commission	Petition	Commission	Petition	Commission
WBPDCL	878	545	165	103	1.88	1.88
ER	80	80	19.2	19.2	2.40	2.40
UPCL	575	575	149.5	149.5	2.60	2.60
HPSEB	440	440	110	110	2.50	2.50
NJPC	160	0	48.32	0	3.02	
UPPCL		412		107.1		2.60
Total	**2133**	**2231**	**492**	**488**		

3.11 Transmission Charges and other Wheeling Charges

3.11.1 Petitioner's Submission

In its Petition, TRANSCO has submitted that the transmission wheeling charges are payable to the Power Grid for the transmission of power from Central Generation Stations and other sources. For the period July 2002 to March 2003, TRANSCO has estimated the transmission charges considering an increase of 5% over the transmission costs for FY 2001-02. The actual transmission charges for the period July 2002 to March 2003 works out to 13.85 paise/kwh, while the TRANSCO has estimated the transmission charges at 13.20 paise/kWh in the Petition.

The transmission charges as estimated by TRANSCO and as considered by the Commission are summarised in the Table 3.34 given below:

Table 3.34 Transmission Charges				
Item	July 2002 to March 2003		FY 2003-04	
	Proposed	Commission	Proposed	Commission
Total Transmission Charges (Rs crore)	117	123	158	159

3.12 Other Wheeling Charges

In its Petition, TRANSCO submitted that the TRANSCO has to pay other agencies also apart from PGCIL towards wheeling of power as the power flows through their system. The other wheeling charges applicable are as follows:

- Wheeling Charges to BBMB for Malana Power)
- Rental for Rohtak Road Sub-Station
- Wheeling Charges for Eastern Region Power
- Pooled losses for Rohtak Road sub-station at BTPS rate
- Wheeling charges for Salal Power to Punjab and J&K
- Transmission Losses for Salal power to BBMB

The Commission directed the TRANSCO to submit the supporting documents specifying the rates towards these other wheeling charges, which were subsequently submitted by TRANSCO. Most of tthese charges are linked to drawal from a particular Station. Based on actual power purchase during July 2002 to March 2003 and projected power purchase for FY 2003-04, the Commission has estimated the other wheeling charges. The summary of other wheeling charges as estimated in the Petition and as estimated by the Commission is provided in the Table 3.35 given below:

Table 3.35 Wheeling Charges				
	July 2002 to March 2003		FY 2003-04	
	Petition	Commission	Petition	Commission
Other Wheeling Charges (Rs crore)	5.39	5.35	8.12	7.11

3.13 RLDC and ULDC Charges

In its Petition, TRANSCO submitted that it has to pay O&M Charges to Regional Load Despatch Centre and Unified Load Despatch Centre (ULDC) and communication charges to PGCIL as per the rates approved by the Central Electricity Regulatory Commission (CERC). The Commission has considered these charges on actual basis for the period July 2002 to March 2003 and for FY 2003-04, the Commission has accepted the charges estimated by the Petitioner. The summary of RLDC and ULDC Charges as estimated in the Petition and as considered by the Commission is provided in the Table 3.36 given below:

Table 3.36 RLDC & ULDC Charges				
	July 2002 to March 2003		FY 2003-04	
	Petition	**Commission**	**Petition**	**Commission**
RLDC & ULDC Charges (Rs crore)	9.11	8.57	17.56	17.56

Transmission Losses

3.13.1 Petitioner's Submission

In its Petition, TRANSCO has considered external transmission losses of 4.25% in PGCIL system. TRANSCO has also submitted that the NRLDC has been considering 3.75% losses in PGCIL transmission system to arrive at net drawal by the constituents within their respective territories. TRANSCO further mentioned that the NRLDC has conducted a study by obtaining the information on net energy injected by interstate generating stations and net drawals of each State and arrived at a system loss of 4.25%.

TRANSCO has considered the transmission losses in its own transmission network at 3% based on the average of the actual transmission losses for July 2002 to September 2002.

Commission's Analysis

The actual external transmission losses for the period July 2002 to March 2003 works out to 3.84% and the same has been considered by the Commission for estimating the energy available at Delhi periphery.

TRANSCO also submitted the actual data with respect to net energy received at Delhi periphery and energy supplied to licensees for the three-month period December 2002 to February 2003. The actual transmission losses for this three-month period works out to 2.04%. The Commission is of the opinion that 3% transmission losses in the transmission network of TRANSCO as considered in the Petition is very high. Therefore, the Commission has considered the transmission losses of 2.04% in TRANSCO network based on the actual losses during December 2002 to February 2003.

Sale to Other States and Underdrawals

3.13.2 Petitioner's Submission

TRANSCO has entered into an Agreement with Power Trading Corporation for sale of surplus power during off peak (night) hours. During the period July 2002 to March 2003, power to the extent of 318 MU has been sold to other States @ Rs 2.05/kwh.

In its Petition for FY 2003-04, TRANSCO has considered the sale of 620 MU to PTC. TRANSCO has recently entered into the following Agreement with PTC for sale of surplus power available during night hours:

- 200 MW for 9.5 hours (0000 hours Midnight to 0930 hours) from 15th May 2003 to 30th September 2003 @ Rs 2.05/kwh
- 100 MW for 9 hours for 3 weeks @ 2.05/kwh
-

3.13.3 Commission's Analysis

For the period July 2002-March 2003, TRANSCO has shown a revenue of Rs 79.65 crore from sale of power to other states in its Provisional Accounts and the same has been considered by the Commission while estimating the power purchase cost of TRANSCO.

For FY 2003-04, the Commission has considered the entire surplus energy available as a sale of power to other States. **The Commission directs the TRANSCO to optimise its energy balance and try to sell the surplus energy available during off peak hours to the maximum extent possible. In case, TRANSCO is unable to sell the surplus energy, TRANSCO should back down the generating stations of Delhi including GENCO, PPCL and Badarpur. TRANSCO is further directed not to surrender the cheaper power available from CGS except in case on unavoidable circumstances.**

During the period December 2002 to March 2003, TRANSCO has received Rs 22.98 crore as Unscheduled Interchange (UI) Charges on account of underdrawals, during the period and the same has been considered by the Commission while estimating the power purchase cost. Further, during the period 1st April to 15th May 2003, TRANSCO has underdrawn to the extent of 300 MU and has received Rs 42 crore as UI Charges on account of these underdrawals. Average rate for UI during December 02-March 03 work out to 81 paise/unit and for period 1st April – 15th May 03 it works out to 134 Paise/unit.

The Commission has considered the above underdrawals and the UI Charges received while estimating the energy availability for sale and the power purchase costs. The Commission is concerned about the extent of underdrawals made by TRANSCO. **The Commission directs TRANSCO to improve their load management systems in order to avoid the instances of underdrawals**.

3.14 Energy Balancing

Based on the net energy purchased from each source, transmission losses, sale to other States and Underdrawals made, the Energy Balance for the period July 2002 to March 2003 and for FY 2003-04 as estimated in the Petition and as considered by the Commission is provided in Table 3.37 below:

Table 3.37 Energy Balancing for TRANSCO (MU)

Particulars	(July 02 to March 03		FY 2003-04	
	Petition	Actual	Petition	Commission
Purchase from CGS and other States	8295	8200	12218	12503
Losses in PGCIL network	(353)	(315)	(555)	(499)
Balance	7942	7886	11663	12005
Purchase from Genco, PPCL, BTPS, etc	6543	6802	9611	9911
Energy Available at periphery	14485	14688	20654	21916
Transmission losses in TRANSCO network	434	286	620	435
Sales to NDMC and MES	994	854	1479	1479
Sales to DISCOMs	13057	13121	18555	18696
Underdrawals (UI)	0	110	0	300
Sale to Other States	0	318	620	1005

3.15 Summary of Power Purchase and Power Purchase Costs

The total power purchase from various sources and power purchase cost as estimated in the Petition and as considered by the Commission for the period July 2002 to March 2003 and FY 03-04 is summarised in the Table 3.38 and Table 3.39 respectively as under:

Table 3.38 Summary of Power Purchase and Power Purchase Cost for July 2002 to March 2003

3.15.1.1.1 Source	Units Purchased (MU)		Total Price (Rs Cr)		Price/unit (Rs/kWh)	
	Petition	Commission	Petition	Commission	Petition	Commission
CGS	7749	7784	1495	1472	1.93	1.89
PTC and Other States	1097	1111	248	258	2.26	2.32
BTPS	3578	3577	848	797	2.37	2.23
Genco	1663	1719	413	327	2.48	1.90
PPCL	751	812	213	188	2.84	2.32
sub-total	14838	15003	3217	3042	2.17	2.03
Sale to other States & underdrawals		(428)		(103)		
Total Power Purchase	**14838**	**14575**	**3217**	**2939**	**2.17**	**2.03**
3.15.1.1.2 Other Costs						
Transmission Charges			117.00	123.00		
RLDC and ULDC Charges			9.11	8.57		
Other Wheeling Charges			5.39	5.35		
Income Tax			95.00	93.80		
Incentive			54.69	53.99		
sub-total			281.00	285.00		
Total Power Purchase Cost			**3498**	**3224**	**2.36**	**2.21**

Table 3.39 Summary of Power Purchase and Power Purchase Cost for FY 2003-04

Source	Units Purchased (MU)		Total Price (Rs Cr)		Price/unit (Rs/kWh)	
	Petition	Commission	Petition	Commission	Petition	Commission
CGS	11100	11466	2154	2178	1.94	1.90
PTC and Other States	2133	22052	492	488	2.31	2.38
BTPS	4600	4695	1090	1088	2.37	2.32
Genco	2290	2264	572	444	2.50	1.96
PPCL	1706	1938	462	428	2.71	2.21
sub-total	21829	22414	4770	4626		
Sale to other States	(620)	1005	(121)	206		
Underdrawls (Actual)		(300)		(42)		
Total Power Purchase	**21209**	**21110**	**4649**	**4378**	**2.19**	**2.07**
Other Costs						
Transmission Charges			158.00	159		
RLDC and ULDC Charges			17.56	17.56		
Other Wheeling Charges			8.12	7.37		
Income Tax			131.50	137.2		
Incentive			56.03	30.5		
sub-total			**371**	**351**		
Total Power Purchase Cost			**5021**	**4729**	**2.37**	**2.24**

3.16 Approval of PPAs by the Commission

The TRANSCO has submitted the short-term (of less than six month duration) Power Purchase Agreements for post-facto approval of the Commission. The Commission appreciates that in case of short-term PPAs, it may not be possible for the TRANSCO to take prior approval of the Commission, as the window of opportunity for availability of such power is limited. At the same time, this constraint should not be a reason for not taking the approval of the Commission. **The Commission directs the TRANSCO that henceforth, whenever any short-term PPA is signed by the TRANSCO, it should intimate the Commission regarding the event within 1 week of signing the PPA and before commencing actual drawal, and will submit the PPA for post-facto approval of the Commission within one month of signing the PPA. The Commission will establish detailed guidelines that should be followed by the TRANSCO while entering into such PPAs. As for long-term PPAs, the TRANSCO has to approach the Commission for prior approval of such PPAs.**

Further, the Commission would like to clarify that though the Commission has taken into consideration the draft PPA's and Other Agreements while estimating the power purchase cost, it should not be construed as approval of the PPA by the Commission.

