



BSES Rajdhani Power Limited

# Aggregate Revenue Requirement

FY – 2005-06

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**Submission to the  
Delhi Electricity Regulatory Commission**

File No. \_\_\_\_\_

Case No. \_\_\_\_\_

IN THE MATTER OF Petition/Application for approval of Aggregate Revenue requirement for the financial year 2005-06, under Section 62 of the Electricity Act 2003, read with Section 11 and section 28 of Delhi Electricity Reforms Act 2000, Conduct of Business Regulation 2001 AND the Licence for Distribution and Retail Supply of Electricity issued by the Honourable Delhi Electricity Regulatory Commission (hereinafter referred to as Honourable Commission)

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BSES Rajdhani Power Limited,  
BSES Bhawan, Nehru Place, New Delhi-  
110019;  
PETITIONER

The Petitioner named above most respectfully sheweth:

- I. That BSES Rajdhani Power Limited (hereinafter referred to as “petitioner”), a company incorporated under the Companies Act, 1956, and having its registered office at BSES Bhawan, Nehru Place, New Delhi – 110019, is a license holder for carrying on the business of Distribution and Retail Supply of electrical energy within the Area of Supply as specified in the “License for

Distribution and Retail Supply of Electricity” issued by the Honourable Commission on 12<sup>th</sup> day of March 2004. The license shall remain in force upto 11<sup>th</sup> day of March 2029.

- II. That the petitioner in accordance with the license conditions is required to calculate the total expected revenue from charges in accordance with the provisions of Section 28 of the DERA, and submit to the Honourable Commission every year:
  - a. a statement with full details of its expected aggregate revenues and cost of service for the ensuing financial year (including financing costs and its proposed return on equity) for its Licensed Business, in accordance with Section 28(5) of the DERA;
  - b. the annual investment plan giving specific details of the investment which the licensee proposes to make in the ensuing financial year and which the Licensee desires to be covered under the revenue requirements in the ensuing financial year with appropriate references to Schemes, if any, already approved by the Honourable Commission of which such investments form a part;
- III. That the Policy directions envisage uniform retail tariffs across the DISCOMs and, the tariff to be determined so as to, allow the DISCOMs to recover all permissible expenses and return for the year. This implies that the BST and RST are interlinked, and therefore, the Petitioner has restricted this petition to estimating its ARR.
- IV. That the Petitioner is committed to reduce the Aggregate Technical and Commercial losses (hereinafter referred to as “AT & C losses”) by 17.00% (Bid level) from the opening loss levels determined by the Honourable Commission, over the transition period of five years (2002-03 to 2006-07) as per the Policy Directions issued by the State Government.

- V. That the Petitioner has committed a loss reduction of 6% in the fourth year i.e. the period April 1, 2005 to March 31, 2006 and this has been included in the projections made in the ARR being filed with this petition.
- VI. That the Petitioner has drawn out plans to carry out improvements in various functional areas viz., managerial, technical, commercial, financial etc. for improvement of the quality and reliability of power supply and reduction of AT & C losses. The Petitioner is also striving to substantially improve the working conditions of the employees and is in the process of applying modern management techniques for development of appropriate attitude, skills and knowledge in employees at all levels.
- VII. That the Petitioner has made certain assumptions while projecting its operations for the FY 2005-06. These projections are based upon the best estimates of the operations and prospective plans of the company at the time of the ARR filing. The actual ARR and the revenue figures would be different from the above estimates due to several external factors such as power purchase cost and change in consumer mix/consumption. The Honourable Commission in its previous tariff order dated 26.06.2003 has recognized the necessity for truing up the costs and revenue at the end of the year. The Petitioner requests the Honourable Commission to consider the petition accordingly.
- VIII. That in view of the long term investment proposed by the petitioner in the distribution business for bringing out operational efficiency and meet the loss reduction plan, the Honourable Commission may kindly review its stand on the imposition of the burden of the revenue gap on the DISCOMs and may ask for appropriate support from the Government during the transition period. The BST payable by the DISCOMs for 2004-05 (and subsequent years of the “transition” period) may thus be determined on the basis of the paying capacity of the DISCOMs after providing for all prudent expenses

and the assured return on equity and free reserves at the AT&C loss levels committed as per the bid submitted at the time of takeover of the DISCOMs. Any overachievement or underachievement of the bid level of AT&C losses may also be kindly dealt with as per the provisions of the Policy Directions.

- IX. That there is a projected shortfall in recovery of Rs. 325 Crores in FY 2004-05. The gap between Aggregate Revenue Requirement and estimated revenue realization in FY 2005-06 (including the shortfall of FY 2004-05) is Rs. 585 Crores. The petitioner in accordance with the earlier precedent followed by the Honourable Commission in its Tariff Order FY 2003-04 and the policy directions issued by GoNCTD has computed its revenue requirement after truing up of expenses of the previous years and based on its paying capacity. The petitioner thus has assumed that the regulatory asset created by the Honourable Commission will be made available to the petitioner at the beginning of the FY 2005-06.
- X. That the present application is presented before the Honourable Commission for the approval of the Aggregate Revenue Requirement and determination of tariff for FY 2005-06. In view of the above the petitioner requests the Honourable Commission:

**PRAYER :**

BSES Rajdhani Power Limited requests the Honourable Commission:

1. To approve the accompanying Aggregate Revenue Requirement for the financial Year 2005-06.
2. To determine the Retail Supply Tariff chargeable to the consumers and the bulk Supply Tariff that will be payable to the Delhi Transco Limited for purchase of power.

3. To determine BST rate on the basis of the paying capacity of the petitioner in accordance with the Policy Direction after providing for all prudent expenses and the assured return on equity and free reserves at the AT&C loss levels committed as per the bid submitted at the time of takeover of the distribution business in the licensed area by the petitioner.
4. To approve the under recovery of year 2003-04 and 2004-05 as truing up of costs/ revenues arising from lower approval of R & M and A & G Expenses.
5. To true up costs and revenues at the end of the financial year 2005-06 and any shortfall in revenue requirement arising out of this truing up exercise be allowed to be adjusted in the subsequent year.
6. To approve all expenses while determining Annual Revenue Requirement without deferring any or part of the expense in the form of Regulatory Asset.
7. To treat the distribution business as a 'continuous process plant' for the purpose of determination of depreciation, in the Schedule XIV of Companies Act, 1956 as recommended by Task force constituted by the GoI on Power Sector Investments and Reforms.

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**ABBREVIATIONS USED**

<b>A &amp; G</b>	Administrative and General Expenses
<b>ABB</b>	Asea Brown Boveri
<b>ACB</b>	Air Circuit Breaker
<b>ACD</b>	Advanced Consumption Deposit
<b>AEC</b>	Ahmedabad Electricity Company
<b>APDRP</b>	Accelerated Power Development and Reform Program
<b>ARR</b>	Aggregate Revenue Requirement
<b>AS</b>	Accounting Standards
<b>AT &amp; C</b>	Aggregate Technical and Commercial
<b>BRPL</b>	BSES Rajdhani Power Limited
<b>BSES</b>	Bombay Suburban Electricity Supply
<b>BST</b>	Bulk Supply Tariff
<b>BYPL</b>	BSES Yamuna Power Limited
<b>Capex</b>	Capital Expenditure
<b>CCA</b>	City Compensatory Allowance
<b>CEA</b>	Central Electricity Authority
<b>CESCO</b>	Calcutta Electricity Supply Company
<b>CGHS</b>	Consumer Group Housing Society
<b>CHD</b>	Consumer Help Desk
<b>CPI</b>	Consumer Price Index
<b>CPM</b>	Critical Path Method
<b>CT</b>	Current Transformer

<b>DA</b>	Dearness allowance
<b>DDA</b>	Delhi Development Authority
<b>DERA</b>	Delhi Electricity Reform Act
<b>DERC</b>	Delhi Electricity Regulatory Commission
<b>DISCOM</b>	Distribution Company
<b>DJB</b>	Delhi Jal Board
<b>DMRC</b>	Delhi Metro Rail Corporation
<b>DO</b>	Drop out
<b>DPCL</b>	Delhi Power Corporation Limited
<b>DPR</b>	Detailed Project Report
<b>DTL</b>	Delhi Transco Limited
<b>DVB</b>	Delhi Vidyut Board
<b>EBS</b>	Electricity Billing System
<b>EHV</b>	Extra High Voltage
<b>ERP</b>	Enterprise Resource Planning
<b>FC</b>	Fixed Charges
<b>FR&amp;SR</b>	Fundamental Rules & Supplementary Rules
<b>FY</b>	Financial Year
<b>GENCO</b>	Generation Company
<b>GIS</b>	Geographical Information System
<b>GOAB</b>	Gang Operated Air Brake Switch
<b>Goi</b>	Government of India
<b>Honourable</b>	Honourable

<b>HRA</b>	House Rent Allowance
<b>HRD</b>	Human Resource & Development
<b>HT</b>	High Tension
<b>HVDS</b>	High Voltage Distribution System
<b>HVPNL</b>	Haryana Vidyut Prasaran Limited
<b>ID</b>	Indoor
<b>ISDN</b>	International Standard Dialing Network
<b>IT</b>	Information Technology
<b>JJ</b>	Jhuggi Jhopri
<b>kms</b>	Kilometers
<b>kV</b>	Kilo Volts
<b>kVA</b>	Kilo Volt Ampere
<b>kVAh</b>	Kilo Volt Ampere hour
<b>kVARh</b>	Kilo Volt Ampere Resistance hour
<b>Kw</b>	Kilo Watt
<b>kWh</b>	Kilo Watt Hour
<b>LIP</b>	Large Industrial Power
<b>LT</b>	Low Tension
<b>LTC</b>	Leave Travel Concession
<b>LTMP</b>	Low Tension Modernization Program
<b>MCD</b>	Municipal Corporation of Delhi
<b>MDI</b>	Maximum Demand Indicator
<b>MIS</b>	Management Information System

<b>MMC</b>	Minimum Monthly Charge
<b>MoP</b>	Ministry of Power
<b>MoU</b>	Memorandum of Understanding
<b>MTNL</b>	Mahanagar Telephone Nigam Limited
<b>MU</b>	Million Units
<b>MVA</b>	Million Volt Ampere
<b>NCT</b>	National Capital Territory
<b>NDLT</b>	Non Domestic Low Tension
<b>O/H</b>	Over Head
<b>OD</b>	Out Door
<b>PAT</b>	Profit After Tax
<b>PERT</b>	Program Evaluation Review Technique
<b>PFC</b>	Power Finance Corporation
<b>PILCA</b>	Paper Insulated and Lead Coated
<b>PWD</b>	Public Works Department
<b>R &amp; M</b>	Repair and Maintenance
<b>REC</b>	Rural Electricity Corporation
<b>RMU</b>	Ring Main Unit
<b>Rs.</b>	Rupees
<b>SCADA</b>	Supervisory Control & Data Acquisition
<b>SEB</b>	State Electricity Board
<b>SIP</b>	Small Industrial Power
<b>SVRS</b>	Special Voluntary Retirement Scheme

<b>TDS</b>	Tax Deducted at Source
<b>TRANSCO</b>	Transmission Company
<b>UPPCL</b>	Uttar Pradesh Power Corporation Limited
<b>VRS</b>	Voluntary Retirement Scheme
<b>VSAT</b>	Very Small Apperture Terminal
<b>XLPE</b>	Cross Linked Polyethelene
<b>Y-O-Y</b>	Year on Year



## **1 Executive Summary**

This is the third consecutive annual submission being made by the Petitioner to the Honorable Commission for the determination of aggregate annual revenue requirement and the retail supply tariffs since the takeover of the distribution business from the erstwhile Delhi Vidyut Board (DVB) in July 2002. The guiding principles of the tariff and revenue requirement determination process during the “transition period” up to March 2007 were laid down in the Policy Directions issued by the Government of NCT of Delhi in November 2001 (and its subsequent amendments). The Petitioner has sought to diligently follow the principles and guidelines laid down in the Policy Directions, the Electricity Act 2003 and the Tariff Orders of the Honorable Commission.

The last Order on the Determination of the Aggregate Revenue Requirement and Retail Supply Tariffs (“tariff order”) was issued by the Honorable Commission on the 9th of June 2004 and was effective ten days since from 19th of June 2004. The tariff order envisaged among other things a deferment of the recovery of the total annual expenditure of the Petitioner, which went against the principles envisaged in the Policy Directions which provided for an assured return on equity and free reserves of 16% per annum. While providing an insight into the revenue requirement and tariff determination process to the investors, the Honorable Commission had indicated in its tariff order of February 2002, that the bulk supply tariff payable by the Petitioner would be determined by the capacity of the Petitioner to pay for such supply after providing for all its prudently incurred expenses and the assured return on equity and free reserves, at the predetermined AT&C loss level as per the bid submitted by the successful bidder for the takeover of the distribution companies.

The deferment of the recovery of the expenses approved by the Honorable Commission is not only contrary to the Policy Directions which are in force during the transition period, but is anticipated to cause a net negative cash flow during the year for the Petitioner which may result in a cash shortfall for meeting the regular expenses towards salaries, repair and maintenance, etc. This has a cascading adverse effect on the capital projects planned by the Petitioner during the current year. The petitioner will face difficulties in obtaining financing from lending institutions, which view the risk profile of the companies' finances being adversely affected due to the tariff design which does not provide for the recovery of expenses at the projected loss levels. To compound the problems, the Honorable Commission capped the R&M and A&G expenses at the same levels as the previous year in the approved ARR for 2004-05, whereas the cost of all major inputs for repair and maintenance – material and labor costs – have risen considerably, as also the input costs towards administrative and general expenses. This has resulted in an underestimation of the amount of regulatory asset that would be created during the current year in the Petitioner's regulatory accounts. In case estimates were based on the forecasts made by the Petitioner – it might have brought forth a difference in the Honorable Commission's opinion on the creation of the regulatory assets – perhaps by implementing the Honorable Commission's observation in the Tariff Order of February 2002 – *“.....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, 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 Honourable Commission at the appropriate stage...”*. The Petitioner has pleaded in this submission that the Honorable Commission may deem it fit to revise the extent of government

support required during the transition period for bridging the revenue gap of Delhi Transco, and may make appropriate provisions for seeking such additional support as required.

The only way for the Petitioner to survive this multiple impact on the company's finances and continue with its capital investment plan was to further intensify its efforts on containment of losses and strive to overachieve its committed loss reduction during the current year.

In spite of the financial hurdles created during the current year due to the creation of the regulatory assets, the Petitioner has gone ahead with the execution of all major capital improvement projects as also the “must-do” projects for meeting the demand growth, creating adequate capacity for relieving overloaded feeders and transformers and providing electric service to previously unserved areas. Details of the executed and planned capital expenditure are presented in this petition for the consideration of the Honorable Commission. As presented earlier to the Honorable Commission a substantial proportion of capital expenditure is directed towards reduction in the current levels of AT&C losses and for its early realization coupled with other associated benefits like improved customer satisfaction, growth in sales, etc., the Petitioner has continued with its plan to prioritize the capital expenditure in the current and the ensuing year instead of phasing it out over a longer period. For the funding requirements of the capital expenditure, the Petitioner has proposed infusion of additional equity to the tune of Rs. 214 crores in FY 2004-05 and 2005-06 with the equity base at the close of 2005-06 is projected at Rs. 674 crores.

Depreciation for the current and the ensuing years have been estimated as per the Companies Act 1956. The petitioner has considered depreciation for the previous year as per the MoP notified rates for the previous year. Although the Honorable Commission has allowed depreciation at much lower rates than the notified rates, the Petitioner maintains that the rate of depreciation has to be in accordance with the MoP notified rates for the previous year and upon repealing of Electricity Supply Act 1948, as per Companies Act 1956.

The Petitioner has estimated the sales and revenues based on the trends observed in the past years and has forecasted the revenues based on the projected levels of AT&C losses.

The Petitioner has estimated the expenses on account of salaries in accordance with the principle for amortization of cost of special voluntary retirement scheme (SVRS) approved by the Honorable Commission in its Tariff Order 2004-05.

Repair & maintenance and other administrative & general expenditures have been estimated on the basis of normal levels after providing for increase in costs due to inflation. The Petitioner has instituted systems for preventive maintenance for all its network equipment and a substantial portion of the R&M budget is allocated towards these activities. Adherence to the preventive maintenance protocols have led to a massive reduction in the occurrence of faults and breakdowns in the Petitioner's distribution network. The Petitioner has separately approached the Honorable Commission for the approval of a higher amount towards repairs and maintenance for the current year with proper justification in compliance to the directives of the Honourable Commission.

The Petitioner has projected a growth in units sold of 11.54 % for total projected sales of 5703 Million Units in 2005-06 considering past trends of load growth and various measures undertaken for reduction of AT&C losses. The Power Purchase for 2005-06 has been projected at 8558 MU considering the projected sales growth and reduced AT&C losses.

The summarized breakup of revenues and cost projections for the current and the ensuing year are presented below:

**Table 1 : ARR summary (Rs. Crores)**

Components	FY 2004-05		FY 2005-06
	Approved by DERC	Revised Estimate	
<b>Expenditure</b>			
Power Purchase Costs	1,743	1,669	1,779
Employee Expenses	135	176	188
R & M Expenses	53	69	75
A & G & Other Expenses	18	35	38
Interest & Finance Charges	16	3	54
Depreciation	62	108	139
DVB Arrears	41	24	20
Truing up of Regulatory Assets	-	21	-
Loss on retirement of Asset	-	-	-
<b>Net Expenditure</b>	<b>2,068</b>	<b>2,105</b>	<b>2,293</b>
Appropriations	-	-	-
Contingency Reserve	8	8	10
Income Tax	10	-	2
<b>Net Expenditure After Expenses</b>	<b>2,086</b>	<b>2,113</b>	<b>2,304</b>
Reasonable Return	83	113	155
Previous Year Losses	10	27	325
Less:	-	-	-
Non Tariff Income	35	37	31
<b>Annual Revenue Requirement</b>	<b>2,144</b>	<b>2,216</b>	<b>2,753</b>
Revenue Realized	1,877	1,891	2,168
<b>Projected Shortfall</b>	<b>267</b>	<b>325</b>	<b>585</b>
<b>AT &amp; C Losses</b>	<b>42.70%</b>	<b>42.70%</b>	<b>36.70%</b>

The detailed submission of the Aggregate Revenue Requirement, proposals for capital expenditure and tariff rationalization, etc. are presented for the

consideration and approval of the Honorable Commission in the subsequent chapters.

The Policy directions envisage uniform retail tariffs across the DISCOMs and, the tariff to be determined so as to, allow the DISCOMs to recover all permissible expenses and return for the year. This implies that the BST and RST are interlinked, and therefore, the Petitioner has restricted this petition to estimating its ARR. However, the Petitioner has suggested some tariff rationalization measures in the ARR for due consideration by the Honourable Commission during the process of tariff determination. Some of these are:

- a. Recovery of the fixed costs incurred by the petitioner through fixed component of the tariff. The petitioner has suggested that the tariffs should be so designed so as to recover a major portion of the fixed costs incurred by the petitioner through fixed charges.
- b. The petitioner has also suggested gradual decrease in the amount of cross subsidization amongst various categories and the tariff should be reflective of the cost of service.
- c. The petitioner has proposed to migrate to kVAh billing for all consumers with connected load above 10 kW. This will reduce overloading of the system and also compensate for the reactive energy drawn by the consumers.
- d. For the purpose of setting the tariff the Honorable Commission may please consider an average power factor of not less than 0.9 to be maintained by the consumers in respect of their installation.

## **2 Background**

The National Capital Territory of Delhi was beset with shortage of supply of power, poor quality of service and process inefficiencies in the supply of power for a substantial period. The earlier municipality owned utility – the erstwhile Delhi Electric Supply Undertaking was converted into Delhi Vidyut Board in 1997. Various loss reduction schemes initiated by these utilities failed to generate adequate results. Thereafter, Government of National Capital Territory of Delhi (hereinafter referred to as the 'State Government') decided to un-bundle DVB into separate Generation, Transmission and Distribution entities and hand over the management of the distribution and retail supply business to the private sector.

