Before the Maharashtra Electricity Regulatory Commission,

Mumbai

Filing No.:

Case No.:65 of 2018

IN THE MATTER OF

The Proposal of the Generation Business of The Tata Power Company Limited for the approval of

(i) Truing up for FY 2015-16 as per the MERC (MYT) Regulations, 2011,

(ii) Truing up for FY 2016-17 as per MERC (MYT) Regulations, 2015 and its amendment dated 29th November, 2017,

(iii) Provisional Truing-up of FY 2017-18 and Revised projections of Aggregate Revenue Requirement for FY 2018-19 and FY 2019-20 as per the MERC (MYT) Regulations, 2015 and its amendment dated 29th November 2017.

AND

IN THE MATTER OF	**The Tata Power Company Limited,**
THE APPLICANT	**Bombay House,**
	24, Homi Mody Street,
	Fort, Mumbai 400001 …………….. **(Petitioner)**

Petitioner, under Sections 61, 62 and 64 of The Electricity Act, 2003 And under the MERC (Conduct Of Business) Regulations 2004, MERC (Multi Year Tariff) Regulations, 2011 and MERC (Multi Year Tariff) Regulations, 2015 and its amendment, files for proceedings by the Hon'ble commission for deciding on the matters concerning approval of **Truing Up For FY 2015-16, FY 2016-17, Performance Review For FY 2017-18 And Revised Projections of ARR**

for FY 2018-19 And 2019-20 for the Generation Business of The Tata Power Company Limited (herein after referred to as **"Tata Power - G"**)

The Tata Power Company Ltd. Respectfully submits the following:

The Petitioner, The Tata Power Company Limited ("Tata Power") is a company incorporated under the provisions of the Indian Companies Act, VII of 1913, with its registered office at Bombay House, 24, Homi Mody Street, Fort, Mumbai 400 001.

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LIST OF ABBREVIATIONS

Abbreviation	Description
A&G	Administration and General
ABT	Availability Based Tariff
AFC	Annual Fixed Cost
APAF	Annual Plant Availability Factor
APM	Administered Price Mechanism
APR	Annual Performance Review
ARR	Aggregate Revenue Requirement
ATE	Appellate Tribunal for Electricity
Aux.	Auxiliary
BEST	Brihan Mumbai Electric Supply and Transport
CA	Civil Appeal
CAGR	Compound Average Growth Rate
Capex	Capital Expenditure
CBA	Cost Benefit Analysis
CCGT	Combined Cycle Gas Turbine
CCPP	Combined Cycle Power Plant
COD	Date of Commercial Operation
CPI	Consumer Price Index
CPP	Captive Power Plant
CPRI	Central Power Research Institute, Bangalore
Crs	Crores
CSR	Corporate Social Responsibility
CWIP	Capital Works In Progress
DPR	Detailed Project Report scheme
EA-2003	The Electricity Act, 2003
FAC	Fuel Adjustment Charge
FBSM	Final Balancing and Settlement Mechanism
FY	Financial Year

Abbreviation	Description
GAIL	Gas Authority of India Ltd.
GFA	Gross Fixed Assets
GoM	Government of Maharashtra
GT	Generator Transformer
GTG	Gas Turbine Generator
H1	First Half of Financial Year(Period between 1st April to 30th September)
H2	Second Half of Financial Year (Period between 1st October to 31st March)
HO	Head Office
Hon'ble	Honourable
HOSS	Head Office & Support Services
HT	High Tension
IDC	Interest During Construction
IT	Income Tax
kV	kilo Volt
kVA	kilo Volt Ampere
kWh	kilo Watt Hours
KWTA	Krishna Water Tribunal Award
LA	Licence Area
LCC	Load Control Centre (Now known as Power System Control Centre)
LIBOR	London Interbank Offered Rate
LT	Low Tension
MCGM	Municipal Corporation of Greater Mumbai
MCLR	Marginal Cost of Funds-based Lending Rate
MD	Maximum Demand
MERC	Maharashtra Electricity Regulatory Commission
MMSCMD	Million Metric Standard Cubic Metres per Day
MOD	Merit Order Despatch
MoPNG	Ministry of Petroleum and Natural Gas
MSEDCL	Maharashtra State Electricity Distribution Company Limited

Abbreviation	Description
MSETCL	Maharashtra State Electricity Transmission Company Limited
MSLDC	Maharashtra State Load Despatch Centre
MSPGCL	Maharashtra State Power Generation Company Limited
MTR	Mid Term Review
MUs	Million Units
MVA	Mega Volt Ampere
MW	Megawatt
MWRRA	Maharashtra Water Resource Regulatory Authority
MYT	Multi Year Tariff
NAPAF	Normative Annual Plant Availability Factor
OEM	Original Equipment Manufacturer
O&M	Operation and Maintenance
ONGC	Oil & Natural Gas Company Ltd.
PF	Power Factor
PLF	Plant Load Factor
PLR	Prime Lending Rate
PPA	Power Purchase Agreement
R&M	Repairs and Maintenance
RFP	Request For Proposal
RFQ	Request For Qualification
R-Infra	Reliance Infrastructure / Reliance Energy Limited
RPM	Revolutions Per Minute
RoE	Return on Equity
RPO	Renewable Purchase Obligation
RTC	Round The Clock
Rs.	Rupees
SBI	State Bank of India
SS	Support Services
STU	State Transmission Utility

Abbreviation	Description
Tata Power	The Tata Power Company Limited
Tata Power - D	Distribution Business of The Tata Power Company Limited
Tata Power - G	Generation Business of The Tata Power Company Limited
Tata Power - T	Transmission Business of The Tata Power Company Limited
T.O.	Tariff Order
TPTCL	Tata Power Trading Company Limited
USD	United States Dollars
VC	Variable Cost
WPI	Whole Sale Price Index

1. INTRODUCTION AND APPROACH TO THE PRESENT PETITION

1.1 Historical Perspective

1. The Tata Power Company Limited ("Tata Power") is a Company established in 1919. On 1st April, 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 Tata Power, to form one unified entity. Consequent to the merger, the licences of the above mentioned companies were also merged and Tata Power was granted a licence by the Government of Maharashtra (GoM) for the supply of energy to the public in its Mumbai Licence Area and to supply energy in bulk to Distribution Licensees, vide resolution No: IEA –2001/ CR-10509/NRG-1, dated 12th July, 2001.

2. Post the enactment of the Electricity Act – 2003 (EA-2003), the Generation Business of Tata Power (herein after referred to as "Tata Power-G" has been having a Power Purchase Agreement / Arrangement with the Distribution Utilities of Mumbai under Section 62 of the EA-2003.

1.2 Filings under Multi Year Tariff (MYT) Regulations

3. Pursuant to the enactment of the Electricity Act, 2003 (EA-2003), Tata Power-G is required to submit its Aggregate Revenue Requirement (ARR) and Tariff Petitions as per the procedures outlined in Section 61, 62 and 64, of EA-2003, and the governing regulations thereof. A summary of the various filings over the years has been provided in the Table below:

Table: 1-1: Summary of Past Filings

Sr. No.	Brief Details of Filing	Petition Filing Date	Date of Order
1	MYT as per Tariff Regulations, 2005	15th January, 2007	30th April, 2007
2	APR for FY 2007-08	30th November, 2007	26th May, 2008
3	APR for FY 2008-09	26th December, 2008	28th May, 2009
4	APR for FY 2009-10	17th March 2010	3rd September, 2010
5	APR for FY 2010-11	16th September 2011	14th February, 2012
6	Business Plan	30th September, 2011	28th June, 2012
7	MYT Petition for 2nd Control Period	23rd October, 2012	30th March, 2013
8	Mid Term Review Petition for the 2nd Control Period from FY 2011-12 to FY 2015-16	20th February, 2015	26th June, 2015
9	Truing up of FY 2014-15, Prov. Truing Up of FY 2015-16 and MYT Petition for 3rd Control Period	28th March, 2016	8th August, 2016

4. Further, certain Review Petitions / Appeals have been filed against the ARR Orders of the Generation Business listed above. The summary of the Review Petitions / Appeals filed and their status is provided in the Table below:

Table: 1-2: Details of Various Filings in the Past

Sr. No.	Brief Details of Filing	Case No.	Date of Order
1	MYT as per Tariff Regulations, 2005	72 of 2006	2nd April, 2007
	Appeal in ATE	51 of 2007	7th April, 2008
2	APR for FY 2007-08	68 of 2007	2nd April, 2008
	Appeal in ATE	137 of 2008	15th July, 2009
3	APR for FY 2008-09	111 of 2008	28th May, 2009
	Appeal in ATE	173 of 2009	14th February, 2011
4	APR for FY 2009-10	96 of 2009	8th September, 2010
	Appeal in ATE	18 of 2011	31st August, 2012
5	APR for FY 2010-11	105 of 2011	15th February, 2012
	Appeal in ATE	105 of 2012	28th November, 2013
6	Business Plan	166 of 2011	9th August, 2012
	Appeal in ATE	182 of 2012	28th November, 2013
7	MYT Petition for 2nd Control Period	177 of 2011	30th March, 2013
	Review Petition	90 of 2013	9th October, 2013
	Appeal in ATE	212 of 2013	27th October, 2014
8	Mid Term Review Petition for the 2nd Control Period from FY 2011-12 to FY 2015-16	6 of 2015	26th June, 2015
	Appeal in ATE	244 of 2015	3rd June, 2016
	Review in ATE	13 of 2016	17th November, 2016
	Civil Appeal in Supreme Court	1356-1358 of 2017	Judgment Awaited
9	Truing up of FY 2014-15, Prov. Truing Up of FY 2015-16 and MYT Petition for 3rd Control Period	32 of 2016	8th August, 2016
	Appeal in ATE	23 of 2017	Judgment Awaited

5. The history of the relevant petitions is as follows:

1.2.1 Filings under Second Control Period

A. ARR Petition of FY 2011-12 and MYT Petition for FY 2012-13 to FY 2015-16

6. The Hon'ble Commission had issued MERC (Multi-Year Tariff Regulations), 2011 dated 4th February, 2011 (hereinafter called "MYT Regulations, 2011") for the Second Control Period from FY 2011-12 to FY 2015-16. The MYT Regulations, 2011 provided for filing of Business Plan for the Control Period of 5 years and upon the approval of the same, the MYT Petition to be filed by the Generating Company. In compliance with the same Tata Power - G had filed the Business Plan with the Hon'ble Commission on 30th September,

2011 and the MYT Petition on 30th November, 2011. The Hon'ble Commission had passed an order for Business Plan Petition on the same dated 9th August, 2012 in Case 166 of 2011.

7. In the said order, the Hon'ble Commission had directed Tata Power – G to file a MYT Petition for the Second Control Period from FY 2012-13 to FY 2015-16. However, for FY 2011-12, the Hon'ble Commission had directed Tata Power-G to file the ARR for the year FY 2011-12 as per MERC Tariff Regulations, 2005.

8. In view of this, Tata Power-G had filed an appeal in the Appellate Tribunal for Electricity (ATE) against the directive of filing ARR of FY 2011-12 as per the old Tariff Regulations, 2005 and not approving ARR as per the new MYT Regulations, 2011 in Appeal 182 of 2012. The Hon'ble ATE had passed the judgment on the same dated 28th November, 2013.

9. The Hon'ble Commission had issued the order on the MYT Petition for Tata Power-G dated 5th June, 2013 in Case 177 of 2011 in which it had carried out the Truing Up exercise for FY 2011-12 and approved the Tariff for FY 2013-14 to FY 2015-16. In the same petition, the Hon'ble Commission, while carrying out truing up of FY 2011-12, had disallowed certain expenditure pertaining for the year FY 2011-12. Further, the Hon'ble Commission had allowed the ARR for FY 2011-12 as per the MYT Regulations, 2005.

10. Subsequently, Tata Power filed a Review Petition in Case 90 of 2013 with the Hon'ble Commission. The Hon'ble Commission passed a judgment in the matter on 9th October, 2013.

11. In addition, Tata Power-G had also filed an Appeal (Appeal No.212 of 2013) with the Hon'ble ATE challenging the stand taken by the Hon'ble Commission on certain issues. The Hon'ble ATE has passed the judgment on the same dated 27th October, 2014.

B. Mid-Term Performance Review (MTR) for the MYT Second Control Period

12. As per the MYT Regulations, 2011, Tata Power –G was required to file a Petition for Truing-up of FY 2012-13 and FY 2013-14, performance review of FY 2014-15 and revised Annual Revenue Requirement for FY 2015-16. In the said petition, the performance was reviewed in comparison with the approved parameters by the Hon'ble Commission in Case 177 of 2011 (MYT Order).

13. The Hon'ble Commission had passed an Order for the Mid-Term Performance Review for the 2nd MYT Control Period from FY 2011-12 to FY 2015-16 on 26th June, 2015 in Case 06 of 2015. In the said order, in addition to the Truing Up of FY 2012-13 and FY 2013-14, the Hon'ble Commission approved the impact of various judgments of the Appellate Tribunal for Electricity (ATE) i.e. impact of the judgment in Appeal 18 of 2011 dated 31st August, 2012, judgment in Appeal 105 of 2012 dated 28th November, 2013, judgment in Appeal 182 of 2012 dated 28th November, 2013 and judgment in Appeal 212 of 2013 dated 27th October, 2014. Further, the Hon'ble Commission had approved the net ARR for FY 2015-16 after considering the Truing-up of ARR for FY 2012-13, FY 2013-14 and Provisional Truing-up of FY 2014-15 and revised ARR projections for FY 2015-16.

14. Tata Power-G had raised certain issues against the MTR Tariff Order issued by the Hon'ble Commission in Case No. 6 of 2015 dated 26th June, 2015 in Appeal No. 244 of 2015. The Hon'ble ATE had issued the judgment on the same dated 3rd June, 2016, in which it had dismissed the issues raised by Tata Power-G. Tata Power-G subsequently filed a Review Petition against the Judgement in an Appeal No. 244 of 2015 vide RP No. 13 of 2016. The Hon'ble ATE in its Judgement in RP No. 13 of 2016, again rejected the claims raised by the Tata Power-G. Subsequently, Tata Power-G has raised an appeal with the Hon'ble Supreme Court in Civil Appeal (CA) No. 1356-1358 of 2017. The judgment in this matter is awaited.

1.2.2 Filings under Third Control Period

C. MYT Petition for the Third Control Period

15. The Hon'ble Commission had issued MERC (Multi-Year Tariff Regulations), 2015 dated 8th December, 2015 (herein after referred to as "MYT Regulations, 2015") for the Third Control Period from FY 2016-17 to FY 2019-20. As per the MYT Regulations, 2015, Tata Power-G was required to file a Petition for Truing-up of FY 2014-15, performance review of FY 2015-16 and Approval of Aggregate Revenue Requirement for Third MYT Control Period i.e. from FY 2016-17 to FY 2019-20. Tata Power-G had accordingly filed a petition in Case No. 32 of 2016. In the said petition, the performance was reviewed in comparison with the approved parameters by the Hon'ble Commission in its MTR Tariff Order in Case No. 06 of 2015.

16. The Hon'ble Commission had passed its Order for the Third Control Period from FY 2016-17 to FY 2019-20 on 08th August, 2016 in Case No. 32 of 2016 including the Truing Up of FY 2014-15 and Provisional Truing Up of FY 2015-16.

17. Tata Power-G has filed an appeal with the Hon'ble ATE against the Order in Case No. 32 of 2016 with respect to certain issues in Appeal No. 23 of 2017. The judgment in the matter is awaited.

1.3 Filings under Present Petition

18. The present petition has been filled by Tata Power-G for (i) Truing-up for FY 2015-16 under the MYT Regulations, 2011, (ii) Truing-up for FY 2016-17, (iii) Performance Review for FY 2017-18 and (iv) Revised Projections of Aggregate Revenue Requirement (ARR) for FY 2018-19 to FY 2019-20 under the MYT Regulations, 2015.

19. In the present petition, the detailed submission of the actual performance of FY 2015-16 & FY 2016-17 in comparison with the approved parameters by the Hon'ble

Commission in Case No. 32 of 2016, dated 8th August, 2016 has been presented in **Section 2** and **Section 3** respectively. Further, the detailed submission of Performance Review for FY 2017-18 in comparison with the approved parameters by the Hon’ble Commission in Case No. 32 of 2016, dated 8th August, 2016 has been presented in **Section 4**. The detailed submission regarding the revised projections for FY 2018-19 and FY 2019-20 and the Tariffs for the ARR are presented in **Section 5 and 6**. The compliance to various directives of the Hon’ble Commission given in the Order dated 8th August, 2016 in Case No. 32 of 2016 has been covered in **Section 7.** The prayers to the Hon'ble Commission are listed in **Section 8**. The list of various Annexures as referred in the present Petition has been provided in **Section 9.**

1.4 Allocation of Assets and Costs

20. We wish to submit that although Tata Power carries out various Businesses on its Balance Sheet, the cost and the assets of all such Businesses are maintained separately under separate Division codes and hence, the issue of allocation of such cost of the different Businesses to Mumbai Licence Area does not arise and is not carried out.

- **Costs common to Mumbai Licensed Area and Outside Mumbai Licensed Area**

21. There are however, certain departments under the head “Head Office and Support Service” (HOSS) that require allocation between the various Businesses including the Business of Mumbai Licence Area (Generation, Transmission and Distribution Business pertaining to Mumbai Area). Such departments and the costs of HOSS have been divided into two parts viz., (i) cost centres that are dedicated to the Mumbai Licence Area called “LA Services” and (ii) cost centres (“HO Support Services”) that are being used by both Mumbai Licence Area and Other Businesses of Tata Power.

22. The various Departments in the “LA Services” and “HO Support Services” are shown in the Table below:

Table: 1-3: Details of Cost Centres of LA service and HOSS

LA Services		HO - Services	
Allocation : 100% to LA	**Cost Centre**	**Allocation: To all Businesses**	**Cost Centre**
Medical	1900012001	Corporate Account & MIS	1900022001
Regulation	1900012002	Corporate Adminstration	1900022002
Corporate Relations	1900012003	Garage/Transp Dharavi	1900022003
Demand Side Management	1900012005	BE Group	1900022004
LA -HR & Admin	1900012007	MD's Office	1900022005
PSCC (LD)	1900012009	ED (F)'s Office	1900022006
Advocacy	1900012010	ED (O)'s Office	1900022007
Civil Construction - MO	1900012011	Corporate - Taxation	1900022008
Central Construction - MO	1900012012	Secretarial / Legal	1900022009
		Clean Technologies	1900022010
		Environment	1900022011
		Safety	1900022012
		Regulations - Delhi	1900022013
		Corporate Communication	1900022014
		Corporate HR-Cadre Recruitment	1900022015
		Chief OM Office	1900022016
		Corporate Legal	1900022017
		Corporate Sustainability	1900022018
		Financial Concurrence Group	1900022019
		Contract Management	1900022021
		Corporate Treasury	1900022022
		Corporate Sourcing Group	1900022024
		Estate - HO	1900022025
		Corporate HR	1900022026
		Payroll	1900022027
		Internal Audit	1900022028
		Corporate CSR	1900022029
		SAP Centre of Excellence	1900022033
		ICT e-Security	1900022034
		IT Infra & Non-SAP	1900022035
		Corp Commercial	1900022036
		BE - Affirmative Act	1900022037
		Centenary Celebration	1900022039
		Finance - Centre of Excellence	1900022040

- **Allocation of Costs to Basic Areas**

23. The HOSS income and expenditures are further allocated between Mumbai Licence Area and Other Businesses of Tata Power in the ratio of their operating incomes

24. The summation of the costs of LA Services and allocated costs of HOSS to Mumbai Licence Area forms the total allocated cost to Mumbai Licence Area. In addition, the cost data is captured by Tata Power across Generation, Transmission, Distribution Wires and Retail Supply.

25. The assets and costs of LA Services and allocated costs of HOSS is further allocated to Generation, Transmission and Distribution Businesses ("Basic Areas") as explained below:

Assets and Capital Expenditure: Allocated based on the size of the Business of the Basic Areas as reflected by the Opening Gross Fixed Assets of each of these Basic Areas in each year.

Costs: As the costs vary in nature, relevant assumptions as detailed in the Table below are developed to ensure a fair allocation across the three basic functions:

Table: 1-4: Allocation of LA Services and allocated HO & SS Costs between Generation, Transmission & Distribution Businesses

Items	Assumption with Rationale
Employee Costs	Allocated on the basis of number of employees of each Basic Area.
Repairs and Maintenance	Allocated to the Basic Areas on the basis of respective opening balance of Gross Fixed Assets.
Administration and General Expenses	Allocated on the basis of total direct A & G expenses of each Basic Area before allocation.
Interest and Finance Charges	Allocated based on the principles used for allocating the assets and capital expenditure stated above, i.e. on the basis of opening balance of Gross Fixed Assets.
Depreciation	Allocated to the Basic Areas on the basis of respective opening balance of Gross Fixed Assets.
Non Tariff Income	Non Tariff income primarily consists of Income from Statutory Investments, rentals and sale of scrap etc. that are related to the asset base.
	As regards the Statutory Investments, the income is on account of the Investment of Contingency Reserves which have been apportioned between Transmission and Distribution Function in the ratio of the Statutory Reserves in the two functions (Not relevant to Generation)
	As regards the rest of the income, the same has been allocated on the basis of asset base of the Basic Areas.

1.5 Interest Rates considered for Recovery of Arrears

26. Tata Power–T has considered the SBI PLR for computing the interest on the amounts due in the previous years. Since the SBI PLR has been varying within the year for FY 2015-

16, the weighted average interest rate has been used for computing the carrying cost on past recoveries for FY 2015-16. The computation of average interest rates is as given below:

Table: 1-5: Short Term Interest Rates for FY 2015-16

Year	Date		Days	Interest
	From	To		
FY 2015-16	1-Apr-2015	9-Apr-2015	9	14.75%
	10-Apr-2015	7-Jun-2015	59	14.60%
	8-Jun-2015	4-Oct-2015	119	14.45%
	5-Oct-2015	31-Mar-2016	179	14.05%
Average			**366**	**14.29%**

27. For the Control Period FY 2016-17 to FY 2019-20, the following is the applicable interest rates as per the Regulation, 32 of the MYT Regulations, 2015:

*"**32Carrying Cost or Holding Cost***

The Commission shall allow Carrying Cost or Holding Cost, as the case may be, on the admissible amounts, with simple interest, at the weighted average Base Rate prevailing during the concerned Year, plus 150 basis points."

28. Subsequently, the Hon'ble Commission on 29th November, 2017 has notified an amendment to the MYT Regulations, 2015 viz. MERC (Multi Year Tariff) (First Amendment) Regulations, 2017. According to this amendment, the definition of "Base Rate" has been amended as follows:

*2.1 (10) "**Base Rate**" shall mean the one-year Marginal Cost of Funds-based Lending Rate ('MCLR') as declared by the State Bank of India from time to time;*

29. Considering the applicable Regulation and its amendment thereof, the applicable Interest rate for FY 2016-17 and FY 2017-18 is presented below:

Table: 1-6: Interest Rate for FY 2016-17 and FY 2017-18

Financial Year	Date From	Date To	Days	SBI MCLR %
FY 2016-17	01-Apr-16	30-Apr-16	30	9.20%
	01-May-16	31-Jul-16	92	9.15%
	01-Aug-16	30-Sep-16	61	9.10%
	01-Oct-16	31-Oct-16	31	9.05%
	01-Nov-16	31-Dec-16	61	8.90%
	01-Jan-17	31-Mar-17	90	8.00%
Base Rate *(One Year SBI MCLR)*			365	8.81%
Add	150 Basis Points			1.50%
Applicable Interest Rate for FY 2016-17				**10.31%**
FY 2017-18	01-Apr-17	31-Oct-17	214	8.00%
	01-Nov-17	31-Dec-17	61	7.95%
Base Rate *(One Year SBI MCLR)*			275	7.99%
Add	150 Basis Point			1.50%
Applicable Interest Rate for FY 2017-18				**9.49%**

30. For FY 2018-19 and FY 2019-20, the Interest Rate has been considered same as that of FY 2017-18.

2. TRUING UP OF FY 2015-16

31. This section discusses and presents the actual performance of Unit 4 to 8 at Trombay Thermal Generating Station & the Hydro Generating Stations at Khopoli, Bhivpuri and Bhira of Tata Power-G during FY 2015-16. The brief details of the Generating Units are provided in the Table below:

Table 2-1: Generating Units of Tata Power-G

MW

Generation Unit	Type of Fuel	Unit Status	Capacity
Unit 5	Coal, Oil and Gas	Operational	500
Unit 6	Oil and Gas	Operational	500
Unit 7	Gas	Operational	180
Unit 8	Coal	Operational	250
Total Thermal Capacity			**1430**
Bhira	Hydro	Operational	300
Bhivpuri	Hydro	Operational	75
Khopoli	Hydro	Operational	72
Total Hydro Capacity			**447**
Total Generation Capacity			**1877**

32. The Generation Capacity has been tied up with two Distribution Licensees in Mumbai viz. Brihanmumbai Electric Supply and Transport Undertaking (BEST) and the Distribution Business of Tata Power i.e. Tata Power-D; the Power Purchase Arrangement / Agreement (PPA) for this has been approved by the Hon'ble Commission.

33. The actual performance of the Generating units has been compared with the normative values of approved parameters by the Hon'ble Commission in its MYT Order dated 8th August, 2016 issued in Case No. 32 of 2016. The computation has been carried out separately for (i) Unit 4 to 7 & Hydro Generating Stations and (ii) Unit 8. Accordingly, the performance of Tata Power-G for FY 2015-16 is outlined below:

2.1 Performance of Unit 4 to 7 and Hydro Generating Stations

34. The operational as well as financial performance of Unit 4 to 7 and the Hydro Generating Stations of Tata Power - G for FY 2015-16 is presented in the sections below:

Operational Performance – FY 2015-16

2.1.1 Generation

35. The actual generation of Tata Power - G for FY 2015-16 is as given in the Table below:

Table 2-2: Gross Generation of Unit 4 to7 & Hydro Generating Stations for FY 2015-16

MUs

Generating Station	MYT Order (Approved)	FY 2015-16 (Actuals)	Difference
Hydro Stations			
Khopoli	241.93	231.45	-10.48
Bhivpuri	228.09	230.41	2.32
Bhira	641.82	636.81	-5.01
Total Hydro	**1111.84**	**1098.67**	**-13.17**
Unit 4	0.00	0.00	0.00
Unit 5	3503.45	3503.45	0.00
Unit 6 (Under PPA)	13.80	13.80	0.00
Unit 6 (Under MSLDC directions)	28.33	28.33	0.00
Unit 7	1179.73	1179.73	0.00
Total Thermal	**4725.31**	**4725.31**	**0.00**
Total	**5837.15**	**5823.97**	**-13.17**

36. As seen from the Table above, during the FY 2015-16, Tata Power-G achieved a total gross generation of **5823.97 MUs**. The Unit-wise operational performance details are as explained below:

Thermal Generating Stations:

Unit 4:

37. The Hon’ble Commission had not considered any generation from Unit 4 during FY 2015-16, being on Standby. In actuals also, the unit was not required to be brought into service in FY 2015-16 and hence, the generation from the unit has been nil as approved by the Hon'ble Commission in its MYT Order.

Unit 5:

38. Gross Generation of **3503.45 MUs** from Unit 5 for the FY 2015-16 is equal to the gross generation approved by the Hon’ble Commission in the MYT Order for FY 2015-16.

Unit 6:

39. As the Hon'ble Commission is aware, the Unit 6 of Tata Power-G has been under economic shutdown, based on the request of its beneficiaries i.e. Tata Power-D and BEST.

40. However, during FY 2015-16, Unit 6 has generated **13.80 MUs** to meet the requirement of its beneficiaries as per PPA. Further, **28.33 MUs** were generated as per the directives of the Maharashtra State Load Despatch Centre (MSLDC) to address the transmission constraints experienced during summer time by Mumbai. Accordingly, the total gross generation of Unit 6 for FY 2015-16 stands at **42.13 MUs** and is equivalent to the generation approved by the Hon'ble Commission in its MYT Order pertaining to Provisional Truing Up of FY 2015-16.

Unit 7:

41. The gross generation of Unit 7 for the year FY 2015-16 is **1179.73 MUs** and is equivalent to the generation approved by the Hon'ble Commission for FY 2015-16 in the MYT Order.

Hydro Generating Stations:

42. The Gross Hydro Generation for FY 2015-16 was recorded at **1098.67 MUs** which is marginally lower than the gross generation of 1111.84 MUs approved by the Hon'ble Commission in the MYT Order. The Hydro Generation during FY 2015-16 was lower than approved in the MYT Order on account of significantly low rainfall experienced in the catchment areas of the Hydro Generating Stations. The rainfall recorded at the Hydro Generating Station catchment area has been lower by around 30% as compared to the average rainfall recorded over the past 10 years. The lower rainfall has resulted in the total generation being lower than the Design Energy in case of Bhira Hydro Generating Station. The impact of the same has been considered in subsequent sections.

Considering the above, we request the Hon'ble Commission to approve the Gross Generation of 5823.97 MUs for Unit 4 to 7 & Hydro Generating Stations for the purpose of Truing Up of FY 2015-16.

2.1.2 Heat Rate

43. Heat rates for the Thermal Generating Units of Tata Power-G for FY 2015-16 in comparison with the normative values approved in the MYT Tariff Orders are as follows:

Table 2-3: Heat Rates of Thermal Units - FY 2015-16

(kcal/kWh)

Generating Unit	As per MYT Regulations	FY 2015-16 (Actuals)	Difference
Unit 5	2581	2520	-61
Unit 6*	2594	3054	460
Unit 7	2085	2136	51

** Unit 6 Operated at an abnormally low PLF of 0.31% for FY 2015-16*

44. The Unit wise operational performance details are presented below:

Unit 5:

45. The actual Heat Rate of 500 MW Unit 5 is lower than the Normative Heat Rate as per MYT Regulations, 2011. We request the Hon'ble Commission to approve the same.

Unit 6:

46. As explained in the earlier paragraphs, 500 MW Unit 6 has been under economic shut down during FY 2015-16 on account of its high generating cost and the Unit has run intermittently only when the beneficiaries required it. Hence, the power generation from Unit 6 has been insignificant during the year achieving an abnormally low PLF of 0.31%.

47. The abnormally low PLF of Unit 6 coupled with multiple start-ups and shut downs, higher variation in generation and frequent ramping up / down of the generation has led to actual Heat Rate of Unit 6 being abnormally higher than the revised normative heat rate as approved by the Hon'ble Commission in its MYT Order. Such generation does not represent the actual operating performance level of the Unit in the true sense. Hence, Tata Power-G humbly requests the Hon'ble Commission that the application of normative Heat Rate as well as normative Auxiliary Consumption which is determined for operating performance level at normative plant load factor of 85%, would not be in

true letter and spirit of the Standards of Performance specified in MYT Regulations, 2011.

48. Further, in the MYT Order of Tata Power-G in Case No. 32 of 2016, the Hon'ble Commission has approved the actual Heat Rate and actual Auxiliary Consumption for Unit 6 when run under the direction of MSLDC. In case of these rulings, the Hon'ble Commission has taken cognizance of the fact that operation under MSLDC, wherein Unit 6 had generated 28.33 MUs as exceptional in nature, where the Unit had run at low load with intermittent operation as and when required, resulting in higher uncertainties of operation. The relevant extract of the MYT Order is reproduced below:

> *" 4.3.5.3 As explained earlier with regard to the Auxiliary Consumption of Unit-6 under MSLDC directions, the Commission is of the view that its operation in these circumstances is of an exceptional nature and requires the Unit to run on low and intermittent load. Considering this, the Commission approves the actual SHR of 2831 kCal/kWh for FY 2014-15, after prudence check of the month-wise fuel cost calculation submitted by TPC-G. "*

49. Considering the above, we wish to humbly submit that although Unit 6 was available, the generation from Unit 6 for its beneficiaries was even lesser than that done under the directions of MSLDC. This makes the operating condition of the Unit even more abnormal. Considering that the operating conditions were similar whether the Unit was operating under PPA requirement or under the directions of MSLDC, Tata Power-G humbly requests the Hon'ble Commission to approve the actual Heat Rate of Unit 6 at 3054 kcal / kwh for FY 2015-16.

Unit 7:

50. The actual heat rate of Unit 7 stands at 2136 kcal / kwh for FY 2015-16 and is higher that the normative Heat Rate open cycle operation on account of forced outage of STG for Exciter failure. The Hon'ble Commission has approved Normative Heat rates for Unit 7

as 2025 kcal / kwh under Closed Cycle operation and 2900 kcal / kwh under Open Cycle operation in its Order on Business Plan of Tata Power-G for second MYT Control Period in Case No. 166 of 2011. Accordingly, based on the Generation from Unit 7 during open cycle and closed cycle mode, the revised normative heat rate has been worked out in the Table below:

Table 2-4: Revised Normative Heat Rate for Unit 7 - FY 2015-16

Kcal/ Kwh

Mode of Operation	Normative Heat Rate	Gross Generation (MUs)	Revised Heat Rate	Actual Heat Rate
Open Cycle	2900	80.99	2085	2136
Closed Cycle	2025	1098.74		
Total Generation		**1179.73**		

51. As seen from the Table above, the actual Heat Rate of Unit 7 is higher than the revised Normative Heat Rate of 2085 kcal / kwh calculated as per MYT Regulations, 2011.

Tata Power-G request the Hon'ble Commission to approve the actual Heat Rates as submitted above for Units 5, 6 and 7 and consider the revised normative heat rate of 2085 kcal / kwh for Unit 7 for the purpose of the calculation of Gain / (Loss) on account of variation in performance parameters as per Regulation 12.2.c of the MYT Regulations, 2011.

2.1.3 Auxiliary Consumption

52. The Auxiliary Consumption for the Thermal Generating Units at Trombay and Hydro Generating Stations for FY 2015-16 is as given in the Table below:

Table 2-5: Auxiliary Consumption - FY 2015-16

%

Generating Unit	Approved	FY 2015-16 (Actuals)	Difference
Hydro *(W/O colony Consumption)*	1.96%	2.87%	0.91%
Unit 4*	3.68	1.91	-1.77
Unit 5	6.00%	5.87%	-0.13%
Unit 6**	3.50%	183.38%	179.88%
Unit 7	2.86%	2.63%	-0.24%

**Auxiliary Consumption of Unit 4 in MUs*

***Auxiliary Consumption of Unit 6 includes Auxiliary Consumption in standby mode*

53. As seen from the above Table, the auxiliary consumption in the case of Unit 4, 5 and 7 is within the norms specified by the Hon'ble Commission. The auxiliary consumption for Hydro Generating Stations and Unit 6 is higher as compared to the approved values in the MYT Order.

Unit 4

54. In its Order on Business Plan of Tata Power - G for the second Control Period in Case Mo. 166 of 2011, the Hon’ble Commission has approved Auxiliary Consumption of 0.426 MUs / month for Unit 4, when the Unit is in Stand-by mode. During FY 2015-16, the Unit was under Standby mode for the entire year.

55. Based on the norms approved for Unit 4, the normative auxiliary consumption works out as follows:

Table 2-6: Auxiliary Consumption of Unit 4 - FY 2015-16

Particulars		Unit	For FY 2015-16
Unit 4 Auxiliary consumption as approved in the Business Plan under S/B mode for 150 MW capacity	a	Mus	0.43
Number of Months in Stand by mode	b	Months	12
Total Auxiliary Consumption	c = a* b	MUs	3.68
Actual Auxiliary Consumption for FY 2015-16	d	MUs	1.91
Difference in auxiliary consumption	e = d-c	MUs	-1.77

56. As seen from the above Table, the Auxiliary Consumption of Unit 4 is within the normative consumption approved by the Hon'ble Commission under standby mode. Further, we wish to submit that Tata Power-G has not considered the auxiliary consumption of Unit 4 for any Gain / (Loss) computation for FY 2015-16.

Tata Power-G requests approval of the actual auxiliary consumption for Trombay Unit No. 4 for FY 2015-16 at 1.91 MUs.

Unit 6:

57. As has been explained above, 500 MW Trombay Unit 6 was kept under economy shut down on the request of its Beneficiaries, to be brought in service as per requirement, to lower the impact on cost of generation, resulting in benefit to the consumers of Mumbai. However, it is pertinent to note that Unit 6, like any other thermal generating plant, needs basic minimum amount of energy to keep it and its critical auxiliaries in service worthy condition **(refer Annexure 2.1).** Tata Power-G has approached the Hon'ble Commission as a part of its MTR Petition in Case No. 6 of 2015 as well as MYT Petition in Case No. 32 of 2016, to provide a norm for this minimum level of Consumption of Energy and not consider the same to calculate the Efficiency Gain / (Loss) on account of controllable factors. However, the Hon'ble Commission had rejected the claim.

58. We wish to submit that, this is resulting into a double impact on Tata Power-G; (i) by not allowing the cost of energy consumption in standby mode and (ii) not excluding the energy required during standby operation from Gain / (Loss) calculations. It is pertinent to note that unlike FY 2014-15, barring a small generation of around 13 MUs, to meet the requirement of beneficiaries, the Unit was in standby mode for the entire year.

59. We have presented below the impact on Tata Power-G for keeping the Unit 6 under economy shut down solely on request of Tata Power-D and BEST. The shutdown of Unit 6 has resulted in significant savings in Power Purchase Cost of Tata Power-D and BEST, which otherwise would have run at least at Technical Minimum load of 150 MW.

Table 2-7: Saving on account of Economy Shutdown of Unit 6

Financial Year	Economy S/D Hours	Corresp. Net Gen. @ Tech. Min. *(MUs)*	Approved E.C. @ Gas: Oil mix *(Rs/Kwh)*	Approved AFC *(Rs. Crores)*	BEST			Tata Power-D			Eff. Loss (Aux.) for Tata Power-G*
					Average PP Cost *(Bilateral / UI)*	Fixed Cost Paid	Saving *(Rs. Crores)*	Average PP Cost *(Bilateral / UI)*	Fixed Cost Paid	Saving *(Rs. Crores)*	
FY 2012-13	840	118.115	10.54	242.21	9.73	123.94	-58.52	3.59	118.27	-17.67	(23.04)
FY 2013-14	4878	603.634	10.56	283.52	2.03	145.08	189.24	2.28	138.44	176.45	(16.46)
FY 2014-15	3561	514.969	10.59	338.99	2.82	173.46	115.99	2.96	165.53	111.04	(10.69)
FY 2015-16	7879	1059.451	10.13	132.51	2.04	67.81	403.75	2.85	64.70	344.90	(16.98)
FY 2016-17	8688	1247.187	9.38	154.45	3.52	79.03	333.54	3.13	75.42	343.80	(12.96)
FY 2017-18	8760	1077.809	9.395	155.69	3.52	79.67	283.25	3.13	76.02	292.60	(12.98)
Total	**34605**	**4621**					**1267**			**1251**	**(93.11)**

** Efficiency Loss considered as approved in True Up Orders*

60. As seen from the Table above, it is clear that Tata Power-D and BEST have saved a significant expenditure towards the cost of power purchase by replacing Unit 6 Generation which they ought to have purchased at least @ technical minimum level with bilateral purchase. On the contrary, Tata Power-G would be adversely impacted by Rs. (93.11) Crores by the end of FY 2017-18 for enabling its beneficiaries to save power purchase cost to the tune of Rs. 2518 Crores as the actual Auxiliary consumption under standby mode has not been approved separately. Hence, considering this as a genuine requirement where the Auxiliary consumption has been actually experienced, we request the Hon'ble Commission to treat the Auxiliary Consumption mode for operating period and Stand by period separately as given in the Table below:

Table 2-8: Unit 6 Auxiliary Consumption in operating and stand-by mode for FY 2015-16

	Gross Gen (Mus)	Net Gen (Mus)	Aux Mus	% Aux
Regulated	13.80	12.84	0.96	6.96%
Economy Shut down			24.34	

61. The Auxiliary Consumption, when the Unit was in operation is 6.96% which is higher than the norm provided for Unit 6 at 3.50%. It may be noted that in absolute terms (in Mus) the Auxiliary Consumption is not high but when it is considered as a percentage of the generation it works out to be higher as the PLF of the Unit is abnormally low at 0.31% whereas the norms are provided at 85% operation. Such Auxiliary Consumption does not represent the true performance of the Unit 6 and same is not comparable with the performance of the unit under normal operating conditions. Hence, we request the Hon'ble Commission not to consider these abnormal values for computation of Efficiency Gain / (Loss) on account of controllable factor as the present situation is reasonably out of control for Tata Power-G.

Tata Power-G requests the Hon'ble Commission to approve the % Auxiliary Consumption of 6.96% in operation and approve the Auxiliary Consumption of 24.34 MUs separately for auxiliary consumption under Economy shut down of the Unit 6.

- **Hydro Generating Stations:**

62. The Auxiliary Consumption for the Hydro Generating Stations is **2.87%**. The various components are explained below:

  - ***Auxiliary Consumption including Static Excitation:***

63. Auxiliary Energy Consumption under this head at **0.94%** is lower than the approved value of 1%.

- ***Pumping Energy for Nallah Diversion***

64. The actual energy consumed towards Nallah Diversion schemes is **0.31%** for FY 2015-16 for the pumped quantum of water of 60.71 MCM. In this regard, we wish to submit that the earlier norm of 0.28% derived by the Hon'ble Commission in its Order on Business Plan of Tata Power-G in Case No. 166 of 2011 was based on the average Water Pumped and Energy used over a period starting from FY 2006-07 to FY 2010-11 i.e. Energy consumption of 3.42 MUs was approved for pumping 52.46 MCM of water i.e. 0.0652 MUs / MCM. However, the quantum of water pumped is dependent on the quantum of rainfall, the energy for pumping would increase in line with the same.

65. The situation of a higher quantum of Nallah Diversion pumping occurred in FY 2011-12 where the pumping was much higher than the average base quantum used while setting the norm. The Hon'ble Commission had dealt with this situation to address the issue of Auxiliary Energy Consumption for Nallah diversion in its MYT Order dated 5th June, 2013 in Case No. 177 of 2011 as follows:

> *"…Further, the Commission in its Business Plan Order in Case No. 166 of 2011 has additionally allowed the Auxiliary Energy Consumption of 0.28% for energy consumption for nallah diversion considering the last five year average consumption of 3.78 MU. TPC-G stated that in the last five years, i.e., from 2007 to 2011 average of 52.46 MCM water was pumped. However, during FY 2011-12 since the rainfall was very high, the quantum of water pumped was 76.82 MCM. In view of the same, the Commission has considered the energy consumption of 5.54 MU on pro rata basis considering the water pumping of 76.82 MCM. Further, considering the total Gross Generation of 1532.05 MU the Commission has allowed the additional Auxiliary Energy Consumption of 0.36%."*

66. Similarly, the water pumped during FY 2015-16 is 60.71 MCM, which is higher than the base considered while approving the Normative of 0.28% Auxiliary Consumption in

Business Plan Order. Accordingly, on application of the approach adopted by the Hon'ble Commission in MYT Order in Case No. 177 of 2011 for 60.71 MCM water pumped, the revised Auxiliary Energy Consumption norm for 'Pumping Energy for Nallah Diversion' works out to be 0.36%. The computation of revised Auxiliary consumption towards pumping energy required for Nallah Diversion Schemes for FY 2015-16 works out as follows:

Table 2-9: Normative Pumping Energy for Nallah Diversion Schemes for FY 2015-16

Pariculars	Unit		As per MYT Tariff Order
Average of Energy consumed from Pumping as per MYT Order in Case 177 of 2011	MUs	a	3.42
Average of Water Pumped as per MYT Order in Case 177 of 2011	MCM	b	52.46
Actual water Pumped in FY 2015-16	MCM	c	60.71
Mus based on the Average MCM water flow for as per MYT Order	MUs	d = a *c/b	3.96
Gross Hydro Generation	MUs	e	1098.67
% normative Auxiliary Consumption	%	f=d/e	0.36%

- ***GT Losses:***

67. The Auxiliary Energy Consumption under this head is higher at **1.37%** as compared to the approved value of 0.50%.

- ***Headworks Consumption:***

68. The Hon'ble Commission in its MYT Order in Case No. 32 of 2016 had approved additional 0.18 % Auxiliary Energy Consumption under this head. However, in view of lower generation on account of lower Rainfall as explained in the earlier sections, the actual Percentage Auxiliary consumption under this head for FY 2015-16 is 0.23%.

- ***Colony Consumption***

69. As per the methodology approved by the Hon'ble Commission in its MTR Tariff Order, Tata Power-G has excluded the colony consumption from the total Auxiliary Consumption. The same has been included in O&M expenditure by multiplying Colony consumption in MUs with the average Energy Rate for FY 2015-16 as per the approved methodology adopted by the Hon'ble Commission in its Tariff Order.

70. Considering all the above, the actual auxiliary consumption in comparison with the normative auxiliary consumption for the year FY 2015-16 works out as follows:

Table 2-10: Auxiliary Consumption of Hydro Stations - FY 2015-16

%

Sr. No.	Particulars		Approved	FY 2015-16	Diff
1	Auxiliary Consumption including Static Excitation	a	1.00%	0.94%	-0.06%
2	Energy for Nallah Diversion	b	0.36%	0.31%	-0.05%
3	GT Losses	c	0.50%	1.37%	0.87%
4	**Total Losses**	**d =a+b+c**	**1.86%**	**2.62%**	**0.76%**
5	Head Works Consumption	e	0.18%	0.23%	0.05%
6	Condenser Mode of operation	f	0%	0.02%	0.02%
7	Housing Colony Consumption	g		0.22%	0.22%
8	**Total**	**h =d+e+f+g**	**2.04%**	**3.09%**	**1.05%**
9	**Auxiliary Consumption net of Colony Consumption**	**i=h-g**	**2.04%**	**2.87%**	**0.83%**

We request the Hon'ble Commission to approve the Auxiliary Energy Consumption Norm of 2.04% for Hydro Stations for FY 2015-16 and actual Auxiliary consumption of 2.87%.

2.1.4 Availability

71. The Actual Availability achieved for the year FY 2015-16 for the Thermal Generating Units at Trombay and the Hydro Generating Stations is as shown in the Table below:

Table 2-11: Availability Unit 4 to 7 and APAF for Hydro Generating Stations – FY 2015-16

Station	FY 2015-16	
	Normative	Actual
Thermal		
Unit 5	85.0%	95.25%
Unit 6	85.0%	92.99%
Unit 7	85.0%	93.69%
Hydro		
Khopoli	90.0%	99.82%
Bhivpuri	90.0%	99.30%
Bhira	90.0%	90.61%

72. As can be seen from the above Table, Availability of all thermal Generating Units is greater than the normative availability of 85% as specified in Regulation 44.1 (a) of the MYT Regulations, 2011. Thus, in line with Regulation 49.2 of MYT Regulations, 2011, all thermal generating units of Tata Power-G are entitled for recovery of full Annual Fixed Cost (AFC) for FY 2015-16.

73. Further, actual Annual Plant Availability Factor (APAF) in case of all Hydro Generating Stations has been greater than the Normative Annual Plant Availability Factor (NAPAF) of 90% as specified in Regulation 47.1 of the MYT Regulations, 2011.

74. The certificate for Availability issued by the Maharashtra State Load Despatch Centre (MSLDC) for FY 2015-16 is attached as **Annexure 2-2(a)** to this Petition.

2.1.5 Operation of Unit 6 under the directives of MSLDC

75. As has been explained earlier, during FY 2015-16, as per the requests made by the Distribution Licensees, Unit 6 was kept under economic shut down. However, during certain periods of time, the Unit was required to be operated to meet the requirements of the Distribution Licensees. Further, the Unit was run under the directions of MSLDC to address the transmission constraints in meeting the requirements of Mumbai.

76. Considering the above, in FY 2015-16, Unit 6 operated under three different scenarios as follows:

- Unit 6 generation to meet the PPA requirements
- Unit 6 under economic shut down
- Unit 6 generation to address the transmission system constraints of Mumbai.

77. Accordingly, during FY 2015-16, Unit 6 generated 13.80 MUs to meet the requirements of Tata Power-D and BEST as per the requirements of the PPA and generated 28.33 MUs to address transmission system constraints of Mumbai as per the directions from MSLDC. Apart from these operations, Unit 6 was under economic shut down, however, required certain auxiliary consumption to keep the Unit available.

78. Tata Power-G, as a part of its submission in the MYT Petition in Case No. 32 of 2016 for the purpose of the provisional truing up for Unit 6 for FY 2015-16 had requested the Hon'ble Commission to approve the Actual Heat Rate and Actual Auxiliary Consumption for FY 2015-16. The Hon'ble Commission, in their Order dated 8th August, 2016, had ruled as follows:

> …
>
> *4.3.2.30 However, the Commission notes that Unit-6 operation under MSLDC directions is a special mode of operation. It does not arise from the demand of Distribution Licensees but is required to meet system constraints. In such eventuality, the Unit normally runs at low load with intermittent operation as and when required, resulting in higher uncertainties in operation. Vide*

instructions dated 26 March, 2014, the MSLDC directed TPC-G to operate Unit-6 for some period to avoid load shedding, subsequent to decisions taken at a meeting chaired by the Principal Secretary (Energy), GoM. Considering the exceptional nature of operation of Unit-6 under MSLDCs direction on intermittent load, the Commission considers this a fit case for exercising its power under the MYT Regulations, 2011 to remove difficulties.

…

4.3.5.3 As explained earlier with regard to the Auxiliary Consumption of Unit-6 under MSLDC directions, the Commission is of the view that its operation in these circumstances is of an exceptional nature and requires the Unit to run on low and intermittent load. Considering this, the Commission approves the actual SHR of 2831 kCal/kWh for FY 2014-15, after prudence check of the month-wise fuel cost calculation submitted by TPC-G.

…

5.3.3.6 As regards the Auxiliary Energy Consumption of Unit-6 under MSLDC directions, as discussed at para. 4.3.2.30, considering the exceptional nature of the operation of Unit-6 on intermittent load, the Commission approves the actual Auxiliary Consumption of 1.85 MU for FY 2015-16.

…

5.3.8.2 As explained at para. 4.3.5, considering the exceptional nature of operation of Unit-6 under MSLDC directions, the Commission approves the actual SHR of 2890.13 kCal/kWh for FY 2015-16, after prudence check of the month-wise fuel cost calculation submitted by TPC-G. Also, the Commission has considered actual Auxiliary Energy Consumption while computing the fuel cost of Unit-6 when operating under MSLDC directions, after prudence check of meter reading data of 15 minute time block submitted by TPC-G.

5.3.8.3 In view of the above, the Commission approves the actual Fuel Cost of Rs. 24.13 Crore for Unit-6 when operating under MSLDC directions during FY 2015-16.

79. Accordingly, we request the Hon'ble Commission to approve the actual performance parameters for Unit 6 while operating under MSLDC directive as shown in the Table below:

Table 2-12: Unit 6 Performance Parameters under MSLDC directive – FY 2015-16

Generating Unit	Approved	FY 2015-16 (Actuals)
Unit 6 under MSLDC Direction		
Heat Rate (kcal /kWh)	2890.13	2890.13
Auxiliary Consumption (%)	6.54%	6.54%

Financial Performance:

80. The financial performance of the Thermal Generating Stations and Hydro Generating Stations at Bhira, Bhivpuri and Khopoli in FY 2015-16 under the various heads is stated in the sections below:

2.1.6 Fuel Cost

81. The total fuel cost for FY 2015-16 of the Thermal Generating Station at Trombay for Units 5 to 7 was **Rs. 1245.84 Crores**. The details of various fuel related parameters are given in the Table below:

Table 2-13: Fuel Details for Thermal Generating Station – FY 2015-16

Particulars	MYT Order	FY 2015-16 (Actuals)
Consumption (MT)		
Gas - APM		130981
Gas - RLNG		70246
Coal		1809593
Oil *(combined)*		1233
GCV (kcal/kg)		
Gas - APM	13127	13127
Gas - Non APM	13162	13162
Gas - RLNG	13162	13010
Coal	4828	4826
Oil	10462	10460
Price (Rs./MT)		
Gas - APM	15761	15761
Gas - Non APM	16046	16028
Gas - RLNG	36388	36089
Coal	4978	4976
Oil	50651	50750
Total Fuel Cost (*Rs. Crores)*		**1245.84**

82. As the various fuel price parameters were provisionally trued up during the MYT Order in Case No. 32 of 2016, the variation in the final audited fuel parameters for FY 2015-16 in the MYT Order vis-à-vis the actuals parameters for FY 2015-16 is negligible.

83. The Generating Unit wise break-up of the above expenditures and the total Fuel Cost is presented in the Table below:

Table 2-14: Unit wise Fuel Cost – FY 2015-16

(Rs. Crores)

Unit	Fuel Cost
Unit 5	921.13
Unit 6*	13.95
Unit 7	310.76
Total	**1,245.84**

** Unit 6 Fuel Cost excludes the cost for operation under MSLDC Directions.*

84. Accordingly, Tata Power-G Requests the Hon'ble Commission to approve the actual Fuel Cost for Unit 5, Unit 6 and Unit 7 at Trombay for FY 2015-16 at **Rs. 1245.84 Crores**.

85. In addition to the above, fuel cost pertaining to Unit 6 operation under MSLDC directive considering actual Heat Rate and Auxiliary Consumption works out to **Rs. 24.13 Crores.**

- **Adjustment in Fuel Cost pertaining to past Period**

86. In this regard, we wish to submit that there is an adjustment with respect to the Entry Tax on Fuel Purchase pertaining to past period. The detailed explanation of the adjustments is given below:

a. Entry Tax on Fuel:

87. In 2002, the Government of Maharashtra (GoM) had introduced the Entry Tax on the specified goods brought into the State from outside the State. These included Entry Tax on Local and imported Furnace oil. Tata Power had challenged this tax liability in the Bombay High Court. The Bombay High Court had issued an Order dated 16th January, 2004 in which it held the levy of this tax as unauthorized and unconstitutional. The GoM then filed a Special Leave Petition (SLP) with the Hon'ble Supreme Court of India.

Meanwhile, GoM amended the Sales Tax Act by allowing partial set-off of Entry tax against Sales tax. Simultaneously, the Hon'ble Supreme Court dismissed the petition on grounds that the GoM had removed the levy of Entry Tax, which was still in effect, but allowed only partial set-off. Tata Power has ever since been consistently claiming that Entry Tax is not leviable on the basis of the Hon'ble High Court & Hon'ble Supreme Court judgments.

88. As mentioned above, as only partial set off had been allowed, Tata Power has now received a demand notice from GoM to the tune of Rs. 326.40 Crores and Rs 458.96 Crores in respect of the Entry Tax Liabilities including interest and penalty for FY 2005-06 and FY 2008-09 (since Assessment for these years is complete) respectively under the Maharashtra Tax on the Entry of Goods into Local Areas Rules, 2002.

89. However, as per the provisions of the Entry Tax Act, set off is allowed on payment of Entry Tax. Hence, though the gross tax is 12.5% (claimed by the GoM), the effective rate after the eligible set-off against VAT is 3% to 4%. Tata Power has paid to the GoM the amount after adjusting VAT Refund based on the VAT assessment order by the authorities. Thus, the amount after adjusting this VAT refund works out to **Rs. 36.31 Crores** (i.e. Gross tax liability minus the VAT Refund) for FY 2007-08 paid in FY 2015-16 and **Rs 1.14 Crores** for FY 2013-14 paid in FY 2017-18. Tata Power has paid this net liability to the tax department on 3rd July, 2015, the challan of the same is also attached as **Annexure 2-3** to this submission. The summary of the payments with respect to the above is presented in the Table below:

Table 2-15: Summary of Entry Tax

Rs Crores

		FY 2005-06	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	Balance	Total
Entry Tax to be paid by Tata Power-G	a	33.83	27.38	39.03	42.37	15.08	14.31	35.56	38.66	21.08	47.13	219.13
VAT Refund Adjusted in FY 2014-15	b		(1.76)			(6.69)	(14.31)					(22.76)
VAT Refund Adjusted in FY 2015-16	c			-2.72				-35.56				(38.28)
VAT Refund Adjusted in FY 2016-17	d								-38.66			(38.66)
VAT Refund Adjusted in FY 2017-18	e									-19.94		(19.94)
Net Entry Tax need to be claimed	**f=a+b+c+d+e**	**33.83**	**25.62**	**36.31**	**42.37**	**8.39**	**0.00**	**0.00**	**0.00**	**1.14**	**47.13**	**158.09**
Claimed in MTR Petition	g	33.83			42.37							76.20
Paid in FY 2014-15	h		25.62			8.39						34.01
Paid in FY 2015-16	i			36.31								36.31
Paid in FY 2016-17	j											0.00
Paid in FY 2017-18	k									1.14		1.14
Balance Entry Tax amount	**j=f-(g to k)**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**47.13**	**10.43**

90. Further, it is to be noted that the actual liability towards the entry tax is higher by the amount adjusted to the extent of VAT Refund as the VAT refund has already been passed

on to the consumers through Non-Tariff Income in the respective years. Adjustment towards VAT refund would mean passing on the VAT refund twice to the consumers. Hence, for FY 2007-08 the actual recovery towards entry tax would be **Rs. 39.03 Crores,** for FY 2011-12 the same would be **Rs 35.56 Crores**, for FY 2012-13 the same would be **Rs 38.66 Crores** and for FY 2013-14 it would be **Rs 21.08 Crores** as against Rs. 36.31 Crores, Rs 0 Crores, Rs 0 Crores and Rs 1.14 Crores respectively.

91. Further, we wish to submit that while claiming the entry tax during Truing up of FY 2014-15, the VAT Refund of Rs. 22.76 Crores pertaining to previous years i.e. FY 2006-07, FY 2009-10 and FY 2010-11 as was adjusted during payment of entry tax. However, since the said VAT refund is passed on to the consumers on an accrual basis, the removal of the same from the claim of Entry Tax again based on final VAT Refund Orders in FY 2014-15 has resulted into under recovery of Entry Tax Liability / passing VAT refund twice to the beneficiaries. Accordingly, the actual recovery for FY 2014-15 towards entry tax would be **Rs. 56.77 Crores** as against Rs. 34.01 Crores claimed as a part of Truing up of FY 2014-15. Hence, there is an under recovery of **Rs 22.76 Crores** of Entry Tax for FY 2014-15.

Table 2-16: Balance Recovery of Entry Tax

Particulars	Rs Crore
Under recovery of Entry Tax for FY 2014-15	22.76
Balance claim towards Entry Tax payment for FY 2015-16	74.59
Total Under recovery for Entry Tax	97.35

We Request the Hon'ble Commission to approve the recovery of Rs. 97.35 Crores i.e. Rs. 22.76 crores for FY 2014-15 and Rs. 74.59 Crores for FY 2015-16.

92. As explained in the paragraph above, the amount towards the entry tax is pertaining to the period FY 2007-08, when Tata Power-G was supplying power to three Distribution Utilities i.e. Tata Power-D, R-Infra and BEST. Hence, this amount is to be charged in the ratio of sales of Distribution Utilities in the respective year. Similar consideration has

been taken for the amount towards entry tax pertaining to period FY 2011-12. The computation of the same is given below:

Table 2-17: Recovery of Entry Tax of Rs 61.79 Crores – FY 2015-16

Period		Unit	Total	Tata Power-D	Rinfra-D	BEST
FY 2007-08	Sales	MUs	11080	4748	2246	4086
	Ratio	%	100%	43%	20%	37%
FY 2007-08	**Entry tax**	**Rs Cr**	**61.79**	**26.48**	**12.53**	**22.79**

Table 2-18: Recovery of Entry Tax of Rs 35.56 Crores – FY 2015-16

Period		Unit	Total	Tata Power-D	BEST
FY 2011-12	Sales	MUs	10057.8	4947.41	5110.39
FY 2011-12	Ratio	%	100%	49.19%	50.81%
FY 2011-12	**Entry tax**	**Rs Cr**	**35.56**	**17.49**	**18.07**

93. