

Before the  
**MAHARASHTRA ELECTRICITY REGULATORY COMMISSION**  
World Trade Centre, Centre No.1, 13th Floor, Cuffe Parade, Mumbai – 400 005  
Tel. 022-22163964/65/69 Fax 022 22163976  
Email: [mercindia@mercindia.org.in](mailto:mercindia@mercindia.org.in)  
Website: [www.mercindia.org.in](http://www.mercindia.org.in)

**Case No. 111 of 2008**

**In the matter of Petition of The Tata Power Company Ltd. Generation Business’  
(TPC-G) for approval of Truing up for FY 2007-08, Annual Performance Review  
for FY 2008-09 and Determination of Tariff for FY 2009-10**

Shri V. P. Raja, Chairman  
Shri A. Velayutham, Member  
Shri S. B. Kulkarni, Member

**ORDER**

**Dated: May 28, 2009**

In accordance with MERC Tariff Regulations and upon directions from the Maharashtra Electricity Regulatory Commission (hereinafter referred as MERC or the Commission), The Tata Power Company Limited’s Generation Business (TPC-G), submitted its application for approval of truing up of FY 2007-08, Annual Performance Review (APR) for FY 2008-09 and Tariff Petition for FY 2009-10, on 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-G, all the suggestions and objections of the public, responses of TPC-G, issues raised during the Public Hearing, and all other relevant material, and after review of Annual Performance for FY 2008-09, determines the tariff for the Generation Business of TPC-G for FY 2009-10 as under.



## Table of Contents

<b>1</b>	<b><i>BACKGROUND AND BRIEF HISTORY</i></b>	<b>9</b>
1.1	Tariff Regulations	9
1.2	Commission's Order on ARR and Tariff Petition for FY 2005-06 and FY 2006-07	9
1.3	Review Petition on Tariff Order for FY 2006-07	9
1.4	Commission's Order on MYT Petition for TPC-G for FY 2007-08 to FY 2009-10	10
1.5	Commission's Order on APR Petition for TPC-G for FY 2007-08 and Determination of Tariff for FY 2008-09	10
1.6	Review Petition on Order on APR for FY 2007-08 and Determination of Tariff for FY 2008-09	10
1.7	Petition for Annual Performance Review for FY 2008-09 and Determination of Tariff for FY 2009-10	10
1.8	Admission of Petitions and Public Process	11
1.9	Organisation of the Order	13
<b>2</b>	<b><i>OBJECTIONS RECEIVED, TPC's RESPONSE AND COMMISSION'S RULING</i></b>	<b>14</b>
2.1	Procedural Issues	14
2.2	Power Purchase agreement (PPA) of 500 MW with Reliance Infrastructure Limited (RInfra)	15
2.3	Supply of Construction Power to Unit-8	16
2.4	Impact of the ATE Judgment dated May 12, 2008	17
2.5	Sharing of Common Facilities at Trombay for Unit-8	18
2.6	Fuel Cost	19
2.7	Interest Rate	22
2.8	Income Tax	23
2.9	Return on Equity	23
2.10	Advertisement Expenses	24
2.11	Sharing of Gain/Losses	25



<b>3</b>	<b>TRUING UP OF AGGREGATE REVENUE REQUIREMENT FOR</b>	
	<b>FY 2007-08</b>	<b>26</b>
3.1	Gross Generation	26
3.2	Auxiliary Consumption	27
3.3	Heat Rate	28
3.4	Construction Power Supplied to Unit-8	31
3.5	Fuel Price and Calorific Value	34
3.6	Fuel Costs	35
3.7	O&M Expenses	36
3.8	Capital Expenditure and Capitalisation	40
3.9	Depreciation	41
3.10	Interest Expenses	42
3.11	Interest on Working capital	44
3.12	Return on Equity (RoE)	47
3.13	Non Tariff Income	47
3.14	Income Tax	52
3.15	Income Tax Reversal	54
3.16	Excess Recovery of FAC	56
3.17	Revenue from Sale of Power	56
3.18	Incentive on PLF and Capacity Index	57
3.19	Sharing of Gains and Losses for FY 2007-08	59
<b>4</b>	<b>IMPACT OF JUDGMENT OF APPELLATE TRIBUNAL FOR</b>	
	<b>ELECTRICITY (ATE)</b>	<b>67</b>
4.1	Background	67
4.2	Depreciation	67
4.3	Income Tax	71
4.4	Employee Expenditure	73
4.5	R&M Expenditure	75
4.6	A&G Expenditure	77
4.7	Drawal from Statutory Reserves;	80



4.8	Income Tax Adjustment _____	81
4.9	Capex Related Expenses _____	81
4.10	Departure from Mercantile System _____	84
4.11	Summary of Recoverable Amount _____	86
4.12	Recovery of the Amount _____	87
5	<b>TREATMENT OF RECOVERABLE AMOUNT DUE TO ATE JUDGEMENT AND SURPLUS FOR FY 2007-08</b> _____	88
5.1	Contingency Reserve Entitlement _____	88
5.2	Surplus Available based on Truing up for FY 2007-08 _____	90
5.3	Net amount to be recovered from Distribution Licensees for Previous Years _____	90
6	<b>PERFORMANCE PARAMETERS</b> _____	91
6.1	Performance Parameters _____	91
6.2	Generating Stations of TPC _____	91
6.3	Unit-Wise Performance Parameters and Tariff _____	92
7	<b>ANALYSIS OF ENERGY AVAILABILITY, ENERGY CHARGES AND ANNUAL FIXED CHARGES FOR FY 2008-09 AND FY 2009-10</b> _____	100
7.1	Energy Availabilitiy _____	101
7.2	Gross generation and Energy Availability from TPC Generating Stations during FY 2009-10 _____	103
7.3	Fuel Costs for FY 2008-09 _____	107
7.4	Fuel Costs for FY 2009-10 _____	108
7.5	O&M Expenses for FY 2008-09 _____	114
7.6	O& M Expenses for FY 2009-10 _____	114
7.7	Capital Expenditure and Capitalisation _____	115
7.8	Depreciation _____	122
7.9	Interest Expenses _____	124
7.10	Return on Equity (RoE) _____	128
7.11	Interest on Working Capital for FY 2008-09 and FY 2009-10 _____	129
7.12	Non Tariff Income for FY 2008-09 _____	130
7.13	Non Tariff Income for FY 2009-10 _____	131



<b>7.14 Income Tax for FY 2008-09</b>	<b>131</b>
<b>7.15 Income Tax for FY 2009-10</b>	<b>132</b>
<b>7.16 Allocation of Load Control Centre cost of Tata Power Generation and Tata Power Distribution</b>	<b>134</b>
<b>7.17 Impact of Ruling in Case No 29 of 2008</b>	<b>137</b>
<b>7.18 Summary of Annual Fixed Charges for Existing Stations for FY 2008-09 and FY 2009-10</b>	<b>138</b>
<b>7.19 Station wise/unit wise Fixed Cost</b>	<b>139</b>
<b>7.20 Tariff for Unit 8</b>	<b>140</b>
<b>8 TARIFF OF TPC-G'S GENERATING STATIONS</b>	<b>142</b>
<b>8.1 Tariff for Thermal Power Generating Stations</b>	<b>142</b>
<b>8.2 Tariff for Hydel Power Generating Stations</b>	<b>144</b>
<b>8.3 Applicability of Tariff and Order</b>	<b>148</b>



**List of Abbreviations**

ATE	Appellate Tribunal for Electricity
A&G	Administrative and General
AFC	Annual Fixed Charge
APR	Annual Performance Review
ARR	Aggregate Revenue Requirement
AS (R )	Accounting Standards (Revised)
BEST	Brihanmumbai Electric Supply & Transport Undertaking
BHEL	Bharat heavy Electricals Limited
Capex	Capital Expenditure
CAGR	Compounded Annual Growth Rate
COD	Commercial Operation Date
CPI	Consumer Price Index
Cu.m	Cubic meter
CV	Calorific Value
DERC	Delhi Electricity Regulatory Commission
DPR	Detailed Project Report
EA 2003	Electricity Act, 2003
ESA	Electricity (Supply) Act, 1948
FAC	Fuel Adjustment Cost
FERV	Foreign Exchange Rate Variation
FOB	Freight on Board
FY	Financial Year
GAIL	Gas Authority of India Limited
GFA	Gross Fixed Assets
GOM	Government of Maharashtra
GTG	Gas Turbine Generator
HPCL	Hindustan Petroleum Corporation Limited
IDBI	Industrial Development Bank of India
IDC	Interest During Construction
IDFC	Infrastructure Development Finance Company
IOC	Indian Oil Corporation
IWC	Interest on Working Capital
IT Act, 1961	Income Tax Act, 1961
kcal	kilo calories
kcal/kWh	kilo calories per kilowatt hour



KPI	Key Performance Indicator
kW	kilo Watt
kWh	kilowatt hour
KWDTA	Krishna Water Dispute Tribunal Award
LCC	Load Control Centre
LSHS	Low Sulphur Heavy Stock
MPT	Mumbai Port Trust
MCM	Million Cubic Meter
MOEF	Ministry of Environment & Forests
MoPNG	Ministry of Petroleum & Natural Gas
MERC	Maharashtra Electricity Regulatory Commission
MMSCMD	Million Standard Cubic Metre per Day
MPCB	Maharashtra Pollution Control Board
MSETCL	Maharashtra State Electricity Transmission Company Limited
MSLDC	Maharashtra State Load Despatch Centre
MSPGCL	Maharashtra State Power Generation Company Limited
MT	Metric Tonnes
MU	Million Units
MW	MegaWatt
MYT	Multi Year Tariff
OEM	Original Equipment Manufacturer
O&M	Operations and Maintenance
ONGC	Oil and Natural Gas Corporation Limited
PLF	Plant Load Factor
PLR	Prime Lending Rate
PPA	Power Purchase Agreement
REL/RInfra	Reliance Energy Limited/Reliance Infrastructure Limited
RoE	Return on Equity
R&M	Repair and Maintenance
RTC	Round The Clock
SBI	State Bank of India
SLDC	State Load Dispatch Centre
STG	Steam Turbine Generator
TMC	
TPC	The Tata Power Company Limited
TPC-G	The Tata Power Company Limited- Generation business



TPTCL	The Tata Power Trading Company Limited
TVS	Technical Validation Session
VAT	Value Added Tax
WDV	Written Down Value
WPI	Wholesale Price Index
YTM	Yield To Maturity





## **1 BACKGROUND AND BRIEF HISTORY**

The Tata Power Company Limited (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 EA 2003, notified the Maharashtra Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2005, (hereinafter referred as the Tariff Regulations) on August 26, 2005. These Regulations superseded the MERC (Terms and Conditions of Tariff) Regulations, 2004.

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

TPC submitted its Aggregate Revenue Requirement (ARR) and Tariff Petition for FY 2006-07 for its vertically integrated operations comprising Generation, Transmission and Distribution Businesses in Case No. 12 of 2005 and 56 of 2005 on February 9, 2006. After two Technical Validations sessions, the Commission vide its letter May 4, 2006 directed TPC to submit its revised ARR and Tariff Petition for FY 2006-07 including a separate section on truing up of ARR for FY 2005-06. TPC submitted its revised ARR and Tariff Petition for FY 2006-07 on May 16, 2006. The Commission admitted the ARR Petition of TPC for FY 2005-06 (Case No. 12 of 2005) and ARR and Tariff Petition of TPC for FY 2006-07 (Case No. 56 of 2005) on May 18, 2006. The Commission 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.

### **1.3 REVIEW PETITION ON TARIFF ORDER FOR FY 2006-07**

TPC filed a Review Petition (numbered as Case No. 47 of 2006) against the Commission's Order dated October 3, 2006, in the matter of TPC's ARR and Tariff Petition for FY 2005-06 and FY 2006-07 before the Commission. The Commission disposed off the Review Petition by issuing the Order dated March 22, 2007. TPC appealed (Appeal No.60 of 2007) against the Commission's Order on the Review Petition filed by TPC, before the Hon'ble Appellate Tribunal for Electricity. The



Appellate Tribunal (ATE) issued its Judgment on TPC's Appeal (Appeal No. 60 of 2007) on May 12, 2008.

#### **1.4 COMMISSION'S ORDER ON MYT PETITION FOR TPC-G FOR FY 2007-08 TO FY 2009-10**

TPC submitted its ARR and Multi Year Tariff (MYT) Petition for the first Control period from FY 2007-08 to FY 2009-10 for its Generation Business on January 3, 2007 numbered as Case No. 72 of 2006. The Commission issued the MYT Order for TPC-G for the first Control Period, i.e., FY 2007-08 to FY 2009-10, on April 2, 2007, which came into effect from April 1, 2007, and the tariffs were valid upto March 31, 2008.

#### **1.5 COMMISSION'S ORDER ON APR PETITION FOR TPC-G FOR FY 2007-08 AND DETERMINATION OF TARIFF FOR FY 2008-09**

TPC-G submitted its Petition for Annual Performance Review (APR) for FY 2007-08 and determination of tariff for FY 2008-09 for its Generation Business on November 30, 2007 numbered as Case No. 68 of 2007. The Commission issued the APR Order for TPC-G on April 2, 2008, which came into effect from April 1, 2008, and the tariffs were initially valid upto March 31, 2009, which was later extended till the revised tariff are determined for FY 2009-10 vide the Commission's Order dated April 15, 2009 in Case Nos. 152, 153 and 154 of 2008. TPC-G appealed against the Commission's Order on the APR for FY 2007-08 and determination of tariff for FY 2008-09, before the Hon'ble Appellate Tribunal for Electricity (numbered as Appeal No. 137 of 2008). The Appellate Tribunal's decision on TPC-G's Appeal is awaited.

#### **1.6 REVIEW PETITION ON ORDER ON APR FOR FY 2007-08 AND DETERMINATION OF TARIFF FOR FY 2008-09**

TPC-G filed a review Petition numbered as Case No. 29 of 2008 against the Commission's APR Order in Case No. 68 of 2007 before the Commission. The Commission disposed off the review Petition vide its Order dated December 1, 2009.

#### **1.7 PETITION FOR ANNUAL PERFORMANCE REVIEW FOR FY 2008-09 AND DETERMINATION OF TARIFF FOR FY 2009-10**

In accordance with Regulation 9.1 of the MERC Tariff Regulations, application for the determination of tariff is required to be made to the Commission not less than 120



days before the date from when the tariff is intended to be made effective. Further, the first proviso to Regulation 9.1 of the MERC Tariff Regulations provides that the “*date of receipt of application for the purpose of this Regulation shall be the date of intimation about receipt of a complete application in accordance with Regulation 8.4 above.*” The Commission had directed TPC-G to submit the Petition for APR latest by November 30 of each year in accordance with Regulation 9.1 of the Tariff Regulations.

TPC-G submitted its Petition for truing up for FY 2007-08, APR for FY 2008-09 and determination of tariff for FY 2009-10 for its Generation Business on November 28, 2008, based on actual audited expenditure for FY 2007-08, actual expenditure for first half of FY 2008-09, i.e., from April to September 2008 and revised estimated expenses for October 2008 to March 2009, and projections for FY 2009-10. TPC-G, in its Petition, requested the Commission to:

- Accept the APR and Tariff Petition for TPC-G in accordance with the guidelines outlined in MERC Orders passed in various matters relating to TPC-G and principles contained in of the Tariff Regulations;
- Include the impact of the Order on the Review Petition filed by TPC-G in May 2008 in the Tariff Order dated April 2, 2008.

The Commission, vide its letter dated December 25, 2008, forwarded the preliminary data gaps and information required from TPC-G. TPC-G submitted its replies to preliminary data gaps and information requirement on January 5, 2009.

The Commission scheduled a Technical Validation Session (TVS) on TPC-G’s APR for FY 2008-09 and Tariff Petition for FY 2009-10, on January 13, 2009 in the presence of authorised Consumer Representatives authorised on a standing basis under Section 94(3) of the EA 2003 to represent the interest of consumers in the proceedings before the Commission. The list of individuals, who participated in the TVS, is provided at **Appendix-1**. During the TVS, the Commission directed TPC-G to provide additional information and clarifications on the issues raised during the TVS. The Commission also directed TPC-G to submit the draft Public Notice in English and Marathi in the format prescribed by the Commission.

## **1.8 ADMISSION OF PETITIONS AND PUBLIC PROCESS**

TPC-G submitted its responses to the queries raised during the TVS, on February 18, 2009, and the Commission admitted the APR Petition of TPC-G on February 20, 2009.



In accordance with Section 64 of the EA 2003, the Commission directed TPC-G to publish its APR Petition in the prescribed abridged form and manner, to ensure public participation. The Commission also directed TPC-G to reply expeditiously to all the suggestions and objections received from stakeholders on its Petition. TPC-G issued the Public Notice in newspapers inviting suggestions and objections from stakeholders on its APR Petition. The Public Notice was published in The Times of India, Indian Express, Loksatta and Samana newspapers on February 24, 2009. The copies of TPC-G'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](http://www.tatapower.com)). The copy of the Public Notice and the Executive Summary of the Petition was also on the website of the Commission ([www.mercindia.org.in](http://www.mercindia.org.in)) in downloadable format. The Public Notice specified that the suggestions and objections, either in English or Marathi, may be filed in the form of affidavit along with proof of service on TPC.

The Commission received written suggestions and objections expressing concerns on procedural issues, imported coal, oil and fuel prices, allocation of capacity, income tax, etc., and a host of other issues. The Public Hearing was held in Mumbai on March 24, 2009 at 11:00 hours at **Vista Hall, 30<sup>th</sup> Floor, Centre 1, World Trade Centre, Cuffe Parade, Mumbai-400 005**. 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 the law to ensure transparency and public participation was 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 Hearing was held for processing the APR Petitions for FY 2008-09 and determination ARR and tariff for FY 2009-10 filed by TPC-G (numbered as Case No. 111 of 2008), TPC-T (numbered as Case No. 112 of 2008) and TPC-D (numbered as Case No. 113 of 2008), the Commission is issuing separate Orders on the three Petitions filed by TPC. This Order deals with the truing up for FY 2007-08, Annual Performance Review of FY 2008-09 and determination of tariff of TPC-Generation Business for FY 2009-10. Various suggestions and objections that were raised on TPC-G's Petition after issuing the Public Notice both in writing as well as during the Public Hearing, along with TPC's response and the Commission's rulings have been detailed in Section 2 of this Order.



## 1.9 ORGANISATION OF THE ORDER

This Order is organised in the following six Sections:

- **Section 1** of the Order provides a brief history of the quasi-judicial regulatory process undertaken by the Commission. For the sake of convenience, a list of abbreviations with their expanded forms has been included.
- **Section 2** of the Order lists out the various suggestions and objections raised by the objectors in writing as well as during the Public Hearing before the Commission. The various suggestions and objections have been summarised, followed by the response of TPC and the rulings of the Commission on each of the issues
- **Section 3** of the Order details the truing up of expenses and revenue of TPC-G for FY 2007-08, including sharing of efficiency gains/losses due to controllable factors.
- **Section 4** of the Order details the impact of the Appellate Tribunal for Electricity Judgement dated May 12, 2008 in Appeal No. 60 of 2007 in the matter of Appeal filed by TPC against the Commission's Order dated October 3, 2006.
- **Section 5** of the Order details the performance parameters as approved by the Commission in the MYT Order for the first Control Period, APR Order for FY 2007-08, TPC-G's proposal for performance parameters and the Commission's approach on performance parameters during FY 2008-09 and FY 2009-10.
- **Section 6** of the Order comprises the review of performance for FY 2008-09 and the Commission's analysis on various components of Energy Charges and Annual Fixed Charges of TPC-G's Stations/Units for FY 2009-10.
- **Section 7** of the Order details the tariff design for TPC-G's Stations/Units and the approved Annual Fixed Charges and Energy Charges for FY 2009-10.



## **2 OBJECTIONS RECEIVED, TPC's RESPONSE AND COMMISSION'S RULING**

### **2.1 PROCEDURAL ISSUES**

Electrical Contractors' Association of Maharashtra (ECAM) submitted that the Commission should follow the principle laid down under Para 5.0 (h) (3) of the Tariff Policy (TP) notified on January 1, 2006 for determination of tariff. ECAM submitted that as per TP, under Multi Year Tariff (MYT) regime, the tariff should be revised only at the end of the Control Period.

#### ***TPC-G's Response***

TPC has not responded to this objection.

#### ***Commission's Ruling***

As regards determination of tariff on annual basis, the Commission in its MYT Order for TPC-G dated April 2, 2007 in Case No. 72 of 2006, has approved the Annual Fixed Charges and trajectory of performance parameters for TPC's generating stations for the Control Period from FY 2007-08 to FY 2009-10, while the tariff was determined for FY 2007-08 only, in accordance with Regulation 20.1 of the MERC (Terms and Conditions of Tariff) Regulations, 2005, which stipulates that the tariff will be determined on an annual basis. Accordingly, the Commission had approved the tariff of TPC-G stations for FY 2008-09 in its Order in Case No. 68 of 2007. Hence, the Commission in this Order is approving the tariff of TPC-G stations for FY 2009-10.

As regards Para 5.0 (h) (3) of the Tariff Policy (TP), it stipulates as under:

*“Once the revenue requirements are established at the beginning of the control period, the Regulatory Commission should focus on regulation of outputs and not the input cost elements. At the end of the control period, a comprehensive review of performance may be undertaken.”*

Hence, the Commission is of the view that the provisions of the Tariff Policy referred by ECAM does not stipulate that the tariff cannot be determined on an annual basis.



## **2.2 POWER PURCHASE AGREEMENT (PPA) OF 500 MW WITH RELIANCE INFRASTRUCTURE LIMITED (RINFRA)**

RInfra-D has submitted that it had proposed to execute a PPA for 500 MW with TPC-G, without prejudice to the rights and contentions of either party, however, TPC-G has expressed its inability to execute the same in view of various judicial proceedings. RInfra-D further submitted that lower allocation of about 262 MW from TPC-G capacity is resulting in an adverse impact of about Rs. 700 crore on the consumers of RInfra-D.

### ***TPC-G's Response***

TPC-G submitted that it was agreeable to sign a PPA for 500 MW with RInfra-D as far back as in April 2007. RInfra-D chose not to execute the agreement for 500 MW. Subsequently, on a similar request by RInfra-D after more than one and half years in September 2008, TPC-G declined to enter into such conditional agreement with RInfra-D. TPC-G further submitted that having once refused to sign an Agreement for 500 MW on the conditions proposed by TPC-G, it is inappropriate that RInfra raise such a grievance against TPC-G for not signing the conditional Agreement after a lapse of one and half years.

As regards RInfra-D's submission on increase in cost due to reduction in its allocation from TPC-G, TPC-G submitted that the increase in procurement cost of RInfra-D arises out of its own negligence, as power procurement is the responsibility of RInfra-D. The high cost of power procurement of RInfra-D is solely attributable to its own negligence, which it is trying to shift to the Commission and TPC.

TPC-G further submitted that the contents of the letters enclosed by RInfra-D are self explanatory and indicate that RInfra-D could have signed PPA for 500 MW after a long series of negotiations.

TPC-G added that RInfra-D has not entered into any Agreement for availing supply from TPC-G, and is therefore, not entitled to claim any allocation of capacity from its existing capacity. RInfra-D has not brought on record any material to establish any right or interest on any capacity of TPC-G. Therefore, RInfra-D cannot raise a claim for allocation of any capacity from TPC-G's existing capacity of 1777 MW. RInfra-D is only entitled to such capacity as made available by TPC-G to it from its untied capacity on an ad-hoc day to day basis as indicated in TPC-G's APR.

### ***Commission's Ruling***



The Commission has held time and again that all the Distribution Licensees have to make long-term contractual arrangements for the procurement of power and the Commission will be guided by the PPA executed and approved by the Commission. As regards RInfra plea regarding higher tariffs for its consumers, the Commission will deal with it appropriately in RInfra tariff proposal pending before it and will not pre-judge the issue in these proceedings.

### **2.3 SUPPLY OF CONSTRUCTION POWER TO UNIT-8**

RInfra-D submitted that TPC-G, in its Petition, has not stated the source of power being used for construction of Unit-8 at the existing generation facility of TPC-G at Trombay Station. RInfra requested TPC-G to provide the information related to the source of construction power and also to clarify the impact of the same on the power balance of TPC-G.

#### ***TPC-G's Response***

TPC-G submitted that the source and accounting of construction power for Unit-8 is not relevant to the present APR Petition and could be dealt with at the time of capital cost approval of Unit-8. TPC-G clarified that net generation considered by TPC-G for energy accounting is after deducting the energy down by Unit-8 for construction.

#### ***Commission's Ruling***

Regarding the construction power supplied by existing Units of TPC-G to Unit-8, which was under construction in FY 2007-08 and FY 2008-09, and achieved Commercial Operation Date (COD) on March 31, 2009, the Commission had asked TPC-G to submit the details of the construction power supplied to Unit-8. TPC-G, in its reply, submitted that construction power for Unit-8 has been supplied through Station Auxiliary feeders of Unit-6 and Unit-7 and the gross generation from these Units includes the construction power supplied for Unit-8. TPC-G added that the gross generation cost indicated in the APR Petition includes the energy utilised for construction power. TPC-G submitted that the actual auxiliary consumption for Unit-6 and Unit-7 would be lower to that extent.

The Commission has analysed this matter while examining all the elements of costs and revenue of TPC-G and has deliberated on the same in Section 3 of this Order.





## **2.4 IMPACT OF THE ATE JUDGMENT DATED MAY 12, 2008**

RInfra-D submitted that TPC-G has not indicated any break-up of Rs. 579 crore allowed by the ATE among its Generation, Transmission and Distribution Businesses. RInfra-D submitted that Generation and Transmission costs could be considered together for the purpose of recovery from Distribution Licensees; however, the portion of cost pertaining to TPC's own Distribution Business needs to be segregated and recovered from TPC-D only. RInfra-D submitted that the amount involved belongs to previous years and the same should be recovered through (monthly) fixed charges of TPC-G. RInfra-D further requested the Commission to consider recovery of the approved amount on this account in a suitably phased manner over a period of 2-3 years to reduce tariff shock to the consumers of RInfra-D.

The Association of Hotels and Restaurant (AHAR) submitted that the ATE Judgment has been passed without inviting any suggestions and objections from the affected party, i.e., 'The Public' and the matter was concluded without any Public Hearing and the ATE should have given the opportunity to the public to submit their objections.

### ***TPC-G's Response***

TPC-G submitted that the disallowed expenditure that needs to be restored on account of the ATE Order pertains to FY 2004-05 and FY 2005-06, when TPC's truing up was undertaken as an integrated Utility, and hence, this amount is recoverable from all the three Distribution Licensees, viz., TPC-D, BEST and RInfra-D. Hence, in its APR Petition, TPC has proposed the sharing on the basis of the sales in those years to the three Distribution Licensees.

As regards RInfra-D's request to recover such amount through monthly fixed charges of TPC-G, TPC-G submitted that the tariff for TPC-G for FY 2009-10 has been proposed to be recovered in accordance with the Tariff Regulations, particularly 'Part E' of the said Regulations. TPC-G also submitted that the APR of TPC-G would impact all the three Distribution Licensees, viz., TPC-D, BEST and RInfra-D. Hence, TPC had presented the impact in the APR Petition of TPC-G to draw the attention of the two Distribution Licensees, viz., BEST and RInfra-D.

As regards RInfra-D's submission on impact of the above issue on the tariff to consumers, TPC-G submitted that the recovery of the impact may be left to the individual Distribution Licensees. TPC-D has proposed the recovery over a period of 3 years in its Tariff Proposal and a similar recovery schedule may be proposed by RInfra-D for their consumers.



TPC has not commented on the process followed by the ATE, and submitted that TPC had duly complied with the prevalent provisions of law.

### ***Commission's Ruling***

The Commission has addressed the issue of the impact of ATE Judgment in Section 4 of the Order.

As regards the contention raised by AHAR regarding the process adopted by the Hon'ble ATE, the Commission is the view that this aspect is neither within the purview of the present regulatory process on the APR Petitions filed by TPC-G nor within its jurisdiction, and the objector may approach the appropriate forum to redress its grievance in the matter.

## **2.5 SHARING OF COMMON FACILITIES AT TROMBAY FOR UNIT-8**

RInfra submitted that without prejudice to its contention on proportionate allocation of the capacity of Unit-8, the use of land and other assets such as coal handling, jetty, etc., of the existing capacity (1777 MW) for Unit-8 should be charged at current costs on commercial principles, in accordance with Section 61(b) of the EA 2003, to reflect the true cost of Unit-8. RInfra-D further submitted that the Tariff Policy also provides that the benefits of the existing assets should remain with the existing beneficiaries and therefore, it is prudent that commercial principles be applied in arriving at the current cost of Unit-8.

### ***TPC-G's Response***

TPC-G submitted that that the Section 61 (b) of the EA 2003 stipulates the principles to be applied for framing of Tariff Regulations by the Commission and the Tariff Regulations have been notified and are in effect since August 2005. Hence, the applicability of Section 61 (b) of the EA 2003 does not arise for the situation under consideration. TPC-G further submitted that the Tariff Policy quoted by RInfra in this regard also has no relevance. TPC-G added that revaluation of assets such as the cost of land and other assets would only increase the tariff of the existing power plants and ultimately the power tariff to the consumers.

TPC-G further submitted that it has presented the methodology for sharing of existing facilities at Trombay station in its APR Petition after duly considering the relevant costs.

### ***Commission's Ruling***



The approval of the tariff for Unit-8 would require a separate regulatory process for which the Commission, through this Order, has directed TPC-G to file a separate Petition. The issue of costs, etc., raised with respect to Unit-8 would be relevant in that process. For the present Petition, the Commission's approach in this regard is elaborated in Section 6.19 of this Order. .

## **2.6 FUEL COST**

The Millowners Association (MA) submitted that the fuel cost has reduced by around 50% in the recent period, particularly in the last four months of 2008. However, it is not known how much benefit has been accrued and is going to accrue to the consumers on account of the reduced cost of power generation due to the reduced rates of furnace oil. MA submitted that continued efforts must be made to get allocation of higher quantities of gas, as it is a cheaper feedstock for power generation. TPC-G should also examine the possibility of generation from coal, which is again a cheaper feedstock. It was also suggested that the Government of India has removed the customs duty on naphtha for power generation and requested TPC-G to take advantage of this development, if any generation on naphtha is possible from its generating Units.

Shri Guruprasad Shetty representing AHAR submitted that the price of fuel oil would have been estimated around September/October 2008, when the fuel oil price had reduced to level of 280 cents per gallon as compared to 420 cents per gallon in February 2008, which subsequently crashed to 119 cents per gallon in February 2009. The average cost of power generation of TPC-G through all the sources would be around Rs. 2 per kWh.

Shri. Pramod Bhogte compared the coal cost of various generating stations in Maharashtra and observed that the coal cost for TPC-G's Units is significantly higher. Shri. Bhogte further compared the transportation cost of US \$ 25 per Tonne as considered by TPC-G and current prevailing rate of US \$ 10 per Tonne.

The Dadar Merchant's Association submitted that in February 2009, the fuel prices crashed to 119 cents per gallon and are expected to fall further, and therefore, the generation cost per unit by using fuel oil would have reduced to Rs. 1.85/kWh.

### ***TPC-G's Response***

TPC-G submitted that it has already factored in the impact of reduction in oil prices for estimating the fuel cost for FY 2009-10. TPC-G added that the average oil (LSHS) cost for H1 of FY 2008-09 was Rs. 37485 per Tonne, while that considered for FY



2009-10 is Rs. 19960 per Tonne. As regards the possibility of generation using naphtha, TPC-G submitted that it would study the workability of the same. The Commission subsequently asked TPC-G to clarify whether any generation is possible from naphtha from existing generating stations along with quantum of generation from each Unit. TPC-G submitted that Trombay station does not have storage and handling facility for naphtha firing and none of the Units at Trombay are equipped to fire naphtha. TPC-G further submitted that capital expenditure would be required for making a provision to utilise naphtha as fuel, which may be too high and time consuming. Accordingly, TPC-G submitted that it is not in a position to take advantage of the customs duty removal on naphtha at this point of time.

As regards the contention of high coal cost, TPC-G submitted that comparison across various locations may not be appropriate, as the costs are impacted by the (i) source (ii) quality of coal, and (iii) the transportation distance. TPC-G further submitted that Trombay Generating station operates under strict environmental norms, which compel TPC-G to burn low sulphur coal that is available at very few locations, such as Indonesia, as indigenous coal is not suitable for burning at Trombay.

TPC-G submitted that as part of the replies dated January 5, 2009 submitted to the Commission; TPC-G has provided the detailed break-up of the cost that has been considered for projection in FY 2009-10. While projecting the coal cost, TPC-G has considered the long-term Contracts for coal that it has entered into, and has made other reasonable assumptions.

As regards the comparison with the imported coal cost of RInfra, TPC-G submitted that TPC-G has considered a Freight on Board (FOB) cost of about US \$ 73.5 per Tonne and freight of US \$ 25 per Tonne, RInfra has also assumed the costs in line with that considered by TPC-G and submitted the relevant extracts of Para 3.3 of RInfra-G's APR Petition as under:

*“Imported coal has had a major increase in its prices, and is available at around \$ 100/ MT. With freight charges and 5.5% of basic price taxes and duties added, its unit cost is ranging between Rs. 5000-5300 /MT. However on account of availability of opening stock for H2FY09 at lower rates, the average issue price during October 2008- January 2009 worked out to Rs. 4655/MT and same has been considered for H2FY09. Accordingly, the average price of imported coal for entire FY09 works out Rs.3976.68/MT and same is considered for FY10.”*



TPC-G submitted that for a generating station, the actual cost of fuel would be considered while billing the Distribution Licensees. Hence, even if the cost shown in the APR Petition is low, the energy rate would be computed at the actual price of the fuel prevailing in the month of generation. Similarly, if the actual cost is lower than that assumed in the APR Petition, such lower cost would be passed on to the consumers. TPC-G submitted that it chose to project a realistic price for the benefit of the public. Thus, the coal price projected by TPC-G is realistic and based on correct assumptions. The benefit of actual cost being lower due to lower opening stock value or otherwise would be considered at the time of actual billing.

As regards the transportation cost, TPC-G submitted that it would be incorrect to compare the present spot freight rate with the rate that has been contracted by TPC-G. The spot rate would vary from day to day, and hence, the spot rate at the time of contract finalization is an appropriate benchmark. The spot rate at the time of contract finalisation was much higher than \$ 25 per Tonne.

TPC-G submitted that in the past, TPC-G's approach of entering into long-term contracts for procurement and transportation of coal has yielded far greater benefits as compared to facing the risk of spot prices. Moreover, this contract is for a long period of time (upto 2012) and hence, it would be incorrect to judge by making a comparison with the current spot price as such spot prices may move up in future.

As regards the contention that the cost of generation using fuel oil would be about Rs.1.85/kWh on account of reduced oil prices, TPC-G submitted that no basis has been provided by the objector for arriving at this figure. TPC-G submitted that unprecedented rise in oil and coal prices were witnessed in FY 2008-09 on account of which, cost of generation using fuel oil was in excess of Rs.9.50/kWh. Subsequently, oil prices have started declining. This reduction in oil prices has been factored in TPC-G's projections for FY 2009-10, as may be ascertained from the fact that the proposed variable charge for oil based generation on Unit 6 is taken at Rs.4.96/kWh, which is substantially lower than the levels observed in early FY 2008-09. Any benefit on account of further decrease in fuel prices will accrue to consumers in accordance with the Tariff Regulations.

### ***Commission's Ruling***

The Commission has addressed this issue in detail in Section 6 of the Order while analysing the various components of Energy Charges For FY 2007-08, the Commission has considered the actual fuel prices for truing up of expenses and revenue. As regards reduction in fuel prices in the later part of FY 2008-09, the



Commission obtained and analysed the month-wise actual fuel prices and observed that the liquid fuel prices have reduced from November 2008 onwards. The LSHS price in October 2008 was Rs 37997/MT, which has reduced to Rs 20090/MT in March 2009. The Commission has considered the impact of reduction in oil prices while approving the energy charges for FY 2009-10.

As regards the comparison of coal prices amongst various generating stations in Maharashtra, the Commission agrees with the views of TPC-G that the coal prices vary depending upon the source and properties of coal. The coal used in other generating stations in Maharashtra is primarily domestic coal with high ash content, while TPC-G is utilising imported coal due to environmental constraints.

