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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 March 3, 1999 and it became operational from December 10, 1999.

1.1.1 Functions of the Commission

Major functions assigned to the Commission under the Delhi Electricity Reform Act 2000 (hereinafter referred to as 'DERA') 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 National Capital Territory 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

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

1.1.2.1 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.

1.1.2.2 Guidelines for Revenue and Tariff Filing

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.

1.1.3 Regulations and Orders issued by the Commission

In its journey from inception till date, the Commission has issued seven Tariff Orders and notified nine Regulations as given in Tables 1.1 and 1.2, respectively. The Orders were issued after following the due process and all stakeholders were given an opportunity to present their viewpoints.

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 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
4.	Order on ARR for July 2003 to March 2004 (9 months and Financial Year 2003-04) and determination of Retail supply tariffs for BSES – Yamuna Power Limited	26.06.2003
5.	Order on ARR for July 2003 to March 2004 (9 months and Financial Year 2003-04) and determination of Retail supply tariffs for BSES – Rajdhani Power Limited	26.06.2003
6.	Order on ARR for July 2003 to March 2004 (9 months and Financial Year 2003-04) and determination of Retail supply tariffs for BSES – New Delhi Power Limited	26.06.2003
7.	Order on ARR for July 2003 to March 2004 (9 months and Financial Year 2003-04) and determination of Bulk supply tariffs for Delhi TRANSCO Limited	26.06.2003

Table 1.2 : Regulations 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
9	Delhi Electricity Regulatory Commission (Guidelines for establishment of Forum for redressal of grievances of the consumer and Ombudsman) Regulations, 2003	11-3-2004

Further, in compliance to the provisions of Electricity Act 2003 the Commission has issued on 21st May 2004 the following Draft Regulations for public comments:

Table 1.3: Draft Regulations issued by the Commission

Sr. No.	Title of Regulation
1	Delhi Electricity Regulatory Commission (Conduct of Business) Regulation, 2004.
2	Delhi Electricity Regulatory Commission (Intra-state Electricity Trader) Regulations 2004.
3	Delhi Electricity Regulatory Commission (Treatment of income of Other Businesses of Transmission Licensees and Distribution Licensee) Regulation 2004.
4	Delhi Electricity Regulatory Commission (Procedure for filing appeal before the Appellate Authority) Regulation 2004.
5	Delhi Electricity Regulatory Commission (Terms and conditions for Open Access) Regulation, 2004.

1.1.4 Constitution of Commission Advisory Committee

The Commission has constituted the Commission Advisory Committee, vide notification dated March 27, 2003, to advise the Commission on major questions 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.

1.2 Background

1.2.1 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').

1.2.2 Policy Directions

1.2.2.1 Notification of Policy Directions

In exercise of powers conferred by Section 12 and other applicable provisions of the DERA, 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.

1.2.2.2 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.

1.2.2.3 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 disbursed to 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.

1.2.3 Determination of BST and Opening Losses

The Order on opening loss levels, to be passed by the Commission, as discussed in Para 1.2.2.2 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.

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

A joint petition was subsequently filed by the TRANSCO and the three DISCOMs on December 21, 2001 for the determination of Bulk Supply Tariff for the period till March 31, 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 February 22, 2002.

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

1.2.4 Effective date of Transfer Scheme

The Transfer Scheme was made effective by the Government from July 1, 2002 onwards and from this date, the Petitioner formally took over the transmission assets of DVB (as defined in the Transfer Scheme) and became authorised to commence electricity transmission and bulk supply business in the specified area of National Capital Territory of Delhi (as defined in the Transfer Scheme).

1.2.5 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 the 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 DISCOM's 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.

1.2.6 ARR and Tariff Determination for FY 2002-03 and 2003-04

During the months of November and December 2002, the Transmission Company and three Distribution Companies filed their ARR and Tariff Petitions for the nine months of 2002-03 (July 2002 to March 2003) and for FY 2003-04. The Commission had a series of discussions with the TRANSCO and three DISCOMs wherein the Commission sought additional information, clarifications and justifications on various issues critical for admissibility of the Petitions. Subsequently, the Petitioners submitted the information and justifications. However, considering the series of submissions by the DISCOMs and the passage of time, the Commission directed the DISCOMs to file Consolidated ARR Petitions for the nine-month period of FY 2002-03 and FY 2003-04. The DISCOMs filed the Consolidated Petitions during the first week of March 2003. The Commission admitted the Petition of TRANSCO and the Petitions of DISCOMs for further processing on March 6, 2003.

The Commission brought out a Public Notice on March 7, 2003 indicating the salient features of the Petitions and invited responses from the consumers and other stakeholders on the Petitions. However, the Commission did not receive adequate responses on the Petitions due to the fact that the Petitioners did not file a Tariff Petition and due to low awareness and appreciation of the tariff determination process based on the framework specified by the Government's Policy Directions. Due to the low response on the Petitions, the Commission made a presentation to select stakeholders and briefed them about the unbundling and privatisation process followed by the Government, the Policy Directions framework, the salient features of the Petitions, and the importance of the ARR Petitions for the tariffs to be approved by the Commission. The Commission sought responses from the participants on the ARR Petitions as well as suggestions on other related areas including tariff rationalization.

The Commission also brought out a public notice on April 11, 2003 and sought further suggestions/responses from the general public on other related areas of concern to the consumers including rationalisation of tariff categories/sub-categories, tariff structure amendment, and other charges levied as per provisions of the Tariff Schedule. The Commission received a total of 78 responses from the various stakeholders. The Commission conducted the Public Hearings on the May 12,13 and 14, 2003 in five different sessions. Subsequently, the Commission held discussions with the Petitioners and obtained the details of actual expenses, revenue and losses for the nine-month period of FY 2002-03 (July 2002 to March 2003).

The Commission, based on the detailed scrutiny of the Petitions and additional information/clarifications submitted by the Petitioners and after following the due public process, issued its Orders on the ARR and Tariff Petitions of TRANSCO and DISCOMs for FY 2002-03 (9 months) and FY 2003-04 on June 26, 2003.

1.2.7 Enactment of Electricity Act 2003

The Electricity Act 2003 (EA 2003), enacted in June 2003 repealed the Indian Electricity Act, 1910, the Electricity (Supply) Act, 1948 and the Electricity Regulatory Commissions Act, 1998. It provides for increased competition in the sector by facilitating open access (permission to use the existing power transfer facilities) for transmission and distribution, power trading, and also allows setting up of captive power plants without any restriction.

The Commission has examined the applicability of DERA and Policy Directions issued by the GNCTD subsequent to the enactment of the EA 2003. The Sections 185 (3) and 185 (2) (e) of the EA 2003 are the relevant Sections dealing with the applicability of the Delhi Electricity Reform Act 2000 and the Policy Directions issued by the GNCTD under the provisions of DERA.

Section 185 (3) of the EA 2003 states that *"The provisions of the enactments specified in the Schedule, not inconsistent with the Provisions of this Act, shall apply to the States in which such* *enactments are applicable"*. The Delhi Electricity Reform Act, 2000 has been listed under this proviso at Sl.No. 7 of the Schedule of EA 2003.

Further, Section 185 (2)(e) of the EA 2003 states that *"all directives issued, before the commencement of this Act, by a State Government under the enactments specified in the Schedule shall continue to apply for the period for which such directives were issued by the State Government".*

From these two provisions of EA 2003, it can be interpreted that the provisions of DERA 2000 which are not inconsistent with the provisions of EA 2003 shall still be applicable to the State of Delhi and the Policy Directions issued by the GNCTD under the provisions of DERA shall be applicable till the period of Policy Directions i.e. 2006-07. The Commission, while analysing the Petitions and while issuing this Order has duly considered these provisions of the EA 2003 and has dealt with the matters accordingly.

Procedure envisaged in the EA 2003 for Tariff Order

Section 64 of the EA 2003 specifies the procedure to be followed for issuance of a tariff order. Sub-sections (1) and (3) of this Section of EA 2003 state as follows:

Sub-section (1): *"An application for determination of tariff under section 62 shall be made by a generating company or licensee in such manner and accompanied by such fee, as may be determined by regulations".*

Subsection (3): "*The Appropriate Commission, shall within one hundred and twenty days from receipt of application under sub-section (1) and after considering all suggestions and objections received from the public:*

(a) issue a tariff order accepting the application with such modifications or such conditions as may be specified in that order:

(b) reject the application for reasons to be recorded in writing if such application is not in accordance with the provisions of this Act and the rules and regulations made there under or the provisions of any other law for the time being in force:

Provided that an applicant shall be given a reasonable opportunity of being heard before rejecting his application."

1.3 Procedural History

1.3.1 ARR & Tariff filing by the Companies for FY 2004-05

1.3.1.1 Filing of petitions

The TRANSCO, Indraprastha Power Generation Company Limited (IPGCL) and Pragati Power Corporation Limited (PPCL) filed their Petitions for approval of ARR and determination of Tariffs for FY 2004-05, on December 3, 2003.

The Policy Directions envisage uniform retail tariffs across the DISCOMs and tariffs have to be determined so as to allow the DISCOMs to recover all permissible expenses and return for the 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 2004-05. Thereafter, North Delhi Power Limited (NDPL) filed its petition for ARR approval and determination of Retail Supply Tariff (RST) for FY 2004-05 on December 17, 2003. The other two DISCOMS, i.e., BSES Yamuna Power Limited (BYPL) and BSES Rajdhani Power Limited (BRPL) filed their ARR and Tariff Petition for determination of Retail Supply Tariff for FY 2004-05 on December 26, 2003.

The Petitioner, in its Petition, has projected a Revenue Gap of Rs. 2255 Crore for FY 2004-05 (including a Revenue Gap for FY 2003-04), considering the support from GNCTD at Rs. 690 Crore . The Petitioner has requested the Commission to determine its Bulk Supply Tariff, taking into account the provisions of the Transfer Scheme, the Policy Directions issued by the Government and filings made there under.

1.3.1.2 Interactions with the Petitioner

The submissions 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 separate submissions on January 14, 2004.

The Distribution Companies, IPGCL and PPCL also provided similar information and clarifications on the issues raised in respect of their filings, on various occasions. The Commission admitted the Petitions for further processing on January 16, 2004.

1.3.2 Public Notice and response from stakeholders

1.3.2.1 Publicity given to the Proposal

The Commission brought out a Public Notice on January 17, 2004 indicating the salient features of the Petitions for FY 2004-05, and to invite responses from the consumers and other stakeholders on the Petitions submitted by TRANSCO, IPGCL, PPCL, NDPL, BRPL and BYPL in accordance with the provisions of the Delhi Electricity Regulatory Commission Comprehensive (Conduct of Business) Regulations, 2001. The Public Notice was published in several dailies such as:

- The Hindustan Times, The Times of India, and The Economic Times in English;
- Punjab Kesri, Navbharat Times, in Hindi; and
- Daily 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 January 19, 2004 onwards, between 11 a.m. to 4 p.m. on payment of Rs. 100/-. The Notice specified the deadline of February 17, 2004 for the receipt of responses/objections from the stakeholders. The complete copy of the Petitions was also put up on the website of the Commission, as well as that of the Petitioners.

The Commission also published a Public Notice on February 14, 2004 requesting public response on the issues related to Tariff Rationalisation. The Public Notice indicated salient features of the suggestions made by the three DISCOMs on Tariff Rationalisation issues and other Tariff Rationalisation measures considered by the Commission. A copy of the Public Notice in English and Hindi soliciting comments on rationalisation of tariff and extension of time for submission of objections/suggestions is attached as Annexure 2b-1, 2b-2.

1.3.3 Public Hearing

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

The Petitioner filed its responses to the comments/objections of the stakeholders by March 10, 2004. The Commission conducted the Public Hearings on the April 7, 8 and 10, 2004. 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 Public Hearing process is attached with this Order as Annexure 3b. The entire proceeding was split across five different sessions catering to distinct groups of stakeholders as given in Table 1.4.

Table 1.4: Dates of Public Hearing

Date	Category
April 7, 2004 (Two Sessions)	Industrial Consumers and Associations
April 8, 2004 (Two Sessions)	Domestic, Co-operative Societies, NGO's and Commercial
April 10, 2004	Government Departments and Utilities

1.3.4 Post admission interactions

1.3.4.1 Discussions during technical sessions and presentation by the Petitioner

After admission of the ARR Petition, the Commission held further technical sessions with the concerned staff of the Petitioner to seek additional information and clarifications. Subsequently, a meeting was held on March 11, 2004 to seek clarifications and additional information such as details of actual expenses and revenue upto January 31, 2004 and status of capital expenditure including scheme wise details . During the meeting, the Commission directed the Petitioner to submit the information by March 5, 2004. Subsequently, on April 12, 2004 the Commission directed the Petitioner to submit the Provisional Accounts for FY 2003-04 along with actual expenses and revenue and status of capital expenditure for FY 2003-04. Further on April 22, 2004, the Commission directed the Petitioner to get the study conducted on the load forecast of the power system in Delhi by CEA.

The Commission also held a joint meeting with the top management of TRANSCO and DISCOMs on April 28, 2004. During the meeting, it was agreed that it is essential to adopt an integrated and co-ordinated approach between the TRANSCO and three DISCOMs for a pragmatic Capital Investment Plan. It was also discussed that proper coordination is required between TRANSCO and DISCOMs for energy input and load growth projections. Subsequent to the meeting, the TRANSCO and DISCOMs were directed to submit the Revised Capital Expenditure Plan for FY 2004-05 including means of finance, cost benefit analysis and preparedness to execute these works and the revised energy input projections.

1.3.4.2 Petitioner's responses to queries raised by the Commission

On February 19, 2004, the Petitioner made a presentation to the Commission on the status of the Capital Investments proposed by the Company in its Petition for FY 2004-05. The responses to some of the queries raised were submitted on April 27, 2004. Subsequently, on May 27, 2004, the Petitioner submitted various information as discussed during the technical session held on May 25, 2004.

1.3.4.3 Visits by the Commission

In addition to the interactions with the Petitioner in the Commission's office, the Commission also undertook visits to the Petitioner's area on February 28, 2004 at some select locations to review the physical progress of the Capital Works and Repairs and Maintenance works. The findings of the visit to Petitioner's area are discussed in Section 3 of the Order.

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

1.4 Summary of the Petition

The Petitioner has estimated the Annual Revenue Requirement (ARR) for FY 2004-05 at Rs. 1853 Crore. The Petitioner, while estimating the ARR for FY 2004-05, in addition to the revenue gap for FY 2004-05 has also included certain elements of difference in expenses and revenue for FY 2002-03 and FY 2003-04 under the truing up mechanism. The total amount of truing up included in the ARR for FY 2004-05 is of the order of Rs. 641 Crore. A snapshot of the ARR and revenue gap at existing tariffs is provided in the Table 1.5.

Table 1.5 Summary of ARR of the Petitioner

Rs. Crore

Item	FY 2004-05
Power Purchase cost	5618
Expenditure other than Power Purchase Cost	797
Reasonable Return	62
Annual Revenue Requirement	***6477***
Less: Non Tariff Income	76
Aggregate Revenue Requirement (ARR)	***6401***
Less: Revenue at existing BST	3456
Revenue Gap Including Revenue gap for 2003-04	***2945***

1.5 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 summary of the Petition, the second Chapter gives a detailed account of responses from stakeholders, Petitioner's comments and Commission's views on the responses. Chapter 3 discusses the Annual Revenue Requirement. While Chapter 4 focuses on the Tariff Philosophy and determination of Bulk Supply Tariff. Chapter 5 reviews the Directives issued to the Petitioner in the Commission's Order dated June 26, 2003 on the ARR and Bulk Supply Tariff Petition filed by TRANSCO for FY 2004-05 and also lists down the new directives issued in this Order.

2. Response from Stakeholders

The issues relevant to the said Petition have been dealt with in the following paragraphs:

These objections/responses mainly relate to Procedural Issues, Quality of Filing, Privatisation Policy and Reform Process, Policy Directions issued by the Government of NCT of Delhi, ARR and Revenue Gap, Rationalization of Tariffs, Conditions of Supply, etc.

2.1 Quality of Filing and Additional Information

2.1.1 Objections

Mr. Rajan Gupta has submitted that the Petitioner has filed incomplete, non-transparent and non-reliable estimates in the Petition. It has requested the Commission to obtain additional data from the Petitioner. The additional data asked for further scrutiny is as follows:

- Copy of Minutes of Meeting and Resolutions of the Board of Directors approving the Annual Revenue Requirements of the Petitioner for FY 2004-05
- Copy of the report of the Commission with regard to actual verification of the details and data of all the Petitioner and the methodology followed by the Commission towards actual verification of the data
- Copy of the Commission's approval for implementing VRS

Mr. Rajan Gupta has also asked for additional time to submit responses based on compliance by the Petitioners to the above issues.

India Defence Foundation has stated that the information and data provided by the Generation, Transmission and Distribution Licensees is not adequate to evaluate whether these Licensees are properly discharging their public duties and are alive to their responsibilities. The objector has requested the Commission to consider involving C&AG for the test audit to determine causes and responsibilities for any lapses in the systems of these Licensees. The objector has further requested that the state of affairs during erstwhile DVB days and status of improvement achieved after the privatisation should be shared with the public. It has further suggested that the Commission, before entertaining any claim for increase in Tariff or any projection of loss in revenue, or excessive expenditure, may compare the Business Plan of the Licensees with the projections made in the Business Plan at the time of privatisation.

India Defence Foundation has suggested that the following comparative data should be obtained to evaluate the performance of the Licensees:

- Break up of expenditure per consumer
- Labour and management share of the output of the Utility

- Ratio and magnitude of direct labour to management staff including indirect labour, ratio of labour cost to management cost including advertisements and publicity
- Capital to Output ratio, Output to Investment ratio, Labour to Output ratio, Labour to Capital ratio
- Ratio of expenditure incurred in Indian Rupees to that incurred in foreign currency

Joint Committee of Residents Welfare Associations of Pitampura has opined that there is lack of transparency in the accounts.

Mr. Anil Sood, Chetna has stated during the public hearing process, that the data provided by the Petitioner conceals more than it reveals and has requested the Commission to protect the consumers and direct the Petitioner to provide more information. The specific areas, which are mentioned by the Objector, are as follows:

- The Petitioner has not made available the Fixed Asset Register, despite being given sufficient time by the Commission. The Petitioner has not disclosed the details relating to equipment in stores, and the detailed list of assets do not match the specifications, and in many cases assets have been erected only on paper and do not exist on the ground.

2.1.2 Response of the Petitioner

The Petitioner has stated that it has submitted the copies of the relevant Minutes of Meeting and Board Resolutions approving the Annual Revenue Requirements of the Petitioner for FY 2004-05.

The Petitioner has stated that it has taken utmost care to ensure that all the information asked by the Commission has been furnished in the desired Formats. The Petitioner has mentioned that the audited Accounts for FY 2002-03 have already been submitted to the Commission. The Petitioner has confirmed that it has submitted the Fixed Asset Register on March 18, 2003.

2.2 Privatisation Policy and Reform Process

2.2.1 Objections

Some respondents have objected to the privatisation model and related parameters adopted by the Government of NCT of Delhi (GNCTD).

Mr. S. K. Aggarwal has stated that the Revenue Gap of Rs. 4,527 Crore includes the Reasonable Return of Rs. 368 Crore claimed by Delhi Transco Limited (TRANSCO) and the Distribution Companies.

Delhi Power Consumers' Guild has expressed its concerns that power sector reforms in Delhi are failing because they are based on the incorrect philosophy that all losses of the power Utilities are due to theft of power by consumers. They have further mentioned that their study has revealed that the real cause is not the theft by consumers but subversion of the power supply system by the internal forces themselves or administrative lapses. They have requested for modification of the current reform processes in accordance with the ground realities so that it can serve some useful purpose.

India Defence Foundation has expressed its displeasure with the state of affairs post privatisation and has stated that the Licensees have not been ensuring any quality of service or guaranteeing efficient usage of resources or undertaking any cost cutting, except in reduction of manpower engaged in operation and maintenance. It has further stated that the Licensees have been supplying interrupted power supply repeatedly and have not yet succeeded in developing properly functioning complaint handling systems and have been imposing heavy financial burdens on the consumer, who have no means of getting any corrective action or relief. In the rejoinder submitted before the Commission, the Foundation has highlighted the issue of lack of coordination between DISCOMs and TRANSCO and has mentioned inspite of power availability, less power is being drawn from the grid thus resulting in power cuts. Mr. Arun Kumar Dutta stated that a PIL has been filed on restructuring and privatisation of Power Distribution Function in Delhi and the matter is subjudice with the Hon'ble High Court and hence the ARR Petitions should not be processed till the Hon'ble Courts dispose off the matter.

"Energywatch" has argued that the Policy Directions of the GNCTD have brought in an unhealthy practice by introducing the AT&C concept which violates the provisions of the ERC Act, 1998, and has suggested that the Commission while deciding the Tariffs in accordance with the Policy Directions, should also compute the extra burden required for following the Policy Directions and the GNCTD should be made to pay this amount prior to implementation of the Tariff Order.

2.2.2 Response of the Petitioner

The Petitioner has stated that since the Policy Directions have been issued by GNCTD on the basis of which the restructuring of the erstwhile DVB and privatisation of DISCOMs was done, the Petitioner has no comments to offer at this stage.

2.3 Compliance with the Directives of the Commission

2.3.1 Objections

Mr. V. K. Gupta, Municipal Counsellor, MCD has requested the Commission to disapprove the ARR Petitions in absence of the compliance of the Directives issued vide previous Tariff Orders.

Mr. Vijay Kumar Gupta, during the public hearing process, requested the Commission that any directions given by the Commission in the last Tariff Order and not yet complied by the Petitioners should be dealt strongly and the Commission might levy some fines and penalties to enforce compliance with directives. He further added that the ARRs of the companies should not be admitted till they comply with all the directives issued in the last Order.

Chetna has pointed out that the Petitioner has not finalised any scheme relating to power consumption by erstwhile DVB employees, as directed by the Commission. They have prayed to the Commission to consider levying penalty on the Petitioner for non-compliance of the above directive.

2.3.2 Response of the Petitioner

The Petitioner has stated that the matter related to tariff for consumption of power by the employees of erstwhile DVB is under consideration.

2.4 ARR and Revenue Gap

2.4.1 Objections

The major objection under this head relates to authentication of actual revenue and expenditure, restricting wasteful expenditure of the Companies, detailed examination of the accounts of the Petitioner by the Commission, establishing prudence, etc.

"Energywatch" has argued that the Commission should not accept the expenses as mentioned in the audited accounts of the Petitioner, but should determine the ARR and Tariffs on the basis of "properly incurred expenditure", and should be guided by Section 28 of Delhi Electricity Reform Act, 2000 and Section 29 of ERC Act, 1998, in this regard. "Energywatch" has quoted from the Supreme Court judgement in this regard (SLP Nos. CC 6293/02 & CC 6307/02).

PHD Chamber of Commerce and Industry, Mr. Vijay K. Gupta have requested the Commission to conduct due diligence of the costs claimed by the Petitioners to ensure strict compliance with the Commission's previous Orders and rework the revenue gap before considering any increase in either BST or RST for FY 2004-05.

2.4.2 Response of the Petitioner

The Petitioner has replied that the amount of revenue assistance was determined by the GNCTD based on certain assumptions to bridge the gap between the amount realisable by the Petitioner in the form of Bulk Supply Tariff for the sale of power to DISCOMs and the funds requirement of the Petitioner for meeting its obligations including power purchase costs. Further, the revenue gap is being determined based on the Bulk Supply Tariff fixed by the Commission. The determination of the Bulk Supply Tariff and Retail Supply Tariff is the prerogative of the Commission and the Petitioner has requested the Commission to fix the Bulk Supply Tariff so that there is no revenue gap.

2.5 Power Purchase Expenses

2.5.1 Objections

PHD Chamber of Commerce and Industry has requested the Commission to ensure that the various DISCOMs, NDMC and MES make available their estimated energy requirements to Delhi Transco Limited well in time to enable it to plan procurement of sufficient power to meet the power requirements of Delhi fully.

Mr. S. K. Aggarwal has stated that the Energy sales as projected by the TRANSCO to the three DISCOMs (20,405 MU), does not tally with the energy requirement indicated by the three Distribution Companies (18,357 MU). This indicates that the assessment of energy sales by TRANSCO is higher by about 2,000 MU over the assessment of the Distribution Companies, and this variance could impact the energy procurement and revenues of TRANSCO. Mr. S. K. Aggarwal and PHD Chamber of Commerce and Industry have requested the Commission to duly coordinate the estimates amongst these Petitioners to reflect the ground realities. Mr. Sahni, PHD Chamber of Commerce and Industry requested the Commission during public hearing to go into the details of the power purchase costs to ensure that the power purchase costs are minimized.

