

Before the
MAHARASHTRA ELECTRICITY REGULATORY COMMISSION
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Case No. 71 of 2006

IN THE MATTER OF
The Tata Power Company Ltd. (TPC) Multi Year Tariff Petition for its
Transmission Business for the Control Period from FY 2007-08 to FY 2009-10

Dr. Pramod Deo, Chairman
Shri A. Velayutham, Member
Shri S. B. Kulkarni, Member

ORDER

Dated : April 2, 2007

Upon directions from the Maharashtra Electricity Regulatory Commission (Commission), The Tata Power Company Limited (TPC-T), submitted its application for approval of Multi Year Tariff for its Transmission Business for the first Control Period from FY 2007-08 to FY 2009-10, under affidavit. The Commission, in exercise of the powers vested in it under Section 61 and Section 62 of the Electricity Act, 2003 (EA 2003) and all other powers enabling it in this behalf, and after taking into consideration all the submissions made by TPC-T, all the objections, responses of TPC-T, issues raised during the Public Hearing, and all other relevant material, determines the ARR for Transmission Business of TPC as under.

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List of Abbreviations

ATE	Appellate Tribunal for Electricity
A&G	Administrative and General
ARR	Annual Revenue Requirement
BEST	Brihanmumbai Electric Supply & Transport Undertaking
CAPEX	Capital Expenditure
CAGR	Compounded Annual Growth
DPR	Detailed Project Report
EA 2003	Electricity Act, 2003
FY	Financial Year
GFA	Gross Fixed Assets
GOM	Government of Maharashtra
KVA	Kilo-Volt Ampere
KW	Kilo Watt
Kwh	Kilowatt hour
MERC	Maharashtra Electricity Regulatory Commission
MSPGCL	Maharashtra State Power Generation Company Limited
MSETCL	Maharashtra State Electricity Transmission Company Limited
MT	Metric Tonnes
MU	Million Units
MW	MegaWatt
MYT	Multi Year Tariff
O & M	Operations and Maintenance
REL	Reliance Energy Limited
R & M	Repair and Maintenance
TOD	Time of Day
TPC	Tata Power Company

1 BACKGROUND AND BRIEF HISTORY

TPC is a Company established in 1919. On April 1, 2000, The Tata Hydro-Electric Power Supply Company Limited (established in 1910) and The Andhra Valley Power Supply Company Limited (established in 1916), were merged into TPC to form one unified entity.

1.1 TARIFF REGULATIONS

The Commission in exercise of the powers conferred by the Electricity Act, 2003, notified the Maharashtra Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2005, on 26th August, 2005. These Regulations superseded the earlier MERC (Terms and Conditions of Tariff) Regulations, 2004.

1.2 MULTI YEAR TARIFF FRAMEWORK

Regulation 12.1 under Part C of the Maharashtra Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2005 notified on 26th August 2005, stipulates that the Commission shall determine the tariff for following matters under a multi-year tariff framework with effect from 1st April, 2006:

- a) Supply of Electricity by a Generating Company to a Distribution Licensee
- b) Intra-State transmission of Electricity
- c) Wheeling of Electricity
- d) Retail Sale of Electricity

Regulation No. 14.1 under Part C of Terms and Conditions of Tariff Regulations states that

“The applicant shall submit a forecast of his aggregate revenue requirement and expected revenue from tariff and charges for the approval of the Commission for each financial year within a control period of five (5) financial years. Provided that for the first application made to the Commission under this Part, the control period shall be three (3) financial years i.e. April 1, 2006 to March 31, 2009.”

The Commission, considering the requests made by the Utilities, vide its Order dated December 20, 2005 in the matter of Applicability of Multi Year Tariff Framework granted exemption to all the Utilities in Maharashtra from implementation of MYT framework for FY 2006-07. The Commission, in its Order, stated that the Commission would determine the tariff under a multi year tariff framework with effect from April 1, 2007 instead of April 1, 2006 as stipulated in MERC (Terms and

Conditions of Tariff) Regulations, 2005 and accordingly, the first Control Period for MYT framework shall be the three financial years from April 1, 2007 to March 31, 2010. The Commission in the same Order directed the Utilities to submit the ARR and Tariff Petitions for FY 2006-07 by December 31, 2005.

1.3 COMMISSION'S ORDER ON ARR AND TARIFF PETITION FOR FY 2005-06 AND FY 2006-07

TPC submitted its ARR and Tariff Petition for FY 2006-07 on February 9, 2006. The Commission, in exercise of the power vested in it under Section 61 and 62 of the Electricity Act, 2003, and all other powers enabling it in this behalf, and after taking into consideration all the submissions made by TPC, all the objections, responses of TPC, issues raised during the Public Hearing, and all other relevant material, issued the Order on the ARR Petition of TPC for FY 2005-06 and ARR and Tariff Petition of TPC for FY 2006-07 on October 3, 2006.

1.4 REVIEW PEITION ON TARIFF ORDER FOR FY 2006-07

TPC filed a review Petition on the Commission's Order dated October 3, 2006, on TPC's ARR and Tariff Petitions for FY 2005-06 and FY 2006-07 with the Commission. The Commission disposed the review Petition by issuing the Order dated March 22, 2007.

1.5 MULTI YEAR TARIFF PETITIONS

As per the MERC Tariff Regulations, the application for the determination of Tariff shall be made to Commission not less than 120 days before the date from when the tariff is intended to be made effective.

The Commission had directed TPC to submit the MYT Petition for the first Control Period by November 30, 2006, so that the Commission could issue the Order before the commencement of the next financial year, such that the revised tariffs are applicable for the entire financial year.

TPC submitted its ARR and Multi Year Tariff Petitions for the first Control period FY 2007-08, FY 2008-09 and FY 2009-10 for its three businesses i.e. Generation, Transmission, and Distribution on 3rd, 9th and 15th January 2007, respectively, and requested the Commission to condone the delay in filing the MYT Petitions.

The previous Tariff Order for TPC was issued in October 2006. Prior to the issue of this Order, TPC was maintaining combined revenue accounts for the three businesses

of Generation, Transmission and Distribution. After the issue of Tariff Order for FY 2006-07 in October 2006 the Revenue principles were separated in two parts as given below:

Part 1- April 06 to Sept 06- Revenue based on integrated tariff for TPC consumers as per Tariff Order dated June 11, 2004

Part 2 – Oct 2006 onwards- Revenue based on independent tariff for Generation, Transmission, and Distribution business of TPC as per Tariff Order dated October 3, 2006

TPC, in its Petitions, also requested the Commission to undertake truing up for FY 2006-07 based on half year actual data and revised estimates for the second half of the FY 2006-07.

The Commission vide its letter dated January 24, 2007 forwarded the preliminary data gaps and information required from TPC. TPC submitted its replies to preliminary data gaps and information requirement on January 31, 2007.

The Commission held a Technical Validation Session on TPC's MYT Petitions for the first Control Period from FY 2007-08 to FY 2009-10, on February 8, 2007. The list of individuals, who participated in the Technical Validation session is provided at **Appendix-1**. The Commission, on February 13, 2007, directed TPC to provide additional information and clarifications on issues raised during the Technical Validation session. The Commission also directed TPC to submit the Public Notice in English and Marathi in the format prescribed by the Commission.

1.6 ADMISSION OF PETITIONS AND PUBLIC PROCESS

TPC submitted its responses to the queries raised during the Technical Validation sessions, on February 20, 2007. The Commission admitted the MYT Petitions of TPC on February 25, 2007.

In accordance with Section 64 of the EA 2003, the Commission directed TPC to publish its application in the prescribed abridged form and manner, to ensure public participation. The Commission also directed TPC to reply expeditiously to all the suggestions and comments from stakeholders on the MYT Petitions. TPC issued the public notices in newspapers inviting comments/suggestions from stakeholders on its MYT Petitions. The Public Notice was published in The Times of India, Indian Express, Loksatta and Samana newspapers on February 28, 2007. The copies of TPC's Petitions and its summary were made available for inspection/purchase to members of the public at TPC's offices and on TPC's website (www.tatapower.com) and on the

web site of the Commission (www.mercindia.org.in) in downloadable format. The Public Notice specified that the suggestions/objections, either in English or Marathi, may be filed in the form of affidavits along with proof of service on TPC. The Public Notice also informed the consumers about the date and venue of the Public Hearing, i.e., March 20, 2007, at 11:00 hours at Indian Merchants Chamber Hall, IMC Marg, Churchgate, Mumbai-400 020.

For more clarity on the principles and philosophy of Multi Year Tariff, the Commission also issued a concept paper on the TPC's Multi Year Tariff which was available in a downloadable format on the Commission's website.

The Commission received written objections expressing concern on high fuel cost, increase in demand charges, standby charges, high tariff to railways etc, and a host of other issues. Those objectors, who submitted that they would like to be heard in person, were invited for the Public Hearing at Mumbai. The Public Hearing was conducted in Mumbai on March 20, 2007. The list of objectors, who participated in the Public Hearing, is provided in **Appendix 2**.