The Delhi Electricity Reform (Transfer scheme) Rules, 2001 was notified on 20th November 2001 and further amended on 26th June 2002.

The Honourable Commission in exercise of the powers conferred on it by Section 20 of the DERA, has granted License for Distribution and Retail Supply of Electricity on 12<sup>th</sup> day of March 2004 which shall remain in force for 25 years.

BRPL is committed to achieving high standards in quality and reliability of supply and are making sustained efforts and substantial investments in systems and infrastructure for efficient distribution and retail supply of power in the National Capital of Delhi. Additionally the petitioner is also committed to reduce losses during the transition period as per the transfer scheme and achieve turnaround of the business to provide electricity at economical rates to our esteemed consumers in due course.

At present, as per the transfer scheme during the transitional period, BRPL sources its energy requirement from Transco at 66kV/33kV voltage level. To meet the growing demand it is proposed to enhance the installed capacity of the transformers, cables, increase network capacity and revamp the existing network

to improve the quality of supply as described in the section on the Capital Expenditure. The table below shows the milestones achieved by the petitioner since its inception towards augmenting the network capacity.

**Table 2 : Distribution System Parameters**

Sl. No.	ITEMS	BSES Rajdhani Power Limited		
		As On 01.07.2002	As On 01.07.2003	As On 30.11.2004
1	Total Number of Power Transformers	146	155	170
2	Total Demand in EHV system (MVA)	3036	3222	3571
3	Length of EHV (66/33 kV) Cables (kms)	615	701	823.5
4	Total No. of 66 & 33 kV Feeders	132	137	150
5	Total No. of 11 kV Feeders	733	739	767
6	Length of 11 KV Cables (kms)	1595	1652	1752
7	Total No. of LT Feeders	15219	15972	17093
8	Length of LT Conductor (kms)	5382	5644	5915
9	Number of Installed EHV Shunt Capacitors	700	723	997
10	Installed LT Shunt Capacitors	88	88	137

(Note: All figures are rounded off to the nearest digit)

The Honourable Commission has issued the third tariff order on 9<sup>th</sup> June 2004. The salient features of the order are discussed in Section 3.

The policy directions issued by GNCTD envisage uniform retail tariffs across the DISCOMs. The tariffs are to be determined such that the DISCOM's earn at least 16% return on the issued and paid up capital and free reserves. Thus the Bulk Supply price of the DISCOM will vary so as to adapt the uniform retail tariff and the revenue requirement of the DISCOMs. As per the principles laid down in the Policy direction issued by GNCTD, the bulk supply tariff for each DISCOM is to be determined on the basis of its paying capacity. This has also been reiterated by the Honourable Commission in Section 5.1 of its first Tariff Order issued in Feb 2002. The Government will make available to the Transmission Company a



loan which will be used to bridge the gap between its revenue requirement and the bulk supply price.

### **3 Salient Features of Tariff Order for FY 2004-05**

#### **3.1 Tariff Revision**

The Honorable Commission notified the Aggregate Revenue Requirement and the Tariff Order for the FY 2004-05 on 9th June 2004. The Tariff Order for FY 2004-05 of the Honorable Commission envisaged a revision in tariff across all major categories. The Honourable Commission projected revenue billed from approved tariff as Rs. 1930 crores in FY 2004-05 which is 9.2% more than the revenue from tariff as notified in the previous order.

#### **3.2 Tariff Structure**

The Honourable Commission has undertaken several rationalization measures, some of them are highlighted as below:

- a. A new sub-category for JJ clusters under domestic category has been introduced with flat charges of Rs.175/month as energy charges. There is no separate component of fixed charge for this category.
- b. Slab rationalization in the Domestic category has been made by the Honourable Commission. The first two slabs (0-100 units and 100-200 units) of the domestic category have been merged and a new single slab of 0-200. Further, fixed charges were classified into two fixed slabs and a rate slab. For domestic consumers with load of 0-2 kW the fixed charge levied is flat Rs.20/month and in case where load is 2-5 kW the fixed charge levied is flat Rs.50/month. The fixed charge levied for all loads above 5 kW is @Rs.10/kW.
- c. The Fixed charges for Non-Domestic category and Small Industrial consumers were increased from Rs.20/kW/month to Rs.35/kW/month.

- d. Introduction of kVAh billing for SIP consumers where electronic meters are installed.
- e. Separate tariff for Railway Traction was introduced in the last Tariff Order. Earlier the Railway Traction was merged with LIP category. Even though energy charges for LIP consumers were increased in the last tariff, tariffs for railways were retained at the same level. The tariff for DMRC was also retained at Rs.230 paisa/kWh.
- f. The connected load shall be used only for the purpose of assessment in case of direct theft or dishonest abstraction of energy or unauthorized use of energy.
- g. Change of category from SIP to LIP shall be based on MDI reading instead of load.
- h. Provisions of Section 126 and 135 (Theft of Electricity) of Electricity Act, 2003 for unauthorized use have been included.

### **3.3 Directives of the Commission**

The Honourable Commission directed the Petitioner in the last Tariff Order to comply with certain requirements relating to metering and billing operations and submission of data to the Honourable Commission to enable tariff rationalization measures.

The status of the compliances with the various directives of the Honourable Commission is presented later in this petition.

### **3.4 Review Petition**

Under Section 94 (1) (f) of the Electricity Act 2003 read with Section 185 (3) of the Electricity Act 2003, the petitioner had submitted to the Honorable Commission certain grounds for the Honorable Commission's review and

reconsideration of its said order. The submissions that were made in the review petition to the Honorable Commission briefly are as follows:

- a. That the creation of the Regulatory Asset
- b. Deprives the recovery of the entire “properly incurred expenditure” of the licensee and assured return of 16% on equity.
- c. Is contrary to the policy directions detailed to the investors, at the time of privatization and is inconsistent with the provisions of the Sixth Schedule of the Electricity (Supply) Act 1948 as the revenue available does not recover all the expenses and provide for depreciation and return to the petitioner, resulting in a cash shortfall to the petitioner which will have a direct impact on the performance of the Company.
- d. That depreciation to be charged at the rates prescribed by MoP
- e. That RoE is to be determined on the closing balance of equity and free reserves.
- f. That actual R & M and A & G Expenses incurred by the petitioner in FY 2003-04 were restricted to a lower amount.

However, the Honorable Commission didn't grant any relief except for allowing the actual expenses of Rs 60.43 Crores towards R & M for FY 2003-04 as against the amount of Rs 52.57 Crores earlier approved in its tariff order.

## **4 Annual Revenue Requirement**

### **4.1 Capital Expenditure Plan**

The petitioner had inherited an ageing and weak distribution network which was prone to frequent failures, thus resulting in high operational and maintenance cost. Frequent system failures apart from increasing the R & M costs also increased customer displeasure which was a matter of concern for the petitioner. It will be a mammoth task for the petitioner to strengthen the distribution network and will take considerable time and effort to upgrade it to a world class distribution network.

The Aggregate Technical & Commercial (AT&C) loss is the measure of efficiency of the Distribution business and its reduction as envisaged by the petitioner in its bid would not be possible without a major system improvement initiative.

The petitioner in order to gradually achieve the loss reduction target and to regain customer confidence undertook the task of upgrading the system which involved considerable capital expenditure for upgrading the present network system to a desirable standard so as to provide a high degree of network reliability and sustainable performance. The Honourable Commission in its previous Tariff Order has reiterated that *“The Commission recognises that the system improvement will be achieved only through capital investments in the longer term”*. The capital expenditure is envisaged keeping in view the optimal network utilization.

A network optimization study was conducted by an internationally accredited firm, on the up-gradation of the network. Reference was also taken of the Comprehensive Study Report on Transmission and Sub-transmission System prepared by CEA in preparing the in-house report on the implementation of the network upgrade plan. The in-house team also interacted with Delhi Transco

Limited so as to have a synchronized and integrated approach to the upgrade implementation.

In its endeavor to provide world class distribution system in its licensed area, the petitioner in its ARR for FY 2004-05 had proposed a capital expenditure of Rs. 800 crores. The Honourable Commission approved a normative level of capital expenditure of Rs. 525.82 crores and while recognizing the need for such capital expenditure stated that “ *if the petitioner is able to implement the investment beyond the approved normative level during FY 2004-05, then the differential cost arising out of such investments would be allowed during truing up to the extent they are compensated by the associated financial benefits*”.

For providing state of art distribution system, better quality of supply and consumer services to its customers and in tune with the schemes suggested by CEA in its Comprehensive Study Report, the petitioner has planned a capital expenditure of Rs. 800 crores and Rs. 1400 crores in the current year and the ensuing year respectively. Such expenditure was needed in view of:

- a. Undertaking system development to meet the load growth
- b. Strengthening and refurbishment of system to improve the reliability of supply
- c. Reducing the targeted system losses
- d. Carryout automation and other improvement works to enhance customer service
- e. Undertake investments to fulfil social obligations (such as electrification of JJ colonies)
- f. Carry out the Consumer Deposit Works

In accordance with the observations of the Honourable Commission, the petitioner has estimated the differential costs arising out of such investment. The impact of the additional capital expenditure is summarized in the table below;

**Table 3 : Effect of Additional Capital Expenditure (Rs. Crores)**

Sl. No.	Details	FY 2004-05
1	Additional Capital Expenditure	274
2	Depreciation	0.45
3	Interest	6.51
4	Return on Equity	-
5	Less Expenses Capitalized	6.51
6	<b>Net Expenditure</b>	<b>0.45</b>

There will not be any substantial expenditure in the current year due to the additional Capital Expenditure but the benefits accruing on account of the implementation of the additional capital expenditure will be more which is discussed across various schemes in the DPR's submitted to the Honourable Commission.

The petitioner has already submitted the detailed project reports (DPR's) on various capital schemes for the approved Capital Expenditure and the proposed additional capital expenditure, to the Honourable Commission.

#### **4.1.1 EHV SCHEMES**

These schemes comprise of commissioning of new grid sub stations, addition of power transformers in existing grid sub stations, up-gradation of power transformers, replacement of obsolete/defective 66/33/11 KV switchgears and replacement of outlived PILCA cables by XLPE cables, etc. Additionally, reinforcement of input feeder is proposed to various grid sub stations for system development and strengthening of the network.

EHV scheme entails commissioning of new grid sub station and augmentation of capacity of power transformers by an additional 384 MVA. It is also proposed to procure two EHV Mobile Grid sub stations for speedy restoration of supply, in the event of any contingency.

Delhi has been witnessing an annual load growth of 6%. To meet the new loads and maintain system stability and reliability of the 66/33kV grid supply, 5 new grid stations are planned in EHV system which will be implemented in FY 2004-05. They are as tabulated below:

**Table 4 : Grid Stations under EHV Scheme**

Sr. No.	Grid Name	Voltage Level (kV)	Additional Capacity Proposed (MVA)
1.	C-DoT (South Circle)	66/11	40
2.	Jasola (South circle)	66/33/11	100 MVA 66/33 40 MVA 66/11
3.	Balaji Estate (South Circle)	33/11	40
4.	A-4 Paschim Vihar (West Circle)	33/11	40
5.	R K Puram II (South Circle)	33/11	40

The basic principle adopted while designing is to provide (n-1) redundancy. In case of (n-1) redundancy if one of the equipment fails, the remaining equipments will be capable for maintaining power supply with the same load without any interruptions.

These schemes will result in meeting future load growth, increasing reliability of the system, improving quality of power and reducing technical losses in the future years.



#### **4.1.2 DISTRIBUTION SCHEMES (11 kV AND BELOW)**

These schemes aim at replacing the overloaded transformers with higher capacity distribution transformers. Under these schemes, it is intended to procure 990 kVA transformers which will be used to replace the existing 630/400 kVA overloaded and aged transformers. The 630/400 kVA transformers after refurbishment can be reused in replacing lower capacity overloaded transformers. This will augment the transformation capacity and result in providing a stabilized distribution system and reducing the probability of frequent interruption in power supply.

Under these schemes it is also proposed to procure switchgears for replacement of obsolete/defective switchgears, establish new sub-stations, and provide RMUs at outdoor sub station in place of existing GOAB switch / DO fuses. Also 11kV cable will be procured for reinforcing existing 11KV network and providing new 11kV feeders.

#### **4.1.3 CAPACITORS**

It is proposed to install capacitors in the various distribution sub stations so as to improve the power factor and maintain the voltage profile. This will facilitate the petitioner in reducing the voltage fluctuations and provide quality power to its consumers. Moreover, installation of capacitors will also reduce the power purchase bills on account of reactive energy for the petitioner.

The petitioner proposes to install motorized isolator control for each capacitor bank. Such motor operated isolators are controlled by a separate control and relay panel. The relay panel for each capacitor bank consists of separate unbalance current and earth fault protection relay. Each bank has reactors and an 11kV CT to sense unbalanced current in the system due to fault or fuse blowout of the capacitor bank.

#### **4.1.4 METERS AND ACCESSORIES**

Energy which has not been measured cannot be billed / accounted. Hence, accurate and adequate metering will result in capturing the actual consumption of energy and in turn will result in higher revenue realization. A comprehensive metering plan to replace all defective meters and install new meters has been drawn up.

The electronic meters being installed by the petitioner have met with the requirements of standards as prescribed by the Bureau of Indian Standards (BIS). It is also pertinent to observe that the Accelerated Power Development and Reforms Program (APDRP) scheme of the Government of India is also providing assistance to utilities in the country for replacement of electromechanical meters with electronic meters. The Honourable Commission while acknowledging the replacement of electromechanical meters with electronic meters has also issued directions setting targets for installation of electronic meters for various consumer categories. Further, the Honorable Commission in its tariff orders has also introduced various tariff rationalization measures viz. i) change of category from SIP/NDLT to MLHT on the basis of recorded MDI (ii) levy of provision of fixed charge/surcharge on the basis of MDI reading for all categories of consumers (iii) surcharge on low power factor (iv) maintaining data on average power factor, kWh, kVAh, kVARh consumption (v) data base on consumer load profile etc. This implies that electronic meters with multiple parameter recording facilities are necessarily required to implement this tariff provision.

So far, electronic meters across all consumer categories, including SIP/NDLT categories for loads above 10 kW as per the Honourable Commission's directives, are being installed by the petitioner. It is planned to complete the replacement of all remaining electromechanical meters in the petitioner's area of supply with electronic to ensure that all meters, have the same standardized features for software implementation and ease of operation in meter reading to

billing. Given the above background the petitioner intend to accelerate the program for replacement of electromechanical meters with electronic meters of its existing consumers to comply with the tariff orders directives of the Honourable Commission besides facilitating error free and accurate meter reading and billing, with least possible manual intervention in the process, for the benefit of consumers (the advantages of electronic meters over conventional electromechanical meters are well proven and may not require repetition here).

#### **4.1.5 HVDS ELECTRIFICATION**

The petitioner has set up high voltage distribution system (HVDS) in the areas of high losses existing in its licensed area. This will prevent misuse of electricity and in turn will reduce distribution losses and overloading of distribution transformers.

#### **4.1.6 GEOGRAPHICAL INFORMATION SYSTEM (GIS)**

The Petitioner has initiated the processes for the creation of a comprehensive GIS mapping of its assets deployed and the entire network up to the consumer end. Such an exercise has already been carried out by other distribution utilities in the country.

The distribution network of the petitioner consists of HT (high tension, 11 KV to 33 KV) lines, LT (low tension) lines, substations, distribution transformers, pillar boxes, etc., feeding a network of consumers. Maintenance of a global information system of the above on the Geographical platform becomes an absolute necessity in the changing scenario where consumer satisfaction is the prime motto.

The data as regards to the assets of the petitioner is proposed to be maintained in an synchronized manner. Moreover, the information on network elements, possible new cable routes and information to perform spatial queries and analyses are not possible without GIS system in place. The effort of integration of

different information system with GIS as kernel for synchronized operation will help the petitioner in efficient network planning and operations.

**Figure 1: GIS in synchronization with other systems.**



A Geographical Information System will help in mapping the assets of the Petitioner on a spatial basis, on a geographical map. All Grid Substations, underground cables, overhead transmission lines, and distribution substations can be located with exact precision on a map with pinpoint accuracy. In essence, the logic of GIS is to map the services/utilities to the exact physical coordinates for better service, maintenance and long term asset management. The GIS system can be conjoined with existing or ongoing projects like SCADA etc. for a better handling of daily problems like routine or breakdown maintenance so that full use is derived out of the benefits of automation while improving revenue and enhancing consumer satisfaction.

GIS can be used in distribution systems management for:

- a. Handling customer enquiries
- b. Fault Management
- c. Planning routine maintenance
- d. Network extensions and optimization
- e. Network reconfiguration
- f. Improved revenue management
- g. Integration with SCADA

The Geographical Information System has the potential to earn back the entire initial investment through saving in Network analysis, planning and Maintenance expenditure in future years.

#### **4.1.7 LT MORDERNISATION PROGRAM**

The LT distribution system inherited is plagued with many shortcomings like overloading, load unbalancing, voltage drop, excessive energy losses etc, which contributes to high AT & C Loss. Augmentation of the LT distribution system is necessary for increasing the overall reliability of services leading to higher customer satisfaction.

The LT Mordernisation Plan proposes to identify technical deficiencies of the existing distribution network. The basic objective of the plan is reduction of AT & C losses, mordernisation of existing system and enhancement of reliability of the system, improvement of supply conditions, etc. Initially 400 distribution transformers are estimated to be taken up for mordernisation.

Prioritization of theft prone areas will be made for installation of the distribution transformers. Distribution transformers where the AT & C losses are high will be accorded higher priority.

The LT Mordernisation Plan (LTMP) is thus necessary to be executed to control the AT&C losses & meet the demand growth in a reliable manner.

#### **4.1.8 SCADA**

In the last couple of years, utility with best practices in the country have implemented various distribution automation tools like Supervisory Control and Data Acquisition (SCADA) system for both cost reduction and service benefits. This system will enable the utility to remotely monitor, coordinate, control and operate distribution components, equipment and devices in a real-time mode from remote locations with acquisition of data for analysis and planning from one central location. Distribution automation through SCADA systems directly leads

to increased reliability of power for the consumers and lower operating costs for the utility. It results in forecasting accurate demand and supply management; faster restoration of power in case of a breakdown and quickly providing alternate arrangements for power for important/emergency locations.

Implementation of the scheme will enable the Distribution licensee to undertake both active and reactive power management and with better anticipation of trouble and greater trouble-shooting through remote access. Predictive maintenance with SCADA system will results in reduced cost of maintenance of power system devices thereby extending their life. Distribution automation through SCADA also reduces human interface and impending errors. It also ensures reliability and quality of power supply (minimum fluctuation in voltage supplies) for the consumers.

Distribution automation will be used as a tool for enterprise-wide management of the Petitioner's networks. It will provide for efficient operations, enhance operational outputs and translate into economic benefits. Installing SCADA/Distribution Automation System is seen as a major initiative to improve power quality to the consumer.

#### **4.1.9 CONSUMER DEPOSIT WORKS**

The quantum of Deposit work to be carried out is dependent upon the requirement of the consumers. Execution of deposit works for various government departments like MCD, PWD, DJB, DMRC, DDA, DSIDC and private entities like CGHS etc are expected by the petitioner.

#### **4.1.10 INFRASTRUCTURE DEVELOPMENT INITIATIVES**

The infrastructure inherited by the Petitioner lacked standardized facilities for proper functioning. The Petitioner is aware that proper infrastructure and facilities would go a long way in improving working conditions and also contribute to the improvement in the management and control of the business activities.