2.5.2 Response of the Petitioner

The Petitioner has replied that it is obliged to procure all the power generated by IPGCL and PPCL at the rates determined by the Commission. Power purchase cost is a major expense for the Petitioner and the Commission allows all other expenses on the basis of prudence. The Petitioner has stated that the overall losses in its system are to the tune of 2-3% only. The Petitioner has further clarified that it takes all necessary steps to ensure that the power is procured at minimum possible costs.

2.6 Depreciation charges

2.6.1 Objections

Mr. Vijay K. Gupta, in his objections submitted to the Commission and also during the public hearing process has suggested that depreciation should be excluded from expenditure for the purpose of ARR. He has also suggested that depreciation approved in the past Tariff Orders should be disallowed. Alternatively, he has suggested that the effect of any change in valuation of the assets after revaluation should be charged at the end of the Reform Period i.e. FY 2006-07 either to the tariff or to the account of the Holding Company.

PHD Chamber of Commerce and Industry has requested the Commission to adopt the depreciation rate indicated by the CERC in its Draft Regulations on Terms & Conditions for Tariff Fixation for the purposes of assessing depreciation expense to maintain uniformity in approach.

Mr. Arun Kr. Dutta, during the public hearing, stated that the Petitioner in its ARR filing has charged depreciation at a rate of 7.25% instead of 3.75%, the rate approved by the Commission in its Order on ARR for FY 2003-04. He requested the Commission to look into this matter and reduce the burden on the consumers.

2.6.2 Response of the Petitioner

The Petitioner has stated that the depreciation rates considered in the Petition are based on rates as approved by the Commission in the Bulk Supply Tariff Order dated February 22, 2002. The Petitioner has requested the Commission to take a view based on existing norms.

2.7 Investments

2.7.1 Objections

The majority of objections under this head relate to analyses of proposed investments and checking prudence thereof.

PHD Chamber of Commerce and Industry has requested the Commission to examine the details of projected capital expenditure including the sources of funds, the equipment for which the orders have been placed, expected delivery of the equipment and installation thereof, while approving the proposed capital expenditure for the year. It has also requested the Commission to monitor the progress of implementation of augmentation/strengthening of the EHV system periodically to ensure proper power supply capacity of the EHV system.

2.7.2 Response of the Petitioner

The Petitioner has stated that it has no comments to offer in this regard.

2.8 Employee Expenses

2.8.1 Objections

The Senior Citizens Forum has requested the Commission to critically examine whether the claimed revenue expenditure is necessary and to ensure that the Petitioner has undertaken adequate measures to reduce wasteful expenditure, improve productivity of labour and staff. While the objector has recognized that the Petitioner has inherited an inefficient and oversized organization from erstwhile DVB, it has requested the Commission to ensure that the consumers are not made to pay for the failure of the Petitioner to improve productivity and efficiency.

2.8.2 Response of the Petitioner

The Petitioner has not put forward any response in this regard.

2.9 Other Expenses

2.9.1 Objections

Mr. S. K. Aggarwal has commended the Commission on the due diligence conducted on various expense heads to ascertain the admissibility of the expenses in the previous Order and has requested the Commission to conduct due diligence on similar lines for the expenses claimed by the Petitioner.

Mr. S. K. Aggarwal has requested the Commission to direct the Petitioner to file the variance statements for each expense head indicating the expense as indicated by the Commission, the estimate of the Petitioner and the reasons for the variations, to enable the Commission to look into the admissibility of the revised expenses.

Mr. J.P Gupta, during the public hearing process stated that the Petitioners have projected higher level of expenses only to justify the request for increase in tariffs and to claim further subsidy from the Government. He requested the Commission to look into the admissibility of any such expenses and spare the consumers from any tariff increases due to higher expenses projected by the Petitioner.

2.9.1.1 Interest on Long Term Loans/Interest on Security Deposit

Mr. V. K. Gupta, Municipal Counsellor, MCD has mentioned that no interest charge has been shown by the Petitioner against the loan of Rs. 3450 Crore as sanctioned by the GNCTD. This amount is meant to be a loan and the interest should be included in the ARR.

2.9.2 Response of the Petitioner

The Petitioner has stated that the expenses other than power purchase, including reasonable return, constitutes about 3.7% of the ARR, which is very reasonable and should not be considered very high. The Petitioner has also clarified that the expenses prior to unbundling were only notional, as the Company was not a functional entity during that period, and direct comparison of past period with current operations is not possible.

The Petitioner has stated that the terms and conditions regarding the repayment of loan would be settled with the GNCTD.

2.10 Truing up

2.10.1 Objections

Mr. Rajan Gupta has suggested to the Commission that the truing up should be done on actuals and based on prudence checks, as per the earlier Orders. Since the current Petition is based on the revised estimates and not on actuals for FY 2003-04, the Commission should not allow truing up of these expenses.

2.10.2 Response of the Petitioner

The petitioner has not filed any response before the Commission on the above-said matter.

2.11 Return on Capital Base/Equity

2.11.1 Objections

PHD Chamber of Commerce and Industry and Mr. S. K. Aggarwal have requested the Commission to look into the basis of calculating the Return claimed by the Petitioner. PHD Chamber of Commerce & Industry also suggested reduction in rate of return on equity for the DISCOMs to less than 16% on account of reduction in interest rates in the market. Senior Citizens Welfare Association has requested the Commission to reconsider the 16% guaranteed returns provided to the Petitioner, since there are no discernible efficiency improvements shown by the Petitioners.

"Energywatch" has argued that the 16% returns is not sacrosanct and has requested the Commission to also consider other factors like, interest of consumers, efficiency, economic use of resources and good performance, which are mentioned in Section 29 of ERC Act, 1998 and Section 28 of Delhi Reforms Act, 2000.

Mayurdhwaj Residents Welfare Association has requested the Commission to reduce the ROE to 10% and abolish all other subsidies and grants.

Northern Railways have suggested that the Commission may review the rate of 16% return on equity in view of the general inflation rates of consumable commodities.

2.11.2 Response of the Petitioner

The Petitioner has stated that the fixation of rate of return is done by the Commission as per the statutory provisions.

2.12 . Demand Estimation

2.12.1 Objections

PHD Chamber of Commerce and Industry has requested the Commission to look into the assumptions of demand growth for FY 2004-05..

2.12.2 Response of the Petitioner

The Petitioner has replied that it had projected the energy requirement based on the past trends. The Petitioner has further added that its demand forecast for FY 2003-04 up to February 2004 has almost matched the actual energy drawl by the DISCOMs.

2.13 Other Suggestions

2.13.1 Objections

Mr. V.P. Gupta, Bhartiya Janta Party, Delhi Pradesh (Industrial Cell) suggested that the energy charges should be reduced for higher consumption levels to encourage honest consumers.

Chetna has submitted that the website of Petitioners should be updated on a regular periodic basis.

Mr. Bhupendra has suggested that the Tariff should be based only on two factors, Supply Voltage and Time of Day.

2.13.2 Response of the Petitioner

The Petitioner has not filed any response in this regard.

2.14 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 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 is in the process of developing and installing a Regulatory Information Management System (RIMS). The Commission is in the process of finalising a Consultant for developing the RIMS. The RIMS aims at building an MIS with pre-defined information formats, accessible to the Utilities through the Internet for periodic updates. 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 framework established by the Policy Directions 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.

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 in the Tariff Schedule. The Commission also introduced kVAh billing for high voltage consumers to encourage them to improve their power factor. The Commission in its Tariff Order of June 26, 2003 on the ARR and Tariff Petitions of Transmission Company and three Distribution Companies attempted to rationalise the tariffs and made certain changes in the tariff structure to simplify the structure in response to the representations made by various respondents during the process.

In addition to the above changes in the tariff structure, the Commission in its Order dated June 26, 2003 gave several directives to the Petitioners with the objective of rationalising the tariff structure.

In the present Order, apart from bringing tariffs for the subsidized consumers closer to the average cost of supply, the Commission has made further changes in the tariff structure to encourage consumption efficiency and to simplify the existing structure in response to the representations 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.

2.14.1 Procedural Issues

2.14.1.1 Filing of ARR Petitions

The original Petition was filed by the Petitioner on December 2, 2003. The Commission conducted technical sessions with the Petitioner and highlighted the basic data gaps/deficiencies in the Petition, which were required to be rectified before the admission of the Petition. The Petitioner complied with the Commission's directives and submitted the requisite information required for the admission of the Petition on January 14, 2004. The Commission examined the Petition and the subsequent information submitted by the Petitioner and found that the Petition filed (along with additional information) by the Petitioner is in line with the ARR and Tariff Guidelines issued by the Commission. Thereafter, the Commission admitted the Petition for further processing on January 16, 2004.

2.14.2 Quality of Filing and Additional Information

2.14.2.1 Adequacy of information

As regards the adequacy of information, the Commission would like to bring to the notice of the stakeholders that substantial data/information has been submitted by 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 investment related data for FY 2003-04 from the Petitioners.

The Commission is of the opinion that considering the substantial volume of data/information obtained from the Petitioners by the Commission during the processing of the Petitions, it is not feasible to provide a copy of the entire data/information to the Public along with the ARR Petition. Moreover, as specified in the Regulations of the Commission, any stakeholder can see the data by visiting the Commission's office and following due procedure for access to such data.

As regards the suggestion of providing copy of the Report of the Commission on the methodology followed by the Commission towards actual verification of the data, to the objector, the methodology followed by the Commission for scrutinizing each and every element of the ARR has been deliberated in detail in Chapter 3 of the Order.

As mentioned in Chapter 1 of this Order, the Commission's staff also undertook field visits in the Petitioner's license 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 verify the submissions of the Petitioner for FY 2003-04 and to make realistic projections for FY 2004-05.

2.14.2.2 Time provided to stakeholders for response

The Commission is of the opinion that 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 January 17, 2004 and the last date of submission of objections/comments was further extended from February 17, 2004 to February 27, 2004.

2.14.2.3 Audited accounts and Fixed Asset Register

As regard to submission of audited accounts, the Petitioner has submitted the audited accounts for the previous year FY 2002-03 (July 2002 to March 2003). As regards the Fixed Asset Register, the Petitioner submitted the Fixed Asset Register along with valuation report in the month of March 18, 2004 during the ARR and Tariff Process for FY 2004-05.

2.14.3 Policy Directions and reform process

The Policy formulated and Directions issued thereto by the Government in exercise of its powers under section 12 of the Delhi Electricity Reform Act, 2000 are binding on the Commission. The Commission, therefore, does not have any further views in the matter. Furthermore, this aspect has been discussed and addressed in the Commission's Order on Bulk Supply Tariff and opening level of AT&C losses issued on February 22, 2002.

As regards improvement in the service quality, post restructuring and privatisation, the Commission would like to clarify that it monitors the performance of the Licensees on a regular basis with the objective of improving the quality of service and the Commission has issued several regulations namely Performance Standards (Metering and Billing) Regulations, Complaint Handling Procedure, Schedule of Miscellaneous charges, to provide the consumers with an opportunity to register their views in the matter.

2.14.4 Compliance with Directives

The Commission would like to inform the respondents that it monitors the Petitioners' compliance with the directives at periodic intervals. The status and details of compliance by the Petitioner on the directives issued vide the Commission's Order dated June 26, 2003 has been elaborated in Chapter 5 of the Order. The Commission in this Order has also issued some new directives, which are also discussed in Chapter 5 of this Order.

2.14.5 ARR and Revenue Gap

2.14.5.1 Scrutiny of expenditure and revenue components

The Commission would like to clarify that it has critically examined all the elements of expenditure and revenue, and has not accepted the actual expenses as per the audited accounts of the Petitioner. The Commission has considered the prudence of expenditure projected by the Utilities, the actual expenditure in FY 2003-04, as well as the committed Government support, while determining the revenue requirement. Detailed analysis of all the expenditure and the revenue components for their prudence, and the methodology of projection adopted by the Commission, has been provided in the relevant sections of Chapters 3.

2.14.6 Power Purchase Expenses

As regards the suggestion of PHD Chamber of Commerce and Industry regarding co-ordination between TRANSCO and DISCOMs for proper planning and estimation of the energy requirement, to enable procurement of adequate power, the Commission would like to clarify that during the ARR process, it arranged a joint meeting with TRANSCO and DISCOMs and directed them to co-ordinate with each other, on aspects related to the Capital Investment Plan and total energy requirement. Subsequently, the TRANSCO after discussions with the DISCOMs, submitted the total estimated energy requirement for FY 2004-05, which has been considered by the Commission.

As regards the objection that the total energy requirement of DISCOMs has not shown much growth despite the increase in demand, the Commission agrees with the response of the Petitioner that the additional energy required to meet the increase in demand is met by reduction in losses and hence no increase in energy input has been estimated despite increase in the demand.

2.14.7 Depreciation charges

The Commission has deliberated on this issue in detail in its Orders on ARR and Tariff Determination for FY 2002-03 and FY 2003-04. The Commission has adopted a very rational approach in this regard and has allowed depreciation on the basis of the straight-line method of depreciation linked to useful life of the assets. Further, the Commission, in its previous Orders, has deliberated on the utilisation of amount available through depreciation for meeting the loan repayment liability, the working capital requirement and capital investments in the order of priority. The extent of depreciation allowed by the Commission and its utilisation has been discussed in detail in Chapter 3 of the Order.

2.14.8 Investments

The Commission has held detailed discussions with the TRANSCO and scrutinized the investments already made as well as the investments proposed to be made by them. The Commission has also conducted sample checks on the physical progress of investments and completion status thereof by conducting field visits.

The Commission has obtained the details with respect to scheme-wise investment proposed by the Petitioner, details of actual investments undertaken during FY 2003-04, the Petitioner's preparedness for executing the works proposed under the capital investments and the arrangement of means of finance for FY 2004-05. The Commission has taken into account these details while determining the capital investments for the purpose of determination of the Annual Revenue Requirement (ARR) as detailed out in Chapter 3 of the Order.

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

2.14.9 Employee Expenses

The Commission has critically examined the employee expenses projected by the Petitioner and the actual employee expenses for FY 2003-04, while estimating the employee expenses for FY 2004-05.

The total employee expenses allowed by the Commission has been discussed in detail in Chapter 3 of the Order.

2.14.10 Other Expenses

The Commission has carried out detailed due diligence and critically examined all the components of other expenses projected by the Petitioner and the actual other expenses in FY 2003-04 while approving the other expenses. The details of other expenses have been deliberated in Chapter 3 of the Order.

2.14.11 A&G Expenses

The Commission has carried out detailed due diligence and critically examined the A&G expenses projected by the Petitioner and the actual A&G expenses for FY 2003-04 while approving the A&G expenses. The details of A&G expenses have been deliberated upon in Chapter 3 of the Order.

2.14.12 Return on Equity

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 returns are calculated based on the reasonable return provisions of Sixth Schedule to the Electricity Supply Act, 1948 as these provisions are applicable for TRANSCO.

2.14.13 *Truing Up*

The Commission has obtained the actual expenses, sales and revenue data for FY 2003-04 from the Petitioner, and the truing up for FY 2003-04 has been done based on actual data for FY 2003-04 subject to prudence check by the Commission.

2.14.14 *Sales and Demand Estimation*

The Commission has undertaken a detailed analysis of the energy requirement of each DISCOM 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 TRANSCO has been in Chapter 3 of Order. The Commission has projected the demand and energy input requirement of each DISCOM for FY 2004-05 considering the actual category-wise sales during the year FY 2003-04, and the extent of total load shedding undertaken during FY 2003-04.

The Commission has obtained the details of the actual energy purchased by TRANSCO from various sources and the total energy sold to DISCOMs and the Licensees during FY 2003-04. The details of actual transmission losses for FY 2003-04 and energy balancing for the year has been detailed out in Chapter 3 of the Order.

3. Analysis of Annual Revenue Requirement

3.1 Introduction

Section 28 (5) of the 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, 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 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.

The Petitioner filed the ARR and Tariff Petition for nine months of FY 2002-03 (July 2002 to March 2003) and FY 2003-04, during November and December 2002 respectively. The Commission after detailed scrutiny of the Petitions and after due public process, issued the Order on the ARR Petition for FY 2002-03 and FY 2003-04 on June 26, 2003. In this Order, the Commission approved the elements and revenue for FY 2002-03 considering the Provisional Accounts submitted by the Petitioner. For FY 2003-04, the Commission estimated the various components of ARR and the detailed methodology for estimating each element of ARR has been deliberated in the Order.

The Commission in its Order issued on June 26, 2003 has proposed the truing up mechanism, under which the Commission has proposed to take up truing-up of the ARR and revenue figures considered in the Order with the actual ARR and revenue after determining the prudence of each component of ARR and Revenues.

The Petitioner in its Petition for FY 2004-05 has submitted the revised estimates for FY 2003-04 and requested the Commission to true up the ARR and revenue based on the revised estimates.

The Commission has considered various submissions made by the Petitioner over the course of the ARR and tariff determination process and has carefully analysed the different heads of expenditure to true up the ARR for FY 2003-04 and to project the realistic level of allowable expenditure during FY 2004 –05. The process of ARR determination for FY 2004-05 got extended beyond March 31, 2004, and therefore the Commission obtained the details of actual expenses and revenue for FY

2003-04. As the actual details of expenses and revenue for FY 03-04 are available, the Commission has trued up all the elements of ARR based on the actual expenses and income of TRANSCO after ensuring that the expenses satisfy the test of reasonable prudence.

Typically, the Annual Revenue Requirement of the transmission licensee consists of the following major items: -

a) Power Purchase Cost

b) Expenses: -

- Employee expenses
- Administrative and general expenses
- Repairs and maintenance expenses
- Interest expenditure
- Depreciation

c) Return on Equity

d) Taxes on Income

e) Non Tariff Income

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

3.2 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.

The Commission during the technical validation sessions has directed TRANSCO to submit the actual power purchase from all the sources and the power purchase cost for FY 2003-04. The Commission while approving the power purchase and power purchase cost has duly considered the actual details submitted by the TRANSCO.

3.2.1 Sources of Power

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

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

The power purchase agreements (PPAs) entered by DVB with Central Generating Stations and Badarpur TPS got transferred to TRANSCO as a successor entity. TRANSCO also purchases power from IPGCL, PPCL, PTC and other sources.

The actual energy purchased from various sources during FY 2003-04 and availability of energy for the year 2004-05 is discussed below.

3.2.2 Power Purchase from GENCO and PPCL Stations

Petitioners Submission

The TRANSCO in its Petition has estimated the revised power purchase for FY 2003-04 considering the actual energy purchased from April to September 2003 and by estimating the energy purchase from Oct 2003 to March 2004. TRANSCO submitted that the GENCO and PPCL have provided estimated availability for their stations based on certain parameters and maintenance schedules. Considering the availability provided by GENCO and PPCL, the Petitioner has estimated the power purchase from these sources during FY 2004-05.

Commission's Analysis

The Commission in its previous Order on ARR Petition of TRANSCO for FY 2003-04 issued on June 26, 2003 has examined the details of generation, operational parameters and Fixed Cost for GENCO and PPCL stations. However, during FY 2004-05, the GENCO and PPCL have separately submitted their ARR and Tariff Petitions under the Electricity Act 2003. The Commission has examined the ARR and Tariff Petitions of GENCO and PPCL and has approved the generation from these stations and the fixed and variable costs in the Order issued on ARR and Tariff Petitions of GENCO and PPCL.

Further, the TRANSCO has also submitted the Draft Power Purchase Agreement between TRANSCO and GENCO and between TRANSCO and PPCL for the approval of the Commission. The Commission is in the process of examining draft PPAs and will issue the Order on approval of these PPAs separately.

For FY 2003-04, the Commission has obtained the details of actual power purchase from GENCO and PPCL and has considered the same. For FY 2004-05, the Commission has considered the power purchase from these sources based on the generation targets approved by CEA. The Power Purchase cost for FY 2003-04 and FY 2004-05 for these stations has been approved by the Commission in the Order on ARR and Tariff Petitions filed by GENCO and PPCL respectively.

Power Purchase from GENCO and PPCL

Based on the above said orders to GENCO and PPCL, the summary of power purchase and total cost of power purchase from GENCO and PPCL as estimated in the Petition and as approved by the Commission is summarised in Table 3.1and 3.2 given below:

Table:3.1Power Purchase from GENCO stations

Description	FY 2003-04			FY 2004-05	
	Order for FY 2003-04	Rev. Est. (Petition)	Commission	Petition	Commission
Units Purchased (MU)	2264	2030	2360	2410	2369
Total Cost (Rs. Crore)	443.51	432	484	533	514
Cost per unit (Rs/kwh)	1.96	2.13	2.05	2.21	2.17

Table:3.2 Cost of Power Purchase from PPCL

Description	FY 2003-04			FY 2004-05	
	Order for FY 2003-04	Rev. Est. (Petition)	Commission	Petition	Commission
Units Purchased (MU)	1938	2065	2194	1994	2134
Total Cost (Rs. Crore)	464	516	462	528	472
Cost per unit (Rs/kwh)	2.39	2.50	2.10	2.65	2.21

3.2.3 Badarpur Thermal Power Station (BTPS)

3.2.3.1 Petitioner's Submission

In its Petition, TRANSCO for FY 2003-04 has projected a revised quantum of power purchase from BTPS. It has projected a purchase of 4546 MU at rate of 227 paise/kWh as against the Commission's approval of 4695 MU at 232 paise/kWh. For FY 2004-05, TRANSCO has estimated purchase of 4566 MU (PLF of 73%) from BTPS and has estimated the power purchase cost considering the composite power purchase rate of 241paise/kwh.

3.2.3.2 Commission's Analysis

The cost of Badarpur Station is governed by the formula notified by GoI. Accordingly for FY 2003-04 the Commission has gone by the actual power purchase and the cost of power purchase. For FY

2004-05, the Commission has estimated the power purchase based on generation targets approved by CEA. For estimating power purchase cost for FY 2004-05, the Commission has considered an increase of 4% on the actual power purchase rate for FY 2003-04. 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 3.3 given below:

Table:3.3 Cost of Power Purchase from Badarpur Station

Description	FY 2003-04			FY 2004-05	
	Order for FY 2003-04	Rev. Est. (Petition)	Commission	Petition	Commission
Units Purchased (MU)	4695	4546	4903	4566	4566
Total Cost (Rs. Crore)	1087	1030	1114	1102	1078
Cost per unit (Rs/kWh)	2.32	2.27	2.27	2.41	2.36

3.2.4 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.

3.2.4.1 Energy Purchased during FY 2003-04

In the Petition, TRANSCO has estimated the energy purchase from the Central Generating Stations considering the actual energy purchased from April to September 2003 and by estimating the energy purchase from Oct 2003 to March 2004 based on past trends.

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 FY 2003-04. Subsequently, TRANSCO submitted these details to the Commission. The actual energy purchased from CGS during FY 2003-04 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 FY 2003-04 is provided in the Table 3.4 given below:

Table:3.4 Energy Purchase from Central Generating Stations for FY 2003-04

(in MU)

Sl. No.	Station	Rev. Est. for FY 2003-04	Commission
I	**NTPC**		
1	Singrauli	1484	1531
2	Anta	447	308
3	Rihand	954	947
4	Auriya	552	407
5	Dadri (Gas)	535	489
6	Unchahar – I	210	190
7	Unchahar – II	423	414
8	Dadri (thermal)	4634	5024
9	Farkka/ Kehelgaon	22	22
II	**NHPC**		
1	Baira – suil	76	73
2	Salal	375	396
3	Tanakpur	59	56
4	Chamera- I	192	190
5	Chamera – II	75	43
6	Uri	278	315
III	**NPC**		
1	Napp	337	373
2	Rapp B#3	202	213
3	Rapp B#4	431	433
IV	**NJPC**	614	507
	Total	**11902**	**11933**

3.2.4.2 Energy Availability for FY 2004-05

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 while estimating the energy availability for FY 2004-05 has considered the fixed allocation as well as unallocated quota in accordance with the share of Delhi as communicated by Northern Regional Electricity Board (NREB). The Petitioner has considered unallocated quota from each Station based on the weighted average unallocated quota available to Delhi during the various time periods of the year.

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 December 1, 2002, the Central Electricity Authority (CEA) has discontinued allocation of unallocated quota on time slots basis and has communicated the percentage allocation of capacity (allocated and unallocated quota) from the Central Generating Stations to TRANSCO.

The Commission has considered the firm share and the share of unallocated capacity as applicable in each Station in each of the Stations as notified by CEA for estimating the TRANSCO's effective share.