3.17 Employee Expenses

3.17.1

3.17.2 Petitioner's Submission

In its Petition, the TRANSCO has projected employee expenses as Rs. 32.65 crore for the period July 2002 - March 2003. Further, the Petitioner has proposed capitalization @ 15% of the gross employee cost, thereby resulting in a net employee cost of Rs 27.75 crore. The TRANSCO has first projected the employee expenses for the DVB for FY 2002-03, and then allocated the employee expenses to TRANSCO as per the share estimated in the BST Order for FY 2001-02, to arrive at the employee expenses for the nine month period of FY 2002-03.

For projecting the employee expenses during FY 2003-04, the TRANSCO has assumed a growth rate of 10% over the annualized expenses for FY 2002-03. The Petitioner has estimated employee expenses for FY 2003-04 at Rs 47.89 crore, and after considering capitalization @ 15% of the total employee expenses, the net employee expenses estimated by the Petitioner works out to Rs 40.71 crore. The TRANSCO justified the growth rate of 10% in employee expenses for FY 2003-04 on the basis of normal annual increments, fitment benefits to promoted employees and sanction of additional dearness allowance every year.

3.17.3 Commission's Analysis

During the technical sessions, the Commission directed TRANSCO to submit the actual employee expenditure incurred during the nine months of FY 2002-03. Accordingly, TRANSCO submitted the details of actual employee expenses at Rs 30.76 crore for the period July 2002 -March 2003.

The Commission has analyzed the total actual employee expenses of all the five successor entities, i.e. GENCO, TRANSCO and the three DISCOMS. As the total employee expenses of all the five successor entities during FY 2002-03 is slightly higher than the actual employee expenses of erstwhile DVB in FY 2001-02, the Commission has considered the actual employee expenses of each successor entity while determining their ARR.

The TRANSCO while submitting the actual expenses for the period July 2002 -March 2003, has mentioned that the employee expenses have not been capitalized during FY 2002-03 as the extent of investments undertaken during the period is not substantial. Since the value of assets capitalized during the nine months of FY 2002-03 is low, no capitalization of the employee expenses has been considered by the Commission during FY 2002-03. Accordingly, the Commission has approved the all the components of employee expenses as actuallay incurred by the Petitioner, aggregating to Rs 30.76 crore for FY 2002-03 (nine months).

For estimating the employee expenses for FY 2003-04, the Commission has projected each component of the employee expenses rather than applying a growth rate on the overall employee expenses. The critical assumptions made by the Commission with regard to the projections for FY 2003-04 are stated below:

- ***Salary***: Growth of 3% considered in average salary per employee per month over FY 2002-03 levels.
- ***Dearness Allowance***: Increase of 6.00% considered over the average DA per employee per month in FY 2002-03, assuming DA revision twice in a year.
- ***Terminal Benefits***: Contribution to Terminal Benefit Liability Funds considered at 16% of the Salary and Dearness Allowance for FY 2003-04. Since TRANSCO has not provided any basis for the contribution made towards the terminal Benefit Liability Fund, the contribution has been considered at the actual proportion of Basic salary and DA contributed during FY 2002-03.
- ***Other components***: Other heads such as staff welfare, other allowances, medical reimbursements, bonus/ex-gratia, etc. considered on proportionate basis based on the actual expenses during FY 2002-03.

Based on the above assumptions, the employee expenses for FY 2003-04 have been approved at Rs 42.68 crore as against Rs 47.89 crore proposed by the Petitioner. For FY 2003-04, the Commission has considered capitalization @ 10% of the gross employee costs.

The Table 3.40 given below provides a snapshot view of the employee expenses as proposed by TRANSCO in the Petition and as approved by the Commission.

Table 3.40 Employees Expenses

(in Rs. crore)

Components	**FY 2002-03 (9 months)**		**3.17.3.1.1 FY 2003-04**	
	Petition	**Commission**	**Petition**	**Commission**
Salaries	13.50	12.73	19.80	17.49
Dearness Allowance	6.21	5.86	9.11	8.29
Terminal Benefits	3.22	3.04	4.72	4.17
Other Costs	9.72	9.13	14.26	12.73
Total Employee expenses	***32.65***	***30.76***	***47.89***	***42.68***
Less: expenses capitalized	*4.90*	*0.00*	*7.18*	*4.27*
Net Employee expenses	**27.75**	**30.76**	**40.71**	**38.41**

3.18 Administrative & General Expenses

3.18.1 Petitioner's Submission

In its Petition, TRANSCO has projected A&G expenses as Rs 13.45 crore in FY 2002-03 (nine months). The TRANSCO has first projected the A&G expenses for the DVB for FY 2002-03, and then allocated the A&G expenses to TRANSCO as per the share estimated in the BST Order for FY 2001-02, to arrive at the A&G expenses for the nine month period of FY 2002-03. The Petitioner has submitted that it had to establish a new corporate office with facilities like furniture, software, communication system, etc., which involved additional expenditure under the head of A&G expenses.

For FY 2003-04, the Petitioner has projected A&G expenses at Rs 19.18 crore, assuming a growth of 8% over the annualized A&G expenses in FY 2002-03.

3.18.2 Commission's Analysis

During the technical sessions, the Commission directed TRANSCO to submit the actual A&G expenditure incurred during the nine months of FY 2002-03. The TRANSCO submitted the actual A&G expenses incurred during FY 2002-03 (nine months) at Rs 23.32 crore. This actual expenditure comprises of Rs 4.42 crore under the regular heads of A&G expense, and Rs 18.90 crore on account of the rebate allowed to the DISCOMs on the sale of energy. This rebate extended to the DISCOMs on the sale of power is accounted for by the Distribution Companies in their Non-Tariff Income. Therefore, the Commission is of the opinion that the expense on this head is not an expenditure in real terms, as far as the sector as a whole is concerned.

The Commission has observed a major discrepancy between the A&G expenses for FY 2002-03 (nine months), as stated in the ARR Petition for FY 2002-03 and as provided in the ARR Petition for FY 2003-04. The Petition for FY 2002-03, has stated the A&G expenses to be at the level of Rs 22.28 crore, while the estimates provided in FY 2003-04 Petition for the same period stands at Rs 13.45 crore. FY
The Commission has analysed the total actual A&G expenses of all the five successor entities i.e. GENCO, TRANSCO and three DISCOMS. The total actual A&G expenses of all the five successor entities is much less than the actual A&G expenses of the erstwhile DVB for FY 2001-02.

Since the bulk of the actual A&G expenses submitted by the Petitioner is on account of the actual rebate extended on sale of power to the DISCOMs, and is not an expense in real terms as rebates received from TRANSCO has been considered as non-tariff income while determining the ARR of DISCOMs, the Commission has considered the A&G expenses for FY 2002-03 (nine months) to be at the levels of the actual A&G expenses as submitted by the Petitioner. Hence, the Commission approves A&G expenses at Rs 23.32 crore forFY 2002-03 (nine months).

For FY 2003-04, the Commission has separately projected individual components of A&G expenses. FYFYThe average growth rate in most of the components has been considered at 8% over the annualized amounts for

FY 2002-03 while some of the components have been considered at annualized levels of 2002-03. Further, the component of rebate on sale of energy has been FYestimated based on the total power purchase cost of DISCOMs. The total A&G expenses for FY 2003-04 estimated by the Commission works out to Rs 31.57 crore.

The Table 3.41 given below provides a summary of the A&G expenses as proposed by the Petitioner and as approved by the Commission.

Table 3.41 Administrative and General Expenses

(in Rs. crore)

Components	FY 2002-03 (9 months)		FY 2003-04	
	Petition	Commission	Petition	Commission
A&G Expenses	5.66	4.42	5.19	6.37
Rebate on sale of power*	7.79	18.90	11.11	25.20
A&G Expenses	**13.45**	**23.32**	**19.18**	**31.57**

* Other expenses as provided in the Petition is assumed to be Rebate on sale of Power

3.19 R&M Expenses

3.19.1 Petitioner's submission

TRANSCO has projected R&M expenses as Rs 32.86 crore for FY 2002-03 (nine months), and Rs 48.2 crore for FY 2003-04, assuming an overall growth of 10% over the annualized expenditure in FY 2002-03.

3.19.2 Commission's analysis

During the technical sessions, the Commission directed the TRANSCO to submit the actual R&M expenditure incurred during the nine months of FY 2002-03. The TRANSCO submitted the actual R&M expenditure incurred during the nine months of FY 2002-03 at Rs 38.59 crore. Subsequently, the Commission directed the TRANSCO to submit the provisional accounts for FY 2002-03 (nine month period). The provisional accounts submitted by the TRANSCO indicates the actual R&M Expenses for FY 2002-03 at Rs 13.67 crore. Accordingly, the Commission approves the actual R&M expenses incurred by TRANSCO during FY 2002-03 (nine months) at Rs 13.67 crore

For FY 2003-04, the Commission has estimated the R&M expenses at Rs 20.05 crore, based on actual R&M expenses for nine months of FY 2002-03 and considering the other factors such as system requirement etc.

The Commission directs the Petitioner to maintain a separate record of the items issued from the Stores for the R&M works and submit the same to the Commission alongwith the details of the actual R&M works carried out at the end of each quarter.

The Table 3.42 given below provides a summary of the R&M expenses of TRANSCO, as proposed by the Petitioner and as approved by the Commission.

Table 3.42 R & M Expenses				
				(in Rs. crores)
Component	**FY 2002-03 (9 months)**		**FY 2003-04**	
	Petition	**Commission**	**Petition**	**Commission**
Total R&M expenses	32.86	13.67	48.20	20.05

For estimating the other components of the Annual Revenue Requirement such as Interest Charges, Depreciation, Return on Equity and Free Reserves, it is essential to analyse the investments and means of financing.

3.20 Investments

3.20.1 Petitioner's submission

In its Petition, TRANSCO has proposed an investment as Rs. 112 crore during the period July 2002 - March 2003. The Petitioner has projected the investment at Rs 426.35 crore for FY 2003-04 comprising of the investments in following assets.

Table 3.43 Investments

Description	Amount (Rs crore)
400 kV Substations	28.20
400 kV lines	5.55
220 kV substations	117.63
220 kV lines	247.97
Total	**426.35**

The Petitioner has stated that this capital outlay is envisaged anticipating plan assistance from the GNCTD, and the actual investment shall be dependent upon the extent of funds available.

TRANSCO has subsequently submitted the actual expenditure incurred during the nine month period from July 2002 -March 2003 at Rs 51.12 crore comprising of the following works:

3.20.2 Commission's Analysis

The Commission has analyzed the submissions made in the Petition and the subsequent responses submitted by the Petitioner in the area of investments.
The actual investments as per the Provisional Accounts submitted by TRANSCO for the nine month period of FY 2002-03 shows investments at Rs 43.47 crore. For FY 2002-03 (nine months), the Commission has considered the investments as per the Provisional Accounts for ARR determination.

For the purpose of projecting the investments during FY 2003-04, the Commission has assumed that 80% of the proposed capital investments would be undertaken during the year, based on the actual investments made during the nine month period 2002-03. The Commission has accordingly considered investments at Rs 340.80 crore for FY 2003-04.

The Petitioner has considered the cost of deposit works as an expense in the ARR. The Commission is of the opinion that since the expenditure on deposit works is capital in nature, the cost of these works cannot be considered as revenue expenditure. Accordingly, the Commission has considered the cost of deposit works as a part of capital investment. The treatment of deposit works has been elaborated in section 2.8 For ARR determination, the Commission has considered the funding of 50% of the investments considered against these deposit works.

The Commission directs the Petitioner to obtain Commission's approval for all the capital investment schemes.

3.21 Asset Capitalization

3.21.1 Petitioner's Submission

In its Petition, the TRANSCO has not proposed to capitalise any investments and has treated the entire investments made during FY 2002-03 (nine months) as works-in-progress. For FY 2003-04 the Petitioner has proposed asset capitalization to the extent of Rs 100 crore

3.21.2 Commission Analysis

The Commission has analyzed the asset capitalization proposed in the ARR Petition for FY 2002-03 (nine months) and FY 2003-04. The asset capitalization during the nine months of FY 2002-03 has been considered at the level of Rs 21.45 crore on the basis of the Provisional Accounts for FY 2002-03. For the purpose of projecting the asset capitalization for FY 2003-04, the Commission has assumed that all of the CWIP carried forward from FY 2002-03 and 30% of the fresh investments proposed during FY 2003-04 will be capitalized, considering that transmission projects are long gestation projects. Based on this assumption, the Commission has considered capitalization to the extent of Rs 137.24 crore for FY 2003-04.

The summary of opening balance of fixed assets, asset capitalization during the year and the closing balance of fixed assets at the end of the Financial Year as proposed in the Petition and as considered by the Commission is summarized in the Table 3.44 given below:

Table 3.44 Assets Capitalised & closing balance of fixed assets

(in Rs. crores)

3.21.2.1.1 Component	**July 2002-March 03**		**3.21.2.1.1.1 FY 2003-04**	
	Petition	**Commission**	**Petition**	**Commission**
Opening balance of fixed assets	650.00	650.00	650.00	671.45
Capitalisation during the year	0.00	21.45	100.00	137.24

Closing balance of fixed assets	650.00	671.45	750.00	808.69

3.22 Depreciation

3.22.1 Petitioner's Submission

TRANSCO has submitted that the Transfer Scheme specifies the value of assets transferred to TRANSCO at Rs 650 crore. The Petitioner has not considered any additions to the asset base during FY 2002-03 (nine months), and has projected the depreciation on fixed assets using a weighted average rate of depreciation of 6.69% as approved by the Commission in the BST Order for FY 2001-02. Accordingly, the depreciation expenses considered by the Petitioner are Rs 32.61 for the nine months of FY 2002-03 and Rs 43.49 crore for FY 2003-04.

3.22.2 Commission's Analysis

From an accounting perspective, Depreciation is a charge to the Profit and Loss account to reflect a measure of the wearing out, consumption or other loss in value of a depreciable asset arising from use, efflux of time or obsolescence through technology and market changes. Depreciation is calculated as a fair charge on the value of the asset in each accounting period over the expected useful life of the asset.

From a regulator perspective in the electricity sector, Depreciation is an important element of fixed cost. Depreciation is not a cash outflow for a utility and it is built into the tariff computation with a view to providing the utility a source of funding to repay installments of debt capital. In the real world, few lenders extend commercial loans at tenures beyond 5- 10 years, which is a much lower figure than the useful life of most plant and equipment. Therefore, if accounting rates of depreciation were to be used for tariff computation, a utility is unlikely to be able to generate sufficient cash flow from operations to service debt capital. Therefore, regulatory practice may allow utilities to build in a higher depreciation in their tariffs, thereby enabling them to repay loans within a reasonable horizon that is acceptable to lenders. In case the quantum of loan repayment exceeds the amount under depreciation, the Utilities may be allowed to build an higher depreciation (also known as 'advance against depreciation') into their tariffs, so as to be able to service the loans. Once the loan is repaid, the excess depreciation charged by the Utility is adjusted against the depreciation due in future years, by not allowing depreciation till such time the normal cumulative depreciation matches the actual cumulative depreciation charged.

The loan repayment liability of the TRANSCO during FY 2002-03 and FY 2003-04 is much lower than the depreciation. Therefore, the Commission is of the opinion that utilizing the depreciation to fund the capital investment is appropriate, and has hence considered the unutilised depreciation as a means of finance for capital investment.

<u>Asset Block on which depreciation is applicable</u>

In the BST Order of February 2002, the Commission had directed the DISCOMs and the TRANSCO to submit their Fixed Asset Registers (FAR) by 30 June 2002. However, the TRANSCO has not submitted the Fixed Asset Register till date. The Commission has taken a very serious view of the non-submission of the detailed FAR, despite the Commission granting sufficient opportunities to the Petitioner for submission of the FAR.

The Commission directs the Petitioner to submit the detailed Fixed Asset Register by 31st July 2003.

Accordingly, the Commission has computed the depreciation expense for FY 2002-03 based on the GFA as on 1 July 2002. For FY 2003-04, the Commission has computed depreciation on the opening GFA as on 1 April 2003, by adding the assets capitalized during FY 2002-03.

Depreciation Rate

Keeping in view the non-availability of the Fixed Asset Register, in the BST Order the Commission had considered a weighted average depreciation rate of 6.69% based on the weighted average depreciation rate of DVB's transmission and distribution assets in FY 1999-00 and FY 2000-01.

In the absence of the detailed FAR, the Commission has considered other options to assess the depreciation due to the Petitioner. The bulk of the fixed assets of the TRANSCO are expected to be classified under lines and cable network. The latest Ministry of Power (MoP) depreciation norms for licensees notified in March 1994 specify the fair life of the lines and cables network at transmission voltages as 25 years. The Commission has applied the principle of depreciating the asset over its residual life, such that 90% of the asset value is depreciated over the fair life of the asset. As the bulk of the assets would be classified under the lines and cables network, the average fair life of the asset base has been considered as 25 years for the purpose of estimating the depreciation. In this method, the average depreciation for the lines and cable network works out to 3.75%. The Commission has hence considered the depreciation rate as 3.75% for the purposes of this ARR. The Commission is of the view that in the future, the depreciation computed at the rate of 3.75% may be higher or lower than the rate based on the actual FAR, and is of the opinion that this can be adjusted against the actual depreciation chargeable, under the truing up mechanism.

The Commission is of the view that as depreciation is a non-cash expenditure and there is no scheduled loan repayment, the reduction in the depreciation expenditure will not affect the Petitioner's operations as all legitimate and prudent expenditure is being considered for the purposes of determination of the ARR. It, therefore, follows that when the loan repayment commences in future, then the Petitioner may require higher cashflow to meet the repayment obligations. In such case, the Commission opines that it would be appropriate to consider various mechanisms to enable building in a higher cashflow, including an advance against depreciation.

The Table 3.45 given below provides a summary of the depreciation as proposed by the Petitioner and as approved by the Commission for both the years.

TABLE 3.45 Depreciation (Rs Crore)				
Component	**July2002-March 03**		**FY 2003-04**	
	Petition	**Commission**	**Petition**	**Commission**
Original cost of fixed assets	650	650	650	750
Addition during the year	0	21	100	137.24
Depreciation charges	**43.49**	**18.28**	**43.49**	**25.18**

3.22.3 Depreciation Utilization

As there is no loan repayment liability during the period July 2002 - March 2003, the Commission has considered utilization of depreciation for meeting the working capital requirement and funding capital investments. The utilization of depreciation has been considered in accordance with the following priority order

- Loan Repayment, if any
- Capital Investment
- Working Capital Requirement

The Working Capital Requirement has been estimated by considering two months R&M expenses and one month cash expenses i.e., salary and A&G expenses.

The utilization of depreciation as considered by the Commission is summarized in Table 3.46 given below:

Table 3.46 Depreciation utilization *(Rs crore)*		
Description	**July 2002 – March 2003**	**FY 2003-04**
Repayment	0.00	3.42
For Working Capital Requirement	9.05	9.53
For Capital Investment	9.23	12.22
Total Depreciation	**18.28**	**25.18**

3.23 Means of Finance

3.23.1 Petitioner's Submission

The TRANSCO has proposed funding the entire capital expenditure in FY 2002-03 (nine months) as well as FY 2003-04 through Government support. Accordingly, the Petitioner has proposed Government support to the extent of Rs 112 crore during FY 2002-03 (nine months) and Rs 426 crore during FY 2003-04.

3.23.2 Commission Analysis

As elaborated in Section 3.22 the Commission has considered the unutilized depreciation as a source of funding for the capital investments. The Commission has thus considered the means of finance to be a mix of unutilized depreciation and State Government support. The means of finance considered by the Commission is summarized in the table 3.47 below :

Table 3.47 Means of Finance

(in Rs. crores)

Description	July 2002-March 03		FY 2003-04	
	Petition	Commission	Petition	Commission
Unuitilized depreciation	--	9.23	--	12.23
Government Loan	112.00	34.24	426.35	328.64
Total	**112.00**	**43.47**	**426.35**	**340.80**

3.24 Interest Expenditure

3.24.1 Petitioner's Submission

In its Petition, TRANSCO has projected interest expenses of Rs 7.28 crore on the Sate Government loan of Rs 112 crore for capital expenditure. The rate of interest considered by the Petitioner on the plan assistance from State Government is 13%. For FY 2003-04, the Petitioner has projected the interest liability at Rs 41.78 crore on the State Government loan. As per the terms and conditions of loan assistance from State Government, the loans are repayable in 15 years from the date of drawal. The Petitioner has considered the first installment of repayment at Rs 7.47 crore during FY 2003. FY

Since the outstanding loan of Rs 270 crore given by the Holding Company has a moratorium for four years for the payment of interest and principal repayment, no interest on this loan has been considered during both FY 2002-03 and FY 2003-04.

3.24.2 Commission's Analysis

The Commission has analyzed the interest expenses proposed by TRANSCO for both FY 2002-03 (nine months) and FY 2003-04. As already discussed in the section relating to the means of finance, the Commission has considered State Government loan to the extent of Rs 34.24 crore for the nine months of FY 2002-03 and Rs 328.64 crore during FY 2003-04. Accordingly, the Commission has considered interest expenses at Rs 2.23 crore for the nine months of FY 2002-03 and Rs 28.12 crore for FY 2003-04 based on the interest rate of 13% per annum. The Commission has also assumed the drawal of fresh loans in the middle of the year for the purpose of projecting the interest liability of the Petitioner.

The summary of the interest charges as proposed by the Petitioner and as approved by the Commission is provided in the Table 3.48 given below:

Table 3.48 Interest Expenditure (in Rs. crores)				
Description	**July 2002-March 2003**		**FY 2003-04**	
	Petition	**Commission**	**Petition**	**Commission**
Interest Expenditure	**7.28**	**2.23**	**35.78**	**28.12**

3.25 Total Expenditure

The Table 3.49 given below provides a summary view of the various expenses as proposed by the Petitioner and as approved by the Commission for FY 2002-03 (nine months) and FY 2003-04. Detailed analysis of each expense head has already been provided in the above sections.

Table 3.49 Total Expenditure (in Rs. crores)				
Description	**July 2002 – March 03**		**FY 2003-04**	
	Petition	**Commission**	**Petition**	**Commission**
Power Purchase Expenses	3504	3223.97	5020.84	4729.41
Employee expenses	32.61	30.76	47.89	42.68
A&G expenses	22.28	23.32	19.18	31.57
R&M expenses	32.86	13.67	48.20	20.05
Interest Expense	7.28	2.23	41.78	28.12
Depreciation	32.61	18.28	43.49	25.18
Other Admissible expenses	13.49	0.23	12.92	1.42
Deposit works	39			
Total Gross Expenditure	3681	3312.47	5234	4878.43
Less: Expenses capitalized	6.53	0	16.00	4.27
Total Net Expenditure	**3678**	**3312**	**5218**	**4874.16**
Contingency Reserves	1.63	1.63	1.63	1.63
Net Expenses incl. Spl Appropriations	**3680**	**3314**	**5220**	**4876**

3.26 Non Tariff Income

3.26.1 Petitioner's Submission

In its Petition, TRANSCO has projected non-tariff income to be nil for FY 2002-03 (nine months) and Rs 120.54 crore for FY 2003-04. The Petitioner has projected the non- tariff income for FY 2003-04 by assuming sale of additional power to the extent of 500 MW to PTC during the year. TRANSCO expects to sell about 588 Mus at Rs 2.05/unit to realize a revenue of Rs 120.54 crore during FY 2003-04.

3.26.2 Commission's Analysis

During the technical sessions, the Commission directed TRANSCO to submit the actual Other Income during the nine months of FY 2002-03. Accordingly, TRANSCO submitted the details of the actual Non- Tariff Income during the period July 2002 to March 2003 at Rs 50.37 crore, on account of the rebate earned on power purchases by TRANSCO. The Provisional Accounts of TRANSCO for FY 2002-03 reveal an additional income to the extent of Rs 9.34 crore on account of heads such as interest on fixed deposits, miscellaneous receipts, interest on advances to staff, income from sale of scrap, etc. The Commission has considered the non-tariff income of TRANSCO at Rs 59.71 crore , based on the Provisional Accounts for FY 2002-03.

The income from sale of power to other States has been considered while estimating the total power purchase cost and hence the same has not been considered as part of non-tariff income.

For the purpose of projecting the non-tariff income for FY 2003-04, Commission has considered annualized figures for the income on account of other heads such as Interest on Fixed Deposits and other receipts. Therefore, the Commission has considered non-tariff income at Rs 12.45 crore for FY 2003-04.

The Table 3.50 below provides a summary of the Non-tariff Income, as proposed by the Petitioner and as approved by the Commission .

Table 3.50 Non-tariff Income

(in Rs. crore)

Components	**July 2002-March 2003**		***FY 2003-04***	
	Petition	**Commission**	**Petition**	**Commission**
Interest on Fixed deposits	-	6.10	-	8.13
Other receipts	-	3.24	-	4.32
Rebate on Power Purchases	-	50.37	-	-
Sale of power to PTC*	-	-		
Total Non-tariff Income	**0.00**	**59.71**	**--**	**12.45**

*Considered in total power purchase costs

3.27 Return

TRANSCO has submitted that the reasonable return has been estimated on the capital base considered by the Commission in its BST Order dated 22nd February 2002.

The Commission is bound by the Policy Directions and the Policy Directions specify that the Distribution Companies are entitled to earn 16% return on equity The Commission has estimated the Capital Base and Reasonable Return of TRANSCO for the period July 2002 to March 2003 and for FY 2003-04, in accordance with the Schedule VI of the ESA. The summary of Capital Base and Reasonable Return as estimated in the Petition and as estimated by the Commission is provided in Table 3.51 given below:

Table 3.51 Capital Base and Reasonable Return				
	July 2002-March 2003		FY 2003-04	
	Petition	**Commission**	**Petition**	**Commission**
Original cost of fixed assets (excl consumer contribution)	650	650	650	671
Cost of intangible assets	0	0	0	0
Original cost of WIP	112	22	22	247
Compulsory investments	0	0	0	0
Amount of working capital as sum of:	0	0	0	0
Average cost of stores	5	3	3	3
Average cash & bank balance	9	10	10	9
Sub- total	776	685	685	931
Amount written off or set aside on account of depreciation of fixed / intangible assets	243	218	218	243
Amount of loan from State Govt	112	34	34	398
Loan from Holding Company	270	270	270	270
Debenture issues	-	0	0	0
Amounts deposited in cash with licensee by consumer by way of security	0	0	0	0
Sub-total	625	523	523	912
Net Capital Base	**151**	**162**	**162**	**19**
16% return on capital base	18	19	19	3
Return on borrowed funds	1	1	1	3
Total Reasonable Return	**22**	**21**	**21**	**6**

3.28 Revenue Requirement

Based on the expenses, return and non-tariff income estimated in above sections, the total Revenue Requirement as given in the Petition and as estimated by the Commission is summarized in Table 3.52 given below:

Table 3.52 Total Revenue Requirement

(in Rs. crore)

Description	**July 2002-March 03**		***FY 2003-04***	
	Petition	**Commission**	**Petition**	**Commission**
Expenses (A)	**3676**	**3314**	**5220**	**4876**
Return (B)	**22**	**21**	**29**	**7**
Non-Tariff Income (C)	**0.00**	**60**	**--**	**12**
Revenue Requirement (A+B-C) excl. Power Purchase Cost	**3698**	**3275**	**5249**	**4870**

CHAPTER 4 TARIFF DESIGN

4 Tariff Design

Subsequent to the unbundling of Delhi Vidyut Board into six successor entities through the Transfer Scheme, which was made effective from 1st July 2002, and the issuance of Policy Directions by the Government, the process of submission of tariff proposal by the respective licensees and its approval by the Commission was required to be different from the conventional one. Conventionally, a Utility files the tariff proposal based on the revenue gap between proposed Annual Revenue Requirement and the revenues at existing tariff of that Utility alone. The tariff proposal is given to bridge this revenue gap and is a distribution of various expense items in the ARR over the various categories of consumers.

In order to make the inter-linkages between tariffs of all the licensees clearer and better appreciated, the Commission puts forth its views on the fundamental concepts of tariff determination under the framework of Policy Directions.

4.1 Implications of the Policy Directions on Tariff Determination Process

4.1.1 4.1.1 Conventional tariff determination process

Conventionally, the Bulk Supply Tariff (BST) which the TRANSCO may charge from the Distribution licensees (DISCOMs and NDMC/MES) to whom it is supplying power, is determined on the principle of average cost of supply, derived as follows:

BST is calculated as-

$$\mathrm{BST} = \frac{\mathrm{ARR_T}}{(\mathrm{UI_1} + \mathrm{UI_2} + \mathrm{UI_3} + \mathrm{UI_4})}$$

where,

ARR_T = ARR of TRANSCO in Rs

UI_1, UI_2, UI_3 = Units input into each of the three DISCOMs in kwh

UI_4 = Units input into NDMC & MES

The revenue to be received by TRANSCO from the four licensees would be BST x UI_1, BST x UI_2, BST x UI_3 and BST x UI_4, respectively.

4.1.2 4.1.2 Tariff determination process under Policy Directions

The Policy Directions make ARR and Tariff determination of TRANSCO and the DISCOMs intertwined as explained in the following paragraphs.

4.1.3 4.1.3 For Distribution Licensee

The Policy Directions distinctly set the principles on which tariff for the Transmission and Distribution Licensees is to be determined. Extracts from the Policy Directions relevant to determination of tariff for Distribution Licensees are reproduced hereunder for convenience.

Para 1, Notification dated 31.05.02

"AT&C losses for the purposes of tariff computation shall be based on the values of reduction in AT&C loss each year for the years 2002-03, 2003-04, 2004-05, 2005-06 & 2006-07 indicated in the bid submitted by the Purchaser and as finally accepted by the Government (hereinafter referred to as the "Accepted Bid"), over the opening level of AT&C loss approved by DERC for each distribution company in the Tariff Order dated 22.02.2002."

Para 13, Notification dated 22.11.01

"From the date of issuance of these directions till the end of 2006-07 and subject to provision of paras 11 and 12 above and all expenses that shall be permitted by the Commission, tariffs shall be determined such that the distribution licensees earn, at least, 16% return on the issued and paid up capital and free reserves (excluding consumer contribution and revaluation reserves but including share premium and retained profits outstanding at the end of any particular year) provided that such share capital and free reserves have been invested into fixed or any other assets, which have been put into beneficial use for the purpose of electricity distribution and retail supply and provided further that such investment of such share capital and free reserves has the approval of the Commission."

Para 14, Notification dated 22.11.01

"Retail tariffs for the three distribution licensees shall be identical till the end of 2006-07, i.e., consumers of a particular category shall pay the same retail tariff irrespective of their geographical location."

4.1.4 4.1.4 Inter-linkages between ARRs and tariffs of licensees

Under a conventional tariff determination process, as explained above, the ARR and BST for TRANSCO is independent of the ARRs and Tariffs for DISCOMs. Moreover, the ARR and Tariff of a DISCOM depends on the BST of TRANSCO and its internal parameters, but they are independent of ARRs and Tariffs of other DISCOMs. The Policy Directions require the retails supply tariffs (RST) to be the same for all the licensees and the tariff is to be determined such that distribution licensees earns at least 16% return on equity and free reserves. Further, the AT&C losses for the purpose of tariff determination shall be taken as the AT&C loss levels committed by the distribution licensees.

The provision of uniform retail tariff makes it necessary that the retail tariff for all the DISCOMs is determined simultaneously by considering their ARRs collectively. Further, the provision of 16% return translates into a situation wherein after covering all their prudently incurred expenses, the DISCOM get 16% return. In other words, out of the revenues from tariff and other charges available with the DISCOMs, the DISCOM gets a clear return of 16%.

The existing levels of RST and AT&C losses are such that the revenues available with a DISCOM, i.e. RST x Units Realised = RST x Units purchased (1-AT&C loss), is insufficient to meet the ARR of DISCOM if it is calculated as per conventional process with average BST of TRANSCO for its power purchase cost. Thus, the RST as calculated by the equation above shall be required to meet the revenue requirement of TRANSCO and DISCOMs. But at existing RST and AT&C loss level, this revision in RST shall mean high tariff shock for consumers. In order to avoid this tariff shock, the Government has stepped in and has issued the Policy Directions whereby with assumptions of reasonable tariff increases the shortfall in revenue requirement shall be made up by loan support to TRANSCO. The Government has estimated this support amount to be about Rs. 3450 Crores over the five-year period of Policy Directions. The DISCOMs shall pay to TRANSCO the Bulk Supply Price from their revenues after meeting all their prudently incurred expenses and the 16% return. In other words, the Bulk Supply Tariff for the DISCOM is to be determined based on its paying capacity after meeting all its expense other than power purchase (i.e. ARR excluding power purchase cost). Also, the total ARR of the DISCOM, including power purchase cost, is equal to the revenues which it get from tariffs and other charges leaving no revenue gap for the DISCOM.

The above scheme makes the determination of BST for each DISCOM independent of the ARR of TRANSCO, as it is solely decided by the revenues from tariffs and other charges and the ARR excluding power purchase cost of the DISCOM. That is to say that BST payable to TRANSCO cannot be determined by TRANSCO's ARR, but needs to be determined from ARRs of individual DISCOMs. This makes it necessary to process petitions from TRANSCO and DISCOMs simultaneously to arrive at the BST and revenue gap figure of TRANSCO.

Thus, in its Petition, the TRANSCO has not proposed any BST for the DISCOMs and the NDMC and MES and has requested the Commission that their tariff may be determined as per the provisions of the Act and the Policy Directions.

Under these circumstances, the Commission made the Petitions public on 7th March 2003 clearly indicating the above position in the advertisement. Further, as stated in **section 1.9**, the Commission made a presentation to select stakeholders on the Petitions filed by DISCOMs and TRANSCO and requested the stakeholders to suggest measures for rationalization of tariff.

4.2 Truing-up mechanism

While estimating the ARR and the revenues of the Petitioner, the Commission has relied on the information available and some assumptions regarding the extent of variations in the parameters in future as compared to their existing levels. The Commission recognises that after the expiry of the year and the actual operational data is made available by the utility, the actual ARR and revenue figures would be different from the above estimates because the parameters on which these estimates are based shall be different from those assumed by the Commission. After determining the prudence of each component of ARR and revenues, the Commission would take up truing-up of the ARR and revenue figures considered earlier.

4.3 Treatment of DVB arrears collected by the DISCOMs

In the Transfer Scheme notified by the GNCTD on November 20, 2001, the Notes to Accounts to the Opening Balance Sheet of each DISCOM states that

"All the receivables from sale of power to consumers of the erstwhile Board other than to the extent specifically included in Schedules D, E and F shall be to the account of Holding Company. The DISCOMS will be authorized to realize the receivables of the Holding Company in their respective area of supply. Upon realization of such receivables of the Holding Company the same shall be shared between the Holding Company and the DISCOMS in the ratio 80 : 20".

The actual amount of DVB arrears collected by the DISCOMs in FY 2002-03, the amount (equivalent to 80%) remitted to the Holding Company by the DISCOMs, and the amount of DVB arrears considered for FY 2003-04 have been detailed below:

(Rs. Crore)

Particulars	**FY03**		**FY04**	
	Petition	Actual	Petition	Commission
Arrears Collected	143.13	124.10	162.50	137.33
Less: Remitted to DPCL	114.50	99.28	130.00	109.86
Balance	28.63	24.82	32.50	27.47

Note: Above numbers refer to arrears collected and remitted by all DISCOMs together

Thus, the total amount that has been remitted to the Holding Company in FY 2002-03 and projected for FY 2003-04 is Rs. 210 crore.

The DISCOMs are utilizing the existing billing and collection infrastructure to collect the DVB arrears. Once collected, 80% of the arrears are being remitted to the Holding Company and the balance 20% is being retained by the DISCOMs. The Commission has considered the entire collection for the purpose of computing the AT&C losses and revenue.

The Commission feels that the amount corresponding to 80% of realized DVB arrears would have been available in the sector to reduce the overall revenue gap, had DVB continued to be in existence. This outflow of money from the sector due to the above said provision is not intended and thus to avoid the burden of this amount to be passed on in tariff, the Commission has requested the Government to revisit the said provision.

The Commission is of the opinion that 80% of the arrears collected by the DISCOM should be remitted to the TRANSCO rather than the Holding Company. The benefit of this approach is that as the TRANSCO is a 100% subsidiary of the Holding Company, the money will still remain in GNCTD hands as well as remain within the sector. If this money is given to TRANSCO, it will be considered as Other Income for the TRANSCO and the overall sector gap will reduce, thus enabling lesser increase in the RST.

Accordingly, for FY04, the Commission has considered 80% of the DVB arrears collected as a payment to the TRANSCO, rather than the Holding Company. For FY03, the funds have already been transferred by the DISCOMs to the Holding Company. The Commission has assumed that these funds will be transferred to the TRANSCO and these funds are available to the sector. Accordingly the Commission has considered 80% of the DVB arrears for FY 2002-03 and FY 2003-04 as funds available to TRANSCO in FY 2003-04.

The Commission is of the opinion that there is a lot of scope for collection of the DVB arrears and the collection of around Rs. 100 crore in the nine months of FY03 should be surpassed substantially in the immediate future years. The DISCOMs should strive to drastically increase the collection of DVB arrears, which will ensure that the AT&C losses are reduced and additional funds are available in the sector.

4.4 Pricing of Reactive Power

Delhi's power system faces low voltage conditions for most of the time during the year. The voltage at 220 kV BTPS bus dips at times to as low as 181 kV. One of the reasons for low voltage is inadequate reactive compensation at the transmission and distribution levels. The NREB data shows that there is a shortfall of about 500 to 600 MVAr in the Delhi system. In order to meet its reactive power requirement particularly during summer (due to high reactive weather beating load) it draws heavy MVAr from the Northern Regional Grid which results in excessive voltage drop in the transmission and distribution system. Low voltage causes increased system losses, decrease in system transfer capability, and the system is prone to voltage collapse. It may also cause damage to consumers' equipment.

Under the ABT regime, TRANSCO has to pay for reactive drawals from the inter-State network when the bus voltage dips below 97%. The DISCOMs, however, are not compensating the TRANSCO for reactive power drawal. The Commission believes that in the interest of increased reliability of the power system, reactive power should be explicitly priced. The reactive power drawal should be priced such that the Distribution Companies are encouraged to make efficient choices about how they use or conserve reactive power. The Commission understands that the meters presently installed at the interface points do not have the facility to record voltage in 15 minutes blocks as is required under the ABT scheme. Under the current situation, the Commission decides and allows TRANSCO to charge for reactive power @ 2.00 paise per kVArh on all reactive power drawal (inductive only) from the TRANSCO system at interface points. **However, any reactive power drawal from feeders emanating from GENCO power stations shall not be priced.**

The Commission directs TRANSCO to submit information on month-wise reactive energy supplied to each DISCOM and monthly peak reactive drawal (in MVAr) by each DISCOM along with the next ARR and Tariff filing.

4.5 Availability Based Tariff (ABT)

4.5.1 Petitioner's Submission

TRANSCO has submitted that with the implementation of ABT, Transco has to pay the capacity charges and variable costs as determined by CERC for Central Generating Stations (CGS) and also certain additional charges towards unscheduled inter-changes. The unscheduled inter-changes (UI) relate to overdrarwals of power from the grid at low frequency and penal rates have to be paid for such drawals. Petitioner has further submitted that on one hand Delhi is largely dependent on CGS and other sources for meeting its demand and on the other hand it have large variations in its peak and offpeak demand, thus UI is unavoidable. Transco has further submitted that additional liability due to implementation of ABT may allowed to pass through to the Discoms as they are primarily responsible to control drawal of power and scheduling is done by adding up the schedule furnished by the Discoms.

DISCOMs have submitted that in the system inherited by them from the erstwhile DVB, it is not possible to comply with the requirements of ABT regime. For effective implementation of ABT, Discoms are required to have complete electricity flows with in a distribution system as well as the total flow of power within the entire system. To have knowledge of these energy flows, they would require connectivity with Transco and other distribution companies and would also require installing frequency meters at all substations.

4.5.2 Commission's Analysis

Commission has analysed and clarifies that going by the ABT concept, if is the DISCOMs, NDMC and MES who are to be responsible for unscheduled interchange. At the same time it has to be noticed that installation of Special Energy Meters (SEMs) at all the interface points including interface points with NDMC and MES is a prerequisite for implementation of ABT appropriately. Further, DISCOMs are no doubt required to know online total in-flow and out-flow of power with respect to their respective systems in order to regulate online drawal. It is imperative, therefore, that the requisite infrastructure facilities are in place at the earliest. Accordingly the Commission directs Transco to prepare a total scheme in consultation with the DISCOMs, NDMC and MES clearly defining responsibilities of each of the above Licensees and submit to the Commission in one month's time. The implementation schedule of the schemes shall be as short as possible.

4.6 Design of Bulk Supply Tariff

The revenue gap of the TRANSCO has to be funded through a combination of methods, viz. GNCTD support and increase in the BST. The Commission has considered the Government support to TRANSCO for FY03 and FY04 as committed by the GNCTD. The overall sector gap comprises the combined revenue gap of the TRANSCO and the DISCOMs. The unmet revenue gap of the TRANSCO, after accounting for the GNCTD support has to be met through revision in BST. The revenue gap of the DISCOMs can be met through revision in retail tariffs. The revision in RST has to account for the overall sector gap.

Under normal circumstances, the Utilities would have approached the Commission in December 2001 for approval of the ARR and tariff determination for FY03. However, due to the restructuring of the erstwhile DVB and the privatization of the distribution business, the Petitioners were not in a position to file the ARR and Tariff Petition. However, the Petitions filed in November 2002 did not have critical data required to assess the prudency of the expenses. The problems in migration of the database from the DVB to the new Companies and the substantial improvement desired by the Commission in the data quality have forced the Companies to improve their data management systems. This is beneficial in the long term, as henceforth, the Companies will be able to provide the data required by the Commission within a reasonable timeframe. This, being the first time, has taken longer than anticipated and consequently, the Commission finds itself in the position of having to determine the ARR and Tariff for the already completed FY03 in the month of May and June 2003.

The DISCOMs have already paid the existing BST to the TRANSCO in FY03, and have recovered part of their revenue requirement through the existing RST levied on the consumers. In the Information Memorandum given to the shortlisted investors before privatization, the GNCTD had considered an average annual increase of 10% in the retail tariffs in FY03, which was expected to net additional revenue of Rs. 200 crore to the TRANSCO in six months of FY03. However, the retail tariffs have not been revised since May 2001.Hence, the GNCTD decided to compensate the TRANSCO for the reduction in the capacity to pay of the DISCOMs on account of the non-revision in tariffs, by increasing the support by Rs. 200 crore in FY03.

However, after considering the actual expenses and revenue of the DISCOMs and the TRANSCO in FY03, the Commission has found that the three DISCOMs had a revenue gap in FY03 while the TRANSCO had a revenue surplus, after accounting for all the prudently incurred expenses and after accounting for the committed GNCTD support to the TRANSCO. In other words, the DISCOMs have paid BST to the TRANSCO at levels higher than their ability to pay.

The Commission has to address the issue of unmet revenue gap of the Utilities in FY03 in the context of the Policy Directions that specify that the DISCOMs are entitled to earn 16% Return on Equity every year. Accordingly, the TRANSCO should refund the excess recovery in FY 03 to the DISCOMs by adjusting the bills for the month of July 2003. The excess recovery component determined by the Commission to be refunded by TRANSCO to respective DISCOM is provided in following table:

(Rs Crore)

Particular	**NDPL**	**BRPL**	**BYPL**
Excess Recovery Component	22.30	34.28	25.47

The balance surplus of FY 2002-03 (nine months) after refunding the excess recovery from DISCOMs has been considered as revenue available in FY 2003-04 to meet the revenue requirement.

4.7 BST Determination for FY 2003-04

The paying capacity of each DISCOM in FY04 (amount available for power purchase) has been estimated based on the projected Revenue Realisation at the approved tariffs for the FY 2003-04, and the Revenue Requirement excluding power purchase expenses. The Bulk Supply Tariff for each DISCOM has been computed based on the total amount available for power purchase and the total units input to the respective DISCOM.

Based on the revenues projected at approved tariff, estimated total revenue requirement of each DISCOM excluding power purchase cost and the estimated total units input to each DISCOM, the Bulk Supply Tariff for each DISCOM has been computed and is shown in Table below:

(Rs Crore)

Particular	NDPL	BRPL	BYPL
ARR – Excluding Power Purchase (Rs.Cr)	329	391	213
Revenues at Existing Tariff (Rs. Cr)	1248	1745	926
Electricity Duty (Rs.Cr)	61	80	48
Amount Available for Power Purchase (Rs.Cr)	859	1275	665
Unit Inputs (MU)	5451	7966	5280
Bulk Supply Tariff (Paise/kWh)	**157.54**	**160.05**	**125.94**

4.8 NDMC and MES Tariff

The existing BST of Rs. 2.57 per kVAh for NDMC and MES is based on the Order issued by the Commission on May 31, 2002. The Commission had asked the erstwhile DVB to identify the 33 kV feeders supplying power to NDMC and MES and submit the details to the Commission, through its letter dated November 11, 2001 to Govt. of NCT of Delhi. This would have enabled the Commission to assess the losses and the wheeling charges applicable for the NDMC and MES. However, neither the DVB nor the TRANSCO have submitted the relevant data. In the absence of this data, the Commission is unable to take a considered view in the matter. The Commission is of the opinion that in such a situation, it would not be proper to either increase or decrease the tariffs applicable for NDMC and MES, and has hence retained the existing tariffs for NDMC and MES at Rs. 2.57 per kVAh in this order.

4.9 Revenue Requirement and Revenue

The TRANSCO's revenue requirement and revenue for FY 2002-03 (nine months) and for FY 2003-04 as determined by the Commission is summarised in following table:

(Rs Crore)

Particular	FY 2002-03	FY 2003-04	Total
Revenue Requirement	**3275**	**4870**	**8145**
Revenues from Sale of Power - Discoms - NDMC and MES	 1924 248	 2799 422	 4723 670
Government Support	1364	1260	2624
DVB Arrears		210	210
Excess/(Shortfall)	**261**	**(-)179**	**82**
Less :Amount payable to Discoms			82

5 DIRECTIVES

5.1 Introduction

The Commission has issued certain directives to the Utilities operating in the state from time to time, in order to improve the functioning of the electricity sector in the state in terms of operational efficiency, costs, and quality of service. In order to evaluate the progress made by the Petitioner towards the achievement of the directives issued by the Commission, it is imperative to understand the rationale behind issuance of the directives. The Commission has been constituted under the Delhi Electricity Regulatory Act 2000 (DERA), and Section 11 (1) (d) of the Act mandates the Commission to promote competition, efficiency and economy in the activities of the electricity industry. Similarly, Section 11 (1) (m) mandates the Commission to regulate the working of the licensees in the National Capital Territory of Delhi, and to promote their working in an efficient, economical and equitable manner. Thus, the thrust of these enabling provisions in the DERA is on improving the operational efficiency of the Utilities operating in the State to provide better quality of supply and service to the consumers at optimum costs.

The directives issued by the Commission are intended to have beneficial effects both in the short and long term. For instance, a directive to reduce the T&D losses over a period of time is a long-term directive, while the directive to prepare the Fixed Asset Register is a short-term directive, and both result in long-term benefits to the sector. Compliance with the directives issued will benefit all the stakeholders in the electricity sector on a long-term basis.

5.2 Directives in the Retail Supply Order of May 2001

The Commission issued its first Retail Supply Order in May 2001 for the revision of Retail Supply Tariff for the erstwhile DVB. In this Order, the Commission had issued specific directives to DVB, which were based on the then prevailing system requirement. The directives were issued to DVB with the principal objectives of (i) attaining improvement in operational efficiency and (ii) ensuring the capability of furnishing basic information that was critical for restructuring and privatisation of DVB. The Directives related to diverse areas, such as, T&D loss reduction, metering & billing, Management Information System (MIS), R&M works and Investments, and energy audit. The rationale behind the issuance of some of these directives is elaborated in the subsequent paragraphs.

The directive for conducting real time energy audit was issued with the objective of rendering the process of energy audit more effective by identifying the areas of energy leakage. Similarly, the Commission issued directions for the implementation of a robust MIS, to enable the DVB to maintain data in an organised manner so that the data requirements for ARR filing could be adequately and efficiently met with. The metering and billing function is another area where the Commission had directed the DVB to streamline its systems, to enable it to control the enormous revenue leakage that was taking place on account of inadequate metering infrastructure and weak commercial control mechanisms.

The erstwhile DVB had made some progress on the various directives issued in the RST Order and the brief summary of progress made by DVB on these directives is presented in the following Table:

Summary of Directive	**Progress by DVB**
Management Information System and compilation of data in the prescribed formats for Filing	In the joint petition filed for determination of Bulk Supply Tariff and Opening level of AT&C losses, data and information in some of the areas was provided in accordance with the prescribed formats
Complete Energy Audit for one feeder each of the Circles	Conducted Energy Audit for one feeder in each Circle and submitted the energy audit reports to the Commission
Pilot Project for Real Time Energy Audit	Initiated a real time energy audit; however the same was discontinued due to cost implications
Time Bound Action Plan for Metering	Submitted detailed action plan on metering comprising existing metering plan, new metering policy and procurement of meters, etc
Billing	Decentralised computerised billing system implemented in two districts. Online billing system implemented in six districts
Electrification of pre 1993 regularised colonies	Submitted detailed report on background and policies for electrification of such colonies
Review of R&M Works	Submitted the quarterly report on R&M expenditure for first two quarters commencing June 2002
Plan for improving Collection Efficiency	Submitted the details of various actions taken such as reduction in provisional billing, drive for recovery by disconnection, extension of bill payment on holidays/Sunday, bill payment facility through credit card, cheque etc
Audited Accounts	Submitted the final accounts upto FY 2001-02 during the process of BST Determination

On the whole, it can be surmised that the erstwhile DVB (till such time as it existed) had made reasonable efforts to comply with the directives issued by the Commission.

5.3 The directives in the context of a restructured electricity sector :

The power sector in Delhi has undergone a drastic transformation since the time the Commission issued the directives in the RST Order. Consequent to the unbundling of the erstwhile DVB and the reform of the power sector of Delhi during 2002, the distribution business of Delhi is being managed by the three private Distribution Companies and the transmission function being undertaken by Delhi Transco Limited.

As a result of changes in the sector structure with the notification of the Transfer Scheme and the issuance of the Policy Directions by the GNCTD, the Commission has reviewed the relevance of these directives to the successor entities of DVB. Based on this review, the Commission feels that some of the directives given in the RST Order are not very relevant in the current framework, as explained in the next paragraph.

The various directives issued in the RST Order on T&D losses, such as, "complete energy audit", "pilot project for real time energy audit", and "improvements in metering and billing system", were given in the background of the DVB being unable to assess its T&D losses, and to enable the DVB to come up with an action plan to reduce losses. However, in the context of the Policy Directions and the bid level and minimum level AT&C loss targets specified in the Policy Directions, this directive is no longer relevant. Similarly, the directive for improving collection efficiency has lost significance, as the lack of collection efficiency will reflect in the AT&C loss. As per the policy directions, the Companies are bound to achieve the bid level AT&C losses on year to year basis during the five-year period from FY 2002-03 to FY 2006-07. The Companies have to undertake these steps to assess the technical and commercial losses at various levels, to ensure that they meet the targeted reduction in AT&C loss levels, as their returns are linked to achievement of AT&C loss reduction. Effectively, the Policy Directions has set the targets for the Distribution Companies for the reduction in AT&C losses, thereby eliminating the need for loss reduction targets by way of specific directives by the Commission.

Similarly, the directive pertaining to the preparation of a base paper on minimum charges is also no longer relevant, since the Commission has replaced the minimum charges with fixed and demand charges for all consumer categories in this Order.

However, there are quite a few directives of the RST Order that are still relevant in today's context, and it is essential for the Petitioner to ensure compliance with these directives for improving the operational efficiency and the quality of data that is made available.

Further, the Commission issued the Bulk Supply Tariff Order in February 2002. The Commission issued certain directives through the BST Order which were meant for the unbundled entities in the sector, and therefore, retain their relevance and applicability to the successor entities.

The progress achieved by the Petitioner towards the directives relevant in the current framework (post privatisation) is discussed below:

5.4 Management Information System

The Commission has been directing the Utilities to develop a robust MIS that could provide the required data for facilitating appropriate decision-making at the right time. A robust MIS will ensure that the data required by the Commission is available with the Utilities, in a manner that facilitates efficient access and amenability to intelligent processing. The Commission has appointed a consultant for designing and implementing a Regulatory Information Management System (RIMS) to facilitate a smooth and seamless exchange of data regularly between the Utilities and the Commission, in place of the prevailing practice of sharing data one a year at the time of the ARR filing. The Utilities should ensure that their internal MIS is compatible with the requirements of an efficient ARR filing system, and dovetails with the RIMS developed by the consultant.

5.4.1 5.4.1 Progress achieved by TRANSCO

In its ARR and Tariff Petition for the period July 2002 to March 2003, and for the FY 2003-04, the TRANSCO has provided part of the data in accordance with the Formats of the Commission. However, the overall quality of data submitted by the Petitioner is not satisfactory, besides requiring an inordinate amount of time and effort on part of the Commission in obtaining the required data from the Petitioner.

5.4.2 5.4.2 Preparation of Fixed Asset Register

The Commission in its BST Order had directed the Petitioners to finalize the Fixed Asset Registers separately for the successor entities by June 30, 2002.

5.4.3 5.4.3 Progress achieved by TRANSCO

The Company came into existence on July 1, 2002 and sought extension till December 31, 2002 to submit the Fixed Asset Registers, which the Commission granted. However, the Petitioner did not submit the FAR till date.
The Commission is concerned about the delay in submission of the FAR, despite the Petitioner's repeated pleas that the FAR was ready and would be submitted soon. The Commission directs the Petitioner to submit the detailed FAR by 31st July 2003.

The Commission in its BST Order had also directed the Petitioner to provide the break-up of Gross Fixed Assets and CWIP in the opening balance sheet of the TRANSCO by June 30, 2002.

The Petitioner is yet to submit the details of the GFA and CWIP in the opening balance sheet of TRANSCO. The Commission directs the Petitioner to submit the relevant details within one month of the issue of this Order.

5.4.4 5.4.4. Approval of Power Purchase Agreement

The Commission had directed the Petitioners to approach the Commission for post-facto approval of Power Purchase Agreements (PPA) from all new sources during 2001-02. The Commission had also directed the Petitioner to approach the Commission in future for approval of any new PPA being signed with any source.

5.4.5 5.4.5 Progress made by TRANSCO

The TRANSCO has submitted the short-term (of less than six month duration) Power Purchase Agreements during the ARR process.

5.4.6 5.4.6 List of New Directives

The Commission has also issued certain new directives, which have been detailed in the respective section, and have been listed in this Chapter for easy reference:

Capital Investments(3.20)

The Commission directs the Petitioner to obtain Commission's approval for all the capital investment schemes.

R&M Works: (3.19)

The Commission directs the Petitioner to maintain a separate record of items issued from the store for R&M works, and submit the details to the Commission along with the details of the actual R&M works carried out at the end of each quarter. In addition to this a report on transformer failure rate should also be submitted on a quarterly basis.

Fixed Asset Register.(3.22)

The Commission directs the Petitioner to submit the detailed Fixed Asset Register (FAR) by 31st July 2003

Consumption by Employees of erstwhile DVB

The Commission directs the TRANSCO and DISCOMs to evolve a mechanism for payments and accounting either at inter-company or at individual employee level and submit the same to the Commission by 31st October 2003

Deposit Works (2.8)

The Commission urges the Government to resolve the issue of deposit works execution within a period of two months from the date of this Order, in consultation with the TRANSCO, DISCOMs and the developing agencies such as DSIDC, DDA etc., A specific forward path needs to be drawn for executing these works, addressing various issues such as:

- Details of deposit works to be executed
- Works to be executed by TRANSCO and each DISCOM
- Funding arrangements

In case the matter does not get resolved amicably between the Government, TRANSCO, DISCOMs and development agencies, it may be referred to the Commission.

Approval of Power Purchase Agreements (3.10)

The Commission hereby directs the Petitioner to approach the Commission for a post-facto approval of Power Purchase Agreements (PPA) from all new sources during 2003-04. The Commission also directs the Petitioner to refrain from entering into 'round-the-clock' type of PPA's, to the extent possible and also to approach the Commission in future for its approval of a new PPA being entered from any source.

The Commission directs the TRANSCO that henceforth, whenever any short-term PPA is signed by the TRANSCO, it should intimate the Commission regarding the event within 1 week of signing the PPA and before commencing actual drawal, and will submit the PPA for post-facto approval of the Commission within one month of signing the PPA. The Commission will establish detailed guidelines that should be followed by the TRANSCO while entering into such PPAs. As for long-term PPAs, the TRANSCO has to approach the Commission for prior approval of such PPAs.

Sale of Surplus Energy

The Commission directs the TRANSCO to optimise its energy balance and try to sell the surplus energy available during off peak hours to the maximum extent possible. In case, TRANSCO is unable to sell the surplus energy, TRANSCO should back down the generating stations of Delhi including GENCO, PPCL and Badarpur. TRANSCO is further directed not to surrender the cheaper power available from CGS except in case on unavoidable circumstances.

The Commission also directs TRANSCO to improve their load management systems in order to avoid the instances of underdrawals.

Reactive Energy (4.4)

The Commission directs TRANSCO to submit information on month-wise reactive energy supplied to each DISCOM and monthly peak reactive drawal (in MVAr) by each DISCOM along with the next ARR and Tariff filing.

Scheme for adherence to Availability Based Tariff (4.5)

The Commission directs Transco to prepare a total scheme in consultation with the DISCOMs, NDMC and MES clearly defining responsibilities of each of the above Licensees and submit to the Commission in one month's time.

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[1] Fixed charges are to be levied on sanctioned load or MDI reading, whichever is higher, on per kW or part thereof basis. Where the MDI reading exceeds sanctioned load, a surcharge of 30% shall be levied on the fixed charges corresponding to excess demand in kW for such billing cycle.

[2] In case of co-operative societies having independent connection for common facilities through separate meter, energy charges for this connection shall be billed at highest slab tariff for domestic category.

[3] The entitlement of various slabs under domestic category shall be worked out on pro-rata basis depending upon the duration of the billing cycle.