With the view that a motivated and facilitated workforce would be able to contribute in a much better manner to the conduct of the business, provide services to the consumers and also go a long way in providing the requisite management control and information, the Petitioner has earmarked multiple areas which would require improvements in the infrastructure and facilities.

The petitioner has taken several steps to improve the conduct of business activities. These include facilities to be made available at all division offices and customer help desks. The petitioner has computerized and provisioned for networked computing environment for capture of all business data.

The Petitioner has completely revamped its Corporate Office to reflect the progressive intent and corporatize the distribution business.

#### **4.1.11 TRAINING**

With an overall objective of improving consumer satisfaction the Petitioner felt the need for honing the technical and managerial skills of its workforce so as to deliver quality services to its consumers. To this effect the Petitioner has established a full-fledged training centre at VSNL grid sub-station building.

The Petitioner has undertaken Various Management Development and IT Training programs in FY 04-05 (Apr'04 to Oct.'04). The highlights of the above programs is given below –

**4.1.11.1 Management Development Program**

<b>Program</b>	<b><u>Customer Goodwill</u></b>	<b><u>Managerial effectiveness</u></b>	<b><u>Creating Harmony &amp; Team building</u></b>	<b><u>"Prerna"</u></b>
<b>Objective</b>	To make the participants understand own role in organisation, to retrospect personal behaviors and their impact on consumers. Further they are taught to handle consumer complaints in a process oriented way.	This program orients the participants towards Self Management, People Management, Job Management and Performance Management	Through this program the participants learn to manage their own styles and orientation, which influence their relationships with others. They further understand the dynamics of interpersonal relationship within the work groups	To bring an awareness among the business heads as to the level of excellence to be achieved at par with Mumbai business. To identify the areas of improvement and suggest ways to improve the same.
<b>Participants</b>	GET, MT, District Help Desk	Engineers, GET, MT, Managers	GET, MT, Managers	Business Managers
<b>Man-Days</b>	158	146	28	26
<b>Achievements</b>	Interface and interaction with consumers has improved	Team interaction and internal communication coupled with performance reflects a marked improvement	Team work and relationship with peers has improved resulting in improved productivity	Business Managers are motivated and efficiently managing teams and further finding solution to day to day issues related to distribution business



## 4.1.11.2 IT Program

<b>Program</b>	<b><u>Comp. Fund. &amp; MS-Office (Districts)</u></b>	<b><u>Comp. Fund. &amp; Lotus Notes (Grids)</u></b>	<b><u>EDMS</u></b>	<b><u>Defaulter List</u></b>	<b><u>Meter Readers</u></b>	<b><u>CAS</u></b>	<b><u>Unix &amp; Oracle</u></b>
<b>Objective</b>	To orient the participants towards usage of computers, so that they can work on MS-Office in their day to day official job	To orient the participants towards usage of computers, so that they can work on MS-Office in their day to day official job	To train them to use the EDMS software which in turn will help us in retrieving data of consumers, related to new connection, instantaneously	The participants will be able to retrieve data related to monthly defaulters and help BM's in generating MIS	The participants gain knowledge on the different type of meters used in BSES and how to read meters accurately	The participants learn the usage of this integrated software so as to use it efficiently in their day to day official job	The participants learn the features which shall be utilised by them in developing application related to GIS & SCADA
<b>Participants</b>	AG's, BM's, Secretaries, KPO	Grid personnel	AFO, AG, KPO	BM, CO, TSE	Meter Readers	BM, CO, AFO, TSE	Software Engineers
<b>Man-Days</b>	106	78	5	4	6	23	11
<b>Achievements</b>	The participants have started working confidently on Computers and productivity has increased. They are motivated and have shown a positive approach towards work	The participants have started using computers without fear and using various software confidently	Data scanning and uploading of data speed at District level has increased and output is positive	Reports being generated regularly and payment follow-up is having a positive trend.	Meter reading is being done with accuracy	The software is being used extensively by the relevant personnel and work speed at district has increased	Training is continuing and the participants have found it helpful in developing relevant applications

#### **4.1.12 ENFORCEMENT**

Considering the high level of AT&C loss in the DISCOMs area of supply, the Petitioner has identified the need for strengthening the Enforcement set-up within the organization. To strengthen the enforcement cell the Petitioner has deployed large number of workforce at various levels for the purpose of carrying out enforcement related activities. The role and responsibility of the employees in Enforcement Cell is summarized below –

- a. Collect information regarding theft/ unauthorized use of Electricity from various sources (vigilance, billing database, consumers etc.)
- b. Detection and booking of the above mentioned cases.
- c. Quick processing of the cases through the various post inspection stages.
- d. Provide speedy redressal of cases to consumer.
- e. Serve as a deterrent to electricity abuse in the state as a whole.
- f. Ensure proper surveillance to prevent theft of electricity in theft prone areas.

The Petitioner has streamlined the enforcement procedures and making concentrated efforts towards reducing the incidence of thefts and un-authorized use of electricity so as to reduce AT&C loss levels.

#### **4.1.13 IT INITIATIVES**

The IT Task Force Report on Power Sector by the IT Task Force set up by MoP is of the view that “Enabling the core business operations with information systems at the transaction level would lay the foundation for sustainable reforms. This will ensure world-class practices and controls at the operations level and would bring about sustainable improvements in the overall health of the utilities. This will enhance the overall quality of data, thereby improving the flow of

information for decision support. Information Technology (IT) would enable sustainable changes in the operations increasing controls at a transaction level, improving the efficiency of the operations and increasing transparency across the organization.”

The level of involvement of Information Technology in the distribution business after the takeover from erstwhile DVB has been focused towards enabling the core business processes with information systems as a strategy for improving the commercial and operational performance of the petitioner’s distribution business. The Petitioner has taken the following initiatives with a focused approach to make Information Technology instrumental in increasing the efficiency and to effectively address consumer’s issues and problems:

- a. **Infrastructure and Connectivity:** In a short span of time, all districts offices have been connected on 2MBPS strong backbone with local dialing facilities making operations Virtual Single Office (VSO). This has resulted in improvement in operations and making district offices more efficient and self dependent. The district offices are well knit and have access to a centralized database. The other locations are also well connected to our main office through VSAT.
- b. **Processes Improvements:** The Petitioner has successfully implemented SAP (ERP) and has automated most of its workings. This will augment the overall quality of data, thereby improving the flow of information for decision support. The Petitioner has also implemented a single window for effectively addressing consumers’ problems by interacting to a single database backed up by proper process based audits, checks and balances.
- c. **Electronic Document Management System (EDMS):** EDMS has been introduced for increasing the productivity of the employees at district offices and faster response to consumers. The setting up of District

Offices has also helped in de-centralizing the processing of meter reading data thereby increasing the efficiency in bill processing for consumers.

- d. **Automated Remote Meter Reading:** With the installation of modems at consumer end for bulk consumers, the meter reading process has reduced the manual interface resulting in streamlining of the process and reduction of probability for errors. It also entails proper monitoring of the high value consumers. The process improvement initiative has also saved on costs of replacing seals on monthly basis and keeping its track. With the new system in place, the meter can be read at any time and any number of times without disturbing the consumer.
- e. **Outage Management System (OMS):** Any breakdown information is readily available to all personnel concerned in system operations and complaint management. The system also helps resource tracking thereby helping in planning and improving the operations.
- f. **Enforcement Case Tracking System:** This system provides up-to-date information and status about a particular case of enforcement.

Apart from the above, the Petitioner maintains a web site [www.bsesdelhi.com](http://www.bsesdelhi.com) that provides online service and other information useful to the customers. Customers can make online enquiry relating to their bills and view the procedure for applying for new connections, change in names/addresses, etc. The site also provides the Do's and Don'ts for consumers, tips for saving electricity and means for saving electricity through use of energy efficient lighting/gadgets. The site also features tools that enable consumers to calculate their energy consumption using energy calculator (ready reckoner) thereby helping them to monitor their consumption and estimate energy bills.

Duplicate Bill – printing system for providing duplicate bills instantly to the consumers who did not receive their bill for any reason whatsoever. Earlier when

the process was entirely manual and the bills were manually prepared and handwritten, the process was lengthy and time-consuming and created numerous problems for the consumer as well as the commercial staff at the division offices. Due to the IT-intervention the latest data regarding the last billing cycle is made available at the division offices at the Duplicate Bill Issue Desk. The bill is instantly generated and printed at the consumer's request. The bill is also bar-coded which ensures that the payment of the bill is rightly credited to the correct account.

The Petitioner has installed the latest series of high-end Sun Microsystems™ servers, storage arrays and Oracle™ database for billing and consumer database management. Additional applications are being deployed on similar platform to provide enterprise-wide database and workflow solutions relating to metering and billing processes.

The Petitioner has implemented SAP™ ERP solutions for financial, human resources and material management. This has comprehensively streamlined the processes for enabling optimal utilization and improving operational efficiency.

The success of the whole Capital Expenditure plan depends on the project management capability to execute the plan in a crashed manner. Petitioner has planned to execute the capital expenditure through a dedicated project management group and field quality monitoring team. To achieve this objective Petitioner has already set up an exclusive project monitoring group. This group will use the PRIMA VERA™ software for the resource planning and PERT and CPM to monitor the activities on a day to day basis.

The petitioner is also proposing to implement round the clock Interactive Voice Response systems for the consumers.

#### **4.1.14 CUSTOMER CARE CENTRE**

Customer care has always been at core of the Petitioner's business philosophy. In its incessant drive to improve customer service, the Petitioner has taken several initiatives and proactive measures. Some of these initiatives have been detailed below.

In the ensuing year the Petitioner will be launching the Single Window System for complete consumer satisfaction. This will bring in transparency and efficiency in System of consumer grievance redressal.

The main features of this system are as follows:

- a. Single Point resolution
- b. Online updation in EBS
- c. Consumer can visit any counter at respective CHD
- d. Faster resolution / Reduction in Waiting Time
- e. Single MIS Report for Commercial & Billing Activities
- f. Single Software for the entire Customer Base of BSES, Delhi
- g. Scheduling / Work Flow / Automatic Escalation to address consumer issues effectively

In this system the consumer can approach any division / Counter with his problem. There would be an automatic escalation of complaint to next level in case of unresolved complaint within a specified time frame. This will bring in transparency of the system and help in faster complaint redressal.

The detailed capital expenditure outlay for the current and ensuing year is shown in the table below:

**Table 5 : Capital Expenditure outlay (Rs. Crores)**

Description	FY 04-05	FY05-06
HVDS	296	170
EHV	184	309
Distribution Schemes and LTMP	236	643
Capacitors	8	7
SCADA'	4	66
GIS	5	8
Meters and Automated Meter Reading	45	132
Test equipment, tools and tackles	3	1
Service Cable	2	8
Distribution Automation	0	25
Vehicles	4	2
IT & Communication	12	1
Land and Building	1	29
<b>Total</b>	<b>800</b>	<b>1400</b>

**4.1.15 FUNDING MECHANISM OF CAPITAL EXPENDITURE**

Based on above planned activities total capital expenditure has been estimated for Rs. 800 crores and Rs. 1400 crores in the current and ensuing year respectively. The funding for the Capital Expenditure will be made from the following sources.

- a. APDRP Grant and Loan
- b. Depreciation after adjusting for Working Capital
- c. Internal Accruals
- d. Equity infusion
- e. Commercial Borrowings

The detailed funding mechanism is tabulated below:

**Table 6: Funding Plan of Capital Expenditure (Rs. Crores)**

<b>Sl. No</b>	<b>Funding Plan</b>	<b>Current Year</b>	<b>Ensuing Year</b>
1	Consumer Contribution	68	57
2	APDRP Grant	63	-
3	APDRP Loan	63	-
4	Depreciation utilized	48	113
5	Internal Accruals (Return on Equity and Free Reserves)	234	155
6	Commercial Borrowings	325	861
7	Fresh Equity	-	214
	<b>Total</b>	<b>800</b>	<b>1,400</b>



## **4.2 Sales Forecast**

### **4.2.1 BASIS FOR SALES FORECAST**

The Petitioner has projected sales of 5703 MUs in the ensuing FY 05-06. The billing demand for FY 05-06 is projected to grow at 11.5% over estimated level of 5113 MUs in FY 04-05. The category wise billing demand has been estimated after considering the following:

- a. Consumer growth due to development of housing colonies, commercial establishments and new projects like DMRC etc.
- b. Normative growth in specific consumption of the existing consumers in billing net
- c. Increase in no. of existing consumers (presently indulging in unauthorized abstraction of power) falling into billing net due to various system improvement measures like HVDS etc.
- d. Replacement of burnt/defective/ tampered meters by electronic meters
- e. Better Vigilance and Enforcement

The estimated category wise billing demand for the current FY 04-05 and ensuing FY 05-06 is enclosed in Form 2.1.

The Petitioner has estimated to bill total amount of Rs.2079 crores based on the estimated billed units of 5113 MU in FY 2004-05. The Petitioner has projected to bill total of 5703 MU amounting to Rs.2383 crores at existing tariffs for the ensuing FY 2005-06. Overall the Petitioner has estimated an over all y-o-y billing growth of 12.6% in FY 2004-05 and 11.5% in FY 2005-06.

The category wise projected units billed are shown in the table below:

**Table 7: Sales Estimates**

Category	Current Year FY 2004-05	Ensuing Year FY 2005-06	Growth %
Domestic	2,801	3,181	13.56%
Commercial	740	752	1.63%
Industrial	406	414	2.00%
Agriculture	66	66	0.00%
Bulk	1,100	1,289	17.26%
<b>Total</b>	<b>5,113</b>	<b>5,703</b>	<b>11.54%</b>

The petitioner has assumed 17.26% increase in billing of Bulk Consumers in the ensuing year as it expects Commercial consumers to shift to Bulk category.

#### **4.2.2 AT&C LOSS LEVELS**

##### **4.2.2.1 Collection Efficiency**

The Petitioner, has considered overall collection efficiency of 95% for FY 04-05 based on the existing trend in the collection. The reduction in collection efficiency is primarily on account of reduction in collection of past arrears (DVB arrears). However, for the ensuing year the petitioner has considered overall collection efficiency at the same level as that of the current year at 95%.

##### **4.2.2.2 Distribution Loss**

The Petitioner has projected AT&C loss at the bid level for the current FY 04-05 and the ensuing FY 05-06. The power purchase requirement has been determined based on the projected units billed, the projected AT&C loss and collection efficiency level. Further the Distribution loss has been derived based on the power purchase requirement and the projected units billed.

**Table 8: Aggregate Technical and Commercial Losses**

<b>Particulars</b>	<b>FY 2003-04 Total</b>	<b>FY 2004-05 Total</b>	<b>FY 2005-06 Total</b>
Units Purchased	8,096	8477	8558
Units Billed	4,541	5113	5703
<b>Distribution losses</b>	<b>43.90%</b>	<b>39.68%</b>	<b>33.36%</b>
Units Collected	4,448	4857	5417
<b>Collection Efficiency.</b>	<b>97.95%</b>	<b>95.00%</b>	<b>95.00%</b>
AT&C Loss	45.06%	42.70%	36.70%

#### **4.2.3 POWER PURCHASE / ENERGY REQUIREMENT**

The Honorable Commission has in its tariff order for FY 04-05 approved ARR based on power purchase (energy input) of 8391 MUs into the Petitioner's system. As against the energy input considered by the Honorable Commission the Petitioner has consumed 5375 MUs in the first 7 months (Apr-Oct'04) of the FY 04-05 and it is estimated to consume 3102 MUs in the remaining 5 months (Nov.-Mar.'04) of the FY 04-05. The total energy input for FY 04-05 is estimated to be 8477 MUs. Based on projected billing demand and the target AT&C loss level in the ensuing FY 05-06 the Petitioner has projected energy requirement of 8558 MUs. The effective growth rate for the ensuing financial works out to 1.0% (y-o-y).

Overall average y-o-y growth based on historical data works out to approx. 5.9% whereas based on the growth in billing demand and the target AT&C loss level, the growth in power purchase requirement works out to only 1.0% for ensuing FY 05-06. It is also expected that due to investments in areas like HVDS, replacement of burnt/defective/ tampered meters by electronic meters, better vigilance and enforcement activities etc., the consumers presently indulging in fraudulent practices of abstracting power by un-authorized means shall be falling in the billing net and they will be consciously reducing their consumption so as to

avoid huge electricity bills. Consumers are shifting towards energy efficient devices so as to reduce their consumption, which shall lead to further reduction in over all billing demand. To a great extent, the normative growth in the billing demand will be met through the savings resulting by way of the loss reduction measures as discussed above. The projected power purchase cost has been worked out at the prevailing BST of Rs.2.0778 / kwh. The projected power purchase units and cost for the FY 04-05 (estimated) and FY 05-06 (projected) has been summarized in the table given below:

**Table 9: Power Purchase Units and Cost**

	<b>FY 03-04</b>	<b>FY 04-05</b>	<b>FY 05-06</b>
	<b>Actual</b>	<b>Estimated</b>	<b>Projected</b>
Units Purchased (MUs)	8,096	8477	8558
Power Purchase Cost (Rs. Crs.)	1276	1667	1778
Avg. BST (Rs./kwhr.)	1.576	1.967	2.078

### **4.3 Employee Cost**

In its Tariff Order issued on June 2004, the Honorable Commission has approved an expenditure (before capitalisation) of Rs. 154.92 crores as against Rs. 197.81 crores proposed by the petitioner in its ARR filed for FY 2004-05. In the first half of the current Financial Year, the Petitioner has incurred an expense of Rs 53 crores and during the second half the petitioner has estimated an expense of Rs 64 crores, resulting in a total expenditure of Rs 117 crores for the full year. These expenses are exclusive of the amortisation costs incurred on providing voluntary retirement under the SVRS. After taking into consideration amortization expenses of Rs 65.6 crores, the total employee expenses (before capitalisation) for the current year are estimated around Rs 183 crores. For the FY 2005-06, petitioner has estimated a total expenditure of Rs 195 crores (before capitalisation).

The net increase in employee cost after taking into consideration the amortization costs on account of SVRS is projected around 6.6%, over the estimated expenses for the current year. The reasons for variation in expenses for individual items of employee head over the current year are discussed in detail in the following paragraphs.

As stated in the ARR and Tariff Filing for FY 2004-05, the petitioner during the FY 2003-04, has offered Special Voluntary Retirement Scheme (SVRS). The benefits of the SVRS have been availed by 2499 employees, which has resulted in an outgo of Rs 132.66 crores for the petitioner. The Honorable Commission in its Tariff Order for FY 04-05 has approved that expenses incurred under the SVRS will be amortised during the next 3-4 years, based on the estimated savings in employee costs. Further the issue of additional liabilities related to pension, on account of implementation of SVRS is yet to be resolved between the Pension Trust and the DISCOMs. The details on treatment of SVRS

expenses have been discussed separately under the section “Special Voluntary Retirement Scheme”.

Gol has passed an order providing for merging a part of DA (an amount of DA equivalent to 50% of the Basic Salary) with the Basic Salary, which will be effective in case of erstwhile DVB employees. As some components of salary such as HRA, DA, Terminal Benefits, etc are directly linked with the Basic Salary, this order has resulted in significant increase in employee salary during FY 2004-05. The same is highlighted by an example tabulated below, for an employee with a Basic Salary of Rs 5000/- per month. It can clearly be observed from the table that the structural change in salary on account of Gol order has resulted in an increase of employee cost by around 10%.

**Table 10 : Example of the effect of merger of DA with Basic Pay**

Sl. No	Items	Assumption	Prior to Amalgamation of DA with Basic	After Amalgamation of 50%DA with Basic
1	Basic		5000	7500
2	DA		3050	825
3	HRA	30% of Basic	1500	2250
4	Terminal Benefits	26% of Basic and DA	2093	2165
	<b>Total</b>		<b>11643</b>	<b>12740</b>

It is known that during the current year inflation rate has shown a considerable increase. The inflation rate which was reported around 4% in the previous year has now reached to a level of around 8%. As some of the salary components, such as DA, etc are directly linked with the inflation, the same will in turn result in increase in employee costs.

As per the Transfer Scheme, Terms and Conditions of service applicable to the erstwhile DVB employees in the Transferee Company shall in no way be less

favorable than or inferior to those applicable to them immediately before the Transfer. Further their services shall continue to be governed by various rules and laws applicable to them earlier to privatization. Hence the petitioner is bound by the Terms and Conditions of Transfer Scheme with regard to the salaries of erstwhile DVB employees.

The rationale for estimation and working of the total employee costs and various components of salary are detailed in the following paragraphs.

#### **4.3.1 NUMBER OF EMPLOYEES**

The number of employees with the Petitioner during the previous year was 6678. As mentioned earlier, 2499 employees have availed the benefits under the Special Voluntary Retirement Scheme (SVRS) offered to the employees, in the FY 2003-04. Further there have been fresh appointments and the petitioner, is also using the services of certain employees from the Other Group Companies, who have been retained on deputation by the petitioner. These fresh appointments/deputationists aimed at professionalized services in the much required areas of Power distribution, Financial management, Billing, ERP Implementation, Networking and certain new departments which were not existing earlier, etc. Further the petitioner has also taken up restructuring in field operations which is expected to result in marginal increases in employee number and hence the costs vis a vis the benefits of restructuring. The number of employees as of 1st April 2004 was 5620 and this is expected to increase to 6095 by 1st April 2005.

#### **4.3.2 BASIC SALARY**

Honorable Commission in its Tariff Order for the current year has approved an expenditure of Rs 77.44 crores<sup>1</sup>, assuming that the employee expenses that the petitioner would have incurred if the employees that have availed SVRS still

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<sup>1</sup> Honourable Commission has fixed the costs considering as if SVRS was not implemented.

continued so as to amortize the SVRS expenses. In the first half of the current year the petitioner has incurred an expenditure of Rs 22.29 crores and expenditure during the second half, is estimated to be Rs 23.18 crores<sup>2</sup>. For the FY 2005-06, the Petitioner has estimated a total expenditure of Rs. 49.11 crores under the head “Basic Salary”.

The projected growth in the Basic Salary of the employees is due to promotions and annual increase in pay. The annual increase depends on the pay scale of an employee and such increase is mandatory for employees of erstwhile DVB. For other employees the promotions and annual increase is linked to performance during the year.

#### **4.3.3 OVERTIME & HOLIDAY PAY**

In its previous ARR and Tariff petition, the petitioner has estimated an expenditure of Rs 11.93 crores for the current financial year. However during the first half of the current year the petitioner has incurred a total overtime expense of Rs. 3.23 crores and during the second half the petitioner would limit the expenses to Rs. 2.91 crores. For the ensuing year the petitioner has estimated the overtime expenditure to Rs. 5.52 crores only.

During the previous year and also in the current year, the petitioner has taken various measures to control the overtime expense. Efforts have been made to streamline the operations and putting into place the adequate systems and procedures to improve the employee productivity. Also the petitioner has resorted to outsourcing some of its functions such as billing etc. The results of the efforts made are visible in the half yearly performance of the current year. In spite of the fact that 2499 employees have adopted for voluntary retirement under the SVRS, the overtime expenses during the current year are estimated to be Rs 6.14 crores vis. a vis total overtime expenses of Rs 9.60 crores and Rs 11.99 crores

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<sup>2</sup> The actual and estimated expenditure for the first and second half of FY 2004-05, take into consideration the effect of SVRS.



for FY 2002-03 (9 months) and FY 2003-04 respectively. The overtime expenditure is to be seen from the fact that the petitioner had to manage the operations due to the sudden retirement of so many employees and the remaining employees were to be employed on overtime during the transition period till the operations stabilized. However on account of outsourcing some of the functions, the petitioner expects increase in A&G expenses during the current and ensuing year. For the ensuing year the petitioner has assumed overtime expenses at Rs. 5.52 crores, on account of the various measures under taken, as described above.

#### **4.3.4 DEARNESS ALLOWANCE**

In the previous tariff order the Honorable Commission has fixed the Dearness Allowance @ 11% of Basic Salary after merging a part of DA (equivalent to 50% of the Basic Salary) with the Basic Salary. However on 1<sup>st</sup> July 2004, the DA rate was further increased by 3%, resulting in a Dear ness Allowance of 14% of Basic Salary. Hence during the first half year, the effective DA rate was 12.5%, and as a result of the same the petitioner has already incurred an expense of Rs. 2.51 crores.

As the DA rate is linked to rate of inflation, another 3% increase in DA rate is expected in January 2005, when the Gol undertakes a review of the same. As a result of this increase, the average DA rate for the 2<sup>nd</sup> half of the current year is estimated at 15.5%, which is expected to result in an expenditure of Rs 3.31 crores during the 2<sup>nd</sup> half of current year. For the ensuing year the petitioner has estimated a total DA expense of Rs 9.22 crores based on annualized increase in DA rate by 6%. This increase of 6% in the DA rate has been assumed based on increase in inflation rate over the past few months.

#### **4.3.5 OTHER ALLOWANCES**

The category “Other Allowances” includes various allowances such as Transport Allowances, House Rent Allowances, Washing Allowance, CCA, Conveyance

Allowances etc which were being provided by DVB to its employees prior to takeover by the petitioner. The Honourable Commission in its Tariff Order for FY 2004-05 has linked “Other Allowances” with Basic Salary. During the first half of the current year the petitioner has actually incurred an expense of Rs 10.66 crores and during the second half the petitioner expects to incur an expenditure of Rs 11.08 crores, resulting to a total expenditure of Rs 21.74 crores for the current year. For the ensuing financial year, the petitioner has estimated an expenditure of Rs 23.48 crores assuming an increase in line with the existing inflation rate.

As certain components such as House Rent Allowance, etc. included under the subhead of “Other Allowances” are directly linked with the Basic Salary, hence any increase in Basic salary will have a corresponding impact on the “Other Allowances”. Further under the salary structure based on “Cost to Company” concept, which is being adopted for new recruits, the proportion of “Other Allowances” to “Basic Salary” is higher in comparison to erstwhile DVB employees transferred to the petitioner. As the proportion of fresh recruits to the erstwhile DVB employees will gradually increase over the years, on account of retirement of employees, the proportion of “Other Allowances” to “Basic Salary” is likely to increase.

#### **4.3.6 BONUS/EXGRATIA/SPECIAL INCENTIVE**

The provision of Bonus in the salary structure is aimed at improving the profitability by linking it to performance of the system and sharing of benefits of improvement with the employees. For the current year the petitioner expects to incur an expenditure of Rs 3.82 crores on account of Bonus and Special Incentive. For the ensuing financial year the petitioner has considered expenses at level of Rs 4.02 crores on account of increase in number of employees during the current year. However the petitioner would like to state that bonus is performance linked and the amount will vary across the employees based on their performance.

#### **4.3.7 STAFF WELFARE EXPENSES**

These expenses include the expenditure incurred on activities such as sports, felicitation functions, various insurances for employees, send off functions, other co-curricular activities, etc. Further these expenses also include the expenditure to be incurred by the petitioner on providing uniforms to the erstwhile employees of DVB, as per the Terms and Conditions of the Service Agreement agreed to by the Licensee at the time of Transfer. In the first half of current year an expenditure of Rs 0.42 crores has been incurred and for the second half petitioner expects to incur an additional expenditure of Rs 0.44 crores. In line with the expenditure of the current year, the petitioner has estimated a total expenditure of around Rs 0.93 crores for the ensuing year.

#### **4.3.8 ADHOC PAYMENT ON CORPORATISATION**

As per the Transfer Scheme and the agreement with the employee unions prior to privatization, all employees of erstwhile DVB are being made an adhoc payment of Rs 500/- per month on account of privatization. This expenditure is included in salaries.

#### **4.3.9 TERMINAL BENEFITS**

As per the Transfer Scheme & the Tripartite Agreement dated October 28, 2000, between the State Government, erstwhile DVB and the employees, it has been agreed that all obligations in respect of payment of pension, retirement benefits including provident fund, superannuation pension, encashment of leave, gratuity, LTC, Medical benefits and DA as available to employees who have retired and who are going to retire from the services of the Board on or after the date of restructuring of erstwhile DVB, shall be the responsibility of the corporate entities and the Pension Trust which has been established and guaranteed by the Delhi Government.

The contribution for Terminal Benefits for erstwhile DVB employees is governed under FR&SR general rules of the Gol. For the ensuing year the petitioner has

estimated an expenditure of Rs 15.17 crores towards terminal benefits @ 26% on Basic plus DA as has been approved in the tariff orders for FY 2003-04 and FY 2004-05. The break up for a contribution @ 26% is as follows:

- a. Towards Leave Contribution: 11%
- b. Towards pension, Gratuity: 15%

#### **4.3.10 OTHER STAFF COSTS**

##### **4.3.10.1 Reimbursement of Medical Expenses**

Erstwhile DVB employees are entitled for reimbursement of medical expenses on actuals, without any ceiling. In order to exercise control on these expenses without affecting the legitimate claims, the petitioner has taken various measures, some of which are as follows:

- a. Empanelment of certain Hospitals for conducting employee checkup;
- b. Direct payments to Hospitals by the petitioner in the event of Hospitalization of employees, etc.

The action taken by the petitioner is expected to result in effective controlling of these expenses without affecting the legitimate claims of the employees.

In the ARR and Tariff filing for FY 2004-05, the petitioner has estimated expenses of Rs 3.03 crores for the current year. Based on the actual expenditure incurred in the first half, the petitioner has estimated an expenditure of Rs 2.49 crores for the current year. With due consideration to the factors listed above, the expenses for the ensuing year have been limited to Rs 2.69 crores.

##### **4.3.10.2 Leave Travel Assistance**

In the ARR and Tariff Filing for FY 2004-05 the petitioner has estimated that 50% of its employees will avail Leave travel assistance during the year and an average expenditure @ Rs 10,000 per employee was projected for the current

year. However based on the actuals available for the first half of the current year, the petitioner has estimated an average expenditure of Rs 12000/- per employee. The number of employees availing the LTA benefit has been limited 50% of the employee strength. However the distribution will not be even over the year, as employees prefer to avail the LTA at the end of the year. The total expenditure for the current and ensuing year is projected at Rs 4.58 crores and Rs. 4.82 crores respectively.

#### **4.3.10.3 Earned Leave Encashment**

As per the Service conditions and Terms and Agreement of the Transfer Scheme, signed by the Licensees, all the erstwhile DVB employees are entitled for encashment of earned leaves. This expenditure has been covered under the head “Terminal benefits”.

#### **4.3.10.4 Payment under Workmen’s Compensation Act**

The same is also included in Staff Welfare expenses.

#### **4.3.10.5 Pension Trust Fee and Administrative Charges of Pension Trust**

As per the Trust Deed, the operating cost of the Pension Trust will be divided between the three Discoms, Genco & Transco (five successor entities) of erstwhile DVB. This fee is estimated based on actual of the previous year and the first half of current year. For the current and ensuing year the trust fee has been estimated at Rs 1.10 crores and Rs 1.19 crores.

#### **4.3.11 SPECIAL VOLUNTARY RETIREMENT SCHEME**

In the ARR for FY 2004-05 the petitioner had submitted that the actual outgo due to the special voluntary retirement scheme was Rs. 132.66 crores. The Honourable Commission in its Tariff Order for FY 2004-05 has projected the employee expenses on the assumption that the expenses incurred by the petitioner on SVRS will be recovered through the savings which will be on

account of the difference in the actual expenditure on salary for the remaining employees and other outsourcing costs vis-à-vis the estimated expenditure assuming that none of the employees have availed SVRS. The Honourable Commission has outlined that this method of treatment of SVRS outgo will be beneficial to the consumers, as it maintains the employee costs at prudent levels and will be tariff neutral for the amortization period, which was determined as 3 to 4 years in case of BRPL. The petitioner has considered the savings in the salaries as per the above principles outlined by the Honourable Commission i.e. equivalent to the estimated outflow of funds assuming that none of the employees have availed VRS. The net employee expenses is estimated to be Rs. 111 crores and Rs. 123 crores for the current and ensuing year respectively without considering the SVRS expenses. The amount of savings is estimated to be Rs. 65.60 crores and Rs. 64.70 crores for the current and ensuing year respectively. Hence the net employee expenses including the SVRS outgo is Rs. 177 crores and Rs. 188 crores for current and ensuing year respectively. It should be recalled that once the SVRS costs are recovered, the employee costs will substantially reduce and benefit of such reduction can be passed on to the consumers.

Pending resolution of the devolvment of additional liabilities on account of implementation of SVRS and in the interest of welfare of the VRS optees an MoU has been arrived at between the GoNCTD and the DISCOMs for creation of a trust purely as a pro-tem arrangement up till 31<sup>st</sup> March, 05 for disbursal of their pension dues, subject to the GoNCTD issuing policy direction to the DERC for inclusion of the expenses on account of the above in the ARR of the DISCOM's. The petitioner prays that such expense, if any, be considered while truing up the costs of the ARR FY 2004-05.

The details of the employee expenses for the previous, current and ensuing year are provided in the following table.

**Table 11: Details of Employee Expenses (Rs. Crores)**

S. No.	Item Description	Previous Year (Actual)	Current Year (Estimate)	Ensuing Year (Projection)
1	Employees' Salaries	-	-	-
	-Basic	44.93	32.08	34.64
	-Dearness Pay	-	13.40	14.47
	-Dearness Allowance	26.15	5.83	9.22
	-Overtime	11.99	6.14	5.52
	-HRA	13.48	11.73	12.67
	-Other Allowances	5.87	10.01	10.81
	-Bonus/Exgratia/ Special incentive	2.25	3.82	4.02
2	Staff Welfare Expenses	0.50	0.86	0.93
3	Terminal Benefits	11.66	13.04	15.17
4	Other Staff Costs	-	-	-
	- Medical Expenses Reimbursement	3.18	2.49	2.69
	- Leave Travel Assistance	0.08	4.58	4.82
	- others	0.08	0.14	0.15
5	Other employee Costs	-	-	-
	Administrative charges for Pension Trust/ Trust Fee	1.04	1.10	1.19
6	Paid to Contractual Employees	-	11.68	13.68
7	Total before Capitalisation	121.21	116.90	129.97
8	less: Expenses capitalised	2.56	5.84	6.50
	<b>Net Total</b>	<b>118.65</b>	<b>111.04</b>	<b>123.47</b>
9	Amortisation of cost of VRS	13.72	65.63	64.70
	<b>Net Employee cost</b>	<b>132.37</b>	<b>176.67</b>	<b>188.17</b>

#### 4.4 Administrative and General Expenses

These expenses include amount incurred by the licensee on insurance, communication, professional charges, property upkeep related expenses, audit fees, advertisement expenses, royalty, freight, conveyance and traveling, etc

In the Tariff Order issued on 9<sup>th</sup> June 2004, the Honourable Commission while approving the Administrative and General Expenses for FY 2004-05 to Rs. 17.29 crores has directed the licensee to “*take a prior approval for any increase in A&G expenses during the FY 2004-05 beyond A& G expenses approved before committing/incurred an expense*”. The licensee in FY 2004-05 has initiated several customer care initiatives which include increasing number of operators in

the call centres to reduce the response time, Integrated Customer care help desk and helpline for complaint against theft/touts, computerised tracking & monitoring of customer complaint, implementation of Bill amendment module, New connection Module, Outage Management Module, Power Supply module etc.. These measures, in addition to provide prompt consumer service are essential to meet the loss reduction target and are essential for efficient operation of the petitioner, has resulted in additional A & G expenses than the budget stipulated by the Honourable Commission. The petitioner has separately sought approval of the revised budget from the Honourable Commission as directed in the previous Tariff Order.

The target for loss-reduction and all-round improvement in reliability and customer services can only be achieved with a highly motivated work force empowered with all requisite tools and facilities to expedite focused action for meeting any exigency. Administrative and general expenses of the petitioner are occurred towards the day-to-day expenses relating to the administration of its field offices and corporate offices.

In the current year, the petitioner in its endeavor to increase the customer satisfaction has opened two additional customer care/ call centers. It has also taken steps to increase the communications network with the field persons so as to reduce the time gap for restoration of power.

In the last Tariff Order the Honourable Commission has considered A & G Expenses for FY 2004-05 at the same level as that of FY 2003-04 despite increase in rate of inflation. It is respectfully submitted that the Regulatory Commission in other reforming states like Uttar Pradesh, Uttaranchal, Haryana, Andhra Pradesh, Madhya Pradesh, Assam etc, have duly considered the effect of inflationary trend while approving the A & G expenses for the utility. Some of the examples are as follows:



- a. Uttaranchal Electricity Regulatory Commission in its Tariff Order for FY 2004 stated *"The Commission is of the view that the annual compound increase of 3% only should be allowed in A&G expenses, except the License Fees which is based on the actual total sales revenue earned during the last year in financial year 2003-04 keeping in view the rate of inflation."* (Section 5.9) The inflation rate assumed by the Honourable Commission was around 3%.
- b. Orissa Electricity Regulatory Commission in its Tariff Order for FY 2004 for CESCO stated *"The Commission finds the projected A&G expenditure proposed by the licensee is on higher side and considers it reasonable to allow an increase of 7% per annum over the approved figure of 2002-03 to take care of incremental expenses and factor in inflation."* (Section 5.18.3.4)

Gol in its financial budget for FY 2004-05 have increased the service tax component from 8% to 10% and introduced an education cess of 2% which would increase various expenses like insurance, communications, professional charges, audit fees, advertisement expenses, conveyance and traveling, freight etc.

The petitioner has taken several steps for enhancing customer care, system augmentation and computerization for better process management. Initiatives towards enhancing customer care includes increase in number of operators in the call centers, computerized tracking and monitoring of complaints, convenient payment facilities for consumer, etc. It has also taken steps to increase the communications network with the field persons so as to reduce the time gap for restoration of power. The benefits from these initiatives have greater economic/social values than the cost associated with these activities, besides generating higher revenue from loss reduction, etc.

Item-wise details of A & G expenses incurred in the current year and the ensuing year is enumerated below:

#### **4.4.1 RENT, RATES AND TAXES**

This includes expenses incurred by the petitioner on rent for office premises, rates and taxes for vehicles and property tax. In the first six months of the current year the petitioner has incurred Rs. 0.50 crores towards rent, rates and taxes. However, the above amount doesn't include the property tax of Rs. 2.4 crores as claimed by MCD Delhi on the properties not belonging to the petitioner but belonging to DPCL, DTL and other utilities. Such amounts if any, on settlement of dispute with MCD will be trued up in the subsequent year.

#### **4.4.2 INSURANCE**

The expenses incurred by the licensee on account of Fire policy for all assets, public liability policy, cash insurance policy, insurance of all computers, networking equipments, fault locating vans, telecom equipments, vehicles and group personal accident Insurance policy for employees.

In the first six months the following insurance policies has been taken up by the licensee and included in the accounts on accrual basis for:

- a. Fire policy for buildings and stores.
- b. Public Liability Policy
- c. Money Insurance Policy
- d. Vehicle Insurance
- e. Group Personal Accident Insurance Policy.

The licensee has provisioned for the insurance premium in the following policies in the next six months of the current year:

- a. Fire policy for Grid and Substations
- b. Fire policy for office premises including office furniture's, computers, networking equipments and telecom inventory.

- c. Fire policy for fault locating vans.

Insurance expense for the above policies were also incurred in the previous year while in the first half of the current year the policy though renewed could not be converted into contract and thus the expenses is included in the second half of the year and for the full year of FY 2005-06.

#### **4.4.3 TELEPHONE CHARGES, POSTAGE CHARGES**

These include expenses incurred on telephone charges, postages , courier, etc by the petitioner. The expenses has increased in comparison to the previous year due to the following reasons:

- a. Increase in Service tax which forms a component in Telephone expenses.
- b. Increase in number of operators in the Call centers for better customer service.
- c. In order to reduce the response time in case of any breakdown, all the field personnel's are being provided with mobile phones so that they can be immediately contacted in case of any emergency so that the fault can be repaired in lesser time. This effort is taken by the petitioner in order to provide better service to its consumer.
- d. The mobile telephone expense incurred by the petitioner in the previous year, as was considered by the Honourable Commission, was for three months (as the mobile phones were issued in the last three months of the financial year) while the expense in the un-audited accounts for the current year is for six months.

#### **4.4.4 CONSULTANCY FEES**

The expense incurred by the petitioner under this head includes consultancy and legal fees paid for specific assignments outsourced by the petitioner. As per the un-audited accounts of the first six months of the current year, Rs. 1.68 crores

has been incurred by the petitioner. This is due to the following consultancy assignments outsourced:

- a. Consultancy for Sales Tax matter which includes filing of quarterly sales tax, regular assessment on yearly basis, updating all circulars/sales tax notifications, etc.
- b. Consultancy for audits of Journal Entries through Bill amendment module.
- c. Engagement of professionals for filing of intimation of contract, checking and verification of Tax deducted at source, Salaries, checking of TDS certificates, Works contract Acts, etc..
- d. Experienced professionals engaged as consultants in various functional areas..
- e. Consultancy for Internal audit
- f. Stock Valuation.
- g. Software modification/upgradation of Bill amendment module, new connection module, customer query handling module.

The petitioner proposes to outsource other assignments for financial and operational improvements like load forecasting study for meeting long term demand/energy requirements so as to provide for adequate availability of power to the consumers etc. The petitioner hence has estimated Rs. 2.75 crores for the next half of the current year. Thus the total expense estimated is Rs. 4.44 crores and Rs. 4.79 crores for the current and ensuing year respectively.

#### **4.4.5 OTHER PROFESSIONAL CHARGES**

The professional charges include expense incurred by the petitioner on account of audit, etc. In the current year the petitioner has engaged experts (legal etc.) in

the enforcement division to reinforce the enforcement drives and reduce theft and other commercial losses.

#### **4.4.6 LICENCE FEES**

Section 12.1 of the Distribution and Retail Supply of Electricity License stipulates that the licensee shall pay to the Commission a fee equivalent to 0.05% of the amount billed during the previous financial year in the area of supply of the license. The licensee has paid Rs. 2.37 crores as license fees to DERC for the FY 2002-03, FY 2003-04 and FY 2004-05 out of which Rs. 0.87 crores was accounted in FY 2003-04 and the balance amount of Rs. 1.50 crores is considered in FY 2004-05. In the ensuing year the license fees is estimated to be 0.05% of the revenue estimated in the current year.

#### **4.4.7 CONVEYANCE AND TRAVELLING**

The expenses incurred by the petitioner under this head includes expenses on account of hire charges viz. vehicles hired for attending breakdowns, enforcement, meter managements, street lights, vigilance, customer support services, stores, traveling fares of Director's and Executives, Local conveyance, fuel charges etc.

In the current year fuel prices have increased by approximately 40% as compared to previous year. This increase has affected the conveyance and traveling expenses.

#### **4.4.8 OTHER EXPENSES**

The expenses incurred by the petitioner under this head includes expenses incurred for security personnel, house keeping charges, advertisement and all other sundry charges not included in the above.

**4.4.9 METERING AND BILL DISTRIBUTION EXPENSES**

These expenses are incurred by the licensee on meter reading and bill distribution for its consumers. The licensee is required to record following additional parameters MDI, kVAh, kVARh, pf, etc., which requires additional resources as compared to the previous year. Implementation process for recording MDI, kVAh, kVARh, pf etc for respective category of consumers have commenced from September '04 and expenses has been included in the second half and FY 05-06. The actual expenses incurred in FY 2003-04 is Rs. 5.08 crores, which doesn't include the additional efforts required for recording extra parameters as specified by the Honourable Commission.

All the above expenses are essential to improve the revenue and operational performance of the petitioner. The expenses are also instrumental in decreasing the losses occurring at various stages of the revenue cycle and meet the committed bid loss reduction levels.

Thus as seen from above, as per the un-audited accounts the total A & G Expenses incurred by the licensee in the first half of FY 2004-05 is Rs. 15.30 crores and the budget for the next six months is Rs. 19.06 crores. Thus the total expenses estimated in FY 2004-05 and FY 2005-06 is Rs. 34.36 crores and Rs. 37.34 crores as shown in the table below:

**Table 12 : Administrative and General Expenses (Rs. Crores)**

Sl. No.	Particulars	April 04 to Sep 04 Rs Crores	2004-05 Oct 04 to Mar 05 Rs Crores	Total Rs Crores	2005-06 Rs Crores
1	Rent, Rates & Taxes	0.50	0.52	1.02	1.10
2	Insurance	0.33	0.73	1.06	1.15
3	Telephone Charges, Postages, etc.	2.19	2.28	4.47	4.83
4	Consultancy Fees	1.68	2.75	4.44	4.79
5	Technical Fees	0.10	0.10	0.20	0.22
6	Other Professional Charges	0.08	0.08	0.16	0.18
7	Licence fees	0.76	0.74	1.50	1.01
8	Conveyance and Traveling	2.27	2.36	4.64	5.01

Sl. No.	Particulars	April 04 to Sep 04 Rs Crores	2004-05 Oct 04 to Mar 05 Rs Crores	Total Rs Crores	2005-06 Rs Crores
9	Freight	-	-	-	-
10	Printing & Stationery ,	1.28	1.33	2.61	2.82
11	Other Expenses	-	-	-	-
	- Electricity & Water Charges	-	0.51	0.51	0.56
	- Other material related expenses	-	-	-	-
	- Others	3.30	3.44	6.74	7.28
12	Meter Reading & Bill Distribution Expenses	2.80	4.20	7.00	8.40
	<b>Total</b>	<b>15.30</b>	<b>19.06</b>	<b>34.36</b>	<b>37.34</b>

#### 4.5 Repair & Maintenance Expenses

The petitioner in the previous year has incurred Rs. 80.31 crores as expense towards R & M expense. The Honourable Commission considered Rs. 19.88 crores, towards transformers and meters, as a part of the Capital Expenditure and directed the petitioner to *“clearly demarcate expenditure related to replacement of meters, transformers and switchgears and include the same in capital expenditure in future submissions”*. Hence the actual R & M expense incurred by the petitioner is Rs. 60.43 crores against which the Honourable Commission has approved Rs. 52.57 crores. On referring the issue in the review petition filed by the petitioner, the Honourable Commission has considered the expenses of the previous year at Rs. 60.43 crores but hasn't revised the R & M Expenses of the current year, which was considered at the same level of the previous year, despite the increase in material / labour costs. The Honourable Commission has stated that the additional cost of Rs. 7.86 crores in FY 2003-04 shall be considered in the next ARR.

Considering the review petition, the R & M Expenses approved for the current year is at a lower level than that of the previous year despite increase in material costs due to inflation. Moreover, in the current year the petitioner has significantly decreased the failure rates of transformers due to the sustained preventive maintenance efforts.

The distribution network inherited by the petitioner from DVB is ageing and weak and requires complete revamping, which requires bare minimal level of R & M expenses for the next couple of years to maintain the vast distribution network to a normal level. Moreover, the new assets induced in the distribution network due to additional Capital Expenditure envisaged by the petitioner, requires minimal maintenance for maintaining its fair value of life. The detail of the distribution network is shown in Table 2.

The Repair and Maintenance activities for the distribution activity can be classified as-

- a. Normal Repair and Maintenance of existing assets
- b. Repair and maintenance of new network laid for meeting the demand growth and
- c. Repair and Maintenance due to external factors such as extended monsoon, road widening etc. Such activities necessitate frequent maintenance and causes extensive damage to the underground cabling system in the licensed area. The expenditure increases due to the extra equipment /sub-station including underground cable installed as per the growth in the licensed in the licensed area.

The maintenance activities by various classes of assets are as given below:-

- a. 11KV / 33KV / 66KV :
  - i. Expenses for repairing of cable faults including failure of ID/OD Box.
  - ii. Expenditure for laying of cable in case of concretizing, for repairing the faults or in case of the encroachment on the roads.



- iii. Failure of joints due to ageing
- iv. Damages by external utilities like MCD, MTNL etc.
- v. Expenses due to Preventive / Breakdown maintenance of O/H Lines.
- vi. Expenses for Overhauling of Switchgears.
- vii. Repairs to faulty switchgears due to flashover / operating mechanism problem etc.
- viii. Preventive maintenance of any other type.
- ix. Expenses for Filtration of transformers.
- x. Repairs to 11KV / 33KV/66KV Transformers.
- xi. Replacement of faulty Transformers (Labour & material charges)
- xii. Attending Oil leakages of transformers.

b. LT Network:

- i. Repair/Replacement of damaged feeder pillars.
- ii. Change of bus bars, contacts, L-strips, Fuses etc.
- iii. Maintenance of LT panels
- iv. Replacement of faulty switch units, fuse switches.
- v. Expenses for repairing LT Cable faults.
- vi. Expenses for shifting/diversion of LT Cable due to road development/encroachment.

- vii. Expenses for repairing service and installations.
- viii. Expenses for preventive maintenance of ACB, Feeder pillars etc.
- ix. Expenses for preventive/breakdown maintenance of overhead Lines.
- c. Others:
  - i. Repair and maintenance of the buildings (substations, offices, staff quarters etc)
  - ii. Repairing of fault locating vans
  - iii. Thermo-graphic survey of sub stations

Most of the State Electricity Regulatory Commissions in the country like Uttar Pradesh, Gujrat, Andhra Pradesh, etc. have also taken a considerate view on the R & M Expenses and have allowed/expressed its views to allow higher expenditure on the R & M as it has a direct impact on improvement of supply conditions, and provides a net economic benefit on the life of the assets. Some examples are as follows:

- a. Uttar Pradesh Electricity Regulatory Commission in its Tariff Order for FY 2003-04 has indicated its willingness to allow higher R & M expenses and stated that *“While the Commission is willing to consider higher amounts if it leads to improvement in quality of supply, the UPPCL has to first demonstrate its commitment to improve its management practices to ensure that higher expenditure would lead to better supply quality.”* (Section 6.55)
- b. Gujrat Electricity Regulatory Commission in its Tariff order for FY 2002-03 of Ahmedabad Electricity Company mentions that *“The Commission is of the opinion that to the extent an increase in R&M*

*expenditure results in a net economic benefit through extending / maintaining the life of an asset, it is reasonable to permit such expenditure. It is equally necessary that the plants and systems should be in good shape if we were to expect a high quality of service from the AEC. We have therefore accepted R & M expenditure of Rs. 55 crores as projected by the AEC for FY 2002-03.” (Section 5.74).*

In its tariff order the Honourable Commission has also recognized the need for R & M expenses and mentioned that “The Commission feels that R&M work is a critical activity not only for improving but also for maintaining the quality of service. This also has a direct bearing on the useful life of the assets. Thus, any reduction in R&M expenses may adversely affect the quality of supply to the consumers.” But while allowing the expenses for the current year, it has limited the R & M expenses to Rs. 52.57 crores which is lower than the actual expenses of Rs. 60.43 crores incurred in the previous year. The petitioner has already appealed separately to the Honourable Commission in this regard.

It may be worthwhile to mention that the R & M Expenses incurred by the petitioner in the previous and current year have already started yielding results. The proactive preventive maintenance initiatives taken by the petitioner to improve the quality of supply in its distribution area in the current year have resulted in a significant improvement of the reliability index of the system as compared to the yester years.

In the current year the petitioner have also prioritized the activity of maintenance of street lights. In its area of supply, almost 97% of the street lights on an average are functioning as compared to 80% in the previous year.

As compared to the previous year the material costs have increased significantly. The rise in prices of raw materials required for the Repair & Maintenance activities is indicated in the table below.

**Table 13: Price increase in raw material (Jan 2003 – June 2004)**

Item	PRICE (RS./TON EXCEPT AS INDICATED)		% CHANGE
	Jan-04	Jun-04	Jun 04 – Jan 04
MS Angles	20300	24500	20.69%
MS Rounds	20500	25800	25.85%
Channels	20400	24700	21.08%
HR Sheets	26700	30000	12.36%
`CR Sheets	26900	31000	15.24%
Copper (\$/ton)	2424	2687	10.85%
Lead (\$/ton)	758	870	14.78%
Tin (\$/ton)	6485	9205	41.94%
Zinc (\$/ton)	1017	1022	0.49%

The petitioner in view of the above has incurred Rs. 38.75 crores towards R & M Expenses in the first six months of the current year. The Honourable Commission in its last order has directed the petitioner to take prior approval for any increase in R & M expenditure before committing/incurred any expense. Accordingly, the petitioner has separately requested for approval from the Honourable Commission for the increased R & M expenses.

The Honourable Commission in its tariff order issued in Feb 2002, after considering the critical requirement of the R & M Expenses, has considered an increase of 7% per annum as the maintenance activities increases the useful life of the assets. Moreover, the petitioner after taking over the distribution business has added substantial assets through increased Capital Expenditure. Such assets also require adequate level of maintenance activity for their smooth operation.

In view of the inflationary trend in material prices and labour costs, the petitioner has considered R & M expenses of Rs. 68.99 crores and Rs. 74.51 crores in the current and ensuing year respectively.

#### **4.6 Depreciation**

In the last Tariff Order the Honourable Commission has assumed 3.75% as the rate of depreciation and has categorically stated that *“The Commission is of the view that as depreciation is a non-cash expenditure and there is no scheduled loan repayment, the reduction in the depreciation expenditure will not affect the Petitioner’s operation as all legitimate and prudent expenditure is being considered for the purpose of determination of the ARR”*.

As per Accounting Standards 6 issued by the Institute of Chartered Accountants of India Depreciation is defined as a “measure of the wearing out, consumption or other loss of value of a depreciable asset arising from use, efflux ion of time or obsolescence through technology and market changes. Depreciation is allocated so as to charge a fair proportion of the depreciable amount in each accounting period during the expected useful life of the asset”.

In the workshop on APDRP organized by Ministry of Power, the depreciation rates and methods was recommended to be followed as per the above mentioned Accounting Standard. It stated that *“Depreciation is provided as per AS-6 (Depreciation. Depreciation is charged on the depreciable amount. Depreciable amount is cost of individual asset as reduced by the residual value. Depreciation is calculated on the depreciable amount as divided by the estimated useful life (subject to minimum rate prescribed under Schedule XVI of The Companies Act, 1956). In case of any additions/deletions of assets depreciation is to be provided on pro rata basis.”*

Most of the State Electricity Regulatory Commission’s in the country have considered depreciation as per the rates specified by the Ministry of Power. Gujrat Electricity Regulatory Commission in its Tariff Order for Ahmedabad Electric Company (FY 2002-03), the depreciation is to be calculated in accordance with such principles as the Central Government may after consultation with the authority by Notification in the Official Gazette lay down

from time to time. Section 5.88 of the GERC Tariff Order reads *“In the light of the provisions of Section 29 of the Electricity Regulatory Commissions Act, 1998, the Commission decided that for admitting revenue requirements of various items it should follow the guiding principles laid down in the Schedule VI of the Electricity Supply Act, 1948. Section VI(a) of the Schedule VI mentions that the licensee shall provide for the depreciation each year, such sum calculated in accordance with such principles as the Central Government may after consultation with the authority by Notification in the Official Gazette lay down from time to time. It is seen from the Notification issued by the Ministry of Power on 27.3.1994 that the schedule given for calculation of the rates of depreciation refers to the assets existing on the books of accounts and the quantum of depreciation is determined as percentage of such value.”*

This has also been reinforced by Andhra Pradesh Electricity Commission in its Tariff Order for FY 2004-05, Para 452 reads *“For electricity industry, the depreciation rates are the rates, notified by the Ministry of Power, Government of India. Depreciation is applied on the opening balances of the Fixed Assets for the ensuing year at specific rates applicable to particular assets subject to a limit of 90% of the Fixed Asset value (the balance being treated as scrap value).”*

The rate of depreciation as notified by the Ministry of Power is followed by other Commissions in the country while determining the ARR for the utility in their Tariff Orders. For e.g. Uttar Pradesh Electricity Regulatory Commission has specifically mentioned in its Tariff Order that *“The Commission has used the asset break-up in the Transfer Scheme to determine asset category-wise depreciation amounts for FY 2003-04. Asset additions have been assumed to be in the same proportion as the existing proportion of asset categories. Depreciation rates have been used as per the MoP notification”* (Section 6.88, Tariff Order for UPPCL for FY 2003-04).

The petitioner had filed petition for the review of method of charging depreciation. The Honourable Commission has not approved the petition on above subject

stating inter alia *“Commission has mentioned that it has determined the depreciation based on the useful life of the lines and cable specified in the MoP depreciation norms notified in March 1994. Hence the Commission is of the view that the return has not been denied to the petitioner. Further the Commission has mentioned that the rate of depreciation used in BST Order of February 22, 2002 was derived from the earlier RST Order. In the earlier RST order, the Commission has considered the weighted average depreciation rate, as the details of asset composition at the beginning of FY 2001-02, were not available.”*

It is submitted that, the MoP Depreciation norms notified in March 1994 provides for a depreciation rate of 7.84%. But the Honourable Commission has assumed a depreciation rate of 3.75% for the purpose of ARR. This change in depreciation rate by the Honourable Commission is impacting Cash Flow and the Return of the petitioner, as in its Books of Account the petitioner has provided for depreciation as per the MoP norms. In consideration of the above, the Honourable Commission is requested to review the depreciation rates allowed for FY 2002-03 and FY 2003-04 and its corresponding impact may be provided in the ARR of FY 2005-06.

Consequent to the repeal of the Electricity Supply Act 1948 (which considered depreciation rates as notified by MoP), a Task force was constituted by the GoI on Power Sector Investments and Reforms. The Report of the Task Force– Feb 2004 (N. K. Singh Committee Report) stated that *“the provisions relating to depreciation may be harmonised with the provisions of the Companies Act, 1956 and for the purpose of tariff determination, depreciation rate as per the Schedule XIV of Companies Act, 1956 may apply. All power sector entities may be treated as ‘continuous process plant’ for the purpose of determination of depreciation rate till new rates are evolved.”*

Therefore, the petitioner has considered depreciation rate as per Companies Act 1956 for the current and ensuing year, which may please be approved

## **4.7 Interest and Finance Costs**

### **4.7.1 INVESTMENT PLAN**

The petitioner has envisaged an investment plan of Rs. 800 crores and Rs. 1400 crores for the current and ensuing year respectively as detailed in the Section 4.1. The funding mechanism has already been provided in Table 6.

### **4.7.2 INTEREST ON DPCL LOANS**

The petitioner as per the transfer scheme has inherited a loan of Rs. 690 crores from DPCL. The loan is payable within 13 years from the date of transfer with a moratorium for the first four years on both interest and principal. Thereafter the loan would bear an interest at the rate of 12% per annum and would be repaid in eighteen equal half yearly installments. Hence for the current year and in the ensuing year no interest has been assumed on the above loan.

### **4.7.3 INTEREST ON APDRP LOANS**

Gol with a view to upgrade the sub-transmission and distribution in densely electrified zones in the urban and industrial areas and improvement in commercial viability of the SEB's/utilities have launched the APDRP program. Under this program funds will be provided through a combination of grant and loan to the State Government as additional central plan assistance. Delhi being a Non special category state, Gol will finance 50% of the project cost and the ratio of grant and loan is 1:1. The utilities will have to arrange for the remaining 50% of the fund from PFC/REC or other financial institution as counter part fund. This fund will accelerate the reform program undertaken in the state and will augment the licensees efforts for providing quality and uninterrupted power to its consumers.



The licensee on 28<sup>th</sup> March 2003 has signed an MoU with the GoI and DPCL for execution of APDRP in the distribution circles in its area of supply. Accordingly an amount of Rs. 334.31 crores was approved under the scheme. The loan component of the APDRP fund will carry an interest burden of 11.50 % per annum. The repayment terms of the loan is as follows:

- a. 50% of the loan amount shall be repaid in 20 annual installments commencing from the year which is following the year in which the last tranche of DPCL contribution of APDRP funds is released by the DPCL.
- b. Balance 50% of the Loan amount shall be repaid in 15 annual installments after an initial moratorium of five years. This five year moratorium period would commence from the year following the year in which the last tranche of DPCL contribution of APDRP funds is released.

The petitioner has only received the first tranche of payments for an amount of Rs. 18.63 crores on September 12 2003. The remaining loan amount of Rs. 62.71 crores is expected in the current year.

The petitioner has provided a total loan component of Rs. 81.34 crores with an average interest @ 11.5 % per annum for the current year and in the ensuing year works out to be Rs.3.95 crores and Rs. 9.24 crores respectively.

#### **4.7.4 INTEREST ON OTHER COMMERCIAL BORROWINGS**

As discussed in the Table 6 the petitioner needs to borrow Rs. 325 crores and Rs. 861 crores in the current and in the ensuing year for funding its capital expenditure after considering consumer contribution, APDRP funds, unutilized depreciation (after meeting working capital requirements), internal accruals, capitalisation and equity infusion.

The interest rate assumed by the licensee for such a borrowing is 9.5% per annum. Accordingly, the interest component after capitalisation of such a borrowing from the financial institutions is Rs. 33 crores for the ensuing year.

#### **4.7.5 CARRYING COST OF SVRS**

The petitioner has made payment of Rs. 132.66 crores for funding the SVRS. The petitioner has considered the carrying cost of SVRS amount @ 9%. The interest has accordingly been considered in both the current and ensuing after accounting for the amount of amortization approved by the Honourable Commission in the last Tariff Order.

#### **4.7.6 INTEREST ON CONSUMER SECURITY DEPOSITS**

Section 47(4) of the Electricity Act 2003 states that *“The distribution licensee shall pay interest equivalent to the bank rate or more, as may be specified by the concerned State Commission, on the security referred to in sub-section (1) and refund such security on the request of the person who gave such security.”*

The Honourable Commission in its draft Performance Standards (Metering and Billing) Regulations 2004 has provided for payment of interest on consumer security deposits. The Honourable Commission has also held public hearing after obtaining objections/suggestions from the stake holders and is in the process of finalizing the Regulations. As a major portion of the Security deposit was retained by the holding company (DPCL), the allocation of the amount transferred to the petitioner against individual consumers is unknown to the petitioner. The opening balances of the Consumer Security Deposit amount were not available to the petitioner. Accordingly the petitioner has separately petitioned the Honourable Commission to intervene in the matter and clarify the position. The decision of the Honourable Commission in this regard is awaited. Pending the decision on the subject, the petitioner in its best estimate has compiled the Consumer Security Deposits in Form 1.1f1 CSD based on the available information with the petitioner.

Accordingly, the petitioner has proposed for a sum of Rs. 12.23 crores in the ensuing year towards interest on Consumer Security Deposit assuming the Regulations referred to will come into effect in the ensuing financial year.

#### **4.7.7 WORKING CAPITAL REQUIREMENT**

The petitioner has considered Working Capital Requirement as a sum of the following :

- a. One twelfth of the sum of the book cost of stores, materials and supplies including fuel in hand at the end of each month of the year.
- b. One twelfth of the sum of (cash and bank balance) & call and short-term deposits at the end of each month of the year of account, not exceeding in the aggregate an amount equal to one-quarter of the expenditure under sub paragraph(2) (b) excluding sub-clauses (i), (iv), (iv-a), (iv-b) & (x) of The Sixth Schedule of The Electricity (Supply) Act, 1948.

The Honourable Commission in its last Tariff Order has considered the funding of Working capital through cash available from depreciation. In the current year and ensuing year the total working capital requirement is Rs. 118 crores and Rs. 144 crores respectively which is proposed to be funded from the depreciation.

#### **4.8 Arrears to Holding Company**

According to the provisions of the Transfer scheme, the amount of DVB arrears realized by the DISCOM shall be shared between the Holding Company and DISCOM in the ratio of 80:20. The Honourable Commission in its previous Tariff Order has considered 80% of these actual arrears to be retained in the sector by passing thereon to TRANSCO.

Accordingly, for the ensuing year, the amount of DVB arrears realized by the petitioner is Rs 25 crores and 80% of the share is treated as expenses on account of the Petitioner.

#### **4.9 Return on Equity**

The computation of the return has been made on the equity and free reserves at the end of the year as provided in clause 13 of the policy directions of November 2001.

The Honourable Commission has approved a Return on Equity of Rs. 56.45 crores and Rs. 75.31 crores in FY 2002-03 and FY 2003-04 respectively, while Rs. 10.67 crores was utilized for the purpose of financing Capital Expenditure upto FY 2003-04. The petitioner has considered the balance unutilized reserve of Rs. 121 crores as part of opening balance.

These are used for financing Capex at the beginning of the current financial year. The Petitioner has planned for a substantial investment with the objective of providing a world class distribution system in Delhi, i.e. better quality of supply & better services to its customers. The total planned investment is mainly due to the following activities:

- a. System development to meet the load growth.
- b. Strengthening and refurbishment of system to improve the reliability of supply.
- c. Reduction in system losses.
- d. Automation and other improvements to improve customer service.
- e. Investments required to fulfill social obligations (such as electrification of JJ colonies).

f. Consumer Deposit Works.

In addition to funding requirement for Capital Expenditure, the petitioner will also be required to arrange funds for financing Regulatory Asset which has been provided in The Tariff Order 2004-05. In order to attract the lenders for Financing Capital Expenditure Schemes & Regulatory Asset, it would be necessary for the promoters to infuse Additional Equity. In line with the standard practice, Commission has also considered financing of Capex with Debt Equity ratio of 70:30. The petitioner is in the process of raising the equity for Financial Year 2004-05 & 2005-06 amounting to Rs. 214 Crores. The amount of equity utilized for the purpose of capex has been shown as an addition to equity.

In the Tariff Order for Financial Year 2004-05, the Honourable Commission while allowing the Annual Revenue Requirement for Financial Year 2004-05 of the Petitioner had allowed depreciation @ 3.75% as against average rates of 7.84% notified Ministry of Power, Government of India vide the notification of March 1994, thus deviating from the provisions of MoP and the Companies Act, 1956. The Honourable Commission has allowed depreciation of Rs. 58.19 crores as against Rs. 114.81 crores as per the books of accounts of the company for Financial Year 2003-04.

While preparing the books of accounts the Petitioner is required to follow the mandatory Accounting Standard – 22 on 'Accounting For Taxes on Income' issued by The Institute of Chartered Accountants of India. The Accounting Standard has to be followed by the petitioner under the provisions of Section 211(3A) of The Companies Act, 1956. As per the Accounting Standard – 22 on 'Accounting For Taxes on Income', any tax liability which is likely to arise on account of timing difference of expenditure has to be charged to Profit and Loss account for computing the income and any unpaid amount of tax has to be provided as deferred tax liability in the Balance Sheet.

In view of the above, the profit/loss in the books of accounts will be vary from the timing difference of expenditure. This results in a lower figure for the free reserves at the end of the year on which the return to the shareholder's is assured.

The Petitioner, therefore, requests the Honorable Commission to allow return on the basis of normative free reserves on the basis of the Table given below which has been made as per the Policy Directions issued by the Government of NCT of Delhi. The computation of the return on issued and paid-up capital and free reserves for all the years is presented below:

**Table 14: Computation of Return on Issued and Paid-up Capital and Free Reserves (Rs. Crores)**

Description	2002-03	2003-04	2004-05	2005-06
Equity Capital	460	460	460	460
Addition to the Equity Capital	-	-	-	214
Opening Balance of Free Reserves:	-	56	132	245
(a) Opening Balance of Utilised Return	-	11	11	245
(b) Opening balance of Allowed Unutilised return	-	46	121	-
Addition to the opening free reserves during the year	11	-	113	155
Closing Balance of Free Reserves	56	132	245	399
(a) Closing Balance of Utilised Return	11	11	245	399
(b) Closing balance of Allowed Unutilised return	46	121	-	-
Total of Equity and Closing Free reserve	471	471	705	1,073
<b>16% return on Equity and Free reserve</b>	<b>56</b>	<b>75</b>	<b>113</b>	<b>155</b>

#### 4.10 Taxes on Income

The Honourable Commission in its last tariff order has mentioned that the actual tax liability will be considered by the Honourable Commission under the “truing up” mechanism in case there is a difference between the actual tax liability and the estimated tax liability.

The petitioner has not made any provision of tax liability in the current year and in the ensuing year and request the Honourable Commission to allow such expenses as per actual expense incurred by the petitioner in future years.

#### **4.11 Retirement of Assets**

The Honourable Commission in its last Tariff Order has reiterated that “ *for the purpose of ARR computation, the Commission has not considered loss on retirement/sale of assets as an expense and the Commission based on its decision on the aspect after detailed examination will consider the impact during the truing up process*” (Section 3.4.2). Pending decision of the Honourable Commission on the issue, the petitioner has not provisioned any amount towards retirement of assets in its ARR. However the petitioner estimates an amount of Rs. 20 crores towards retirement of assets

#### **4.12 Regulatory assets**

In its last tariff order, the Honorable Commission had determined the sector revenue gap for the state at Rs. 1072 crores for the year 2004-05 after the tariff increase provided for during the year. After providing for the committed Government subsidy available for the sector, the revenue gap was estimated at Rs. 696 crores. The Honorable Commission had determined that the sector revenue gap for the year was not feasible to be amortized during the year through tariff setting, as it would entail a tariff shock to the consumers. Therefore, the revenue gap was allocated between the three DISCOMs and Delhi Transco as a regulatory asset to be amortized over a period of time. The Petitioner's share of the revenue gap was determined at Rs. 267 crores, after allocating Rs. 100 crores as Transco's share.

The Petitioner had subsequently petitioned the Honorable Commission for a review of its order in which the Petitioner has submitted that the Regulatory Asset created was not justified as it would entail a cash loss for the Petitioner which would be impossible to finance either through the Petitioner's resources or

through borrowings. The Petitioner had also presented that this measure of creation of regulatory assets was not in keeping with the Transfer Scheme which inter-alia provided that the Petitioner would be entitled to an assured return on equity of 16% during the transition period, i.e., up to 2006-07. This meant that the Petitioner was entitled to a bulk supply tariff based on the Petitioner's ability to pay after providing for all properly incurred expenditure and the assured return on equity. However, the creation of the regulatory asset denied the Petitioner the assured return on equity as per the Transfer Scheme.

The Report of the Task Force on Power Sector Investments and Reforms – Feb 2004 (N. K. Singh Committee Report) on its comments on Regulatory Assets has mentioned that *“While recognizing the flexibility provided by such a mechanism for handling extreme circumstances where recovery of entire costs through tariff may not be possible, the Task Force is concerned that such a facility could be used to defer tariff increases that may ordinarily occur. The Task Force is also of the view that **such an arrangement is inefficient and unfairly burdens the future consumers of the system with the cost of past inefficiencies. In addition, the credibility of Regulatory Asset is also low since there is little certainty on amortisation of the Regulatory Asset within a reasonable time frame. This instrument also vitiates the efficient working capital management by the licensees.**”*

The Honourable Commission in its order on the licensee's review petition has stated that *“the Commission would explore various alternatives including gains from efficiency improvement in terms of over achievement in AT & C losses, appropriate tariff increase, additional support from the Government at appropriate stage to meet the revenue gap in future years”*. The Honourable Commission has also opined that *“the matters such as Regulatory Asset, created in order to avoid a severe tariff shock to the consumers during the policy direction period, would have to be amortized during the tenure of the Policy Direction i.e. by 2006-07.”*



In the Tariff Order of June 9, 2004, the Honourable Commission has created a Regulatory Asset of Rs. 138 crores for the petitioner. The Honourable Commission in this Tariff Order has observed that “*The Commission while amortizing the Regulatory Asset will also consider the carrying cost of the Regulatory Asset*” (Para 4.7.3.2). Further in its order on the Review petition filed by the petitioner, the Honourable Commission has stated that the carrying cost of such fund will be considered at a debt equity ratio of 70:30. The actual revenue gap in FY 2004-05 is Rs. 325 crores vis-à-vis Rs. 267 crores as approved by the Honourable Commission due to the following reasons:

- a. Difference in actual expenses incurred by the petitioner and the expenses approved by the Honourable Commission on R & M and A & G expense in FY 2003-04 and FY 2004-05.
- b. Lower approval of other expenses in FY 2004-05

The regulatory asset as stated above also includes ROE of Rs. 26.55 crores of FY 2003-04 which requires a return @ 16% for the full year as shown in the table below.

**Table 15: Truing up of Regulatory Assets**

Year	Amount of Regulatory Asset (Rs. Cr.)	Carrying Cost (%)	Carrying Cost (Rs. Cr.)
Total Gap in FY 2003-04	26.55		
ROE deferred in FY 2003-04	26.55	16.00%	4.25
Amount of loan deferred in FY 2003-04	-		
Total Gap estimated in FY 2004-05	298.62		
<i>ROE component deferred</i>	<i>71.00</i>	<i>16.00%</i>	<i>5.68</i>
<i>Loan Component</i>	<i>227.61</i>	<i>9.50%</i>	<i>10.81</i>
<b>Total</b>	<b>325.16</b>		<b>20.74</b>

The effect of the actual expenses incurred by the petitioner over and above the approved amount of FY 2004-05 and the revenue gap of FY 2003-04 has been included in the revenue requirement as previous year expenses for truing up in

the ensuing year. The petitioner in accordance with the earlier precedent followed by the Honourable Commission in its Tariff Order FY 2003-04 and the policy directions issued by GoNCTD has computed its revenue requirement after truing up of expenses of the previous years and based on its paying capacity. The petitioner thus has assumed that the regulatory asset created by the Honourable Commission will be made available to the petitioner at the beginning of the FY 2005-06.

#### 4.13 Non Tariff Income

The Honourable Commission in the previous Tariff Order has considered the following components as Non-Tariff Income for the petitioner.

- a. Income derived by the petitioner from compulsory investments
- b. Rebate on Power purchase for the current year
- c. Commission on collection of electricity duty based on 3% of the Electricity duty.

Based on the same principles, the petitioner has estimated the Non-Tariff Income for the ensuing year as Rs. 31.03 crores as explained in the table below:

**Table 16 : Details of Non Tariff Income (Rs. Crores)**

Details	April 04 to Sep 04 Rs Crores	2004-05		2005-06 Rs Crores
		Oct 04 to Mar 05 Rs Crores	Total Rs Crores	
Sale & repair of lamps and apparatus	0.90	0.85	1.75	1.89
Investments, fixed and call deposits and bank balances	2.37	0.58	2.95	1.48
-Rebate against bulk supply	0.38	-	0.38	-
- Commission on collection of electricity tax on behalf of MCD	1.13	1.17	2.30	2.67
Profit/Loss on sale of Current Investmen	1.61	-	1.61	-
-Sale of Scrap	3.54	1.00	4.54	2.00

Details	April 04 to Sep 04	2004-05 Oct 04 to Mar 05	Total	2005- 06
	Rs Crores	Rs Crores	Rs Crores	Rs Crores
- Others (including interest on loan to BYPL)	12.51	11.00	23.51	23.00
<b>Total</b>	<b>22.44</b>	<b>14.60</b>	<b>37.04</b>	<b>31.03</b>

#### 4.14 Total Expenditure Excluding Power Purchase Cost

The table below provides a summary of the various expenses as estimated in the current year and ensuing year. Detailed analysis of each expense head has already been discussed in the above sections.

**Table 17 : Total Expenditure Excluding Power Purchase Costs (Rs. Crores)**

Components	FY 2004-05		FY 2005-06
	Approved	Revised Estimate	
Expenses			
Employee Expenses	135	176	188
R & M Expenses	53	69	75
A & G & Other Expenses	18	35	38
Interest & Finance Charges	16	3	54
Depreciation	62	108	139
DVB Arrears	41	24	20
Truing up of Regulatory Assets	-	21	-
<b>Net Expenditure</b>	<b>325</b>	<b>436</b>	<b>513</b>
Appropriations	-	-	-
Contingency Reserve	8	8	10
Income Tax	10	-	2
<b>Net Expenditure After Expenses</b>	<b>343</b>	<b>445</b>	<b>525</b>

#### 4.15 Revenue Requirement

The Revenue requirement for the current year and the ensuing year as estimated by the petitioner is provided in the Table below:

**Table 18 : Revenue Requirement excluding Power Purchase Costs (Rs. Crores)**

Components	FY 2004-05		FY 2005-06
	Approved	Revised Estimate	
Expenses excluding Power purchase costs	343	445	525
Reasonable Return	83	113	155
Previous Year Losses	10	27	325
Less:			
Non Tariff Income	35	37	31
ARR Excluding Power Purchase Costs	401	547	973
Power Purchase Costs	1,743	1,669	1,779
<b>Total Revenue Requirement from Tariff</b>	<b>2,144</b>	<b>2,216</b>	<b>2,753</b>
Revenue From Tariff	1,877	1,891	2,168
<b>Revenue Gap</b>	<b>267</b>	<b>325</b>	<b>585</b>

## **5 Formats for Annual Revenue Requirement**

### **5.1 Capital Base (Form 1.1)**

Details are provided in the Form

#### **5.1.1 ORIGINAL COST OF FIXED ASSETS (FORM 1.1A)**

The Petitioner has submitted the Fixed Asset Register with the Honourable Commission. The details of GFA and CWIP in the opening balance sheet of the company in terms of the Transfer Scheme Rules dated 20-11-2001 and subsequent amendments which are statutory in nature and binding on the Discoms and other stake-holders were also provided to the Honorable Commission. Based on the additions during the last three years the original cost of Fixed Assets as of March 31, 2004 is reflected in the Audited Accounts.

Funding of Capex for FY 2003-04 shown above is as approved by the Commission in its Tariff order (which provides for transfer of Rs 23.74 crores from R&M and consultancy expenses to Capex in FY 03-04). In the Fixed Asset sheet, an amount of Rs 64.26 crores transferred from R&M to Capex for the FY 02-03 and FY 03-04 is captured directly in closing balance of FY 2003-04/opening balance of FY 04-05. For the current year a total expenditure of Rs 800 crores has been planned while the additions of the Fixed Assets are estimated around Rs 316 crores, as majority of the schemes are expected to be in progress at end of current financial year. For the ensuing year also, the petitioner has envisaged Rs. 1400 crores for capital expenditure while the capitalization during the year is projected around Rs 1112 crores. The details on the assets are provided in the Section 4.1. In the last tariff order the Honourable Commission has transferred a portion of the R & M Expenditure and Consultancy expenses into Capital Expenditure. The impact of the same has been considered in the closing balance of FY 2003-04 directly in the form 1.1b.1. The

corresponding effect of depreciation of FY 2003-04 has been included in the depreciation for FY 2004-05.

Significant level of investments in the current and ensuing year, as mentioned above, is being made to achieve the following objectives:

- a. Undertaking system development to meet the load growth
- b. Strengthening and refurbishment of system to improve the reliability of supply
- c. Reducing the targeted system losses
- d. Carryout automation and other improvement works to enhance customer service
- e. Undertake investments to fulfill social obligations (such as electrification of JJ colonies)
- f. Carry out the Consumer Deposit Works

#### **5.1.2 CONSUMER CONTRIBUTION**

Consumer Contribution of Rs. 68 crores and Rs. 57 crores have been estimated for the current and ensuing year respectively by the petitioner for capital expenditure.

#### **5.1.3 DEPRECIATION (FORM 1.1B)**

Further the Honourable Commission in its Guidelines The details of computation of depreciation have been explained in earlier Section.

#### **5.1.4 SUBVENTION FROM THE STATE/CENTRAL GOVERNMENT (FORM 1.1C)**

Under the APDRP scheme, the petitioner expects to receive the entire balance during the FY 2004-05, of which 50% amount will be provided in the form of grant. For the ensuing year, no funds under the APDRP scheme have been assumed, on account of uncertainty with respect to disbursements under the scheme.

**5.1.5 WRITTEN DOWN COST OF ASSETS (FORM 1.1D)**

The petitioner has not considered write off of any assets.

**5.1.6 WORKS IN PROGRESS (FORM 1.1E, FORM 1.1E1, FORM 1.1E3)**

The works in progress details are given in the forms as outlined. The same have been compiled after taking into consideration the various schemes including the EHV schemes and estimated time period for completion of these schemes. As scheduled completion time period for EHV schemes is more in comparison to other schemes and with significant proportion of investments being made in EHV schemes, the average time period of 6 months has been considered for completion of various schemes, for the purpose of capitalization and work-in-progress is estimated accordingly.

**5.1.7 ASSET CAPITALIZATION (FORM 1.1E2).**

In the current year, a base capital expenditure of Rs.800 crores is estimated. The total capitalization during the year is estimated around Rs 316 crores. For the ensuing year a base capital expenditure of Rs 1400 crores is projected, while a capitalization of Rs 1112 crores has been estimated. The basis of capitalization of employee costs and interest is described below :

- a. Cost to Company of the employees involved in capital works such as EHV construction, Planning and civil construction is allocated to the capital expenditure account.
- b. Interest capitalization has been computed using average of 6 months for completion of the scheme.

Summary of CWIP and capitalization is given in the following table.

**Table 19: Details of CWIP and capitalisation (Rs. Crores)**

	CWIP, at year end	Capitalisation during year
FY 2003-04	35.32	82.54
FY 2004-05	519.07	316.25
FY 2005-06	807.50	1111.57

**5.1.8 DOMESTIC LOANS AND DEBENTURES (FORM 1.1F)**

As discussed in Section 4.1.15, the Petitioner is estimated to borrow a net amount of Rs. 370 crores and Rs 859 crores in the current year and ensuing year respectively. The details are specified in the Form 1.1f.

**5.1.9 FOREIGN LOANS AND DEBENTURES (FORM 1.1G)**

Petitioner may in due course resort to Foreign Currency Loans (FCL) depending upon the Financing Costs and arrangements. However, for the ensuing year the Petitioner has not considered any FCL borrowings.

**5.1.10 AVERAGE CASH AND BANK BALANCE**

The average Cash and Bank Balance at end of each month has been estimated at Rs. 53 crores and Rs 59 crores for the current year and ensuing year respectively.

**5.1.11 COMPUTATION OF TAX ON INCOME AND PROFITS**

The Honourable Commission in its Tariff Order of June 26<sup>th</sup> 2003 and 9<sup>th</sup> June 2004 has detailed the methodology for Tax estimation taking into consideration the depreciation rate permitted for Income Tax workings. The petitioner has accordingly estimated the Tax liability, which is estimated to be nil for the current and ensuing year. The actual tax liability will be considered by the Honourable Commission under the 'truing up' mechanism in case there is a difference between the actual tax liability and the estimated tax liability



## **5.2 Reasonable Return (Form 1.2a)**

The Petitioner has discussed the issue in detail in Section 4.9.

## **5.3 Expenditure (Form 1.3)**

The details of expenditure to be incurred by Petitioner in the ensuing year are provided in the detailed format specified by the Honourable Commission. The main expense heads are as follows:

Power Purchase Cost: As per the Transfer Scheme and Policy Directions, the **cost of purchase of energy** is a derived amount, which is the difference between the amount realized (computed on the basis of average Retail Supply Tariff) and the ARR including 16% ROE (i.e., paying capacity of the Petitioner). The details of effective Bulk Supply Rate at the existing RST and estimated ARR are given in Form 1.3a.

- a. Employee Cost: The Wages and Salaries have been calculated for the employees transferred to petitioner, new recruits, contractual labour and employees on deputation from associate concerns.
- b. Administrative and General (A&G) expenses.
- c. Repairs and Maintenance expenses
- d. Payment to the Holding Company against collection of arrears of the erstwhile DVB has been considered in full@100%.
- e. Depreciation
- f. Interest
- g. Interest on Consumer Security Deposit
- h. Cost of truing up on account of Revenue Gap and Regulatory Asset
- i. Bank Charges
- j. Previous year losses which includes shortfall in R & M and A & G Expenses in the previous year.

### **5.3.1 POWER PURCHASE**

#### **5.3.1.1 Cost of Purchased Energy (Form 1.3b)**

All the various interface points at which TRANSCO supplies energy to the Petitioner are duly metered and bills are being raised as per meter reading jointly taken by both Transco and the Petitioner. In case meter at any interface point becomes defective, the energy consumption is suitably assessed.

The Cost of Purchase of Energy is estimated at the existing BST as notified in the last tariff order of the Honourable Commission.

Power purchase invoices from Delhi Transco Limited from April to October 2004 are presented in Annexure 4 in support of power purchase made.

#### **5.3.1.2 Availability of Power (Form 1.3b1)**

The estimated availability of power for the balance period FY2004-05 as well as actual power delivered to the Petitioner for the month of July 2002 to October 2004 is mentioned in the Form. The availability of power has been estimated based on the historical growth rate between the availability during the period 2003-04 and the contiguous period during 2004-05.

The seasonal variation has also been taken into account while making the projections based on the month-wise load curve from the previous year.

### **5.3.2 EMPLOYEE COST (FORM 1.3C, FORM 1.3C-1)**

The petitioner has discussed the issue in Section 4.3

### **5.3.3 ADMINISTRATION AND GENERAL EXPENSES (FORM 1.3D)**

The petitioner has discussed the issue in Section 4.4.

#### **5.3.4 REPAIR AND MAINTENANCE EXPENSES (FORM 1.3E)**

Repair & Maintenance expenditures being incurred by the licensee and the expenditure projected for ensuing year has been explained in Section 4.5 of this document.

#### **5.3.5 SALE AND LEASE-BACK OF ASSETS (FORM 1.3F)**

Sale and lease back of assets is not planned/envisaged at present and hence not included in the expenditure.

#### **5.3.6 OTHER LEASE PAYMENTS (FORM 1.3G)**

An amount of Rs. 2 crores for the current year and the ensuing year has been provided for payment towards leasing of capacitor banks from M/s RMS Automation Systems (P) Ltd. The same has been incorporated in the Form 1.3 G.

#### **5.4 Non-tariff income (Form 1.4)**

Non-tariff income of the petitioner entails income from investments, sale and repair of lamps, commission on collection of electricity tax on behalf of Municipal Corporation of Delhi, sale of scrap material, etc. The details of non tariff income are discussed in Section 4.13.

#### **5.5 Form 4.1 to 4.3**

The Petitioner's tariffs are to be determined to enable it to recover its costs and returns as per the policy directions. The Policy Directions also stipulate uniform retail tariffs across all DISCOMs during the transition period. This implies that the BST and RST are interlinked and therefore the Honorable Commission is requested to determine the BST and RST.

Form 4.1 b is not applicable to the Petitioner at present as the Petitioner is not wheeling electricity on behalf of any third party.

## **5.6 Form 4.4 to 4.9**

Petitioner would like to submit that determination of class embedded costs for various consumers would require breakup of the value of the total assets transferred to BRPL across the individual assets, installation of energy meters at various sub-stations, feeders, interface points, mapping of consumers with feeders/transformers, etc., for allocation of difference between energy input and energy billed across consumer categories. The petitioner is in the process of completing installation of energy meters at its sub-stations and on the outgoing feeders etc. Only after the energy meters become fully operational and data generated are mapped with consumers, it will be possible to furnish the required information.

As embedded cost and the marginal cost calculations are not available at present for the reasons explained above the cross subsidies also cannot be estimated.

## **5.7 Performance Snapshot**

The Petitioner submits that, while reviewing the performance measures in its area of supply, it is necessary to take into consideration, the health and adequacy of the EHV (66/33 kV) as well as HV (11 kV) i.e. sub-transmission and distribution infrastructure that was existing at the time of takeover of the business. The Commission in its tariff order FY'04-05 has also opined that, since the distribution system inherited by the Petitioner was in a dilapidated condition, substantial capital works will be required to be taken to maintain system reliability and ensuring quality supply to the consumer. It is submitted that though R&M/system improvement work has been taken up post privatization, the base from which the company has started will continue to make a difference during the first couple of years and improvements in performance will accordingly be progressively realized.

**5.7.1 SHUNT CAPACITOR ADDITION / REPAIR PROGRAM**

The details of shunt capacitor addition and repair program are enclosed in form 5.1. The details are given below:

**Table 20 : Shunt Capacitors**

Particulars	FY 2003-04 (Actual)	FY 2004-05 (Actual)	FY 2005-06 (Projected)
Total Installed Capacitors (MVAR) at the beginning of the year	702.43	911.00	1135.30
Net Capacity Available (MVAR) at the beginning of the year	559.48	838.09	1035.30

It may be observed from the above table that there has been a substantial addition to the MVAR capacity of the Petitioner system so as to bring more stability by improving power factor and reducing drawl of reactive energy from the transmission system.

The total installed capacity increased by almost 30% and available capacity increased by 50% during FY2004-05 compared to 2003-04.

**5.7.2 LOAD SHEDDING**

Load shedding of 104 MUs has to be carried out during April to September 2004 as compared to similar period in the previous year of 102.8 MUs. Load shedding was practically of the same level and could not be reduced mainly due to northern grid constraints/ breakdown in the grid S/Stns maintained by DTL & BSES. These include:

- a. Low frequency in the Northern Grid
- b. Failure of 100 MVA 220/33 kV transformer of DTL at Lodhi Road
- c. Failure of 20 MVA 66/11 kV transformer of DTL at Vasant Kunj

- d. Failure of 20 MVA 66/11 kV transformer of DTL at Okhla
- e. Accidental damage of 33 kV double circuit tower line of BRPL from Kilokari to Medical at Ashram Chowk.
- f. Accidental damage to 1no. 66 kV Rail pole of BRPL between 220 kV Okhla-Malviya Nagar due to which load shedding was resorted to by the Petitioner.

The Petitioner has undertaken to augment, replace and overhaul the overloaded distribution transformers, which has resulted in substantial reduction in the load shedding from 17 MUs to 3.8 MUs due to overloading of distribution transformers during the period April to September 2004 there has been a reduction of 77% as compared to April- September'03.

The Petitioner is carrying out the required Repair & Maintenance of its distribution network to meet the immediate need of reducing breakdowns and undertaking Preventive Maintenance as the impact of the capital investments being implemented will be gradual.

### **5.7.3 STATUS OF OVERLOADED FEEDERS**

#### **5.7.3.1 West Circle:**

There are three sources of power supply from DTL to West Delhi:-

- a. Najafgarh
- b. Papankala
- c. Rohtak Road

Najafgarh and Rohtak Road Grids are fully loaded and there is no redundancy available and even on small outage the load shedding has to be carried out. There is a space constraint at these grids to augment / add new transformers / switchgears. Moreover there is no immediate proposal to establish new grids by

DTL to overcome these constraints. The Petitioner has proposed new grids at Tikrikalan and A-4 Paschim Vihar. Infeed proposal for former has been brought from DTL. The Petitioner has augmented / added transformers and cables to strengthen its distribution system to some extent but still more work is being carried out and Petitioner endeavors to complete large number of the schemes by March 2005.

During the erstwhile DVB period the loading factor was taken to be 90% of the rated capacity and no redundancy was taken into account. The Petitioner has adopted the international norms i.e the transformer/equipment loading factor as 70% and redundancy norms as (N-1). The details presented in Form 5.8 are based on this criterion.

#### **5.7.3.2 South Circle:**

The main sources of supply of electricity in South Delhi are DTL's Okhla and Mehrauli 220 kV Grid S/Stns. At Okhla, all five 100 MVA transformers are fully loaded and no redundancy is available either in the transformation capacity or at 66 kV and 33 kV feeders levels. There is no vacant space now available at the Okhla grid to augment / add transformers or switchgears. The Petitioner has established new grid at Balaji Estate and proposed a new grid at Nehru Place – II. Infeed proposal to the later is to be decided in consultation with DTL.

DTL has proposed new grids at Masjid Moth and Maidan Garhi which are proposed to be commissioned by 2007. As an alternative, the Petitioner has proposed to divert Sarita Vihar power to Okhla area through 66 kV MCIE – Okhla Phase – I. This line has to cross the busy railway line for which ROW is yet to be given by the Railway Authorities.

It can be seen from Form 5.3 that total duration of tripping (in hours) has decreased from 34089 hrs in April - September 2003 to 30065 hrs in April - September 2004 which has resulted in reduction in the average duration of interruption per feeder at 66 kV, 33 kV and 11 kV voltage level. This could be

achieved due to better load management and improved response time by close monitoring of the system operation.

#### **5.7.4 STATUS OF TRANSFORMERS OVERLOADING AND FAILURE RATE**

At the aggregate level, overloaded transformers in the BRPL area of supply have increased from 6 in September 2003 to 26 in September 2004 at 66 kV while at 33 kV and 11 kV level overloaded transformers have decreased from 53 to 36 and from 1893 to 802 respectively in the same period.

By augmentation of overloaded transformers, load balancing and servicing and maintenance of the distribution transformers the petitioner has achieved almost nil failure rate of distribution transformers in 2004 (April -September) as compared to same period of previous year. Only one transformer has failed during April- September 2004.

Number of power and distribution transformers have been augmented / added to avoid overloading and to create redundancy in the system. However, due to poor monsoon during FY'04 in the Northern region the inductive load was higher as compared to FY'03, resulting in overloading of transformers, switchgears, cables, conductors, etc.

From the above, it will be seen that even though the Petitioner made all efforts to strengthen its distribution network, system constraints beyond the control of the Petitioner resulted in increased load shedding. However the Petitioner has already taken steps to further augment the network for which schemes have already been executed / are under execution and it will be Petitioner's endeavor to complete most of schemes by March-2005.

#### **5.7.5 IMPROVEMENT IN RELIABILITY INDEX**

Due to the measures undertaken by the Petitioner including close monitoring, better load management and improving response time there has been an improvement of the Reliability Index as shown in the table below:



**Table 21: Reliability Index as on July**

Month	Reliability Index
July'02	96.98%
July'03	97.71%
July'04	98.83%

**Table 22: Reliability Index as compared to last year**

Month	Reliability Index
April-Sept'03	98.48 %
April- Sept'04	98.61 %

## **6 Tariff Proposal**

### **6.1 Tariff Philosophy**

In accordance with the clause 24.2(b) of the License for Distribution and Retail Supply of Electricity, if there is a difference between the expected aggregate revenues and expected cost of service, the License shall submit along with the above statement an explanation of the measures it proposes to take, including any proposal for tariff revision, to eliminate the difference.

As per para 14 of the Policy directions issued on 22nd November 2001 by GoNCTD “The Government as a matter of policy, has decided that retail tariffs for the three distribution licensees shall be identical till the end of 2006-07, i.e., consumers of a particular category shall pay the same retail tariff irrespective of their geographic location”.

That the Policy directions envisage uniform retail tariffs across the DISCOMs and, the tariff to be determined so as to, allow the DISCOMs to recover all permissible expenses and return for the year. This implies that the BST and RST are interlinked, and therefore, the Petitioner has restricted this petition to estimating its ARR.

However, the Petitioner would request the Honorable Commission to consider the following while determining the Tariffs for various categories of consumers for the ensuing FY 05-06:

#### **6.1.1 FIXED CHARGES**

The Commission in its tariff order for FY 04-05 mentioned that with the existing tariff structure, the recovery from fixed charges is very nominal as compared to the fixed costs of the Licensees. The Commission has attempted to increase the recovery of fixed costs of the utility from the Fixed Charges while determining the tariffs. The Commission is of the opinion that the recovery from Fixed Charges

has to be increased in a gradual manner to minimize the billing impact to the consumers. Considering this aspect, the recovery from Fixed Charges has to be increased gradually up to reasonable proportion of the fixed costs.

In the Tariff Order dated June 26, 2003, the Honorable Commission has introduced the concept of two part tariff for all consumer categories, with a fixed charge per KW and energy charge per unit of energy billed. However at the same time the Honourable Commission has abolished the Minimum Monthly Charges, which was in existence over the years, altogether. Further the Honourable Commission has also stated that it has restricted the fixed charges to a level even much below the existing minimum charges and also abolished the levy of meter rent for all categories of consumers stating that levy of fixed charges based on actual fixed cost per KW may lead to a tariff shock and would like to gradually move the tariffs linked to cost of supply. Accordingly, in the last Tariff Order the Honourable Commission had made a further increase in fixed charges.

The fixed charges component in a two part tariff is aimed at recovery of capital related and other fixed costs. The capital related costs are the costs incurred by the licensee on building up the infrastructure and maintaining the same in proper working conditions. In order to service the consumers the Licensee will have to keep a task force; hence the employee and other related expenses are also fixed in nature and are a part of the fixed expenses.

In its ARR and Tariff filing for the FY 2004-05, the petitioner has requested the Honourable Commission to increase the fixed charges for various consumer categories, as the fixed charges determined by the Honourable Commission in its Tariff Order for FY 2003-04, provided for a revenue equivalent to only 7% of the total income of the petitioner. The Honourable Commission in its Tariff Order has also stated that recovery of the fixed charges from the tariffs is very nominal as compared to the fixed cost of the licensee and the same needs to be increased in a gradual manner up to a reasonable proportion of fixed costs. In line with the observation made, the Honourable Commission has increased fixed charges for

certain consumer categories in FY 2004-05. However taking into consideration the increase provided by the Honourable Commission the recovery from fixed charges works out to only 8% of the total expenses and there is still a significant gap between the fixed costs incurred and recovery from fixed charges, which needs to be abridged.

While the petitioner understands the approach of the Honourable Commission to consider a gradual increase in Fixed Charges, but would like to submit that the same needs to be carried out in a rational manner, so as to prevent any exploitation of the Tariff structure by the consumers and cross subsidization within the different slabs in the same category. The petitioner trusts that the Honourable Commission will appreciate that a fixed charge of Rs. 20/- per household with connected Load in the range of 0-2 KW, as determined by the Honourable Commission in its Tariff Order for FY 2004-05, is not even sufficient to meet the basic expenditure on meter reading, bill preparation, delivery of bill to consumers premises, acknowledgement of cash receipt from these consumers and handling of the cash received, leave aside the other fixed expenditures on building and maintenance of the total system and other related fixed costs.

The Petitioner would like to submit that the practice of levying the Fixed charge / Minimum charges is in line with the practice being adopted by other utilities viz. Delhi Jal Board (DJB), Telecom (Land Line and Mobile Services) etc. In fact in the recent order issued by DJB it has levied fixed charge based on the category of consumer starting from JJ Cluster to the higher income group people living in big houses / plots the charges ranging from Rs. 40 to Rs. 150.

In order to enable the Licensee to recover their fixed costs the petitioner requests the Honourable Commission that either the Fixed Charges are increased further or alternatively a “Minimum Monthly Charge” is introduced. For Domestic consumers in particular, wherein the Tariff Structure is promoting underreporting of connected load and also resulting in cross subsidization of closed/ not in use/ vacated households by other domestic consumers the petitioner requests the

Honourable Commission to abolish the existing classification under Category 1.2 of the Tariff Table (Chapter 8 of the Tariff Order for FY 2004-05) and establish a new classification as is depicted in the table below. The petitioner would also like to draw the attention of the Honourable Commission to the fact that in the tariff order of FY 2001-02, the Minimum Monthly Charges for domestic consumers were Rs 60/KW, which was more reasonable as compared to the existing Fixed Charge of Rs 10/KW.

**Table 23: Comparison of Existing and Proposed Fixed Costs for Domestic Consumers**

	Existing Structure		Proposed Structure	
	Load (KW)	FC (Rs/month)	Load (KW)	FC (Rs/month)
1.2 Domestic Lighting /Fan and Power  (Single Delivery point and Separate Delivery points/meters)	Up to 2 KW	20	Up to 5 KW	(to be determined by the Honourable Commission)
	2-5 KW	50	Above 10 KW	
	Above 10 KW	10/KW		

The petitioner has also compiled the Fixed and Minimum Monthly Charges (MMC) prevalent in the neighboring states and metropolitan areas being supplied by other Licensees. The compilation assesses fixed charges payable by consumer for different connected loads @ 1KW, 2 KW and 5 KW. The compilation is presented below:

**Table 24 : Comparison of Fixed and/or Fixed and minimum Charges in Neighbouring Areas of Delhi**

Category	Delhi	Gurgaon	Ghaziabad and Noida	Chandigarh
<b>Domestic</b>				
Fixed Charges +Minimum Charges per month	Rs 20 for 0-2 kW	Rs 60 per KW ( up to 1 KW),	Rs 50 per kW/month for all loads	Rs 27per KW
	Rs.50 for 2-5 kW	Rs 40 per additional KW		
	Rs.10/kW above 5 kW			
1 KW	Rs 20	Rs 60	Rs 50	Rs 27
2 KW	Rs 50	Rs 100	Rs 100	Rs 54
5 KW	Rs 50	Rs 140	Rs 250	Rs 135
6 kW	Rs.60	Rs.260	Rs 300	Rs.162
<b>Non Domestic/Commercial</b>				
Fixed Charges +Minimum Charges per months	Rs 35 per KW	Rs 120per KW(up to 1KW)	Rs 260 per KW per month	Rs 99 per KW per month
		Rs 100 for every addl KW or part thereof		
1 KW	Rs 35	Rs 120	Rs 260	Rs 99
2 KW	Rs 70	Rs 220	Rs 520	Rs 198
5 KW	Rs 175	Rs 520	Rs 1300	Rs 495

It can be observed from the table above that charges being paid by the consumers of the petitioner are the least in comparison to the consumers among the neighboring states/areas/state capitals/union territories.

The petitioner requests the Honorable Commission to consider the proposals of the petitioner to resolve the issues highlighted above. This would enable the petitioner to recover more of the stranded costs from the consumers, which will result in petitioner making more investments in the system to provide a higher quality service to its consumers.

#### **6.1.2 REDUCTION OF CROSS-SUBSIDY**

The level of cross-subsidization in the tariffs may be considered for reduction so as to gradually move towards tariff based on cost of service. The same is in line with the provisions of the Act. The Honorable Commission may consider further rationalization of Tariffs for the categories which are presently being subsidized.

#### **6.1.3 KVAH BASED BILLING**

The Commission in its tariff order for FY 04-05 stated that it intends to gradually expand the coverage of consumers under kVAh billing as kVAh based tariff takes care of power factor of the consumer and encourage efficient use of electricity. Accordingly, it has extended the coverage to SIP consumer category in the last tariff order. Further, higher power factor eventually helps the system by lesser loading and reduction in losses.

The Petitioner suggests that the Honourable Commission may further extend KVAh billing to all consumers having sanctioned load above 10 KW. The Petitioner is in the process of completing installation of electronic meters in case of all consumers having load above 10 KW. The Petitioner endeavors to complete installation of above meters in FY 2004-05.

Migration to KVAh Billing will compensate for the reactive energy drawn by the consumers. However, it is requested that the Honorable commission may consider average power factor (p.f.) of 0.90 while determining the tariff.

#### **6.1.4 POWER FACTOR**

The Honorable Commission in its tariff order for FY 2004-05 has recognized the advantages of migrating to KVAh based tariff and the above proposed measure is in line with the philosophy of tariff rationalization measures being adopted by the Honorable Commission.

For the purpose of setting tariffs the Honorable Commission may consider an average power factor of not less than 0.90 to be maintained by the consumers in respect of their installation. The consumer requiring supply for motive power shall install shunt capacitor of adequate rating at his own cost, so as to meet the average power factor requirement. In case shunt capacitors of adequate ratings are not installed and maintained in proper working order or average power factor is found to be below 0.90 on verification, a Low Power Factor (LPF) surcharge as approved by the Honorable Commission may be levied.



## 7 Compliance of Directives issued by the Honourable Commission

DESCRIPTION	Reference	Status of Compliance
INVESTMENTS	(Para 3.6.2 & 3.10)	<p>1) The Commission directed the Petitioner to submit the complete DPR along with cost-benefit analysis for schemes more than Rs.2 Crores for obtaining the scheme-wise investment approval from the Commission as per Clause 10 of the License for Distribution and Retail Supply of Electricity. The Commission further directed that the Petitioner should submit a separate Petition for approval of schemes for FY 2005-06, by September 2004.</p> <p><b>The Petitioner has submitted the DPR's for approved Capital expenditure of Rs. 526 crores on 13th July'04 to the Honourable Commission. It has also submitted the DPR's of additional Capital Expenditure of Rs.1053 crores on 6th Sept'04. The petitioner is in the process of compiling the DPR's of the FY 2005-06 and will be submitting the DPR's to the Honourable Commission shortly.</b></p> <p>2) The Commission reiterated its direction to the Petitioner to submit the quarterly progress report of investments. The Commission also directed the Petitioner to maintain consistency in reporting the schemes for obtaining approval and future reporting on quarterly/annual basis.</p> <p><b>The Petitioner has submitted the first quarter report as per the approved format on 16th Aug'04 and the second quarter report on 13th Dec 04 to the Honourable Commission.</b></p> <p>The Commission directed the Petitioner to ensure that the progress of investment scheme should not be affected on account of the delayed receipt or non-availability of APDRP funds. The Commission would consider actual interest expense arising on account of delayed receipt or non-availability of APDRP funds through truing up of expenses for FY 2004-05.</p> <p><b>The Petitioner assures the Honourable Commission that the progress of APDRP work will not be affected due to non-availability of funds.</b></p>

DESCRIPTION	Reference	Status of Compliance
<b>R &amp; M WORKS</b>	<b>(Para 3.7.2)</b>	<p>1) The Commission directed the Petitioner to maintain a separate record of the items issued from the Stores for R&amp;M works, and submit the same to the Commission along with the details of the actual R&amp;M Works carried out at the end of each quarter. The Report on transformer failure rate should also be submitted on a quarterly basis along with the above data on the R&amp;M items issued.</p> <p><b>The Petitioner has submitted the first quarter report as per the approved format on 16th Aug'04 and the second quarter report on 1<sup>st</sup> Dec 04 to the Honourable Commission.</b></p>
<b>DISTRICT WISE AT&amp;C LOSSES</b>	<b>(Para 4.1.3)</b>	<p>1) The Commission directed the Petitioner to submit district wise information on AT&amp;C loss at the end of a quarter commencing from June 2004.</p> <p><b>The Petitioner has made a presentation on district wise AT&amp;C loss before the Honourable Commission on 10<sup>th</sup> Nov'04.</b></p>
<b>BASE PAPER ON VOLTAGE LINKED TARIFF</b>	<b>(Para 5.4.13)</b>	<p>1) The Commission directed the Petitioner to submit the base paper on voltage-linked tariffs within 1 month of the date of issue of this Order. The Commission further directs the Petitioner to maintain and submit information/data in the formats specified by the Commission for arriving at voltage-linked tariff for each of the consumer categories along with the ARR and Tariff Petition for FY 2005-06.</p> <p><b>The Petitioner has submitted the base paper on voltage linked tariff to the Honourable Commission on 27<sup>th</sup> Sept.'04.</b></p>

DESCRIPTION	Reference	Status of Compliance
<b>INFORMATION ON COST OF SUPPLY IN PRESCRIBED FORMAT</b>	<b>(Para 6.2.1)</b>	<p>1) The Commission directed the Petitioner to submit the information on Cost of Supply in prescribed formats along with the ARR and Tariff Petition for FY 2005-06.</p> <p><b>The Petitioner along with base paper on Voltage Linked Tariff has submitted the methodology to be adopted for determining the Cost of Supply, which requires extensive information about consumer categories / sub-categories. The analysis would provide the necessary allocation for appropriating the overall costs / revenue requirement to the various consumer categories and sub-categories.</b></p> <p><b>At present it is difficult for the Petitioner to arrange detailed information on Cost of Supply as in many cases the current infrastructure (meters etc.) is not capable of providing this information on embedded costs.</b></p>
<b>DATABASE FOR CONSUMERS HAVING ELECTRONIC METERS</b>	<b>(Para 4.9.2.11) of Tariff Order for FY 2003-04</b>	<p>1) The Commission directed the Petitioner to start submitting a report on the analysis of database of the consumers, for whom electronic meters have been/are being provided by taking data logs each time the reading is done on a monthly basis along with the ARR and Tariff Petition for FY 2005-06.</p> <p><b>The report is submitted separately to the Honourable Commission.</b></p>
<b>INSTALLATION OF ELECTRONIC METERS</b>	<b>(Para 6.7.1 &amp; 6.8.1)</b>	<p>1) The Commission directed the Petitioner to complete installation of electronic meters for all the consumers, except those upto 10 kW being supplied on single phase, of SIP/NDLT categories by July 2004 and submit the status report on installation of meters at the end of each quarter till the Petitioner completes the installation of such meters.</p> <p><b>As directed by the Honourable Commission the petitioner has taken up the task of installation of electronic meters for consumers of all categories with load above 10 kW. The Petitioner has completed installation of most of the consumers barring cases where execution is pending due to premises locked or reconciliation of the connection details.</b></p>

DESCRIPTION	Reference	Status of Compliance
<b>INSTALLATION OF METERS FOR DOMESTIC CONSUMERS PAYING FLAT RATES ON PLOT SIZE BASIS</b>	<b>(Para 6.6.7)</b>	<p>1) The Commission directed the Petitioner to submit the status of meter installation for all domestic consumers paying flat rates on plot size basis within 1 month of the date of issue of the Tariff Order FY 04-05. The Commission further directed to install meters for all such consumers within 3 months of the date of issue of this Order.</p> <p><b>The Petitioner has submitted the status report of meter installation for all domestic consumers paying flat rates on plot size on 8th July 2004</b></p> <p><b>As directed by the Honourable Commission the petitioner has taken up the task of installation of electronic meters for consumers paying flat rates on plot size basis. The Petitioner has prayed to the Honourable Commission to extend the time frame up to December 2004, for compliance of the said directive. The Commission will be apprised of the status or problems if any during the process.</b></p>
<b>DATA ON KVAH, KWH &amp; KVARH</b>	<b>(Para 5.3.3)</b>	<p>1) The Honorable Commission directed the Petitioner to start submitting report on data on average power factor, kWh, kVAh and kVARh consumption on monthly basis commencing from June 2004.</p> <p><b>The Petitioner has submitted above information for the consumers having load above 45 KW for the month of September 2004 separately to the Commission.</b></p>
<b>CONSUMPTION BY EMPLOYEES OF ERSTWHILE DVB</b>	<b>(Para 4.9.2.19) of Tariff Order FY 2003-04</b>	<p>1) The Honorable Commission 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 issue of consumption of power by employees of erstwhile DVB within 1 month of the date of issue of the Tariff Order for FY 04-06.</p> <p><b>The Petitioner has submitted an interim status report to Honourable Commission on 27th August 2004 interalia detailing the difficulties being encountered.</b></p>

DESCRIPTION	Reference	Status of Compliance
<b>TREATMENT OF REPLACEMENT OF METERS, TRANSFORMERS AND SWITCHGEARS</b>	<b>(Para 3.7.2)</b>	<p>1) The Honorable Commission directed the Petitioner to clearly demarcate expenditure related to replacement of meters, transformers and switchgears and include the same in capital expenditure in future submissions and not as a part of the R&amp;M expenses.</p> <p><b>The Petitioner has complied with the above directive.</b></p>
<b>MONITORING OF INVESTMENTS</b>	<b>(Para 3.6.2)</b>	<p>1) In line with the recommendation of the CEA, the Honorable Commission directed the Petitioner to form a Steering Committee with one member as the 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 Honorable Commission directed the Petitioner to submit the consolidated plan within 15 days of the date of issue of this Order and submit quarterly monitoring reports thereafter.</p> <p><b>The Petitioner has submitted the Implementation report to the Honourable Commission on 16th August '04</b></p>
<b>A&amp;G EXPENSES</b>	<b>(Para 3.4.2)</b>	<p>1) The Honorable Commission directed the Petitioner to take a prior approval for any increase in A&amp;G expense during FY 2004-05 beyond the approved A&amp;G expense before committing / incurring an expense.</p> <p><b>The Petitioner has complied with the above directive.</b></p>
<b>R&amp;M EXPENSES</b>	<b>(Para 3.7.2)</b>	<p>1) The Honorable Commission also directs the Petitioner to take a prior approval for any increase in R&amp;M expense during FY 2004-05 beyond the approved R&amp;M expense before committing/incurred an expense..</p> <p><b>The Petitioner has complied with the above directive.</b></p>
<b>SLAB LOAD FOR DOMESTIC</b>	<b>(Para 5.5.1)</b>	<p>1) The Honorable Commission directed the Petitioner to maintain the data for sanctioned load in slabs of 0-2 kW, 2-5 kW and 5 kW and above. The Honorable Commission also directed the Petitioner to maintain the data regarding the number of consumers, total sanctioned load and</p>

DESCRIPTION	Reference	Status of Compliance
CONSUMERS		<p>energy consumption in each of the above slabs.</p> <p><b>The Petitioner has complied with the above directive.</b></p>
ENHANCING THE LIMIT FOR SIP FROM 100 KW TO 150 KW	(Para 5.4.2)	<p>1) Some stakeholders have requested the Honorable Commission to raise the limit for classification under SIP category from 100 kW to 150 kW/250 kW. The Honorable Commission directed the Petitioner to submit a Base Paper on this issue to the Commission, within 3 months from the date of issue of this Order.</p> <p><b>The Petitioner has submitted a base paper on the above subject on 15<sup>th</sup> July 2004</b></p>

## **8 Other Information**

### **8.1 Plans for undertaking load research to determine load profile**

The Petitioner is aware that this is an essential requirement for cost reflective tariff. Time of the day load profile of the distribution transformers/consumers is a vital parameter for undertaking load research. The Petitioner has described elsewhere in the petition the details of the high-tech electronic energy meters being installed in the distribution system, which have the facility to record load survey data in each time period. Similarly the Petitioner is also installing only electronic meters with load survey facility for all categories of consumers. This would enable the petitioner to carry out load analysis.

### **8.2 Programme for converting Un-metered to Metered Supply**

All new connections are provided with metered supply only. The Petitioner is already implementing comprehensive metering plan (details provided elsewhere in the petition).

There are some un-metered connections provided by the erstwhile DVB under its “as is where is” policy (scheme discontinued) being billed on flat rates on plot area basis as per the tariff approved by the Honorable Commission. These are connections in un-electrified areas where the residents were even otherwise drawing power from the utility’s electricity mains in their neighborhood. Pending regular electrification of the area such connections were brought in to the billing fold by the DVB on flat rate tariff basis to at least offset to some extent the revenue loss to the utility. Status of such conversion of consumers being billed on plot basis into metered consumers is being covered in the chapter on compliance of the directives by the Petitioner. The petitioner has envisaged a comprehensive plan for electrification of such un-electrified areas and provide metered connections (including such connections presently being billed on flat rates) to enlarge its billing net and reduce AT&C losses.

### **8.3 Plans for Improving System Power Factor**

The petitioner is proposing to install shunt capacitors for reactive power compensation as mentioned in Form 5.1 and also in Section 4.1.3 of the Capex plan. The Petitioner is also installing only electronic meters as a policy for consumer metering. All poly-phase electronic meters are equipped with facility of recording various parameters viz., kWh, kVAh, kVARh, which will enable implementation of tariff based on kWh & kVARh or KVAh to serve as an incentive to the consumers to install capacitors for maintaining proper power factor. The Honorable Commission has already made observations to this effect and issued directives in its tariff order for FY 04-05 to submit information / data on average power factor, KVAh, KVARh and kWh.

Further to above the Petitioner has proposed elsewhere in the petition that the Honorable commission may consider average power factor (p.f.) of 0.90 while determining the tariffs.

### **8.4 Method for Assessing Consumption**

The assessment of consumption where meter is not installed or is defective is done on a normative basis as in case of Street Lighting etc. or on the basis as covered under the Honourable Commission's tariff order, the Performance Standards (Metering & Billing) Regulations and such other directions issued by the Honorable Commission from time to time.

### **8.5 Plans for Capital Expenditure**

The plans for Capital expenditure have been detailed under Section 4 of the ARR petition.



## **8.6 Plans for Improving Quality and Reliability of Supply**

Following works are planned for improving quality & reliability of power supply and up-gradation of the system with redundancy to meet the expected load growth.

- a. Installing capacitor banks
- b. Replacing over loaded/defective cables and up-gradation of lines.
- c. Replacing & providing switch gears, lightning arrestors, vacuum circuit breakers etc.
- d. Implementation of High Voltage Distribution System (HVDS), Low Tension Modernization Program and Extra High Voltage System
- e. GIS Mapping of consumers
- f. Reducing downtime by providing improved compliant handling, mobile transformers, mobile breakdown vans, fault locating vans with communication facilities like cell phone, wireless, pagers etc.
- g. Introduction of various initiatives like Single Window Clearance / Power Supply Module / Bill Amendment Module (BAM) etc.
- h. Improved Preventive maintenance program.

## **8.7 Plans for Reducing Expenditure**

The petitioner has inherited a network which requires extensive up-gradation to reduce outage, failures & improve quality of power supply. This would require large capital out-lay as given in explanatory notes that would increase interest, depreciation & maintenance expenditure. The petitioner is bound to follow the same terms & conditions of employment of employees transferred to it under the Transfer Scheme thus leaving little scope for rationalization of costs on wages and other service benefits. Besides the petitioner will be required to recruit specialists in various fields to improve operational efficiency and consumer services and stabilize operations. This would require additional expenditure towards salary & wages. On the other hand, the Petitioner had implemented an SVRS scheme in December 2003 to reduce employee cost and have other

related benefits like rationalization of manpower requirement, make organization lean and more efficient and reduce age profile of the set-up to make it adaptable to change.

The petitioner envisages controlling Revenue Requirement through reduction in distribution losses, improving collection efficiency & bringing more consumers in billing fold which would, in long run, bring significant savings.

The petitioner would like to submit that it has plans to further enhance preventive maintenance and other repair & maintenance activities so as to increase system reliability and availability, which will entail additional expenditure. Though the petitioner may be incurring higher expenditure in absolute terms, towards the above activities, it will result into more revenue being generated hence reducing the expenses as percentage of total revenue generated.

#### **8.8 Statement of Reasons**

As per the provisions of the Policy Directions, the petitioners tariffs are required to be determined such that after meeting all expenses allowed by the Honorable Commission, the petitioner earns at least 16% return on the issued and paid up capital and free reserves provided that such share capital and free reserves have been invested into fixed or any other assets, which have been put into beneficial use for the purpose of electricity distribution and retail supply.

As the Bulk Supply Tariff is a balancing amount and is to be determined by the Honorable Commission, it is prayed that the Honorable Commission may determine the applicable RST and BST accordingly.