The effective share in various Central Generating Stations for FY 2004-05 as explained above is shown in the Table 3.5 given below:

Table:3.5 Effective Share of Delhi TRANSCO in Central Generating Stations

Sl. No.	Station	Capacity (MW)	Share (%)	Share (MW
I	**NTPC**			
1	Singrauli	2000	10.03%	200.60
2	Anta	419	13.03%	54.60
3	Rihand	1000	12.53%	125.30
4	Auriya	663	12.91%	85.64
5	Dadri (Gas)	830	12.15%	100.82
6	Unchahar – I	280	6.51%	18.23
7	Unchahar – II	420	13.72%	57.62
8	Dadri (thermal)	840	90.00%	756.00
II	**NHPC**			
1	Baira – suil	180	11.00%	19.80
2	Salal	690	11.62%	80.18
3	Tanakpur	94.5	12.81%	12.11
4	Chamera- I	540	7.90%	42.66
5	Chamera – II	300	25.45%	76.35

6	Uri	480	11.04%	52.99
III	**NPC**			
1	Napp	440	13.59%	59.80
2	Rapp B#3	220	15.00%	33.00
3	Rapp B#4	220	35.00%	77.00
IV	**NJPC**	1500	11.64%	174.60
	Total			**2027.29**

Generation (Plant Load Factor) and Auxiliary Consumption

Petitioner's Submission

Further, for projecting the energy availability from Central Generating Stations, the Petitioner has considered the PLF and auxiliary consumption based on estimates of PLF and auxiliary consumption as considered by the Commission for FY 2003-04 in its order on ARR Petition of TRANSCO issued on June 26, 2003. The Petitioner further submitted that the energy procurement has been estimated from least cost stations after ensuring adherence with the stipulation of minimum drawl of 70% of capacity allocated from various stations under ABT.

Commission's Analysis

The Commission has considered the generation from NTPC, NHPC and NPC stations based on the generation targets prescribed by CEA for FY 2004-05. The auxiliary consumption for each of the NTPC and NPC stations has been considered at the same level as considered by the Commission in its Order on ARR Petition for FY 2003-04. For NHPC stations, the Commission has considered the auxiliary consumption of 1% on normative basis.

The effective share of TRANSCO is applied on the Energy Sent Out to estimate the energy purchases from the respective Stations. The Table 3.6 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 2004-05 and TRANSCO's share of energy in each station.

Table:3.6 Energy Availability from Central Generating Stations for FY 2004-05

Station	Capacity (MW)	Gross Gen (MU)	ESO (MU)	DTL Share %	TRANSCO's share in ESO (MU)	
					Petition	Commission
NTPC						
Singrauli	2000	14997	14003	10.03%	1474	1404
Anta	413	2700	2645	13.03%	444	345
Rihand	1000	7604	7020	12.53%	934	880
Aurya	652	4350	4286	12.91%	552	553

Dadri Gas	817	5100	4969	12.15%	535	604
Unchahar-1	420	3149	2874	6.51%	210	187
Unchahar-2	420	3149	2870	13.72%	423	394
Dadri Thermal	840	6203	5708	90.00%	4682	5137
sub-total					**9254**	**9504**
NHPC						
Bairasul	180	749	745	11.00%	76	82
Salal	690	3100	3081	11.62%	375	358
Tanakpur	94.5	452	449	12.81%	59	58
Chamera I	540	2050	2038	7.90%	192	161
Chamera II	300	1400	1392	25.45%	382	354
Uri	480	2230	2217	11.04%	278	245
sub-total					**1362**	**1257**
NPC						
NAPP	440	2571	2321	13.59%	337	315
RAPP-3	220	1124	1017	15.00%	202	153
RAPP-4	220	1124	1017	35.00%	430	356
sub-total					**969**	**824**
NJPC	1500	6242	6205	11.64%	**1174**	**722**
Total CGS					**12759**	**12308**

3.2.4.3 Cost of Power Purchase from Central Generating Stations

The cost of power purchase from the CGS is governed by the Notifications issued by 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.

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

Petitioner's Submission

In its Petition, the TRANSCO for FY 2003-04 has estimated the power purchase cost based on actual power purchase cost for the period April to September 2003 and by estimating the power purchase cost for October 2003 to March 2004. For estimating the costs of power purchase from NTPC and NPC stations, TRANSCO has estimated the fixed costs in accordance with the fixed charges as per CERC Orders and estimated the variable cost based on the actual variable cost per unit during April to September 2003.

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 FY 2003-04. 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 for FY 2003-04.

The summary of total energy purchased, fixed costs, variable costs and total costs as considered by the Commission based on actual costs during the year are provided in Table 3.7 given below:

Table:3.7 Fixed and Variable Cost of CGS Stations for FY 2003-04

Station	Power Pur MU	Cap Chg. Rs. Crore	Energy Chg Rs. Crore	En. Chg Rs/kwh	Total Rs. Crore	Total Rs/kwh
NTPC						
Singrauli	1531	39	112	0.73	151	0.99
Anta	308	15	40	1.29	55	1.79
Rihand	947	66	67	0.71	133	1.41
Aurya	407	19	56	1.38	75	1.85
Dadri Gas	489	26	72	1.46	98	2.00
Unchahar-1	190	13	20	1.05	33	1.75
Unchahar-2	414	27	43	1.04	70	1.69
Dadri Thermal	5024	412	743	1.48	1155	2.30
ER						
Farakkha	7	1	1	0.93	1	2.00
Kahelgaon	12	2	1	1.06	3	2.47
Talcher	4	1	0	0.44	1	1.81
sub-total	**9332**	**621**	**1155**	**1.24**	**1776**	**1.90**
NHPC						
Bairasul	73	1	5	0.68	6	0.81
Salal	396	0	27	0.67	27	0.67
Tanakpur	56	2	4	0.70	6	1.09
Chamera-I	190	10	13	0.70	23	1.23
Chamera -II	43	10	0	0.00	10	2.25
Uri	315	45	21	0.67	66	2.11
sub-total	**1074**	**68**	**70**	**0.65**	**138**	**1.29**
NPC						
NAPP	373	96	0	0.00	96	2.58
RAPP 3	213	66	0	0.00	66	3.11
RAPP 4	433	138	0	0.00	138	3.18
sub-total	**1019**	300	**0**	**0.00**	**300**	**2.94**
NJPC	**507**	108	**5**	**0.11**	**113**	**2.24**
Total CGS	**11933**	**1098**	**1230**	**1.03**	**2328**	**1.95**

<u>Other Costs of CGS – Income Tax and Incentives</u>

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.

Commission's Analysis

The Commission has compared the income tax per unit per unit estimated by the Petitioner with the actual income tax. 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 Commission has estimated the incentives for NTPC stations based on the revised norms of performance as per the CERC notification.

Based on the above, the income tax and incentive as estimated by the Commission works out to Rs 136 Crore and Rs 31 Crore respectively.

3.2.4.4 Cost of Power Purchase for CGS Stations for FY 2004-05

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 and for unscheduled interchange, if any, based on the average frequency during a block of 15 minutes. The TRANSCO has estimated the fixed costs -the capacity charges as fixed by the CERC for each station and communicated by NREB/NLDC for FY 2003-04 have been adopted to arrive at the fixed costs for the CGS stations for the year 2004-05. As regard to energy charges of NTPC stations, the Petitioner has submitted that the energy charges are estimated considering the prevalent energy charges and by applying an escalation of 4% for coal based stations and 6% for gas based stations. The Petitioner has not considered any escalation in cost of energy for NHPC and NPC stations.

Commission's Analysis

For FY 2004-05, the Commission has estimated the fixed cost for the various Stations considering the fixed costs approved by the CERC and considering proportion to the share allocation of TRANSCO in the respective Stations. Further, the CERC has issued the regulations on 26th March 2004 for determining tariff of generating stations in which they revised the norms of return on equity applicable to CGS from 16% to 14% w.e.f. April 1, 2004. The exact impact of change in norm for Return on Equity cannot be estimated at this stage. However, with this change the Fixed Cost of Central Generating Stations will reduce as compared to existing fixed charges. The Commission while estimating the fixed costs of CGS has considered a reduction of 2% over the existing fixed cost in lieu of the reduction in rate for Return on Equity. Any variation in actual fixed cost will be considered in truing up. The approved fixed cost of NTPC stations, TRANSCO's effective share allocation and fixed cost considered for FY 2004-04 is summarised below in Table 3.8 given below:

Table 3.8 Fixed Cost for NTPC Stations for FY 2004-05

(Rs. Crore)

Station	Annual Fixed Charges	Effective Share	Fixed Charges for TRANSCO
	Rs. Cr.	%	Commission
NTPC			
Singrauli	357	10.03%	35.8
Anta	110	13.03%	14.3
Rihand	489	12.53%	61.3
Auryia	177	12.91%	22.8
Dadri Gas	207	12.15%	25.1
Unchahar-1	192	6.51%	12.5
Unchahar-2	181	13.72%	24.8
Dadri Thermal	449	90.00%	404.2
Total			**600.8**

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 have been estimated at 66 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 NHPC stations, Energy Charges, Capacity Charges, TRANSCO's effective share allocation and estimated fixed cost for TRANSCO for FY 2004-05 is summarised below in Table 3.9 given below:

Table 3.9 : Annual Capacity Charges for NHPC Stations:

Station	Annual Fixed Charge (Rs. Crore)	Total Energy Charge (Rs. Crore)	Total Capacity Charge (Rs. Crore)	Effective Allocation of TRANSCO	Capacity Charges for TRANSCO (Rs. Crore)
Salal	173.25	173.25	---	11.00%	0.00
Bairasul	46.86	43.23	3.63	11.62%	0.42
Tanakpur	44.67	26.09	18.58	12.81%	2.38
Chamera	209	118.32	91.00	7.90%	7.19
Uri	514	128.71	384.88	25.45%	42.49

Variable cost for CGS stations during FY 2004-05

Petitioner's Submission

The petitioner has submitted that the energy charges for the year 2004-05 are based on their recent claims in line with approval from CERC after adding an escalation of 4% for coal based and 6% for gas based stations. No escalation has been considered for NHPC and NPC stations. The cost of energy for NPC stations has been estimated as per rates notified by the Government of India. The rates are at present on single part tariff at Rs. 2.40/kWh for NAPP, Rs. 2.98/kWh for RAPP-III and Rs. 3.25/kWh for RAPP –IV.

Commission's Analysis

The Commission has analysed the variation in monthly variable costs of NTPC stations for FY 2003-04. 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 for FY 2003-04, 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 3.10 given below:

Table 3.10 Variable Costs for 2004-05 (Rs/kwh)

Station	Petition	Commission
Singrauli	0.74	0.76
Anta	1.22	1.34
Rihand	0.72	0.74
Auriya	1.32	1.44
Dadri Gas	1.67	1.52
Unchahar-1	1.12	1.10
Unchahar-2	1.11	1.09
Dadri Thermal	1.56	1.54

As elaborated in earlier section, the energy charge for NHPC stations has been estimated at 66 paise/kWh. For NPC Stations, the Commission has estimated the power purchase cost considering the rates 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 3.11 given below:

Table:3.11 Power Purchase and Power Purchase Cost from CGS for FY 2004-05

Station	**Energy Purchase (MU)**		**Total Cost (Rs. Crore)**		**Total Cost (Rs./kWh)**	
	Petition	**Commission**	**Petition**	**Commission**	**Petition**	**Commission**
NTPC						
Singrauli	1474	1404	145	142	0.99	1.01
Anta	444	345	69	61	1.54	1.76

Rihand	933	880	129	126	1.39	1.43
Auriya	552	553	96	102	1.74	1.85
Dadri Gas	535	604	119	117	2.23	1.94
Unchahar-1	210	187	39	33	1.85	1.76
Unchahar-2	423	394	85	68	2.01	1.72
Dadri Thermal	4682	5137	1145	1194	2.45	2.32
sub-total	**9254**	**9504**	**1828**	**1843**	**1.98**	**1.94**
NHPC						
Bairasul	76	82	10	6	1.26	0.71
Salal	375	358	42	24	1.13	0.66
Tanakpur	59	58	9	6	1.55	1.08
Chamera	192	161	31	18	1.60	1.11
Uri	278	245	76	59	2.74	2.40
sub-total	**1362**	**1257**	**168**	**197**	**1.24**	**1.57**
NPC						
NAPP	337	315	80	75	2.37	2.37
RAPP 3	202	153	60	43	2.98	2.80
RAPP 4	430	356	140	100	3.25	2.80
sub-total	**970**	**824**	**280**	**217**	**2.89**	**2.64**
NJPC	1173	722	305	188	2.60	2.60
Total	**12759**	**12308**	**2581**	**2446**	**2.02**	**1.99**

<u>Other Costs of CGS – Income Tax and Incentives</u>

Petitioner's Submission

The TRANSCO submitted that they have estimated the total incentive for FY 2004-05 as Rs. 30.5 Crore in line with the Commission's Order dated June 26,2003 and the income tax has been estimated based on the actual income tax for previous years.

Commission's Analysis

The Income Tax for FY 2004-05 has been estimated in accordance with the same approach as adopted for FY 2003-04 as discussed earlier. The income tax estimated by the Commission for FY 2004-05 works out to Rs 131 Crore.

The Commission has estimated the incentives for NTPC stations based on the revised norms of performance as per the CERC regulations dated March 26, 2004. As per the revised performance norms the incentive for NTPC stations is applicable @25 paise/unit for ex-bus schedule energy corresponding to schedule generation in excess of ex-bus energy corresponding to target PLF.

Considering the generation levels of NTPC stations as discussed in above sections and by applying the incentive rate as per the CERC regulation, the total incentive for NTPC stations for FY 2004-05 is estimated at Rs. 20.2 Crore.

For NHPC and Power Grid the incentives *have been estimated at 2.5paise/kwh and 0.6 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 3.12 given below:

Table:3.12 Incentive for CGS Stations for 2004-05 (Rs. Crore)

	Petition	Commission
NTPC	19.87	20.2
POWERGRID	3.40	3.14
NHPC	8.14	7.38
Total	**31.42**	**30.68**

3.2.5 Power Purchase from Other Sources

3.2.5.1 Power Purchase from Other Sources for FY 2003-04

Petitioner's Submission

In its Petition, the TRANSCO for the year 2003-04 has projected a power purchase of 2987 MUs from PTC and other sources as against 2231 MUs approved by the Commission in its order dated June 26, 2003.

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 FY 2003-04. Subsequently, TRANSCO submitted these details to the Commission. The Commission has considered actual energy purchased and the actual costs have been considered for the purpose of estimating the energy purchases from other sources during FY 2003-04. The energy purchases from the Other Sources and the power purchase cost as approved by the Commission based on actual for FY 2003-04 is provided in Table 3.13 given below:

Table:3.13 Power Purchase from other sources during FY 2003-04

	Power Pur (MU)	Total Cost (Rs. Crore	Rate (Rs/kwh)
WBPDCL	645	139	2.16
WBPDCL (off peak)	150	40	2.64
Gridco Peak	45	12	2.58
Uttaranchal	503	131	2.60
HPSEB	1021	266	2.60
UPPCL	360	94	2.61
Gridco (NVVNL)	60	15	2.43
Goa (Global)	155	36	2.30
sub-total	**2939**	**730**	**2.49**

3.2.5.2 Power Purchase from other sources during FY 2004-05

In its Petition, TRANSCO has submitted that to meet the growing demand of the State, it has entered into Power Purchase Agreements with Power Trading Corporation (PTC) for purchase of power from Uttaranchal Power Corporation (UPCL), West Bengal Power Development Corporation Limited (WBPDCL) and Eastern Region. The Petitioner further submitted that TRANSCO has been purchasing power from HPSEB in the past and it is proposed to continue this arrangement with HPSEB. Further, the TRANSCO during FY 2003-04 is also purchasing power from Goa.

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 in its petition has submitted that to meet the power requirements of Delhi, TRANSCO is required to contract demand of approx. 3300 MW during peak summer and approx. 3500 MW during peak winter. The TRANSCO further submitted that as the energy consumption pattern is different for 24 hours of a day, it will not be possible to utilise the allocated power and power tied up with other sources during the offpeak hours and TRANSCO has proposed to sell the surplus power during the off peak hours to the neighbouring States/PTC.

Commission's Analysis

In the Petition, the TRANSCO during FY 2004-05 has proposed to purchase power from Uttaranchal Power Corporation Limited, West Bengal Development Corporation Limited (WBPDCL) and Eastern Region through PTC. The TRANSCO has also proposed to purchase energy from HPSEB and from Goa through Global Energy during FY 2004-05.

However, during the technical validation session, the Petitioner has submitted that the Power Purchase Agreement with PTC and Goa (Global Energy) has expired and the TRANSCO has not entered into fresh PPA with PTC for purchase of power during FY 2004-05. The Petitioner further submitted that the only arrangement TRANSCO have for purchase of power during FY 2004-05 form other sources is HPSEB and TRANSCO proposes to purchase from HPSEB as per the Agreement between TRANSCO and HPSEB.

Based on the above submission of the Petitioner, the Commission has considered the power purchase only from HPSEB as purchase from other sources.

Himachal Pradesh State Electricity Board

The actual power purchased by TRANSCO from HPSEB during FY 2003-04 is 1021 MU. For Y 2004-05 the TRANSCO has estimated power purchase of 1381 MU from HPSEB. The Commission note that with the availability of energy from its own resources, CGS and bilateral tie ups with HPSEB, TRANSCO shall be surplus during offpeak hours. For FY 2004-05, the Commission has considered power purchase of 1381 MU from HPSEB as considered by the Petitioner.

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 3.14 given below:

Table:3.14 Power Purchase from Other Sources for FY 2004-05

S.No.	Source	Units Purchased (MU)		Total Cost (Rs. Cr)		Rate (Rs/kwh)	
		Petition	Commission	Petition	Commission	Petition	Commission
1	WBPDCL	538		143		2.65	
2	ER	275		73		2.65	
3	UPCL	460		126		2.75	
4	HPSEB	1381	1381	380	380	2.75	2.75
5	UPPCL						
6	Goa (Global)	287		76		2.65	
	Total	**2941**	**1381**	**798**	**380**	**2.71**	**2.75**

3.2.6 Transmission Charges and other Wheeling Charges

Petitioner's Submission

In its Petition, TRANSCO has submitted that the transmission wheeling charges payable to the Power Grid for the transmission of power from CGS, are estimated based on the weighted average capacity allocation from the central stations to the TRANSCO. The calculation is based on both allocated and unallocated power from the sources.

Based on actual details submitted by the Petitioner, the transmission charges for FY 2003-04 are Rs. 197 Crore and the Commission has considered the same for FY 2003-04. The primary reason for increase in transmission charges is change in methodology of charging transmission charges. Earlier the transmission charges were applicable on the number of units purchased from the Central Generating Stations. However, as per the CERC Orders, the transmission charges of PGCIL are payable in proportion to the allocation and not on the energy drawl. As the capacity allocation from CGS of Delhi has not changed, TRANSCO has to pay the transmission charges based on share allocation.

For the year 2004-05 the petitioner has projected transmission charges of Rs. 123.16 Crore. Commission for FY 2004-05 has considered the transmission charges of Rs. 197 Crore as per the actual transmission charges for FY 2003-04.

The transmission charges as estimated by TRANSCO and as considered by the Commission are summarised in the Table 3.15 given below:

Table:3.15 Transmission Charges (Rs. Crore)

Description	FY 2003-04			FY 2004-05	
	Order for FY 2003-04	Rev. Est. (Petition)	Commission	Petition	Commission
Transmission charges	159.00	116.79	197	123.16	197

3.2.6.1 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.

In the petition, the TRANSCO for FY 2003-04 has considered the wheeling charges as Rs. 7.42 Crore as against the wheeling charges of Rs. 7.11Crore, as approved by the Commission in the Order for FY 2003-04. The Petitioner submitted that this marginal increase is due to the fact that the rental charges for Rohtak Road substation has increased from Rs. 5.5 lacs per annum to Rs. 8.1 lacs per annum

For FY 2004-05, the Petitioner has considered the following other wheeling charges :

- Rental for Rohtak road sub-station of BBMB @ Rs. 8.1 lacs/month
- Pooled loses for Rohtak sub-station @ 10 lac units per month for 12 months @ BTPS rate of 236 Ps/kWh.
- Wheeling charges for Salal Power at 3 Ps./kWh for 358 MU
- Salal losses paid to BBMB @ 4% at Salal power rate
- Wheeling charges to PGCIL for reimbursement to BBMB for Bairasuil Power
- Wheeling Charges @ 2 paise/kWh for Eastern Region Power.
- UPPCL wheeling charges at 1 paise /kWh for drawal from Sahibabad sub-station

Commission noted that there shall not be any drawal of power from Eastern Region during FY 2004-05 and there shall not be wheeling charges for ER power.

For FY 2003-04 and FY 2004-05, the Commission has considered the wheeling charges of Rs. 7.42 and Rs. 6.21 Crore respectively.

Table:3.16 Other Wheeling Charges (Rs. Crore)

Description	FY 2003-04			FY 2004-05	
	Order for FY 2003-04	Rev. Est. (Petition)	Commission	Petition	Commission

Other wheeling charges	7.11	7.42	7.42	7.42	6.21

3.2.6.2 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 total RLDC and ULDC charges as estimated by the Petitioner for FY 2003-04 and FY 2004-05 are Rs. 15.51 and Rs. 18.61 respectively.

For FY 2003-04, the Commission has obtained the actual details of RLDC and ULDC charges and as submitted by the Petitioner the actual RLDC and ULDC charges for FY 2003-04 is Rs. 18.75 Crore and the same has been considered by the Commission. For FY 2004-05, the Commission has considered these charges as Rs. 18.75 Crore based on actuals for FY 2003-04.

3.2.7 Transmission Losses

Petitioner's Submission

In its Petition, TRANSCO has submitted that the Commission has considered transmission losses of 2.04% for FY 2003-04 in the TRANSCO network based on the actual losses during December 2002 to February 2003, however during the period April 2003 to September 2003 the losses work out to be an average of 2.18%. Hence TRANSCO has considered transmission losses for both FY 2003-04 and FY 2004-05 as 2.18% based on actuals for the period April 2003 to September 2003

For external transmission network losses the TRANSCO has submitted a figure of 3.05% and 3.71% for FY 2003-04 and FY 2004-05respectively.

Commission's Analysis

During the technical validation session the Commission has directed TRANSCO to submit the details of actual transmission losses for FY 03-04. Subsequently, TRANSCO has submitted the total energy purchased during the year, energy sold during the year and the transmission losses in TRANSCO system. As regard to external losses, the TRANSCO during the technical validation session mentioned that NREB has not finalised the Regional Energy Balances and hence the details of actual external transmission losses for FY 2003-04 cannot be provided at this stage.

The actual transmission losses in TRANSCO system for FY 2003-04 as per the details provided by TRANSCO works out to be 1.69%. The Commission has considered the transmission losses of 1.69% in TRANSCO system based on actual losses for FY 2003-04 for both the years FY 2003-04 and FY 2004-05.

As regards the external transmission losses, the Petitioner has not submitted the details. However, the Commission, based on the details of total energy purchased, sold to Licensees including NDMC and MES in Delhi and considering the transmission losses of TRANSCO, has worked out the external transmission losses which as 1.1%. Considering the past trends, the external transmission losses of 1.1% appears to be on very low side. The Commission during technical validation sessions obtained clarification on this aspect. The Petitioner submitted that they have not obtained the details of external transmission losses from NREB as the Regional Energy Accounts for FY 2003-04 are not finalised.

Based on above, the Commission for FY 2003-04 has considered the external transmission losses as 1.1% as estimated for the energy balancing. Any variation in external transmission losses during FY 2003-04 will be considered during truing up. For FY 2004-05, the Commission has considered the transmission losses of 2.5% based on the actual transmission losses during previous years.

3.2.8 Energy Requirement

Petitioners Submission

The TRANSCO in its Petition has submitted that the power requirement has been computed using a "bottom up approach". The monthly unrestricted demand, taking into account actual consumption and load shedding for the period April 1995 to September 2003 has been analysed and using the Cumulative Average Growth Rate (CAGR) for this period, the projected power requirement has been estimated for the period October 2003 to March 2004 and for FY 2004-05. TRANSCO submitted that as the estimated energy requirement from DISCOMs, NDMC and MES have not been received by TRANSCO, the TRANSCO has adopted this approach.

The TRANSCO has submitted that the peak demand and energy requirement of Delhi has been estimated based on past trends and the growth in demand during FY 2004-05 is estimated at about 6% over the demand of FY 2003-04. Based on this methodology, the energy to be procured as estimated by TRANSCO works out to 22115 MU.

TRANSCO submitted that to meet the power requirement of Delhi, TRANSCO is required to contract demand of approx 3300 MW during summer and approx. 3500 MW during winter. However, as the energy consumption pattern varies over the 24 hours of the day, TRANSCO will not be able to utilise the full allocated power during off peak hours and it is proposed to sell surplus power to other States/PTC and as UI. Considering these aspects, TRANSCO has estimated the energy purchase of 24670 MU for FY 2004-05 to meet the energy requirement and peak demand of 3800 MW.

Commission's Analysis

The Commission has examined the total energy requirement for FY 2003-04 as estimated by TRANSCO and actual energy supplied during the year. The Commission has observed that against the energy requirement of 20015 MU for FY 03-04 as estimated by TRANSCO, the actual energy supplied to DISCOMs, NDMC and MES is 20040 MU.

For FY 2004-05, the Commission has also observed the total energy requirement as projected by DISCOMs in their ARR Petition and has found that the energy requirement of DISCOMs as projected by DISCOMs is substantially lower than the energy requirement as estimated by TRANSCO. This is due to the reason that DISCOMs will be able to meet growth in energy requirement from the reduction in losses during FY 2004-05, as the AT&C loss targets for FY 2004-05 are substantially higher than the targets for FY 2003-04.

Considering these aspects, the Commission directed TRANSCO to get the study done by CEA towards the total energy and load requirement of Delhi for FY 2004-05. The study has been carried out by CEA, however inspite of repeated reminders, TRANSCO has not submitted the copy of CEA Report on this study to the Commission conveying, hoever, that the commercial arrangements for consultancy could not be finalised..

Further, the Commission during technical validation sessions with senior management of TRANSCO and DISCOMs have directed the Utilities to adopt an integrated approach for estimating the growth in load and energy requirement.

Based on the energy requirements submitted by DISCOMs , NDMC and MES for FY 2004-05 as estimated by the Commission works out to 19958 MU as against the energy requirement of 21711 MU as estimated by the TRANSCO. Considering the external transmission losses and TRANSCO system losses, the total energy requirement for the Delhi power system as estimated by the commission works out to 20679 MU as against 22697 as estimated by TRASNCO.

Based on detailed analysis for energy availability as discussed in earlier sections, the total energy available from all the sources for FY 2004-05 as estimated by the Commission works out to 22757 MU and considering the estimated requirement, the surplus energy available is 2079 MU.

The Commission has not reduced the power purchase to the extent of surplus power and has considered the sale of entire surplus energy at average cost of power purchase.

3.2.9 Sale to Other States and Underdrawals

3.2.9.1 Petitioner's Submission

TRASNCO in its Petition has submitted that NREB has allocated the capacity to TRANSCO from each of the CGS and unallocated power on daily basis. , TRANSCO will not be able to draw its share during the hours 23.00 hours to 00.60 hours of winter season due to reduced demand in the system during these hours. The drawl cannot be less than 60-70% of the share from each CGS of NTPC under ABT regime. Thus there would be some amount of UI.

For FY 2004-05, TRANSCO has proposed to sell the surplus off-peak power to the extent of 1973 MUs to PTC / other neighbouring states and as UI at an average rate of Rs. 1.66/kWh.

3.2.9.2 Commission's Analysis

During the technical validation sessions, the Commission directed the TRANSCO to submit the details of actual energy sold along with revenue and details of UI Charges for FY 2003-04, Subsequently, TRANSCO provided the details of actual energy sold to other States, Revenue from sale of power to Other States and UI Charges. The actual energy sold by TRANSCO during FY 2003-04 is 1358 and the revenue earned by TRANSCO from this sale is Rs. 454 Crore. Thus, the average rate for sale of energy to other States works out to Rs. 1.99/kWh as against the rate of Rs. 1.66/kWh projected in the Petition. The Commission has considered the actual revenue from sale of power to other States while computing the total power purchase cost of TRANSCO for FY 2003-04.

During FY 2003-04, TRANSCO has underdrawan the energy with respect to the scheduled energy to the extent of 2422 MU and has received Rs. 432.51Crore as Unscheduled Interchange (UI) Charges on account of underdrawal. Thus the average rate of UI receipt by TRANSCO due to underdrawal is Rs. 1.79/kWh. The Commission has considered the above underdrawals and the UI Charges received while computing the energy availability for sale and the power purchase costs for FY 2003-04. The Commission is concerned about the extent of underdrawals made by TRANSCO. The Commission would like to highlight that by getting UI Charges due to underdrawls; the TRANSCO infact is incurring losses, as the average rate of UI received is much lower than the average power purchase cost. Considering the UI receipt due to underdrawls and average power purchase cost, the extent of loss incurred by TRANSCO due to underdrawls is around Rs. 92 Crore. The Commission understands that the underdrawls at certain instances due to sudden change in load in the system are unavoidable, but at the same time with proper load management, the quantum of underdrawls/overdrawls can be optimised. The Commission for FY 2003-04 has considered the UI charges received due to underdrawls. The Commission would like to limit the extent of unscheduled interchanges to reasonable level, which is not at all avoidable.

The Commission therefore directs TRANSCO to improve their load management systems in order to avoid the instances of underdrawals and submit the report to the Commission on the initiatives taken to avoid unscheduled interchanges within 3 months from the date of issuance of this Order.

For FY 2004-05, the Commission has considered the entire surplus energy available as difference between the energy available and estimated energy sales to Licensees in Delhi as a sale of power to other States. The Commission hopes that the TRANSCO will be able to sell the entire surplus energy available during off peak hours to other States. **The Commission directs the TRANSCO to optimise its energy balance and try to sell the entire surplus energy available during off peak hours. In case, TRANSCO is unable to sell the surplus energy, TRANSCO should back down the generating**

stations of Delhi including Badarpur, PPCL and GENCO. TRANSCO is further directed not to surrender the cheaper power available from CGS except in case on unavoidable circumstances.

During the period 1st April 2004 to 9th May 2004, TRANSCO has received Rs. 95.33 Crore as UI charges on account of underdrawals to the extent of 295 MU during the period. Thus the average UI charge received by TRANSCO during this period is around Rs. 3.23/kWh. The Commission has considered actual UI charges received during this period while estimating the ARR.

For projecting the revenue from sale to other States, the Commission has considered the average rate of Rs. 2.15/kWh equivalent to average cost of power purchase. The actual average rate for sale of energy to Other States during FY 2003-04 is around Rs. 1.99/kWh. The Commission is of the opinion that TRANSCO should not incur losses on sale of energy to other States and due to underdrawls because of the variation in the load. The Commission is further of the opinion that because of increase in UI charges as approved by the CERC, the average rate for sale of surplus power under bilateral agreement and the UI Charges for underdrawls during FY 2004-05 will be higher than average rate for FY 2003-04.

3.2.10 Energy Balancing

Based on the net energy purchased from each source, transmission losses, sale to other States and Underdrawals, the Energy Balance for FY 2003-04 and FY 2004-05 as estimated in the Petition and as considered by the Commission is provided in Table 3.17 below:

Table 3.17 Energy Balance (MU)

Particulars	***FY 2003-04***			***FY 2004-05***	
	Order for FY 2003-04	***Rev. Est. (petition)***	***Commission (Based on actual details)***	***Petition***	***Commission***
Purchase from CGS and other States	12503	14889	14872	15701	13689
Losses in PGCIL network	(499)	(455)	(164)	(582)	(342)
Balance	12005	14434	14808	15119	13347
Purchase from Genco, PPCL, BTPS, etc	9911	8640	9457	8970	9068
Energy Available at periphery	21916	23074	24165	24089	22415
TRANSCO losses	435	442	345	482	379
Underdrawals (UI)	300		2422		295
Sale to Other States	1005	2790	1358	1973	1347
Energy for Sale in Delhi	20175	19842	20040	21634	20395

3.2.11 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 for FY 2003-04 and FY 2004-05 is summarised in the Table 3.18 and Table 3.19 respectively as under:

Table:3.18 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	11902	11933	2347	2328	1.97	1.95
PTC and Other States	2987	2939	745	730	2.49	2.48
BTPS	4546	4903	1030	1114	2.27	2.27
Genco	2030	2360	431	484	2.13	2.05
PPCL	2065	2194	516	462	2.50	2.10
Sub-total	**23529**	**24328**	**5069**	5117	**2.15**	2.10
Sale to other States		-2422		-433		1.79
Underdrawls (Actual)	-2790	-1358	454	-271	-1.63	1.99
Total Power Purchase	**20739**	**20548**	**4616**	4414	**2.23**	2.05
Other Costs						
Transmission Charges			117	197		
RLDC and ULDC Charges			15.51	18.75		
Other Wheeling Charges			7.42	7.42		
Incentive and Income Tax			167.7	167		
sub-total			**307**	**390**		
Total Power Purchase Cost			**4923**	**4803**		

Table 3.19 Summary of Power Purchase and Power Purchase Cost for FY 2004-05

Source	Units Purchased (MU)		Total Price (Rs. Cr)		Price/unit (Rs./kWh)	
	Petition	Commission	Petition	Commission	Petition	Commission
CGS	12760	12308	2669	2446	2.09	1.99
PTC and Other States	2941	1381	798	380	2.71	2.75
BTPS	4566	4566	1102	1078	2.41	2.36
Genco	2410	2369	533	514	2.21	2.17
PPCL	1994	2134	528	472	2.65	2.21
sub-total	24671	**22757**	5629	**4888**	**2.28**	**2.15**
Sale to other States	-1973	-1344	-328	-288	1.66	2.15
Underdrawls		-295		-95		3.18
Total Power Purchase	**22698**	**20679**	**5301**	**4504**	**2.34**	**2.16**
Other Costs						
Transmission Charges			123.16	197		
RLDC and ULDC Charges			18.61	18.6		
Other Wheeling Charges			7.42	6.2		
Incentive and Income Tax			167.7	162		
sub-total			**316.89**	**383**		
Total Power Purchase Cost			**5618**	**4888**		

3.3 Employee Expenses

3.3.1 Petitioner's Submission

The TRANSCO, in its ARR and Tariff Petition for FY 2004-05, provided the revised estimates for FY 2003-04. The TRANSCO has estimated gross employee expense of Rs. 41.74 Crore for FY 2003-04, as compared with the Commission's approval of Rs. 42.68 Crore. The TRANSCO has submitted that the revised estimates are based on actuals for the first six months and as estimated for the balance six months. The TRANSCO has estimated a capitalisation of 15% of employee expenses for FY 2003-04.

For FY 2004-05, the TRANSCO has projected gross employee expenses at Rs. 47.40 Crore for FY 2004-05. The TRANSCO has submitted that the employee expenses for FY 2004-05 are projected by applying a 10% growth to the estimated employee costs of FY 2003-04. The TRANSCO has also submitted that this increase is projected to meet the normal annual increments, fitment benefit to promoted employees and sanction of additional dearness allowance every year.

The TRANSCO has also proposed capitalisation @ 15% of the gross employee cost, thereby resulting in a net employee cost of Rs. 40.30 Crore for FY 2004-05. The employee expenses of FY 2004-05 are about 14% higher than the revised estimates for FY 2003-04.

3.3.2 Commission's Analysis

The Commission has analysed the employee expenses proposed by the TRANSCO along with the methodology adopted for estimation of the employee expenses. During the technical sessions, the Commission directed the TRANSCO to submit the actual employee expenditure incurred during FY 2003-04.

Accordingly, the TRANSCO submitted the details of actual employee expenses for FY 2003-04. The total actual employee expenses for FY 2003-04 as submitted by the TRANSCO are Rs. 44.77 Crore.

The actual employee expenses of the TRANSCO during the FY 2003-04 are marginally higher than the employee costs approved by the Commission in its Order on ARR for FY 2003-04. Therefore the Commission has considered the actual employee expenses for FY 2003-04. The employee expenses capitalised during the year are projected at Rs. 6.26 Crore, and the Commission has considered the same while approving the net employee expenses for FY 2003-04.

For estimating the employee expenses for FY 2004-05, the Commission has projected each component of the employee expenses rather than applying a growth rate on the overall employee expenses of FY 2003-04. The critical assumptions made by the Commission with regard to the projections for FY 2004-05 are stated below:

- Basic Salary: Considered merger of 50% of the DA with basic and a growth of 3% on Basic Salary.
- Dearness Allowance: Out of prevailing DA @ 59% of Basic, DA equivalent to 50% of Basic has been merged with Basic. DA of 11% of Basic as per prevalent rates has been considered for FY 2004-05.
- Terminal Benefits - 26% of the Basic + DA.
- Other Allowances: Considered as proportion to the Basic, as these components are linked to the Basic Salary.

- Other components: Other heads such as staff welfare, other allowances, medical reimbursements, and bonus/ex-gratia, considered on proportionate basis based on the actual expenses during FY 2003-04.

Based on the above assumptions, the employee expenses for FY 2004-05 have been approved at Rs. 50.20 Crore as against Rs. 47.40 Crore as proposed by the TRANSCO for FY 2004-05. The employee expenses as estimated by the Commission for FY 2004-05 are higher than that projected by the Petitioner mainly because of merger of certain component of DA with Basic. The Commission has considered a capitalisation of 15% of gross employee costs as proposed by the Petitioner.

The Table 3.20 provides a snapshot view of the employee expenses as proposed by TRANSCO in the Petition and as approved by the Commission.

Table:3.20 Employee Expenses (Rs. Crore)

Particulars	FY 2003-04				FY 2004-05	
	Order for FY 2003-04	Rev. Est. (Petition)	Actual	Commission	Petition	Commission
Salaries	17.49	17.00			18.00	27.44
Dearness Allowance	8.29	9.86			11.00	3.02
Terminal Benefits	4.17	1.78			2.00	1.89
Other Costs	12.73	13.10			16.40	18.72
Total	**42.68**	**41.74**	**44.77**	**44.77**	**47.40**	**50.20**
less expenses capitalised	4.27	6.26	6.26	6.26	7.10	7.53
Total	**38.41**	**35.48**	**38.51**	**38.51**	**40.30**	**42.67**

3.4 Administrative and General Expense (A&G)

3.4.1 Petitioner's Submission

In its Petition for FY 2004-05, the TRANSCO has estimated gross A&G expenses for FY 2003-04 as Rs. 33.88 Crore. The TRANSCO has estimated expenses for FY 2003-04 by considering the actuals for first six months and as estimated for the balance six months. The TRANSCO has mentioned that the expenditure for the period October 2003 to March 2004 is much higher than that in April 2003 to September 2003, which is due to the fact that the rebate to DISCOMs for early payment of bills are accounted for in the latter part of the financial year. The TRANSCO has also considered a capitalisation of 15% of A&G expenses for FY 2003-04.

For FY 2004-05, the TRANSCO has projected a gross A&G expenses at Rs. 32.68 Crore, assuming a growth of 10% over the estimated A&G expenses for FY 2003-04. The TRANSCO has also considered a capitalisation of 15% of A&G expenses for FY 2004-05.

3.4.2 Commission's Analysis

During the technical sessions, the Commission directed the TRANSCO to submit the actual A&G expenditure incurred during FY 2003-04. The TRANSCO submitted the actual A&G expenses incurred during FY 2003-04 at Rs. 16.59 Crore. This actual expenditure comprises of Rs. 12.51 Crore under the regular heads of A&G expense, and Rs. 4.48 Crore on account of the rebate on sale of surplus power to other States and it does not include rebate to DISCOMs as the same issue has been referred to the Commission.

The rebate extended to other States on the sale of surplus power is accounted as an expense and the corresponding revenues from sale of surplus power to other States has been considered while estimating the power purchase cost.

The rebate extended to DISCOMs on the sale of power is accounted for by the DISCOMs in their Non-Tariff Income. The Commission is of the opinion that the expense on this head is not an expenditure as far as the sector as a whole is concerned. The Commission has considered the rebates allowed to the DISCOMs as per the amounts mentioned in by the DISCOMs in the Non Tariff Income. The total rebate indicated by all three DISCOMs is Rs. 5.67 Crore, which is based on accounts as submitted by the DISCOMs.

For the other components of A&G expenses, the Commission accepts the actuals as provided by the TRANSCO. The Commission has thus approved a gross A&G expense of Rs. 22.26 Crore for FY 2003-04. The Commission has considered the capitalisation at Rs. 2.49 Crore as per the TRANSCO estimate for FY 2003-04. The A&G expenses as approved by the Commission for FY 2003-04 are higher than the actual expenses because Petitioner has not considered the rebate to DISCOMs as part of A&G expense, while the Commission has considered the rebate to DISCOMs as part of A&G expense and as a part of Non-Tariff Income for DISCOMs.

For FY 2004-05, the Commission has separately projected individual components of A&G expenses, considering a growth rate of 10%, over the actual expenses incurred in FY 2003-04. Further, the component of rebate on sale of energy as reflected by the DISCOMs in the Non Tariff Income has been considered as A&G expense for TRANSCO and Non-Tariff Income for DISCOMs. The total A&G expenses for FY 2004-05 estimated by the Commission works out to Rs. 17.05 Crore. The Commission has considered a capitalisation of 15% of A&G expenses for FY 2004-05 as proposed by TRANSCO.

Table 3.21 provides a summary of A&G expenses as proposed by the TRANSCO and as approved by the Commission.

Table:3.21 Administrative and General Expenses (Rs. Crore)

Particulars	FY 2003-04				FY 2004-05	
	Approved	Petition	Actual	Commission	Petition	Commission

Gross expenses	31.57	33.88	16.59	22.26	32.68	17.05
Less capitalised	-	5.08	2.49	2.49	4.90	2.56
Net expenses	**31.57**	**28.80**	**14.10**	**19.77**	**27.78**	**14.50**

The Commission directs the Petitioner to take a prior approval for any increase in A&G expenses during the FY 2004-05 beyond A&G expenses approved before committing/incurring an expense.

3.5 Repairs and Maintenance (R&M)

3.5.1 Petitioner's Submission

The TRANSCO, in its ARR and Tariff Petition for FY 2004-05, submitted that against an approved R&M expense of Rs. 20.05 Crore for FY 2003-04, the revised estimates for FY 2003-04 are Rs. 30.10 Crore. The TRANSCO has estimated expenses for FY 2003-04 by considering the actuals for first six months and as estimated for the balance six months. The TRANSCO has projected R&M expense of Rs. 30.90 Crore for FY 2004-05.

3.5.2 Commission's Analysis

During the technical validation sessions, the Commission had asked the TRANSCO to submit the actual R&M expenses for FY 2003-04. The TRANSCO submitted that the actual R&M for FY 2003-04 was Rs. 15.72 Crore consisting of Rs. 6 Crore towards consumption from Stores.

The actual R&M expenses of TRANSCO for FY 2003-04 are much lower than the R&M expense approved in the Order for FY 2003-04. Therefore, the Commission now approves R&M expenses for FY 2003-04 at Rs. 15.72 Crore.

For FY 2004-05, the Commission has estimated the R&M expenses at Rs. 16.82 Crore, based on approved R&M expenses for FY 2003-04 and by assuming a growth rate of 7% over the approved expenses for FY 2003-04 based on prevalent industry norms.

The Commission, in its previous Order on ARR for FY 2003-04 dated June 26, 2003, had directed the TRANSCO to provide quarter wise details of the R&M activities as under:

"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 along with the details of the actual R&M works carried out at the end of each quarter.

The Petitioner has not complied with this directive of the Commission and has not submitted the record of the items issued from the Stores for R&M works, actual R&M works carried out and the report on transformer failure rate on quarterly basis to the Commission. The Commission has taken serious note of the non-compliance to the direction given by the Commission in this regard.

The Commission reiterates its direction to the Petitioner to maintain a separate record of the items issued from the Stores for R&M works, and submit the same to the Commission along with the details of the actual R&M Works carried out at the end of each quarter.

The Commission also directs the Petitioner to take a prior approval for any increase in R&M expense during FY 2004-05 beyond the approved R&M expense before committing/incurring an expense.

Table 3.22 provides a summary of R&M expenses as proposed by the TRANSCO and as approved by the Commission.

Table:3.22 Repairs and Maintenance Expenses (Rs. Crore)

Particulars	FY 2003-04				FY 2004-05	
	Approved*	Petition	Actual	Commission	Petition	Commission
Total	20.05	30.10	15.72	15.72	30.90	16.82

* - as per Commission Order dated June 26, 2003.

3.6 Investments

3.6.1 Petitioner's submission

In its Petition, TRANSCO has proposed the investment of Rs. 105 Crore for FY 2003-04 and Rs. 328 Crore for FY 2004-05. The Petitioner has submitted the scheme-wise details of the proposed investments.

During the Technical Sessions, the Commission directed the Petitioner to submit the status of actual capital expenditure incurred during FY 2003-04 and the cost benefit analysis and preparedness for execution of the investment proposed in FY 2004-05.

In the subsequent submissions, TRANSCO has submitted the scheme-wise financial progress report along with a revised estimate of investments undertaken during FY 2003-04. TRANSCO has submitted that it has incurred capital expenditure of Rs. 85.25 Crore as against the investment of Rs. 340.87 Crore considered by the Commission in the ARR and Tariff Order dated June 26, 2003. The Petitioner has indicated that it had envisaged funding of the investments through the Plan Assistance provided by the GNCTD in FY 2003-04. However, the GNCTD allocated plan funds to the extent of Rs. 105 Crore towards the investments proposed by TRANSCO. TRANSCO has submitted that it had curtailed investment plan in line with the GNCTD approval. TRANSCO has further submitted that it could not complete some of the works approved under the Plan Assistance for various reasons beyond its control.

In the subsequent submissions, TRANSCO revised its proposal for investment in FY 2004-05 to Rs. 254 Crore. TRANSCO has further submitted that the GNCTD has sanctioned a Plan Assistance of Rs. 135

Crore for FY 2004-05. TRANSCO has further submitted that if it would be in a position to execute works beyond the approved investments under the Plan Assistance, it would avail a loan assistance from PFC to the extent of 70% of the cost of such projects.

As regards the cost benefit analysis of the investment proposed in FY 2004-05, TRANSCO has submitted that the plan schemes of TRANSCO are for system improvement/augmentation, primarily meant for meeting the load requirements of the DISCOMs including the provision of additional bays and enhanced transformation capacity at various 220 and 400 kV grid substations of TRANSCO. The proposed schemes would enable TRANSCO to provide better system availability and reliable supply to DISCOMs. The Petitioner has also submitted details about its preparedness to execute the proposed investment during FY 2004-05.

During the Technical Session, the Commission arranged a joint meeting between the senior management team of TRANSCO and DISCOMs to emphasise the need of coordinated development towards the investment required for strengthening the entire transmission and distribution network. The Petitioner has accordingly reviewed its expenditure in light of the projections submitted by the DISCOMs and the requirements of NDMC and MES. The Petitioner has submitted its revised plan of investments for FY 2004-05. The investments proposed by the Petitioner for FY 2003-04 and FY 2004-05 in the Petition, actual investment carried out by the Petitioner during FY 2003-04, the revised investment plan for FY 2004-05 and the investments approved by the GNCTD under the Plan Assistance have been summarised in the Table 3.23.

Table:3.23 Investment (Rs. Crore)

	FY 2003-04		FY 2004-05		
Description	**Petition**	**Actual**	**Petition**	**Revised**	**Approved by GNCTD**
400 kV works	31.00	26.82	124.00	40.00	40.00
220 kV works	60.00	40.24	203.00	201.00	82.00
66 and 33 kV works	08.00	4.69	01.00		
SCADA	06.00	13.50		13.00	13.00
Total	**105.00**	**85.25**	**328.00**	**254.00**	**135.00**

3.6.2 Commission's Analysis

The Commission has analysed the submissions made in the Petition and the subsequent responses submitted by the Petitioner in the area of investments. The Commission notes that as against the Petitioner's estimate of Rs 426 Crore of Capital Investments in the Petition for FY 2003-04, the Commission in its Order approved the investment of Rs 341 Crore. However, the actual investment during FY 2003-04 is as low as Rs 85 Crore. For FY 2004-05, the Petitioner in the ARR Petition has originally estimated the capital investment of Rs 328 Crore, which was revised to Rs 254 Crore and further pruned to Rs 135 Crore in the subsequent submissions. During discussions, the Petitioner submitted that the investment plan has been revised based on the sanctioned Plan Assistance from Government for FY 2004-05. This gives the impression that due care has not been taken while preparing the capital investment plan and planning the transmission system requirements. At the same time it is not clear that whether the capital investment plans are prepared on need basis or resource availability basis.

At this junction, in the absence of the necessary details, the Commission is left with the option of approving the capital investment for FY 2004-05 at Rs 135 Crore. However, the Commission is of the opinion that there should not be any gaps in the transmission system, which may throttle the supply to DISCOMs. In case, the additional investments are required for strengthening and improving the transmission system to ensure reliable power supply to DISCOMs, the TRANSCO shall soon prepare the plans for these works and submit it to the Commission. Further, TRANSCO shall expeditiously take up these works and arrange the additional funds for these works through commercial borrowings. The Commission will consider the cost of these borrowings during the truing up.

The Commission directs the Petitioner to submit the complete DPR along with cost-benefit analysis for schemes more than Rs. 5 Crore for obtaining the scheme-wise investment approval from the Commission as per the terms and conditions of the License for Transmission and Bulk Supply of Electricity within a month from the date of the issue of this Order. The Commission further directs that the Petitioner should submit a separate Petition for approval of schemes for FY 2005-06, by September 2004.

The Commission directs the Petitioner to submit the quarterly progress report of investments.

In line with the recommendation of the CEA, the Commission directs the Petitioner to form a Steering Committee, with one member as Commission's Representative, within 7 days of the date of issue of this Order. The Steering Committee would be responsible for developing an integrated and consolidated implementation plan and monitoring thereof. The Commission directs the Petitioner to submit the consolidated plan within 15 days of the date of issue of this Order and submit quarterly monitoring reports thereafter.

The summary of the investments as proposed in the Petition and as considered by the Commission for FY 2003-04 and FY 2004-05 is provided in the Table 3.24.

Table:3.24 Capital Investment (Rs. Crore)

Description	FY 2003-04			FY 2004-05	
	Order for FY 2003-04	Rev. Est. (Petition)	Commission	Petition	Commission
Total Investments	340.87	105.00	85.25	328.00	135.00

3.6.3 Asset Capitalisation

3.6.3.1 Petitioner's Submission

In its Petition, the TRANSCO has proposed to capitalise Rs. 49.40 Crore and Rs. 50.00 Crore of investment during FY 2003-04 and FY 2004-05 respectively.

In the subsequent submissions made by the Petitioner, the revised estimate of asset capitalisation has been submitted as Rs. 100.70 Crore for FY 2003-04. The Petitioner has also submitted the revised estimate of asset capitalisation of Rs. 119.06 Crore for FY 2004-05 along with its revised investment plan. During the Technical Sessions, the Commission has directed TRANSCO to submit the Provisional Accounts for FY 2003-04 and submit actual addition to assets as per the Provisional Accounts of FY 2003-04. TRANSCO has submitted that the Provisional Accounts are yet to be finalised and hence the details of actual addition to assets is not available for FY 2003-04.

3.6.3.2 Commission Analysis

The Commission has analysed the asset capitalisation proposed in the ARR Petition for FY 2003-04 and FY 2004-05. The Commission has also considered the actual asset capitalisation indicated in FY 2002-03 for arriving at an estimate of capitalisation of Assets. As per the Audited Accounts, TRANSCO has not capitalised any asset during FY 2002-03 and carried forward entire works as Capital Work in Progress. TRANSCO has not submitted details of provisional/actual asset capitalisation in FY 2003-04. Considering the unavailability of past track record of capitalisation of asset and actual capitalisation for FY 2003-04, the Commission has assumed that 30% of the fresh investments and capital work in progress would get capitalised during the year as the transmission projects are long gestation projects. Accordingly, the Commission has considered asset capitalisation of Rs. 42.95 Crore and Rs. 77.45 Crore in FY 2003-04 and FY 2004-05 respectively.

The Commission has considered Opening Block of Fixed Assets for FY 2003-04 based on the Audited Accounts submitted by TRANSCO for FY 2002-03.

The summary of opening balance of fixed assets, asset capitalisation 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 summarised in the Table 3.25 given below:

Table:3.25 Asset Capitalisation (Rs. Crore)

Description	FY 2003-04			FY 2004-05	
	Order for FY 2003-04	Rev. Est. (Petition)	Commission	Petition	Commission
Opening balance of fixed assets	671.45	670.94	670.94	720.34	713.14
Addition during the year	137.24	49.40	42.95	50.00	77.45
Closing balance of fixed assets	808.69	720.34	713.89	770.34	791.34

3.6.4 Depreciation

3.6.4.1 Petitioner's Submission

TRANSCO has proposed depreciation charges based on the weighted average depreciation rate approved by the Commission in the BST Order for FY 2001-02. The Petitioner has mentioned that it had filed the Review Petition against the ARR and Tariff order for Transco dated June 26, 2003 requesting the Commission to review its Order and allow the rate of depreciation @ 6.69%.

The Petitioner has further submitted that after the enactment of the Electricity Act 2003 and the repeal of the Electricity Supply Act, 1948, the Power Sector utilities may be required to follow the Companies Act, 1956 for the purpose of depreciation charges. TRANSCO has highlighted that the Ministry of Power, in its draft Tariff Policy, has mentioned that for tariff determination, depreciation rate would be as per the Schedule XIV of the Companies Act, 1956. All power sector entities would be treated as 'continuous process plant' for the purpose of determination of depreciation rate and accordingly applicable rate of depreciation for power entities would be 5.28%.

Considering these aspects, TRANSCO has requested the Commission to reconsider the issue and allow depreciation @ 6.69% as approved in the BST Order for FY 2001-02 pending notification of the Tariff Policy by the Government of India under the Electricity Act 2003.

The Petitioner has estimated the depreciation charge at Rs. 43.40 Crore and Rs. 46.69 Crore for FY 2003-04 and FY 2004-05 respectively. The Petitioner has not submitted details of proposed utilisation of depreciation for FY 2003-04 and FY 2004-05.The petitioner has also mentioned that it has submitted the Fixed Assets Register to the Commission.

3.6.4.2 Commission's Analysis

The Commission has adequately discussed the issue of depreciation in its ARR and Tariff Order dated June 26, 2003 and the Order on the Review Petition filed by the TRANSCO on the ARR Petition dated November 25, 2003 (Review Petition Order). The Commission's view on the concept of depreciation both from an accounting perspective and from a regulatory perspective from its Review Order dated November 25, 2003 has been reproduced below for reference.

"*From an accounting perspective, Depreciation is a charge to the Profit and Loss account and represents a measure of the wearing out, consumption or other loss in value of an asset arising from use, efflux of time or obsolescence through technology and market changes. From a regulatory perspective, depreciation is a small amount of the original cost of the capital assets, built into the tariff computation every year with a view to providing the utility a source of funding to repay instalments of debt capital. As the asset is used over its operational life, Depreciation is proportionately charged over the useful life of the asset.*"

The loan repayment liability of the TRANSCO during FY 2003-04 and FY 2004-05 is lower than the depreciation. Therefore, the Commission is of the opinion that utilising 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>

As set out in its ARR and Tariff Order dated June 26, 2003, the Commission has allowed the depreciation expenditure only on the Gross Fixed Assets at the beginning of the year, in line with the Schedule VI of the Electricity (Supply) Act.

In the BST Order of February 22, 2002, the Commission had directed the DISCOMs and the TRANSCO to submit the details of the GFA and CWIP in the opening balance sheet of DISCOM within one month of the issue of the Order. Accordingly, the Petitioner has submitted the Fixed Assets Register (FAR).

The FAR submitted by the Petitioner is on the basis of the business valuation, on the basis of which the opening balance sheets of successor entities of DVB were prepared and FAR does not provide the historical cost for various categories of assets. In the absence of details of CWIP and availability of historical cost for various categories of Assets, the Commission has continued to provide the depreciation considering the opening block of gross fixed assets as on July 1, 2002 based on the Transfer Scheme. Accordingly, the Commission has computed the depreciation expense for FY 2003-04 based on the GFA arrived at by considering the GFA as on July 1, 2002 as per the Audited Accounts for FY 2002-03 and the assets capitalised during FY 2002-03. For FY 2004-05, the Commission has computed depreciation on the opening GFA as on April 1, 2003, by adding the assets capitalised during FY 2003-04.

<u>Depreciation Rate</u>

The Commission has summarised its methodology of depreciating the assets in its Review Order dated November 25, 2003, which has been reproduced below for reference.

"*In its Order of June 26, 2003, the Commission adopted the methodology of depreciating the asset upto a cumulative 90% uniformly over the entire useful life of the asset. This will avoid front loading of tariffs while at the same time ensuring necessary cash flow to the licensees over a long period of time.*"

The Commission had mentioned in its Tariff Order dated June 26, 2003 that "*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.*"

In the absence of details of CWIP and the historical value of various categories of the assets, the Commission has continued to use the depreciation rate at 3.75% for the purposes of the ARR considering the average fair life of the lines and cables network at distribution voltages as 25 years.

The Commission is of the view that as depreciation is a non-cash expenditure and scheduled loan repayment is lower than the depreciation charge, 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. Accordingly, the Commission has continued to use the depreciation rate of 3.75% for the purposes of the ARR.

The Table 3.26 provides a summary of the Depreciation as proposed by the Petitioner and as approved by the Commission for FY 2003-04 and FY 2004-05.

Table:3.26 Depreciation (Rs. Crore)

Description	FY 2003-04			FY 2004-05	
	Order for FY 2003-04	Rev. Est. (Petition)	Commission	Petition	Commission
Original cost of fixed assets	671.45	670.94	670.94	720.34	713.89
Addition during the year	137.26	49.40	42.95	50.00	77.45
Depreciation charges	25.18	43.40	25.16	46.69	26.77

3.6.4.3 Depreciation Utilisation

The Commission has considered utilisation of depreciation for meeting the loan repayment requirement, working capital requirement and funding capital investments in line with the priority of utilisation mentioned in the Table 3.46 in its ARR and Tariff Order dated June 26, 2003. The priority order of utilisation of depreciation has been summarised below:

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

The Commission has considered actual repayment for FY 2003-04. For FY 2004-05, the Commission has considered loan repayment liability based on the revised submissions by the Petitioner, The working capital requirement has been estimated by considering two months R&M expenses and one month cash expenses i.e. salary, A&G and R&M expenses.

The utilisation of depreciation as considered by the Commission is summarised in the Table 3.27.

Table:3.27 Utilisation of Depreciation (Rs. Crore)

Description	FY 2003-04		FY 2004-05
	Order for FY 2003-04	Commission	Commission

For debt repayment	3.42	2.21	9.11
For working capital requirement	9.53	8.99	9.18
For capital investment	12.22	13.96	8.48
Total depreciation	**25.18**	**25.16**	**26.77**

3.6.5 Means of Finance

3.6.5.1 Petitioner's Submission

In its Petition, the Petitioner has proposed funding of the investments through the Plan Assistance provided by the GNCTD in FY 2003-04. The Petitioner had not proposed means of finance for the proposed investments for FY 2004-05.

During the Technical Sessions, the Commission directed the Petitioner to submit the details of actual means of finance availed during FY 2003-04 and the proposed means of finance for investments in FY 2004-05. During the subsequent submissions, the Petitioner submitted that the GNCTD allocated plan funds to the extent of Rs. 105 Crore towards the investments proposed by TRANSCO for FY 2003-04. The Petitioner has further pointed out that it has received Rs. 91.98 Crore against the allocated Plan Assistance of Rs. 105 Crore. For FY 2004-05, the Petitioner has submitted that the GNCTD has sanctioned the Plan Assistance of Rs. 135 Crore. TRANSCO has further submitted that if it would be in a position to execute works beyond the approved investment limit under the Plan Assistance, it would avail loan assistance from PFC to the extent of 70% of the cost of such projects. TRANSCO has indicated that it has obtained sanction from PFC for any requirement of funds beyond sanctioned Plan Assistance.

3.6.5.2 Commission Analysis

As elaborated in earlier section, the Commission has considered the unutilised depreciation as a source of funding for the capital investments. The Commission has thus considered the means of finance to be a mix of unutilised depreciation, State Government support for funding the investments and commercial loan. For meeting the requirement of additional fund to support capitalisation of salary and interest expense in FY 2004-05, the Commission has considered the utilisation of unutilised portion of loan drawn from the GNCTD for FY 2003-04. For additional funding requirement, the Commission has considered commercial debt. The means of finance considered by the Commission is summarised in the Table 3.28 below:

Table:3.28 Means of Finance (Rs. Crore)

Description	FY 2003-04		FY 2004-05
	Order for FY 2003-04	Commission	Commission
Unutilised depreciation	12.23	13.96	8.48
Loan from GNCTD for Plan Assistance	328.64	84.17*	142.81**

Internal Accruals	0.00	0.00	2.00
Commercial Debt	0.00	0.00	4.66
Total	340.87	98.13	157.94

* Actual loan availed from the GNCTD is Rs. 91.98 Crore for FY 2003-04.
** Loan sanctioned by the GNCTD under Plan Assistance is Rs. 135 Crore. Unutilised loan of Rs. 7.81 Crore in FY 2003-04 is considered for funding investment during FY 2004-05.

3.7 Interest Expenditure

3.7.1 Petitioner's Submission

In its Petition, TRANSCO has projected an interest on the loans from GNCTD under Plan Assistance at Rs. 5.92 Crore in FY 2003-04 and Rs. 7.41 Crore in FY 2004-05. For FY 2003-04 and FY 2004-05, TRANSCO has not projected any on outstanding loan from Holding Company of Rs. 270 Crore as per the opening balance sheet, as this loan has a moratorium for four years for the payment of interest and principal repayment. The TRANSCO has submitted that the loan from the Holding Company is payable within a period of 13 years with 12% interest per annum. Further, TRANSCO has not considered any interest charge on the GNCTD loan towards the Government support for the purpose of meeting the revenue gap of TRANSCO as the detailed terms and conditions of the this loan including the rate of interest are not finalised. TRANSCO has highlighted that the interest liability may arise in future as and when the GNCTD finalise the terms and conditions for the Government Assistance.

During the Technical Sessions, the Commission directed TRANSCO to submit the details of the Plan Fund received from the GNCTD and its repayment schedule and actual interest rate. Accordingly, TRANSCO has submitted that Rs. 33.13 Crore of loan is at the interest rate of 13% and balance loan is at the interest rate of 11.5%. TRANASCO has submitted that it has paid an interest of Rs. 4.31 Crore and repaid loan the extent of Rs. 2.21 Crore in FY 2003-04.

3.7.2 Commission's Analysis

The Commission has analysed the interest expenses proposed by TRANSCO for both FY 2003-04 and FY 2004-05. The Commission has considered actual interest expense of Rs. 4.31 Crore for FY 2003-04. The Commission has considered interest expenses for FY 2004-05 based on the interest rate submitted by the Petitioner for the Plan Fund Assistance and interest rate of 9% on commercial debt. 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 Commission has considered capitalisation of interest for FY 2003-04 at the level proposed by TRANSCO. The Commission has estimated capitalisation of interest considering the asset capitalisation.

The summary of the interest charges as proposed by the Petitioner and as approved by the Commission is provided in the Table 3.29 given below:

Table:3.29 Interest Expenditure (Rs. Crore)

Description	FY 2003-04		FY 2004-05	
	Petition	Commission	Petition	Commission
Interest Expenditure	5.92	4.31	7.41	21.90
Interest capitalised	0	4.13	0	12.85
Interest charged to revenue	5.92	0.18	7.41	9.05

3.8 Total Expenditure

The Table 3.32 given below provides a summary view of the various expenses as proposed by the Petitioner and as approved by the Commission for FY 2004-05 and FY 2003-04. Detailed analysis of each expense head has already been provided in the above sections.

Table 3.30 Total Expenditure (Rs. Crore)

Description	*FY 2003-04*			FY 2004-05	
	Order FY 2003-04	Rev. Est. (Petition)	Commission	Petition	Commission
Power Purchase Expenses	4729	4923	4803	5618	4888
Employee expenses	43	42	45	47	50
A&G expenses	32	34	22	33	17
R&M expenses	20	30	16	31	17
Interest Expense	28	6	4	7	22
Depreciation	25	43	25	47	27
Other Admissible expenses	1	1	1	2	2
Carrying cost on truing up for FY 2003-04					6
Total Gross Expenditure	4878	5079	4917	5784	5028
Less: Expenses capitalised	4	11	9	12	10
Less: Interest capitalised			4		13
Total Net Expenditure	4874	5068	4903	5772	5005
Contribution to contingency reserves	2	2	2	2	2
Net expenditure including special appropriations	**4876**	**5070**	**4905**	**5774**	**5007**

3.9 Non Tariff Income (NTI)

3.9.1 Petitioner's Submission

The TRANSCO, in its ARR and Tariff Petition for FY 2004-05, submitted that against an approved Non Tariff Income of Rs. 12.45 Crore for FY 2003-04, the revised estimates for FY 2003-04 is Rs. 71.78 Crore. The TRANSCO has estimated based on actuals for the first six months of FY 2003-04 and projections for the balance six months of FY 2003-04. The Non Tariff Income comprises of the following heads:

- Interest on FDs, etc.
- Rental on Meters and other apparatus hired to consumers.
- Rebate from early payment of power purchase bills.

- Reactive drawal by DISCOMs.

TRANSCO has submitted that the Commission had in its earlier Order dated July 25, 2003 allowed TRANSCO to charge for reactive power @ 2 paise/kVArh on all reactive power drawl (inductive only) from the Petitioner system at interface points. TRANSCO has submitted that while one of the DISCOMs, viz., NDPL has made payment under protest, the other two DISCOMs have not made any payment. The TRANSCO has thus, included the total amount in Non Tariff Income, pending final decision of the Commission on this issue.

For FY 2004-05, the TRANSCO has projected a Non Tariff Income of Rs. 76.60 Crore. For estimating Non Tariff Income for FY 2004-05, the TRANSCO has submitted that the increase is due to nominal increase in all the Non Tariff Income heads.

3.9.2 Commission's Analysis

During the technical sessions, the Commission had directed the TRANSCO to submit the details of the actual Non Tariff Income for FY 2003-04. Accordingly, the TRANSCO submitted the details of the actual amount received on account of rebate on early payment of power purchase bills during FY 2003-04 at Rs. 83.19 Crore.

For the purpose of approving the Non Tariff Income for FY 2003-04, Commission has considered the actual Non-Tariff Income of TRANSCO. The actual non-tariff income for FY 2003-04 is Rs. 84.97 Crore consisting of income of Rs. 83.19 Crore as Rebate on Power Purchase.

For FY 2004-05, the Commission has projected non-tariff income based on the following assumptions:

- Rentals from meters and Income from compulsory investments estimated on the basis of level of compulsory investments at the end of FY 2003-04.
- Rebate on power purchase for FY 2004-05 has been considered as proposed by the Petitioner.

The Table 3.31 provides a summary of the Non-tariff Income, as proposed by the TRANSCO and as approved by the Commission.

Table:3.31 Non Tariff Income (Rs. Crore)

Particulars	FY 2003-04			FY 2004-05	
	Order	Petition	Commission	Petition	Commission
Income from investments	8.13	1.70	1.70	1.50	1.87
Rebate on Power Purchase		70.00	83.19	75.00	75.00
Other Income	4.32	0.08	0.08	0.10	0.10
Total	**12.45**	**71.78**	**84.97**	**76.60**	**76.97**

3.10 Return

3.10.1 Petitioner's Submission

The Petitioner has estimated the return based on the methodology adopted by the Commission in the ARR and Tariff Order for FY 2002-03 and FY 2003-04 for TRANSCO dated June 26, 2003. TRANSCO has estimated return of Rs. 62.06 Crore on a Capital Base of Rs. 387.87 Crore for FY 2004-05.

3.10.2 Commission's Analysis

The Commission has estimated the Capital Base and Reasonable Return of TRANSCO for FY 2003-04 and FY 2004-05 in accordance with the Schedule VI of the ESA. The Commission has not considered the loan provided by the GNCTD for supporting the revenue gap as part of the Capital Base. The summary of Capital Base and Reasonable Return as estimated by the Petitioner and as estimated by the Commission is provided in Table 3.32 given below:

Table:3.32 Capital Base and Reasonable Return (Rs. Crore)

	FY 2003-04			FY 2004-05	
	Order	**Petition**	**Commission**	**Petition**	**Commission**
Original cost of fixed assets (excl consumer contribution)	671	700	714	750	791
Cost of intangible assets	0	0.7	1	0.5	0
Original cost of WIP	247	105	43	358	77
Compulsory investments	0	0	0	0	0
Amount of working capital as sum of:					0
Average cost of stores	3	6	6	7	7
Average cash & bank balance	9	9	9	9	9
Sub- total	**931**	**820**	**772**	**1124**	**885**
Amount written off or set aside on account of depreciation of fixed / intangible assets	243	276	236	323	263
Amount of loan from State Govt	398	1260	123	414	249
Loan from Holding Company	270	0	270	0	270
Debenture issues/commercial loan		0	0	0	5
Amounts deposited in cash with licensee by consumer by way of security	0		0	0	0
Sub-total	**912**	**1536**	**629**	**737**	**786**
Net Capital Base	**19**	**(715)**	**143**	**388**	**99**
16% return on capital base	3		23	62	16
Return on borrowed funds	3		2		3
Total Reasonable Return	**6**		**25**	**62**	**18**

3.11 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 summarised in Table 3.33 given below:

Table:3.33 Total Revenue Requirement

(in Rs. Crore)

Description	**FY 2003-04**		***FY 2004-05***	
	Petition	**Commission**	**Petition**	**Commission**
Expenses (A)	**5070**	**4905**	**5774**	**5007**
Return (B)	0	25	62	18
Non-Tariff Income (C)	72	85	77	77
Penalty				1
Revenue Requirement (A+B-C)	**5000**	**4845**	**5759**	**4948**

4. Tariff Philosophy and Determination of Bulk Supply Tariff

4.1 Background

The first Tariff Order issued by the Commission for the erstwhile DVB in 2001 was largely in line with the approach mentioned in the Concept Paper issued by the Commission in September 2000, which followed the provisions of the Electricity (Supply) Act, 1948. Subsequently, the DVB was restructured and unbundled into one Generation Company (GENCO), one Transmission Company (TRANSCO) and three Distribution Companies (DISCOMs). The GNCTD issued Policy Directions on November 22, 2001 in exercise of the powers conferred under Section 12 and other relevant Sections of the Delhi Electricity Reform Act, 2000 (DERA), to facilitate the process of privatisation of the unbundled distribution entities of DVB. The Policy Directions specified that the Distribution Licensees would earn a return of at least 16% on their paid up equity capital and free reserves, based on predetermined efficiency parameters for the five-year period from FY 2002-03 to FY 2006-07. Through the Policy Directions, the Commission was mandated to issue the order before bidding for privatisation on determination of the Bulk Supply Tariff payable by DISCOMs to TRANSCO and the opening level of AT&C losses for the three DISCOMs.

The Commission issued the Order on Bulk Supply Tariff and the Opening Level of AT&C losses, on February 22, 2002. The GNCTD, issued another set of Policy Directions on May 31, 2002 in amendment to the Policy Directions issued on November 22, 2001, specifying (i) the trajectory of AT&C losses to be achieved by the DISCOMS as agreed during the bidding process towards privatisation of DISCOMs (Accepted Bid AT&C loss reduction target) over the five year Policy period, (ii) the loss reduction target specified by GNCTD for bidding process (minimum loss reduction target) (iii) the treatment in tariff in case of underachievement or overachievement in actual AT&C losses with respect to Accepted Bid AT&C loss reduction target and (iv) Minimum AT&C loss reduction target.

Subsequently, the Commission issued the revised "Guidelines for Revenue & Tariff Filing" (Guidelines) on August 23, 2002 to accommodate the framework established by the Policy Directions. The DISCOMs and the TRANSCO filed their ARR Petitions for FY 2002-03 (9 months) and FY 2003-04 during November and December 2002 in accordance with the revised Guidelines. The Commission after a detailed analysis of the Petitions and following due public process issued its Order on these Petitions, on June 26, 2003, in line with the Policy Directions and the tariff philosophy adopted by the Commission.

4.1.1 Elements of Policy Directions

There are four important elements in the Policy Directions issued by the GNCTD, which are relevant from the point of view of tariff philosophy. First, the retail tariffs in the State have to be uniform over the tenure of Policy Directions i.e. FY 2006-07. Second is the determination of a Differential BST payable to TRANSCO for power purchase by each DISCOM based on the paying capacity of the respective DISCOMs. Third is the aspect of Government Support for bridging gap of TRANSCO and lastly, the concept of AT&C loss and the treatment of over/under achievement in AT&C losses by the DISCOMs. All these aspects of Policy Directions have been explained in detail in the Commission's Orders dated June 26,2003

The requirement of uniform retail tariff across all the DISCOMs in Delhi implies that the tariff for a particular category of consumer shall be uniform till the end of FY 2006-07, irrespective of geographical location of the consumer within the NCT of Delhi. This requires that the uniform retail tariff for all the DISCOMS have to be determined by considering the ARR of TRANSCO and all DISCOMs simultaneously, after providing a minimum of 16% return for each DISCOM. The determination of Bulk Supply Tariff have to be inter-linked with revenues through the retail tariff and individual parameters including AT&C losses of DISCOMs. Further, the other important aspect of Policy Directions is the support envisaged to be provided by GNCTD to TRANSCO to bridge the revenue gap of the TRANSCO and the Bulk Supply Tariff it receives from the DISCOMs. The provisions of the Policy Directions in this regard are as follows:

"The Government will make available to Transmission Company an amount of upto, approximately, Rs. 3450 Crore during the period 2002-03 to 2006-07 as loan to be repaid by the Transmission Company to the Government in a manner agreed to between the Transmission Company and the Government".

The Policy Directions laid down performance targets/efficiency level to be achieved by the Distribution Companies measured in terms of AT&C loss. Following the principles specified in the Policy Directions, the determination of AT&C loss involves estimation of three parameters, i.e., T&D loss, collection efficiency, and units realised. T&D loss is the difference between the units input to the DISCOM and units billed by the DISCOM, expressed in terms of ratio of energy input to the DISCOM. Collection efficiency is the ratio of the amount collected to the amount billed and units realised is the product of units billed and collection efficiency. AT&C loss is the difference between units input and units realised, expressed as a percentage of units input. In the Commission's Order issued on June 26, 2003, the Commission has explained in detail, the method of determination of AT&C losses. The Commission also discussed in detail, the impact of lag in the collection and billing and analysed sample data collected from the Central East Delhi Electricity Distribution Company (BSES Yamuna Power Limited) to examine whether lag in billing and collection needs to be factored in the AT&C loss computations. The results of the analysis showed that, although the AT&C loss for a particular month might be very high or low, the overall AT&C loss for the year follows a definite trend and has minimal variation. Hence, the Commission concluded that the impact of time lag is minimal and that it may not be necessary to differentiate between the collection efficiency with time lag and without time lag.

4.1.2 Treatment of Over Achievement and Under Achievement of Efficiency Targets

The amendment to the Policy Directions issued by the Government on May 31, 2002, further elaborates the method of treatment of overachievement and underachievement over the period FY 2002-03 to FY 2006-07. The relevant provisions have been reproduced below:

"2. The following shall be the method of computation and treatment of over-achievement and underachievement for the years 2002-03 to 2006-07:

i) In the event the actual AT&C loss of a distribution licensee in any year is better (lower) than the level based on the minimum AT&C loss reduction levels stipulated by the Government for that year the distribution licensee shall be allowed to retain 50% of the additional revenue resulting from such better performance. The balance 50% of additional revenue from such better performance shall be counted for the purpose of tariff fixation.

ii) In the event the actual AT &C loss of a distribution licensee in any year is worse (higher) than the level based on the AT&C loss reduction levels indicated in the Accepted Bid for that year, the entire shortfall in revenue on account of the same shall be borne by the distribution licensee.

iii) In the event the actual AT&C loss of a distribution licensee in any year is worse (higher) than the level based on the minimum AT&C loss reduction levels stipulated by the Government for that year but better (lower) than the level based on AT&C loss reduction levels indicated in the Accepted Bid for that year, the entire additional revenue from such better performance shall be counted for the purpose of tariff fixation.

Provided further that for paras 2(i), 2(ii) and 2(iii) above, for every year, while determining such additional revenue or shortfall in revenue the cumulative net effect of revenue till the end of the relevant year shall be taken, in regard to over-achievement/underachievement and appropriate adjustments shall be made for the net effect."

The Commission has already elaborated upon the treatment of over/under achievement as per the provision of Policy Directions in its Orders on ARR Petitions of DISCOMs for FY 2002-03 and FY 2003-04 issued on June 26 2003.

4.1.3 AT&C Losses for FY 2002-03 and FY 2003-04

The Commission while determining the ARR of DISCOMs for FY 2002-03 had considered the actual AT&C losses and AT&C loss reduction trajectory in Policy Direction framework. During FY 2002-03, two of the DISCOMs (NDPL and BYPL) under-achieved the AT&C loss reduction vis-à-vis their corresponding bid level targets. For these two DISCOMs, the Commission for computing the ARR for FY 2002-03 had considered the AT&C loss for FY 2002-03 considering the bid level AT&C loss reduction target as per the provisions of Policy Directions. The third DISCOM (BRPL) over-achieved the AT&C loss reduction vis-à-vis its bid level target and hence the Commission had considered the actual AT&C loss while computing the ARR as per the provisions of Policy Directions in case of over-achievement in AT&C loss reduction as compared to bid level target.

For FY 2003-04, the Commission, had considered the closing AT&C loss level of FY 2002-03 determined considering the bid targets as the opening level for FY 2003-04 for two DISCOMs (NDPL and BYPL), due to under-achievement of AT&C loss reduction vis-à-vis the bid level target. For BRPL, the Commission had considered the opening level of AT&C loss for FY 2003-04 as the actual loss level at the end of FY 2002-03 due to company's over-achievement of AT&C loss reduction vis-à-vis the bid level target. This effectively implies that the over achievement in AT&C loss during one particular year had been considered for succeeding years.

Subsequent to the Commission's Order dated June 26, 2003, BRPL filed the Review Petition on the Order on ARR for FY 2002-03 and FY 2003-04 issued by the Commission, in which BRPL in addition to other issues had also raised an issue that as per the Policy Directions the over achievement in AT&C loss reduction during one particular year cannot be considered for determining ARR and Tariffs for succeeding years.

The Commission issued its Order on Review Petition filed by BRPL on November 25, 2003 in which the Commission has detailed out the rationale for considering over achievement in AT&C loss reduction during one particular year for succeeding years. The Commission's views on this issue as detailed out in Order on Review Petition filed by BRPL are as follows:

> "The Policy Direction issued by the GNCTD on May 31, 2002 has clarified that the cumulative net effect of revenue has to be considered. However, in the absence of an illustrative example for the sharing mechanism as suggested by the Commission, the Commission had to form its own interpretation of the Policy Directions.
>
> Reduction in AT&C loss level is indicative of improvement in operation performance; therefore, any reduction in the loss level achieved during any particular year gets considered while setting targets for loss level reduction to be attained during subsequent year. Thus, the Commission has adopted the methodology entailing carrying forward of any over-achievement in AT&C loss during any particular year on to the next year for the purpose of tariff determination in the Tariff Order".

However, as this is a matter of interpretation of Policy Directions and this issue will have substantial impact on the future ARR and Tariff Determination process, the Commission felt it appropriate to seek clarifications from GNCTD on the methodology to be followed for treatment of over-achievement in AT&C losses in any particular year for the future.

The Commission requested the GNCTD to provide clarification on the issue of treatment of under/over achievement vis-à-vis AT&C loss targets in the context of the interpretation of Para 2 of the Policy Directions notified on May 31, 2002, vide letter No. F.11 (42)/DERC/2003-04/3719 dated November 5, 2003. In response, the GNCTD, in its letter No. F11 (118)/2001-Power/Partfile/2336 dated December 26, 2003, has given its clarifications on the points raised by the Commission. In addition to explaining the treatment of under/over achievement of AT&C losses, the GNCTD has explained the proviso to Para 2 of the Policy Directions issued on May 31, 2002, on the question of cumulative effect of the AT&C loss achieved by the DISCOMs. The GNCTD in its letter stated that

"The proviso again has no effect on the annual AT &C loss reduction targets, but only related to the determination of additional revenue or shortfall in revenue on account of over-achievement or under-achievement of the loss reduction targets……….. …….The intention of proviso was only to give the DISCOMs the benefit of certain financial adjustments in respect of financial consequences of underachievement or over achievement and has no effect on the AT & C loss reduction targets themselves. Indeed the idea of shifting the targets themselves would be contrary to the whole scheme of policy directives. Again, if the targets themselves were likely to shift upwards on over-achievement, it would not only imply serious disincentive for loss reduction, but might equally have led to demands for a corresponding revision in case of underachievement. It would not, therefore be consistent with the Policy Directions to shift the targets. "

The Government along with the letter providing clarification on this issue also attached the illustrative examples (hypothetical situations) of underachievement and overachievement in different years and how the cumulative net effect ought to be taken into account.

4.2 Treatment of Over/Under Achievement in AT&C Losses

The Commission while estimating the ARR has duly considered the clarification on this issue of treatment of overachievement in a particular year. Accordingly, the Commission has not considered overachievement in a particular year for determining an opening level of AT&C loss for the next year. The Commission has also considered an adjustment of additional revenue due to overachievement in a particular year against a loss in revenue due to underachievement in the previous years.

4.3 Capital Investment Plan

The Commission has analysed in detail the capital investment plan of TRANSCO and each DISCOM while analysing the ARR of respective Company. However, considering the huge capital investments proposed by two DISCOMs (BRPL and BYPL), and their impact on ARR and tariffs, the Commission felt it appropriate to discuss the Investment Plan of TRANSCO and DISCOMs together as a part of tariff philosophy. Accordingly, the Commission in this Section has detailed the

Investment Plan proposed by TRANSCO and DISCOMs, the Commission's views on Investment Plans, need for integrated approach between TRANSCO and DISCOM for planned development of the system, impact of investment plan on ARR and proposed treatment for huge investments over and above the normative level of investments to make these investments tariff neutral.

4.3.1 Investment Proposal of the TRANSCO and DISCOMs

4.3.1.1 Investments Proposed in the ARR Petitions

In their ARR Petitions, the TRANSCO and the DISCOMs have proposed investments as given in Table 4.1 below for FY 2004-05 and have also projected the magnitude of investment over the remaining Reform Period (i.e., from FY 2004-05 to FY 2006-07):

Table 4.1: Capital Investment Proposal by TRANSCO & DISCOMs

(Rs. Crore)

Company	FY 2004-05	Indicative Investment Plan over FY 2004-05 to FY 2006-07
BRPL	1177	1402
BYPL	1565	1700
NDPL	307	860
TRANSCO	328	Not Submitted

The DISCOMs have stated that they have proposed investments for FY 2004-05 to cater to the following requirements:

- System development and strengthening of system to meet the growth in load and improve the reliability;
- Reduction in system losses;
- Automation and other improvements to improve customer service;
- Installation of capacitors;
- Energy Auditing;
- Fulfilment of social obligations (such as electrification of JJ colonies);
- Consumer deposit works.

NDPL and TRANSCO have continued with a phased investment approach to meet the system requirements. However, two of the DISCOMs, viz., BRPL and BYPL, have proposed to accelerate the entire process of modernisation and augmentation of the system in FY 2004-05, instead of continuing with the approach of phased investments every year. BRPL and BYPL have opined that a complete revamp and augmentation of the existing system is essential to improve the reliability and quality of supply and to minimise the losses. They have stated that gradual improvements in the system would not be the optimal approach.

4.3.1.2 Impact of the Accelerated Investment on the Annual Revenue Requirement (ARR)

The proposal of accelerated investment as compared to the normative levels of investment would result in higher costs in the initial years due to increase in depreciation, interest, O&M costs and return on equity and free reserves.

The Commission believes that the acid test for accepting these proposals of accelerated investments is that there should be no impact of these investments on ARR for the current year as well as for the future years. In other words, these investments should be tariff neutral.

4.3.1.3 Comparison of the investment proposal

The Commission is concerned about the impact on the tariff to the consumers arising from the substantially high capital investment proposed for FY 2004-05 by two of the DISCOMs by advancing the capital expenditure of future years to FY 2004-05.

The investment proposal of the DISCOMs when compared with the investment requirement projected by the Technical Consultant to the GNCTD at the time of the restructuring of the erstwhile Delhi Vidyut Board (DVB) and privatisation of DISCOMs indicates that the proposal by the DISCOMs is at variance with what was envisaged. The Technical Consultant had envisaged investments as given in Table 4.2 below for the DISCOMs for a period of five years from FY 2002-03 to FY 2006-07:

Table 4.2: Investment envisaged at the time of restructuring

(Rs. Crore)

DISCOM	2002-03	2003-04	2004-05	2005-06	2006-07	Total
Central East (BYPL)	66	75	67	75	75	357
South West (BRPL)	65	74	66	74	74	352
North North West (NDPL)	57	65	58	65	65	310
Total	**187**	**213**	**191**	**214**	**214**	**1019**

Additional investment requirement beyond the level of investment envisaged prior to the restructuring would have a corresponding impact on the ARR and tariff increase beyond the level envisaged earlier.

4.3.2 Study for need of investment in Delhi Power Sector by CEA

To establish the need for investments in the Delhi Power Sector, the Commission has considered the Comprehensive Study Report on the Transmission and Sub-transmission System of Delhi prepared by the Central Electricity Authority (CEA) in March 2004, for the X Plan (upto FY 2006-07). The CEA has assessed the proposed network addition by the TRANSCO, BRPL and BYPL. CEA has identified the capital works that need to be implemented in the X Plan Period. The Report highlights the following findings and recommendations:

- *The TRANSCO should expeditiously complete the ongoing works for strengthening the transmission system in Delhi. The TRANSCO should provide requisite number of bays in their grid substations for supplying power to BRPL and BYPL network.*

- *The new lines and substations planned by BRPL and BYPL are such that all lines and substations are optimally loaded. The sub-transmission works for strengthening/reinforcement of the system in BRPL and BYPL area for meeting power demand during the X Plan period have been identified. CEA has suggested 17 nos. of 66 kV and 13 nos. of 33 kV substations along with new 66 kV and 33 kV lines/cables for meeting the growth in load.*

- *CEA has suggested that the 11 kV and 0.4 kV works should be implemented to correspond to the commissioning of the 66 kV and 33 kV substations.*

- *CEA has recommended that BRPL and BYPL may identify and replace the old switchgears and cables wherever it is necessary.*

- *CEA has recognised the need to constitute a Standing Committee comprising senior officers of TRANSCO, BRPL and BYPL in order to coordinate and sort out the issues arising during implementation and timely completion of the works as per the target.*

The Report has recognised the need for substantial augmentation and investment in the Delhi Power System till FY 2006-07.

CEA in its report has identified the capital investments, which are significantly higher than the investments identified by the Technical Consultants at the time of restructuring which were considered in the Financial Restructuring Plan prepared at the time of restructuring and privatisation. The CEA has carried out this study recently and hence this study reflects the need of the system based on the prevalent network conditions. Hence, the Commission considers the CEA Report as the base while assessing the capital investment plan.

4.3.3 Assessment of past investment performance

While the Commission has to be satisfy itself about the need for the investment, the Commission also has to consider the feasibility of implementing the proposed investments to ensure that the system benefits from the proposed investments and does not get loaded with the cost of delayed/incomplete investments.

Over the past 2 years, the actual track record of the DISCOMs and TRANSCO in implementing investment schemes does not impart confidence in the ability of the DISCOMs and TRANSCO to implement the proposed investments. The Table 4.3 below summarises the investments approved by the Commission in its ARR and Tariff Order dated June 26, 2003 and actual investment achieved by the DISCOMs and TRANSCO for FY 2002-03 and FY 2003-04:

Table 4.3: Investment Implementation Performance

(Rs. Crore)

Petitioner	FY 2002-03		FY 2003-04	
	Order for FY 2003-04	Actual	Order for FY 2003-04	Actual
TRANSCO	43	44	341	85
BRPL	76	31	423	88
BYPL	56	36	336	71
NDPL	165	49	287	226
Total	**340**	**160**	**1387**	**470**

From the above Table, it is evident that the actual capital expenditure incurred by the TRANSCO, BRPL and BYPL is significantly lower than the capital expenditure approved by the Commission in its Order for FY 2002-03 and FY 2003-04. The Commission has considered implementation performance while approving investments for FY 2004-05.

4.3.4 Assessment of the proposed investments

The Commission is deeply concerned about the substantial underachievement in the progress of the much needed capital works for the second year in succession, and its consequent impact on AT&C loss reduction, system augmentation, load shedding, reliability and safety of the Delhi Power System. The Commission had a meeting with the Senior Management team of the TRANSCO and DISCOMs on April 28, 2004 to emphasise the need for corrective action so as to ensure that the Reform Process achieves the desired objectives.

During the Technical Sessions, the Commission sought details of cost-benefit analysis for the proposed investments to assess the prudence of the proposed investments. This was sought, separately for each of the schemes, as well as the cumulative savings/benefits arising out of all the proposed schemes including the over-achievement in AT&C loss reduction.

During the Technical Sessions, the Commission directed the Petitioners to explain their preparedness to execute the Capital Expenditure proposed during FY 2004-05, including the orders placed, implementation schedule of major schemes and the source of funding along with supporting documents.

The Commission has also recognised the need for an integrated and co-ordinated approach between the TRANSCO and the three DISCOMs for a pragmatic Capital Expenditure Plan. CEA, in its Report referred earlier, has also stressed upon the co-ordinated development of the system. An integrated and co-ordinated approach amongst TRANSCO and DISCOMs is a must for system augmentation and improvement to ensure that the benefits of system improvement are available to the end consumer. Any unreliable or weak link in the chain would weaken the entire chain and any over-strengthening or redundancy will cause unwarranted burden on tariffs in initial years. Till the system is augmented at transmission level, substantial capital works towards augmenting the system at distribution level will not result in substantial benefits to the consumers. Similarly, investments in transmission system would not yield intended benefits to consumers if adequate investments were not made in the distribution system. It is, therefore, essential that the system improvement should be carried out on a holistic basis. In this regard, the Commission directed the DISCOMs to co-ordinate with TRANSCO and finalise the Capital Investment Plan for FY 2004-05 considering the study carried out by the CEA as the base document.

4.3.5 Revised investment proposal of DISCOMs and TRANSCO for FY 2004-05

In its subsequent submissions, TRANSCO has attributed the delay in implementation of the projects to the lower sanction of funds by GNCTD as compared to the level of proposed investments. The TRANSCO has further submitted that they have obtained the sanction from PFC to undertake investments beyond the funds made available by GNCTD.

BRPL and BYPL have pointed out that they have undertaken and completed a detailed network optimisation study with the help of internationally reputed agencies, viz., ABB and Alstom, for following an integrated approach towards capital investment. They have mentioned that they are geared up for accelerated and timely execution of the projects. During the Technical Sessions, the Commission directed BRPL and BYPL to submit the Report on Network Optimisation Study carried out by ABB and Alstom. However, BRPL and BYPL have submitted a Report on Network Upgradation based on an in-house review and study of the results of the Network Optimisation Study carried out by ABB and Alstom.

In the subsequent submissions, BRPL has indicated that it has proposed an investment of Rs. 312 Crore towards reduction of AT&C loss, out of the total proposed investment of Rs. 1284 Crore. BRPL has estimated the benefit on this account as Rs. 19 Crore in FY 2004-05, Rs. 57 Crore in FY 2005-06, Rs. 82 Crore in FY 2006-07 and Rs. 88 Crore in each subsequent year. BYPL has indicated that it has proposed an investment of Rs. 369 Crore towards reduction of AT&C loss out of the total proposed investment of Rs. 1568 Crore. BYPL has estimated that this investment is likely to yield a benefit of Rs. 23 Crore in FY 2004-05, Rs. 72 Crore in FY 2005-06, Rs. 115 Crore in FY 2006-07 and Rs. 117 Crore in each subsequent year.

BRPL and BYPL have highlighted other benefits accruing from the investment plan in addition to the AT&C loss reduction:

- Increase in reliability and improvement in quality of power coupled with improved safety and environment friendly infrastructure;
- Meeting the growing demand of existing consumers;
- Better customer services, making available information to consumers about services and better utilisation of power supply;
- Long term benefit of reduction of cost of service.

In the subsequent submissions, all the Petitioners have submitted brief information on the status of proposed investments and proposed means of finance.

4.3.6 Ensuring tariff neutrality of the Accelerated Investment Proposal

The Commission has to assess the following to ensure that the accelerated investments are tariff neutral:

- Assess the cost benefit of the schemes and approve the viable schemes;
- Ensure that the planned investments materialise in a timely manner and benefits accrue to the system, by ensuring that the system is not burdened with the cost of delayed/incomplete projects;
- Ensure co-ordination between TRANSCO and DISCOMs so that the entire chain in the system is established and the benefit of the investment reaches the end consumer;
- Assess the impact of the investment on the tariff and approve the investment such that only the needed investments are taken up and it does not result in a tariff shock to the consumer.

The Commission convened a meeting with the Senior Management team of the TRANSCO and DISCOMs on April 28, 2004 to discuss its concern on the impact of investments on the tariff to the consumer and to find a solution to make the investments tariff neutral.

In the subsequent submissions, BRPL and BYPL have estimated that the higher costs due to the accelerated investment as against phased investment would be recovered through a higher reduction in AT&C losses over and above the committed levels. They have further pointed out that accelerating the investment would result in significant early improvement in reliability and quality of supply. They have further proposed that the differential higher expenditure on account of accelerated investment as compared to the normative expenditure be carried forward as a regulatory asset in case the realisation of financial benefits in the initial years is not sufficient to offset the entire estimated higher expenditure, as there could be a time lag between incurring of expenditure and resultant improvement. They have proposed that the regulatory asset on the books can then be amortised over a period of time, through increase in tariffs based on the normative investment levels only. They have suggested that the normative expenditure in subsequent years should be based on notional investment that would have been allowed had the Licensees not made the front-ended investment.

The Commission has assessed the implications of the proposed investments in Delhi's Power Sector. For assessing the need of the investments, the Commission has considered the Comprehensive Study Report on Transmission and Sub-transmission System prepared by CEA and the submission of BRPL and BYPL based on in-house review and study of the results of the Network Optimisation Study carried out by ABB and Alstom. Based on the Report prepared by CEA, the Commission recognises the need for substantial investment in Delhi's Power Sector. The Commission believes that the capital expenditure is essential for salvation of Delhi's Power Sector.

For assessing the need, prudence and viability of the investments, the Commission had directed the Licensees to submit additional information to which the Licensees have only partly complied with. The Commission would also like to highlight that the approval of the schemes has to be undertaken separately from the ARR and Tariff Determination process, as it requires significant time and resources of the Commission to analyse the same. **The Commission directs the Petitioner to submit the complete DPR along with cost-benefit analysis for schemes more than Rs. 2 Crore for obtaining the scheme-wise investment approval from the Commission as per the terms and conditions of the License for Transmission and Bulk Supply and Distribution and Retail Supply of Electricity respectively within a month from the date of the issue of this Order. The Commission further directs that the Petitioners should submit a separate Petition for approval of schemes for FY 2005-06, by September 2004.**

To ensure that the investments are synchronised, the Commission has initiated an interaction between the TRANSCO and DISCOMs for co-ordinated development. As mentioned in Chapter 3, **In line with the recommendation of the CEA, the Commission directs the Petitioner to form a Steering Committee, with one member as Commission's Representative, within 7 days of the date of issue of this Order. The Steering Committee would be responsible for developing an integrated and consolidated implementation plan and monitoring thereof. The Commission directs the TRANSCO and DISCOMs to submit the consolidated plan within 15 days of the date of issue of this Order and submit quarterly monitoring reports thereafter.**

Considering the present status of preparedness of the proposed investment and need for integrating the implementation plan, the Commission is of the opinion that it is not prudent to allow the full investments proposed by TRANSCO and DISCOMs. Hence, the Commission has approved the investment plan at the normative level. If the DISCOMs are able to implement the investment beyond the approved normative level during FY 2004-05, then the differential cost arising out of such investments subject to a check on their prudence, to the extent they are compensated by the associated financial benefits, would be allowed during the truing up. Any additional cost arising of such investments subject to prudence check beyond the limit of associated financial benefits may be considered, as a regulatory asset, as has been suggested by BRPL and BYPL. Such regulatory assets may be amortised through future financial benefits arising out of such investments.

4.4 'Truing up' Mechanism

In the Order issued by the Commission in June 26, 2003 on the ARR Petitions filed by TRANSCO and DISCOMs, the Commission had relied on the information available at that point of time and also projected the sales, expenses and revenues while determining the Annual Revenue Requirement for FY 2003-04. The Commission recognised the fact that at the end of the year, the actual sales, expenses and revenues can be different vis-à-vis the projections made by the Commission in its Order. The Commission had detailed its view that the licensees have to be compensated to the extent of variations, which are beyond their control, subject to prudence of the expenses, to ensure their financial viability. In the said Order, the Commission instituted a process of 'Truing up' at the end of the year, based on the actual expenses/revenues, considering the prudence of such variations over the approved levels. Further, the Commission clarified that while approving such expenses/revenues to be recovered in the future years, the holding costs of the same would also be allowed. The Commission is of the view that the holding costs should be limited to the rate approved for working capital borrowings, as these requirements should be financed out of short-term funds.

During the process of ARR for FY 2004-05, the audited accounts for FY 2003-04 for two out of the three DISCOMs, viz., BRPL and BYPL, have been submitted to the Commission and the provisional accounts have been submitted in the case of NDPL. The Commission has, therefore, decided to true up the ARR for FY 2003-04 based on the actual expenses and revenue for FY 2003-04 and consider the difference between the actual expenses and revenue in FY 2003-04 vis-à-vis the approved levels, if any, subject to prudence, in the ARR for FY 2004-05. According to the Commission's estimates, the total expense to be carried over to FY 2004-05 after truing up for FY 2003-04 is Rs. 142 Crore for the sector.

4.5 Treatment of DVB Arrears

According to the provisions of the Transfer Scheme, the amount of DVB arrears realised by the DISCOM shall be shared between in the Holding Company and DISCOM in the ratio of 80:20. The Commission in its previous Tariff Order dated June 26, 2003 has deliberated on this issue and the Commission's views on this issue as mentioned in Tariff Order dated June 26, 2003 are as follows:

"In the Transfer Scheme, notified by the Government of NCT of Delhi on 20th November 2001, the following has been stated:

"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 authorised to realise the receivables of the Holding Company in their respective area of supply. Upon realisation of such receivables of the Holding Company the same shall be shared between the Holding Company and the DISCOMs in the ratio 80:20".

These specified receivables are the past dues against the power sold by the erstwhile Delhi Vidyut Board (DVB), prior to it's restructuring. These receivables have been passed on to the distribution companies and are reflected in their balance sheets, as assets. According to the terms of the

Transfer Scheme, the Holding Company is to receive 80% of the receivables while the balance 20% would be retained by the distribution companies. In the ARR Petitions filed by the three distribution companies, while 20% of the receivables have been accounted as non-tariff income, the remaining 80% is treated, as expense, and passed on to the Holding Company. This would, of course, increase the revenue gap, which would, in turn, imply that tariffs would have to be raised.

It is the considered view of the Commission that the 80% of the receivables, which is going to the Holding Company, should, in fact, go to Delhi Transco Ltd., to be ploughed back into the sector. This would be the most logical course of action since at the time of the calculation of the Bulk Supply Tariff in February, 2002, the entire receivables was taken into account as an income being generated within the sector. It is to be borne in mind that, as mentioned above, in case 80% of the receivables is repatriated to the Holding Company, the consumers of Delhi would have to incur the burden by way of an enhanced tariff shock. In this context, the Commission also notes that in determination of AT&C losses, no distinction is made between the amounts realised against current billing and amounts realised against the past receivables. The Commission is of the view that it could not possibly have been the intention of the GNCTD, while drafting the Transfer Scheme that the expense is passed on to the consumers. It would, indeed, be ironical if the consumers of Delhi were to bear the burden of the receivables, estimated at close to Rs. 200 Crore during financial year 2002-03 (09 months) and financial year 2003-04, in the post privatisation period. ***In view of the above, the Commission asks the GNCTD to revisit this matter and issue an appropriate amendment to the Transfer Scheme. In so far as the present Petitions are concerned, the Commission has considered 80% of the collected arrears remaining within the sector while determining the annual revenue requirements."***

The GNCTD has reviewed the matter and issued a clarification through letter No.F.11(99)/2001-Power/531 dated March 31, 2004 that the original Transfer Scheme would remain as it is and the receivables against DVB arrears would be shared between the Holding Company and the DISCOMs in the ratio of 80:20 respectively.

The Commission feels that it would be equitable and fair if the revenue realised on account of recovery of arrears remain in the sector and as recommended in the Tariff Order dated June 26, 2003, are passed on to the Delhi Transco Limited, instead of the Holding Company. Accordingly, the Commission vide its letter dated April 25, 2004 had again requested the Government to reconsider the matter in the interest of consumers of Delhi as under.

- *"On the issue of past receivables, known as "arrears", it may be stated that the Order issued by the Commission in February, 2002, the "arrears" were treated as a part of the revenue stream while determining the opening levels of AT&C losses and BST. This, in other words, meant no outflow of the revenue outside the sector.*

- *In case, the revenue stream is treated as an expense stream as has been envisaged in the transfer scheme, it would alter the conclusion arrived at earlier. In the instant case, the opening AT&C losses and the BST would get a completely different dimension, while the AT&C losses and the BST would get a completely different dimension, while the AT&C loss levels would go up, the BST will come down.*

- *As a result of higher opening AT&C losses and lower BST as brought out above, the loan assistance of Rs. 3450 Crore to Transco shall also go up considerably.*

- *The entire past "arrears" were a part of the revenue stream in the pre-restructuring era. As a part of the transfer scheme, the receivables are envisaged to be shared between the Holding Company and the DISCOMs in the ratio of 80:20 respectively. In the revenue stream, the 80% share of Holding Company becomes an expense. It would thus be discriminatory in regard to treatment of past "arrears".*

In terms of details:

- <u>*An amount of Rs. 210 Crore has been estimated as receivables during the year 2003-03 and 2003-04. After accounting for the same to remain within the sector by way of outflow to Transco (and not Holding Company), the remaining revenue gap of s. 87 Crore required an overall increase of tariff by 5.6%. Obviously the tariff would have been far far higher had the "expense" of Rs. 210 Crore was also to be provided for by way of tariff increase.*</u>

- <u>*There are estimates which suggest that the total "arrears" of the erstwhile DVB could well be around Rs. 2000 Crore. Going by the transfer scheme, this would lead to a heavy burden on the consumers of Delhi.*</u>

- <u>*It shall be ironical if the collection of past "arrears" from the defaulters (during DVB time) is to be shared by the other law-abiding consumers by way of increased tariff for no fault of theirs.*</u>

<u>*Considering the above aspects, the Commission strongly feels that it would only be equitable and fair if the revenue realised remain in the sector and as recommended in the Tariff Order of 26th of June 2003, are passed on to the Delhi Transco Limited, instead of the Holding Company. The Commission would, therefore, again make an earnest request to the Government to reconsider the matter in the interest of the consumers of Delhi who otherwise will have to bear an unwarranted huge tariff shock."*</u>

The GNCTD further replied on June 4, 2004 mentioning that the Government has reviewed the matter and the original Transfer Scheme would remain as it is and the receivables against DVB arrears would be shared between the Holding Company and the DISCOMs in the ratio of 80:20 respectively.

As discussed in earlier Sections, the Commission is of the opinion that it will not be fair at all to pass on the burden of past receivables of the sector to consumers of Delhi as also this will warrant huge tariff shock to consumers. The 80% of total receivables for three years i.e. FY 2002-03, FY 2003-04 and FY 2004-05 works out to around Rs. 300 Crore. In case these receivables are to be passed on to Holding Company instead of TRANSCO as envisaged in Commission's Order dated June 26, 2003, these receivables along with carrying cost on arrears of FY 2002-03 and FY 2003-04 has to be considered as expense in ARR, which will increase the Revenue Gap by around Rs. 330 Crore. To bridge this additional sector revenue gap of Rs. 330 Crore, the tariff increase required will be around 9%. It in not ending here and infact more and more past arrears will be collected by DISCOMs in future years and if these arrears will go out of the sector, this will lead to increase in tariffs in future. Considering these aspects, the Commission vide its letter dated June 7, 2004 has again approached the Government so as to protect the consumers of Delhi from unwarranted tariff hike. Accordingly, the Commission while estimating the ARR and Revenue Gap has considered 80% of the collected arrears remaining within the sector as revenue to TRANSCO.

4.6 Sector Revenue Gap at Existing Tariffs with Government Support

The total sector revenue gap estimated by the Commission for FY 2004-05 is Rs. 1072 Crore including the revenue gap for FY 2003-04 due to truing up of expenses and revenue. The details of the revenue gap as estimated by the Petitioners for FY 2003-04 (truing up) and FY 2004-05 and the revenue gap as approved by the Commission is provided in Table 4.4 below:

Table 4.4: Proposed and Approved Revenue Gap for FY 2003-04 and FY 2004-05 (Rs Crore)

	2003-04		2004-05		Total (for 2 years)	
	Petition	Commission	Petition	Commission	Petition	Commission
NDPL	370	29	316	(-)5	685	24
BRPL	232	10	328	16	560	26
BYPL	102	48	235	20	336	68
DTL	641	55	2305	1589	2946	1644
Total	**1345**	**142**	**3183**	**1620**	**4528**	**1762**
Govt Support*			690	690	690	690
Transco Rev Gap after Supp		60	1615	899	2256	954
Net Revenue Gap	**1345**	**142**	**2493**	**930**	**3838**	**1072**

* Govt Support for FY 2003-04 considered while estimating the ARR and Revenue Gap of TRANSCO

The figures for FY 2003-04 have been arrived at after considering the actual expenses and revenues of the TRANSCO and DISCOMs in comparison with the approved level of expenses and revenues for FY 2003-04. The total sector revenue gap for FY 2004-05, including the carried forward amount of Rs. 142 Crore pertaining to FY 2003-04 due to truing up, is Rs. 1762 Crore. Considering the revenue at existing tariff, the gap for FY 2004-05 is estimated to be about 48% of the revenue of all the DISCOMs.

As mentioned above, while issuing the Policy Directions, the GNCTD has committed to provide Rs. 3450 Crore during the period FY 2002-03 to FY 2006-07 as a loan to TRANSCO, which is to be used to bridge the gap between its revenue requirement and the bulk supply price that it receives from the Distribution Licensees. The Table 4.5 below shows the committed level of Government support for the period FY 2002-03 to FY 2006-07, as given in the Financial Restructuring Plan approved by the GNCTD.

Table 4.5: Committed GNCTD Support

(Rs. Crore)

Year	FY 2002-03	FY 2003-04	FY 2004-05	FY 2005-06	FY 2006-07	Total
GNCTD Support	1364	1260	690	138	0	3452 (say 3450)

The Commission while in its Order on ARR for FY 2002-03 and FY 2003-04 has taken into consideration the Government Support available to TRANSCO for respective years while estimating the sector revenue gap and for setting the tariffs for FY 2003-04. For FY 2004-05, the extent of Government support available to TRANSO to bridge the revenue gap is Rs. 690 Crore. Considering this, the net revenue gap for FY 2004-05 to be passed on to the consumers is Rs. 1072 Crore. This works out to around 30% of the total revenue from existing tariffs for FY 2004-05.

4.7 Measures to Bridge the Revenue Gap

Considering the quantum of revenue gap the Commission has explored various options to bridge the revenue gap and the options examined by the Commission are discussed in following Sections:

***Option I: Increase in Retail Supply Tariffs*:**

The increase in the revenue requirement determined after prudent regulatory process has to be met through increase in tariffs, as the user charges need to reflect the cost of operations. However, considering the quantum of revenue gap, substantial increase in tariff in the range of around 30%would be necessary, if the entire revenue gap has to be met through revision in tariffs, which would result in a severe tariff shock to consumers.

Option II: Efficiency Improvements

The other option is to assess the expected efficiency improvements and its financial benefits to bridge the revenue gap to certain extent.

Option III : Creation of Regulatory Asset:

This involves deferring the recovery of the revenue gap and staggering it over a longer period, through creation of a Regulatory Asset, to avoid tariff shock to the consumers in the current year.

The details of the above Options and the Commission's approach are detailed in subsequent paragraphs.

4.7.1 Option I: Increase in Retail Tariff

In principle, the Commission is of the view that this Option has to be resorted to only as a final measure after exhausting all other practically available measures. The Commission is of the opinion that the burden on the consumers should be minimised to the extent possible and licensees should operate at efficient levels to bridge the revenue gap. As discussed in earlier Sections, the total sector revenue gap for FY 2004-05 as estimated by the Commission after considering the Government support of Rs. 690 Crore, works out to Rs. 1072 Crore.

At the time of restructuring and privatisation, the GNCTD had initially committed a support of Rs. 2600 Crore for the period of five years FY 2002-03 to FY 2006-07. Accordingly, while issuing the Bulk Supply Tariff Order in February 2002, the Commission considered the Government support to the extent of Rs. 2600 Crore. The Commission in its BST Order with regard to quantum of Government Support to bridge the revenue gap had mentioned as follows:

"The Commission has taken note of the position of the Govt. of NCT of Delhi regarding the issue envisaging turnaround of the Distribution Companies and the viability of the Transmission Company well within five years, enabling TRANSCO to meet the loan liability and at the same time resulting no tariff shocks to the consumers. The Commission is not aware of the assumptions made by the Government to arrive at Rs. 2600 Crore in terms of loss reduction trajectory envisaged and the level of tariff increases. However, the accumulated revenue gap for TRANSCO could be higher or lower than the amount estimated by the Government depending upon the level and structure of future retail tariffs and the committed loss reductions. At this point, the Commission opines that any shortfall in the revenue gap, if any, of TRANSCO during the term of five years over and above Rs. 2600 Crore would have to be bridged in the form of Government support, sector efficiency improvements, any other suitable mechanism or a combination of all of the above, to be decided by the Commission at the appropriate stage."

Subsequently, the Government enhanced the support during the five year period from Rs. 2600 Crore to Rs. 3450 Crore based on assumptions about key parameters which were not provided to the Commission at the time of issuance of amendment to the Policy Directions.

Subsequently, the GNCTD provided the copy of Financial Restructuring Plan prepared at the time of privatisation upon a specific request from the Commission during the processing of the ARR and Tariff Petitions for FY 2002-03 and FY 2003-04.

It may be noted that the Financial Restructuring Plan prepared by GNCTD at the time of privatisation, has assumed an average tariff increases for the period FY 2002-03 to FY 2006-07 as given in the Table 4.6 below:

Table 4.6: Tariff Increases Projected in the Financial Restructuring Plan

(%)

Year	FY 2002-03	FY 2003-04	FY 2004-05	FY 2005-06	FY 2006-07
Projected Tariff Increase	10%	10%	10%	5%	3%

The Commission would like to highlight that the tariff increase projected in the Financial Restructuring Plan and the estimated Government Support were based on broad assumptions for the period FY 2002-03 to FY 2006-07 with respect to increase in sales, consumption mix, loss reduction trajectory, capital investment programme, operational expenses, etc.

The Commission while determining the ARR on year-to-year basis has to consider the actual revenue and expenses, operational parameters and loss reduction of the previous and current year and estimate of the ARR parameters based on the recent trends for the ensuing year. Based on the estimation of ARR for the Transmission Company and Distribution Companies for FY 2002-03 and FY 2003-04, the Commission estimated the Sector Revenue Gap of Rs. 87 Crore for the two years after considering the Government Support of Rs. 1364 Crore and Rs. 1260 Crore for FY 2002-03 and FY 2003-04, respectively. To bridge this estimated revenue gap of Rs. 87 Crore and to compensate for the loss in revenue due to the rationalisation measures undertaken, the Commission increased the tariff by 5.01% for FY 2003-04. Thus, against the 20% average tariff increase assumed in the Financial Restructuring Plan for FY 2002-03 and FY 2003-04, the increase in tariffs required to bridge the revenue gap based on actual assessment for FY 2002-03 and estimations for FY 2003-04 was only about 5%.

As discussed earlier, the Government Support during FY 2004-05 has reduced to Rs. 690 Crore as compared to the amount of Rs. 1260 Crore during FY 2003-04. The reduction in Government Support during FY 2004-05 coupled with other factors as discussed in earlier Sections has resulted in substantial revenue gap at the existing bulk and retail supply tariffs during FY 2004-05. estimated at Rs. 1072 Crore. The tariff increase required to meet the entire gap in FY 2004-05 would be around 30%, which is very high and would result in a severe tariff shock to the consumers. However, the Commission is of the opinion that it is not prudent to increase the tariffs of subsidised categories beyond a certain reasonable level. Further, the Commission is of the opinion that the matter of increase in tariff cannot be considered in isolation and the increase in tariff has to be in tandem with the improvement in quality and reliability of supply and the improvements in the system. The situation in Delhi's Power System has not improved substantially and the consumers of Delhi are still facing the problems of power cuts and interruptions particularly during peak summer and peak winter. The reason for load shedding and interruptions in Delhi is not due to non-availability of power - in fact at transmission level adequate power is available to meet the demand of Delhi. The foremost reason for power cuts and supply of unreliable power in State is the poor condition of distribution network. Two out of three DISCOMs viz. BRPL and BYPL have not improved the system and the actual capital investments on various distribution schemes have been much lower than the capital expenditure plan approved by the Commission. The problems have increased as the load on the system has increased in comparison to the previous year and in absence of adequate capital investments, the old system has been overloaded, due to which the deterioration rate of the existing assets has increased. Because of these reasons the quality of supply has not improved and the interruptions have not been reduced substantially. Apart from the quality of supply, the consumers have been also facing enormous metering and billing problems.

The Commission is of the view that at this stage when the quality of supply has not improved to any great extent and the consumers are facing enormous metering and billing problems, it will not be fair inflict a sharp increase the tariffs on them. Considering all the aspects, the Commission has decided to peg the average tariff increase for FY 2004-05 at 10% resulting in an increase in revenue collected of about Rs. 376 Crore.

The Commission would also like to highlight that the category of consumers worst hit are the domestic consumers with respect to quality of supply. This is the category most affected by the improper distribution network as it receives power at 400 volts and the power cuts are more frequently imposed on domestic consumers and interruptions in power supply to domestic consumers are much higher as compared to other categories. Further, the instances of metering and billing problems are also substantially higher in the domestic category as compared to other categories.

The Electricity Act 2003 provides for reduction of cross subsidies by migrating the category wise tariffs towards the cost of supply, and the Commission would also like to comply with this requirement of the Act. However, the domestic consumers have been historically paying subsidised tariffs and any major shift to remove the cross subsidy at this stage when the quality of supply has not improved and consumers are facing metering and billing problems, will steeply hit the domestic consumers. This aspect (reduction of cross subsidy) shall inherently be addressed to a great extent when the loss levels reach acceptable limits and the revenue requirements on this account shall not call for tariff increase (rather they would come down). Considering these aspects, the Commission has pegged the tariff increase of domestic category to the average tariff increase of 10%. The Commission will attempt to reduce the cross subsidy by moving domestic tariffs towards the cost of supply once the efficiency of operation and quality of supply has improved and metering and billing problems are minimised.

The estimated increase in revenue on account of the tariff revision approved by the Commission is Rs. 376 Crore out of the total unbridged revenue gap of Rs. 1072 Crore. For bridging the balance revenue gap of Rs. 696 Crore, the Commission has explored other options such as efficiency improvements and creation of Regulatory Asset.

4.7.2 Option II: Efficiency Improvements

The Commission has also explored the option of bridging the revenue gap through efficiency improvements. The Commission strongly feels that during the ensuing year FY 2004-05, there is a good chance for substantial overachievement in reducing AT&C losses and the improvement in efficiencies in terms of over achievement in AT&C loss reduction can bridge the estimated revenue gap to some extent. However, as elaborated in earlier Sections, in accordance with the Policy Directions, the Commission is bound to consider Accepted Bid Level AT&C loss reduction target while determining the ARR and setting the tariffs for the ensuing year 2004-05. Therefore, for the said purposes, it is not appropriate to consider efficiency improvements during the ensuing year in terms of over achievement in AT&C loss reduction for bridging the revenue gap.

4.7.2.1 Importance of over achievement of Efficiency Gains

The Commission wishes to highlight the importance of efficiency gains in achieving the goals set out in the reform process. This requires improvements in the functioning of the licensee to over - achieve the performance targets set out in the Policy Directions. The investments made towards system improvement as a part of APDRP including the metering programme and improvements in billing and collection have resulted in some improvement. The significant investments planned under the APDRP scheme, along with other capital and R&M investments approved for FY 2003-04 and FY 2004-05, were not envisaged at the time of bidding. These include system augmentation and commercial loss reduction measures on account of energy audit activities like metering and billing, consumer coding, feeder and Distribution Transformer (DTR) metering, and part outsourcing of metering and billing proposed during the two years. The Commission, therefore, expects that the higher investments during the initial years should lead to a far more aggressive AT&C loss reduction trajectory as compared to the committed loss reduction trajectory.

Based on the submissions by the DISCOMs, the actual AT&C losses reduction achieved by all three DISCOMs in FY 2003-04 was higher than the bid levels for FY 2003-04. Thus the trend of over achievement in AT&C loss reduction target has commenced from FY 2003-04, even when the investments made by two DISCOMs were substantially lower than the investment plan approved by the Commission in its Order of June 26, 2003. While appreciating the efforts put in by the licensees, the Commission expects that this tempo will be continued with added vigour in the coming years and the licensees will strive to surpass the efficiency targets set out in the GNCTD's Policy Directions. The extent of investments proposed by DISCOMs has been discussed in earlier Section. Considering the achievement made in FY 2003-04 and the proposed investment programme, the Commission is optimistic in this regard, and is of the opinion that there will be substantial over achievement in reduction in AT&C loss levels over the bid and minimum levels. A one-percentage point reduction in AT&C losses in the Delhi power sector is expected to result in additional surplus of Rs. 90 Crore in the system at the current level of sales and tariffs. The AT&C loss reduction targets as per the Accepted Bids and Minimum Bid levels stipulated in GNCTD's Policy Directions for FY 2004-05 is about 4% and 4.5 % respectively for the sector.

As per the Policy Directions, the revenues on account of over achievement and under achievement has to be shared between consumers in the form of tariff reduction and DISCOMs based on cumulative underachievement and overachievement in lines with the principles of Policy Directions. Considering the cumulative AT&C loss reduction target for two years FY 2002-03 and FY 2003-04, two DISCOMs i.e. NDPL and BRPL have already over-achieved the AT&C loss reduction and hence the benefit of overachievement in future years will be available in the form of lower ARR from FY 2004-05 onwards. However, in case of BYPL, over achievement in FY 2003-04 does not completely compensate BYPL for under achievement of FY 2002-03. Hence, the over achievement in AT&C loss reduction in future years in BYPL has to first set off against the cumulative under achievement till the end of FY 2003-04. Once the revenue from over achievement is set off against the cumulative underachievement till FY 2003-04, the benefits of over achievement in BYPL will also start flowing in the ARR. By following the mechanism of treatment of overachievement of AT&C loss targets as per the Policy Directions, over achievement of 0.5% in FY 2004-05 will lead to a reduction of around Rs. 30 Crore of revenue requirement of the Sector, as this portion is completely passed on to the consumers. In case the overachievement is higher than 0.5%, the incentive will be shared between the consumers and the licensees, which will again effectively lead to a reduction in ARR of the licensees. However, in the case of years 2005-06 and 2006-07, as the bid level loss reduction targets are higher than the minimum loss reduction target, the entire benefit of over achievement will be shared between the consumers and the licensees. For example 1% improvement in the loss levels over the bid level, will generate additional revenue of Rs. 90 Crore per annum, estimated at current level of tariff and sales. This additional revenue will be shared equally between the consumers and licensee (i.e. Rs. 45 Crore each). This feature highly incentivises the licensees to over achieve and exceed the loss reduction targets.

The Commission further opines that for the success of reform and restructuring and to achieve the viability of the Sector by FY 2006-07, it is essential to exceed the AT&C loss reduction targets as compared to minimum AT&C loss reduction targets stipulated in the Policy Directions.

4.7.3 Option III: Creation of a Regulatory Asset

Need for Regulatory Asset

As discussed in previous Section, the total consolidated revenue gap of all the utilities (TRANSCO and DISCOMs) during FY 2004-05 as estimated by the Commission works out to Rs. 1762 Crore which is 48% of revenue at existing tariffs. The committed support from the GNCTD for FY 2004-05 is Rs. 690 Crore. After considering this Government support, the net revenue gap of the utilities works out to Rs. 1072 Crore. As mentioned earlier, if the entire net revenue gap is to be bridged by increase in tariffs, the average tariff increase required would be to the extent of 30%.

Concept of Regulatory Asset:

Creation of a Regulatory Asset is a mechanism to carry forward a portion of the revenue requirement for a particular year that has not been included while designing the tariffs for that year. The amount equivalent to the Regulatory Assets is thus effectively removed from the revenue requirement for the year in question. Such a situation generally arises when the projected revenues are significantly lower than the revenue requirement and it is not feasible to recover the entire amount either through increase in tariffs or through other means such as Government subsidy during that year. In such situations, the Regulator may choose to create a Regulatory Asset equivalent to the uncovered expenses and allow the licensee to amortise the same over a period of time. The Regulatory Asset mechanism is resorted to mainly to avoid tariff shocks to the consumers in a given year, while at the same time allowing the utility to recover the costs in a reasonable manner so as to protect its interests as well as those of the consumers.

Generally, Regulatory Assets are amortised over a reasonably long period of time, say 3-7 years, so as to even out the sudden increase in tariff. It is also common that over the period of amortisation, financing cost of the outstanding Regulatory Asset and the funds required to retire the Regulatory Asset through amortisation is allowed by the Regulators. In such cases, the Revenue Requirement for the future years would include the amount towards amortisation of the Regulatory Assets as well as the carrying cost of the Regulatory Assets. This allows spreading the impact of tariff increases over a period of time and thereby mitigates the possibility of a rapid and upward pressure on tariffs.

In view of the circumstances in the Delhi Power sector as explained in the above Sections, the Commission feels it is imperative to resort to the mechanism of Regulatory Assets in the interest of viability of the sector and also to ensure that the consumers are not subjected to an unusually high tariff increase after the last tariff increase effected in July 2003.

4.7.3.1 Estimated Regulatory Assets

Out of the total revenue gap, the revenue gap to be bridged from the increase in tariff as approved by the Commission works out to Rs. 376 Crore. The balance revenue gap of Rs. 696 Crore is proposed to be treated as a Regulatory Asset to be amortised in future years through various measures.

The Commission would like to highlight the fact that the total revenue gap estimated for FY 2004-05 is based on information submitted by the Petitioners and certain assumptions based on past trends. However, the actual revenue gap for the year might vary based on the actual performance during the year. Hence, the quantum of uncovered/excess Revenue Gap that will be permitted under truing up mechanism after prudence check, and the Regulatory Assets will also undergo a change after the truing up process for FY 2004-05.

4.7.3.2 Proposed Amortisation Mechanism for the Regulatory Asset

The Commission proposes to amortise the Regulatory Asset through a combination of several measures such as through the efficiency gains i.e. over-achievement in AT&C losses, and inclusion of certain component of Regulatory Asset in future years' ARR, (when the revenue gap for that particular year is not substantial) and any other appropriate measure..

The Commission while amortising the Regulatory Asset will also consider the carrying cost of the Regulatory Asset. The period of amortisation of the Regulatory Asset and the amount to be amortised each year is contingent upon several factors such as Revenue Gap approved by the Commission for the particular year including the ensuing year, actual AT&C loss reduction during the year, etc. The Commission is of the opinion that it would be ideal to amortise this Regulatory Asset fully amortises within the Policy Direction Period i.e. by FY 2006-07. At this stage, it is difficult to define the quantum of amortisation in future years. However, in principle, while deciding the quantum of Regulatory Asset to be amortised, the Commission will consider the following:

- Actual AT&C loss reduction achieved by the DISCOMs
- AT&C loss reduction proposed by the DISCOMs.
- Actual Revenue Gap/Surplus for the previous year, if any, after Truing up
- Estimate of Revenue Gap for the sector during the ensuing year

4.8 Apportionment of Regulatory Asset between the Utilities

The total sector revenue gap estimated by the Commission for FY 2003-04 and FY 2004-05 is Rs. 1072 Crore at the existing retail supply tariff and bulk supply tariff. As highlighted in the Table 4.4, out of total revenue gap of Rs. 1072 Core, the Commission has estimated the revenue gap of DISCOMs at Rs. 118 Crore and that of TRANSCO at Rs. 954 Crore.

However, it is important to note that the distribution of revenue gap between DISCOMs and TRANSCO is primarily attributable to methodology of determination of the Bulk Supply Tariff specified in the Policy Directions (based on paying capacity of the DISCOM after considering all the prudent expenses and 16% Return on Equity). The Policy Direction requires that the determination of Bulk Supply Tariff be inter-linked with the retail tariff and efficiency parameters of DISCOMs so as to support the uniform retail tariff across all the DISCOMs. The Bulk Supply Tariff currently being paid by the DISCOMs is substantially lower than the average cost of supply of TRANSCO. Under this mechanism, the revenue gap for TRANSCO would appear higher than that of DISCOMs as TRANSCO does not receive full cost of supply. Due to this mechanism of computing Bulk Supply Tariff, the TRANSCO and DISCOMs are inter-woven and work in coordination for the benefit of the sector. For example, any overachievement would improve the paying capacity of DISCOM and in turn could help in increasing Bulk Supply Tariff and thereby revenues of TRANSCO. Hence, it will not be appropriate to consider the revenue gap of each of the utility in isolation while designing strategies to bridge the gaps.

As discussed in earlier Sections an average tariff hike of 10% bridges the revenue gap by Rs. 376 Crore out of the total revenue gap of Rs. 1072 Crore. The Commission proposes to consider the remaining revenue gap of Rs. 696 Crore as a Regulatory Asset. Further the Commission has proposed to amortise the Regulatory Asset through a combination of (a) efficiency gains i.e. overachievement in AT&C loss reduction targets; (b) inclusion of certain component of Regulatory Asset in future years ARR for determination of tariff when the revenue gap for that particular year is not substantial; and (c) any other measure the Commission may feel appropriate. Considering these amortisation measures, the Regulatory Asset needs to be apportioned amongst TRANSCO and DISCOMs keeping in mind the scope for efficiency improvements and potential of increase in revenue on account of tariff increase during the remaining tenure of the Policy Direction period.

As the revenue of TRANSCO is linked to the paying capacity of each of the DISCOMs, which in turn is linked to the efficiency improvement and level of retail tariff, it stands to reason to apportion a substantial portion of the Regulatory Asset to the DISCOMs.

However, the Regulatory Asset should also be apportioned to TRANSCO to the extent that there is scope for it to be amortised through tariff increase and efficiency improvement. During the year FY 2003-04, TRANSCO's revenue gap is attributable not only to recovery of revenue lower than its cost of supply but also to the loss arising from the not so efficient operations under the ABT regime. In FY 2003-04, the TRANSCO has under- recovered about Rs. 92 Crore on account of under drawal considering an average UI charge and average cost of purchase. An efficient scheduling of power purchase is desirable on the part of TRANSCO to reduce the overall costs of its operation. Considering the potential and scope for efficiency improvement and tariff increase in future years for TRANSCO, the Commission has apportioned Rs. 100 Crore of the gap as a Regulatory Asset to TRANSCO.

The balance gap of Rs. 596 Crore is proposed as a Regulatory Asset to be apportioned amongst the DISCOMs. An ideal approach would be to apportion the Regulatory Asset considering realistic assessment of efficiency improvements and revenue increase potential factoring in the tariff increase and sales increase for each of the DISCOMs. However as a realistic assessment is not possible at this stage, the Commission is constrained to apportion the Regulatory Asset based on a parameter, which reflects the potential of amortisation of the Regulatory Asset in each DISCOM.

While there are no set precedents for the basis of apportionment, the Commission has evaluated several options considering their linkages to the proposed amortisation mechanism. Following are the parameters considered and their relevance to the amortisation mechanism:

- Revenue of each of the DISCOM: Revenue, is an indicator of the scale of the business operations of a utility and, reflects any increase in tariff in full and any reduction in AT&C loss (to the extent the AT&C loss reduction reflects in collections). However, revenue is not representative of operational efficiency improvements other than reduction in commercial loss and increase in collection efficiency.
- Energy purchase by the DISCOM: Energy purchase reflects any reduction in AT&C loss to the extent it translates to a decrease in quantum of energy requirement. This is subject to demand for energy not dropping in the period. However, this parameter reflects neither an increase in tariff nor an improvement in other operational efficiency.
- Power purchase cost of the DISCOM: Power purchase costs is a function of energy purchased by the DISCOM. Additionally, as power purchase cost is determined by the paying capacity of the DISCOM, it reflects an increase in revenue and improvement in operational efficiency. However, the power purchase cost for the past financial year does not represent the potential of future efficiency improvements.
- Revenue gap of the DISCOM: Revenue gap of each of the DISCOMs for FY 2003-04 is representative of the extent of requirement of truing up on account of difference between estimated revenues and costs and actual revenues and costs. Retail and Bulk Supply Tariff are determined to meet the revenue gap of each of the DISCOMs. Hence, revenue gap cannot be utilised as a base parameter for apportionment of the Regulatory Asset.

None of the parameters considered above fully represents the desired apportionment mechanism. While deciding on the basis, it would also be pertinent to look at the ratio of apportionment, if a particular parameter were chosen as a basis of apportionment. The Table 4.7 captures the proportion of apportionment of the Regulatory asset to the various DISCOMs for each of the parameters as the basis of apportionment:

Table 4.7: Options for Apportionment of the Regulatory Asset:

Sr No.	Description	BRPL	BYPL	NDPL	Total
1	Revenue for FY 2003-04 (Rs. Crore)	1614	835	1163	3614
2	Energy Input for FY 2003-04 (MU)	8096	5192	5552	18840
3	Power Purchase Cost for FY 2003-04 (Rs. Crore)	1276	660	871	2807
4	Apportionment ratio based on Revenue (%)	45%	23%	32%	100%
5	Apportionment ratio based on Energy Input (%)	43%	28%	29%	100%
6	Apportionment ratio based on Power Purchase Cost (%)	45%	24%	31%	100%

As may be observed from the above Table, under all the three options there is not a much variation in the proportions. Based on above the Commission believes that Revenue, being reflective of scale of operations, is the best proxy available for apportionment of the Regulatory Asset.

The Commission apportions Rs. 696 Crore as Regulatory Asset in proportion to Revenue of each of the DISCOM. The following Table 4.8 details the apportionment of the Regulatory Asset:

Table 4.8: Apportionment of the Regulatory Asset:

Sr. No.	Company	Regulatory Asset Apportionment Ratio amongst DISCOM (%)	Regulatory Asset Apportionment Ratio amongst all players (%)	Regulatory Asset (Rs. Crore)
1	BRPL	44.7%	38.3%	267
2	BYPL	23.1%	19.8%	138
3	NDPL	32.2%	27.6%	192
4	Subtotal DISCOMs	100%	85.6%	596
5	TRANSCO		14.4%	100
6	**Total**		**100%**	**696**

4.9 Bulk Supply Tariff Determination for FY 2004-05

4.9.1 Bulk Supply Tariff Determination

The paying capacity of each DISCOM in FY 05 (amount available for power purchase) has been estimated based on the projected Revenue Realisation at the approved tariffs for the FY 2004-05and considering the Regulatory Asset apportioned in each DISCOM, and the Revenue Requirement excluding power purchase cost. 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, apportioned regulatory asset, 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 4.9 below:

Table 4.10 Bulk Supply Tariff for FY 2004-05

Particular	NDPL	BRPL	BYPL
ARR – Excluding Power Purchase Cost (Rs.Cr)	358	390	250
Revenue Gap of FY 2003-04 (Truing up)	29	10	48
Revenues at Proposed Tariff (Rs. Cr)	1400	1964	1038
Regulatory Asset (Rs Cr)	192	267	138
Electricity Duty (Rs.Cr)	64	87	47
Amount Available for Power Purchase (Rs.Cr)	1141	1743	830
Unit Inputs (MU)	5392	8391	5307
Bulk Supply Tariff (Paise/kWh)	**211.56**	**207.78**	**156.47**

4.9.2 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. Requisite details are not available with the Commission. Further, NDMC have not even responded to the various Petitions filed with the Commission for FY 2004-05. 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.

4.9.3 Revenue Requirement and Revenue

The TRANSCO's revenue requirement and revenue for FY 2004-05 including truing up for FY 2003-04 as determined by the Commission is summarised in Table 4.9:

Table 4.11 Revenue Requirement and Revenue of TRANSCO for FY 2004-05 (Rs Crore)

Particular	FY 2004-05
Revenue Requirement	

ARR for FY 2004-05	4,948
Revenue Gap of 2003-04	55
Total Revenue Requirement	**5,003**
Regulatory Asset	100
Net Revenue Requirement	**4,903**
Revenues	
Govt Support	690
DVB Arrears	103
NDPL	1141
BRPL	1743
BYPL	830
NDMC and MES	395
Total	**4,903**

5. Directives

5.1 Introduction

The power sector in Delhi has undergone through a transformation in the last two years. Consequent to the unbundling of the erstwhile DVB and the reform of the power sector of Delhi during 2002, the transmission function is being undertaken by Delhi Transco Limited (TRANSCO) and the distribution business of Delhi is being managed by the three private Distribution Companies (DISCOMs).

The Commission issues directives to the Utilities in the State with the specific objective of attaining the operational efficiency and streamlining the flow of information, which would be beneficial for the Sector both in short and long term. 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 Reform Act, 2000 (DERA), and the Section 11(1)(d) of the DERA mandates the Commission to promote competition, efficiency and economy in the activities of the electricity industry. Similarly, the Section 11(1)(m) of DERA 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. Further, the Section 61 of the Electricity Act, 2003 mentions that the Commission shall be guided by the factors which would encourage competition, efficiency, economical use of the resources, good performance and optimum investments in specifying the terms and conditions of determination of tariff. Thus, the thrust of the directives issued by the Commission is to create an enabling environment so that the Utilities are able to provide good quality of electricity supply to the consumers of Delhi at optimum costs.

5.2 Directives in the Bulk Supply Tariff Order dated February 22, 2002

The Commission issued the Bulk Supply Tariff Order (BST Order) in February 2002. The Commission issued certain directives through BST Order, which were meant for the unbundled entities in the sector. The directives given in the BST Order were discussed in detail in the Commission's Order dated June 26, 2003. While reviewing the compliance against directives given in the BST Order, the Commission directed the Petitioner to comply with one of the directive issued in the BST Order within one month from the date of the Order. The progress achieved by the Petitioner towards the directives is discussed below.

5.2.1 Preparation of Fixed Asset Register

The Commission, in its BST Order, had directed the Petitioners to finalise the Fixed Asset Registers (FAR) separately for the successor entities by June 30, 2002. The Commission had also directed the Petitioner to provide the break-up of Gross Fixed Assets (GFA) and Capital Work in Progress (CWIP) in the Opening Balance Sheet of the TRANSCO by June 30, 2002. While noting down the performance achieved by the Petitioner against this directive, the Commission, in its Order on ARR and Tariff Petition dated June 26, 2003, observed that *the Petitioner is yet to submit the details of the GFA and CWIP in the opening balance sheet by July 31, 2003.*

The Petitioner has submitted the FAR to the Commission on March 18, 2004. The Petitioner has submitted that the Fixed Assets Register has been prepared by carrying out physical verification of assets, assigning historical costs to these assets by an external agency and then adjusting the gross value of fixed assets with the balance sheet of the Transfer Scheme.

5.3 Directives in the Order on ARR and Tariff Petition dated June 26, 2003

The Commission, considering the changed circumstances due to restructuring and privatisation, had issued directives to the Petitioner, in its Order on ARR and Tariff Petition dated June 26, 2003 (ARR and Tariff Order). The progress achieved by the Petitioner towards the directives issued in Order dated June 26, 2003 is discussed below.

5.3.1 Development Charges and Deposit Works

The Commission had requested the GNCTD to resolve the issue of deposit works execution within a period of two months from the date of issue of ARR and Tariff Order dated June 26, 2003, in consultation with the TRANSCO, DISCOMs and the developing agencies such as DSIDC, DDA, etc. The Commission stressed the need of a forward path to execute these works while addressing issues like details of deposit works to be executed, works to be executed by TRANSCO and each DISCOM and the funding arrangements.

As regards the works to be executed by TRANSCO and each DISCOM, the GNCTD has clarified following vide their letter dated July 9, 2003:

1) *Non-capital works below 33 KV level shall be the responsibility of DISCOMs irrespective of whether these works are in progress/nearing completion and for these works the Holding Company shall not be called upon to contribute any amounts to the DISCOMs even if DVB had received any advances on account of these works.*
2) *Since, Transco is primarily responsible for the network of 220 KV and above, it should not be further involved in the works of 66/33 KV, which is primarily the responsibility of Discoms. Therefore, any deposits made by the agencies to DVB for non-capital works of 66/33 KV category should be returned by the Holding Company to the agencies concerned after deducting amount on account of progress*

made in the works by DVB before unbundling. However, before returning any deposits to agencies they may be consulted whether the pending works need to be completed. If so, the deposits would be transferred to the Discoms concerned.

5.3.2 Investments

The Commission had directed the Petitioner to obtain its approval for all the capital investment schemes.
In its Petition, the Petitioner has submitted that it has been submitting all proposals for major capital expenditure scheme costing more than Rs. 5 Crore to the Commission for its approval. The Petitioner has submitted 6 schemes till date for the Commission's approval. The Commission has approved 5 schemes.

(Ref. Section 3.6.2) The Commission directs the Petitioner to submit the complete DPR along with cost-benefit analysis for schemes more than Rs. 2 Crore for obtaining the scheme-wise investment approval from the Commission as per the terms and conditions of the License for Transmission and Bulk Supply of Electricity within a month from the date of the issue of this Order. The Commission further directs that the Petitioner should submit a separate Petition for approval of schemes for FY 2005-06, by September 2004.

5.3.3 R&M Works

The Commission had directed the Petitioner to maintain a separate record of the items issued from the Stores for R&M works, and submit the same to the Commission along with the details of the actual R&M Works carried out at the end of each quarter. The Commission had also directed the Petitioner to submit the report on transformer failure rate should on a quarterly basis along with the above data on the R&M items issued.

The Petitioner has not submitted the desired information on quarterly basis. However in its Petition, the Petitioner has submitted the details of actual R&M works carried out and the transformer failures till the end of September 2003. In a subsequent submission, the Petitioner has also submitted the list of major materials drawn from the stores for the period from April 2003 to September 2003 along with the quantity.

(Ref. Section 3.5.2) The Commission reiterates its direction to the Petitioner to maintain a separate record of the items issued from the Stores for R&M works, and submit the same to the Commission along with the details of the actual R&M Works carried out at the end of each quarter.

(Ref. Section 3.5.2) The Commission also directs the Petitioner to take a prior approval for any increase in R&M expense during FY 2004-05 beyond the approved R&M expense before committing/incurring an expense.

5.3.4 Consumption by employees of erstwhile DVB

On the issue of consumption of power by employees of erstwhile DVB, the Commission had directed the Petitioner to evolve a mechanism for payments and accounting either at inter-company or at individual employee level and submit a report on the same by October 31, 2003.

The Petitioner had requested the Commission to extend the submission date till February 29, 2004 stating that the issue of seeking exemption of income tax on electricity consumption is still pending with CBDT. The Commission agreed to the request and granted the extension. .However, the Petitioner has not yet submitted mechanism for payments and accounting.

The Commission directs the Petitioner to submit the mechanism for payments and accounting within 1 month of the date of issue of this Order.

5.3.5 Approval of PPA

The Commission had directed the Petitioner to approach the Commission for a post-facto approval of Power Purchase Agreements (PPA) from all new sources during FY 2003-04. The Commission had also directed the Petitioner to refrain from entering into 'round-the-clock' type of PPAs, 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 had also directed the Petitioner to intimate the Commission about, the short-term PPA signed by the TRANSCO within 1 week of signing the PPA and before commencing actual drawal. The Commission had also directed the Petitioner to submit such PPAs for post-facto approval of the Commission within one month of signing the PPA. For the long term PPAs, the Commission had directed the Petitioner to obtain prior approval of such PPAs.

The Petitioner has stated that it has complied with the directives of the Commission. The Petitioner has submitted the PPAs executed with IPGCL (664.5 MW) and PPCL (330 MW) on long-term basis to the Commission seeking the Commission's approval. The Petitioner has also mentioned that it has also submitted short term PPAs and MoUs for purchase and sale of power with PTC. Some other PPAs submitted by the Petitioner for Commission's approval are listed in Table 5.1 below;

Table:5.1 Agreements entered into by TRANSCO for purchase of power

Sl. No.	Party	Nature of Agreement
1	UPPCL	Power Purchase Agreement – March 28,2003 100 MW short term purchase of power
2	Satluj Jala Vidyut Nigam	PPA – March 27,2003 – Central Sector Allocation
3	NHPC	Bulk Power Supply Agreement – March 26, 2003- Central Sector Allocation

		Sector Allocation
4	**NHPC**	**Bulk Power Supply Agreement – March 26, 2003- Central Sector Allocation from Sewa HE Stage**
5	**HPSEB**	**PPA – February 13, 2003 for purchase of power for 3 years.**
6	**NTPC**	**PPA - June 24, 2004 – purchase of Koldam HEPP power**

Apart from this the Petitioner has also submitted the agreement it has entered into with PGCIL for Bulk Power Transmission. The Petitioner has also submitted agreement with PTC and Global Energy Limited for the sale of power.

The Commission is in the process of approving the PPAs.

5.3.6 Sale of surplus energy

The Commission had directed the Petitioner to optimise its energy balance and try to sell the surplus energy available during off peak hours to the maximum extent possible. The Commission had also directed the Petitioner to resort to backing down of the generating stations of Delhi including GENCO, PPCL and Badarpur in case the Petitioner is unable to sell the surplus energy. The Commission had further directed the Petitioner not to surrender the cheaper power available from CGS except for the unavoidable circumstances. The Commission also directed the Petitioner to improve its load management system.

The Petitioner has submitted that it has complied with the directions of the Commission. The Petitioner has highlighted that its MoU with HPSEB regarding the banking of power in winter months is a step in the direction of compliance with the directive of the Commission. The Petitioner has further indicated that it has also entered into agreement with PTC to sell power during off-peak hours.

The Commission has noticed that the Petitioner has under recovered around Rs. 92 Crore on account of underdrawal considering an average UI charge and average cost of purchase.

(Ref. Section 3.2.9.2) The Commission therefore directs TRANSCO to improve their load management systems in order to avoid the instances of underdrawals and submit the report to the Commission on the initiatives taken to avoid unscheduled interchanges within 3 months from the date of issuance of this Order.

(Ref. Section 3.2.9.2) The Commission directs the TRANSCO to optimise its energy balance and try to sell the entire surplus energy available during off peak hours. In case, TRANSCO is unable to sell the surplus energy, TRANSCO should back down the generating stations of Delhi including Badarpur, PPCL and GENCO. TRANSCO is further directed not to surrender the cheaper power available from CGS except in case on unavoidable circumstances.

5.3.7 Reactive energy

The Commission had directed the Petitioner 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.

The Petitioner has clarified that the month-wise details of reactive energy consumed by each DISCOM is being supplied. However as regards monthly peak drawl by each DISCOM, the Petitioner has expressed its inability to provide the necessary information on technical grounds. The Petitioner has submitted that it would be able to submit the monthly peak drawal information upon implementation of EMS system.

The Commission has ascertained that the meters are capable of measuring reactive energy and accordingly directs the Petitioner to start submitting information on month-wise reactive energy supplied to each DISCOM and monthly peak reactive drawal by each DISCOM at the end of each quarter.

The Commission directs the Petitioner to submit the detailed implementation plan of EMS system and suggest the target date from which the peak reactive drawl data of each DISCOM can be provided, within 1 month of this Order.

5.3.8 Scheme for adherence to ABT

The Commission had directed the Petitioner to prepare a total scheme in consultation with the DISCOMs, NDMC and MES, clearly defining responsibilities of each of the above Licensees and submit the same to the Commission within one month of the issue of the ARR and Tariff Order dated June 26, 2003.

The Petitioner had submitted a draft scheme on December 5, 2003 and held a discussion with the Commission on January 6, 2004. The Commission, in its letter dated May 19, 2004, has observed that the formulation of scheme has been unduly delayed and has directed the Petitioner to submit the finalised Scheme. The Commission has further mentioned that the Petitioner should inform the Commission regarding reasons for delay in submission of scheme if the Petitioner is not able to submit the same by May 28, 2004. The Petitioner has neither submitted the finalised scheme nor the reasons for delay till date.

The Commission directs the Petitioner to expedite finalisation of scheme and bring to the notice of the Commission any difficulty faced by it in finalisation of the same.

5.4 Penalty for non compliance

The Commission has discussed the status of the compliance of the directives issued to the Petitioner in the above sections. In fact many of these directives, if not complied with, would have serious financial implications, the burden of which will ultimately fall on consumers. Further, any delay in compliance/non-compliance would also hamper promotion of efficiency and economy in the electricity industry.

The Commission has noted with concern the partial compliance of most of its directives in spite of repeated reminders. In case of non-compliance of directives in future by the Petitioner, the Commission will be compelled to levy penalties. Further, the Commission may also resort to other suitable penal actions as stipulated under the Act and License Conditions.

5.5 List of Other New Directives

5.5.1 Monitoring of investments

(Ref. Section 3.6.2) In line with the recommendation of the CEA, the Commission directs the Petitioner to form a Steering Committee, with one member as Commission's Representative, within 7 days of the date of issue of this Order. The Steering Committee would be responsible for developing an integrated and consolidated implementation plan and monitoring thereof. The Commission directs the Petitioner to submit the consolidated plan within 15 days of the date of issue of this Order and submit quarterly monitoring reports thereafter.

The Commission directs the Petitioner to submit the quarterly progress report of investments.

5.5.2 A&G Expenses

(Ref. Section 3.4.2) The Commission directs the Petitioner to take a prior approval for any increase in A&G expenses during the FY 2004-05 beyond A&G expenses approved before committing/incurring an expense.