[4] with a rebate of 15%

[5] Connection sanctioned for dispensaries, Hospitals, Public Libraries, Schools Run/Aided by MCD/Government of NCT of Delhi and such other schools as recommended by Department of Education, Government of NCT of Delhi, Places of worship, Shelters for animals, Birds including, Go-sadans, Chaupals, Community halls in Rural Areas and J.J. Basties/Colonies, Recognised Centres for Welfare of Blind, Deaf and Dumb, Spastic Children and Physically Handicapped Persons, Working Women Hostels run/aided by MCD/Government, Cheshire Homes/Orphanages Charitable homes and Small Health Centres approved by Directorate of Health Services, Government of NCT of Delhi for providing Charitable Services only, electric crematoriums or any other similar establishment as may be approved by the Commission shall be billed at domestic category tariff, if such premises are being used exclusively for the specified purpose.
Provided that all such connections, falling under the above establishments, which were being billed at domestic tariff by the erstwhile DVB shall be deemed to have Commission's approval.

[6] Where the MDI reading exceeds contract demand, a surcharge of 30% shall be levied on the demand charges corresponding to excess demand for such billing cycle.

[7] Same as 4 above.

[8] Same as 5 above

[9] The incumbent shall be entitled for a rebate of 2.5% on the energy charges on 11 kV rates for availing 3 phase supply on 33/66 kV and 4% for supply on 220 kV.

[10] Same as 5 above.

[11] Same as 5 above

[12] Same as 8 above

[13] Maintenance charges @ Rs.60 /month/ street lighting point shall also be payable along with fixed and energy charges

[14] The above tariff is based on the supply being given through a single delivery and metering point at single voltage

[15] Rs. 1260 x (2.97A + 5) where A is contract/maximum demand, whichever is higher, in MVA subject to a minimum of Rs. 25000

[16] The simultaneous maximum demand, for all metering points, shall be considered for levying demand violation charges ●

List of Respondents of Transco

Sl-No-	R.No.	Name	Address	Category	Company to Respond
1.	R-06	Sh. Rajan Gupta	Bharatiya Mazdoor Sangh, 5239, Ajmeri Gate, Delhi	Association (Employees)	TRANSCO
2.	R-12	Sh. Vijender Kumar Gupta	Municipal Corporation of Delhi, B-7, Vinoba Kunj, Plot No. 9, Sector – 9, Rohini, Delhi - 110085	Government Department	TRANSCO
3.	R-14	Sh. Khushal Sharma	Single Point Agency Holder Association, 1, Khushal Complex, Sant Nagar, (Burari), Delhi - 110084	Association (Contractors)	TRANSCO
4.	R-17	Sh. N. K. Gupta	Delhi Development Authority Barracks, Sector D-4, Vasant Kunj, New Delhi	Government Department	TRANSCO
5.	R-18	Sh. T.K. Varghese	Young Friends CGHS, Plot No. 47, Sector 9 3333333, Delhi 110085	Association (Domestic)	TRANSCO
6.	R-21	Sh Satish Kumar	Delhi Metro Rail Corporation Ltd., 3rd Floor, NBCC Place, Pragati Vihar, Bhishma Pitamah Marg, New Delhi-3	Utility	TRANSCO
7.	R-24	Sh CSR Murthy, IDSE	Commander Works Engineer(AF) MES Tughlakabad, PO-Madangir, New Delhi-62	Govt Deptt/Licensees	TRANSCO
8.	R-25	Sh Sunder Lal	Energywatch, FISME Secretariat, B-4/161, Safdarjung Enclave, New Delhi-29	NGO	TRANSCO
9.	R-26	Sh Kamta Prasad	Institute for Resource Management And Economic Development, 2-B, Institutional Area, Karkardooma, Delhi-92	NGO	TRANSCO
10.	R-27	M/s Chander Mohini Mushroom & Agro Farms	M/s Chander Mohini Mushroom & Agro Farms, 11/25 Holambi Kalan, Alipur, Narela, Delhi-82	Individual	TRANSCO
11.	R-28	M/s M.R.Mushroom & Agro Farms	M/s M.R. Mushroom & Agro Farms, 10/20 Holambi Kalan, Alipur, Narela, Delhi-82	Individual	TRANSCO

Sl-No-	R.No.	Name	Address	Category	Company to Respond
12.	R-30	Sh. Harjeet Singh	Delhi State Industrial Development Corpn Ltd., A-3/4, State Emporia Building, Baba Kharak Singh Marg, New Delhi 110001	Govt Deptt	TRANSCO
13.	R-36	Sh Raja Beriwal	B-2/52, Rajasthali Apartsments, Pitam Pura, Delhi - 110034	Individual	TRANSCO
14.	R-39	Sh Sushil Goel	D-241, Ashok Vihar Phase I, Delhi - 110052	Individual	TRANSCO
15.	R-40	Sh Vijay Kumar Gupta	BN-75(West), Shalimar Bagh, Delhi 110088	Individual	TRANSCO
16.	R-42	Sh Kamal Kiran Seth	Udyog Nagar Factory Owners Association, Z-101, (Opp H-18) Udyog Nagar, Rohtak Road, Delhi-41	Association (Industrial)	TRANSCO
17.	R-43	Sh Vijnod Kumar	1/8 East Punjabi Bagh, New Delhi-28	Individual	TRANSCO
18.	R-44	S.S. Mediratta	N.T.P.C Ltd., NTPC Bhawan, Core 7, SCOPE Complex, Institutional Area, New Delhi-3	Govt Deptt	TRANSCO
19.	R-46	Vijay Grover	North-West Industrial Federation, 118, SMA Cooperative Industrial Estate, G.T.K.Road, Delhi-33	Association (Industrial)	TRANSCO
20.	R-47	Sushil Goel	Rajasthani Udyog Nagar Manu.Asso. 1, Rajasthani Udyog Nagar , G.T.Karnal Road, Delhi-33	Association (Industrial)	TRANSCO
21.	R-49	Sh. F.C Batra	Badli Industrial Estate Association, Administrativea Block Bldg., Badli Industrial Estate, Delhi-110042	Association (Industrial)	TRANSCO
22.	R-61	Sh Anil Sood	CHETNA, Society for Protection of Culture Heritage, Environment, Traditions and Promotion of National Awareness, 132 Thapar Chamber II, Opp Kalindi Colony, Kilokari, Main Ring Road, New Delhi-29	NGO	TRANSCO

Date –sheet for Critical Activities relating to deliberations on Petition

Date	Activity
08.11.2002	The petitioner filed the petition for ARR and to determine Bulk Supply Tariff for the Financial year 2002-03(9 months)
16.12.2002	Basic gaps in the ARR Petitions communicated to the petitioner.
19.12.2002	Detailed deficiency memo issued to the petitioner.
19.12.2002	DTL wide its letter no.DGM(Comml)/249 dated 29.11.2002 informed to the Commission that DTL was not in business prior to 01.07.2002
26.12.2002	First technical session held with the petitioner on the data gaps communicated to them.
31.12.2002	The petitioner filed the petition for ARR and to determine Bulk Supply Tariff for the Financial year 2003-04
14.01.2003	Response of the petitioner on certain queries in response to Commission's letter dated 19.12.2002.
31.01.2003	Deficiency memo no-2 issued to the petitioner on AT&C losses, Capital expenditure, expenses, revenues etc.
21.02.2003	Meeting held with CEO's of Transco and Discoms to discuss various data gaps in the petition. The petitioner's advised to remove all deficiencies. and to submit the composite proposal by 26.02.2003.
06.03.03	Commission admitted the petition.
7.03.2003	Public notice issued in newspapers requesting stakeholders to respond on the consolidated petitions of companies by 7th April 2003.
17.03.2003	Notice to the petitioner for technical session to be held on 21.03.2003 to seek additional informations/clarifications on responses submitted and to provide the actual data upto February 2003.
21.03.2003	Technical session held with Petitioners.
25.03.2003	The petitioner directed to provide additional informations/clarifications upto 31.3. 2003.

31.03.2003	Selected stakeholders invited to participate in the presentation on the ARRs of the Petitioners, on 5th April 2003, organized by the Commission.
05.04.2003	Presentation on the ARRs of the Petitioners to invited stakeholders.
07.04.2003	❖ Public notice in newspapers for extension of time limit for Public response on ARR Petition to 16.4.03. ❖ Selected stakeholders who attended the presentation, also informed of the extended date of public response.
09.04.2003	Ist set of responses from the public sent to the petitioner for their response to the objector and to the Commission.
16.04.2003	The petitioner directed to submit the all pending information.
17.04.2003	2nd set of responses from the public sent to the petitioner for there response to the objector and to the Commission.
22.04.2003	3rd set of responses from the public sent to the petitioner for there response to the objector and to the Commission.
24.04.2003	The petitioner reminded to submit the all pending information.
24.04.2003	The petitioner submitted the supplementary information.
25.04.2003	4th set of responses from the public given to the petitioner for reply thereon latest by 05.05.2003.
26.04.2003	The petitioner submitted the supplementary information.
29.04.2003	The petitioner submitted the replies to the Ist set and 2nd set of public responses.
30.04.2003	❖ GNCTD addressed to provide details & calculation of Rs.3450/- crores, support to DTL. ❖ The Petitioners and the GNCTD informed the schedule of Public Hearings on 12th, 13th and 15th May 2003.
1.05.2003	The stakeholders who responded upto cut-off date of 25.4.03 invited, to attend the Public hearing in groups on 12th, 13th and 15th May 2003.
08.05.2003	The Petitioners submitted replies to the balance public responses.
10.05.03	GNCTD reminded to provide the detail calculations of Rs.3450/- crores, support to DTL.
12.05.03	❖ Public hearing conducted in two sessions. ❖ GNCTD addressed to consider foregoing the return of 16% on equity of GENCO.
13.05.03	❖ Public hearings conducted in two sessions. ❖ Response of GNCTD received regarding calculations & assumption on

	support of Rs.3450/- crores to DTL.
14.05.03	Public hearing was conducted in one session on 14th May instead of 15th May 2003, which was the public holiday.
20.05.03	Response of GNCTD received regarding return on equity to GENCO.
23.05.03	The petitioner addressed to attend a technical session for clarification/further information on pending issues.
24.05.03	Technical session held with the petitioner.
30.05.03	The petitioner submitted provisional accounts and partial information/data.
07.06.03	The petitioner submitted balance information/data.
	Issue of Orders by the Commission