## **2.7 INTEREST RATE**

MA submitted that TPC-G has raised a loan from IDBI at an interest rate of BPLR minus 2.76%, and from IDFC at an interest rate of benchmark rate plus 1.45%, subject to a minimum of 8.9%. MA submitted that the average interest rate was around 11.53% and 13% for IDBI and IDFC, respectively. MA suggested that TPC should borrow funds for capital expenditure from Financial Institutions, which would offer most favourable rates of interest.

AHAR submitted that there should be no need to raise any loan from IDBI, IDFC or any other Financial Institution, when TPC has shown significant Reserves and Surplus in its Books of Accounts and Rs. 2039 crore has been lent as loans and advances. AHAR also submitted that seeking payment of interest on long-term funds and working capital funded by internal funds is illegal, as these are neither expenses recognised under the Income Tax Act, 1961 nor ethical as per Accounting Norms and are also against the public interest.

### ***TPC-G's Response***

TPC submitted that it has always endeavoured to contract for loans at the most optimum rate and has also passed on the benefit of such costs to the consumers.

TPC submitted that the need for raising any loan arises when there is a requirement of funds for capital expenditure. The actual reserves and surplus and the dividend payment in the past has no direct bearing on the loan that is required to be raised. TPC further submitted that if internal funds are used, it would amount to higher costs being passed on to the consumers. Similarly, the Interest on Working Capital has been claimed in accordance with the norms stipulated by the Commission. TPC-G further submitted that therefore, the claim of the objector that these expenses are disallowed



by the Income Tax Act, 1961 and not ethical as per Accounting Norms is incorrect and baseless.

### ***Commission's Ruling***

The Commission has addressed the issues related to interest rate in Section 6 of the Order, while analysing the various components of the Annual Fixed Charges of the generating stations. On the issue of utilising reserves and surplus for capital investments instead of availing loans from the market, the Commission would like to clarify that as per the provisions of MERC Tariff Regulations, the equity investment is permissible upto a maximum of 30% of Capital Investment. In case the Utility funds the entire investment from internal accruals (equity), the Commission considers the equity contribution in excess of 30% as normative debt and allow the interest on normative loans.

## **2.8 INCOME TAX**

AHAR submitted that Income Tax is not a cost but a tax on income, and the Income Tax Act does not allow for Income Tax paid to be recovered from the public. The consumers of TPC are being made to pay Income Tax of TPC, which is an illegitimate cost and should be disallowed.

### ***TPC-G's Response***

TPC submitted that the Income Tax as claimed by TPC is in accordance with the Tariff Regulations notified by the Commission and it has not deviated from the Tariff Regulations for recovery of such amount.

### ***Commission's Ruling***

The Income Tax is considered as a part of the fixed charge, in accordance with Regulation 34.2 of the MERC Tariff Regulations, which stipulates as under:

*“34.2.1 Income-tax on the income of the Generating Business of the Generating Company shall be allowed for inclusion in the annual fixed charges:  
...”*

## **2.9 RETURN ON EQUITY**

AHAR submitted that the total equity capital of TPC in the last 90 years of its existence is only Rs. 220 crore, whereas in the last five years alone, the equity shareholders have been paid a dividend of more than Rs. 885 crore. Further, the



Commission has allowed recovery of Rs. 232 crore as Return on Equity (RoE) in FY 2009-10. This recovery is illegitimate, against all accounting norms and against the definition of Cost and Expense as per Income Tax Act.

### ***TPC-G's Response***

TPC submitted that AHAR has referred to the equity capital from the Balance Sheet of TPC, while completely disregarding the reserves and surplus shown there. TPC further submitted that in any case, Return on Equity is payable to TPC based on the Regulatory Equity as approved by the Commission, which in turn is determined in accordance with the various provisions of the Tariff Regulations, and therefore, the question of such recovery being illegitimate does not arise. TPC further clarified that the dividend has been paid to the shareholders not solely out of the profits generated from Licensed Area business, but also from the profits generated from the other business of TPC.

### ***Commission's Ruling***

The Return on Equity is being considered as a part of the fixed charge and has been computed in accordance with the MERC Tariff Regulations. As per the provisions of MERC Tariff Regulations, Return on Equity is allowed on opening balance of equity invested in the Gross Fixed Assets. For FY 2009-10, the total amount of equity eligible for return is Rs 1115.9 Crore and RoE allowed is Rs 156.23 Crore.

## **2.10 ADVERTISEMENT EXPENSES**

Western India Glass Manufacturers' Association submitted that the Advertisement (Public Notice) of more than 2 pages in newspapers is an avoidable expenditure and a quarter page advertisement with a note to contact TPC or visit its website for further details may also serve the purpose.

### ***TPC-G's Response***

TPC submitted that it is in agreement with the suggestion for reducing the size of the advertisement, thereby reducing the expenditure incurred on the 'Public Notice' Advertisement significantly. However, the MERC (Conduct of Business) Regulations, 2004, specify that the Public Notice may be printed in two English and two Marathi newspapers, however, content can be reduced to optimize the cost while making available all the information stipulated by the Commission on TPC's website.

### ***Commission's Ruling***





The Commission does not agree with TPC-G's response and it should strive to economise on operational and other costs, which are more significant than this one time 'cost' where TPC-G has to communicate with its consumers and stakeholders. In accordance with the provisions of the MERC (Conduct of Business) Regulations 2004, the Public Notice has to be issued in a minimum two English and Marathi newspapers. The objective of issuing the Public Notice is that the affected stakeholders are put to notice that the Commission has admitted the APR Petition submitted by the Utility for its consideration, under which it has sought the Commission's approval for revision in the tariffs, and provide basic information about the Petition, to enable the stakeholders to submit their say in the matter, if desired.

## **2.11 SHARING OF GAIN/LOSSES**

AHAR submitted that the Company benefits as it earns more revenue due to better efficiency in generation, transmission, operation, management and reduction in T&D losses and asked TPC to submit the reasons for passing on the impact of such efficiency and inefficiency to the consumers.

### ***TPC-G's Response***

TPC submitted that the sharing of gains and loss has been considered in accordance with the MERC Tariff Regulations and clarified that TPC-G has proposed to pass on the share of the gains to the consumers, in its Petition.

### ***Commission's Ruling***

In accordance with the MERC Tariff Regulations, the sharing of gains and losses is to be carried out at the end of the year based on the actual performance for the entire year. Accordingly, in this Order, the Commission has determined the sharing of gains and losses on account of controllable factors for FY 2007-08, as detailed in Section 3.19. This will address the concerns expressed by AHAR within the boundaries of the Regulations.



### **3 TRUING UP OF AGGREGATE REVENUE REQUIREMENT FOR FY 2007-08**

TPC-G, in its Petition, has sought approval for the final truing up of expenditure and revenue for FY 2007-08 based on actual expenditure and revenue as per Audited Accounts. TPC-G provided the comparison of actual expenditure against each head with the expenditure approved by the Commission along with the reasons for deviations and also proposed the sharing of the efficiency gain/loss for some of the heads of expenditure and revenue, as applicable. TPC-G also provided the details of the revenue earned during FY 2007-08 under various heads.

Accordingly, the Commission in this Section has analysed all the elements of actual revenue and expenses for TPC-G for FY 2007-08, and has carried out the truing up of expenses and revenue after prudence check. Further, for FY 2007-08, the Commission has approved the sharing of gains and losses on account of controllable and uncontrollable factors between TPC-G and the Distribution Licensees, in accordance with Regulation 19 of the MERC Tariff Regulations, in this Section.

#### **3.1 GROSS GENERATION**

The Commission, in its MYT Order dated April 2, 2007 in Case No. 78 of 2006 approved gross generation from TPC-G's generating stations at 10186 MU. However, the actual gross generation achieved during FY 2007-08 is 10002 MU, which is slightly lower than the gross generation approved by the Commission.

TPC-G submitted that the actual hydel generation for FY 2007-08 was 1489 MU, which was marginally lower than the quantum of 1500 MU approved by the Commission on account of constraints due to compliance with Krishna Water Tribunal Award (KWTA) norms. The overall generation from Trombay power station is also marginally lower by around 1.8% than the approved levels. The generation from Unit-4 was reduced to minimise the cost of generation, as the generation cost from this Unit is the highest amongst all the Units at Trombay station. TPC-G submitted that lower generation from Unit-7 is on account of low gas availability during outages of ONGC platforms in the months of April and May 2007 and frequent tripping of platforms from time to time resulting in reduced gas supplies. The overall gas supplies reduced from 0.9 MMSCMD in FY 2006-07 to 0.7 to 0.85 MMSCMD in FY 2007-08, thereby resulting in lower generation.



The Commission has therefore accepted the actual gross generation of TPC-G generating stations for FY 2007-08. The summary of Unit-wise gross generation approved by the Commission in Tariff Order for FY 2007-08, actual gross generation during FY 2007-08, and gross generation considered after truing up is shown in the Table below:

**Table: Summary of Gross Generation for FY 2007-08 (MU)**

Particulars	FY 2007-08		
	MYT Order	Actuals	Approved after truing up
<b>Gross Generation</b>			
<b>Hydel Stations</b>	<b>1500</b>	<b>1489</b>	<b>1489</b>
Unit 4, Trombay	935	795	795
Unit 5, Trombay	3995	4001	4001
Unit 6, Trombay	3816	3870	3870
Unit 7, Trombay	1440	1337	1337
<b>Total Thermal</b>	<b>10,186</b>	<b>10,002</b>	<b>10,002</b>
<b>Total Gross Generation</b>	<b>11,686</b>	<b>11,491</b>	<b>11,491</b>

### 3.2 AUXILIARY CONSUMPTION

TPC-G, in its Petition, submitted that auxiliary consumption of all its Stations/Units is lower than the auxiliary consumption approved in the MYT Order. The weighted average auxiliary consumption for Trombay thermal station is 4.04%. Though the actual auxiliary consumption achieved during FY 2007-08 is lower than the approved auxiliary consumption, the Commission has considered the normative auxiliary consumption of thermal and hydel stations approved for FY 2007-08 for truing up purposes. Accordingly, the Commission has considered the difference between actual auxiliary consumption and normative auxiliary consumption as approved in the APR Order for computing the sharing of efficiency gain/loss for FY 2007-08. The summary of Unit-wise auxiliary consumption approved by the Commission in APR Order for FY 2007-08, actual auxiliary consumption during FY 2007-08, and auxiliary consumption considered for sharing of gains is shown in the Table below:

**Table: Auxiliary Consumption for FY 2007-08 (%)**

Particulars	FY 2007-08		
	APR Order	Actuals	Allowed after truing up for sharing of gains
Hydel Stations	0.50%	0.46%	0.50%
Unit 4, Trombay	8.00%	7.39%	8.00%
Unit 5, Trombay	5.50%	4.87%	5.50%
Unit 6, Trombay	3.50%	3.07%	3.50%
Unit 7, Trombay	2.75%	2.37%	2.75%



### 3.3 HEAT RATE

The summary of the actual heat rate and approved heat rate by the Commission for FY 2007-08 for all Units of Trombay station is shown in the Table below:

***Table: Heat Rate for FY 2007-08 ( kcal / kWh)***

Heat Rate (kCal/kWh)	APR Order	Actuals
Unit 4, Trombay	2565	2497
Unit 5, Trombay	2489	2567
Unit 6, Trombay	2400	2306
Unit 7, Trombay	1971	2001

TPC-G submitted that the actual heat rate in FY 2007-08 for Unit-4 and Unit-6 are within the levels approved by the Commission, however, the actual heat rate of 2567 kcal/kWh for Unit-5 in FY 2007-08 is higher than the approved heat rate, on account of higher moisture in the imported coal and faster deterioration due to 100% coal firing as compared to a mix of coal and oil firing in the earlier years. TPC-G submitted that the average daily generation of Unit-5 in FY 2007-08 increased from 11.43 MU to 11.85 MU per day based on running hours of the Unit (i.e., excluding the outage period in FY 2007-08), which has resulted in higher boiler exit gas temperature and increased boiler slagging. TPC-G also submitted that due to ageing of the Unit and the equipment, copper carry-over has been observed from low pressure and high pressure feed water heaters into the turbine resulting in loss of efficiency of the turbine. TPC-G submitted that pro-active measures have already been taken to replace the copper tube heaters with stainless steel heaters. TPC-G submitted that the higher coal consumption in Unit-5 during FY 2007-08 was with the objective to reduce the overall fuel expenditure. TPC-G also submitted that Trombay Unit-5 is designed for multiple fuel firing namely oil, gas and Indian coal. However, Indian coal cannot be fired in full due to environmental limits at Trombay. Hence, although its boiler was not designed for sub-bituminous (high moisture) coal, Unit-5 in stages switched to 100% Indonesian coal, which has low sulphur but high moisture. TPC-G submitted that as the furnace dimensions are not adequate for firing this type of coal, the flue gas exit temperature has risen beyond the design value, which is adversely affecting the heat rate.

TPC-G also submitted that M/s Solomon Associates had been engaged to carry out the comparative performance analysis of the thermal Units at Trombay station. The



study carried out by M/s Solomon Associates revealed that at Trombay Unit-5, heat rate is well within the band of thermal Units and fall within the third quartile despite firing the coal for which the boiler is not designed. Accordingly, TPC-G submitted that the heat rate of Trombay Unit-5 is at the most optimum value and there may be only marginal scope for further improving the existing conditions, considering the age of the Unit.

As regards the heat rate for Unit-7, TPC-G submitted that the actual heat rate of 2001 kcal/kWh for Unit-7 in FY 2007-08 is higher than the approved heat rate of 1971 kcal/kWh, on account of reduction in gas supplies from level of 0.9 MMSCMD in FY 2006-07 to 0.85 MMSCMD in FY 2007-08, which resulted in operating the Unit at lower load (i.e., at 159 MW as against 166 MW in FY 2006-07). TPC-G submitted that TPC-G was also forced to operate Unit-7 in open cycle due to reduced gas supplies from April 26, 2007 to May 4, 2007 when the gas supplies reduced to a level of 0.40-0.45 MMSCMD due to outage of ONGC platform. With such low gas supplies, Steam Turbine Generator (STG) was forced to shut down and Gas Turbine Generator (GTG) was operated in open cycle at partial load of around 35-50 MW only. The Unit was operated in open cycle mode as the variable cost of generation was still lower than Rs. 2/kWh during that period. TPC-G submitted that Unit-7 was operated in open cycle mode for around 215 hours in FY 2007-08 as compared to 57 hours in FY 2006-07.

TPC-G added that the overall actual heat rate of 2385 kcal/kWh of Trombay Station is marginally lower than the approved heat rate of 2389 kcal/kWh for FY 2007-08.

The Commission has noted the reasons mentioned by TPC-G for variation in heat rate of Unit 5. However, the Commission is of the view that since the Commission had approved the Unit-wise heat rate in the MYT Order after considering the details of degradation factors provided by TPC-G, the same shall hold good. Further, if actual heat rate of Unit-5 is allowed then the purpose and objective of Multi Year Tariff mechanism of stipulating the norms at the beginning of the Control Period would be lost.

The Commission, in its MYT Order, had approved a heat rate of 2499 kcal/kWh for FY 2009-10 for Unit-5, hence, the Commission has considered the heat rate of 2500 kcal/kWh for Unit-5 for FY 2007-08, and has considered the sharing of efficiency losses due to the higher heat rate for Unit 5, with reference to the heat rate of 2500 kcal/kWh considered in this Order.



As regards the heat rate for Unit-7, the Commission asked TPC-G to submit the details of the actual heat rate during such operation period when the Unit was operated in open cycle mode, details of actual generation cost for 215 hours of operation of Unit-7 in open cycle mode and comparison of the generation cost if normative heat rate prescribed for open cycle is considered, which were submitted by TPC-G. The summary of the impact of operating Unit-7 in open cycle mode as submitted by TPC-G is shown in the Table below:

Particulars	Gas Supplies		Calorific Value	Unit-7 Gen (MU)			Heat Rate	Fuel Cost	Cost of Gen. considering Actual Heat Rate		Cost of Gen. considering Normative Heat Rate	
	MT	MMS CMD		Mkcal /MT	GTG	STG			Total	kcal/k Wh	Rs/MT	Rs/Unit
20-Apr-07	547	0.781	13.059	2.137	1.4	3.537	2018	4546	0.7	0.25	0.69	0.24
21-Apr-07	480	0.685	13.059	1.662	1.273	2.935	2134	4546	0.74	0.22	0.69	0.2
22-Apr-07	485	0.693	13.059	1.818	1.319	3.137	2020	4546	0.7	0.22	0.69	0.22
23-Apr-07	637	0.91	13.059	2.735	1.611	4.346	1913	4546	0.67	0.29	0.69	0.3
24-Apr-07	538	0.768	13.059	2.185	1.428	3.613	1943	4546	0.68	0.24	0.69	0.25
25-Apr-07	558	0.798	13.059	2.124	1.422	3.546	2057	4546	0.72	0.25	0.69	0.24
26-Apr-07	473	0.675	13.059	1.735	1.095	2.83	2180	4546	0.76	0.21	0.69	0.19
27-Apr-07	310	0.442	13.059	0.837	0	0.837	4831	4546	1.68	0.14	0.99	0.08
28-Apr-07	286	0.409	13.059	0.722	0	0.722	5182	4546	1.8	0.13	0.99	0.07
29-Apr-07	297	0.424	13.059	0.796	0	0.796	4873	4546	1.7	0.14	0.99	0.08
30-Apr-07	297	0.425	13.059	0.758	0	0.758	5124	4546	1.78	0.14	0.99	0.07
1-May-07	98	0.425	12.873	0.764	0	0.764	5016	4434	1.73	0.13	0.97	0.07
2-May-07	10	0.443	12.873	0.842	0	0.842	4743	4434	1.63	0.14	0.97	0.08
3-May-07	93	0.704	12.873	1.896	0	1.896	3347	4434	1.15	0.22	0.97	0.18
4-May-07	19	0.741	12.873	1.99	0.725	2.715	2460	4434	0.85	0.23	0.68	0.18

As regards the heat rate for Unit-7, the Commission is of the view that since the Commission had approved the Unit-wise heat rate in the MYT Order after considering the details of degradation factors provided by TPC-G, the same shall hold good. Further, if actual heat rate of Unit-7 is allowed then the purpose and objective of Multi Year Tariff mechanism of stipulating the norms at the beginning of the Control Period would be lost. Accordingly, the Commission does not agree with the contentions of TPC-G to allow the heat rate for Unit-7 on actuals and is of the view as against the actual heat rate for period of operation of Unit-7 in open cycle mode, the normative heat rate as specified in the Tariff Regulations should be allowed. Accordingly, the Commission has considered the normative heat rate for open cycle mode as stipulated in the Tariff Regulations for the period of operation of Unit-7 in open cycle mode and has accordingly considered the weighted average heat rate of 1992 kcal/kWh for Unit-7 for FY 2007-08.



In case the actual heat rate of Unit-5 and Unit-7 is approved, it would amount to passing on the entire loss to the consumers and burden them with higher cost on account of fuel that should not have been used, which would be contrary to the treatment for other Units, where the benefit of reduction in fuel consumption is being shared between TPC-G and the distribution licensees through efficiency gains. Under the MYT mechanism, it is appropriate to share both gains and losses on account of stipulated controllable factors instead of just sharing the gains for better performance and passing the entire losses due to under performance to consumers. Therefore, for computing the efficiency gains, the Commission has considered the normative heat rate as approved by the Commission for FY 2007-08 for Unit-4 and Unit-6. For computing the efficiency loss, the Commission has considered the heat rate for Unit-5 and Unit-7 as approved by the Commission for FY 2007-08 in this Order.

The summary of Unit-wise heat rate approved in the APR Order, actual heat rate for FY 2007-08, and heat rate approved after truing up is given in the following Table:

**Table: Heat Rate ( kCal / kWh)**

Particulars	FY 2007-08		
	APR Order	Actuals	Allowed after truing up
Unit 4, Trombay	2565	2497	2565
Unit 5, Trombay	2489	2567	2500
Unit 6, Trombay	2400	2306	2400
Unit 7, Trombay	1971	2001	1992

### 3.4 CONSTRUCTION POWER SUPPLIED TO UNIT-8

TPC-G submitted the year-wise construction power supplied to Unit-8 as shown in the Table below:

#### *MU*

Particulars	Unit-6	Unit-7	Total
FY 2006-07	0.31	0	0.31
FY 2007-08	3.339	0	3.339
FY 2008-09	3.953	4.817	8.77
<b>Total</b>	<b>7.603</b>	<b>4.817</b>	<b>12.42</b>

TPC-G submitted that since the energy utilised for construction power for Unit-8 in FY 2006-07 is insignificant from a materiality perspective, the treatment for the same may be considered in a manner deemed appropriate by the Commission. For the power utilised in FY 2007-08 and FY 2008-09, TPC-G submitted the cost to be capitalised on account of construction power supplied from Unit-6 as Rs. 1.88 crore



for FY 2007-08 and Rs. 2.71 crore for FY 2008-09 and from Unit-7 as Rs. 0.35 crore in FY 2008-09. The cost of construction power supplied from these units to be capitalised has been computed at variable cost of generation from these Units.

TPC-G proposed to restate the auxiliary consumption of Unit-6 and Unit-7, by considering the supply of construction power to Unit-8. TPC-G submitted that gains/losses for Unit-6 needs to be revised on account of lower auxiliary consumption and submitted that for FY 2007-08, the benefit of the lower auxiliary consumption in accordance with the philosophy adopted by the Commission for computing sharing of gains/losses for better auxiliary consumption would amount to Rs. 9.77 crore.

The Commission enquired of TPC-G regarding the provisions of law under which, TPC-G had supplied construction power from the existing generating Units to Unit-8 of TPC-G.

TPC replied that Unit 8 is operationally a part and parcel of the Generating Station at Trombay, and as such the power supply made to Unit-8 is an in-house arrangement within the generating station. TPC-G quoted the definition of a “Generating Station” under the EA 2003, which stipulates as follows:

➤ **Generating Station**

*"generating station" or "station" means any station for generating electricity, including any building and plant with step-up transformer, switch yard, switch-gear, cables or other appurtenant equipment, if any used for that purpose and the site thereof, **a site intended to be used for a generating station**, and any building used for housing the operating staff of a generating station, and where electricity is operating staff of a generating station, and where electricity is generated by water-power, includes penstocks, head and tail works, main and regulating reservoirs, dams and other hydraulic works, but does not in any case include any substation; [ **emphasis supplied**]*

TPC-G submitted that the definition of the “generation station” includes a site intended to be used for generating station. Accordingly, Unit-8 construction would qualify as a part of the generating station within the meaning of the EA 2003. TPC-G further submitted that it could be viewed from another angle; Unit-8 would also form a part of the “Power System” of the Generating Station. The definition of Power System includes Generating Station (including Unit-8 as aforesaid) as well as substations.

➤ **Power System**





*"power system" means all aspects of generation, transmission, distribution and supply of electricity and **includes one or more** of the following, namely:-*

- (a) generating stations;*
- (b) transmission or main transmission lines;*
- (c) sub-stations;*
- (d) tie-lines;*
- (e) load despatch activities;*
- (f) mains or distribution mains;*
- (g) electric supply-lines;*
- (h) overhead lines;*
- (i) service lines;*
- (j) works;*

**[Emphasis added]**

TPC-G submitted that all substations (including 440 kV, 220 kV and 110 kV substations) consume power for the control room, Air conditioner, Switchyard lighting, etc., within the substation. The Power System itself uses power and this power at the substation is supplied through a step-down transformer, which is a part of the Transmission asset (at such higher voltage substations). The supply to such Power system may not fall under the supply of the Distribution Licensee. TPC-G further submitted that unlike for "consumer" who is defined as a person who can take power only from certain sources, there is no such condition in the EA 2003 for power consumption by "Power System". Accordingly, TPC-G submitted that in its opinion Unit-8 could consume power from Trombay Generating station (Unit 6/Unit 7).

The Commission is of the view that supply of construction power to Unit-8 of TPC-G is a retail supply activity and cannot certainly be treated as auxiliary consumption of Unit-6 and Unit-7. It was highly improper on the part of TPC-G to report this supply of construction power to Unit-8 as auxiliary consumption of Unit-6 and Unit-7, because retail supply of power has to be governed by the provisions of the EA 2003 and the MERC Tariff Regulations. The Commission hereby rules that the supply of construction power to Unit-8 will be considered as sale of power from TPC-G's Unit-6 and Unit-7 to TPC-D at the respective generation tariff applicable for the respective period. Accordingly, the Commission has considered the additional revenue to TPC-G considering such sale to TPC-D. TPC-D will be deemed to have supplied construction power to Unit-8 of TPC-G.



Based on the approved energy charge for FY 2007-08 for Unit-6 and considering the quantum of 3.34 MU supplied as construction power from Unit-6, the Commission has estimated the revenue for TPC-G for FY 2007-08 for such supply as Rs. 1.56 crore. As regards the treatment of supply of power during FY 2008-09, the Commission rules that the same would be considered during the final truing up of revenue and expenses for FY 2008-09.

### 3.5 FUEL PRICE AND CALORIFIC VALUE

The Commission, in its MYT Order, while approving the tariff of TPC-G considered the fuel prices and calorific value as prevalent during the period from October 2006 to February 2007.

TPC-G submitted that the fuel prices during FY 2007-08 have been higher than the price considered by the Commission and submitted the details of actual fuel prices and calorific value of respective fuels for FY 2007-08. TPC-G submitted that the oil prices in FY 2007-08 have increased substantially to Rs. 25,193 /MT as against the price of Rs.19,886/MT considered by the Commission while approving the tariff. Similarly, the actual coal price per MT was Rs. 2,907/MT as against the approved value of Rs. 2,814/MT. TPC-G added that the impact of increase in fuel costs has been reduced to some extent on account of higher generation on coal, which otherwise would have resulted in additional burden of Rs. 115 crore.

The variation in the fuel prices and calorific value of fuel during FY 2007-08 has been considered as part of Fuel Adjustment Cost (FAC), and has already been passed through to the consumers on a monthly basis under the FAC charge mechanism. For the purpose of truing up of fuel costs (variable cost of generation) for FY 2007-08, the Commission has considered the actual fuel costs and actual calorific value, as given in the Table below:

**Table: Fuel Parameters**

Particulars	MYT Order	Actuals	Allowed after truing up
<b>A. Fuel Price (Rs/MT)</b>			
Gas	4565	4547	4547
Coal	2814	2907	2907
Fuel Oil	19886	25193	25193
<b>B. Calorific Value (kcal/kg)</b>			
Gas	13139	13151	13151
Coal	5009	4985	4985
Fuel Oil	10462	10068	10068
<b>C. Fuel Price (Rs/Mkcal)</b>			



Particulars	MYT Order	Actuals	Allowed after truing up
Gas	347	346	346
Coal	562	583	583
Fuel Oil	1901	2502	2502

The Commission express its concern that if the variation in fuel price would have not been a pass through, TPC-G would have taken adequate steps to mitigate risks of fuel price variation. The Commission is of the view that TPC-G should endeavour to devise risk mitigation measures for fuel price variation. Further, it has been observed that for generation companies, there is an automatic pass through of FAC to the Distribution Licensees; therefore, it is necessary that some risk is shared by generating companies also. Accordingly, the Commission is of the view that in future some principle needs to be devised, wherein incentive and disincentive may be stipulated in fuel pricing also, which would incentivise the Generating Companies to take some risk mitigating measures.

### 3.6 FUEL COSTS

TPC-G, in its Petition, has submitted that the total actual fuel cost for FY 2007-08 was Rs. 3311 crore and after considering the adjustments of Rs. 12.82 crore on account of foreign exchange variation gain, adjustment of previous year and exchange difference on account of stock in transit, the net fuel cost works out to Rs 3298.18 Crore.

Based on the heat rate, fuel prices and fuel calorific value as discussed in above paragraphs, the total fuel costs for FY 2007-08 are summarised in the following Table:

**Table Fuel Costs (Rs Crore)**

Particular	MYT Order	Actuals	Normative Allowed after truing up
Unit 4, Trombay	455	476	489
Unit 5, Trombay	711	626	610
Unit 6, Trombay	1721	2116	2202
Unit 7, Trombay	99	93	92
<b>Total Thermal</b>	<b>2986</b>	<b>3311</b>	<b>3393</b>



### **3.7 O&M EXPENSES**

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

The actual O&M Expenditure for FY 2007-08 was Rs. 301.42 crore as compared to Rs 327.56 crore projected in the APR Petition for FY 2007-08 and Rs. 321.96 crore approved in the APR Order.

The various components of O&M Expenses are elaborated below:

#### **3.7.1 Employee Expenses**

TPC-G submitted that the total actual employee related expenses for FY 2007-08 was Rs. 129.96 crore as against the actual expenditure of Rs. 106 crore in FY 2006-07.

TPC-G submitted that the employee expense for FY 2007-08 includes a statutory provision of about Rs. 24 crore on account of Accounting Standard [AS 15 (R)]. TPC-G submitted that AS 15 (R) relating to employee benefits has been made mandatory from April 1, 2007. The revised AS redefines employee benefits to include benefits arising out of formal plans, those provided under legislative requirements and those by informal practices (long service awards, retirement gifts, and hospitalisation benefits, etc.). The provision is computed based on an Actuarial Valuation. Accordingly, TPC-G submitted that such revised accounting standards have increased the employee expenses.

The Commission asked TPC-G to submit the basis and assumptions for computing the capitalisation of employee expenses for FY 2007-08 and TPC-G submitted that the Engineering Department and other Support Service Groups at Head Office are exclusively working on the capital expenditure (capex) schemes in Mumbai Licensed area. The time spent by the members of the department is estimated and the salaries relating to them are provided in the Budget of the respective projects. The log sheets are maintained to book the actuals, which are audited by statutory auditors too. The salaries of the employees are thus, directly charged to the capital projects in proportion to the time spent on the respective projects. Expenses routed through normal O&M are debited to respective projects under 'Expenses Capitalised', while employee expenses directly charged to capital projects are included in the works capitalised.



The Commission has analysed the actual employee expenses for FY 2007-08 under various sub-heads vis-à-vis the actual expenses in FY 2006-07. The Commission asked TPC-G to provide the details of sub-head under which the heads of provisioning on account of AS 15 (R) have been shown. The Commission asked TPC-G to elaborate the reasons for the increased expenditure under the sub-heads of 'other allowance', 'leave encashment', and 'staff welfare expenses' and TPC-G submitted that increase in this head was on account of AS 15 (R). As TPC-G has provided the details of sub-heads for provisioning of AS 15 (R), for truing up, the Commission has considered the expenses related to provisioning of AS 15 (R) under the employee expenses.

Further, the Commission observed that TPC-G has considered an amount of Rs. 3 Crore under Fringe Benefit Tax (FBT) under Income Tax head. However, since FBT amounting to Rs. 3 crore is an element of Employee Expenses, the Commission has considered the same for truing up under this head.

Considering the details of actual employee expenses and reasons submitted by TPC-G for increase in employee expenses, the Commission has allowed the employee expenses of Rs. 132.96 crore for FY 2007-08 under the truing up exercise.

### **3.7.2 A & G Expenses**

TPC-G submitted that the actual A&G expenses for FY 2007-08 was Rs. 73.93 crore (including brand equity) as against the actual A&G expenses of Rs. 68.71 crore during FY 2006-07. TPC-G submitted that this increase is mainly due to

- Increase in water charges- Rs 1.5 crore
- Increase in upgradation of IT infrastructure - Rs 1.77 Crore.

TPC-G submitted that it has not considered the payment of Rs. 9.06 crore towards Tata Brand Equity paid during FY 2007-08 for computing the O&M expenses in accordance with the philosophy adopted by the Commission in APR Order dated April 2, 2008 in Case No. 68 of 2007. TPC-G submitted that it has appealed before the Appellate Tribunal for Electricity (ATE) against the Commission's stand on the dis-allowance of Brand Equity expenditure for FY 2006-07 and that it reserves the right to seek appropriate adjustments for FY 2007-08 based on the decision of the ATE.

As regards the capitalisation of A&G expenses, TPC-G submitted that such A&G expenses, which relate to the Capex schemes (i.e., consultant's fees, travelling expenses, etc.) are directly debited to the scheme.



The Commission directed TPC-G to submit the details of legal and consulting charges under A&G expenses. TPC-G submitted the break-up of legal and consulting charges, which includes payments towards Audit fees, legal charges, income tax consultant fees, consultant fees for various activities, etc.

The Commission obtained the details of 'other expenses' shown under A&G expenses for FY 2007-08, which includes expenses towards Brand Equity, director fees, scrapping of expenses, etc. As elaborated in its APR Order dated April 2, 2008 in Case No. 68 of 2007, the Commission has not considered the expense of Rs 9.06 crore towards Tata Brand Equity. The relevant Para of the said Order stipulates as follows:

*“...The Commission is of the opinion that this expense of Rs 7.29 Crore towards Tata Brand Equity is a sort of internal arrangement between the Group Companies and this amount is paid to the promoter of the Company, viz., Tata Sons. The kind of support provided by Tata Sons to TPC, as stated by TPC in above paragraphs is normal and usually in business, the promoter provides such support to its Group Companies as it also earns returns from its Group Companies. TPC itself is a 100 year old business and a brand name in its own right and with assured returns in a regulated business, has all the financial and other goodwill to conduct its business optimally. Therefore, the amount paid by TPC to Tata Sons under Tata Brand Equity should not be separately allowed, as it would amount to provide the promoters additional return on equity. As per the MERC Tariff Regulations, a Generating Company can only be provided a regulated Return on Equity of 14% on the regulatory equity as estimated by the Commission and if any expense towards the Tata Brand Equity is allowed, then it would tantamount to allowing a higher Return on Equity. For FY 2006-07, if this expense of Rs 7.29 Crore is considered, the ROE works out to around 14.7%. TPC, in its additional submissions, has stated that the ceiling for expenditure under this head is Rs 50 Crore and if Rs 50 Crore is considered as additional return (to be shared between TPC-G, TPC-T and TPC-D in proportion to their RoE), then the effective RoE works out to more than 17%...”*

The Commission observed that in spite of paying an amount towards Tata Brand Equity, TPC-G has submitted that the rating of TPC was changed from 'AAA' to 'AA' from July 2007, and hence, it proposed to increase the interest charges towards the IDFC loan, which has increased the interest rates from 8.9% per annum to 13% per annum.



The Commission observed that the 'contribution/donations' sub-head under A&G expenses includes an expense of Rs 0.55 crore in FY 2007-08 as against the actual expenses of Rs 0.03 crore in FY 2006-07. The Commission asked TPC-G to submit the reasons for such increase and also justification for considering such expenses in the ARR. TPC-G, in its reply, submitted that it incurred such expenditure mainly towards donations to Tata Medical Centre of Rs. 0.50 crore, and that the donation has been made for the cancer medical centre coming up in Kolkata. The Commission is of the view that if the Company or the shareholders of the Company wish to contribute/donate towards charitable causes, the same should be contributed from the return earned out of the business, rather than passed on to the Utility's consumers. Hence, for truing up purposes for FY 2007-08, the Commission has not considered the expense of Rs 0.50 crore towards donation to Tata Medical Centre.

Subsequently, TPC-G, in its reply to query regarding break-up of financing charges for FY 2007-08 submitted that inadvertently it has provided excess credit and deducted a certain amount i.e., Rs. 1.65 crore in both fuel costs and sub head 'other miscellaneous expenses' of A&G expenses.

Considering the details of actual A&G expenses and reasons submitted by TPC-G for the same, the Commission has allowed the A&G expenses of Rs. 66.02 crore for FY 2007-08 under the truing up exercise.

### **3.7.3 R&M Expenses**

TPC-G submitted that the actual R&M expenses for FY 2007-08 were Rs 102.47 crore as against the actual A&G expenses of Rs. 86.14 crore during FY 2006-07.

The Commission asked TPC-G to submit the reasons for such increase in R&M expenses in FY 2007-08. TPC-G submitted following reasons for the increase:

- Unit-4 outage expenses including General Maintenance for certification of Turbine overhaul & Boiler recertification - Rs. 5 crore
- Unit-5 outage expenses including renovation of HP Module, turbine spare consumption, replacement of Regenerative Air Preheater, renovation of burner, bottom ash hopper, electrification job, and other materials procured for refurbishment - Rs. 11 crore

Further, TPC-G submitted that in its APR Petition for FY 2007-08 in Case No. 68 of 2007, TPC-G had indicated that the R&M expenditure for FY 2006-07 was lower at Rs.86 crore due to deferment of some expenditure to subsequent years. The R&M



expenditure prior to FY 2006-07 was in the range of Rs.100 crore. Accordingly, TPC-G submitted that it would be inappropriate to compare the R&M expenditure for FY 2007-08 with that incurred in FY 2006-07.

### 3.7.4 **O&M Expenses**

Based on the approved Employee, A&G and R&M expenses for FY 2007-08 as mentioned in above paragraphs, the Commission has approved the O&M expenses for FY 2007-08 as shown in the Table below:

**Table: O&M Expenses (Rs Crore)**

Particulars	FY 2007-08		
	APR Order	Actuals	Allowed after truing up
Employee Expenses		129.96	132.96 *
A&G Expenses		64.87	66.02+
R&M Expenses		102.47	102.47
Total O&M expenses		312.96	297.30

Note: \*Includes FBT of Rs. 3 crore allowed under Employee Expenses which was considered by TPC-G as part of income tax

+Reduced Donation (Rs. 0.50 crore), added the excess credit of Rs. 1.65 crore passed in A&G expenses towards adjustments in fuel price and reduced the payment towards Tata Brand Equity of Rs. 9.06 crore

The difference between the approved expenses and the expenses allowed after truing up for FY 2007-08 has been considered as a controllable gain and has been shared between TPC-G and the Distribution Licensees in accordance with Regulation 19 of the MERC Tariff Regulations, as explained later in this Section.

### 3.8 CAPITAL EXPENDITURE AND CAPITALISATION

The Commission has examined the depreciation and actual capitalisation claimed by TPC-G in detail as against the various capex schemes approved by the Commission. The Commission notes that as against permitted capital expenditure of Rs. 174.82 crore and corresponding capitalisation of Rs. 129.49 crore considered under its earlier APR Order dated April 2, 2008, actual capitalisation by TPC-G during FY 2007-08 amounted to Rs. 54.45 crore. The Commission has verified the actual capitalisation claimed by TPC-G as against the capex schemes already approved by the Commission. The Commission's rationale for approving the capitalisation for FY 2007-08 in this Order is discussed below:





The Commission has not considered capitalisation of the DPR schemes of the Captive coal berth at Trombay as the Commission has not accorded its in-principle approval for the Scheme as yet. The Commission clarifies that after receiving the Commission's approval for the said scheme, if TPC-G ascertains that the projected benefits have actually accrued for the benefit of the consumers, the Commission may consider the actual capitalisation towards the scheme subject to prudence check.

In respect of the DPR scheme 'Coal yard augmentation', the Commission has not considered the actual capital expenditure and capitalisation, as the Commission is of the view the benefits of such scheme needs to be examined in terms of coal stock maintained prior to the scheme, increase in the coal stock after setting up the additional coal stock yard, etc. The Commission is of the view that until it ascertains that the projected benefits have actually accrued for the benefit of the consumers, it would not be appropriate to allow such expenses.

For Non-DPR schemes, the Commission has considered 50% of the actual capitalisation during FY 2007-08 on adhoc basis as the Commission is of the view that until it is ascertained that the projected benefits actually accrue for the benefit of the stakeholder, it would not be appropriate to allow the entire expenses. TPC will have to submit detailed cost benefit analysis, for the Commission to arrive at the total cost to be allowed after scrutiny. Accordingly, for truing up for FY 2007-08, the Commission has considered the capitalisation of Rs. 25.13 crore.

As regards whether projected benefits have actually accrued for the benefit of the consumers, the Commission directs TPC-G to submit the detailed report with established benefits vis-à-vis the benefits projected with the schemes within one month from the issuance of this Order.

### **3.9 DEPRECIATION**

The Commission, in its earlier Order dated April 02, 2008, in Case No. 68 of 2007 had permitted depreciation expenditure of Rs. 47.88 crore for FY 2007-08, which amounts to 1.76% of opening level of Gross Fixed Assets (GFA) of TPC-G for FY 2007-08, which was considered as Rs. 2714.15 crore. The depreciation rates were considered as prescribed under the MERC Tariff Regulations.

TPC-G, under its APR Petition, submitted that based on actual capitalisation the depreciation for FY 2007-08 works out to Rs. 47.78 crore. TPC-G submitted that the depreciation for FY 2007-08 has been computed on opening GFA only. TPC-G further submitted that it has not considered the depreciation component of Rs. 0.86



crore on assets added during the year while computing the depreciation for FY 2007-08. TPC-G submitted that it has appealed before the ATE against the Commission's stand on the issue of depreciation on assets added during the year and it reserves the right to seek appropriate adjustments for FY 2007-08 based on the decision of the ATE. The Commission has however, considered depreciation in accordance with methodology specified in Regulation 34.4 of the MERC Tariff Regulations.

Further, TPC-G in its additional submissions confirmed that depreciation has not been claimed beyond 90% of the asset value in accordance with the MERC Tariff Regulations.

The depreciation expenditure approved by the Commission in the APR Order, actual depreciation claimed by TPC-G, and depreciation expenditure allowed after truing up for FY 2007-08 on above mentioned basis have been summarised in the following Table:

**Table: Depreciation (Rs Crore)**

Particulars	APR Order	Actuals	Allowed after truing up
Opening GFA	2714.15	2714.15	2714.15
Depreciation	47.88	47.78	47.78

### **3.10 INTEREST EXPENSES**

The Commission, under its APR Order dated April 2, 2008 in Case No. 68 of 2007, had approved interest expenditure of Rs 22.79 crore, after considering the interest expenditure on normative debt and actual loan from IDFC limited corresponding to capitalised assets only. The Commission had considered the normative interest rate of 10% p.a. for the assets put to use during FY 2004-05 and FY 2005-06 and interest rate of 8.9% p.a. for assets put to use during FY 2006-07, and interest rate of 8.9% p.a. for assets put to use during FY 2007-08 towards the IDFC loan, and accordingly considered the weighted average rate of interest as 9.7%.

TPC has estimated the interest expenses under the following heads:

- Interest on debt
- Interest and Finance Charges

TPC-G submitted that interest on debt for FY 2007-08 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 2007-08. TPC-G 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-G submitted that the interest on long-term debt for FY 2007-08 is estimated at Rs. 20.46 crore as against Rs. 22.79 crore approved by the Commission. TPC-G submitted that the variation in the interest expenditure is on account of:

- Lower capitalisation as compared to the approved capitalisation for the year
- Different terms for the loan considered by TPC-G vis-à-vis the terms considered in the earlier Tariff Order

The Commission has considered the interest expenditure on the normative debt corresponding to capitalised assets only and has considered the interest rate of 10% p.a. for the assets put to use during FY 2004-05 and FY 2005-06. As regards assets put to use during FY 2006-07 and FY 2007-08, the Commission has considered the loan terms based on the actual loan availed by TPC-G from IDFC. The Commission has verified yield-to-maturity (YTM) rate for 5 year G-Sec, which was around 7.45% to 7.56%. Thus, for the purpose of interest cost computation during FY 2006-07 and FY 2007-08 (on the loan portion of the approved capitalisation), the Commission has considered interest rate at minimum of 8.90% p.a. as submitted by TPC-G under its APR Petition. Accordingly, the weighted average rate of interest amounts to 9.79% p.a. for FY 2007-08. The summary of the interest expenses as approved in the APR Order, revised estimate by TPC-G, and interest expenses approved by the Commission after truing up is shown in the Table below:

**Table: Interest Expenses** **(Rs Crore)**

Particulars	FY 2007-08		
	APR Order	Revised Estimate	Allowed after truing up
Op. Balance	201.99	201.98	201.98
Additions	90.64	38.11	17.59
Repayments	(22.39)	(22.39)	(22.39)
Cl. Balance	270.23	217.70	197.18
<b>Interest</b>	<b>22.79</b>	<b>20.46</b>	<b>19.54</b>
Effective Interest Rate	9.65%	9.75%	9.79%

Further, TPC-G had projected the financing charges for FY 2007-08 at Rs 0.28 crore in its APR Petition filed in Case No. 68 of 2007, which was approved by the Commission..

TPC-G submitted that the actual other financing charges for FY 2007-8 were Rs. (2.72) crore, mainly on account of favourable foreign exchange rate variation.



Subsequently, the Commission asked TPC-G to submit the details of the other financing charges. TPC-G, in its reply, submitted that the financing charges as submitted in the Petition as Rs. (2.72) crore needs to be revised to Rs. 4.23 crore. TPC-G submitted that it has inadvertently deducted a certain amount twice, while presenting in the APR, such as profit/loss on exchange of fuel, exchange difference on stock in transit, etc.

The Commission observed that though the details submitted shows the credit being given twice, i.e., in fuel costs as well as in other financing charges, however, Format F 2.1 does not separately provide for any such adjustment in the total fuel cost. The Commission asked TPC-G to confirm whether the adjustment has been considered while computing the fuel price per unit as submitted in Format F 2.2. TPC-G, in its reply, submitted that the said adjustment has been included while computing the fuel price per unit as considered in Format F 2.1, which has been examined by the Commission. The Commission has approved the actual other financing charges of Rs 4.23 Crore for FY 2007-08.

### **3.11 INTEREST ON WORKING CAPITAL**

TPC-G submitted that it has estimated the Interest on Working Capital (IWC) considering average interest rate @ 11.50% on the working capital requirement computed in accordance with the MERC Tariff Regulations, with the revised Interest on Working Capital estimated at Rs 86.85 crore as against Rs 88.88 crore approved in the APR Order by the Commission.

As regards the actual working capital interest expense incurred, TPC-G submitted that such requirements are funded through a mix of actual borrowings and through funds provided by the Corporate through internal accruals. TPC-G submitted that the total interest paid by TPC for such short-term loan works out to Rs. 26 crore for FY 2007-08. TPC allocated such actual interest paid for working capital to its Generation, Transmission and Distribution business on the basis of the normative working capital share in total normative working capital in TPC's Mumbai Operations and allocation to TPC-G works out to Rs. 22 crore.

TPC-G further submitted that the component of financing through Corporate funds (Internal accruals) is also entitled to interest as the Corporate incurs a carrying cost for such 'internal cash' or funds, as usage of this cash denies the Corporate of an opportunity to earn income through interest on deposits in money markets.



Accordingly, TPC-G submitted that it has effectively incurred a cost by blocking its money (cash) in such Working Capital. TPC-G further submitted that it is a well known principle that any ongoing Company requires working capital to run its operations. The working capital required may either be borrowed or may be funded from own funds. If the working capital is borrowed, the cost of such borrowed funds is the interest paid to the lender on this borrowed amount. However, if no loans are taken, the same would have to be provided by the Company from the funds it has accrued. Such internal funds are in effect provided by the Shareholders who expect some return on the funds. Hence, it would be legitimate to expect that there is cost of such internally accrued funds that are used to finance the working capital and the cost of such internally accrued funds, which reflect the expectation of returns by the shareholders is generally higher than the cost of borrowing.

TPC-G further submitted that even if no amount was actually borrowed, it would be incorrect to treat the entire normative interest on working capital as an efficiency gain to be shared with the consumers. TPC-G submitted that the MERC Tariff Regulations stipulates the computation of Interest on working capital on “Normative Basis” and does not prescribe or stipulate any pre-condition for funding the working capital through actual loans. Further, it is submitted that the treatment given for normative loans for financing capital expenditure may be extended to the financing of Working Capital.

Accordingly, TPC-G submitted that the interest on actual working capital requirement at normative interest rates (SBI PLR) should be considered as part of interest expenses for the computation of gains and losses on account of interest on working capital and submitted the computation for the normative working capital. TPC-G further requested the Commission to reconsider its stand adopted in its APR Order dated April 2, 2008 and approve the above methodology for computing gains and losses on account of working capital. As regards the sharing of gains and losses on account of actual and normative interest on working capital, TPC-G submitted that the Commission has considered the difference between actual working capital and that approved on normative basis as gains and hence, passed one-third of the gains to the Distribution Licensees. TPC-G submitted that it has appealed against the Commission’s methodology in the ATE and reserves the right to seek appropriate adjustments for FY 2007-08 based on the decision of the ATE.

During the TVS, TPC-G reiterated its submission under its Petition regarding interest on working capital and submitted that TPC-G has computed the Interest on Normative working Capital in lieu of Actual Interest on Working Capital so as to correctly reflect



the cost of Working Capital, while computing the sharing of gains and losses due to controllable factors. TPC-G further submitted that in FY 2007-08, the funds of Tata Group Company, viz., M/s Indian Hotels were utilised for working capital through the corporate Company, M/s Tata Sons. The Commission asked TPC-G to submit the details and documentary evidence of relevant inter-Company transactions.

TPC-G, in its reply, submitted that the reference during the TVS to utilisation of funds for working capital from corporate funds within the same Company was with reference to utilisation of Corporate funds belonging to 'The Tata Power Company' for funding the working capital of a particular business like 'Generation', 'Transmission', 'Distribution' or any other business that the Company may have. TPC-G submitted that during the TVS it wanted to convey that the MERC Tariff Regulations also provide that any capital expenditure would be funded through a Debt (Loan) to Equity structure of 70:30 notwithstanding the actual quantum of loan in such financing. In effect, the debt quantum for financing the Capital Expenditure is considered on normative basis. The actual quantum of loan taken by the Company has no bearing on the tariff that is determined as it is only the normative loan that is considered. If the actual loan interest is less than the normative interest, it is not construed as savings. TPC-G further submitted that the reference to another Tata Group Company such as M/s Indian Hotels was inadvertent and unintentional and hence, there was no need to produce documentary evidence to support the claim.

The Commission asked TPC-G to submit the documentary evidence for the details of actual interest paid for short-term loan raised from various Financial Institutions for working capital for FY 2007-08. TPC-G submitted the documentary evidence of such loan from Financial Institutions in the form of letters written by TPC to the banks from whom such working capital have been availed. The Commission has considered the actual working capital interest for short term loans by TPC-G from various Financial Institutions for working out the sharing of gains between normative working capital interest and actual working capital interest.

The Commission has estimated the normative working capital interest for FY 2007-08 based on the revised expenses approved in this Order after truing up. The Commission has computed the sharing of gains/losses between the normative working capital interest and the actual working capital interest of Rs. 22 crore incurred by TPC-G, since this is a controllable parameter. Further, the MERC Tariff Regulations stipulate that rate of interest on working capital shall be considered on normative basis and shall be equal to the short-term Prime Lending Rate of State Bank of India as on the



date on which the application for determination of tariff is made. As the short-term Prime Lending Rate of State Bank of India at the time when TPC-G filed the Petition for tariff determination for FY 2007-08 was 11.50%, the Commission has considered the interest rate of 11.50% for estimating the normative interest on working capital. The normative interest on working capital for FY 2007-08 as estimated by the Commission works out to Rs 84.79 crore.

### 3.12 RETURN ON EQUITY (ROE)

TPC-G submitted that based on the capital expenditure, capitalisation and normative debt:equity ratio of 70:30, the Return on Equity (RoE) on the equity portion has been computed at 14%. Further, TPC-G, in its Petition, has reduced the equity portion of the asset de-capitalised during the year while computing the RoE. Accordingly, TPC-G estimated the RoE as Rs. 151.61 crore as against the approved RoE of Rs. 152.00 crore.

The Commission has computed the RoE in accordance with Regulations 34.1 and 31 of the MERC Tariff Regulations, which stipulate that the Return on Equity for a Generation Company is to be provided on the opening level of equity. Accordingly, the Commission has neither considered the addition to assets during the year, nor the assets de-capitalised/retired during the year, while computing the RoE.

The summary of RoE as claimed by TPC-G and approved by the Commission for FY 2007-08 is summarised in the following Table:

**Table: Return on Equity (Rs Crore)**

Particulars	FY 2007-08		
	APR Order	Revised Estimate	Allowed after truing up
Regulatory Equity at the beginning of the year	1085.70	1085.70	1085.70
Regulatory Equity at the end of the year	1124.55	1099.29	1090.50
<b>Total Return on Regulatory Equity</b>	<b>152.00</b>	<b>151.61</b>	<b>152.00</b>

### 3.13 NON TARIFF INCOME

TPC-G submitted that the actual non tariff income for FY 2007-08 is Rs. 27.06 crore as against Rs. 10 crore approved in the APR Order dated April 2, 2008 in Case No. 68 of 2007. Out of the total non tariff income of Rs. 27.06 crore, TPC-G submitted that income from recurring items corresponds to Rs. 9 crore, while non-recurring items contributed Rs. 18 crore. TPC-G provided the details of the non tariff income under various heads.



TPC-G referred to Para 73 of the ATE Judgment in Appeal No. 86 and 87 of 2007 on the Appeal filed by the Maharashtra State Power Generation Company Limited (MSPGCL) against the Commission's Order in Case Nos. 48 of 2005 and 68 of 2006 and requested the Commission to consider the same while truing up for FY 2007-08. The relevant Para 73 of the ATE Judgment in Appeal No. 86 and 87 of 2007 stipulates as under:

*“However, if the income can not be reasonably linked to any cost item allowed by the Commission as part of the ARR, the same should not be adjusted against the ARR of the Appellant, in the absence of specific Regulations.”*

The Commission asked TPC-G to submit the basis and justification for each sub-head under “Non Tariff Income” to justify that the same cannot be reasonably linked to any cost item allowed by the Commission as part of the ARR.

TPC-G submitted its rationale for not considering the income under some heads while determining the ARR in accordance with the ATE Judgment in Appeal No. 86 and 87 of 2007, as discussed below.

### **Rents**

TPC-G submitted that some portion of the income under this head is on account of the rent received for using the land. TPC-G submitted that there is no cost element that pertains directly to land. The land does not attract any depreciation as the rate prescribed in the Tariff Regulations towards land is nil. Further, there is no O&M Expenditure (except the Non Agriculture Assessment of Rs. 0.25 crore) that can be attributed to land. Also, there is no cost on account of the land relating to Interest, Return on Equity or Interest on Working Capital. For the generating stations, the land has been either given by the Government or has been procured many years ago and therefore, the contribution to Return on Equity in a year is very minimal. Accordingly, TPC-G requested that the income under this head should not be included in the Non Tariff Income. The income under consideration is Rs. 0.82 crore.

TPC-G also submitted that under the same head, it has included the income under “Storage and Warehousing of flyash”. This is towards rent derived from storing of flyash before it is disposed off. Accordingly, TPC-G submitted that such income should also not form part of non-tariff income. TPC-G submitted that the income under this head “Storage and Warehousing of flyash” for FY 2007-08 is Rs. 0.76 crore. The net income after considering the non agriculture assessment works out to Rs 1.33 crore (0.82+ 0.76- 0.25).





In this regard, the Commission asked TPC-G to submit the details of rent received vis-à-vis the purpose for which land has been given on rent. TPC-G submitted that the land rental amount of Rs. 0.82 crore was received by the Trombay Generating Station, mainly on account of two heads:

- Rents for storing of chemicals by CTTL on the land (about Rs 0.69 Crore)
- As fuel pipelines of IOC and HPCL pass through land at Trombay, TPC-G received the rent for the same (about Rs 0.10 Crore)

The Commission asked TPC-G to clarify regarding which Unit of the Trombay station or Hydro generating stations did the land given on rent belong to. TPC-G submitted that the land under consideration is land belonging to Trombay Station and it may not be possible to identify any particular Unit of Trombay with the head of income.

Based on the submission of TPC-G, it is clear that the land referred here from which rent has been received is part of the Trombay Station. The cost of the land is included in the Gross Fixed Assets, which has been used to compute the Capital Base in the past, on which TPC was earning Returns in the past and continuously do so. Thus, the cost of procuring this land has been borne by consumers in the past, and continues to be borne even now, since the original Capital Base is still being considered as equity. Even if the land has been given by the Government in some cases, as claimed by TPC-G, the same has been granted for the purpose of setting up the generating facilities for serving the consumers of Mumbai licence area. Hence, any benefit derived out of rent earned by TPC-G on this land, should be passed on to its consumers. Hence, the Commission is of the view that the rent received should be considered as a part of the non-tariff income.

### **Interest on Staff Loans and Advances**

The income under this head captures the interest received by the business on loans given to staff. TPC-G submitted there is no cost incurred by TPC-G for earning this income. The income under this head is Rs. 0.58 crore.

The Commission asked TPC-G to provide detail of the source of funds from which loans have been provided to the employees. TPC-G submitted these loans were provided from the internal accruals. TPC-G confirmed that none of the three sources viz., a) Long Term Debt, b) Equity, and c) Working Capital Loans have been used to finance the loans and advances given to employees.



The Commission finds merit in TPC-G's contentions in this regard as the loans to staff have been given from the internal accruals and accordingly, the income under this head has not been considered for truing up purposes.

### **Sale of Scrap**

TPC-G submitted that the income from sale of scrap is generated after effecting the sale of some asset. When the asset is retired, the book value is brought to Nil and the amount equal to book value is shown as "Loss on scrapping of Asset". TPC-G submitted that keeping the spirit of the ATE Judgment in Appeal No. 86 and 87 of 2007, if "Loss on Retirement of Asset" is shown as an expense, the Sale from Scrap should be shown as income for the ARR. Similarly, if the "Loss on Scrapping of Asset" does not form part of the expense, then income from Sale of Scrap cannot be included under Other Income. TPC-G submitted that both (i.e., sale as well as loss) should be excluded from the determination of the ARR. TPC-G submitted that the amounts under the above heads are Rs. 1.92 crore (Sale of Scrap) and Rs. 0.078 crore (Loss on Scrapping of Asset). Hence, the net amount of Rs. 1.92 crore should not be considered for truing up purposes.

In this regard, the Commission asked TPC-G to clarify whether the scrap sold was part of the assets of the various generating stations or head office. TPC-G confirmed that the scrap sold was from its own generating station. TPC-G further submitted that such items before being treated as scrap were a part of the asset block of the business area and were given the same treatment as given for any other asset. However, such treatment (of recovery of the cost viz., Interest, Depreciation and RoE) was for the past period and did not pertain to the year under consideration i.e., FY 2007-08. TPC-G also referred the ATE Judgment in Appeal No. 86 and 87 of 2007, which stipulates:

*"However, if the income can not be reasonably linked to any cost item allowed by the Commission as part of the ARR, the same should not be adjusted against the ARR of the Appellant, in the absence of specific Regulations.*

TPC-G interpreted the above Para to mean that the non tariff income should be related to the expenses of that year and not to the expenses of the past period(s), i.e., in case there is no nexus between the expenses of the year under consideration and the non tariff income of that year, the non tariff income should not be considered in the computation of the ARR that year.



The Commission is of the view that the ATE Judgment in Appeal No. 86 and 87 of 2007 cannot be interpreted to mean that if the income cannot be reasonably linked to any cost item allowed by the Commission as part of the ARR for 'that particular year', it should not be considered as Non-Tariff Income. It is obvious that scrap would not accrue for the assets in the same year/s they were bought.

Based on the submission of TPC-G, it is clear that the scrap sold by TPC-G was part of the Generating Station. As submitted by TPC-G, though these assets are fully depreciated, the servicing cost of these assets including entire depreciation, interest and RoE have been borne by consumers in the past. The Commission rejects TPC-G's contention and is of the view that as the asset value of such scrap has been considered in some form or the other as a part of the ARR in the previous years, the income earned from sale of such scrap should be considered as a part of the non-tariff income.

### **Profit on Sale of Asset**

TPC-G submitted that this amount reflects the difference in amount between the Sale Value and Book Value of an Asset. Some of these assets have reached their 90% Depreciated value and there is no depreciation that is charged to the consumers. Accordingly, TPC-G submitted that it is not able to discern any nexus between the income under this head and any cost elements paid for by the Distribution Licensees. Accordingly, TPC-G requested that the income under this head should not be included in the ARR.

Based on the Commission's rulings in previous paragraphs, i.e., though these assets are fully depreciated, the servicing cost of these assets including entire depreciation, interest and RoE have been borne by consumers in the past, the Commission has not accepted TPC-G's argument and has considered such income for truing up purposes.

### **Income from Statutory Investments**

TPC-G submitted that this income reflects the income derived from investments made from Contingency Reserves investment. TPC-G submitted that unlike the Transmission Business and Distribution Business, where an appropriation towards Contingency Reserve is permitted, such appropriation does not form part of cost elements for Generation Business. Hence, TPC-G submitted that the income from such investment should not be included in the ARR computation.



TPC-G further submitted that the fact that reserves have been created in the past (when TPC was an integrated Utility) through appropriation cannot be a reason for including the income from the investment in the current year. The ATE Judgment in Appeal No. 86 and 87 of 2007 mentions the cost in the year of consideration and not whether such costs have been incurred in the past. TPC further submitted that in the past when such appropriation has been done (for the integrated Utility), the income arising out of such investment against the reserves has also been recognised and passed on to the consumers. TPC-G submitted that the income under this head is Rs. 7.5 crore.

The Commission agrees with the TPC-G's views that appropriation towards Contingency Reserve is not permitted for Generation Business. However, in this case, the contingency reserve existing in Generation business is due to allocation of reserves available to Generation, Transmission and Distribution Business. TPC-G has created this reserve out of the tariffs charged to consumers when TPC was operating as an integrated Utility and hence, the outstanding reserves with TPC-G are totally funded by consumers. As the contingency reserves allocated to TPC-G are funded by consumers through tariff, the Commission has considered the income under this head for truing up purposes.

The summary of the actual non tariff income, TPC-G's revised submission and that allowed by the Commission after truing up is shown in the Table below:

**Table: Non Tariff Income (Rs Crore)**

Particulars	Actual	TPC-G Revised Submission	Allowed after truing up
<b>Non Tariff Income shown in the APR</b>		<b>27.06</b>	<b>27.06</b>
Less: Income from rent from land		(1.33)	-
Interest on loans to staff		(0.58)	(0.58)
Less: Income from sale of scrap net off loss on retirement of asset		(1.92)	-
Less: Income from statutory investment		(7.50)	-
<b>Non Tariff Income to be considered</b>	<b>27.06</b>	<b>15.73</b>	<b>26.48</b>

### 3.14 INCOME TAX

TPC-G, in its Petition, submitted that the Income Tax payable by TPC in FY 2007-08 has been computed on the basis of the total revenues earned by TPC and after considering:



- (i) disallowances under various section under Income Tax Act, 1961;
- (ii) the allowable expenditures under Section 32, Section 43 A, Section 43 B;
- (iii) Benefit under Section 80 IA;
- (iv) Section 14 and other relevant Sections of the Income Tax Act, 1961.

Accordingly, TPC-G computed the Income Tax for FY 2007-08 as Rs. 120 crore as against Rs. 44 crore approved by the Commission. TPC-G submitted that the variation in the Income Tax is mainly on account of performance in the year.

TPC-G quoted the Commission's ruling in Case No. 64, 65 and 66 of 2007, on the APR Petitions filed by REL for FY 2007-08, wherein, the Commission ruled that normative interest on loan and normative interest on working capital are not actual expenses and hence, will not be eligible as deductible expenses while computing the income tax. The Commission has adopted the same approach for computing the Income Tax for TPC-G. The total income tax as per TPC-T, paid by TPC as a whole for FY 2007-08 is Rs. 116.44 Crore.

As regards tax on income arising out of PLF incentive, the Commission is of the view that the expenses incurred for achieving better performance for higher PLF/Capacity Index has already been allowed as pass through by the Commission and allowing tax on income arising out of better performance will put additional burden to consumers. Moreover, the MERC Tariff Regulations stipulate that the Generation Company is allowed to retain two-third of the efficiency gains and only the balance one-third is passed on to the consumers (distribution licensees, in this case) through reduction in tariff. If the income tax on the share retained by the Generation Company is passed through as an expense in the ARR, it will amount to reducing the consumer's share, i.e., one-third of the efficiency gains. This clearly is not the intention of the MERC Tariff Regulations. In other words, income tax is to be allowed as a pass through in the ARR, only to the extent of normal profits, i.e., the RoE, and not on any additional returns that the licensee is able to earn. Hence, The Utility has to pay the Income Tax on efficiency gains out of its own profits, and this cannot be passed on to the consumers. Accordingly, the Commission has not considered the tax on income arising out of PLF/Capacity Index incentive.

Further, as discussed earlier, the Commission has considered the FBT as a part of the O&M expenses, and not as a part of the income tax.

TPC has estimated the Income Tax liability considering the Tax Written Down Value (WDV) of assets and other provisions of the Income Tax Act, 1961. The Commission



has modified the tax computations submitted by TPC to account for the changes in RoE and regulatory depreciation. For the purpose of Income Tax computations, the Commission has considered the RoE as the regulatory profit before tax in accordance with the approach suggested by TPC in the earlier APR Petition, and adopted by the Commission in the previous APR Order. Further, the Commission has not grossed up such RoE component for income tax, since the income tax is being allowed as an expense under the ARR, in accordance with the MERC Tariff Regulations. Based on the above principles, the Commission has estimated the Income Tax of TPC-G on stand alone basis by considering the income and expenses as per approved ARR after truing up for FY 2007-08, as Rs.34.59 crore. The summary of the income tax as claimed by TPC-G and as approved by the Commission in this Order is shown in the Table below:

Sl.	Particulars	FY 2007-08
		Approved (Rs Crore)
1	Profit Before Tax / Regulated Return on Equity	152.00
2	Add: Depreciation as per APR	47.78
3	Less: Depreciation as per Income Tax	-72.31
4	Add: Normative Interest on Working Capital	84.79
5	Less: Actual Interest on working capital	-22.00
6	Add: Normative Interest on Long Term Loan	19.54
7	Less: Actual Interest on long term loan	-3.35
8	Add: Other Disallowances for computing Income Tax	28.61
9	Less: Other Expenses allowed for computing income tax	-22.19
10	Less: Deductions under S. 80-G, 80 IA	-111.09
<b>11</b>	<b>Total</b>	<b>101.78</b>
<b>12</b>	<b>Income Tax</b>	<b>34.59</b>

### 3.15 INCOME TAX REVERSAL

TPC-G submitted that in its APR Petition for FY 2007-08, it had discussed the Tax Reversal (on account of upholding of benefits arising from Section 80 IA as well as other favourable decisions) wherein, TPC-G had succeeded in obtaining tax reversal for various years commencing from FY 1983-84. The benefit of the same was also passed on to the Distribution Licensees in the submission. The Commission in its APR Order dated June 4, 2008 in Case No. 69 of 2007 had considered the benefit arising out this reversal only upto the period FY 2002-03. For the benefit for the period from FY 2003-04 onwards, the Commission had suggested that the same may be considered along with the impact of the ATE Judgment in Appeal No. 60 of 2007



in the subsequent filing. Accordingly, TPC-G submitted the computation of the benefit to be passed on to the consumers from FY 2003-04 onwards. TPC-G also submitted the following additional points:

- The ATE Judgment in Appeal No 60 of 2007 pertains to FY 2004-05 and FY 2005-06. Hence, the computation of FY 2003-04 would not be impacted by the said ATE Judgment;
- Benefit of additional Tax Reversals on account of Section 80 IA computations recognized in FY 2007-08 are being passed on to the Distribution Licensees;
- The principles of Sixth Schedule of Electricity (Supply) Act, 1948 are applicable upto FY 2006-07.

The summary of the reversal of tax provisions and sharing of benefits with consumers as submitted by TPC-G is shown in the Table below:

**Table Reversal of Tax Provisions (Rs Crore)**

Sl No.	Particulars	FY 2003-04	FY 2004-05	FY 2005-06	FY 2006-07	Total
(i)	Tax Reversals pertaining to the years FY 84 onwards -Shown in APR FY 08	42	31	30		
(ii)	Additional Tax Reversals - Shown in this APR FY 09	6	8	12	1	
(iii)=(i)+(ii)	Total	48	39	42	1	
(iv)	Tax claimed by TPC in their Filing based on actuals	224	138	160		
(v)=(iv)-(iii)	Tax that would have been claimed had the adjustments taken place in respective years	176	99	118		
(vi)	Tax Approved by the Commission in the Tariff Order for TPC	128	105	110		
(vii)	Tax Amt restored due to ATE Judgment		33	50		
(viii)=(vi)+(vii)	Total Amt requested to be Approved (including the amount restored)	128	138	160		
(v)	The amount by which CP would have exceeded RR owing to tax reversal = If (viii) is greater than (v) then (viii)-(v) else Nil	-	39	42		



Sl No.	Particulars	FY 2003-04	FY 2004-05	FY 2005-06	FY 2006-07	Total
(vi)= 1/3 of (v)	Transfer to T&D Reserve out of the excess through application of the provisions of the Sixth Schedule of the ESA 1948 Act	-	13	14		
(vii) = 1/3 of (v)	<b>Share of the consumers relating to the amount in (v) above through application of provisions of Sixth Schedule of the ESA 1948 Act</b>	-	<b>13</b>	<b>14</b>	<b>1</b>	<b>28</b>

The Commission has already undertaken the truing up for FY 2006-07 in its previous Order. Further, in this Order, the Commission has undertaken the truing up for FY 2004-05 and FY 2005-06 again based on the ATE Judgment in Appeal No. 60 of 2007. The Commission is of the view that at this stage, it may not be appropriate to transfer any amount to reserves for the period FY 2004-05 to FY 2006-07, particularly when the adjustment of reserves has already been carried out in previous Tariff Orders as well as in this Order and TPC has been allowed the maximum permissible reserves in accordance with the provisions of MERC Tariff Regulations. Therefore, for these three years, viz., FY 2004-05 to FY 2006-07, the Commission has considered the amount of Rs. 82 crore of tax refund to be passed on to consumers, as compared to Rs. 28 crore proposed by TPC.

### 3.16 EXCESS RECOVERY OF FAC

As regards the recovery of under-recovered FAC of Rs. 327.2 crore, the Commission in its Order dated June 4, 2008 in Case No. 69 of 2007 observed as follows:

*“As the actual under-recovery in FAC during FY 2006-07 is to the extent of Rs 264.66 Crore, TPC’s entitlement for recovery of this amount alongwith carrying cost works out to Rs 280.54 as against amount of Rs 327.2 Crore allowed by the Commission, Thus, the Commission will consider the excess recovery of Rs 45.65 Crore while carrying out the final truing up of TPC-G for FY 2007-08.”*

Accordingly, the Commission has considered the impact of excess recovery of Rs. 45.65 crore which includes the carrying cost for truing up purposes for FY 2007-08.

### 3.17 REVENUE FROM SALE OF POWER

TPC-G, in its Petition, has submitted the details of revenue from sale of power to the three Distribution Licensees of Mumbai Region, viz., TPC-D, BEST and RInfra-D,





under various heads like fixed charge, energy charge, hydro rebate, etc., as shown in the Table below:

Sl.	Particulars	Unit	BEST	RInfra-D	TPC-D	Total
1	Fixed Charge	Rs. crore	182	212	100	494
2	Incentive	Rs. crore	15	18	8	41
3	Hydro Rebate	Rs. crore	-27	-31	-15	-72
4	Energy Rate	Rs./kWh	3.32	3.32	3.32	3.32
5	Energy Sold	MU	4,086	4,748	2,246	11,080
6	Energy Charge	Rs. crore	1,355	1,574	745	3,674
7	Cash Discount/Settlement of previous issues	Rs. crore	-11	3		-7
8	Total = 1+2+3+6+7	Rs. crore	1,515	1,776	839	4,130

Similarly, RInfra-D and BEST have also shown the expenditure on power purchase from TPC-G for FY 2007-08 in their respective APR Petitions. However, the Commission observed that there was variation between the data submitted by RInfra-D and BEST in their Petitions towards power purchase expenses vis-à-vis the figures submitted by TPC-G towards Revenue, as shown in the Table below:

Sl.	Particulars	TPC-G APR	BEST APR	TPC-G APR	RInfra-D
		Petition	Petition	Petition	APR Petition
		Revenue from sale to BEST	Power Purchase	Revenue from sale to RInfra-D	Power Purchase
1	Energy (MU)	4086.28	4088.71	4747.76	4569.63
2	Amount (Rs Crore)	1515.19	1481.00	1775.76	1835.03

The Commission's staff held a meeting with all the Distribution Licensees of Mumbai and TPC-G to reconcile the above difference. The Commission has considered the revised reconciled statement for power purchase cost and revenue for FY 2007-08 for truing up purposes. Accordingly, the Commission has considered the total revenue from sale of power during FY 2007-08 to BEST and RInfra-D as Rs. 1510.93 crore and Rs. 1775.76 crore, respectively.

### 3.18 INCENTIVE ON PLF AND CAPACITY INDEX

TPC-G, in its Petition, submitted that the MERC Tariff Regulations permit incentive for thermal generation higher than PLF of 80% and on capacity index higher than 85% for hydro plants. The incentive due to TPC-G for FY 2007-08 works out to Rs 41.70 Crore. The incentive computations submitted by TPC for thermal and hydro stations are given in the following Tables:



**Table: Incentive Computations for thermal units as submitted by TPC-G**

Unit	Actual Net Generation (MU)	Net Generation at 80% PLF (MU)	Energy eligible for incentive (MU)	Rate of Incentive (Rs./kWh)	Incentive (Rs. crore)
Unit 4	735.82	969.75	-	0.25	-
Unit 5	3,805.66	3,320.35	485.31	0.25	12.13
Unit 6	3,751.22	3,390.62	360.60	0.25	9.01
Unit 7	1,305.01	1,230.11	92.25	0.25	2.31
<b>Total</b>					<b>23.45</b>

**Table: Incentive Computations for hydro stations as submitted by TPC-G**

Station	Actual Capacity Index - CIA (%)	Normative Capacity Index - CIN (%)	Diff. in Cap. Index eligible for incentive (%)	AFC as approved (Rs Crore)	Incentive (Rs Crore)
Khopoli	99.70%	85%	14.70%	75.03	7.17
Bhivpuri	97.96%	85%	12.96%	51.33	4.32
Bhira	99.36%	85%	14.36%	73.41	6.85
<b>Total</b>					<b>18.35</b>

TPC-G has computed the incentive on net actual thermal generation considering the actual auxiliary consumption. The Commission is of the view that as the benefit of reduction in auxiliary consumption is being allowed in terms of sharing of efficiency gains while truing up the revenue, which includes the revenue due to additional sales on account of lower auxiliary consumption, computing incentive considering actual auxiliary consumption instead of normative auxiliary consumption will lead to additional benefit for reduction in auxiliary consumption. Therefore, for thermal units, the Commission has re-computed the incentive for FY 2007-08 as given in the following Table:

**Table: Incentive Computation for thermal units as approved by the Commission**

Unit	Net Generation considering Aux. Consumption (MU)	Net Generation at 80% PLF (MU)	Energy eligible for incentive (MU)	Rate of Incentive (Rs/kWh)	Incentive (Rs. crore)
Unit 5	3780.54	3320.35	460.19	0.25	11.50
Unit 6	3734.40	3390.62	343.77	0.25	8.59
Unit 7	1299.97	1230.11	69.86	0.25	1.75
<b>Total</b>					<b>21.85</b>



For hydro stations, the Commission observed that TPC-G has computed the incentive on actual Annual Fixed Charge (AFC) rather than AFC approved by the Commission. The Commission is of the view that since the AFC is being not re-determined from retrospective basis, therefore, incentive component should be computed on approved AFC. The Commission has re-determined the tariff for Hydro generating stations considering the AFC approved in its MYT Order. The total incentive approved by the Commission for hydro generating stations works out to Rs 18.02 crore, as shown in the Table below:

Station	Actual Capacity Index - CIA (%)	Normative Capacity Index - CIN (%)	Diff. in Cap. Index eligible for incentive (%)	AFC as approved (Rs Crore)	Incentive (Rs Crore)
Khopoli	99.70%	85%	14.70%	71.90	6.87
Bhivpuri	97.96%	85%	12.96%	49.70	4.19
Bhira	99.36%	85%	14.36%	74.60	6.96
<b>Total</b>					<b>18.02</b>

### 3.19 SHARING OF GAINS AND LOSSES FOR FY 2007-08

TPC-G has submitted the actual expenditure under various heads of expenditure and the reasons for variation between the approved expenditure and the actual expenditure. Further, TPC-G has categorised these expenses as controllable and uncontrollable and computed the gains and losses for the controllable expenditure and shared the same with the Distribution Licensees. The relevant provisions under the MERC Tariff Regulations stipulating sharing of gains/losses due to controllable factors are reproduced below:

*“17.6.2 Some illustrative variations or expected variations in the performance of the applicant which may be attributed by the Commission to controllable factors include, but are not limited to, the following:*

*(a) Variations in capital expenditure on account of time and/ or cost overruns/efficiencies in the implementation of a capital expenditure project not attributable to an approved change in scope of such project, change in statutory levies or force majeure events;*



- (b) Variations in technical and commercial losses, including bad debts;
- (c) Variations in the number or mix of consumers or quantities of electricity supplied to consumers as specified in the first and second proviso to clause (b) of Regulation 17.6.1;
- (d) Variations in working capital requirements;
- (e) Failure to meet the standards specified in the Standards of Performance Regulations, except where exempted in accordance with those Regulations;
- (f) Variations in labour productivity;
- (g) Variations in any variable other than those stipulated by the Commission under Regulation 15.6 above, except where reviewed by the Commission under the second proviso to this Regulation 17.6.

...

19.1 The approved aggregate gain 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 gain shall be passed on as a rebate in tariffs over such period as may be specified in the Order of the Commission under Regulation 17.10;
- (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 under clause (b) of Regulation 19.2; and
- (c) The balance amount of gain may be utilized at the discretion of the Generating Company or Licensee.

19.2 The 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.”

The treatment (controllable or uncontrollable) proposed by TPC for variation in various heads of expenditure is given in the Table below:

**Table: Controllable and Uncontrollable factors proposed by TPC-G**



Sr. No.	Particulars	Category	TPC-G's Remarks
1	Fuel Cost	Uncontrollable	Uncontrollable to the extent of the fuel prices and controllable to the extent of the operational parameters
2	O&M expenditure	Controllable	Uncontrollable to the extent they arise due to factors such as increase in statutory levies, taxes, changes due to requirements of other utilities and other bodies such as municipal authorities, MbPT, etc.
3	Interest on Normative Loans	Uncontrollable	Controllable to the extent they arise due to delay in completion of the project thereby leading to increase in the completed project cost and such increase is not approved by the Commission.
4	Interest on Working Capital	Uncontrollable	Uncontrollable as worked out on normative basis at target availability.
5	Other Finance Charges	Controllable	
6	Depreciation & Advance against Depreciation	Uncontrollable	Controllable to the extent they arise due to delay in completion of the project thereby leading to increase in the completed project cost and such increase is not approved by the Commission.
7	Income Tax	Uncontrollable	
8	Return on Equity	Uncontrollable	Computed based on principles outlined by the Commission in the Tariff regulations.
9	Non-Tariff income	Uncontrollable	Controllable to the extent of the recurring portion of such non-tariff income.

The Commission has not accepted the above and has considered the performance parameters and expenses for computing the sharing of gains/losses in accordance with the MERC Tariff Regulations, as elaborated below:

### **Fuel Cost and reduction in auxiliary consumption**

TPC-G submitted that the variation in the fuel cost is due to variation in the operational parameters of the generating units, which are controllable factors. For Unit-4 and Unit-6, TPC-G computed the fuel cost based on the approved operational norms of heat rate, while for Unit-5 and Unit-7, TPC-G computed the fuel cost based on actual heat rate. For auxiliary consumption, TPC-G computed the efficiency gains with respect to norms approved by the Commission. The total efficiency gains estimated by TPC-G works out to Rs. 116 crore, which has been shared with the Distribution Licensees to the extent of Rs. 39 crore (one-third). The summary of the efficiency gain on account of fuel cost as proposed by TPC has been shown in the Table below:



**Table: Gain and loss due to variation in fuel cost as proposed by TPC-G (Rs Crore)**

Particulars		Unit 4	Unit 5	Unit 6	Unit 7	FHC & Other Adjustment	Total Fuel Cost
Fuel Cost (Rs. Crore)	a	476	626	2116	93	-	3311
Actual Heat Rate	b	2497	2567	2306	2001		
Actual Aux Consumption (%)	c	7.39%	4.87%	3.07%	2.37%		
Actual Net Heat Rate	d= b/(1-c)	2697	2698	2379	2050		
Normative Heat Rate	e	2565	2567	2400	2001		
Normative Aux Consumption (%)	f	8.00%	5.50%	3.50%	2.75%		
Normative Net Heat Rate	g=e/(1-f)	2788	2716	2487	2058		
Fuel Cost applying Normative Net Heat Rate (Rs. Crore)	h=g/d*a	492	631	2212	93	-	3428
Net Gains/ (Loss) (Rs. Crore)	i=h-a	16	4	96	0	-	116
Passed on to the Dist. Licenses	j=1/3xi	5	1	32	0	-	39

As discussed in the above Sections, for computing the efficiency gain/loss, the Commission has considered the approved normative heat rate for FY 2007-08 for each Unit in the MYT Order except for Unit-5 and Unit-7 where heat rate as approved in this Order has been considered by the Commission for approving the fuel costs. However, TPC-G has computed the efficiency gain based on net heat rate. If efficiency gain is computed on the basis of net heat rate, then the benefit of the better auxiliary consumption will get passed on twice as any gain in the net generation due to the reduction in the auxiliary consumption is realised through the extra sales by TPC-G. Therefore, the Commission has considered the efficiency gain on account of fuel cost on the basis of gross heat rate. The total efficiency gain on account of fuel cost approved by the Commission works out to Rs 82.09 Crore, one-third of which has been passed on to the Distribution Licensees.

The Commission has considered the benefit of reduction in auxiliary consumption in terms of sharing of efficiency gains. Therefore, for the Units of Trombay Station, the Commission has estimated revenue from energy charge from sale of additional power on account of reduction in auxiliary consumption, at Rs. 17.05 crore. The revenue from sale of additional power on account of reduction in auxiliary consumption from hydel stations works out to Rs. 1.88 crore considering the average per unit cost of hydel generation. In accordance with the MERC Tariff Regulations, one-third of the gain has been passed on to Distribution Licensees and two-thirds of such gain has been allowed to be retained by TPC-G.



Accordingly, the total efficiency gain on account of fuel cost approved by the Commission and on account of additional revenue due to reduced auxiliary consumption works out to Rs 101.03 Crore, as against the estimate of Rs. 116 crore by TPC-G.

### **O&M Expenditure**

TPC-G submitted that a number of uncontrollable factors have resulted in an increase in the expenses for FY 2007-08 and hence, TPC-G has restated the actual O&M expenditure for computing the efficiency gains/loss. TPC-G has thus considered the actual O&M expenditure as Rs. 296 crore, as compared to the actual O&M expenditure of Rs. 301 crore. By comparing this revised actual O&M expenses of Rs 296 crore with approved O&M expenses of Rs. 313 crore, TPC-G has considered a net gain of Rs. 17 crore in O&M expenses and has proposed to share 1/3<sup>rd</sup> of the same with the Distribution Licensees, as shown in the Table below:

**Table: Gain and loss due to variation in O&M expenses as estimated by TPC G**

**(Rs Crore)**

SI No.	Particulars	O&M
1	Approved O&M Expenditure for FY 2007-08	313
2	Actual O&M Expenditure without Brand Equity	301
3	Uncontrollable Expenditure	5
3.1	Water Charges	2
3.2	Up-gradation of IT Infrastructure	4
<b>4</b>	<b>Actual without Uncontrollable Expenditure</b>	<b>296</b>
<b>5</b>	<b>Amount passed on to the Distribution Licensee (1/3rd of Gain/Loss) (1/3<sup>rd</sup>*(1)-(4))</b>	<b>6</b>
<b>6</b>	<b>Amount allowed to be retained by Tata Power-G</b>	<b>11</b>
<b>7</b>	<b>Net Entitlement (3+4+6)</b>	<b>313</b>

The Commission is of the view that the approach adopted by TPC-G for working out efficiency gains due to controllable factors is not appropriate. The Commission is of the view that the overall actual O&M expenditure has to be compared with the O&M expenditure approved in the Order to determine the amount to be shared as a result of efficiency gains. The actual expenses cannot be restated by deducting the expenses related to water charges and up-gradation of IT infrastructure considered as uncontrollable by TPC-G. O&M expenses are a controllable expense head, and the



sharing has to be undertaken based on the actual expenses and the approved expenses. The total amount of O&M expenditure allowed by the Commission for FY 2007-08 based on actual expenses including increase in expenses subject to prudence check works out to Rs. 301.42 crore as against O&M expenses of Rs. 312.96 crore approved in the APR Order. Thus, the efficiency gain with respect to O&M expenses for FY 2007-08 works out to Rs 11.54 Crore, out of which 1/3<sup>rd</sup> has been considered to be passed on to Distribution Licensees and 2/3<sup>rd</sup> has been allowed to be retained by the Generating Company, i.e., TPC-G.

### Interest on Working Capital

TPC-G submitted that the Commission in its APR Order considered the difference between actual working capital and that approved as gains and hence, passed 1/3<sup>rd</sup> of the same to the Distribution Licensees. TPC-G submitted that has appealed against the Commission's methodology vide an appeal in the ATE stating that it has funded its working capital through funds available with the Corporate, which have a certain carrying cost. The summary of the computation of efficiency loss as submitted by TPC-G is shown in the Table below:

Particulars	Rs. Crore
Normative Interest on Working Capital	87
Actual Working Capital*	108
Amount of loss passed on to the Distribution Licensees	7
Amount of loss retained by TPC-G	14
Net Entitlement of TPC-G	94

\*Note: Actual working capital interest included the actual working capital interest of Rs. 22 crore paid to financial institutions and also considering a carrying cost on the working capital funded from internal accruals

As discussed in the above paragraphs, the actual interest on working capital incurred by TPC-G during FY 2007-08 is Rs. 22 crore and the normative interest on working capital approved by the Commission considering other elements of expenses as approved after truing up, works out to Rs. 84.79 crore. The Commission has considered the difference between the normative and actual interest on working capital as efficiency gain and has considered sharing of the same with the Distribution Licensees in accordance with the MERC Tariff Regulations.





**Gap/(Surplus) for FY 2007-08 based on truing up and sharing of efficiency gain/losses**

The Commission has considered the efficiency gains to be shared in accordance with the Tariff Regulations, thus, one third of this efficiency gain is to be shared with the Distribution Licensees and two third of the efficiency gain is being allowed to be retained by TPC-G. Based on the truing up of various elements of expenses and revenue and TPC-G's share of efficiency gains/losses, the Commission has estimated the total surplus as Rs. 233.45 crore as against the surplus of Rs. 57 crore estimated by TPC for FY 2007-08. The summary of the net ARR and efficiency gains as approved by the Commission for FY 2007-08 is given in the following Table:



**Table: Summary of Truing up for FY 2007-08 including sharing of efficiency gains (Rs Crore)**

S.No.	Particulars	FY 2007-08					
		Tariff Order	Actual	Entitlement as per Regulations/Order	Deviation	Efficiency Gain/(loss) shared with Distribution Licensees	Net Entitlement
<b>A</b>	<b>Expenditure</b>						
1	Fuel Related Expenses	2,986.00	3,311.18	3,393.27	(82.09)	27.36	3,365.90
2	Operation & Maintenance Expenses	312.96	301.42	301.46	(11.50)	3.83	309.13
3	Depreciation, including advance against depreciation	47.88	47.78	47.78	-	-	47.78
4	Interest on Long-term Loan Capital	22.79	20.46	19.54	-	-	19.54
5	Interest on Working Capital	88.88	22.00	84.79	(62.79)	20.93	63.86
6	Other Finance Charges*	-	(2.72)			-	4.23
7	Other Expenses		-		-	-	-
8	Income Tax	44.36	120.20	34.59	-	-	34.59
	<b>Total Expenditure</b>	<b>3,502.87</b>	<b>3,820.31</b>	<b>3,881.43</b>	<b>(156.38)</b>	<b>52.13</b>	<b>3,845.04</b>
<b>B</b>	<b>Return on Equity</b>	<b>152.00</b>	<b>152.00</b>	<b>152.00</b>	<b>-</b>	<b>-</b>	<b>152.00</b>
<b>C</b>	<b>Incentive for Higher PLF &amp; CI</b>		<b>41.47</b>	<b>39.86</b>			<b>39.86</b>
<b>D</b>	<b>Revenue sharing due to Reduced Aux. Cons.</b>			<b>18.94</b>	<b>(18.94)</b>	<b>6.31</b>	<b>12.62</b>
<b>D</b>	<b>Total including expenditure +RoE +Incentive</b>	<b>3,654.87</b>	<b>4,013.78</b>	<b>4,073.29</b>			<b>4,049.51</b>
<b>E</b>	<b>Revenue</b>				<b>-</b>	<b>-</b>	<b>-</b>
1	Revenue from sale of electricity	3,654.87	4,125.53				4,125.53
3	Revenue from Sale of Construction Power			<b>1.56</b>			<b>1.56</b>
4	Other Income	10.00	27.06	26.48	-	-	26.48
<b>F</b>	<b>Total Revenue</b>	<b>10.00</b>	<b>4,152.59</b>	<b>28.04</b>			<b>4,153.57</b>
<b>G</b>	<b>Revenue Gap/(surplus)</b>	<b>-</b>				<b>58.44</b>	<b>(104.06)</b>
<b>H</b>	<b>Impact of Tax reversal</b>		<b>28</b>	<b>28</b>			<b>(81.00)</b>
<b>I</b>	<b>FAC over-recovery of FY 2006-07</b>						<b>(48.39)</b>
<b>J</b>	<b>Net Surplus</b>						<b>(233.45)</b>

\* TPC-G subsequently revised the amount of financing charges to Rs. 4.23 crore



## 4 IMPACT OF JUDGMENT OF APPELLATE TRIBUNAL FOR ELECTRICITY (ATE)

### 4.1 BACKGROUND

As discussed in Section 1, the Commission issued the Order on the ARR Petition of TPC as a vertically integrated entity for FY 2005-06 (Case No. 12 of 2005) and ARR and Tariff Petition of TPC for FY 2006-07 (Case No. 56 of 2005) on October 3, 2006. In the said Order, the Commission had undertaken the truing up of the expenditure for FY 2004-05 and FY 2005-06.

TPC filed a review Petition (numbered as Case No. 47 of 2006) against the Commission's above said Order dated October 3, 2006. The Commission disposed off the review Petition by its Order dated March 22, 2007. TPC appealed (Appeal No.60 of 2007) against the Commission's Order on the Review Petition filed by TPC, before the ATE. The ATE issued its Judgment on TPC's Appeal in Appeal No. 60 of 2007 on May 12, 2008.

TPC submitted that the ATE has allowed TPC's appeal on the following issues and accordingly, it is entitled to recover certain amount of expenditure disallowed by the Commission in its Order dated October 3, 2006.

### 4.2 DEPRECIATION

On the issue of depreciation for FY 2004-05 and FY 2005-06, the Commission in its Order dated October 3, 2006 stipulated as follows:

*“TPC submitted the actual depreciation expenditure in FY 2004-05 and FY 2005-06, which have been computed partly in accordance with the depreciation rates considered in the Tariff Order. However, in case of plant and machinery under Transmission assets, the actual depreciation costs (Rs 68.54 Crore) for FY 2004-05 as submitted by TPC under Form F3 over Opening Gross fixed Assets (Rs 468.03 Crore) is very high and the depreciation rate works out to 14.65% during FY 2004-05. TPC is directed to submit the Auditor's certificate certifying that the accumulated depreciation for each asset in the asset register has not exceeded 90% of the asset value, as depreciation cannot be claimed beyond 90% of the asset value. The Depreciation expenditure approved by the Commission for FY 2004-05 and FY 2005-06 are summarised in the following Table*



Table: Depreciation Expense

(Rs Crore)

Sl.	Particulars	FY 2004-05			FY 2005-06		
		Tariff Order	Actuals	Allowed after truing up	Petition	Actuals	Allowed after truing up
1	Depreciation	171.00	245.50	200.35	160.08	157.00	153.46
2	Opening GFA	3592.32	3704.74	3704.74	3988.49	4023.00	3844.32
3	Depreciation Rate (%)	4.76%	6.63%	5.41%	4.01%	3.90%	3.99%

Further, the Commission in the Order on Review Petition in Case No. 47 of 2006 stipulated as follows:

*“In its submission, TPC has claimed that the remaining useful life of the asset was nil, the capitalised FERV has been depreciated fully in the year of capitalisation itself, viz., FY 2004-05. It appears that the useful life considered by TPC for this purpose refers to the useful life considered for the purposes of depreciation, and not the real useful life of the transmission asset, which is less than 15 years old, as the foreign exchange loan repayment was still being made on account of which the FERV has occurred. The useful life of such transmission assets as stipulated by the Commission’s Tariff Regulations ranges between 25 to 35 years.*

*However, since the truing up expenditure refers to FY 2004-05, wherein the Commission’s Tariff Regulations were not applicable, the useful life of the asset as stipulated in the Ministry of Power (MoP) Notification of March 1994 on ‘Depreciation Norms for licensees’ would be applicable. The fair life of the transmission assets as stipulated under the MoP Notification also ranges between 25 to 35 years, depending on the voltage. Hence, TPC’s submission that the remaining useful life of the asset is nil, is incorrect, and the balance useful life of the asset would be at least around 20 years. The capitalised FERV would have to be depreciated over the balance useful life of the asset, as provided in the AS-11. Since the actual age of the relevant asset is not known, the Commission is not in a position to determine the depreciation allowable in FY 2004-05 and subsequent years, on this account.*

*Moreover, the auditor’s certificate submitted by TPC indicates that the FERV has been capitalised and depreciated to the extent of 100%, though the principal asset has been depreciated only 90% in accordance with the*



regulatory requirements. Hence, the depreciation on the capitalised FERV should also be limited to 90%, as a result of which, the extent of depreciation additionally allowable would reduce by Rs. 3.72 crore. TPC may submit the detailed description of the assets for which FERV was incurred, age of the asset and the balance useful life of the asset, with reference to the MoP notification, to enable the computation of depreciation in future years, on this account.

As regards the capitalisation of insurance spares and the corresponding depreciation, this detail was not submitted earlier to the Commission, along with the Petition. Further, the impact in FY 2004-05 has arisen primarily because of change in accounting policy of the Company, as insurance spares were identified and depreciated in accordance with AS-2 in FY 2004-05. As this does not qualify under either “mistake or error apparent on the face of the record” or “discovery of new and important matter or evidence which, after the exercise of due diligence, was not within the Petitioner’s knowledge or could not be produced by him at the time when the direction, decision or order was passed”, the Commission rejects review of depreciation expenditure allowed on the grounds of depreciation on account of capitalisation of insurance spares.”

The relevant paragraphs of TPC’s appeal in this regard as stipulated in the ATE Judgment in Appeal No. 60 of 2007 in the matter are as follows:

“TPC submitted that it had provided for and claimed depreciation for the period in question on the basis of the opening asset block of Rs.468.04 Crores based on the detailed fixed asset register maintained by them, applying a weighted average depreciation rate of 6.73% derived from the applicable rates as notified by the Ministry of Power on March 26, 1994 pursuant to the VI Schedule to the Supply Act. TPC contends that “Plant and Machinery” covers assets which attract depreciation rates ranging from 1.8% to 45% in terms of the Schedule to the 1994 notification which resulted in the weighted average depreciation rate of 6.73%. However, MERC has applied a depreciation rate of 5% for the said block of asset.

TPC extensively relied upon the principles, purpose and application of useful life and rate of depreciation as provided for under the Ministry of Power’s Notifications of 1992 and 1994 as laid down in the judgments of this Tribunal



*dated May 24, 2006 and September 29, 2006 passed in Appeal No. 122 of 2005, and as upheld by the Hon'ble Supreme Court in Delhi Electricity Regulatory Commission vs BSES Yamuna Power Ltd & Others [(2007) 3 SCC 33]*

*Per contra learned senior counsel appearing for MERC has contended that the reliance on the judgment of the Hon'ble Supreme Court was limited to the peculiar facts of the five year policy direction based on transition in Delhi from a public utility to a private utility.*

*TPC submitted that within its depreciation claim is a component of provision for additional Insurance spares computed on the basis of the existing inventory which ought to be allowed. Taking note of the fact that the useful /depreciable life of the assets in terms of the MOP Notifications had already been exhausted and 90% original book value written down, TPC capitalized and depreciated the insurance spares in that very year in compliance with Accounting Standards ASI2, whereby TPC examined the inventory existing and even provided for insurance spares. Since the assets were already depreciated, TPC capitalized and depreciated the insurance spares in that very year in compliance with ASI2.*

*TPC further submitted that MERC approved of depreciation to the sum of Rs.200 Crores in the true-up exercise for FY 2004-05, as against the depreciation approved in the Tariff Order was Rs.175 Crores. However, MERC failed to take note of the fact that the actual depreciation for FY 2004-05 was Rs.245 Crores out of which Rs.70 Crore were allocable to the additional provisions made in terms of paragraph (b) and (c) above. As a consequence, MERC erred in treating the claim as excessive and denying to TPC a depreciation claim of Rs.51.62 Crores (Rs.45 Crores plus Rs.6.62 Crores).*

The ATE, in its Judgment in Appeal No. 60 of 2007 on this issue, ruled as under:

*“15. Schedule VI of The Electricity (Supply) Act, 1948 is applicable both in Mumbai and in Delhi for tariff determination of the licensees, we find no force in the arguments of the Commission that DERC vs BSES Yamuna judgment pertains to the peculiar facts of five year policy directive of Delhi Government. The judgment of this Tribunal in Appeal No.122 of 2005 which*



was upheld by the Hon'ble Supreme Court will be applicable to Tata Power also. In this view of the matter, we decide in favour of the appellant.

16. Insofar as the component for FERV and insurance spares for determination is concerned, it is to be kept in mind that the accounting standards have to be necessarily followed by the appellant and there is no exception to it. In view of this we agree with the contentions of the appellant and decide this issue also in favour of the appellant.”

TPC-G, in its Petition, submitted that in accordance with the ATE Judgment in Appeal No. 60 of 2007 it is entitled to recover the entire disallowed amount for FY 2004-05 and FY 2005-06 except for the variation of Rs. 3.7 Crore being 10% of the depreciation to be retained out of the deprecation arising out of Foreign Exchange Variation. The summary of the impact of ATE Judgment in Appeal No. 60 of 2007 for depreciation as submitted by TPC is shown in the Table below:

**Rs crore**

Particulars	FY 2004-05	FY 2005-06
Actual	245.50	157.00
Allowed in Tariff Order dated Oct. 3, 2006	200.35	153.46
Disallowed Quantum	45.15	3.54
<b>Amount of disallowed quantum to be now allowed due to ATE Judgment</b>	<b>41.45*</b>	<b>3.54</b>

Note: \* FERV being considered as depreciable only 90%

In accordance with the ATE Judgment in Appeal No. 60 of 2007 on this issue, the Commission has considered the additional allowable expenses on account of depreciation for FY 2004-05 as Rs. 41.45 crore and Rs. 3.54 crore for FY 2005-06.

### 4.3 INCOME TAX

On the issue of income tax for FY 2004-05 and FY 2005-06, the Commission in its above said Order dated October 3, 2006 stipulated as follows:

*“In the absence of details on actual income tax paid for the Mumbai license area, the actual income tax paid by TPC in FY 2004-05 and FY 2005-06 has been apportioned between the Mumbai license area business and other business of TPC, which has been assumed as 75:25. Accordingly, 75% of the actual income tax paid by TPC has been apportioned to TPC’s licensed business in Mumbai. Thus, the income tax expenditure allowed for FY 2004-05 and FY 2005-06 is Rs. 104.9 crore and Rs. 110.1 crore, respectively...”*



Further, the Commission in the Order on Review Petition in Case No. 47 of 2006 stipulated:

*“Moreover, TPC has requested the Commission to allow pass through of income tax to the extent of Rs. 159.4 crore in FY 2005-06, when the actual income tax for TPC as a whole, including other businesses, as per TPC’s audited results is only Rs. 146.8 crore. This highlights the unreasonableness of this request, as the consumers are being expected to pay tariff to recover income taxes that have not been actually paid by TPC as a whole, leave alone for the licensed area.”*

The ATE, in its Judgment in Appeal No. 60 of 2007, ruled as under:

*“18. This issue is exactly covered by our judgment in appeal No. 251 of 2007 in case of REL vs MERC dated April 04, 2007 ( 2007 APTEL 164). We decide that in this view of the matter the Commission should extend the same regulatory dispensation to Tata Power as implemented in pursuance of our judgment in case of REL.”*

The relevant para of the ATE Judgment in Appeal No. 251 of 2007 regarding income tax, stipulates as under:

*“32. We see force in the arguments put forth by the counsel for the appellant as truing up for the years 2004-05 and 2005-06 has to be carried out only as per the Sixth Schedule. The consumers in the licensee’s area must be kept in a water tight compartment from the risks of other business of the licensee and the Income Tax payable thereon. Under no circumstance, consumers of the licensee should be made to bear the Income Tax accrued in other businesses of the licensee. Income Tax assessment has to be made on stand alone basis for the licensed business so that consumers are fully insulated and protected from the Income Tax payable from other businesses. We, therefore, allow the appeal in this respect.”*

TPC submitted that therefore, it is entitled to recover the disallowed amount of income tax for FY 2004-05 and FY 2005-06. The summary of the impact of ATE Judgment in Appeal No. 60 of 2007 for income tax as submitted by TPC is shown in the Table below:

<i>Rs crore</i>		
<b>Particulars</b>	<b>FY 2004-05</b>	<b>FY 2005-06</b>
Actual	138	160
Allowed in Tariff Order dated Oct. 3, 2006	105	110





Disallowed Quantum	33	50
<b>Amount of disallowed quantum to be now allowed due to ATE Judgment</b>	<b>33</b>	<b>50</b>

In accordance with the ATE Judgment in Appeal No. 60 of 2007 in this regard, the Commission has considered the additional allowable expenses on account of income tax for FY 2004-05 as Rs. 33 crore and Rs. 50 crore for FY 2005-06.

#### 4.4 EMPLOYEE EXPENDITURE

On the issue of employee expenditure for FY 2004-05 and FY 2005-06, the Commission in its Order dated October 3, 2006 stipulated as follows:

*“TPC has projected the employee expenses for FY 2005-06 in its Petition for FY 2005-06, based on six month actuals and balance projection, wherein it has considered an increase in the employee expenditure in FY 2005-06 over the actual employee expenditure in FY 2004-05. Subsequently, TPC has given the actual employee expenses in FY 2005-06. While approving the employee expenses for FY 2005-06, the Commission has considered an increase of around 5% over the allowed level of expenses in FY 2004-05 (after truing-up), in accordance with the trend of increase in CPI, though the actual growth trend in case of TPC is around 3%.”*

Further, the Commission in the Order on Review Petition in Case No. 47 of 2006 stipulated as follows:

*“TPC has submitted that the amount of prior period adjustment of Rs. 15 crore should not be deducted from the expenditure in FY 2004-05, while projecting the amount of allowable employee expenditure in FY 2005-06. The Commission is of the opinion that TPC’s rationale is flawed, as the prior period adjustment refers to amounts that have been booked as expenditure in some previous years, which have now been reversed. However, the growth in expenditure has been computed on the basis of the expenditure actually booked during these previous years, rather than the lower level of expenditure which should have been actually booked, had the prior period expenditure been correctly accounted for in the respective years.*

*If the Commission accepts TPC’s request, it would amount to double accounting of this expenditure of Rs. 15 crore, resulting in inflating the allowable level of expenditure for FY 2005-06. Moreover, in the Tariff Order, the Commission had considered a growth rate of 5% for projecting allowable*



*expenses in FY 2005-06, though the actual increase was around 3%, as stated below:*

*“While approving the employee expenses for FY 2005-06, the Commission has considered an increase of around 5% over the allowed level of expenses in FY 2004-05 (after truing-up), in accordance with the trend of increase in CPI, though the actual growth trend in case of TPC is around 3%.”*

***Hence, the Commission does not grant review of the employee expenditure allowed for FY 2005-06.”***

The ATE Judgment in Appeal No. 60 of 2007 stipulates as under:

*“19. Learned counsel submitted that this claim is also covered by this Tribunal judgment of April 04, 2007 in Appeal No. 251 of 2007 titled REL v/s MERC.*

*20. Learned counsel appearing for the Commission fairly accepted the plea of Tata Power and assured that it shall take up this issue subject to prudence check. We order accordingly.”*

TPC submitted that the ATE in its Judgment in Appeal No. 60 of 2007 directed the Commission to allow the actual amount subject to “prudence check”. TPC added that the Commission in TPC-G’s APR Order dated April 2, 2008 in Case No. 68 of 2007 had allowed the actual employee expenditure for TPC-G for FY 2006-07, which was justified on the basis of the expenses of FY 2005-06 (matter of the Appeal itself).

TPC submitted that therefore, it is entitled to recover the entire disallowed amount of employee expenses for FY 2004-05 and FY 2005-06. The summary of the impact of ATE Judgment in Appeal No. 60 of 2007 for employee expense as submitted by TPC is shown in the Table below:

***Rs crore***

<b>Particulars</b>	<b>FY 2004-05</b>	<b>FY 2005-06</b>
Actual	133	152
Allowed in Tariff Order dated Oct. 3, 2006	133	140
Disallowed Quantum	0	12
<b>Amount of disallowed quantum to be now allowed due to ATE Judgment</b>	<b>0</b>	<b>12</b>



In accordance with the ATE Judgment in Appeal No. 60 of 2007 in this regard, the Commission has considered the allowable expenses on account of employee expense at actuals for FY 2005-06. However, TPC has erred in submitting the amount of actual employee expenses for FY 2005-06. The Commission, in this regard, has relied on the actual amount of employee expenses as submitted by TPC for FY 2005-06 and recorded in the above said Tariff Order dated October 3, 2006, as reproduced below:

*“The employee expenses allowed by the Commission for FY 2004-05 and FY 2005-06 are given in the Table below:*

Employee Expenses		(Rs. Crore)				
Particulars	FY 2004-05			FY 2005-06		
	Tariff Order	Actuals	Allowed after truing up	Petition	Actuals	Allowed after truing up
Salaries & Wages	109.87	80.55	80.55	100.42	105.60	84.58
Staff Welfare Expenses	0.00	10.46	10.46	9.97	9.70	10.98
Terminal Benefits	28.12	36.55	36.55	25.12	24.70	38.38
VRS Expenses	8.00	5.81	5.81	7.30	7.70	6.11
<b>Total Employee Cost</b>	<b>145.99</b>	<b>133.38</b>	<b>133.38</b>	<b>142.81</b>	<b>147.70</b>	<b>140.05</b>

Accordingly, the summary of the impact of the ATE Judgment in Appeal No. 60 of 2007 for employee expenses as considered by the Commission is shown in the Table below:

*Rs crore*

Particulars	FY 2004-05		FY 2005-06	
	TPC	Approved by the Commission	TPC	Approved by the Commission
Actual	133	133	152	148
Allowed in Tariff Order dated Oct. 3, 2006	133	133	140	140
Disallowed Quantum	0	0	12	8
<b>Amount of disallowed quantum to be now allowed due to ATE Judgment</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>8</b>

#### 4.5 R&M EXPENDITURE

On the issue of R&M expenditure for FY 2004-05 and FY 2005-06, the Commission in its Order dated October 3, 2006 stipulated as follows:



*“The Commission has examined the prudence of the R&M expenditure incurred by TPC in FY 2004-05 and FY 2005-06. The Commission has allowed the R&M expenditure in FY 2004-05 and FY 2005-06, to the extent of 3% of opening GFA...”*

Further, the Commission in the Order on Review Petition in Case No. 47 of 2006 stipulated as follows :

*“...Moreover, it is a fact that the GFA has been increasing steadily and newer assets have been regularly added to the system, especially in the distribution business. It is logical that newer assets will require negligible/lesser R&M expenditure, which will offset the higher R&M requirement for the older assets. Moreover, in FY 2005-06, the expenditure has been allowed for TPC as an integrated Utility.*

***Hence, the norm of 3% of GFA adopted by the Commission is appropriate and there is no need for reviewing the R&M expenditure allowed.”***

The ATE, in its Judgment in Appeal No. 60 of 2007, stipulated:

*“21. Learned counsel stated that TPC submitted that Commission has allowed only Rs. 111.14 crores against the actual expenditure of Rs. 113.21 crores (for FY 2004-05) and Rs. 115.33 crores against actual expenditure of Rs. 115.95 crores (for FY 2005-06). He further stated that this claim is covered by the judgment dated April 04, 2007 of this Tribunal in Appeal No. 251 of 2007.*

*22. We direct that the Commission to adopt the principles given in the aforementioned judgment of April 04, 2007 in this view of the matter also.”*

TPC quoted the relevant para of the ATE Judgment in Appeal No. 251 of 2007 regarding R&M expenditure, which stipulates:

*“38. Commission clarified that all these amounts in respect of Repairs and Maintenance for Generation, Transmission and Distribution are only projections and the actual expenses could be higher or lower than these projections, which will be considered at the time of truing up of the expenses, subject to prudence of the expenditure.*

*39. We do not find anything wrong in this approach of the respondent Commission.”*

TPC submitted that therefore, it is entitled to recover the entire amount disallowed under this head for FY 2004-05 and FY 2005-06. The summary of the impact of ATE



Judgment in Appeal No. 60 of 2007 for R&M as submitted by TPC is shown in the Table below:

Particulars	Rs crore	
	FY 2004-05	FY 2005-06
Actual	113	116
Allowed in Tariff Order dated Oct. 3, 2006	111	115
Disallowed Quantum	2	1
<b>Amount of disallowed quantum to be now allowed due to ATE Judgment</b>	<b>2</b>	<b>1</b>

In accordance with the ATE Judgment in Appeal No. 60 of 2007 in this regard, the Commission has considered the actual R&M expenses and accordingly approves the additional allowable expenses on account of R&M expenses for FY 2004-05 as Rs. 2 crore and Rs. 1 crore for FY 2005-06.

#### 4.6 A&G EXPENDITURE

On the issue of A&G expenditure for FY 2004-05 and FY 2005-06, the Commission in its Order dated October 3, 2006, stated:

*“The Commission has examined the prudence of the A&G expenditure incurred by TPC in FY 2004-05 and FY 2005-06. Mere incurrence of the cost cannot be a reason for allowing the same through the tariff. The annual growth in A&G expenses is around 2.4%, over the last five years. The Commission is of the opinion that A&G expenses should be controlled, and has hence allowed A&G expenses for FY 2004-05 at the same level as approved in the Tariff Order. For FY 2005-06, an increase of 2.4% has been considered, over the allowed level of A&G expense in FY 2004-05...”*

Further, the Commission in the Order on Review Petition in Case No. 47 of 2006 stipulated as follows:

*“As regards the reduction in heat rate of Unit 6, the reduction in heat rate in FY 2003-04 (before Consultant was appointed) was 40 kcal/kWh, while the reduction in heat rate in FY 2004-05 (after Consultant was appointed) was only 10 kcal/kWh. TPC has also indicated that one of the benefits of the Consultant’s recommendation was that TPC managed to increase its load to HPCL by 45 MW. The Commission is of the opinion that other consumers should not be made to pay for TPC’s drive to increase the sales to selected consumers.*



***Accordingly, the Commission is of the opinion that no review of A&G expenses is required, and hence, does not grant the same.”***

The ATE, in its Judgment in Appeal No. 60 of 2007, stipulated:

*“30. In view of the aforesaid we allow the appeal on this issue of A&G expenditure.”*

TPC submitted that therefore, it is entitled to recover the entire amount disallowed under this head for FY 2004-05 and FY 2005-06. The summary of the impact of ATE Judgment in Appeal No. 60 of 2007 for A&G as submitted by TPC is shown in the Table below:

<b><i>Rs crore</i></b>		
<b>Particulars</b>	<b>FY 2004-05</b>	<b>FY 2005-06</b>
Actual	102	101
Allowed in Tariff Order dated Oct. 3, 2006	83	85
Disallowed Quantum	19	16
<b>Amount of disallowed quantum to be now allowed due to ATE Judgment</b>	<b>19</b>	<b>16</b>

In response to the Commission’s query, TPC submitted the details of A&G expenses under various heads in the format specified by the Commission. The Commission also noted that the actual A&G expenses for FY 2004-05 is inclusive of an amount of Rs. 21 crore, which TPC incurred while engaging consultants for the implementation of cost saving exercises/initiatives.

The Commission asked TPC to submit the details related to such consultancy services in terms of process adopted for appointing consultants, price offered by bidders, etc. TPC submitted that it engaged the services of Mckinsey and Company, which is a reputed consultant worldwide and was selected on account of the following reasons:

- (i) Mckinsey and Company is a leading consulting group in the World;
- (ii) Special methodology developed by them to address cost reductions. The technique involved Key Performance Indicator (KPI) tree for all cost elements, planning action, monitor and improvement;
- (iii) Mckinsey and Company’s services had yielded good results in two of the TPC’s group companies namely, The Tata Steel Ltd and The Tata Chemicals Ltd.
- (i) Mckinsey and Company had been hired by various State Governments and the Public Sector Undertakings including Government of West Bangal, Government of Andhra Pradesh, GAIL, NTPC, SBI, ONGC, Indian Oil,



SAIL, Bharat Petroleum, TRAI, Food Corporation of India and Municipal Corporation of Greater Mumbai.

TPC further submitted that it believes that in appointing consultants as advisors, it is not the competitive bidding process that is relevant but the experience and expertise profile of the organisation and reasonableness of the fee compared to efforts and likely gains. The management team chose Mckinsey based on the above approach. It was further strengthened by the fact that the consultant had successfully carried out such exercise in other Tata Companies, whose experience has been found to be very good in terms of quality of work compared to estimated effort and gains realized. TPC also provided the credentials of the consultants. TPC further quoted the ATE Judgment in Appeal No. 60 of 2007 on the A&G expenses, which stipulates:

*“29. In our view any expenditure properly incurred by the licensee has to be permitted. TPC have furnished credentials of the consultants and the benefits they have derived through system improvements from the services rendered by the consultant and the benefits of about Rs.100 crores derived by TPC. It is an accepted international practice that the remuneration of the consultant depends mainly on the quality of services they deliver and, therefore, no hard and fast rules can be laid for determination of the services of the consultant. Such decisions are normally left to the management of the utilities. Competition can be created amongst consultants of similar standing and repute by proper evaluation process.*

*30. In view of the aforesaid we allow the appeal on this issue of A&G expenditure.”*

TPC further submitted that the main focus of appointing the consultant was:

- (i) Involving the personnel from TPC
- (ii) Implementation of these ideas and
- (iii) Review of the implementation.

TPC also submitted that with this methodology, there were several areas for improvement that were identified and submitted the details of the areas for improvement. Further, TPC submitted that the consultant was a partner in implementation too. **Accordingly, there was no report as such that was produced with suggestions for implementation.** TPC further submitted the cost benefit analysis for some of the items.

In accordance with the ATE Judgment in Appeal No. 60 of 2007 in this regard, the Commission has considered the actual A&G expenses and accordingly approves the



additional allowable expenses on account of A&G expenses for FY 2004-05 as Rs. 19 crore and Rs. 16 crore for FY 2005-06. However, the Commission is also concerned with appointment of consultants at such heavy fees and that too without any properly defined scope of work in writing. Further, TPC in this case has even not submitted any report or deliverable of the consultant to the Commission. The Commission would also like to highlight that the TPC had not revealed the name of the consultant appointed either along with its ARR and Tariff Petition for FY 2005-06 and FY 2006-07 or even its Review Petition and the name of the consultant was revealed first time by TPC in its Appeal before ATE. **The Commission directs TPC that in future, any appointment of consultants where the estimated cost for the engagement of the Consultants is more than Rs. 1 crore, it should ensure that the selection is made through a competitive bidding process, proper Terms of Reference are prepared, cost benefit analysis is stated upfront and the deliverables of the consultancy assignment are properly defined. TPC-G should submit the following details for all consultancy assignments of more than Rs 1 Crore in its APR and Tariff Petition:**

- **Process followed for appointment of Consultant including number of bids received along with bid documents**
- **Stated Cost-Benefit analysis and assessment of cost benefit analysis after completion of the assignment**
- **List of Deliverables submitted by Consultant**

#### **4.7 DRAWAL FROM STATUTORY RESERVES;**

As regards the issue of drawal from the statutory reserves to meet the under-recovered FAC, TPC referred to the ATE Judgment in Appeal No 60 of 2007, which stipulates:

*“31. This claim of Tata Power issue relates to the draw-down and appropriation of Rs. 226 Crores from the Contingency Reserves of Tata Power to meet the gap between Clear Profits and Reasonable return. Learned counsel for Tata Power contended that this claim is covered by the judgment dated July 12, 2007 of this Tribunal passed in IA No. 76 of 2006 in Appeal No. 251 of 2007.*

*32. Since this issue is covered in our judgment above, we direct the Commission to apply the same principles in case of Tata Power also.”*

TPC submitted that ATE, in its Judgment dated July 12, 2007 has upheld REL's (subsequently renamed as RInfra) appeal in the matter of drawal from Statutory





Reserves. Hence, applying the same rationale in the case of TPC, TPC requested that the Contingency Reserves should not be drawn for meeting the gap between Clear Profit and Reasonable Return. TPC requested that the Contingency Reserves may therefore, be restored to that extent.

In accordance with the ATE Judgment in this regard, the Commission has considered TPC's claim for restoration of contingency reserve. The consequential treatment of the Contingency Reserves has been discussed in subsequent paragraphs in this Section.

#### **4.8 INCOME TAX ADJUSTMENT**

On the issue of income tax adjustment for FY 2004-05 and FY 2005-06, the Commission in its Review Order dated March 22, 2007 in Case No. 47 of 2006 stated as under:

*“Accordingly, the Commission’s rejects TPC’s contention to recompute the income tax liability allowed for FY 2004-05 and FY 2005-06 based on the expenditure allowed by the Commission and the income earned by TPC.”*

The ATE, in its Judgment in Appeal No. 60 of 2007, stipulated as follows:

*“34. MERC has fairly conceded that if Tata Power succeeded on other issues, the same will have an impact on those issues and it will automatically be entitled to the claim of tax liability. We order accordingly.”*

However, TPC-G has now submitted in the present APR Petition that as the disallowed amounts, after considering the impact of ATE Judgment in Appeal No. 60 of 2007 would be almost negligible, there will be no impact on its income tax liability and as result no additional amount has been assessed by them.

The Commission has accepted the above contention of TPC.

#### **4.9 CAPEX RELATED EXPENSES**

On the issue of capital expenditure for FY 2004-05 and FY 2005-06, the Commission in its Order dated October 3, 2006 in Case No. 12 of 2005 and 56 of 2005 stipulated:

*“There is a discrepancy between the capitalisation figures reported under Form F5.4 (CWIP and capitalisation) and figures for addition to Gross Fixed Assets reported under Form F4 (Assets and Depreciation) by TPC under its*



*submission. Accordingly, the Commission has only considered capital schemes whose details have been furnished under Form F5.3 (Capital Expenditure). The Commission directs TPC to henceforth ensure consistency across various Forms. Further, under Form F5.4, TPC has not included capitalisation of interest and only cost of works has been considered for capitalisation. The Commission opines that interest cost during construction (IDC) should not be considered as part of revenue expense and the same should be capitalised along with assets, as and when put to use. Accordingly, the Commission has considered capitalisation of assets including IDC derived considering the normative debt (70% of capital investment) and considering the interest rate of 10% for the schemes initiated during FY 2004-05 and FY 2005-06...”*

Further, the Commission in the Order on Review Petition in Case No. 47 of 2006 stipulated as follows:

*“...For the purpose of approval of ARR, capitalisation is equally important apart from capital expenditure. Besides, the Commission is of the view that unless capital expenditure and capitalisation are reconciled and discrepancies as identified above are addressed, it is not possible to consider any capitalisation as a part of this review.*

*Moreover, the Commission expresses its displeasure with TPC for non-submission of the DPRs for these schemes. In fact, the Commission had directed TPC to submit the DPR for these schemes related to network development activity in its Order dated June 11, 2004, which was not done by TPC. Subsequently, in February 2005, the Commission issued guidelines for approval of capital expenditure schemes, wherein it was stipulated that all schemes above Rs. 10 crore would require DPR to be submitted. However, TPC did not make any submissions as regards network development activity after these guidelines were issued.*

*In the Order dated October 3, 2006, the Commission reiterated that this capital expenditure was not being approved in the absence of DPRs. After almost two and a half years since the Commission's first Tariff Order, TPC has submitted in its Review Petition that these schemes are below Rs. 10 crore, and only one scheme is above Rs. 10 crore, for which the DPR will be submitted. However, till date, the DPR has not been submitted even for this scheme.*



***Given the repeated failure of TPC to comply with the Commission's directions in this regard and non-submission of DPRs till date, the Commission does not see any merit in approving this capital expenditure."***

The ATE, in its Judgment in Appeal No. 60 of 2007, stipulated:

*"35. TPC submitted that MERC has disallowed the Capital Expenditure on the ground that the various schemes have not been placed before MERC for its approval and/or no details of such schemes were provided by TPC to MERC. TPC submits that non approval of Capital Expenditure is without any justification, arbitrary and unlawful. TPC contends that MERC disapproved Capital Expenditure under Network Development Activity for the FY 2004-05 and FY 2005-06 on the ground that no DPR was submitted. TPC submitted that the expenditure of Rs.70 Crores under the Network Development Activity did not require submissions of DPR in view of the MERC "guidelines for in-principle clearance of proposed investment schemes" which required submission of feasibility report for Licensee for those capital investment schemes exceeding Rs.10 Crores for "in-principle" approval by MERC. It submitted that only one such scheme exceeded Rs.10 Crores investment and the said scheme was submitted for approval with MERC. Remaining schemes under Network Development Activity worth Rs.70 Crores did not require submissions of feasibility report. Details of these schemes were submitted by TPC to MERC along with the Review Petition and that the MERC has not taken into account of these documents/details of the schemes while passing the in-principle Order. It was further submitted that the disallowance of Capital Expenditure is contrary to the law enunciated by this Tribunal in its judgment dated November 08, 2006 passed in Appeal No.84/2006 titled as KPCL vs. KRC.*

...

*38. Mr. Kapur submitted that this view has also been approved and followed by this Tribunal in its judgment dated November 08, 2006 in Appeal Nos. 181 & 207/2005 and 59/2006.*

*39. MERC in the beginning, justified its Order by stating that TPC had not submitted details of the schemes and as such MERC was not in a position to discern whether the scheme were actually for amount less than Rs.10 Crores. However, on being shown the details of the schemes and the documents placed*



on records by the Counsel for TPC MERC conceded that it had not looked into these details.

40. In view of our judgment in case of KPTCL vs KERC cited above and the fact that only such schemes as are more than Rs. 10 Crores are to be furnished for MERC approval, we allow the appeal in this view of the matter also.”

TPC-G submitted that the interest cost has been disallowed due to disallowance of the capital expenditure and a plain reading of the decision of the ATE implies that whole of actual capital expenditure/capitalisation would have to be allowed for FY 2004-05 and FY 2005-06. Accordingly, TPC submitted that therefore, it would be able to recover the entire interest expenses for FY 2004-05 and FY 2005-06. The summary of the impact of ATE Judgment in Appeal No. 60 of 2007 on interest expenses as submitted by TPC is shown in the Table below:

*Rs crore*

Particulars	FY 2004-05	FY 2005-06
Actual	20	45
Allowed in Tariff Order dated Oct. 3, 2006	15	40
Disallowed Quantum	5	5
<b>Amount of disallowed quantum to be now allowed due to ATE Judgment</b>	<b>5</b>	<b>5</b>

In accordance with the ATE Judgment in Appeal No. 60 of 2007 in this regard, the Commission has considered the actual interest expenses and accordingly approves the additional allowable expenses on account of interest expenses as Rs. 5 crore each for FY 2004-05 and FY 2005-06.

#### **4.10 DEPARTURE FROM MERCANTILE SYSTEM**

As regards the un-recovered FAC and adjustment of reserves for FY 2004-05 and FY 2005-06, the Commission in its Review Order dated March 22, 2007 in Case No. 47 of 2006, stipulated:

*“Further, TPC has interpreted the Commission’s Tariff Regulations to mean that FAC under recovery has to be adjusted against FAC in future, which is incorrect. Firstly, the Commission’s Tariff Regulations are not applicable for FY 2005-06. Moreover, the relevant provisions of the Tariff Regulations do not support TPC’s interpretation, as the Tariff Regulations state that FAC under-recovery shall be carried forward and be recovered over such future period as may be directed by the Commission. This does not mean that the FAC under-recovery if any will be adjusted against FAC in future. Hence, the*



*Commission has considered the FAC under-recovery while truing up for FY 2005-06, and the same has been adjusted against the available regulatory reserves.*

*The Commission also does not agree with TPC's statement that it would be forced to reverse the revenue booked in FY 2005-06 which would result in reduction of revenue and publishing such results would have serious business impact. TPC should be aware that Regulatory accounts may differ from the Company's audited accounts, which are prepared in accordance with the Companies Act, 1956, due to difference in treatment of certain expenses, allowance/disallowance of certain expenses, etc. TPC may deal with this matter internally, without linking the same with the treatment of expenses and revenue being done by the Commission in its Orders.*

*Hence, the Commission does not grant review of the treatment on account of unrecovered FAC and reserves."*

The ATE, in its Judgment in Appeal No 60 of 2007, ruled:

*"46. In view of the aforesaid succinctly defined terms, it is clear that as soon as the liability arises the same has to be accounted for. One does not have to wait for the receipt of cash in hand or disbursal of expenditure. Companies are required to declare their accounting policies and they are required to adhere to the same. In the present case TPC having declared their accounting policy, they cannot deviate from it. Notwithstanding the 10% cap put by MERC in the Fuel Adjustment Cost (FAC). The moment electricity is sold income corresponding to the entire Fuel Adjustment Cost has accrued and has to be entered into the books of accounts. On the expenditure side the price paid for the fuel (irrespective of 10% cap) has to be paid to the fuel supplier and corresponding entry has to be made in the accounts books. If contention of the Commission was to be accepted there will be a distortion in the books of accounts as expenditure would be shown fully but corresponding income will be truncated limited by the 10% cap. Such distortion cannot be allowed by accounting standard as the same will result in reduced income. This will further result in lesser payment of Income Tax by the company which may attract penalties.*

*47. In view of the foregoing discussions we are inclined to agree with the contentions of the appellant and allow the appeal in this view of the matter."*



TPC submitted that therefore, it is entitled to recover the entire under-recovered FAC through tariff and not through setting off of reserves as carried out by the Commission. The summary of the impact of ATE Judgment in Appeal No 60 of 2007 in this regard as submitted by TPC is shown in the Table below:

**Rs crore**

Particulars	FY 2004-05	FY 2005-06
Under-recovered/(over recovered) FAC	(101)	356
Allowed to be recovered through tariff in Tariff Order dated October 3, 2006	-	-
Disallowed Quantum	(101)	356
<b>Amount of disallowed quantum to be now allowed due to ATE Judgment</b>	<b>(101)</b>	<b>356</b>

In accordance with the ATE Judgment in Appeal No 60 of 2007 in this regard, the Commission has considered the allowable expenses in this regard for FY 2004-05 as Rs. (101) crore and Rs. 356 crore for FY 2005-06.

#### **4.11 SUMMARY OF RECOVERABLE AMOUNT**

Based on the ATE Judgment in Appeal No 60 of 2007 on various expenses, which were disallowed for FY 2004-05 and FY 2005-06 by the Commission while truing up for FY 2004-05 and FY 2005-06, TPC submitted the summary of the amounts recoverable through tariff. TPC further submitted that the impact of trued up amount as approved by the Commission in the Tariff Order dated October 3, 2006, was considered in the determination of the tariff for FY 2006-07. TPC submitted that as the impact of the ATE Judgment in Appeal No 60 of 2007 is to be recovered in FY 2009-10; interest for 3 to 4 years would accrue and computed the interest based on the rate approved by the Commission for Working Capital interest as these items are largely revenue based.

As regards the carrying cost on the impact of ATE Judgment in Appeal No 60 of 2007, the Commission has relied upon the ATE Judgment in Appeal No 60 of 2007 in the matter, which has not given any specific ruling regarding any carrying cost or interest cost on any element to be allowed. Neither was this prayed for in the Appeal filed by TPC, and something, which has not been prayed for, cannot be granted. The summary of the impact of the ATE Judgment in Appeal No 60 of 2007 as submitted by TPC and as approved by the Commission in this Order is shown in the Table below:

**Rs crore**



Particulars	FY 2004-05		FY 2005-06	
	TPC	Approved by the Commission	TPC	Approved by the Commission
Depreciation	41	41	4	4
Income Tax	33	33	50	50
Employee Expenses	-	-	12	8
R&M Expenses	2	2	1	1
A&G Expenses	19	19	16	16
Interest on disallowed capex	5	5	5	5
Departure from Mercantile system	(101)	(101)	356	356
<b>Total</b>	<b>(1)</b>	<b>(1)</b>	<b>444</b>	<b>439</b>
Interest for 4 years	(0)			0
Interest for 3 years			137	0
<b>Total Recovery including Interest</b>	<b>(2)</b>	<b>(1)</b>	<b>581</b>	<b>439</b>

#### 4.12 RECOVERY OF THE AMOUNT

TPC-G submitted that since the above amount pertains to the period when TPC was operating as an integrated Utility, this amount would be recoverable from all the three Distribution Licensees, viz., TPC-D, BEST and RInfra-D and has proposed to recover the same in the ratio of total sales in the respective year (FY 2004-05 and FY 2005-06). The summary of the amount recoverable from each Distribution Licensee as submitted by TPC-G is as shown in the Table below:

Licensee	FY 2004-05 Sales (MU)	Ratio of Sales FY 2004-05	Share of each Licensee for FY 2004-05 (Rs crore)	FY 2005-06 Sales (MU)	Ratio of Sales FY 2005-06	Share of each Licensee for FY 2005-06 (Rs crore)	Total Share of each Licensee for FY 2004-05 and FY 2005-06 (Rs crore)
BEST	3,352	35%	(1)	3,924	38%	219	218
RInfra-D	3,962	41%	(1)	4,155	40%	232	231
TPC-D	2,269	24%	(0)	2,336	22%	130	130
<b>Total</b>	<b>9,583</b>		<b>(2)</b>	<b>10,415</b>		<b>581</b>	<b>579</b>

However, the total amount as considered by the Commission on account of impact of ATE Judgment in Appeal No 60 of 2007 on truing up for FY 2004-05 and FY 2005-06 works out to Rs 439 Crore. The Commission has dealt with the treatment of amount to be recovered due to ATE Judgement in the next Section of the Order.



## 5 TREATMENT OF RECOVERABLE AMOUNT DUE TO ATE JUDGEMENT AND SURPLUS FOR FY 2007-08

### 5.1 CONTINGENCY RESERVE ENTITLEMENT

The Commission analysed the total contingency reserve available with TPC and total entitlement of TPC towards contingency reserve in accordance with the provisions of MERC Tariff Regulations. As per MERC Tariff Regulations, there is no provision for creation of contingency reserves for Generation Business and for Transmission Licensees and Distribution Licensees; the maximum contingency reserve that can be created cannot exceed 5% of opening Gross Fixed Assets. Thus, in accordance with the provisions of MERC Tariff Regulations, the maximum permissible contingency reserve for TPC works out to Rs 72.04 Crore. The summary of the maximum permissible contingency reserve for TPC (TPC-T and TPC-D together) for FY 2007-08 is shown in the Table below:

*Rs. crore*

Particulars	TPC-G	TPC-T	TPC-D	Total
Opening GFA- FY 2007-08	2714.15	1,045.67	395.07	4154.90
Entitlement of Contingency reserve @ 5% for FY 2007-08	-	52.28	19.75	72.04

The total contingency reserve set off earlier by the Commission in its Order on ARR and Tariff Petition was Rs 183 Crore. Further, the Commission from FY 2006-07 onwards has allowed the contingency reserves to the extent of Rs 9.56 Crore in the ARR of TPC-T and TPC-D. The summary of the contingency reserve allowed for FY 2006-07 and FY 2007-08 is shown in the Table below:

*Rs. crore*

Contingency reserve created from FY 2006-07 onwards	TPC-G	TPC-T	TPC-D	Total
Approved Contribution to contingency reserve for FY 2006-07 after truing up	-	0.56	1.80	2.36
Approved Contribution to contingency reserve for FY 2007-08 in APR Order	-	5.23	1.97	7.20
<b>Total</b>	-	<b>5.79</b>	<b>3.77</b>	<b>9.56</b>





At the end of FY 2005-06, TPC as a whole, had a contingency reserve of Rs 183 Crore, which was set off earlier by the Commission against TPC's revenue requirement. As observed from the above Table, for FY 2006-07 and FY 2007-08, the Commission allowed contingency reserve of Rs. 9.56 crore for TPC-T and TPC-D. Thus, the contingency reserve to be retained by TPC out of contingency reserve set off earlier works out to Rs 62.82 Crore (72.04 – 9.56) to meet entitlement of contingency reserve of Rs 72.04 Crore in accordance with the MERC Tariff Regulations.

TPC-G, in its replies to queries raised by the Commission for non-treatment of income from contingency reserves in TPC-G business, has admitted that the Tariff Regulations do not provide for any contingency reserve for Generation Business. However, as TPC operated as an integrated Utility till FY 2005-06 and while allocating the assets and liabilities to Generation, Transmission and Distribution Business, contingency reserves have been allocated to Generation Business also. The contingency reserve is a reserve created from the tariff paid by the consumers in the past, and hence, if the contingency reserves available with TPC is in excess of maximum contingency reserves permissible as per MERC Tariff Regulations, the excess amount of contingency reserves needs to be trued up similar to the principle of truing up of any other element of truing up. Therefore, the Commission has undertaken the truing up of excess contingency reserves of Rs 120.52 Crore (183 – 62.82). The summary of contingency reserve entitlement, excess contingency reserve available with TPC and contingency reserve available for truing up is given in the following Table:

**Table: Summary of Contingency Reserve (Rs Crore)**

Particulars	TPC-G	TPC-T	TPC-D	Total
Opening GFA- FY 2007-08	2714.15	1045.67	395.07	4154.90
% Share of GFA	65.32%	25.17%	9.51%	
Entitlement of Contingency reserve @ 5% for FY 2007-08	-	52.28	19.75	72.04
Approved Contribution to contingency reserve created after FY 2006-07	-	5.79	3.77	9.56
Contingency Reserve Set Off earlier				183.00
Contingency reserve to be retained out of contingency reserve set off earlier to meet the total eligibility				62.48
<b>Excess contingency reserve available with TPC to be adjusted</b>				<b>120.52</b>



## 5.2 SURPLUS AVAILABLE BASED ON TRUING UP FOR FY 2007-08

As discussed in Section 3 of this Order, based on truing up for FY 2007-08 including the sharing of gains/losses, the net surplus amount with TPC-G works out to Rs 233.45 Crore.

## 5.3 NET AMOUNT TO BE RECOVERED FROM DISTRIBUTION LICENSEES FOR PREVIOUS YEARS

Based on the total amount on account of impact of ATE Judgment in Appeal No 60 of 2007 on truing up for FY 2004-05 and FY 2005-06, surplus contingency reserve available with TPC and truing up for FY 2007-08, the net amount to be recovered by TPC from Distribution Licensees for previous years is given in the following Table:

Insert Table here

Sl. No.	Particular	Rs. Crore
A	Total Amount due to TPC on account of ATE Judgment	439
B	Revenue surplus for after truing up for FY 2007-08	(233)
C	Excess contingency reserves available with TPC to be adjusted	121
D	Net Amount to be recovered from Distribution Licensees (D=A+B-C)	85

This amount of Rs 85 Crore should be recovered by TPC-G from the three distribution licensees, i.e., RInfra-D, BEST and TPC-D in weighted average proportion to energy supplied by TPC to RInfra, BEST and TPC's retail consumers during FY 2004-05 and FY 2005-06 as most of the amount pertains to these years. TPC-G should raise a separate bill to three distribution licensees for recovering this amount in 10 equal instalments starting from June 2009..

Particulars	FY 2004-05 Sales (MU)	FY 2005-06 Sales (MU)	Ratio of sales (%)	Net amount Recoverable from Distribution Licensees (Rs. crore)
BEST	3352	3924	36%	31
RInfra-D	3962	4155	41%	34
TPC-D	2269	2336	23%	20
<b>Total</b>	<b>9583</b>	<b>10415</b>	<b>100%</b>	<b>85</b>



## 6 PERFORMANCE PARAMETERS

### 6.1 PERFORMANCE PARAMETERS

Regulation 16.1 of the MERC Tariff Regulations 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.” (**emphasis added**)*

The Commission, in its MYT Order for TPC-G, had approved the trajectory of following performance parameters:

- Availability
- Heat Rate
- Auxiliary Consumption

### 6.2 GENERATING STATIONS OF TPC

The installed capacity of TPC’s Generation Business is 1777 MW comprising 447 MW of hydel generation capacity and 1330 MW of thermal generation capacity. TPC has submitted that the new Unit-8 of 250 MW at Trombay Thermal Station has been commissioned on March 31, 2009, which was originally scheduled to be commissioned in October 2008. TPC-G, in its Petition, has also projected the generation from Unit-8 along with its performance parameters and the applicable tariff for FY 2009-10.

The station-wise and unit-wise break-up of total capacity of TPC’s Generation Business is given in the following Table:

**Table: Summary of Existing Generation Capacity of TPC-G**

Station / Unit	Installed Capacity (MW)
<b>Hydel</b>	
Khopoli	72



<b>Station / Unit</b>	<b>Installed Capacity (MW)</b>
Bhivpuri	75
Bhira	300
<b>Sub-total</b>	<b>447</b>
<b>Thermal</b>	
Unit 4	150
Unit 5	500
Unit 6	500
Unit 7	180
<b>Sub-total</b>	<b>1330</b>
<b>Total</b>	<b>1777</b>

### **6.3 UNIT-WISE PERFORMANCE PARAMETERS AND TARIFF**

The Commission, in its MYT Order for TPC-G, had approved the performance of individual Units of Trombay Thermal Station rather than considering the entire Station as a whole, considering the fact that most of TPC-G's Units operate on multiple fuels, with the objective of bringing in more clarity in the tariff determination process.

#### **6.3.1 Availability of TPC's Generating Stations**

The Commission, in its MYT Order, had considered the availability of Thermal Stations over the Control Period as projected by TPC for Unit-4, Unit-5 and Unit-6. However, for Unit-7, the Commission in its APR Order for FY 2007-08 in Case No. 68 of 2007, had considered the revised projections of availability of 82.67% for FY 2008-09, after considering the varying gas availability.

TPC-G, in its Petition, has submitted the revised estimates of availability during FY 2008-09 based on the actual availability during the first six months and projections for the remaining six months of FY 2008-09. Except for Unit-7, TPC-G has estimated availability higher than the normative availability for FY 2008-09. For Unit-7, TPC-G submitted that the availability is expected to be lower on account of extended outage for generator rotor rewinding and balancing work. TPC-G submitted that during the major overhaul, gas turbine generator rotor inspection was carried out by Original Equipment Manufacturer (OEM), M/s Siemens, and their findings revealed partially blocked ventilation holes. Siemens recommended full rewinding of the generator rotor. An independent opinion was also taken from ex-BHEL expert, who also recommended the rewinding of the generator rotor at the earliest. Based on these



recommendations, gas turbine generator overhaul and rotor rewinding were planned during the major overhaul of July to August 2008. The outage activities were rescheduled for 70 days (from earlier schedule of 45 days) in view of additional work of balancing of generator rotor at BHEL (Hyderabad). Further, during the assembly work, installation of retaining ring caused a major technical problem, which resulted in extension of outage to 87 days. TPC-G submitted that the extended outage, due to uncontrollable technical reasons during the overhaul, has resulted in lower availability of Unit 7 during FY 2008-09. TPC-G requested the Commission to permit the recovery of full annual fixed charges at availability less than 80% on account of extended outages due to technical reasons. The Commission asked TPC-G to submit the likely under-recovery in the annual fixed charges to the extent of reduction in availability as compared to normative availability, and TPC-G submitted that the likely under-recovery is estimated at around Rs. 4 crore for FY 2008-09.

TPC-G also submitted the revised availability projections for FY 2009-10 for the generating Units of Trombay Station. TPC-G has estimated availability for all the Units higher than the normative availability of 80%. As regards the availability of Unit-7 for FY 2009-10, TPC-G submitted that the gas supply to Trombay has been reduced in the recent past and is expected to further reduce in FY 2009-10. TPC-G submitted that the gas supplies are totally beyond its control. TPC-G requested the Commission to allow recovery of full annual fixed charges even when the availability is less than 80% on account of shortage of gas and quoted the Commission's APR Order dated April 2, 2008 in Case No. 68 of 2007 for TPC-G, in which the Commission has allowed full recovery of Annual Fixed Costs, even at lower availability than normative availability due to shortage of gas.

As the revised estimate of availability during FY 2008-09 and projected availability during FY 2009-10 for all the thermal Units of Trombay Station is higher than the normative availability of 80% except Unit 7, the Commission allows the recovery of full fixed cost recovery of thermal generating stations of TPC-G. As regards recovery of full fixed charges for Unit 7 at availability lower than 80% for FY 2008-09, the Commission does not accept the reasoning and will consider the normative availability in accordance with the Regulations while carrying out the truing up for FY 2008-09. Further, the Commission has not revised the approved availability for FY 2009-10, due to non availability of gas, however, the Commission would consider the deviations in availability on actual basis during the truing up exercise. **TPC-G is further directed to submit the documentary evidence (may be in the form of a certificate from the gas supplier/appropriate Authority) regarding the gas**



**availability during any financial year corresponding to its contracted quantity for that year.**

The Unit-wise Availability as approved by the Commission in APR Order (for FY 2008-09), MYT Order (for FY 2009-10), projected by TPC-G in the APR Petition, and considered by the Commission for FY 2008-09 and FY 2009-10, is shown in the Table below:

**Table: Availability for FY 2008-09 and FY 2009-10**

Plant	FY 2008-09			FY 2009-10		
	APR Order	Revised Estimate	Considered by Commission	MYT Order	Revised Estimate	Considered by Commission
Unit 4	99.00%	98.09%	99.00%	99.00%	92.24%	99.00%
Unit 5	99.00%	99.44%	99.00%	92.00%	92.24%	92.00%
Unit 6	93.00%	91.08%	93.00%	99.00%	99.00%	99.00%
Unit 7	82.60%	76.26%	82.60%	91.10%	97.17%	91.10%

### **6.3.2 Auxiliary Consumption**

TPC-G, in its Petition, submitted that the auxiliary consumption for hydro and thermal generation units for FY 2008-09 is based on the actual auxiliary consumption for first six months and projected for the remaining six months of FY 2008-09. TPC-G has projected the auxiliary consumption for generating Units at Trombay Station for FY 2009-10 on the basis of the auxiliary consumption approved by the Commission for FY 2009-10.

Though the auxiliary consumption as estimated by TPC-G for generating Units at Trombay station for FY 2008-09 is lower than the auxiliary consumption approved in the Order, the Commission in this Order has not revised the auxiliary consumption for FY 2008-09, and the Commission will consider the actual auxiliary consumption for FY 2008-09 for sharing of gains and losses during truing up of performance for FY 2008-09 during the APR Petition for FY 2009-10.

As regards the projections for auxiliary consumption for Hydro generating stations for FY 2008-09, TPC-G has estimated auxiliary consumption of 0.58% which is higher than the approved value of 0.5%. The Commission asked TPC-G to submit the reasons for such increase in the auxiliary consumption for Hydro Generating Stations. TPC-G, in its reply, submitted that the estimated gross hydro generation for FY 2008-09 is significantly lower at 1148 MU as compared to 1489 MU in the previous year



i.e., FY 2007-08. This lower generation is mainly on account of the necessity to comply with the Krishna Water Tribunal Award guidelines. The auxiliary consumption at 0.5% works out to 5.74 MU and at 0.58% works out to 6.65 MU, i.e., the difference is very small. TPC-G submitted that the auxiliary consumption in absolute terms (MU) for the individual hydro generating stations for FY 2008-09 is almost comparable to the levels achieved in FY 2007-08. However, on account of lower generation during FY 2008-09, the percentage auxiliary consumption will be marginally higher than the approved value of 0.5%. TPC-G further submitted that there are some auxiliary systems, which need to be in service even though there is no generation from the plant, which are as follows:

- Lighting in the power house.
- Compressed air system.
- Cooling water system for transformers.
- Generator strip heaters, panel heaters.
- Air conditioning units for control room, relay room area.

Subsequently, the Commission asked TPC-G to provide data on gross generation and auxiliary consumption in MU terms for each Hydro Generating Station for the past 10 years, and the last 10 years' consumption data of such auxiliaries, which TPC-G has mentioned above as needing to be in service even though there is no generation from the plant.

TPC-G submitted the last 10 years data for gross generation and auxiliary consumption in MU terms for each Hydro Generating Station. As regards the consumption data for such auxiliaries, which need to be in service even though there is no generation from the plant, TPC-G submitted that it does not record the consumption of Hydro Generating Stations for such equipments separately.

Though the auxiliary consumption as estimated by TPC-G for Hydro Generating Stations for FY 2008-09 is higher than the auxiliary consumption approved in the Order, the Commission in this Order has not revised the auxiliary consumption for FY 2008-09, and the Commission will consider the actual auxiliary consumption for FY 2008-09 during truing up of performance for FY 2008-09 during the APR Petition for FY 2009-10.

For FY 2009-10, the Commission has considered the auxiliary consumption as approved in the MYT Order for Hydro Generating Stations and Generating Units at Trombay Station.



The summary of auxiliary consumption as approved in APR Order (for FY 2008-09), MYT Order (for FY 2009-10), projected by TPC-G in the APR Petition, and considered by the Commission for FY 2008-09 and FY 2009-10 is shown in the Table below:





**Table: Auxiliary Consumption for FY 2008-09 and FY 2009-10**

Plant	FY 2008-09			FY 2009-10		
	APR Order	Revised Estimate	Considered by Commission	MYT Order	Revised Estimate	Considered by Commission
Unit 4	8.00%	7.49%	8.00%	8.00%	8.00%	8.00%
Unit 5	5.50%	4.79%	5.50%	5.50%	5.50%	5.50%
Unit 6	3.50%	3.26%	3.50%	3.50%	3.50%	3.50%
Unit 7	2.75%	2.42%	2.75%	2.75%	2.75%	2.75%
Total Hydro	0.50%	0.58%	0.50%	0.50%	0.57%	0.50%

### 6.3.3 Heat Rate

The heat rate estimated by TPC-G for each of the Units for FY 2008-09 and FY 2009-10 and the rationale for the same is given below:

For FY 2008-09 and FY 2009-10, TPC-G submitted that the Heat Rates for Unit-4, Unit-6 and Unit-7 are likely to be lower than the levels approved by the Commission in its APR Order. However, in case of Unit-5, there is a deviation between the approved heat rate and the heat rate projected by TPC-G.

#### **Unit 5 Heat Rate**

TPC-G submitted that the Commission, in its MYT Order, had approved heat rate of 2494 kcal/kWh for FY 2008-09 as against heat rate of 2530 kcal/kWh proposed in the MYT Petition. The actual heat rate achieved during first half of FY 2008-09 is 2542 kcal/kWh. The heat rate for Unit-5 has increased due to (i) enhanced coal firing, (ii) change in operating procedure for mill safety, and (iii) general performance deterioration.

TPC-G further submitted that Unit-5 was commissioned in 1984 with a design Heat Rate of 2370 kcal/kWh and based on coal with a moisture level of 8-10%. However, coal with moisture content in the range of 25-30% is being used since last 2 years. Considering the age of the plant as 22 years and based on industry norms, the heat rate of the Unit is expected to deteriorate by about 2.5% to 3.0% over 22 years. TPC-G submitted that the Commission has provided a concession in the form of higher Station Heat Rate for lignite based stations on account of the higher moisture



[Regulation 33.1.3 of the Tariff Regulations,], where an increase of 4% in Heat Rate is permitted with Lignite as fuel (with 30% moisture). Considering the moisture level of 24%, a factor of 1.032 has been applied to the Heat Rate to arrive at the Station Heat Rate for Unit-5. Accordingly, TPC has estimated the Station Heat Rate for Unit-5 at 2539 kcal/kWh for FY 2008-09 and 2555 kcal/kWh for FY 2009-10.

The Commission, in its MYT Order, approved the heat rate for Unit-4 and Unit-5 based on heat rate degradation details submitted by TPC-G for some of the Other Utilities. Considering the industry practices and vintage of Unit-4 and Unit-5, the Commission applied the heat rate degradation of 0.2% per annum while approving the heat rate for the Control Period for Unit-4 and Unit-5.

The Commission would like to highlight that for FY 2008-09, the revised heat rate figures submitted by TPC-G are estimated figures based on actual performance during the first six months and estimated performance during the next six months of the year. The trajectory of performance parameters during the first Control Period was approved in MYT Order considering the past performance and based on submissions made by TPC-G. The Commission does not find any merit in revising the approved performance parameters based on just half year performance of the first Control Period. The Commission is further of the view that it would not be appropriate to modify the performance trajectory approved for the Control Period unless there are very pertinent reasons for doing so. However, the Commission will analyse the variation in actual performance during the entire year of FY 2008-09 based on justification provided by the TPC-G and take appropriate view in the matter including sharing of gains and losses during the truing up exercise based on actual figures for the entire year. Thus, at this stage, the Commission has not considered any revision in heat rate and has retained the heat rate approved by the Commission in its MYT Order.

The summary of heat rate approved in APR Order (for FY 2008-09), MYT Order (for FY 2009-10), projected by TPC-G in the APR Petition, and approved by the Commission for FY 2008-09 and FY 2009-10 is shown in the Table below:

**Table: Heat Rate (kcal/kWh) for FY 2008-09 and FY 2009-10**

Plant	FY 2008-09			FY 2009-10		
	APR Order	Revised Estimate	Approved	MYT Order	Revised Estimate	Approved
Unit 4	2570	2522	2570	2575	2575	2575
Unit 5	2494	2539	2494	2499	2555	2499
Unit 6	2400	2353	2400	2400	2400	2400



Unit 7	1971	1968	1971	1971	1971	1971
--------	------	------	------	------	------	------



## **7 ANALYSIS OF ENERGY AVAILABILITY, ENERGY CHARGES AND ANNUAL FIXED CHARGES FOR FY 2008-09 AND FY 2009-10**

TPC-G, in its APR Petition, submitted the performance for FY 2008-09 based on actual performance for the first half of the year, i.e., April to September 2008 and estimated performance for the second half of the year, i.e., October 2008 to March 2009. TPC-G submitted the comparison of each element of expenditure and revenue for FY 2008-09 with that approved by the Commission in its Order dated April 2, 2008 in Case No. 68 of 2007.

TPC-G, in its Petition, along with the revised estimates of expenditure also provided the details of adjustments on account of sharing of gains and losses for FY 2008-09. TPC-G, in its Petition, mentioned that there exists an additional revenue requirement for FY 2008-09 largely on account of uncontrollable factors and sought the recovery of gap with carrying cost to be recovered from the three Distribution Licensees, viz., TPC-D, BEST and RInfra-D. TPC-G requested the Commission to provisionally true up expenses and revenue for FY 2008-09 including sharing of gains and losses and allow the same to be recovered from the three Distribution Licensees.

The Commission will undertake the final truing up of the revenue requirement and Revenue for FY 2008-09, once the actual expenses and revenue based on the Audited Accounts of TPC for FY 2008-09 are available, i.e., during Annual Performance Review for the third year of the Control Period, viz., FY 2009-10. As regards the provisional truing up requirement for FY 2008-09 for TPC-G, the Commission is of the view that the provisional truing up for Generation Companies is not required to be undertaken, as the Generation Companies are able to recover increase in fuel costs, which comprise the bulk of the expenses, through the FAC mechanism. Moreover, based on analysis of expenditure for FY 2008-09, it is observed that the variation in other elements of expenditure except fuel cost, is not substantial, and there is also no requirement to change any principles/methodology. Further, it is observed that the final truing up for FY 2006-07 and FY 2007-08 including sharing of efficiency gains and losses has resulted in surplus for both the years. Accordingly, the Commission in this Order on APR for FY 2008-09 and determination of Tariff for FY 2009-10, has not considered the provisional truing up of elements of the revenue requirement for FY 2008-09. However, before proceeding towards determination of tariff for FY 2009-10, it is essential to assess the performance during FY 2008-09 based on half



year actuals and revised estimates for second half of FY 2008-09. Accordingly, the revised estimate of performance of TPC-G during FY 2008-09 as compared to Commission's APR Order for TPC-G is discussed in the following paragraphs.

## 7.1 ENERGY AVAILABILTIY

### 7.1.1 Gross Generation during FY 2008-09

The summary of actual gross generation for FY 2007-08, generation approved by the Commission in its APR Order for FY 2008-09 and revised estimates of generation in FY 2008-09, as projected by TPC-G, is given in the following Table:

**Table: Gross Generation (MU)**

Particulars	FY 07-08	FY 08-09	
	Actual	APR Order	Rev. Est.
Hydro	1489	1375	1148
Unit 4	795	573	793
Unit 5	4001	4317	4149
Unit 6	3870	3556	3392
Unit 7	1337	1303	1115
<b>Total Thermal</b>	<b>10002</b>	<b>9750</b>	<b>9448</b>
<b>Total TPC</b>	<b>11491</b>	<b>11125</b>	<b>10596</b>

**Table: Unit-wise PLF for Thermal Stations (%)**

Particulars	FY 07-08	FY 08-09	
	Actual	MYT Order	Rev. Est.
Unit 4	60%	44%	60%
Unit 5	91%	99%	94%
Unit 6	88%	81%	77%
Unit 7	85%	83%	71%

TPC-G, in its Petition, has projected lower hydro generation in FY 2008-09 at 1148 MU, as compared to hydro generation of 1375 MU considered in the APR Order. The overall generation from Trombay Power Station is expected to be lower than the approved levels, which though not uniformly spread across various Units is largely on account of change in generation pattern of Trombay power station and mainly on account of the extended outage of Unit-7. TPC-G submitted the following reasons for reduction in estimated generation during FY 2008-09 as compared to generation approved by the Commission:



- Trombay Unit-4, which was shown as standby from October 1, 2008 in the APR Order, continued to operate on account of delay in commissioning of Unit-8 and also on account of Unit-6's outage in January-February 2009, which resulted in higher generation from Unit-4.
- Lower generation from Trombay Unit-7 due to major overhaul and extended outage of 87 days as against the scheduled outage of 45 days.

TPC-G submitted that the availability from the hydro stations is typically both a function of plant availability as well as the quantum of water available in the catchment areas as well as policies on irrigation and Krishna Water Dispute Tribunal Award (KWDTA). TPC-G submitted that the actual hydel generation during FY 2005-06 and FY 2006-07 was higher as compared to actual generation for the previous years, due to favourable monsoon. TPC-G submitted that its hydro generation is based on the allowable westward diversion of water as per the KWDTA published in 1976 and the said Award allows TPC-G to divert 54.5 TMC, i.e., 1543 MCM annually in any one water year and not more than 213 TMC, i.e., 6031 MCM in any period of five consecutive water years. TPC-G further submitted that it has been following the said Order from 1974, and westward diversion has been restricted as per the Award. However, during the years 2005 and 2006, due to unprecedented rainfall in all the catchment areas, TPC-G's lakes received huge inflows leading to flood situation in and around dam areas. Hence, on account of the *force majeure* conditions, TPC-G had to operate its hydel stations at base load to avoid flood in the dam areas. TPC-G has referred the issue of additional westward diversion for FY 2005-06 and FY 2006-07 to the Maharashtra KWDTA cell and the matter is pending with the Tribunal.

TPC-G projected the net hydro generation for FY 2008-09 at 1150 MU. The summary of the net westward diversion considered in the APR Petition for projecting the revised generation from hydel stations is shown in the Table below:

**Table: Westward Diversion considered in APR Petition (MCM)**

Water Year	Year	Net westward Diversion	Rolling Average	Excessive diversion	Revised awarded diversion	Revised Rolling average
2001	FY 2001-02	1067	5757			
2002	FY 2002-03	1065	5544			
2003	FY 2003-04	1130	5479			
2004	FY 2004-05	1252	5464			
2005	FY 2005-06	1696	6210	372	1324	5838
2006	FY 2006-07	1703	6474	389	1314	6085



2007	FY 2007-08	1206	6987	0	761	1206
2008	FY 2008-09	935	6792		761	935

TPC-G, in its additional submission to the Commission, submitted that the water consumption permissible for FY 2008-09 would be only 935 MCM and considering a water rate of 1.22 MU per MCM, the generation permissible would be 1141 MU.

Subsequently, the Commission asked TPC-G to submit the details of actual generation for the period from October to February 2009. TPC-G submitted the details of the actual generation for the period from October to March 2009. Considering the details submitted by TPC-G, the actual generation from generating Units at Trombay Station works out to 9726 MU, which is higher than the revised estimate of TPC-G in its APR Petition. Accordingly, considering the details submitted by TPC-G, the total generation from Units at Trombay Station and Hydro generating stations, works out to be 10877 MU.

As the overall variation in generation between the quantum approved by the Commission in the APR Order and actual generation for FY 2008-09 as submitted by TPC-G for FY 2008-09 is only around 2%, the Commission has not revised the quantum of gross generation for FY 2008-09 at this stage. The Commission will undertake the truing up of gross generation for FY 2008-09 based on actual performance for the entire year along with the reasons for variation in actual generation, during Performance Review for the third year of the Control Period, i.e., FY 2009-10.

## **7.2 GROSS GENERATION AND ENERGY AVAILABILITY FROM TPC GENERATING STATIONS DURING FY 2009-10**

TPC-G, in its Petition, submitted that TPC-G currently supplies power to the Distribution Licensees, i.e., BEST and TPC-D on the basis of shared capacities on the basis of the signed PPA.

TPC-G further submitted that RInfra-D has not signed any PPA with TPC-G so far. The projection of gross and net generation and consequent revenue determination of TPC-G for FY 2009-10 has been structured on the assumption (without assuming any obligation) that balance out of the existing capacity (1777 MW) i.e., 500 MW ("Balance Existing Capacity") available after supplying to BEST and TPC-D as per approved and signed PPAs between them and TPC-G, would be, sold at the tariff approved by the Commission to RInfra-D strictly on a day to day basis, until TPC-G finalises a PPA for the said balance existing capacity of 500 MW with an appropriate



counter party buyer. TPC-G submitted that any sale of power to RInfra-D out of the said balance available capacity of 500 MW shall at all times be without prejudice to TPC-G's right to enter into a long-term PPA to sell the said capacity of 500 MW or any part thereof to any Licensee or consumer in accordance with Section 10(2) and other provisions of the EA 2003.

TPC-G further submitted that the requirements of the three Distribution Licensees (TPC-D, BEST and RInfra-D) have been considered solely for the purposes of working out the Merit Order Despatch (MoD) from TPC-G plants (except for Unit-8).

### **7.2.1 Generation from Hydel Stations**

TPC-G submitted the generation availability from the hydro stations is typically both a function of plant availability as well as the quantum of water available in the catchment areas. While the first factor is a controllable factor, the other factors are not fully predictable. TPC-G, in its Petition, further submitted that considering the good monsoon in previous years and consequent higher hydro generation, in order to remain within the limit of KWDTA, a generation of 1443 MU has been planned from hydro generating stations in FY 2009-10.

Based on the information submitted by TPC-G, the Commission has analysed that considering the expected allowance of excessive diversion and to be within the limit of 5-year rolling average of 6031 MCM, the net westward diversion available would be 1252 MCM as shown in the Table below:

**Table: Westward Diversion considered in APR Petition (MCM)**

Water Year	Year	Net westward Diversion	Rolling Average	Excessive diversion	Revised awarded diversion	Revised Rolling average
2001	FY 2001-02	1067	5757			
2002	FY 2002-03	1065	5544			
2003	FY 2003-04	1130	5479			
2004	FY 2004-05	1252	5464			
2005	FY 2005-06	1696	6210	372	1324	5838
2006	FY 2006-07	1703	6474	389	1314	6085
2007	FY 2007-08	1206	6987	0	761	1206
2008	FY 2008-09	935	6792		761	935
2008	FY 2009-10	1252				1252

On the basis of TPC-G's additional submission to the Commission regarding water rate of 1.22 MU per MCM, the generation permissible would be 1527 MU.





However, the actual generation from hydel stations will also depend upon the monsoon during FY 2009-10. Further, the Commission in its MYT Order observed that the average hydel generation for the last nine years excluding FY 2005-06 and FY 2006-07 works out to 1378 MU. The Commission has therefore, considered the approved gross generation (1500 MU) and net generation (1492 MU) from hydel stations as approved in the MYT Order for FY 2009-10. The summary of net generation from hydel stations is given in the following Table:

**Table: Summary of Net Generation for FY 2009-10 (MU)**

	MYT Order	Revised Projection	Approved
Hydel	1492	1443	1492

### **7.2.2 Generation from Thermal Stations**

TPC-G, in its Petition, has projected the gross generation from its thermal generating Stations for FY 2009-10 considering the scheduled outages for annual maintenance and the following operational constraints:

- Average gas supply limited to 610 Tonnes per Day (TPD), based on past trends
- Average daily coal consumption of 7360 MT for 500 MW Unit 5 and for Unit 8.
- Minimum Technical Limitation for generation on 500 MW Unit 5 at 200 MW
- Minimum Technical Limitation for generation on 500 MW Unit 6 at 150 MW
- Minimum Technical Limitation for generation on 150 MW Unit 4 at 50 MW (whenever operational )
- Minimum Technical Limitation for generation on Unit 8 at 100 MW
- Contracted capacity of Unit-8 [to The Tata Power Trading Company Ltd. (TPTCL)] at 100 MW
- Operation of Unit-4 as a standby Unit subsequent to the Commissioning of Unit-8
- Application of Merit Order Dispatch methodology considering above parameters

The summary of gross generation projected by TPC-G for each Unit of Trombay Thermal Station during FY 2009-10 (excluding Unit-8, which has been discussed separately) is given in the following Table:



**Table: Summary of Gross Generation and PLF for FY 2009-10**

Unit	Gross Generation (MU)	PLF (%)
Unit 4	78	6%
Unit 5	3988	91%
Unit 6	3877	89%
Unit 7	1420	90%

The PLF projected by TPC-G in its APR Petition for all the Units during FY 2009-10 is higher than 80%, except for Unit-4, which is a costly source of generation. Further, with the commissioning of Unit-8 of 250 MW, TPC-G has proposed to reduce the generation from Unit-4, as Unit-4 is the highest cost unit in the merit order dispatch.

As regards the gross generation for FY 2009-10 from generating Units at Trombay, by considering the revised projections as submitted by TPC-G for generating Units at Trombay, the impact on the power purchase cost to the Distribution Licensees, viz., TPC-D, BEST and RInfa-D, would reduce due to reduction in estimated power purchase from costly sources and hence the Commission has considered the gross generation level for Trombay thermal units as submitted by TPC-G in its APR Petition, however, the Commission will undertake the truing up of actual generation achieved during FY 2009-10 at the time of truing up. The Commission directs TPC-G to abide by the SLDC's instructions for despatch schedule for the State as a whole in accordance with the merit order principles approved by the Commission from time to time.

Considering the gross generation considered by the Commission and auxiliary consumption norms approved by the Commission in Section 4 of this Order, the projected net generation from TPC-G's generating stations is summarised in the following Table:

**Table: Summary of Net Generation for FY 2009-10 (MU)**

	MYT Order	Revised Projection	Approved
Unit 4	66	72	72
Unit 5	3774	3769	3769
Unit 6	3554	3741	3741
Unit 7	1397	1381	1381
<b>Sub-total Thermal</b>	<b>8791</b>	<b>8964</b>	<b>8964</b>



	MYT Order	Revised Projection	Approved
Hydel	1492	1443	1492
<b>Grand Total</b>	<b>10283</b>	<b>10407</b>	<b>10456</b>

### 7.3 FUEL COSTS FOR FY 2008-09

TPC-G, in its Petition, has submitted that the total fuel cost for FY 2008-09 is estimated to be Rs. 4152 crore as against the estimate of Rs. 3301 crore approved by the Commission in the APR Order. TPC-G submitted that the increased fuel costs are largely on account of the increase in fuel prices for coal, gas and oil during FY 2008-09. The trend of prices across different fuels have been different in the first half of FY 2008-09, and TPC-G has estimated the prices of fuel for second half of FY 2008-09, considering the recent trends in fuel prices. The summary of fuel price in Rs/MT, calorific value and fuel price in Rs/Mkcal as submitted by TPC-G is given in the following Table:

**Table: Fuel Parameters**

Particulars	APR Order	H1 Actual	Rev. Est.
<b>A. Fuel Price (Rs/MT)</b>			
Gas	4477	4527	4562
Coal	2915	3683	4886
Fuel Oil	26830	37500	33449
<b>B. Calorific Value (kcal/kg)</b>			
Gas	13172	13143	13073
Coal	5064	4957	4954
Fuel Oil	10504	10445	10447
<b>C. Fuel Price (Rs/Mkcal)</b>			
Gas	340	344	349
Coal	576	743	986
Fuel Oil	2554	3590	3202

As the impact of variation in fuel prices is allowed as pass through under the FAC mechanism, the Commission has not considered any revision in fuel prices for FY 2008-09 in this Order. The Commission will undertake the final truing up for fuel costs based on actual fuel costs during the entire year, subject to prudence check, during Annual Performance Review for the third year of the Control Period, i.e., FY 2009-10.



## **7.4 FUEL COSTS FOR FY 2009-10**

### **7.4.1 Fuel Price and Fuel Calorific Value**

TPC-G, in its Petition, submitted that it uses imported coal, gas and fuel oil as the primary fuels for its thermal generating Units. The prices of imported coal and oil are governed by the Fuel Supply/Transportation Agreements, while the gas price is under the Administered Price Mechanism of the Ministry of Petroleum & Natural Gas (MoPNG), Govt. of India.

TPC-G, in its Petition, submitted that it has projected the fuel prices during FY 2009-10 considering the factors affecting the fuel prices as discussed below:

#### **Oil**

TPC-G submitted that the oil market has seen extreme volatility in prices from a peak of USD 150 per barrel to a much lower price of USD 50 per barrel during FY 2008-09. TPC-G submitted that the world market scenario along with its recessionary outlook makes it very difficult to forecast the likely price in the coming months. Accordingly, TPC-G assumed the current price based on the last shipment for estimating the fuel costs as Rs. 20,860 /MT for FY 2009-10.

#### **Coal**

TPC, in its Petition, submitted that long-term contracts have been entered with PT Adaro, PT Samtan and other Indonesian coal sources for purchase of coal and under shortfall conditions, it proposes to purchase imported coal on spot basis.

#### **Freight on Board (FOB) Prices for FY 2009-10**

TPC-G submitted that it has estimated the FOB prices for FY 2008-09 based on the following:

- (i) Current contract prices,
- (ii) Validity of the contracts, and
- (iii) International Coal market movement,

Accordingly, TPC-G submitted that it has estimated the FOB price for Indonesian Coal as USD 72.1/MT.

#### **Freight on Board (FOB) Prices for FY 2009-10**

TPC-G submitted that it has entered into long-term contract of Affreightment for voyage from Indonesia to India at USD 25/MT. Hence, freight is estimated at USD 25/MT for FY 2009-10. TPC-G submitted that this contract is a fixed price contract and is not affected by the trends in pricing. TPC-G submitted that considering the



present structure of duties and levies and on the assumption that this coal would be imported through the jetty of Trombay, the estimated cost of Landed Coal would work out to Rs. 5,343 /MT.

### Gas

TPC-G, in its Petition, submitted that the gas price is administered by the Government of India. TPC-G has considered an escalation of 10% over the gas price for FY 2008-09, i.e., Rs. 4600/MT, and estimated the price at Rs 5208/ MT for FY 2009-10.

The Commission has taken note on the suggestions made by various stakeholders with respect to reduction in fuel prices during second half of FY 2008-09. The Commission obtained the prevalent fuel prices for the period from April 2008 to March 2009. The Commission has analysed the actual fuel prices during different periods of FY 2008-09, as summarized in the following Table:

**Table : Summary of Actual Fuel Prices**

Particulars	Petition	H1 Actual (FY 09)	Oct to March' 09
<b>A. Fuel Price (Rs/MT)</b>			
Gas	5113	4527	4524
Coal	5343	3683	5659
Fuel Oil	20860	37500	26392
<b>B. Calorific Value (kcal/kg)</b>			
Gas	13000	13143	13089
Coal	4950	4957	5106
Fuel Oil	10450	10445	10524
<b>C Fuel Price (Rs/Mkcal)</b>			
Gas	393	344	346
Coal	1079	743	1108
Fuel Oil	1996	3590	2508

The summary of the coal prices as submitted by TPC-G is shown in the following Table:

Month	Coal	
	Price (Rs/Tonne)	Calorific Value kcal/kg
Oct-08	4658	5183
Nov-08	5348	5195
Dec-08	5580	5075
Jan-09	5453	4948
Feb-09	6075	5095



Month	Coal	
	Price (Rs/Tonne)	Calorific Value kcal/kg
Mar-09	6852	5151
<b>Average</b>	<b>5659</b>	<b>5106</b>

The Commission observed that there has been a substantial increase in the price of coal during the months of February and March 2009 and asked TPC-G to explain the reasons for the same. TPC-G submitted that the primary reason for increase in the coal cost is the increase in the FOB price of coal. TPC-G submitted that the price of coal procured at Trombay is governed through the Coal Contracts entered into with various parties by TPC-G. The price of coal procured through these contracts has been moving up over the last year. As per data of procurement based on Bill of Lading, the FOB price for April 2008 was US \$ 33.26 per MT while the same for March 2009 was about US \$ 81 per MT. The landed cost of coal is determined by several elements including FOB, Freight, Exchange Rates, Custom Duties and Inland Transportation.

TPC-G submitted that the price of coal consumed is determined by:

- (i) Opening stock value and;
- (ii) Purchase/procurement during the month.

TPC-G submitted that due to rise in procurement prices during the year, the opening stock value has been steadily rising. The rise in consumption cost (as compared to January 2009) has also been on account of the quarterly adjustments made in March 2009. TPC-G further submitted that that the closing stock price of Rs. 6168 per MT in March 2009 would also have an impact on the consumption prices of the initial months of FY 2009-10.

The Commission also asked TPC-G to submit the coal contracts. TPC-G submitted that it currently sources its coal requirements from three different sources and submitted the coal contracts and coal price computations. The salient features of the coal contracts are shown in the Table below:



Sr. No.	Contract	Contracted Quantity (MMT)	Contracted Delivery Period	Pricing basis (FOB)	Remark	Price for FY 2009-10
1.	Adaro - I	Base qty :1.0 Optional qty: 0.25. (Minimum off take obligation : 0.75)	August 2004 to July 2009 further extendable by 5 years at Tata Power's option	Annual price negotiations ( \$ 90 PMT from Aug -08 to Jul-09)	Contract is extended for further 5 years, i.e up to July 2014.	Assumed to be negotiated at \$ 70 from Aug -09 onwards
2.	Adaro -II	Base qty :1.0 Optional qty: 0.20. (Minimum off take obligation : 0.75)	August 2008 to July 2013, Further extendable by 5 years at Tata Power's option	Computed as arithmetic average of (i) the price arrived at by applying CERC index and (ii) Price considered for Adaro- I  (average \$ 83 for Aug-08 to Jul-09)	Extension Notice to be given before 1.7.2012	The price from August 09 arrived at by applying CERC index is assumed to be \$ 57 PMT. Hence the arithmetic average works out to 63.5 \$/T
3.	Samtan	Base qty: 0.65 optional qty: 0.20 (Minimum off take obligation: 0.65)	April 2004 to March 2009. Further extendable to 5 years on mutual consent	Annual price negotiations for 0.55 MMT.  For FY 09 at 75 \$ PMT	Contract is extended for further 5 years, i.e up to March 2014.	Considered as \$ 70 PMT from Apr-09 to Mar-10
4.	Indo coal resources	0.75 (Variation allowed +/- 20%) (Minimum off take obligation : 0.60)	From May' 08 to December'18 and extendable by 10 years at buyer's option	Pricing as per CERC Index and formula on base price	Extension Notice to be given before 1.1.2017	Considered as \$ 78 PMT on an average from Apr-09 to Mar-10

As observed from the above Table and the coal contracts submitted by TPC-G, two of the coal contracts, i.e., with PT Adaro-I and PT Adaro-II are due for Annual Price Negotiations before the month of July 2009. Further, the coal contract with PT Samtan was also due for the Annual Price Negotiations before the month of March 2009 in accordance with the provisions of the coal contract for which TPC-G has projected to consider the base price as \$ 70/MT.

The Commission express its concern that if the variation in fuel price would have not been a pass through, TPC-G would have taken adequate steps to mitigate risks of fuel price variation. The Commission is of the view that TPC-G should endeavour to devise risk mitigation measures for fuel price variation. Further, it has been observed that for generation companies, there is an automatic pass through of FAC to the Distribution Licensees, therefore, it is necessary that there should be some risk sharing by generating companies also. Accordingly, the Commission is of the view that in future some principle needs to be devised, wherein incentive and disincentive may be stipulated in fuel pricing also, which would incentivise the Generating Companies to take some risk mitigating measures.

For FY 2009-10, the Commission in accordance with the practice adopted in previous Tariff Orders, has considered the price and calorific value of fuel equivalent to average actual fuel price and calorific value for the latest quarter, i.e., January 2009 to March 2009 for oil and gas prices. However, considering the fact that most of the coal contracts are scheduled for Annual Price Negotiation in early months of FY 2009-10 and considering the prevailing economic scenario, the Commission has considered the price of the coal for the third quarter, i.e., October to December 2008. **Further, the**



Commission is of the view that TPC-G, considering the current economic slowdown, should strategise and make its best efforts to ensure the lowest negotiated price, since the Annual Price Negotiation for the coal contracts are due for negotiations in coming months.

The summary of fuel prices and calorific value as projected by TPC-G and as considered by the Commission for FY 2009-10 is given in the Table below:

**Table : Summary of Fuel Prices for FY 2009-10**

Particular	Petition	Approved
<b>A. Fuel Price (Rs/MT)</b>		
Gas	5113	4546
Coal	5343	5195
Fuel Oil	20860	20472
<b>B. Calorific Value (kcal/kg)</b>		
Gas	13000	13136
Coal	4950	5151
Fuel Oil	10450	10550
<b>C Fuel Price (Rs/Mkcal)</b>		
Gas	393	346
Coal	1079	1009
Fuel Oil	1996	1941

#### 7.4.2 Variable Cost of Generation and Rate of Energy Charge

Based on performance parameters, i.e., heat rate and auxiliary consumption approved for FY 2009-10, and considering the fuel prices and fuel calorific value as discussed in above paragraphs, the variable cost of generation and rate of energy charge for each Unit of Trombay thermal generating station for FY 2009-10 as approved by the Commission is given in the Table below:

**Table: Cost of Generation and Energy Charge approved for FY 2009-10**

Unit	Fuel	Fuel Price	CV	Heat Rate	Aux. Cons.	Cost of Gen	Energy Charge
		Rs/Tonne	kcal/kg	kcal/kWh	%	Rs/kWh	Rs/kWh
Unit 4	Fuel Oil	20472	10550	2575	8.00%	5.00	5.43
Unit 4	Gas	4546	13136	2575	8.00%	0.89	0.97
Unit 5	Fuel Oil	20472	10550	2499	5.50%	4.85	5.13
Unit 5	Gas	4546	13136	2499	5.50%	0.86	0.92
Unit 5	Coal	5195	5151	2499	5.50%	2.52	2.67
Unit 6	Gas	4546	13136	2400	3.50%	0.83	0.86
Unit 6	Fuel Oil	20472	10550	2400	3.50%	4.66	4.83





Unit	Fuel	Fuel Price Rs/Tonne	CV kcal/kg	Heat Rate kcal/kWh	Aux. Cons. %	Cost of Gen Rs/kWh	Energy Charge Rs/kWh
Unit 7	Gas	4546	13136	1971	2.75%	0.68	0.70

In the above Table, the cost of generation is computed as the total cost divided by the total gross generation, while the energy charge is computed as the total cost divided by the total net generation. The comparison of rate of energy charge as proposed in the Petition and as approved by the Commission for FY 2009-10 is given in the Table below:

**Table: Energy Charge for FY 2009-10 (Rs/kWh)**

Unit	Fuel	Petition	Approved
Unit 4	Fuel Oil	5.59	5.43
Unit 4	Gas	1.10	0.97
Unit 5	Fuel Oil	5.40	5.13
Unit 5	Gas	1.06	0.92
Unit 5	Coal	2.92	2.67
Unit 6	Gas	0.98	0.86
Unit 6	Fuel Oil	4.96	4.83
Unit 7	Gas	0.80	0.70

#### 7.4.3 Summary of Total Fuel Costs

Based on the approved net generation and rate of energy charge, the total fuel costs for FY 2009-10 are summarised in the following Table:

**Table: Total Fuel Costs for FY 2009-10 (Rs Crore)**

Unit	Fuel	Petition	Approved
Unit 4	Fuel Oil	40.30	39.18
Unit 5	Fuel Oil	156.16	148.49
Unit 5	Coal	1015.60	928.12
Unit 6	Gas	3.65	3.21
Unit 6	Fuel Oil	1838.81	1787.56
Unit 7	Gas	110.11	96.90
<b>Total</b>		<b>3164.63</b>	<b>3003.46</b>

Though fuel cost is considered as an uncontrollable expenditure, TPC-G should make all efforts to optimize the fuel cost, so that the burden on the distribution licensees to whom it sells power is minimized. Though variation in fuel prices is allowed as a pass through to consumers as part of the FAC mechanism, however, such FAC adjustments also need to be vetted by the Commission on post facto basis. **Accordingly, the Commission directs TPC-G to submit the station-wise FAC details with all the necessary documents on quarterly basis for the Commission's approval.**



## **7.5 O&M EXPENSES FOR FY 2008-09**

TPC-G submitted that the revised O&M Expenditure for FY 2008-09 is estimated at Rs. 325 crore as compared to Rs. 329 crore approved in the APR Order, based on the actual O&M expenses for first half of FY 2008-09 and estimated O&M expenses for the remaining half of the year. TPC-G submitted that the Commission, in its MYT Order, has approved the total O&M expenses on a normative basis in accordance with the principles outlined in the Tariff Regulations rather than approving the costs for individual elements within the O&M expenses. TPC-G further submitted that the total R&M expenditure in second half of FY 2008-09 is expected to be higher on account of annual overhaul for January-February 2009.

TPC-G submitted that payment towards Brand Equity has been deducted from the O&M expenses in order to be consistent with the APR Order of the Commission and that it reserves the right to seek appropriate adjustments in the cost relating to Brand Equity based on the decision of the ATE.

The Commission approved the overall O&M expenses of Rs 329 crore for FY 2008-09 in the APR Order on normative basis in accordance with the MERC Tariff Regulations. While approving the O&M expenses for FY 2008-09, the Commission had considered the impact of Rs. 24 crore due to implementation of AS 15 (R).

Considering that the revised projections of O&M expenses as submitted by TPC-G is on lower side and also the variation in the expenses is not very significant, the Commission has not undertaken any provisional truing up for O&M expenses for FY 2008-09. The Commission will undertake the final truing up of O&M expenses for FY 2008-09 based on actual O&M expenses for the entire year and prudence check, during the APR process for FY 2009-10.

## **7.6 O& M EXPENSES FOR FY 2009-10**

TPC-G has estimated the O&M expenditure for FY 2009-10 by considering an escalation of 6% on account of inflation, on the approved O&M expenses for FY 2008-09 in the MYT Order and impact of Rs. 17 crore of AS 15 (R). TPC-G submitted that payment of Rs. 7 crore towards Brand Equity has been deducted from the O&M expenses in accordance with the APR Order of the Commission, however, TPC-G reserves the right to seek appropriate adjustments in the cost relating to Brand Equity based on the decision of the ATE. Accordingly, TPC-G projected O&M expenses of Rs. 341 crore for FY 2009-10.



TPC-G submitted that it had inadvertently included the impact of AS-15 (R) as Rs. 17 crore, which should be considered as Rs 24 crore. TPC-G further submitted that the Commission has also recognised the same in its APR Order for FY 2008-09. Accordingly, TPC-G requested the Commission to consider the revised amount of Rs. 347 crore for FY 2009-10.

For FY 2009-10, the Commission has considered an increase of around 6.04% on account of inflation over the revised level of base O&M expenses (i.e., excluding Brand Equity and impact of AS 15 (R)) as approved for FY 2008-09, 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 of Govt. of India) and CPI numbers for Industrial Workers (as per Labour Bureau, Government of India) for a period of 3 years, i.e., FY 2005-06 to FY 2007-08, to smoothen the inflation curve. The Commission has considered a weight of 60% to WPI and 40% to CPI, based on the expected relationship with the cost drivers. Further, the Commission has also considered the impact of AS 15 (R) for FY 2009-10 at Rs. 24 crore.

The summary of O&M expenses as projected by TPC-G and as approved by the Commission for FY 2009-10 is given in the following Table:

**Table: Summary of O&M Expenses for FY 2009-10 (Rs Crore)**

	MYT Order	TPC-G	Approved
O&M Expenses	329	347	347

## 7.7 CAPITAL EXPENDITURE AND CAPITALISATION

Capital expenditure and capitalisation are two important variables that influence computation of different expenditure and return components such as depreciation, advance against depreciation, interest on long term debt and return on equity. Accordingly, variation between approved values and actual values of these variables over the Control Period needs to be evaluated carefully during the Annual Performance Review along with scrutiny of reasons necessitating such review.

**Table: Capitalisation as submitted by TPC-G (Rs Crore)**

Particulars	FY 2008-09		FY 2009-10	
	APR Order	Revised Estimate by TPC-G	MYT Order	Revised Estimate by TPC-G
Capitalisation	291.92	349.70	97.07	220.18

The Commission, under its APR Order, had approved capitalisation of Rs. 291.92 crore and under its MYT Order had approved Rs. 97.07 crore for FY 2008-09 and FY



2009-10, respectively. Against this, TPC-G has projected revised estimate of capitalisation of Rs. 349.70 crore for FY 2008-09 and Rs. 220.18 crore for FY 2009-10.

The above capitalisation excludes capex scheme of new generating station of 250 MW generating station (Unit-8) at Trombay, as the Commission has already clarified in the MYT Order and APR Order that determination of generation tariff in respect of new generating stations shall be dealt with separately and not as part of approval of revenue requirement and tariff for existing Units.

The revision in ARR/tariff sought by different Utilities as a part of the Annual Performance Review (APR) process for FY 2008-09 can be attributed primarily to increase in power purchase cost of distribution licensees and the steep increase in capital expenditure and capitalisation being undertaken by the Utilities in recent years. The issue of increase in power purchase expenses is being dealt with in the Orders of the respective distribution licensees, since the reasons for the increase are different for different distribution licensees. However, the issue of steep increase in capital expenditure and capitalisation is a generic issue and relevant for all the Utilities.

The Commission appreciates that the investment on capex schemes is an ongoing process for any Utility/Licensee, which is required for healthy system development with tangible and intangible benefits. The scope, objective and benefits are identified while formulating project reports. After implementation of the scheme, before capitalisation, the benefits are to be demonstrated by the Utility. The Utility is required to execute the capex schemes in a phased manner so as to minimise tariff shock attributable to capex implementation. The Commission can permit capex in the ARR only after prudence check as there is an impact on tariff.

To understand the significance of the capitalisation claimed by TPC-G, the actual capitalisation over the last four to five years vis-à-vis the opening GFA prevailing around 5 years ago have been compiled as under:

Particulars	FY 2004-05	FY 2005-06	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10
	Actuals	Actuals	Actuals	Actuals- TPC submission	Revised Estimate	Projected
<b>Opening GFA</b>						
TPC-G	2452.00	2595.43	2679.88	2714.15	2738.62	3086.40
TPC-T	970.22	966.29	1032.97	1045.67	1088.51	1262.46
TPC-D	282.53	282.37	359.25	395.07	436.31	523.30
Total TPC	3704.74	3844.09	4072.10	4154.90	4263.43	4872.15
<b>Asset addition during the year</b>						
TPC-G	150.52	86.54	41.26	54.45	349.70	220.18



TPC-T	0.00	7.34	21.63	51.43	174.73	344.86
TPC-D	0.77	6.84	37.03	41.59	87.12	323.84
Total TPC	151.29	100.72	99.91	147.46	611.54	888.89
<b>Asset write off/retirement during the year</b>						
TPC-G	(7.09)	(3.51)	(6.99)	(29.98)	(1.92)	0.00
TPC-T	(3.92)	(0.19)	(8.93)	(8.60)	(0.78)	0.00
TPC-D	(0.93)	(0.61)	(1.32)	(0.35)	(0.13)	0.00
Total TPC	(11.94)	(4.31)	(17.24)	(38.93)	(2.82)	0.00
<b>Closing GFA</b>						
TPC-G	2595.43	2678.46	2714.15	2738.62	3086.40	3306.58
TPC-T	966.29	973.44	1045.67	1088.51	1262.46	1607.32
TPC-D	282.37	288.61	394.96	436.31	523.30	847.14
<b>Total TPC</b>	<b>3844.09</b>	<b>3940.51</b>	<b>4154.77</b>	<b>4263.43</b>	<b>4872.15</b>	<b>5761.04</b>

The above compilation has been done for TPC as a whole, to give a better picture of the overall increase in asset addition over the last five years, since TPC was earlier being regulated as an integrated Utility.

It is clear from the above Table that the Gross Fixed Assets have increased by around 35%, 66%, and 200% for the Generation, Transmission, and Distribution Business, respectively, over the last five years. The pace of asset addition has increased by leaps and bounds over the last five years. TPC-D has projected to almost treble its asset base (as in FY 2004-05) by the end of FY 2009-10, while TPC-G and TPC-T have also proposed to increase their asset base (as in FY 2004-05) to around 1.3 to 1.7 times. Further, when TPC was operating in an integrated manner during the period from FY 2004-05 to FY 2006-07, the total asset addition every year was only around Rs. 100 to 150\_crore, whereas in FY 2008-09 and FY 2009-10, each of the Businesses are individually adding assets of more than this amount every year on an average. The addition to the asset base is clearly not commensurate either with the increase in sales or increase in demand in MW served. Since the Utilities were able to serve the existing consumer base well enough with the existing assets, the rationale for this steep increase in the asset base needs to be examined further. The favourite argument of the Utilities that in the past, there was a backlog on this account, and that they want to make it up, is also unconvincing to justify the 100% increase in the asset base in such a short period.

In the regulated business, the returns to the investors are linked to the equity invested in the business, which in turn is directly linked to the existing asset base and assets added every year. The steep increase in the asset base every year appears has been suggested by the consumers to be an attempt by the Utilities to increase the returns



from the regulated business, during the Public Hearing conducted by the Commission on the APR Petitions filed by the Utilities.

The Commission has conducted a Public Hearing on the Petitions filed by different Utilities to ascertain the views of the consumers and other stakeholders on the Petition and the tariff increase sought by the Utility. During the Public Hearings, there was a huge resistance to the proposed tariff increase and one of the common objections has been that the increase in ARR/tariff being sought by the Utilities is exorbitant and the capital expenditure should not be allowed to the extent sought by the Utilities, since there has been no great increase in the sales quantum or any great improvement in the service quality over the period, and in some cases deterioration in the service quality has been witnessed.

Further, as regards capital expenditure, the Commission has instituted a process of giving in-principle approval for the capital expenditure schemes costing above Rs. 10 crore (together known as DPR Schemes), wherein the Utility has to submit Detailed Project Report (DPR) as well as the expected cost-benefit analysis, pay back period, etc., as per well laid out guidelines. Schemes costing less than Rs. 10 crore are considered as non-DPR schemes and the Utilities are not required to submit any DPR for the approval of the same. It is often observed that at the time of obtaining in-principle approval of the Commission for the DPR schemes, the Utilities indicate several quantifiable benefits and a short payback period. However, the Utilities are not able to substantiate the benefits once the capital investment is actually undertaken and the assets are added to the Gross Fixed Assets (GFA). As a result, the costs and hence, the tariffs are increased, but the expected benefits to the system do not accrue.

In this regard, the in-principle approval given by the Commission to the DPR Schemes has certain standard covenants. One such in-principle approval given to a scheme submitted by MSETCL is reproduced below, for reference:

“... ”

***2. Please note that this in-principle clearance should not be construed as final approval for ARR purpose and the scheme will be open for scrutiny during the tariff determination process/ARR review, particularly in the context of actual cost incurred, scope and objective achieved etc. ex post after implementation of the scheme. MSETCL will be required to submit the status of implementation of the scheme with cost incurred till date, likely completion date etc. along with their ARR petition or during the tariff determination process at the appropriate time.***



3. *MSETCL should submit half yearly report giving the status of implementation of the scheme in terms of expenditure incurred and item wise physical progress achieved during the implementation of the scheme.*

4. *Assets created after execution of the scheme should be maintained separately in the Asset register.*

***5. Immediately after completion / commissioning of the respective scheme, MSETCL should communicate to the Commission the date of completion of the scheme, actual cost incurred, escalation in cost, if any with reasons, the scope and objectives of the scheme and to what extent they have been achieved, etc. so as to facilitate a comparison between the in-principle clearance and the actual.”(emphasis added)***

However, the Utilities have not been able to submit any evidence that the scope and objective of the scheme have been achieved.

In this context, the recent Report by Forum of Regulators on Multi-Year Framework has also emphasized that the capital expenditure plans of Utilities should clearly bring out cost benefit analysis.

Further, the Commission has observed that most of the Utilities have projected very high non-DPR schemes, and in some cases, the capital expenditure and capitalisation projected under non-DPR schemes is several times that projected under DPR schemes. This defeats the very purpose of classifying schemes costing above Rs. 10 crore as DPR schemes and requiring regulatory scrutiny of the schemes.

In this regard, the Commission in its APR Order for Maharashtra State Electricity Transmission Company Limited (MSETCL) for FY 2007-08 as well as the MYT Orders for Utilities had observed as under:

*“However, the Commission would like to reiterate that in-principle approval of the scheme does not absolve the senior management of MSETCL of their responsibility to prioritise various schemes and undertake cost benefit analysis and financial analysis to validate the commercial prudence of each scheme. MSETCL 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.”*

...

*“The increase in quantum of Non-DPR schemes indicates an unhealthy trend, as the Commission feels that there is a tendency to split distribution scheme so that capital outlay of the scheme is below Rs. 10 Crore, to escape regulatory scrutiny. 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.”*

In view of the above, as a general rule, the Commission has decided that the total capital expenditure and capitalisation on non-DPR schemes in any year should not exceed 20% of that for DPR schemes during that year. To achieve the purpose, the purported non-DPR schemes should be packaged into larger schemes by combining similar or related non-DPR schemes together, so that the in-principle approval of the Commission can be sought in accordance with the guidelines specified by the Commission and regulatory oversight can be exercised while approving the capitalisation.

Further, in the absence of documentary evidence that the stated purpose and objective of the capex schemes have been achieved, MERC is restricting the capitalisation considered for the purposes of determination of ARR and tariff. Once the Utilities submit the necessary justification to prove that the scope and objective of the capex scheme has been achieved as projected in the DPR, the same may be considered in future Orders.

TPC is directed to prioritise the capex schemes based on importance and the schemes may be implemented in a phased manner to minimise the impact on generation cost.

For the purpose of APR exercise for FY 2008-09 and revised projection for FY 2009-10, the Commission has not considered capitalisation of such DPR schemes where in-principle approval of the Commission is yet to be accorded. Accordingly, the Commission has not considered the capitalisation of the following DPR schemes:





- Captive coal berth at Trombay;
- Bunds for condenser cooling discharge water;
- Replacement of Unit-5 HP FW Heaters.

In respect of the DPR scheme 'Refurbishment of GT Unit-7', the Commission had approved the project cost of Rs. 40 crore as per the DPR scheme proposed by TPC-G, whereas, TPC-G has claimed capitalisation of Rs. 59.34 crore including IDC during FY 2008-09 against this scheme. Thus, actual capital expenditure and capitalisation in respect of this scheme exceeds the initially considered capital expenditure and capitalisation. The Commission is of the view that while the increase in capitalisation could be on account of additional scope necessitated or any other reason, however, unless the same is ascertained, it would not be prudent to allow such expenses. Further, the Commission is of the view the benefits of such scheme needs to be examined and until it is ascertained that the projected benefits have actually accrued for the benefit of the consumers, it would not be appropriate to allow such expenses. Accordingly, the Commission has not considered the projected capital expenditure and capitalisation towards this DPR scheme.

The Commission also notes that as per Regulation 30.1 of the Tariff Regulations, the actual capital expenditure incurred on completion of the project shall form the basis for determination of original cost of the project subject to prudence check. Accordingly, the Commission directs TPC-G to provide adequate justification, including process of procurement, sources of equipment, etc., to establish that best price/cost has been obtained, rationale and provide supporting documentation for justifying the increase in capitalised cost in respect of this scheme. Accordingly, revised approved capitalised cost can be considered at the time of true-up of financial performance of FY 2008-09 and annual performance review for FY 2009-10.

In respect of the DPR scheme 'Coal yard augmentation', the Commission has not considered the proposed capital expenditure and capitalisation of the scheme as the Commission is of the view the benefits of such scheme needs to be examined in terms of coal stock maintained prior to the scheme, increase in the coal stock after setting up the additional coal stock yard, etc. The Commission is of the view that until it ascertains that the projected benefits have actually accrued for the benefit of the consumers, it would not be appropriate to allow such expenses.

In respect of the DPR scheme 'Renovation of Unit-6 LP Turbine', the Commission has not considered the proposed capital expenditure and capitalisation of the scheme as TPC-G in its half yearly progress report submitted to the Commission that the



scheme has been delayed. Further, the Commission is of the view the benefits of such scheme needs to be examined and until it is ascertained that the projected benefits have actually accrued for the benefit of the consumers, it would not be appropriate to allow such expenses.

In respect of the DPR scheme 'Modification of the coal conveying system', the Commission has not considered the proposed capital expenditure and capitalisation of the scheme as TPC-G, in its half yearly progress report submitted to the Commission that the scheme has been delayed. Further, TPC-G has claimed capitalisation of Rs. 31.87 crore including IDC during FY 2009-10 against the approved cost of Rs. 22 crore. Thus, actual capital expenditure and capitalisation in respect of this scheme exceeds the initially considered capital expenditure and capitalisation. The Commission is of the view that while the increase in capitalisation could be on account of additional scope necessitated or any other reason, however, unless the same is ascertained, it would not be prudent to allow such expenses. Further, also until it is ascertained that the projected benefits have actually accrued for the benefit of the consumers, it would not be appropriate to allow such expenses.

For Non-DPR schemes, the Commission has considered 50% of the proposed capitalisation by TPC-G on adhoc basis, as the Commission is of the view that until it is ascertained that the projected benefits have actually accrued for the benefit of the consumers, it would not be appropriate to allow the entire expenses.

Accordingly, revised estimate for capitalisation for FY 2008-09 and approved capitalisation for FY 2009-10 is summarised in the following Table:

***Table: Capitalisation approved by the Commission (Rs Crore)***

Particulars	FY 2008-09			FY 2009-10		
	APR Order	Revised Estimate by TPC-G	Revised Estimate by the Commission	MYT Order	Revised Estimate by TPC-G	Approved
Capitalisation	291.92	349.70	84.82	97.07	220.18	87.48

## **7.8 DEPRECIATION**

The Commission, in its APR Order, had permitted depreciation to the extent of Rs. 60.72 crore for FY 2008-09 and Rs 81.21 crore for FY 2009-10 in the MYT Order, which amounts to 2.14% and 2.50% of Opening level of Gross Fixed Assets (GFA) of TPC-G for FY 2008-09 and FY 2009-10, respectively.

TPC-G, in its APR Petition, submitted that as regards the computation of the depreciation to be charged for the year, the Commission in its APR Order for FY



2007-08 had not permitted TPC-G to charge depreciation on the assets put to use during the year and mentioned that the Regulation 34.4.1 of Tariff Regulations does not provide for depreciation on assets added during the year. TPC-G submitted that the depreciation for FY 2008-09 and FY 2009-10 has been computed based on the opening GFA. TPC-G further submitted that it has appealed before the ATE on this issue of depreciation on assets added during the year and it reserves the right to seek appropriate adjustments for FY 2007-08 based on the decision of the ATE.

TPC-G, under its APR Petition, submitted revised estimate for depreciation expenditure for FY 2008-09 and FY 2009-10 as Rs. 51.35 crore and Rs. 60.05 crore respectively, at an overall depreciation rate of 1.87% and 1.95% corresponding to opening GFA of Rs. 2738.64 crore and Rs. 3086.42 crore, respectively.

***Table: Depreciation as estimated by TPC-G (Rs Crore)***

Particulars	FY 2008-09		FY 2009-10	
	APR Order	Revised Estimate by TPC-G	MYT Order	Revised Estimate by TPC-G
Opening GFA	2842.57	2738.64	3245.20	3086.42
Depreciation	60.72	51.35	81.21	60.05

Further, TPC-G confirmed that depreciation has not been claimed beyond 90% of the asset value in accordance with the Tariff Regulations.

In view of revised value of capitalisation as estimated under previous paragraphs for FY 2008-09 and as approved for FY 2009-10, the depreciation expenditure as estimated by the Commission for FY 2008-09 and approved for FY 2009-10 considering the depreciation on opening GFA, is summarised in the following Table:

***Table: Depreciation as approved by the Commission (Rs Crore)***

Particulars	FY 2008-09			FY 2009-10		
	MYT Order	Revised Estimate by TPC-G	Revised Estimate by the Commission	MYT Order	Revised Estimate by TPC-G	Approved
Opening GFA	2842.57	2738.64	2709.30	3245.20	3086.42	2792.21
Depreciation	60.72	51.35	50.63	81.21	60.05	54.02

The Commission will undertake the final truing up of depreciation based on actual capitalisation during the entire year subject to prudence check, during Performance Review for the third year of the Control Period, i.e., FY 2009-10.



## 7.9 INTEREST EXPENSES

TPC-G, under its APR Petition, submitted the revised estimate of interest expenditure for FY 2008-09 and FY 2009-10 as Rs. 35.40 crore and Rs. 57.48 Crore, respectively, at a weighted average interest rate of 10.76% and 11.37% for FY 2008-09 and FY 2009-10, respectively.

**Table: Interest on Loan as submitted by TPC-G (Rs Crore)**

Particulars	FY 2008-09		FY 2009-10	
	APR Order	Revised Estimate by TPC-G	MYT Order	Revised Estimate by TPC-G
Op. balance of loan	270.23	217.70	525.76	440.10
Loan Addition	204.34	244.79	67.95	154.13
Loan Repayment	(22.39)	(22.39)	(33.49)	(23.12)
Cl. Balance of loan	452.18	440.10	560.22	571.11
<b>Interest cost</b>	<b>33.68</b>	<b>35.40</b>	<b>49.61</b>	<b>57.48</b>
<b>Effective Interest Rate</b>	<b>9.32%</b>	<b>10.76%</b>	<b>9.14%</b>	<b>11.37%</b>

TPC-G submitted that interest on long-term debt for FY 2008-09 has been computed based on interest on normative loans for previous years, actual loans for FY 2006-07 and FY 2007-08 and interest on 70% of the expenditure to be capitalised in FY 2008-09. TPC-G has raised a loan of Rs. 450 crore from IDFC to fund its current capital expenditure as per 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% (if the Company is not able to maintain a rating of AAA six (6) months prior to the interest rate reset date, then IDFC will have the right to revise the spread).

TPC-G submitted that based on the above mentioned terms, the interest rate is liable to vary over a period of time. TPC-G further submitted that IDFC, through its letter dated September 29, 2008, sought to reset the interest rate to 13% from September 29, 2008 for a period of one year and submitted the copy of the letter. Accordingly, TPC-G considered an average rate of 10.95% (i.e., average of 8.9% and 13%) for FY 2008-09.

TPC-G further submitted that it has also raised a loan of Rs. 400 crore from IDBI to fund its current capital expenditure as per following terms:

- Tenor : 13 years with 3 year moratorium and 10 years repayment
- Repayment: 5% of the loan amount to be repaid every year for the first nine years and balance in 10<sup>th</sup> year



- Interest Rate: BPLR (-) 1.45% p.a. payable monthly. The interest rate to be fixed on each date of disbursement.

TPC-G submitted the details of disbursement in FY 2008-09 towards IDBI loan as shown in the Table below:

*(Rs. crore)*

Month of Disbursement	Quantum of Disbursement	Net Interest Rate
End March 2008	200	10.49%
August 2008	92	11.39%
October 2008	84	14.00%
<b>Total</b>	<b>376</b>	<b>11.53%</b>

Accordingly, TPC-G submitted that it has considered an average rate of 11.53% for working out the interest liability on assets capitalized in FY 2008-09. TPC-G also submitted a copy of the letter from IDBI regarding change in the interest rate.

TPC-G submitted that the IDBI loan is being utilised for all the three functions, viz., Generation, Transmission and Distribution. Based on the capitalisation considered for the three functions, the quantum of Rs. 400 crore of IDBI loan may not be sufficient. TPC-G submitted that it may have to borrow additionally (including other sources) to finance its Capital Expenditure in FY 2008-09. Pending finalisation of additional loans, for the purpose of estimation of interest for the year, TPC-G assumed that the additional loans would be available at the terms considered above. TPC-G further submitted that the impact of actual loans on the interest cost would be included during the truing up of FY 2008-09 and Annual Performance Review of FY 2009-10.

Further, in response to query, TPC-G confirmed that it has accepted the proposal of IDFC of resetting the interest rate. TPC-G further submitted that in accordance with the clauses of the Loan Agreement, the interest rate to be made applicable is determined by the following:

- Benchmark rate
- Credit Rating of TPC at the time of (6 months prior to) Reset Interest Date.

The rating of TPC was changed from 'AAA' to 'AA' from July 2007. Accordingly the premium of 1.45 % (the Spread) over the Benchmark rate was revisited at the time of Interest Reset Date. IDFC applied the interest rate of 13% to TPC from September 28, 2008. TPC considered the same appropriate as the cost of borrowing by TPC from other sources at the time of Interest Reset Date was around 13 %.



Further, in response to the Commission's query with respect to IDBI loan, TPC-G confirmed that it has accepted the proposal of IDBI of 14% interest rate on the disbursement of Rs. 86 crore as during that period, the funds in the market had dried up and the interest cost had risen substantially. TPC-G further submitted that the cost of loans available to TPC at that point of time (around October 2008) was in the range of about 14%. TPC-G submitted that the same is evidenced by the rate of interest payable by TPC for a short-term loan of Rs. 500 crore availed around October 2008 which worked out to 14.4 %.

TPC has contemplated that loan from IDFC and IDBI is to be used to fund capital expenditure for new generating station of 250 MW Unit-8 of Trombay Station apart from existing projects of TPC. In response to a query, TPC-G has submitted the allocation of IDBI and IDFC loans for Generation, Transmission and Distribution businesses as shown in the Table below:

(Rs crore)

Year	Source	TPC-G Unit 4 to 7	TPC-G Unit-8	TPC-T	TPC-D	Total
FY 2006-07	IDFC	28.86	-	15.14	26	70.01
FY 2007-08	IDFC	38.11	276.55	36	29.33	379.99
<b>Sub-Total (IDFC)</b>		<b>66.98</b>	<b>276.55</b>	<b>51.15</b>	<b>55.33</b>	<b>450</b>
FY 2008-09	IDBI	244.79	519.17	122.31	60.98	947.25
FY 2009-10	IDBI	154.13	13.74	241.4	226.68	635.95
<b>Sub-Total (IDBI)</b>		<b>398.92</b>	<b>532.91</b>	<b>363.71</b>	<b>287.67</b>	<b>1,583.20</b>
<b>Total</b>		<b>465.89</b>	<b>809.46</b>	<b>414.86</b>	<b>342.99</b>	<b>2,033.20</b>

As observed from the above submissions of TPC-G, against the sanctioned amount of loan of Rs. 400 crore from IDBI, for, TPC-G has considered a loan drawal of Rs. 519.17 crore for Unit-8 alone. Effectively, the other schemes have been funded by normative loan, since only Rs. 400 crore has been sanctioned by IDBI till date. Hence, the Commission has considered the utilisation of actual loan availed from IDBI during FY 2008-09 for funding the capex requirement of Unit-8. Accordingly, for working out the interest rate towards the loan portion of the approved capitalisation for the



remaining schemes, the Commission has considered the normative debt:equity ratio, i.e., considered loan as 70% of capitalisation as approved in this Order. As the actual interest rate for IDFC loans during part of the last year was 8.9% and considering the normative interest rates allowed by the Commission in the previous Order with respect to interest rates prevailing at that time, the Commission has considered a normative interest rate of 9% for working out the interest expenses for FY 2008-09. Further, as against the proposed capital expenditure for FY 2009-10, TPC-G is yet to tie up the loans, therefore, the Commission is of the view that the proposed capital expenditure may be funded from internal accruals and in accordance with the provisions of the MERC Tariff Regulations, the Commission has considered the normative debt: equity ratio of 70:30 for the approved capitalisation for FY 2009-10. Since, TPC-G is yet to tie up for loan for the capital expenditure in FY 2009-10, the Commission has considered the interest rate of 9% on the normative loan on the capitalised amount as approved in this Order for FY 2009-10.

As regards the resetting of the interest rate from IDFC on account of change in rating of TPC from 'AAA' to 'AA', the Commission is of the view that the said change may have been on account of performance of other businesses of TPC, as the regulated business of electricity ensures a guaranteed return, which it earns every year. As regards the regulated business of electricity for Mumbai region, the Commission does not observe any critical or significant factor that might have affected its business. On the one hand, TPC-G talks of Tata Brand Equity, etc., while TPC credit rating has gone down due to other businesses and not TPC-G. In fact, TPC-G is the major earner with huge cash balance. Accordingly, the Commission does not agree with the contentions of TPC regarding the impact on interest rate on account of change in credit rating. Further, as regards the resetting of the interest rate, the letter from IDFC clearly mentions that the proposed reset in interest rate is for one year only. The Commission is of the view that TPC-G should have made adequate efforts to negotiate the interest rate. Even though the interest cost is a pass through in the ARR and subsequently to the consumers, it does not bar TPC-G from making adequate and sincere efforts in this regard. The Commission, while estimating the interest expense for FY 2008-09 has considered the average interest rate of 10.95% towards IDFC loan as submitted by TPC-G, however, for FY 2009-10, the Commission has considered the interest rate of 8.9% on the basis of earlier terms of the loan agreement.

The Commission, in its earlier Tariff Order dated October 3, 2006 (Case No. 12 and 56 of 2005) as well as MYT Order in Case No. 72 of 2006 and APR Order in Case No. 68 of 2007, has considered normative interest expenditure on loans corresponding



to capitalised assets at interest rate of 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, for assets capitalised during FY 2006-07, the Commission had considered the interest rate in accordance with the IDFC loan terms.

The estimated interest expenditure for FY 2008-09 and approved interest expenditure for FY 2009-10 is summarised in the following Table:

***Table: Interest on Loan as approved by the Commission (Rs Crore)***

Particulars	FY 2008-09			FY 2009-10		
	APR Order	Revised Estimate by TPC-G	Revised Estimate by the Commission	MYT Order	Revised Estimate by TPC-G	Approved
Op. balance of loan	270.23	217.70	197.18	525.76	440.10	234.17
Loan Addition	204.34	244.79	59.37	67.95	154.13	61.24
Loan Repayment	(22.39)	(22.39)	(22.39)	(33.49)	(23.12)	(23.12)
Cl. Balance of loan	452.18	440.10	234.17	560.22	571.11	272.28
<b>Interest Expense</b>	<b>33.68</b>	<b>35.40</b>	<b>21.71</b>	<b>49.61</b>	<b>57.48</b>	<b>23.92</b>
<b>Effective Interest Rate</b>	9.32%	10.76%	10.07%	9.14%	11.37%	9.44%

## 7.10 RETURN ON EQUITY (ROE)

The Commission, in its APR Order, had permitted return on equity to the extent of Rs 157.44 Crore for FY 2008-09 and Rs 171.91 Crore for FY 2009-10, at rate of return of 14% on opening value of regulated equity of Rs 1124.55 Crore and Rs. 1227.92 Crore, during respective years.

TPC, under its APR Petition, submitted revised estimate for return on equity for FY 2008-09 and FY 2009-10 as Rs 153.90 Crore and Rs 168.59 Crore, respectively, as shown in the Table below:

***Table: Return on Equity as computed by TPC-G (Rs Crore)***

Particulars	FY 2008-09		FY 2009-10	
	APR Order	Revised Estimate by TPC-G	MYT Order	Revised Estimate by TPC-G
Regulatory Equity at the beginning of the year	1124.55	1099.29	1227.92	1204.20
Equity portion of assets capitalised	87.58	104.91	29.12	66.06
Regulatory Equity at the end of the year	1212.12	1204.20	1257.04	1270.26
Return on Regulatory Equity at the beginning of	157.44	153.90	171.91	168.59





Particulars	FY 2008-09		FY 2009-10	
	APR Order	Revised Estimate by TPC-G	MYT Order	Revised Estimate by TPC-G
the year				
<b>Total Return on Regulatory Equity</b>	157.44	153.90	171.91	168.59

TPC-G submitted that based on the capital expenditure and capitalisation and debt:equity norm of 70:30, the return on equity on the equity portion has been claimed at 14%.

The Commission has computed the RoE for FY 2008-09 and FY 2009-10 on the opening balance of equity in accordance with the Regulations 34.1 and 31 of the Tariff Regulations as applicable for the generating stations. Accordingly, estimated Return on Equity for FY 2008-09 and approved Return on Equity for FY 2009-10 is summarised in the following Table:

**Table: Return on Equity as approved by Commission (Rs Crore)**

Particulars	FY 2008-09			FY 2009-10		
	APR Order	Revised Estimate by TPC-G	Revised Estimate by the Commission	MYT Order	Revised Estimate by TPC-G	Approved
Regulatory Equity at the beginning of the year	1124.55	1099.29	1090.50	1227.92	1204.20	1115.95
Equity portion of assets capitalised	87.58	104.91	25.45	29.12	66.06	26.24
Regulatory Equity at the end of the year	1212.12	1204.20	1115.95	1257.04	1270.26	1142.19
Return on Regulatory Equity at the beginning of the year	157.44	153.90	152.67	171.91	168.59	156.23
<b>Total Return on Regulatory Equity</b>	157.44	153.90	152.67	171.91	168.59	156.23

## 7.11 INTEREST ON WORKING CAPITAL FOR FY 2008-09 AND FY 2009-10

TPC-G, in its Petition, submitted that the Working Capital has been computed in accordance with the provisions of the Tariff Regulations. TPC-G further submitted that the normative interest rate of 13% has been considered for estimating interest on working capital.

For FY 2008-09, as the Commission has not carried out provisional truing up of other elements of ARR, the Commission has not carried out truing up of interest on working capital for FY 2008-09. The Commission will carry out the truing up of



interest on working capital after final truing up of other elements of expenses and revenue for FY 2008-09.

For FY 2009-10, The Commission has estimated the Unit-wise working capital requirement for the thermal stations of TPC-G and station-wise working capital requirement for hydel stations of TPC-G in accordance with the MERC Tariff Regulations. For Unit-4, the Commission has estimated the Working Capital requirement at the approved PLF rather than normative availability as approved PLF for Unit-4 is lower than the normative availability of 80%.

As the prevailing short-term Prime Lending Rate of State Bank of India was 13% at the time of filing of Petition by TPC-G, the Commission has considered the interest rate of 13 % for estimating the interest on working capital.

The interest on working capital for each Unit of Trombay thermal station and aggregate for hydel stations for FY 2009-10 is given in the following Table:

**Table: Interest on Working Capital for FY 2009-10 (Rs Crore)**

Unit/Station	MYT Order	APR Petition	
		TPC	Approved
Unit 4	1	1	1
Unit 5	22	32	31
Unit 6	46	50	48
Unit 7	4	5	5
<b>sub-total (Thermal)</b>	<b>73</b>	<b>88</b>	<b>85</b>
Bhira	2	2	2
Bhivpuri	1	1	1
Khopoli	2	2	2
<b>sub-total (Hydel)</b>	<b>5</b>	<b>6</b>	<b>5</b>
<b>Total</b>	<b>78</b>	<b>94</b>	<b>90</b>

## 7.12 NON TARIFF INCOME FOR FY 2008-09

TPC-G submitted that the Non-Tariff Income for FY 2008-09 is estimated at Rs 13 crore as against Rs. 9 crore approved by the Commission in the APR Order.

The Commission will undertake the truing up of Non Tariff Income based on audited accounts during Performance Review for the third year of Control Period, i.e., FY 2009-10.



**7.13 NON TARIFF INCOME FOR FY 2009-10**

TPC-G submitted that Non-Tariff Income comprises recurring items such as rents, interest on statutory reserves and non-recurring items such as sale of scrap, etc. TPC-G further submitted that considering the ATE Judgment in Appeal No. 60 of 2007 dated May 12, 2008, the contingency reserve has been reinstated to the extent of amount drawn from these reserves, and income from investments made from such reserves have been considered in the Non-Tariff Income. TPC-G has projected the non-tariff income based on past trends followed by the recurring items, at Rs. 17 crore as against the Commission's approval of Rs 7 crore for FY 2009-10.

The Commission has considered the Non-tariff Income as projected by TPC-G in its Petition, except the income of Rs. 7.41 crore towards the income from statutory reserves. TPC-G in its additional submissions submitted that as per the provisions of Tariff Regulations, the contingency reserves are not applicable for Generation business. The Commission as detailed out in Section 5 of the Order has adjusted the extra contingency reserves available with TPC-G and for FY 2009-10 no provision has been made. Hence the Commission has not considered the interest on statutory reserves as part of Non Tariff Income. Accordingly, the approved non-tariff income for FY 2009-10 works out to be Rs 9.78 crore for FY 2009-10.

**7.14 INCOME TAX FOR FY 2008-09**

TPC-G submitted that for FY 2008-09, the income tax is estimated at Rs 88 crore as against the earlier estimate of Rs 52 crore, which was approved by the Commission for FY 2008-09 in the APR Order. TPC-G has estimated the income tax liability considering the Tax WDV of assets and other provisions u/s 14A, 32A, 43A and 43B of the IT Act, 1961.

TPC-G further requested the Commission to not consider normative interest on loan and normative interest on working capital as actual expenses while computing the income tax. The Commission agrees with TPC-G's submission that normative interest on loan and normative interest on working capital are not actual expenses and hence, will not be eligible as deductible expenses while computing the income tax. However, while normative interest on long-term loans has been added to the RoE while computing the Income Tax for FY 2008-09, the normative interest on working capital loan has not been added to the RoE, since it is not possible to project the exact actual interest expense that will be incurred by TPC-G. Depending on the actual interest on working capital incurred by TPC-G, only the difference between the normative



interest and actual interest, and that too, only if the actual interest is lower than the normative interest on working capital, will have to be added to the RoE, for computing the Income Tax. Hence, this can be considered at the time of final truing up.

For the purpose of income tax computations, the Commission has considered the RoE as the regulatory profit before tax. Further, the Commission has not grossed up such RoE component for income tax, since the income tax is allowed as part of the ARR as an expense head, in accordance with the MERC Tariff Regulations.

Based on above principles, the Commission has estimated the income tax of TPC-G on stand alone basis by considering the income and expenses as per revised estimate for FY 2008-09 as Rs. 57.54 crore. The Commission will however, true up the income tax, based on final truing up other elements of expenses and revenue for FY 2008-09. The summary of the income tax as estimated by the Commission for FY 2008-09 in this Order is shown in the Table below:

<b>Income Tax</b>	<b>Rs Crore</b>
Return on Equity	152.67
Add: Normative Interest on Working Capital	0.00
Less: Actual Interest on working capital	0.00
Interest on loan approved by Commission	21.71
Less: Actual Interest on Long Term loan (IDFC & IDBI loan)	-5.09
Add: Regulatory Depreciation	50.63
Less: Tax depreciation	-93.08
Add: Other Disallowances for computing Income Tax	55.02
Less: Other Expenses allowed for computing income tax	-15.96
Less: Deductions under S. 80-G, 80 IA	-82.14
Total	169.29
Corporate Tax Rate	33.99%
<b>Income Tax</b>	<b>57.54</b>

### 7.15 INCOME TAX FOR FY 2009-10

TPC has projected income tax based on the applicable tax rate, tax WDV of assets and various other applicable provisions of the IT Act, 1961. The Income Tax estimated by TPC for FY 2009-10 is Rs. 107 crore considering the Return on Equity for existing Units. TPC-G further submitted that income tax projections are sensitive to the quantum of capitalisation in that year as such capitalisation impacts the depreciation under the IT Act, 1961. Accordingly, TPC-G requested the Commission that in case the capitalisation approved by the Commission is different from the proposed, income tax workings may be re-computed.



TPC-G further requested the Commission to not consider normative interest on loan and normative interest on working capital as actual expenses while computing the income tax. The Commission agrees with TPC-G's submission that normative interest on loan and normative interest on working capital are not actual expenses and hence, will not be eligible as deductible expenses while computing the income tax. However, while normative interest on long-term loans has been added to the RoE while computing the Income Tax for FY 2009-10, the normative interest on working capital loan has not been added to the RoE, since it is not possible to project the exact actual interest expense that will be incurred by TPC-G. Depending on the actual interest on working capital incurred by TPC-G, only the difference between the normative interest and actual interest, and that too, only if the actual interest is lower than the normative interest on working capital, will have to be added to the RoE, for computing the Income Tax. Hence, this can be considered at the time of final truing up.

TPC-G has estimated the income tax liability considering the Tax WDV of assets and other provisions of the Income Tax Act, 1961. For the purpose of income tax computations, the Commission has considered the RoE as the regulatory profit before tax. Further, the Commission has not grossed up such RoE component for income tax, since the income tax is allowed as part of the ARR as an expense head, in accordance with the MERC Tariff Regulations. As regards TPC-G's request that in case the capitalisation approved by the Commission is different from that proposed, income tax workings may be reworked considering the change in tax depreciation, the Commission has not considered the same at this stage, since it is difficult to estimate and separate the tax depreciation for assets added during the year vis-à-vis the tax depreciation for assets already existing, in the absence of such information with the Commission. The impact of this change will hence, have to be addressed at the time of final truing up for FY 2009-10.

The Commission has estimated the income tax of TPC-G on stand alone basis as Rs. 59.84 crore. The Commission will however, true up the income tax, based on actual revenue and expenditure of TPC-G for FY 2009-10. The summary of the income tax as approved by the Commission for FY 2009-10 in this Order is shown in the Table below:

<b>Income Tax</b>	<b>Rs Crore</b>
Return on Equity	156.23
Interest on loan approved by Commission	23.92



Less: Actual Interest on Long Term loan (IDFC & IDBI loan)	(4.10)
Add: Regulatory Depreciation	54.02
Less: Tax depreciation	(114.49)
Add: Other Disallowances for computing Income Tax	53.39
Less: Other Expenses allowed for computing income tax	(13.19)
Less: Deductions under S. 80-G, 80 IA	(49.23)
Total	176.05
Corporate Tax Rate	33.99%
<b>Income Tax</b>	<b>59.84</b>

## 7.16 ALLOCATION OF LOAD CONTROL CENTRE COST OF TATA POWER GENERATION AND TATA POWER DISTRIBUTION

TPC-G in the Petition submitted as under:

- a) The Tata Power Company, through its generating plants in Trombay, Khopoli, Bhira, and Bhivpuri (TPC-G) supplies power to the Distribution Licensees in Mumbai namely BEST, RInfra-D and Tata Power's Distribution business (TPC-D). Further, it also operates transmission assets (TPC-T) to transmit the energy generated as well as power purchased from various parts of the country. TPC-T network is interconnected with MSETCL and RInfra-T system at various points. TPC's Load Control Centre (LCC) is responsible for carrying out various activities for TPC-G, TPC-T and TPC-D.
- b) Also, TPC's LCC acts as a single point contact for coordination between SLDC and other Utilities. TPC LCC is fully equipped with the required infrastructure. Currently, the expenditure incurred on account of LCC operation is part of TPC-T's ARR. TPC has outlined the methodology for allocation of the expenditure incurred for maintaining the LCC and its infrastructure amongst TPC-G, TPC-T and TPC-D.
- c) In the APR Petition for FY 2007-08, it was submitted that about Rs 66 Lakh (a portion of the employee costs) was allocable for carrying out the SLDC function. As the SLDC is setting up the Sub-Load Despatch Centre for monitoring the operations of Mumbai, TPC has assumed that such portion of the employee cost and efforts would now be apportioned to the three functions of TPC, i.e., TPC-G, TPC-T and TPC-D.

TPC further submitted that, TPC's LCC has its own direct expenses such as:



- a. Employee expenses
- b. R&M expenses
- c. A&G Expenses
- d. Depreciation
- e. Interest on Normative Loans
- f. Return on Equity
- g. Interest on Working Capital

Based on the nature of expenses above, TPC considered it appropriate:

- To allocate the Employee Expenses to TPC-G, TPC-T and TPC-D on the basis of the time spent by the TPC-LCC personnel ,
- To allocate the expense on account of related to 'Infrastructure Expense' on the basis of the data points monitored by the LDC for the three businesses.

Thus, the percentage allocation of LCC's expenses to TPC-G, TPC-T and TPC-D as proposed by TPC for FY 2008-09 and FY 2009-10 is summarised in the Table below:

**Table: Percentage allocation of LCC's expenses to TPC-G, TPC-T and TPC-D**

Expense Type	Allocation to TPC-G	Allocation to TPC-T	Allocation to TPC-D
Employee Expenses	30.63%	30.83%	38.53%
Infrastructure	27%	68%	5%

Based on the percentage allocation, the cost allocation of LCC's expenses to TPC-G, TPC-T and TPC-D as proposed by TPC is summarised in the Table below:

**Table: Cost allocation of LCC to TPC-G, TPC-T and TPC-D for FY 2008-09 and FY 2009-10 each**

LCC Expenditure item	Total Amount	TPC-G Allocation	TPC-T Allocation	TPC-D Allocation
Total O&M	4.66			
<i>Employee Expenses</i>	<i>3.73</i>	<i>1.14</i>	<i>1.15</i>	<i>1.44</i>
<i>A&amp;G</i>	<i>0.32</i>	<i>0.09</i>	<i>0.22</i>	<i>0.02</i>
<i>R&amp;M</i>	<i>0.61</i>	<i>0.17</i>	<i>0.42</i>	<i>0.03</i>
Interest on Normative Loans	0.37	0.10	0.25	0.02
Interest on Working Loans	0.14	0.04	0.10	0.01
Depreciation	0.78	0.21	0.53	0.04



Return on equity	0.64	0.17	0.43	0.03
Income Tax	0.41	0.11	0.28	0.02
<b>Total</b>	<b>7.00</b>	<b>2.03</b>	<b>3.37</b>	<b>1.60</b>

TPC was earlier undertaking the load despatch function for the Mumbai licence area and had built up very costly infrastructure for the same. However, not the Mumbai area sub-LDC is to be operated by the MSLDC, hence, there is no need for TPC to be operating such an LDC. The Commission is of the view that the expense levels indicated by TPC on these heads as shown in the Table above, are very high, and reflect historical expenses, and which cannot be allowed to be recovered from the consumers, for a service that is no longer to be provided by TPC, since the same is being provided by MSLDC. It should be noted that the annual MSLDC Budget, which is approved separately by the Commission, ranges around Rs. 13 to 15 crore, as compared to TPC's LCC expense of Rs. 7 crore. Given that the MSLDC is charged with the load despatch functions for the State as a whole and is the statutory authority for the same, it does not appear to be reasonable to allow TPC LCC expense, which is around 50% of the MSLDC Budget, even though the functions expected to be performed by the LCC are far lesser as compared to the scope of activities of the MSLDC. If this amount is also allowed, it would amount to expenses being allowed twice for the same activity, to a certain extent, since the MSLDC has the mandate to manage the load across the State and across all licence areas, including the Mumbai licence area, which was earlier managed by the TPC – LDC, which has not been converted to the LCC. MSLDC has to give despatch instructions to the generating stations as well as regulate the demand imposed on the system by giving load withdrawal instructions in case of a situation of demand-supply gap, over and above the planned demand-supply gap. As regards the Distribution Control Centre (TPC-D) share indicated as Rs. 1.60 crore, the Commission is of the view that this is also very high, given TPC's very low retail consumer base, of only around 27,000 consumers.

The Commission is of the view that unless basis for accounting for LCC expenditure and the need for this expenditure is established, allowing LCC expenditure of Rs 7.00 Crore or any amount for FY 2008-09 and FY 2009-10 will not be appropriate. The Commission shall duly consider and allow LCC expenditure together with carrying cost at SBI PLR, as soon as such basis for accounting of LCC expenditure and the need for this level of expenditure is established by TPC.





The State load despatching functions are to be undertaken by SLDC. Through SLDC budget, the Commission approves the cost associated with MSLDC functions. The approved cost for the relevant period includes the cost associated with Mumbai load despatching activities also. In view of the above, TPC's claim of Rs. 7 crore for the purpose of Load Control Centre functions can not be granted, which may amount to duplication of function and associated expenditure. There is no justification for loading this avoidable cost on consumers. The Commission has made this observation to TPC during previous ARRs.

Pending ascertainment of LCC related expenditure and its revised apportionment thereof by TPC, the Commission has not considered LCC related expenditure of Rs 7.00 Crore as claimed by TPC, as part of ARR approval for FY 2008-09 and FY 2009-10, under TPC-G, TPC-T or TPC-D.

#### **7.17 IMPACT OF RULING IN CASE NO 29 OF 2008**

TPC-G filed a Review Petition on APR Order (Case No. 68 of 2007) on erroneous representation of Allocation of AFC of TPC-G to Thermal and Hydro Generating Stations and Allocation of AFC of Hydro to each Hydro Generation Station in the Order. The Commission, vide its Order in Case No. 29 of 2008, has corrected the allocation of the O&M expenses of hydro business across each hydro station considering the gross generation as approved for FY 2008-09 in the APR Order in Case No. 68 of 2007. The Commission further provided the liberty to TPC-G that it may submit the details of the various cost elements separately for thermal and hydro stations at the time of truing up during the APR for FY 2008-09 and Tariff for FY 2009-10.

TPC-G, in its APR Petition for FY 2008-09, has submitted the details of the allocation of costs between various Units of Thermal and Hydro Stations along with the basis of allocation for various components. Considering the details provided by TPC-G regarding the various cost elements, the Commission has accepted the request of TPC-G in this regard, however, the Commission observes that the difference in the allocation of approved AFC for FY 2008-09 was mainly on account of allocation of the O&M expenses. Accordingly, the Commission has considered the revised percentage allocation of O&M expenses as provided by TPC-G for FY 2008-09 in the APR Petition for FY 2008-09 (i.e., in the ratio of 77% for thermal and 23% for Hydro) has considered. Further the Commission clarifies that the approved AFC for



FY 2008-09 as approved in the APR Order for FY 2007-08 in Case No. 68 of 2007 should be read as follows:

**Table: Station-wise/Unit-wise Annual Fixed Charges for FY 2008-09 (Rs Crore)**

	Unit 4	Unit 5	Unit 6	Unit 7	Bhira	Bhivpuri	Khopoli	Total
O&M Charges	14.86	112.12	92.34	33.83	48.84	13.45	13.17	328.62
Interest on Debt	0.88	15.24	2.36	4.02	5.96	1.04	4.19	33.68
Interest on Working Capital	10.58	21.31	58.18	3.67	2.53	1.25	1.64	99.15
Depreciation	1.60	17.44	4.07	9.07	9.80	7.54	11.20	60.72
ROE	3.04	41.84	24.06	35.12	19.74	15.03	18.61	157.44
Income Tax	0.88	12.05	6.93	10.11	5.69	4.33	5.36	45.34
Less Non Tariff Income	0.19	2.75	1.48	2.36	0.75	0.58	0.89	9.00
<b>AFC for FY 2008-09</b>	<b>31.65</b>	<b>217.24</b>	<b>186.45</b>	<b>93.46</b>	<b>91.80</b>	<b>42.05</b>	<b>53.28</b>	<b>715.94</b>
Provisional Truing up for FY 08	(1.38)	(9.44)	(8.10)	(4.06)	(3.99)	(1.83)	(2.32)	(31.12)
<b>Net AFC for FY 2008-09</b>	<b>30.28</b>	<b>207.79</b>	<b>178.35</b>	<b>89.39</b>	<b>87.81</b>	<b>40.23</b>	<b>50.97</b>	<b>684.82</b>

Further, the Commission clarifies that, while computing the incentive for better Capacity Index for Hydro Generating Stations, the above approved AFC shall be considered.

#### 7.18 SUMMARY OF ANNUAL FIXED CHARGES FOR EXISTING STATIONS FOR FY 2008-09 AND FY 2009-10

Based on analysis of each head of expense and revenue discussed above, the summary of Annual Fixed Charges for TPC-G for FY 2008-09 approved by the Commission in its APR Order, as estimated by TPC-G in its APR Petition and the Commission's revised estimate in this Order is given in the following Table:

**Table: Annual Fixed Charges for FY 2008-09 (Rs Crore)**

Particulars	FY 2008-09		
	Approved (APR Order)	Revised Estimate by TPC-G	Revised Estimate by the Commission
O&M Charges	328.62	324.52	327.52
Interest on Long Term Loans	33.68	35.40	21.71
Interest on Working Capital	99.15	128.76	109.88
Finance Charges	-	(0.19)	(0.19)
Depreciation	60.72	51.35	50.63
Return on Equity	157.44	153.90	152.67
Income Tax	45.34	88.11	57.54



Particulars	FY 2008-09		
	Approved (APR Order)	Revised Estimate by TPC-G	Revised Estimate by the Commission
Allocation of LCC Charges	-	2.03	-
Less: Non Tariff Income	9.00	13.34	9.00
<b>Annual Fixed Charges</b>	<b>715.95</b>	<b>770.54</b>	<b>710.77</b>

As observed from the above Table, the variation in Annual Fixed Charges for FY 2008-09 as approved in the APR Order and revised estimate in this Order is not substantial, and hence, the Commission has not carried out the provisional truing up for FY 2008-09.

The summary of Annual Fixed Charges for TPC-G for FY 2009-10 approved by the Commission in its MYT Order, as estimated by TPC-G in its APR Petition and as approved by the Commission in this Order is given in the following Table:

**Table: Annual Fixed Charges for FY 2009-10 (Rs Crore)**

Particulars	FY 2009-10		
	Approved (MYT Order)	Revised Estimate	Approved
O&M Charges	329.30	341.23*	347.00
Interest on Long Term Loans	49.61	57.48	23.92
Interest on Working Capital	77.90	94.18	90.05
Interest and Finance Charges	-	-	-
Depreciation	81.20	60.05	54.02
Return on Equity	171.90	168.59	156.23
Income Tax	31.00	106.63	59.84
Allocation of LCC Charges	-	2.03	-
Less: Non Tariff Income	7.00	17.00	9.78
<b>Annual Fixed Charges</b>	<b>733.91</b>	<b>813.00</b>	<b>721.28</b>

\* Note: TPC-G subsequently revised the O&M expenses to Rs. 347 crore

The Annual Fixed Charges (AFC) for FY 2009-10 are slightly lower than that determined in the MYT Order due to the reduction in capital related expenditure.

## 7.19 STATION WISE/UNIT WISE FIXED COST

The above total Fixed Cost for TPC-G has to be apportioned to the generation Stations/Units, to determine the Fixed Charge payable to each of the generating Stations/Units.

In case of hydel Stations, the fixed charges have been allocated station-wise, whereas



the fixed cost of thermal Station at Trombay has been allocated to each Unit. TPC submitted the allocation of each element of fixed cost and the assumptions for the same in its Petition. The fixed costs have been allocated in the same proportion as considered by TPC in its Petition.

The summary of approved Annual Fixed Charges allocated to hydel stations and thermal units is given in the following Table:

**Table: Station-wise/Unit-wise Annual Fixed Charges**

Particulars	Unit 4	Unit 5	Unit 6	Unit 7	Bhira	Bhivpuri	Khopoli	Total
O&M Charges	2.30	116.84	113.57	41.61	26.23	18.90	27.56	347.00
Interest on Debt	0.63	7.79	2.77	5.09	4.16	1.18	2.30	23.92
Interest on Working Capital	1.30	30.71	48.26	4.58	1.96	1.37	1.86	90.05
Depreciation	1.48	10.66	4.30	10.15	9.90	7.15	10.38	54.02
ROE	2.99	36.05	25.28	37.78	20.14	15.59	18.41	156.23
Income Tax	1.15	13.81	9.68	14.47	7.71	5.97	7.05	59.84
Less Non Tariff Income	0.21	2.16	1.59	2.64	1.09	0.83	1.26	9.78
<b>AFC for FY 2009-10</b>	<b>9.64</b>	<b>213.69</b>	<b>202.22</b>	<b>111.03</b>	<b>69.02</b>	<b>49.33</b>	<b>66.30</b>	<b>721.28</b>

## 7.20 TARIFF FOR UNIT 8

TPC-G, in its Petition, submitted that Unit-8 has been commissioned in March 2009 and requested the Commission to approve the provisional tariff for this new Unit. TPC-G, in its Petition, has estimated the total capital cost of the 250 MW thermal generating station (Unit-8) as Rs 1137 crore.

The Commission, in the APR Order for FY 2007-08, has directed the TPC-G to file the Petition for approval of tariff for Unit-8. The relevant paragraph of the APR Order stipulates

*“...The Commission directs TPC to file a separate Petition (in the formats prescribed by the Commission for new stations) for approval of final tariff within 60 days from the date of commissioning of the Unit.”*



The Commission reiterates its direction to file a separate Petition for approval of Final Tariff for Unit-8 within one month from the date of this Order. The Commission will carry out the detailed analysis of the elements of Annual Fixed Charge and Energy Charge for Unit-8. In the interim, the Commission has approved the provisional tariff as approved in the APR Order for FY 2007-08 in Case No. 68 of 2007. The relevant paragraph of the said Order is reproduced below:

*“Based on above components, the provisional tariff for Unit 8 as approved by the Commission for FY 2008-09 is given in Table below:*

Unit	Fixed Charge for 6 months (Rs Crore)	Fixed Charge per month (Rs Crore)	Energy Charge per unit (Rs/kWh)
Unit 8	104.11	17.35	1.75

Accordingly, the tariff considered by the Commission for Unit-8 on ad-hoc basis is as follows:

*Table: Tariff for Unit 8*

Unit	Fixed Charge per month (Rs Crore)	Energy Charge per unit (Rs/kWh)
Unit 8	17.35	1.75

\*Note: The above should not be treated as interim or provisional tariff approval of the Commission



## 8 TARIFF OF TPC-G'S GENERATING STATIONS

Regulation 20.1 of the MERC Tariff Regulations 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.”*

The Commission, in its MYT Order, has approved the Station-wise/Unit-wise Annual Fixed Charges and parameters of variable cost for the Control Period. The Commission further stipulated in the MYT Order that it will determine the tariff of TPC-G for each financial year during the Control Period in accordance with Regulation 20.1 of the MERC Tariff Regulations and considering the fuel prices prevalent during the current year. In accordance with the MERC Tariff Regulations, the Commission has determined the tariff, i.e., fixed charge as well as variable charges for each generating Unit/Station for FY 2009-10 in this Order.

### 8.1 TARIFF FOR THERMAL POWER GENERATING STATIONS

Regulation 28 of the MERC Tariff Regulations specifies that *“Tariff for sale of electricity from a thermal power generating station shall comprise of two parts, namely, the recovery of annual fixed charges and energy charges”*.

The methodology and assumptions for estimating station-wise Annual Fixed Charges and Energy Charges have been discussed in earlier Sections of this Order.

#### **i) Approved Annual Fixed Charges**

As regards the recovery of Annual Fixed Charges, Regulation 33.1.1 of the MERC Tariff Regulations stipulates that the target availability for full recovery of annual fixed charges for thermal Units shall be 80 percent. The availability projected by TPC-G for its Thermal generating Units is more than 80%. The Commission, hence,



approves the full recovery of fixed charges during FY 2009-10 for all the Units of the thermal station. However, in the event of actual availability for the year, computed in accordance with the MERC Tariff Regulations, being less than 80%, the fixed charges shall be proportionately reduced, while truing up the revenue and expenses in the next year.

The approved Unit-wise Annual Fixed Charges for Units of TPC-G's Trombay Thermal Station for FY 2009-10 is given in the following Table:

**Table: Approved Annual Fixed Charge of Trombay Thermal Station (Rs. Crore)**

Unit No.	AFC
Unit 4	9.64
Unit 5	213.69
Unit 6	202.22
Unit 7	111.03

### ii) Energy Charge

The rate of energy charge (ex-bus) for FY 2009-10 has been approved for each Unit, based on approved operational parameters and projected fuel price for FY 2009-10. Any variations in the fuel price shall be dealt with under the FAC mechanism. The following Table details the station-wise energy charge to be charged by TPC-G for sale of power from the Units of TPC's Trombay Thermal Station.

**Table: Approved Energy Charge for Trombay Thermal Station**

Unit	Fuel	Rate of Energy Charge (Rs/kWh)
Unit 4	Fuel Oil	5.43
Unit 4	Gas	0.97
Unit 5	Fuel Oil	5.13
Unit 5	Gas	0.92
Unit 5	Coal	2.67
Unit 6	Gas	0.86
Unit 6	Fuel Oil	4.83
Unit 7	Gas	0.70

### iii) Tariff for Unit-8

The provisional tariff for Unit 8 as approved by the Commission for FY 2009-10 is given in the Table below:



Unit	Fixed Charge per month (Rs Crore) for 250 MW	Energy Charge per unit (Rs/kWh)
Unit 8	17.35	1.75

#### iv) Incentive

TPC-G shall be eligible for an incentive of 25 paise/kWh for actual net generation in excess of target Plant Load Factor of 80 percent.

To even out the cash flow on account of the incentives, TPC-G shall determine the incentives at the end of September 2009 and March 2010 on the basis of actual performance and shall bill that amount to TPC-D, BEST and RInfra-D in proportion to their share of generation capacity, as an additional charge payable on this account.

At the end of the financial year, i.e., March 31, 2010, the actual PLF for the entire year shall be considered and the incentive payable will be trued up accordingly.

## 8.2 TARIFF FOR HYDEL POWER GENERATING STATIONS

### i) Components of Tariff

The Electricity Act, 2003 requires the Commission to encourage economical use of resources while determining the terms and conditions of tariff. Accordingly, the MERC Tariff Regulations propose an energy rate for hydro stations, which is equal to the variable cost of the least-cost, available alternative source of power if such hydropower generating station was not to be despatched in accordance with the final despatch schedule of the State Load Despatch Centre.

The MERC Tariff Regulations in this regard specify that,

*“Tariff for sale of electricity from a hydro power generating station shall comprise of two-parts, namely, recovery of annual capacity charge and energy charges.*

*Provided that the annual capacity charges for a hydro power generating station shall be computed in accordance with the following formula:*

*Annual Capacity Charges = (Annual Fixed Charge- Energy Charge)*

*Provided further that the Energy Charge shall not exceed the Annual Fixed Charge under these Regulations” (emphasis added)*





The Commission, in its Order dated October 3, 2006, on ARR and Tariff Petitions of TPC for FY 2005-06 and FY 2006-07 as well as in its MYT Order dated April 2, 2007 and APR Order dated April 2, 2008 approved a differential hydro peaking tariff to optimise the hydel generation during peak hours as follows:

<b>Differential Energy Charges for peak and non-peak hours</b>	<b>Rs/kWh</b>
Peak Hours (0900 to 1200 hrs & 1800 to 2200 hrs)	2.00
Non Peak Hours (Other than peak hours)	1.65

TPC-G, in its Petition, submitted that it is observed that for Mumbai, the peak period is between 10:00 to 14:00 hours and 18:00 to 22:00 hours as against peak period of 09:00 to 12:00 hours and 18:00 to 22:00 hours specified by the Commission. TPC-G requested the Commission to change the peak period for Mumbai accordingly.

The Commission is of the view that the peak period has to be defined on the basis of peak period of entire Maharashtra State, as the merit order despatch system has to be adopted for the entire Maharashtra State, and hence, the Commission retains the morning peak period of 09:00 to 12:00 hours and 18:00 to 22:00 hours as specified in earlier Tariff Orders.

As regards the rate during peak hours, TPC-G submitted that as the purpose of the differential tariff for hydel generation during peak hours and non-peak hours is to send proper economic signals, the tariffs should reflect the reality of the situation. TPC-G further submitted that in the present situation, the difference between the rates of power available during peak hours and non peak hours are much higher than the difference in tariffs given by the Commission and hence, requested to increase the difference between peak and non peak hour rates while determining the tariff for hydro generation during peak and non-peak periods.

The Commission obtained the break up of hydel generation during peak and non-peak hours for the period from April 2008 to November 2008 and compared the same with generation during the peak and non-peak hours for the similar period of FY 2007-08. The month-wise comparison of hydel generation during peak and non-peak hours is given in the following Table:

**Table: Hydel Generation during peak and non-peak hours**



Month	FY 2007-08				FY 2008-09			
	Peak Hours	Non-peak Hours	Total	% during Peak Hrs	Peak Hours	Non-peak Hours	Total	% during Peak Hrs
April	62.53	62.63	125.17	50.00%	57.73	54.7	112.43	51.30%
May	62.51	71.57	134.08	46.60%	60.53	66.74	127.27	47.60%
June	69.03	92.57	161.61	42.70%	52.59	42.11	94.7	55.50%
July	94.87	194.13	289	32.80%	27.81	27.36	55.17	50.40%
August	57.06	57.81	114.87	49.70%	25.53	29.62	55.15	46.30%
September	52.53	45.83	98.37	53.40%	37.84	27.41	65.24	58.00%
October	60.26	41.24	101.5	59.40%	51.24	41.93	93.17	55.00%
November	51.31	35.32	86.63	59.20%	56.63	52.03	108.67	52.10%
December	45.41	33.93	79.35	57.20%				
January	61.68	42.01	103.69	59.50%				
February	55.18	33.42	88.59	62.30%				
March	56.97	49.31	106.28	53.60%				
<b>Total</b>	<b>729.34</b>	<b>759.77</b>	<b>1489.14</b>	<b>48.98%</b>	<b>369.90</b>	<b>341.90</b>	<b>711.80</b>	<b>51.97%</b>

As observed from the above Table, the generation during peak hours during April 2008 to November 2008 is 51.97% of the total hydel generation, which is around 6.06% higher than the generation during peak hours for the corresponding months of previous year. The Commission is of the view that it may be more appropriate to take a holistic review of the hydel tariff mechanism for the next Control Period. Therefore, for FY 2009-10, the Commission approves the hydel tariff during peak and non-peak hours as approved in earlier Orders as follows:

Differential Energy Charges for peak and non-peak hours	Rs/kWh
Peak Hours (0900 to 1200 hrs & 1800 to 2200 hrs)	2.00
Non Peak Hours (Other than peak hours)	1.65

#### ii) Estimated Generation during peak and non-peak hours

The Commission has estimated the hydro generation during peak hours as 50% of the total hydro generation based on the past trends of hydro generation during peak and non-peak hours. Accordingly, the estimated generation during peak and non-peak hours for FY 2009-10, is given in the Table below:

**Table: Net Hydro Generation during peak and non-peak hours for FY 2009-10**

Source	Total Generation	Generation during peak hours	Generation during non-peak hours



Total	1492	746	746
-------	------	-----	-----

**iii) Treatment of excess amount recovered on account of hydro peaking tariff**

Based on the above assumption of generation in the peak and non-peak hours and the corresponding energy tariffs during those hours, the total revenue recovery exceeds the annual fixed charge of hydro generating stations by Rs. 86.65 crore.

The Commission's intention is to ensure that the economic signals are provided to the users of the resources, i.e., generating stations and distribution utilities, while at the same time without putting extra burden on the consumers by way of higher tariffs.

However, there is need to provide some incentive to Generating Companies and Distribution Licensees to optimise the hydel generation during peak hours. The Commission allows 5% of excess recovery of revenue from hydel stations on account of higher generation during peak hours to be shared between Generating Company and Distribution Licensees in proportion of 50:50. The share of the distribution licensees in the additional excess recovery in case the actual hydel generation during peak hours is higher than the target specified, will be shared by the Distribution Licensees in proportion to their share of generation capacity of TPC-G.

At the same time, in case the actual hydel generation during peak hours is lower than the target generation during peak hours specified in the Order, except due to uncontrollable factors, i.e., excess water during monsoon period, the loss of revenue will not be trued up and will be shared between Generating Company and Distribution Licensees in proportion of 50:50. The share of the distribution licensees in the loss of revenue will be shared by the Distribution Licensees in proportion to their share of generation capacity of TPC-G.

Considering the target generation during peak and non-peak hours specified in the Order, the Commission directs that 95% of excess recovery of Rs. 86.65 crore from hydro generating stations be adjusted in the bills for sale of power to be raised by TPC-G to TPC-D, RInfra-D and BEST. The amount of reduction towards excess recovery should be shared between the three Licensees in proportion to their share of TPC-G capacity as considered by the Commission for FY 2009-10 in the Orders on APR Petitions of the respective Distribution Licensees. The reduction towards excess recovery should be provided on pro-rata basis every month.



**iv) Incentive**

TPC-G shall be eligible for an incentive payable in accordance with Regulation 37.2 of the MERC Tariff Regulations. TPC-G shall compute the incentives on the basis of the actual performance and shall bill the same as an additional charge, payable at the end of the year. There shall be pro-rata reduction in recovery of annual fixed charges in case the generating station achieves capacity index below the prescribed normative levels.

**8.3 APPLICABILITY OF TARIFF AND ORDER**

This Order for the third year of the first Control Period, i.e., for FY 2009-10 shall come into force with effect from June 1, 2009, and the Tariff approved in the Order shall be applicable from June 1, 2009.

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

Sd/-  
(S. B. Kulkarni)  
Member

Sd/-  
(A. Velayutham)  
Member

Sd/-  
(V. P. Raja)  
Chairman

(P B Patil)  
Secretary, MERC



**APPENDIX 1****List of Persons who attended the Technical Validation Session held on January 13, 2009**

S.No	Name
<b>TPC Officials</b>	
1	Shri V.H. Wagle
2	Shri T.N. Ramakrishnan
3	Shri Prashant Joshi
4	Shri Prashant K. Anvekar
5	Smt Swati Mehendale
6	Shri Ashok Sethi
7	Shri B.P. Mehta
8	Shri Rajesh L.Thakur
9	Shri Anand Dhavale
10	Shri Urmeet Kaur Anand
11	Shri M. Phentage
12	Shri Anshuh De
13	Shri Maynesh Shah
14	Shri D. Raina
15	Shri V.K. Choudhary
16	Shri C.G.H. Aranha
17	Shri V.H. Thakmai
18	Shri C.A. Narayanan
19	Shri S. Ramakrishnan
20	Shri R. Ranade
21	Shri Deepak Mahande
<b>Consultants to Commission</b>	
22	Shri Ajit Pandit
23	Shri Suresh Gehani
24	Shri Palaniappan M
25	Shri S.R. Karkhanis
26	Shri M.N. Bapat
27	Shri Anand Kulkarni



28	Shri Santosh Kumar Singh
29	Shri Krishnajith M U
30	Shri Saurabh Gupta
<b>S.No</b>	<b>Name</b>
<b>TPC Officials</b>	
1	Shri V.H. Wagle
2	Shri T.N. Ramakrishnan
3	Shri Prashant Joshi
4	Shri Prashant K. Anvekar
5	Smt Swati Mehendale
6	Shri Ashok Sethi
7	Shri B.P. Mehta
8	Shri Rajesh L.Thakur
9	Shri Anand Dhavale
10	Shri Urmeet Kaur Anand
11	Shri M. Phentage
12	Shri Anshuh De
13	Shri Maynesh Shah
14	Shri D. Raina
15	Shri V.K. Choudhary
16	Shri C.G.H. Aranha
17	Shri V.H. Thakmai
18	Shri C.A. Narayanan
19	Shri S. Ramakrishnan
20	Shri R. Ranade
21	Shri Deepak Mahande
<b>Consultants to Commission</b>	
22	Shri Ajit Pandit
23	Shri Suresh Gehani
24	Shri Palaniappan M
25	Shri S.R. Karkhanis
26	Shri M.N. Bapat
27	Shri Anand Kulkarni
28	Shri Santosh Kumar Singh
29	Shri Krishnajith M U



**APPENDIX 2****List of Objectors**

<b>S.No</b>	<b>Name of Person / Official</b>	<b>Designation</b>	<b>Institution</b>
1	Shri Mahesh I.K		Excel Electric Industries
2	Shri Guruprasad Shetty		Association of Hotels & Restaurants
3	Shri R.K. Singh		Central Railway
4	Shri Shatadru Sengupta		Hardcastle Restaurants Pvt. Ltd.
5	Shri Rajindar Singh	President	Western India Glass Mfrs. Association
6	Shri Vijay Y. Tamhane	Secretary General	The Millowners' Association
7	Shri Rakshpal Abrol		Bharitya Udhami Avam Upbhokta Sangh
8	Shri N. Ponrathnam		Vel Induction Hardenings
9	Dr. Rajas A. Rane		Shivsena Grahak Saurakshan Kaksh
10	Shri Rishikesh M. Kulkarni		Shivsena Grahak Saurakshan Kaksh
11	Shri Prasad P. Ayre		Shivsena Grahak Saurakshan Kaksh
12	Shri Sachin S. Nayak		Shivsena Grahak Saurakshan Kaksh
13	Shri Vijay B. Malwankar		Shivsena Grahak Saurakshan Kaksh
14	Shri Mahesh Bharbhaya,		Shop No. 5, Sagar Deep Darshan
15	Shri S.S. Seth	Dy. CE (SO) W.S	Municipal Corporation of Greater Mumbai (MCGM)
16	Shri Pramod Ramesh Bhogte	Editor	Navsandesht Saptahik, Surabhi Publications,
17	Shri Pankaj D. Muni	President	Electrical Contractors' Association of Maharashtra
18	Shri Kapil Sharma		Reliance Infrastructure Ltd
19	Shri Ramniklal Chedda	Member	The Retail Grain Dealers Co.op.So.Ltd.
20	Shri P.E. Chandran	Proprietor	S.C. Electricals
21	Representative		The Tenants of Kalyan Bldg. Bldg. No. 1 & 3
22	Shri Apurva Patel	Secretary	MIDC Marol Industries Association
23	Shri D.V. Sawale	President	Dadar Merchant's Association
24	Representative		Indian Hotel & Restaurant



S.No	Name of Person / Official	Designation	Institution
			Association
25	Shri Ravinder Kumar Seth	G.M (E&M)	Mumbai International Airport Pvt. Ltd.

**List of Objectors who attended the Public Hearing on March 24, 2009**

S.No	Name of Person / Official	Designation	Institution
1	Shri Mahesh I.K		Excel Electric Industries
2	Shri R.K. Singh		Central Railway
3	Shri G.K. Sarda		Western India Glass Mfrs. Association
4	Shri Vijay Y. Tamhane	Secretary General	The Millowners' Association
5	Shri Rakshpal Abrol		Bharitya Udhami Avam Upbhokta Sangh
6	Shri N. Ponrathnam		Vel Induction Hardenings
7	Shri Mahesh Bharbhaya		Shop No. 5, Sagar Deep Darshan
8	Shri Amit S. Gajaria		Kandivali Co-Op Ind. Estate
9	Shri Champalal Dloka		Kandivali Co-Op Ind. Estate
10	Shri B.G. Maheshwari		Empire Ind. Ltd
11	Shri Karan Pallav		Reliance Infrastructure Ltd
12	Shri Anil V. Kale		ICRA Management Consulting Services Limited
13	Shri Vivek Mishra		Reliance Infrastructure Ltd
14	Shri Ajay Kumar		JSW Energy Ltd.
15	Shri P.S. Ganguly		Mumbai International Airport Pvt. Ltd.
16	Shri Pravind Kumar		Mumbai International Airport Pvt. Ltd.
17	Shri J.D. Tayade		Maharashtra State Electricity Transmission Co.Ltd
18	Shri Shatadru Sengupta		Hardcastle Restaurants Pvt. Ltd.
19	Shri Shivprasad Bole		Hardcastle Restaurants Pvt. Ltd.
20	Shri Guruprasad Shetty		Association of Hotels & Restaurants
21	Shri Sunil Joglekar		Hiranandani Infrastructure and Real Estate Company (HIRCO), Powai





S.No	Name of Person / Official	Designation	Institution
22	Shri Sumesh Mangle		Reliance Infrastructure Pvt Ltd.
23	Shri S.W. Deshmukh		Electrical Contractors' Association of Maharashtra
24	Shri Sunil Samy		Electrical Contractors' Association of Maharashtra
25	Shri Pavitran K		Brihanmumbai Electric Supply and Transport Undertaking
26	Shri B.A. Shaikh		Brihanmumbai Electric Supply and Transport Undertaking
27	Shri S.A. Nikalje		Maharashtra State Power Generation Company Ltd.
28	Shri A.V. Shenoy		Maharashtra State Power Generation Company Ltd.
29	Shri N.J. Padalkar		Maharashtra State Power Generation Company Ltd.
30	Smt Sapna Desai		Mid-Day
31	Shri A.K. Balan		S.C. Electricals
32	Shri V. Thanumoorthy		Mumbai Citizens Welfare Forum
33	Shri Sachin Nayak		Shivsena Consumer Protection Cell
34	Shri Prasad Ayare		Shivsena Consumer Protection Cell
35	Shri P.G Pokhmare		Reliance Infrastructure Ltd
36	Shri Sharad Nath		
37	Shri R.S. Verma		
38	Shri R. Mago		
39	Shri R.C. Rawat		
40	Shri R.U. Patil		
41	Shri G.P. Charmia		
42	Shri Lakshman Sawant		
43	Shri Rajan Kongaunkar		
44	Shri Rakesh Reddy		
45	Shri Dilip Chawan		
46	Shri B.P. Bhutt		
47	Shri V.V. Devathosh		
48	Shri Gulal Dagu		



<b>S.No</b>	<b>Name of Person / Official</b>	<b>Designation</b>	<b>Institution</b>
49	Shri M.N. Kothari		
50	Shri Mahesh Patankar		