The Commission has ensured that the due process, contemplated under law to ensure transparency and public participation has been followed at every stage meticulously and adequate opportunity was given to all the persons concerned to file their say in the matter.

Though a common public process was held for processing the Multi Year Tariff Petitions filed by TPC-G, TPC-T and TPC-D, the Commission is issuing separate Orders on the three Petitions filed by TPC. This Order deals with the Multi Year Tariff Petition of TPC-Transmission Business. Various objections that were raised and discussed after issuing the public notice both in writing as well as during the public hearing related to TPC-T MYT Petition, along with TPC's response and Commission's Rulings have been detailed in Section 2 of this Order.

1.7 ORGANISATION OF THE ORDER

The Order of the Commission regarding the determination of ARR of TPC-Transmission Business over the first Control Period from FY 2007-08 to FY 2009-10 is broadly divided into five sections.

Section 1 of the Order, given in the previous pages, consists of a brief history of the ARR determination process and the subsequent quasi-judicial process undertaken by

the Commission. For the sake of convenience, a list of abbreviations with their expanded forms is appended at the end of this Part.

Section 2 of the Order lists out the various objections raised by the objectors in writing as well as during the Public Hearing before the Commission. They have been broadly categorized into 4 issues. The various objections have been summarized, followed by the response of TPC and the rulings of the Commission on each of the points.

Section 3 of the Order comprises the Review of Performance for FY 2006-07

Section 4 performance trajectory approved by the Commission for the first Control Period from FY 2007-08 to FY 2009-10. In this Chapter, the Commission has also elaborated on the classification of expenses as controllable and uncontrollable expenses, and the mechanism for sharing the losses and gains arising out of variation in the licensee's performance vis-à-vis the targeted performance.

Section 5 of the Order comprises the Commission's analysis and its decisions on TPC-T's ARR for the first Control Period from FY 2007-08 to FY 2009-10.

2 OBJECTIONS RECEIVED, TPC'S RESPONSE AND COMMISSION'S RULING

2.1 RESERVES AND SPECIAL APPROPRIATIONS

The Millowners' Association submitted that in the Tariff Order for TPC for FY 2003-04 and FY 2004-05, the Commission had ruled that amount kept in various funds and reserves with TPC like the Contingency Reserve, Debenture Reserve, Deferred Taxation Liability Fund, Consumer Benefit Account, etc., can be appropriated to meet the gap between the Clear Profit and Reasonable Return. The Millowners' Association submitted that the amounts to the credit of all these reserves should be fully drawn down to meet the gap, if not done so till now.

TPC's Response

TPC has not responded to this objection.

Commission's Ruling

The Commission agrees with this view and had undertaken truing up of the actual revenue gap/surplus revenue for FY 2005-06 and has adjusted the approved unrecovered revenue gap during FY 2005-06 against the available reserves while determining the ARR of TPC-D for FY 2006-07, in accordance with the principles set out in the previous Tariff Orders of the Commission for TPC. The issue of drawal of reserves and the principles adopted by the Commission for doing so have been elaborated in detail in the Commission's previous two Tariff Orders for TPC, as well as the Commission's Order on the Review Petition filed by TPC in Case No. 47 of 2006.

2.2 REVENUE GAP AND INCREASE IN EXPENDITURE

The Millowners' Association has submitted that TPC has projected a gap of Rs 405 Crore for FY 2007-08 and it is not understood why the expenditure should increase at a rate higher than general inflation rate.

TPC's Response

TPC replied that the gap of Rs 408 Crore is on the account of difference in ARR of FY 2007-08 and revenues at existing tariff. TPC has contended that the ARR has been projected on the basis of existing fuel and power purchase prices, O & M expenditure and the estimated trend in such expenses and hence, the overall gap may not have a relationship with general inflation rate.

Commission's Ruling

The detailed analysis and workings of each component of TPC-T's fixed costs is elaborated in Section 4 of the Order. The analysis and workings of each component of TPC-G ARR and TPC-D ARR will be elaborated in the respective Orders.

2.3 ADDITIONAL TIME FOR COMMENTS/SUGGESTIONS

Shri. Rakshpal Abrol of Bombay Small Scale Industries Association (BSSIA) submitted that as per provisions of MERC (Conduct of Business) Regulations, 2004 the time frame should be three weeks for publication of Petition in two Daily newspapers in English Language and two Marathi newspapers. Shri. Abrol and Shri Mahesh Bharbhaya submitted that the time frame of three weeks given by the Commission for receiving comments/suggestions from the public is totally inadequate. Hence, they requested the Commission to postpone the Public Hearing as it is not feasible to carryout the studies of Multi Year Tariff in detail within the prescribed time span.

TPC's Response

TPC has not responded on this objection.

Commission's Ruling

The public notice was published on February 28, 2007 and the public hearing was held on March 20, 2007. Adequate time has been provided to stakeholders to submit their views/suggestions before Public Hearing and additional time of 7 days was also provided to file rejoinders by March 27, 2007.

2.4 TRANSMISSION CHARGES

BEST submitted that TPC-T's ARR would be pooled along with ARR of other Transmission Licensees in the State to arrive at the Base Transmission Tariff in accordance with the Commission's Order on the transmission tariff philosophy. In view of this BEST requested that the proposed revenue of M/s TPC-G and TPC-D based on sale of energy to BEST along with the share of the pooled transmission charges to be apportioned to BEST should be equivalent to the power purchase expenses to be approved for BEST.

TPC-T's Response

TPC-T has not responded to this objection.

Commission's Ruling

The Commission is issuing a Transmission Tariff Order after pooling the ARR of all the transmission licensees, viz., MSETCL, TPC-T and REL_T, and apportioning the pooled ARR to the four distribution licensees, viz., MSEDCL, REL-D, BEST and TPC-D, in the proportion of the share of coincident peak demand in the State. Accordingly, BEST's concern regarding the consideration of input transmission costs in its ARR will be addressed.

3 PERFORMANCE REVIEW FOR FY 2006-07 AND MULTI-YEAR TARIFF FRAMEWORK

TPC, in its MYT Petition for its Transmission Business (TPC-T) for the first Control Period from FY 2007-08 to FY 2009-10, submitted the performance for FY 2006-07 based on actual performance for the first half of the year, i.e., April to September 2006 and revised estimated performance for the second half of the year, i.e., October 2006 to March 2007. TPC-T has compared each element of cost with that approved by the Commission in its Order dated October 3, 2007 on TPC's ARR and Tariff Petition for FY 2005-06 and FY 2006-07.

As regards to treatment of revenue for FY 2006-07, TPC submitted that it has considered the revenue in two parts, viz.,

Part 1: April 06 to Sept 06 - Revenue based on integrated tariff for TPC's consumers as per Tariff Order dated June 11, 2004

Part 2: Oct 2006 onwards - Revenue based on independent tariff for Generation, Transmission, and Distribution business of TPC as per Tariff Order dated October 3, 2006

TPC submitted that as the revised Tariff Order is effective from the month of October 2006, it would not be possible to segregate the revenues amongst the three businesses to provide a complete picture of the performance of FY 2006-07 and the resultant gap/surplus. Therefore, the Aggregate ARR and Revenue Gap of TPC based on revised estimates for FY 2006-07 has been detailed in the MYT Petition of the Distribution Business of TPC (TPC-D).

The Commission has discussed TPC-T's expenditure during FY 2006-07 based on half year actuals and revised estimates for second half of FY 2006-07, as FY 2006-07 is the base year for the first Control Period. However, the Commission will undertake the truing up of ARR and Revenue for FY 2006-07 only after the audited accounts of TPC for FY 2006-07 are available, i.e., during Annual Review of Performance for the first year of the Control Period, i.e., FY 2007-08.

3.1 O&M EXPENSES

The revised O&M Expenditure for FY 2006-07 is estimated at Rs 99 Crore as compared to Rs 90 Crore filed in the ARR Petition for FY 2006-07 and Rs 78 Crore

approved in the Order. The various components of O&M Expenses are elaborated below:

3.1.1 Employee Expenses

TPC submitted that the total employee related expenses for FY 2006-07 is estimated at Rs 57 Crore against Rs 41 Crore approved by the Commission. TPC submitted that this increase is mainly due to application of Accounting Standard AS 15 (Revised) in place of AS 15 to account for 'Retirement Benefits', which has resulted in the following revision in employee expenses:

Inclusion of various employee benefits such as long service awards, retirement gifts, death in service schemes, hospitalisation schemes, post retirement medical schemes, etc., under the purview of employee expenses to be accounted for

Assessment of accumulated leave liability based on Cost to Company rather than 'Basic + Dearness Allowance'

TPC has submitted that the difference in liability due till March 31, 2006 based on old AS-15 and Revised AS – 15 has been adjusted against the General Reserves of the Company. TPC has adjusted Rs 55.45 Crore of General Reserves, resulting in a corresponding erosion of the net worth of its shareholders. TPC has proposed to recover the same as prior period adjustment and requested the Commission to approve the amortization of this amount over a period of three years. The annual charge to be amortised for TPC-T works out to Rs 5.05 Crore for FY 2006-07.

TPC further submitted that the power sector is facing challenges from the existing and new players in the business, which has resulted in increased compensation packages. TPC has increased manpower costs at a CAGR of 2.9% in the previous 5 years which is less than the inflation rates. In view of the above, TPC has requested the Commission that there is an urgent need to correct the compensation packages to retain the experienced manpower. The summary of employee expenses is given in the following Table:

Table: Employee Expenses (Rs Crore)

Particulars	FY 07		Rev. Est for FY 07		
	Original Petition	Order	Actuals (April - Sept 06)	Projected (Oct - Mar 07)	Total
Employee Expenses	48	41	24	33	57

The Commission has not considered the impact of revised AS-15 as applicability of AS-15 (revised) has been deferred upto FY 2007-08 as per the latest announcement of

ICAI. Further, valuation of leave encashment is not certain and depends on the method followed by the organisation.

3.1.2 A & G Expenses

TPC submitted that the total A&G expenses for FY 2006-07 is estimated at Rs 29 Crore against Rs 24 Crore approved by the Commission. TPC submitted that this increase is mainly due to

Payment of arrears of Rs. 2 Crore to MbPT towards way leave fees, in addition to Way leave fees of about Rs 1 Crore for FY 2006-07.

Expenditure on account of material consumed for services rendered, estimated to be around Rs. 0.5 Crore.

The summary of A&G expenses is given in following Table:

Table: A & G Expenses (Rs Crore)

Particulars	FY 07		Rev. Est for FY 07		
	Original Petition	Order	Actuals (April - Sept 06)	Projected (Oct - Mar 07)	Total
TPC -G	28	24	14	15	29

3.1.3 R&M Expenditure

TPC submitted that the total R&M expenses for FY 2006-07 is estimated at Rs 13 Crore as approved by the Commission.

3.2 DEPRECIATION

TPC submitted that the depreciation expenditure for FY 2006-07 is estimated at Rs 29 Crore as against Rs. 30 crore estimated in the Petition and approved by the Commission, owing to lower capitalisation estimated now as against the filing.

3.3 INTEREST EXPENSES

TPC has estimated the interest expenses under the following three heads:

Interest on debt

Interest on working Capital

Interest and Finance Charges

TPC submitted that interest on debt for FY 2006-07 has been computed based on interest on normative loans for previous years and actual loan for 70% of the

expenditure to be capitalised in FY 2006-07. TPC has raised a loan of Rs 450 Crore from IDFC to fund its current capital expenditure with the following terms:

Tenor : 12 years with 3 year moratorium and 9 years repayment

Interest Rate : 5 year G-Sec rate +1.45% p.a. subject to minimum of 8.90%.

TPC submitted that the interest on debt for FY 2006-07 is estimated at Rs 3 Crore as against Rs 2 Crore approved by the Commission.

As regards the Working Capital, TPC submitted that the interest rate specified under the Tariff Regulations for Working Capital, i.e., Short Term PLR of SBI, has been varying across the year as follows:

Month	PLR
April - May	10.25%
May - August	10.75%
August - 27 th Dec	11%
27 th Dec onwards	11.5%

TPC has estimated the Interest on Working Capital (IWC) considering interest rate @ 11% as per the components considered in the Tariff Regulations, with the revised Interest on Working Capital estimated at Rs 5 Crore as against Rs 2 Crore approved by the Commission.

TPC has estimated the finance charges at Rs. 0.27 Crore as against the Rs. 0.09 Crore estimated at the time of the filing.

The summary of interest expenses is given in the following Table:

Table: Interest Expenses (Rs Crore)

Particulars	FY 07		
	Original Petition	Order	Revised Estimate
Interest on Loan	7	2	3
Finance Charges	0.1		0.3
Interest on Working Capital & Finance Charges	4	2	5

The Commission will undertake the truing up of interest expenses, based on audited accounts, during first performance review considering the following aspects:

- § Capex Schemes approved
- § Actual Capex and capitalization during the year

Further, Working Capital computation as per the norms will change based on truing up of other components of ARR on the basis of audited accounts and prudence check. Truing up of IWC due to change in working capital computation as well as change in PLR will be done based on Performance Review of actual performance for the entire FY 2006-07 for the first year of Control Period, i.e., FY 2007-08.

3.4 CONTRIBUTION TO CONTINGENCY RESERVE

TPC submitted that the Statutory Appropriation towards the Contingency Reserve for the year FY 2006-07 was considered as nil at the time of filing the ARR Petition for FY 2006-07 as the limit specified in the Tariff Regulations had been reached. However, the Commission has adjusted the un-recovered fuel expenditure of FY 2005-06 against this reserve held by TPC in its Tariff Order dated October 3, 2006. TPC has hence, considered this appropriation towards contingency reserve as allowed under the Tariff Regulations at 0.5% of the GFA, which works out to Rs. 5 Crore.

3.5 INCOME TAX

TPC submitted that the income tax as per the provisions of the IT Act 1961 and after accounting for Tax savings on Notional Debt works out to Rs. 36 Crore as against the earlier estimate of Rs. 26 Crore, and the Commission's approval of Rs. 27 crore.

3.6 RETURN ON EQUITY

TPC submitted that the RoE as per the projected capitalisation and considering 70:30 debt:equity ratio is estimated to be around Rs. 57 crore as approved by the Commission.

3.7 NON TARIFF INCOME

TPC submitted that the non tariff income for FY 2006-07 is estimated at Rs 10 Crore as against Rs 9 Crore estimated at the time of the filing and Rs. 2 crore projected by the Commission, on account of loss of income from the statutory reserves that have been adjusted by the Commission in its Order dated October 3, 2006 on ARR and Tariff Petition for FY 2005-06 and FY 2006-07.

To sum up, the Commission will undertake the truing up of expenditure and revenue heads for FY 2006-07, based on audited accounts during Performance Review for the first year of Control Period, i.e., FY 2007-08.

4 MULTI-YEAR TARIFF FRAMEWORK AND PERFORMANCE TRAJECTORY

4.1 CONTROL PERIOD

As stated earlier, the Commission has ruled that the Control Period for the first Multi-Year Tariff (MYT) will be from April 1, 2007 to March 31, 2010.

4.2 PERFORMANCE PARAMETERS

Regulation 16.1 of the MERC (Terms and Conditions of Tariff) Regulations, 2005, stipulates,

“The Commission may stipulate a trajectory, which may cover one or more control periods, for certain variables having regard to the reorganization, restructuring and development of the electricity industry in the State.

Provided that the variables for which a trajectory may be stipulated include, but are not limited to, generating station availability, station heat rate, transmission losses, distribution losses and collection efficiency.”

Regulation 49.1 of the MERC (Terms and Conditions of Tariff) Regulations, 2005, stipulates,

Target availability for full recovery of annual transmission charges

(a) AC system :- 98 per cent

(b) HVDC bi-pole links and HVDC back-to-back stations :- 95 per cent

The Commission has decided that the MYT framework for TPC-T would incorporate the performance trajectory of system availability, as this is the most important performance parameter of a transmission licensee's performance.

4.2.1 Transmission Loss

The Commission has considered an intra-State transmission loss of 4.85% for the Control Period, in accordance with the principles outlined in the Transmission Pricing Framework order dated June 27, 2006 and Transmission Tariff Order date September 29, 2006.

4.2.2 System Availability

TPC-T has to maintain the system availability at the levels stipulated in the Tariff Regulations, in order to be eligible to recover the full fixed charges, i.e. ARR, as determined by the Commission. Any reduction in system availability will lead to pro-rata reduction in recovery of the ARR.

4.3 ANNUAL REVIEW

Regulation 17.1 of the MERC (Terms and Conditions of Tariff) Regulations, 2005, stipulates,

Where the aggregate revenue requirement and expected revenue from tariff and charges of a Generating Company or Licensee is covered under a multi-year tariff framework, then such Generating Company or Licensee, as the case may be, shall be subject to an annual performance review during the control period in accordance with this Regulation.

Accordingly, the Commission rules that it will undertake an Annual Review of the performance of TPC-T over the Control Period, including the Aggregate Revenue Requirement and revenue, over the Control Period. TPC-T should submit its Petition for Annual Review latest by November 30 of each year, as stipulated in Regulation 9.1 of the Commission's Tariff Regulations.

4.4 CONTROLLABLE AND UNCONTROLLABLE FACTORS

Regulation 17.6 of the MERC (Terms and Conditions of Tariff) Regulations, 2005, stipulates,

“Upon completion of the review under Regulation 17.5 above, the Commission shall attribute any variations or expected variations in performance, for variables stipulated under Regulation 15.6 above, to factors within the control of the applicant (controllable factors) or to factors beyond the control of the applicant (uncontrollable factors)”

Regulation 17.6.1 stipulates the following factors as Un-controllable factors:

- § Force Majeure Events
- § Changes in law, judicial pronouncements and Orders of the Central Government, State Government or Commission

- § Economy-wide influences, such as unforeseen changes in inflation rate, market-interest rates, taxes and statutory levies
- § Cost of power generation and/or power purchase due to the circumstances specified in Regulation 25 (i.e. matters related to short term power purchase)

Regulation 17.6.2 stipulates the following factors as controllable factors:

- § Capital Expenditure on account of time and/or cost overruns/efficiencies in the implementation
- § Technical & Commercial Losses including bad debts
- § Consumer Mix in case of presence of more than one Distribution licensee within a area and availing open access by existing consumer
- § Working Capital Requirements
- § Standards specified under SOP Regulations
- § Labour Productivity

4.5 SHARING OF GAINS AND LOSSES

Regulations 18 and 19 of the MERC (Terms and Conditions of Tariff) Regulations, 2005 stipulates the mechanism for sharing of gains or losses on account of uncontrollable factors and controllable factors as follows:

“Any approved aggregate gain or loss to the Generating Company or Licensee on account of uncontrollable factors shall be passed through as an adjustment in the tariff of the Generating Company or Licensee over such period as may be specified in the Order”

Any approved aggregate gain to the Generating Company or Licensee on account of controllable factors to be dealt with in the following manner:

- (a) *One-third of the amount of such gain shall be passed on as a rebate in tariffs over such period as may be specified in the Order...;*
- (b) *In case of a Licensee, one-third of the amount of such gain shall be retained in a special reserve for the purpose of absorbing the impact of any future losses on account of controllable factors...;*
- (c) *The balance amount of gain may be utilized at the discretion of the Generating Company or Licensee.*

Any approved aggregate loss to the Generating Company or Licensee on account of controllable factors shall be dealt with in the following manner:

- (a) *One-third of the amount of such loss may be passed on as an additional charge in tariffs over such period as may be specified in the Order of the Commission under Regulation 17.10; and*
- (b) *The balance amount of loss shall be absorbed by the Generating Company or Licensee.*

4.6 ANNUAL TARIFF DETERMINATION

Regulation 20.1 of the MERC (Terms and Conditions of Tariff) Regulations, 2005, stipulates that the tariff will be determined on an annual basis, as follows:

“The Commission shall determine the tariff of a Generating Company or Licensee covered under a multi-year tariff framework for each financial year during the control period, at the commencement of such financial year, having regard to the following:

- (a) The approved forecast of aggregate revenue requirement and expected revenue from tariff and charges for such financial year, including approved modifications to such forecast; and*
- (b) Approved gains and losses to be passed through in tariffs, following the annual performance review.”*

5 ANNUAL REVENUE REQUIREMENT OVER MYT CONTROL PERIOD

TPC has given details of expenses of its transmission business (TPC-T) under various heads, viz., O&M expenses, depreciation, interest on loans, etc. as per the data formats prescribed by the Commission. The Commission has discussed the allowed expenditure on each of the expense heads and the total expenditure of TPC-T approved by the Commission for the Control Period from FY 2007-08 to FY 2009-10, in the subsequent Sections.

5.1 OPERATION & MAINTENANCE EXPENSES

Operation and Maintenance (O&M) expenses comprises employee related costs, Administrative and General (A&G) Expenses, and Repair and Maintenance (R&M) expenditure.

Regulation 50.5.1 of the MERC (Terms and Conditions of Tariff) Regulations, 2005 stipulates:

“The Transmission Licensee shall be permitted to recover all reasonable and justifiable operation and maintenance expenses relating to the Transmission Business:

Provided that the Transmission Licensee shall submit a forecast of all such operation and maintenance expenses along with the application for determination of tariff:

Provided further that such forecast shall be based on past performance and/or operating norms and shall be supported by detailed calculations that explain the basis for such forecast:

Provided further that the Commission may adopt suitable norms for allowance of operation and maintenance expenses relating to the Transmission Business.”

The Commission is of the opinion that any other suitable norms for allowance of O&M expenses could be adopted after undertaking a thorough study of the O&M expenditure, the cost drivers of the same, and the comparison of the per bay and per circuit km norms across different transmission Utilities, through a separate process. Till any such norm for O&M expenditure is determined, the Commission is

considering the individual elements of O&M expenditure based on the increase linked to inflation indices for the first Control Period of MYT.

TPC has submitted O&M expenses under separate heads of R&M, Employee and Administrative & General (A&G) expenses for the first Control Period from FY 2007-08 to FY 2009-10, as given in the Table below:

Rs Crore			
O&M	FY08	FY09	FY10
Employee Expenses	62.81	66.01	64.94
Administration & General Expenses	28.82	30.26	31.77
Repair and maintenance	14.94	18.57	22.35
Total	106.56	114.83	119.07

5.1.1 Employee Expenses

TPC has provided details of the employee expenses under various heads in accordance with the Formats stipulated by the Commission. TPC has projected the employee expenses considering the impact of correction in compensation packages of TPC and inflation. The main heads of employee expenses are salaries and wages, dearness allowance, other allowances/bonus/benefits and terminal benefits, and amortization of expenditure towards AS-15 implementation. TPC has considered the increase in employee expense on account of AS-15 amortization to the tune of Rs 5.1 Crore for FY 2007-08 and FY 2008-09. The Commission in its Order dated March 22, 2007 in the matter of Petition filed by TPC for Review of the Tariff Order (dated October 3, 2006 in Case no 22 of 2005 and 56 of 2005) has not considered any impact on the employee expenses on this account and not granted any review of the ARR of TPC on account of AS-15 amortization. The relevant extract of this Order is given below:

“TPC has submitted that it had not included the impact of applicability of revised AS-15 (effective from FY 2006-07) in its ARR and Tariff Petition, which requires TPC to provide for inclusion of various employee benefits and to restate certain other employee benefits such as encashment of privilege leave and sick leave on a more conservative basis. TPC submitted that the applicability of revised AS-15 has two impacts, viz., increase in the employee expenses in FY 2006-07 by Rs. 4.67 crore, and reduction in the General Reserves by Rs. 55.5 crore. TPC has submitted that the increase in liability due to applicability of revised AS-15 and the corresponding reduction in General Reserves need to be borne by the consumers and therefore need to be passed on in the ARRs over the next three years, including FY 2006-07.

Firstly, this cannot qualify as ‘new and important evidence which has come to light subsequently’, which is one of the grounds for review. This aspect could have been submitted by TPC along with the Tariff Petition for FY 2006-07. Further, the actuarial valuation of the leave encashment appears to have increased primarily on account of the shift in Company Policy to considering employee salaries on ‘cost to company’ basis, rather than just the applicability of the Accounting Standards.

Moreover, recently, there has been a clarification by the ICAI that the applicability of AS-15 (revised) can be deferred upto FY 2007-08. Further, there could be differences in the treatment of the leave encashment, i.e., considering Basic plus DA or on a cost to company basis.

Hence, for FY 2006-07, the Commission has not considered any impact of revised AS-15, and does not grant any review of the ARR of TPC on this ground.”

The Commission has considered an increase of around 5.36% on account of inflation, over the allowed level of gross employee expenses in FY 2006-07, based on the increase in Consumer Price Index (CPI). The Commission has considered the point to point inflation over CPI numbers for Industrial Workers for a period of 3 years, i.e., FY 2003-04 to FY 2005-06, as per Labour Bureau, Government of India.

The Commission has thus allowed employee expenditure of Rs. 43.01 Cr, Rs 45.31 Cr and Rs 47.74 Cr in FY 2007-08, FY 2008-09 and FY 2009-10, respectively, as given in the following Table:

Employee Expenses (Rs Crore)

Sl.	Particulars	FY 2006-07	FY 2007-08		FY 2007-08		FY 2008-09	
		Approved	Petition	Approved	Petition	Approved	Petition	Approved
1	Salaries, Wages & Staff Welfare Expenses		44.33		47.43		50.53	
2	Terminal Benefits		9.83		10.52		11.21	
3	AS-15 Amortisation		5.05		5.05		0.00	
4	Other		2.81		3.01		3.21	
5	Total Employee Expense	40.82	62.81	43.01	66.01	45.31	64.94	47.74

5.1.2 Administration & General Expenses

TPC has projected A&G expenses of Rs. 28.82 Cr, Rs 30.26 Cr and Rs 31.77 Cr in FY 2007-08, FY 2008-09 and FY 2009-10, respectively. TPC has provided details of the A&G expenses under various heads in accordance with the Formats stipulated by the Commission. The main heads of A&G expenses are rent rates and taxes, cost of services procured and others.

The Commission has considered an increase of around 5.38% on account of inflation over the allowed level of gross A&G expenses in FY 2006-07, based on the increase in Wholesale Price Index (WPI) and Consumer Price Index (CPI). The Commission has considered the point to point inflation over WPI numbers (as per Office of Economic Advisor) and CPI numbers for Industrial Workers (as per Labour Bureau, Government of India) for a period of 3 years, i.e., FY 2003-04 to FY 2005-06. The Commission has considered a weight of 60% to WPI and 40% to CPI, based on the expected relationship with the cost drivers. The Commission has thus allowed A&G expenditure of Rs. 25.01 Cr, Rs 26.35 Cr and Rs 27.77 Cr in FY 2007-08, FY 2008-09 and FY 2009-10, respectively, as given in the following Table:.

Administrative & General Expense (Rs Crore)

Sl.	Particulars	FY 2006-07	FY 2007-08		FY 2008-09		FY 2009-10	
		Approved	Petition	Approved	Petition	Approved	Petition	Approved
1	Rent, Rates & Taxes		10.70		11.07		11.42	
2	Insurance		2.26		2.52		2.78	
3	Legal & Consulting Charges		2.15		2.81		3.04	
4	Cost of Services Provided		2.74		2.88		3.00	
5	Other Exp (incl. Misc. Exp.)		10.96		10.99		11.53	
6	Net A&G Expenditure	23.73	28.82	25.01	30.26	26.35	31.77	27.77

5.1.3 Repair & Maintenance Expenses

TPC has projected R&M expenses of Rs. 14.94 Cr, Rs 18.57 Cr and Rs 22.35 Cr in FY 2007-08, FY 2008-09 & FY 2009-10, which is about 1.5% of the Gross Fixed Assets (GFA) at the beginning of the year considering the past trends, impact of inflation, age of its assets, impact of increasing requirements from consumers, the proportion approved by the Commission in the last Tariff Order and impact of inflation.

The Commission has considered an increase in R&M expenditure for the first Control Period, by considering the inflationary impact of around 5.39% based on the increase in WPI over the approved gross R&M amount of Rs 13.07 Cr in FY 2006-07. The Commission has thus approved R&M expenses of Rs. 13.77 crore, Rs. 14.52 crore, and Rs. 15.30 crore, over the first Control Period.

5.1.4 Total O&M Expenses

The O&M expenditure allowed by the Commission over the Control Period is shown in the following Table:

Operation & Maintenance Expenses (Rs Crore)

Particulars	FY07 Order	FY08	FY09	FY10
Employee expenses	40.82	43.01	45.31	47.74
A&G expenses	23.73	25.01	26.35	27.77
R&M expenses	13.07	13.77	14.52	15.30
O&M expenses	77.62	81.79	86.18	90.81

Though the Commission has not fixed the norms for the transmission business in this Order, the principles to review the performance of the utility with reference to the cost drivers and outputs are being laid down. This review would be carried along with the Annual Performance Review as per the Regulations. This would also facilitate evolution of the norms for transmission business at a later stage.

The performance review framework is similar to the norm based approach adopted by the CERC for regulating the Central Transmission Utility. The cost drivers and outputs for the transmission business considered by CERC are inflationary increase, no. of bays maintained and length of lines maintained. The Commission rules that the performance of TPC-T would also be reviewed on similar lines. The principles are as underlined below:

1. The total O&M Costs for all the years should be allocated between bays and line. The Commission directs the Licensee to submit the details of O&M expenses per circuit Kilometer of line length and per bay for the last five years, if data is not available on the same, then the licensee should submit the asset details of bays and assets details of lines, along with definition as to what constitutes a bay as per the licensee. This information would help derive a ratio that the Commission would use to allocate the total O&M Costs to bays and lines.
2. Based on the above information, the O&M costs per bay and O&M Costs per circuit-km for the past years would be computed by dividing the O&M

cost for bays / lines with total number of bays / total line length in km. The Commission directs TPC-T to submit information regarding the number of bays and total length in circuit kilometers for every year.

3. The operation and maintenance expense norms for the Control Period shall be derived on the basis of the average of the actual O&M Costs per bay and O&M Costs per circuit-km for the five (5) years ending March 31, 2006, based on the audited financial statements, excluding abnormal operation and maintenance expenses, if any, subject to prudence check by the Commission.
4. The average of such O&M Costs per bay and O&M Costs per circuit-km shall be considered as the costs for the financial year ended March 31, 2004 and shall be escalated at the rate of a composite index that Commission would compute based on Wholesale Price Index (WPI) and Consumer Price Index for Industrial workers (CPI_IW) by assigning appropriate weights to the same, per annum to arrive at Operation and Maintenance expenses for the base year commencing April 1, 2006.
5. The base Operation and Maintenance expenses for each subsequent year shall be escalated at the rate of the composite index that Commission would compute as mentioned above to arrive at permissible O&M Costs per bay and O&M Costs per circuit-km for the control period. These values would be reviewed as part of the Annual Performance Review in terms of productivity levels and efficiency factors.

5.2 CAPITAL EXPENDITURE AND CAPITALISATION

5.2.1 Capital Expenditure

TPC incurred capital expenditure of Rs. 21.48 Crore during FY 2005-06 towards its transmission function. Further, during FY 2006-07, as against projected capital expenditure of Rs 64.57 Crore, TPC has projected to incur capital expenditure of Rs 49.36 Crore. However, upto the end of third quarter (Q3) of FY 2006-07, actual capital expenditure incurred by TPC has been only Rs 11.50 Crore.

Over the three year Control Period from FY 2007-08 to FY 2009-10, TPC has projected capital expenditure of around Rs 840.60 Cr. The annual rolling plan for capital expenditure presented by TPC amounts to capital outlay of Rs 261.29 Crore, Rs 213.39 Crore and Rs 365.93 Crore over FY 2007-08, FY 2008-09 and FY 2009-10, respectively.

Further, classification of schemes involving capital outlay exceeding Rs 10 Crore (DPR schemes) and schemes involving capital outlay below Rs 10 Crore (Non-DPR schemes) is presented in the following Table. DPR schemes entail an outlay of around Rs 717.89 Crore and non-DPR schemes entail an outlay of around Rs 122.72 Crore over the Control Period as summarised in the following Table:

Scheme Description	TOTAL (DPR + Non-DPR) Schemes (Rs Cr)			
	FY 2007-08	FY 2008-09	FY 2009-10	TOTAL
DPR schemes	198.88	177.35	341.66	717.89
Non-DPR schemes	62.41	36.04	24.27	122.72
TOTAL (DPR + Non DPR) Schemes	261.29	213.39	365.93	840.60

TPC has has planned capital investment in transmission in order to (i) augment the existing capacities; (ii) To improve the life of the existing assets; (iii) To increase efficiency and productivity; (iv) To augment / replace/ retrofit old/ obsolete/ under-rated equipment; (v) To meet environmental, safety and other statutory requirements; (vi) To purchase routine tools and equipments; (vii) Other miscellaneous expenditure of a capital nature.

The projected capital expenditure includes two transmission schemes namely (i) Expansion of existing 110 kV Receiving Station with 145 kV GIS at Mahalaxmi as part of expansion to meet load requirement of Railways and BEST involving capital outlay of Rs 52.19 Crore and (ii) 220 kV Trombay-Dharavi-Salsette line involving capital outlay of Rs 153.18 Crore. While the Commission has already issued in-principle clearance for expansion of Receiving Station, the scrutiny of 220 kV Trombay-Dharavi-Salsette line is at an advanced stage for approval.

Apart from above schemes, TPC has recently submitted 12 capex schemes for approval comprising

- land for new receiving station (Rs 56.62 Crore),
- 110 kV single phase power supply to Railways from Borivali (Rs 18.16 Crore),
- installation of new 75 MVA power transformer at Malad (Rs 14.69 Crore),
- 145 kV GIS at Versova (Rs 101.84 Crore),
- installation of additional ICT with 33 kV outlets at Dharavi (Rs 32.98 Crore),
- 33 kV supply to BEST from Parel R/S (Rs 33.80 Crore),
- Upgrading of 110 kV transmission lines for system strengthening (Rs 18.03 Crore),

- Establishing 220 kV GIS receiving station at Mahalaxmi (Rs 63.58 Crore),
- Establishing 145 kV GIS receiving switchgear at BKC (Rs 129.67 Crore),
- establishing 220 kV GIS at SAKI and upgrading of transmission lines (Rs 195.2 Crore),
- Upgrading of 110 kV transmission lines by high capacity super conductor (Rs 98.18 Crore),
- 110 kV supply to western railways (Rs 18.66 Crore).

The above transmission schemes have been submitted recently during February/March 2007 by TPC. The Commission opines that for any new capacity addition to intra-State transmission network (InSTS), it would be necessary to ensure fitment of each transmission scheme within overall long term transmission plan for the State and the same needs to be verified and validated by MSETCL in its capacity as State Transmission Utility. Pending detailed scrutiny of above schemes, the Commission has not considered capital outlay towards any of above schemes for the purpose of determination of ARR over control period at this stage.

In addition, TPC has considered capital expenditure and capitalisation towards capex schemes such as 220 kV interconnection with MSETCL (Rs 19.5 Crore), uprating of 110 kV lines for DG set (Rs 18 Crore) over the control period. However, no such scheme has yet been submitted to Commission for approval. Hence, the Commission has not considered any outlay towards these schemes at this stage.

In view of above, the Commission has considered capital outlay of DPR schemes as already approved by the Commission or at an advance stage of approval for determination of ARR over the first Control Period of MYT regime. Thus, as against capital expenditure of Rs 840.60 Crore towards DPR scheme as projected by TPC, the Commission has considered capital expenditure of Rs 260.95 Crore over the Control Period. However, the inclusion under this Order of capex schemes that have not yet been accorded the Commission's approval, does not constitute approval of the scheme by the Commission, which will be accorded separately. In case of non-approval of any scheme after consideration by the Commission, the related capex, capitalisation and the capital related charges like depreciation, interest and RoE will be correspondingly adjusted in future years.

The Commission would like to reiterate that in-principle approval of the scheme does not absolve the senior management of TPC of their responsibility to prioritise various schemes and undertake cost benefit analysis and financial analysis to validate the commercial prudence of each scheme. TPC should ensure that the projected benefits

actually accrue for the benefit of the stakeholders. It would be essential to monitor progress of each scheme as well as track expenditure and benefits accrued as per the scheme.

As regards Non-DPR schemes, the Commission notes that actual capital expenditure incurred by TPC during FY 2005-06 is only Rs 19.23 Crore and TPC has projected to incur capital expenditure of Rs 22.56 Crore during FY 2006-07 towards Non-DPR schemes. However, TPC had projected a significant increase in capital expenditure towards Non-DPR schemes over the Control Period amounting to Rs 122.72 Crore comprising outlay of Rs 62.41 (FY 2007-08), Rs 36.04 Crore (FY 2008-09), and Rs 24.27 Crore (FY 2009-10). The capital expenditure towards Non-DPR schemes as already initiated prior to control period had been considered as proposed by TPC. Further, the Commission has considered capital expenditure towards new Non-DPR schemes only to an extent of 50% of that projected by TPC. Thus, as against capital expenditure of Rs 122.72 Crore towards Non-DPR scheme projected by TPC, the Commission has considered capital expenditure of Rs 75.46 Crore over the Control Period. The increase in quantum of Non-DPR schemes is a worrying trend, as the transmission business is not likely to have too many schemes below Rs. 10 crore. The Commission will take a review of the schemes being classified under Non-DPR category, and in case it is found that these schemes should have ideally been classified under DPR category, then that capex and the related capital charges will be disallowed till the DPR is submitted and the scheme is approved by the Commission.

The capital outlay towards DPR schemes and Non-DPR schemes over the Control Period as considered by the Commission is summarised in the following Table:

(Rs Cr)

Scheme Description	TOTAL (DPR + Non-DPR) Schemes – (Commission)			
	FY 2007-08	FY 2008-09	FY 2009-10	TOTAL
DPR schemes	38.16	52.08	95.25	185.49
Non-DPR schemes	45.28	18.04	12.14	75.46
TOTAL (DPR + Non DPR) Schemes	83.44	70.12	107.39	260.95

A comparison of capital expenditure proposed by TPC and that considered by Commission for the purpose of determination of ARR over the Control Period is given in the following Table:

Capital Expenditure (Rs Cr)

Item Description	TPC			Commission		
	FY 2007-08	FY 2008-09	FY 2009-10	FY 2007-08	FY 2008-09	FY 2009-10
DPR schemes	198.88	177.35	341.66	38.16	52.08	95.25
Non-DPR schemes	62.41	36.04	24.27	45.28	18.04	12.14
Total (DPR + Non DPR) Schemes	261.29	213.39	365.93	83.44	70.12	107.39

TPC has incurred capital expenditure of Rs 21.48 Crore during FY 2005-06 and only Rs 11.50 Crore upto third quarter of FY 2006-07. As the annual capital outlay approved over MYT Control Period is significantly higher than existing performance of TPC on this count, the Commission would consider revision in the capital outlay during annual performance review upon scrutiny of progress of schemes already approved and need for capital outlay towards additional capex schemes as may be approved by then. Further, TPC should ensure that the projected benefits actually accrue for the benefit of the stakeholders. It would be essential to monitor progress of each scheme as well as track expenditure and benefits accrued as per the scheme.

5.2.2 Capitalisation

TPC has proposed total capitalisation amounting to Rs 841.65 Crore over the three year Control Period from FY 2007-08 to FY 2009-10, comprising works capitalisation of Rs 822.13 Cr and interest capitalisation of Rs 19.52 Cr. The annual capitalisation over the Control Period as projected by TPC is Rs 180.34 Cr (FY 2007-08), Rs 261.38 Cr (FY 2008-09), and Rs 399.93 Cr (FY 2009-10). The summary of capitalisation as proposed by TPC is presented in the following Table:

<i>(Rs Cr)</i>				
Item Description	FY 2007-08	FY 2008-09	FY 2009-10	TOTAL
Investments	261.29	213.39	365.93	840.60
Works Capitalised	176.48	252.01	393.64	822.13
Interest Capitalised	3.86	9.38	6.29	19.52
Total Capitalisation	180.34	261.38	399.93	841.65

It is worthwhile to note here that actual capitalisation during FY 2005-06 had been Rs 13.16 Crore and capitalisation projected during FY 2006-07 is Rs 26.46 Crore. The Commission had considered capitalisation of Rs 30.72 Crore while approving the ARR for FY 2006-07 in the previous Order.

The Commission notes that TPC has considered capitalisation of interest cost towards capex schemes in line with Commission's directive under earlier Order. Accordingly,

the Commission had considered capitalisation of DPR schemes as approved or under advanced stage of approval as elaborated in earlier paragraphs.

In addition, the Commission has also considered capitalisation of Non-DPR schemes. The capitalisation of Non-DPR schemes already initiated prior to the Control Period have been considered as proposed by TPC. Further, as elaborated under earlier paragraphs for capital expenditure, the Commission has considered capital expenditure towards new schemes to be initiated during the Control Period under Non-DPR schemes only to the extent of 50% of that projected by TPC. Accordingly, capitalisation of such new non-DPR schemes had also been considered at 50% of that proposed by TPC. The capitalisation considered by the Commission over the MYT Control Period for DPR schemes and Non-DPR schemes is presented in the following Table:

(Rs. Crore)

Scheme Description	TOTAL (DPR + Non-DPR) Schemes – (Commission)			
	FY 2007-08	FY 2008-09	FY 2009-10	TOTAL
DPR schemes	53.77	52.01	103.57	209.35
Non-DPR schemes	43.63	21.73	13.98	79.35
TOTAL (DPR + Non DPR) Schemes	97.40	73.74	117.56	288.70

The comparison of capitalisation as proposed by TPC and that considered by the Commission for the purpose of determination of ARR over the Control Period is summarised in the following Table:

Capitalisation

(Rs Cr)

Item Description	TPC			Commission		
	FY 2007-08	FY 2008-09	FY 2009-10	FY 2007-08	FY 2008-09	FY 2009-10
Total Capitalisation	180.34	261.38	399.93	97.40	73.74	117.56

5.3 INTEREST ON LONG TERM DEBT

During FY 2005-06, TPC had incurred interest expenditure of Rs 1.87 Crore. Further, as against approved interest cost of Rs 1.99 Crore during FY 2006-07, TPC has projected interest expenditure of Rs 2.95 Crore. However, TPC has proposed significant increase in interest expenditure to around Rs 75.51 Crore over the MYT

Control Period mainly on account of significant increase in projected capitalisation over the Control Period, as shown in the Table below:

Item Description	TPC – (Existing + New) Loans (Rs Cr)			
	FY 2007-08	FY 2008-09	FY 2009-10	TOTAL
Interest cost	9.21	22.87	43.43	75.51

TPC has submitted that it has considered a normative debt: equity ratio of 70:30 for financing of the Capex as proposed for FY 2006-07 as per the Commission's Tariff Regulations. Further, TPC has raised debt from the market for funding the capital expenditure for FY 2006-07. TPC plans to finance the future capital expenditure for the Control Period in a similar manner through debt raised from the market. Pending the finalization of such loans, for the Control Period, the terms as offered by IDFC for the Rs. 450 Crore loan have been considered for estimating the interest liability and the Interest during Construction (IDC) over the control period. The financing terms considered by TPC are 3 year moratorium and 6 year repayment at an interest cost of 8.9% p.a. Further, TPC has considered interest cost of 9% p.a. for new loans to be drawn during the Control Period.

The Commission, in its earlier Order dated October 3, 2006 (Case 12 & 56 of 2005), has considered the interest rate on loans corresponding to capitalised assets at 10% p.a. for assets put to use during FY 2004-05 and FY 2005-06 and loan repayment period of 10 years in respect of such loans. Further, in respect of normative loans for assets to be capitalised during FY 2006-07, interest rate of 8% p.a. and repayment period of 27 years as per proviso to Regulation 48.2 of MERC (Terms and Conditions of Tariff) Regulations, 2005, were considered. However, as TPC has projected financing of capex through loan from IDFC to an extent of Rs 450 Crore and arranging funds through additional fund market borrowings, it may not be advisable to consider terms for normative loan funding over the Control Period. Accordingly, the Commission has considered loan repayment and interest for existing loans (i.e. loans corresponding to assets put to use during FY 2004-05 and FY 2005-06) as per earlier terms, and terms for borrowings during the Control Period as per loan terms under IDFC loan, i.e., interest rate of 8.9% p.a. with moratorium of 3 years and repayment of 6 years.

Accordingly, interest cost projected by TPC and that approved by the Commission over the MYT Control Period is summarised in the following Table:

Loan and Interest (Rs Cr)

Item Description	TPC			Commission		
	FY 2007-08	FY 2008-09	FY 2009-10	FY 2007-08	FY 2008-09	FY 2009-10
Opening Balance	38.54	162.27	342.74	38.54	104.22	153.34
Additions	126.24	182.97	279.95	68.18	51.62	82.29
Repayments	(2.50)	(2.50)	(2.97)	(2.50)	(2.50)	(2.97)
Closing Balance	162.27	342.74	619.73	104.22	153.34	232.66
Interest Cost	9.21	22.87	43.43	6.56	11.64	17.33

5.4 DEPRECIATION AND ADVANCE AGAINST DEPRECIATION

TPC has considered depreciation rates specified under MERC (Terms and Conditions of Tariff) Regulations, 2005 for projecting the depreciation over the MYT Control Period. Further, Opening Gross Block has been derived based on proposed capitalisation during respective years over the MYT Control Period.

The summary of depreciation and Opening GFA as proposed by TPC is presented in the following Table:

Table for Depreciation (Rs Cr)

Item Description	FY 2007-08	FY 2008-09	FY 2009-10	TOTAL
Op. GFA	1059.77	1240.11	1501.50	
Depreciation	30.21	36.26	45.17	111.63
% depreciation rate	2.85%	2.92%	3.01%	

The Commission notes that Opening GFA of Rs 1059.77 Crore during FY 2007-08 as projected by TPC is based on assumed capitalisation of Rs 26.46 Cr during FY 2006-07. In the earlier Order for FY 2006-07 (Case 12 & 56 of 2005), the Commission has approved capitalisation of Rs 30.72 Crore.

As per TPC's submission, actual capital expenditure incurred upto December 2006 (Q3 of FY 2006-07) has been Rs 11.50 Crore, including approved capital schemes. Accordingly, the Commission has considered Opening GFA for FY 2007-08 as proposed by TPC for the purpose of determination of depreciation over the MYT Control Period, which may be reviewed during next annual performance review once audited financial results for FY 2006-07 are available. Further, Opening GFA for FY 2008-09 and FY 2009-10 have been derived based on the value of the assets capitalised as discussed in previous paragraphs.

The weighted average depreciation rate as projected by TPC amounts to 2.87% of Opening GFA during FY 2007-08. Upon seeking clarification from TPC for applicable depreciation rates, TPC had confirmed that depreciation rates are in line with the schedule provided under the Tariff Regulations notified by the Commission. Further, the Commission notes that TPC has computed depreciation on the opening GFA as well as assets put to use during the year. However, Regulation 50.4.1 of the Commission's Tariff Regulations does not provide for depreciation on assets added during the year.

Accordingly, depreciation cost projected by TPC and approved by the Commission over the MYT Control Period is summarised in the following Table:

Item Description	TPC			Commission		
	FY 2007-08	FY 2008-09	FY 2009-10	FY 2007-08	FY 2008-09	FY 2009-10
Op. GFA	1059.77	1240.11	1501.50	1059.76	1157.17	1230.91
Depreciation	30.21	36.26	45.17	28.14	30.68	32.96
% depreciation	2.85%	2.92%	3.01%	2.66%	2.65%	2.68%

Advance against depreciation

TPC has not sought approval for any advance against depreciation in line with the conditions stipulated under Tariff Regulations.

The Commission notes that as per Regulation 48.3 of MERC (Terms and Conditions of Tariff) Regulations, 2005, where the actual amount of loan repayment in any financial year exceeds the amount of depreciation allowable under Regulation 50.4.2, the Transmission Licensee shall be allowed an advance against depreciation for the difference between the actual amount of such repayment and the allowable depreciation for such financial year.

As the depreciation approved over the Control Period exceeds the approved loan repayment for each year during the Control Period, hence, there is no need to provide for Advance Against Depreciation (AAD).

5.5 INTEREST ON WORKING CAPITAL

TPC, in its Petition, submitted that the Working Capital requirement has been computed in accordance with the Commission's Tariff Regulations, which stipulate the components of working capital of the transmission business. TPC has considered

the normative interest rate of 11.5%, which is the Short term Prime Lending Rate of the State Bank of India (benchmark interest rate specified in the Tariff Regulations) as revised w.e.f. Dec 27, 2006. TPC projected interest on working capital of Rs 6 Crore, Rs. 7 crore and Rs. 7 crore, for FY 2007-08, FY 2008-09, and FY 2009-10, respectively.

The Commission has estimated the total working capital requirement in accordance with the provisions of Tariff Regulations, and the approved amount of O&M expenses, and total transmission ARR, based on which the working capital requirement is estimated. The rate of interest on working capital loans has been considered as 11.5%, which is the prevalent SBI short-term PLR, as stipulated in the Tariff Regulations.

The interest on working capital approved by the Commission works out to Rs 5.5 Crore, Rs. 5.8 crore, and Rs. 6.1 crore, for FY 2007-08, FY 2008-09, and FY 2009-10, respectively.

5.6 CONTRIBUTION TO CONTINGENCY RESERVES

TPC has projected the contribution to contingency reserves as 0.5% of opening GFA, in line with MERC (Terms and Conditions of Tariff) Regulations, 2005, over the Control Period. The Commission has allowed contribution to contingency reserves at 0.5% of Opening GFA as determined by the Commission over the Control Period, based on the capitalisation projected by the Commission. The contribution to contingency reserve as projected by TPC and as allowed by the Commission is given in the Table below:

Rs Crore

Particulars	FY 2007-08		FY 2008-09		FY 2009-10	
	TPC-T	Commission	TPC-T	Commission	TPC-T	Commission
Contribution to Contingency Reserves	5	5.3	6	5.8	8	6.2

5.7 INCOME TAX

TPC has projected income tax based on the applicable tax rate, based on tax WDV of assets and various other applicable provisions of the IT Act 1961. The Income Tax estimated by TPC for its transmission business in FY 2007-08, FY 2008-09 and FY 2009-10 is Rs 33 Crore, Rs 30 Crore and Rs 34 Crore, respectively.

As TPC has estimated the tax liability considering the Tax WDV of assets and other provisions, and the estimated income tax is in line with the income tax considered by the Commission for FY 2006-07 for the transmission business, the Commission has considered the income tax as estimated by TPC.

5.8 RETURN ON EQUITY

TPC submitted that it has projected the Return on Equity (RoE) for its transmission business in accordance with the Tariff Regulations notified by the Commission, which stipulates a 14% return on equity per annum on the regulatory equity at the beginning of the Financial Year for which the return is being computed. TPC has also considered RoE on the assets added during the year. TPC has projected RoE as Rs. 61 crore, Rs. 71 crore, and Rs. 85 crore, for FY 2007-08, FY 2008-09 and FY 2009-10, respectively.

The Commission has considered the RoE @ 14% of the equity, in accordance with the Commission's Tariff Regulations, on the opening equity at the beginning of the year, and on 50% of the projected levels of assets capitalised during each year of the Control Period and considering the debt:equity ratio as 70:30, as elaborated in the earlier paragraphs on capital expenditure and asset capitalisation. The computation of RoE as approved by the Commission is shown in the Table below:

Return on Equity

(Rs. Crore)

S.no.	Particulars	Ref.	Control Period (Forecast)		
			FY 2007-08	FY 2008-09	FY 2009-10
1	Regulatory Equity at the beginning of the year		412	445	473
2	Capital Expenditure Capitalised		110	94	132
3	Equity portion of capital expenditure capitalised		33	28	39
4	Regulatory Equity at the end of the year		445	473	512
	Return Computation				
5	Return on Regulatory Equity at the beginning of the year	14%*(1)	58	62	66
6	Return on Equity portion of capital expenditure capitalised	14%*(3)/2	2	2	3
7	Total Return on Regulatory Equity	(5)+(6)	60	64	69

The Commission has instituted a truing up mechanism where in the actual expenses and the actual revenue will be trued up at the end of the year based on audited financial results and subject to a prudence check. Thus, the amount shown as equity and return thereon would be trued up based on the actual capital expenditure incurred, asset capitalisation and additional equity used to fund the capital expenditure.

5.9 NON-TARIFF INCOME

TPC has projected non-tariff income of Rs. 9 Cr during each year of the Control Period. TPC has submitted that the non-tariff income has been historically composed

of recurring items (such as rents, etc.), and non-recurring items (like interest on statutory reserves maintained by TPC and certain items that occur once in a while). TPC submitted that since the reserves have been adjusted completely by the Commission to bridge the revenue gap in the previous year, and non-recurring items cannot be predicted, TPC has projected non-tariff income based on the trend followed by the recurring items.

The Commission has accepted TPC's projections of non-tariff income for the Control Period from FY 2007-08 to FY 2009-10.

5.10 AGGREGATE REVENUE REQUIREMENT (ARR)

The Annual Revenue Requirement of TPC-T is the summation of all the expenses and the RoE as computed above, less non-tariff income, and has been summarized below:

Aggregate Revenue Requirement – TPC (T) (Rs. Crore)

S.no.	Particulars	FY 2006-07	FY 2007-08		FY 2008-09		FY 2009-10	
		Order	TPC-T	Commission	TPC-T	Commission	TPC-T	Commission
1	Operation & Maintenance Expenses	77.62	106.56	81.79	114.83	86.18	119.07	90.81
1.1	Employee Expenses	40.82	62.81	43.01	66.01	45.31	64.94	47.74
1.2	Administration & General Expenses	23.73	28.82	25.01	30.26	26.35	31.77	27.77
1.3	Repair & Maintenance Expenses	13.07	14.94	13.77	18.57	14.52	22.35	15.30
2	Depreciation, including advance against depreciation	29.95	30.21	28.14	36.26	30.68	45.17	32.96
3	Interest on Long-term Loan Capital	1.99	9.21	6.56	22.87	11.64	43.43	17.33
4	Interest on Working Capital	1.94	5.94	5.49	6.53	5.77	7.34	6.12
5	Other Interest and Finance Charges	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	Income Tax	26.90	33.33	33.33	30.37	30.37	34.12	34.12
7	Contribution to contingency reserves	0.00	5.30	5.30	6.20	5.79	7.51	6.15
8	Total Revenue Expenditure	138.40	190.55	160.61	217.06	170.42	256.64	187.49
9	Return on Equity Capital	56.53	61.42	59.94	70.70	64.23	84.59	68.97
10	Aggregate Revenue Requirement	194.93	251.97	220.55	287.76	234.65	341.22	256.46
11	Less: Non Tariff Income	2.34	8.83	8.83	9.23	9.23	9.15	9.15
14	Less: Income from Other Business	24.00						
12	Aggregate Revenue Requirement from Transmission Tariff	168.59	243.14	211.72	278.52	225.41	332.07	247.32

5.11 ARR DETERMINATION FOR THE CONTROL PERIOD

Since this is the first time MYT principles are being adopted, and since the investment plans for the Control Period have not been finalized owing to delay in submission of DPR and other issues, the Commission has specified a framework for determination of ARR in future years of the Control Period. This would impart greater regulatory certainty to the licensees and consumers.

The ARR for future years of the Control Period (i.e., for the 2nd and 3rd year of the Control Period) would be determined based on the following formula:

$$ARR_n = ARR_n^1 + ACC_n + K + Z$$

where,

ARR_n is Aggregate Revenue Requirement for the nth year of the Control Period;

ARR_n¹ is the Annual Revenue requirement specified by the Commission at the beginning of the Control Period for the nth year.

ACC_n is the additional capital costs (depreciation, interest expenditure, and return on equity) that need to be considered for the nth year of the Control Period based on the additional DPRs or investments approved by the Commission during the Control Period.

K is the adjustment to the revenue requirement to be carried out as part of the Annual Performance Review to share the net gains and losses arising out of controllable and uncontrollable factors as per Regulation 18 and 19 of the MERC (Terms and Conditions of Tariff) Regulations, 2005. This shall include

- § Positive and negative variations on account of uncontrollable factors,
- § Negative adjustment under Regulation 19.1 (a) to pass one-third of the aggregate gain from controllable factors to consumers
- § Positive adjustment under Regulation 19.2 (a) to pass one-third of the aggregate loss from controllable factors to consumers

Z is an adjustment that the Commission may apply during the control period to pass any appropriate financial implications (positive or negative). This may also include incentives or penalties linked to mandatory standards such as Voltage variations, Safety standards and desirable standards such as Feeder availability, Sub-station availability, Voltage unbalance, Neutral Voltage Displacements (NVD), voltage variation index, System adequacy & System security.

5.12 APPLICABILITY OF ORDER

This Order on TPC-T's ARR for the first Control Period from FY 2007-08 to FY 2009-10, shall come into force with effect from April 1, 2007, and shall continue to be in force for the entire Control Period till March 31, 2010. The Commission will undertake the Annual Review of TPC-T's performance during the last quarter of FY 2007-08. TPC-T is directed to submit its Petition for Annual Review of its performance during the first half of FY 2007-08, as well as truing up of revenue and expenses for FY 2006-07, with detailed reasons for deviation in performance, latest by November 30, 2007.

The Commission acknowledges the efforts taken by the Consumer Representatives and other individuals and organisations for their valuable contribution to the ARR and MYT determination process.

The Commission would also like to put on record, the efforts of its advisors, M/s ABPS Infrastructure Advisory Private Limited.

(S. B. Kulkarni)
Member

(A. Velayutham)
Member

(Pramod Deo)
Chairman, MERC



(Malini Shankar)
Secretary, MERC

APPENDIX 1**List of persons who attended the Technical Validation Session held on February 8, 2007**

S.No	Name	Designation
TPC Officials		
1	Shri S.Ramakrishnan	ED
2	Shri T.N.Ramakrishnan	AGM
3	Shri V.H.Wagle	Manager
4	Shri B.P.Mehta	Asst. Manager
5	Shri Rakesh Singh	Asst. Manager
6	Shri S.V.Kher	AGM
7	Shri A.K.Jain	Sr. Manager
8	Shri Prashant K. Ambekar	Sr.EE
9	Shri Avinash Katdare	Manager
10	Shri T.P.Mohan	ADM
11	Shri A.Sethi	GM
12	Shri M.Ravindra	Sr. Manager
13	Shri M.K.Gupta	AM
14	Shri S.R.Mehendale	AM
15	Shri D.Rama	DGM
16	Shri G.S.Bapat	GM
BEST Officials		
17	Shri A.V.Kane	AGMS
18	Shri S.A.Puranic	DGMES
19	Shri G.P.Pradhan	AGMA
REL Officials		
20	Shri P.S. Pandya	Sr. Consultant
21	Shri G.J.Thakkar	Deputy Manager
22	Shri Sharad Naik	Sr. Officer
23	Shri R.R.Mehta	Sr.VP
24	Shri Desai	Sr. Officer
25	Shri Mohan Limeya	Sr. Manager
26	Shri A.C.Tambawala	AVP
27	Shri M.Madhukar	Sr.VPC
Others		
28	Shri H.S.Dote	Analyst, Emam
29	Shri M.Jain	Analyst, Emam
30	Shri S.Thorat	Sr.Manager, AFF
31	Shri Venkatesh	Consultant, AFF
32	Shri Anand Dhavale	Manager, FVL
MSETCL Official		
33	Shri R.N.Mundhe	S.E
Consultants to Commission		
34	Shri Suresh Gehani	
35	Shri Palaniappan M	

36	Shri S.R.Karkhanis	
37	Shri Akhilesh Avasti	
38	Shri D.Thakur	
39	Shri Lal	

APPENDIX 2**List of Objectors**

S.No	Name of Person / Official	Designation	Institution
1	Shri Vijaykumar Tamhane	Secretary	The Mill owner's Association,
2	Shri S.A. Puranik,	DGM	BEST
3	Shri S.N.Singh,	Chief Electrical Distribution Engg	Central Railway
4	Shri Rajiv Sharma,		
5	Shri Sandeep Gode,		Ekta Mitra Mandal
6	Shri Rakshpal Abrol,	President	Bombay Small Scale Industries Association (BSSIA),
7	Shri N. Ponrathnam,		Vel Induction Hardening
8	Shri Mahesh Barbhaya,		

List of Objectors who attended the Public Hearing on March 20, 2007

S.No	Name of Person / Official	Designation	Institution
1	Shri Vijaykumar Tamhane	Secretary	The Mill owner's Association,
2	Shri S.N. Singh,	Chief Electrical Distribution Engg	Central Railway
3	Shri Rakshpal Abrol,	President	Bombay Small Scale Industries Association (BSSIA),
4	Shri N. Ponrathnam,		Vel Induction Hardening
5	Shri Mahesh Barbhaya,		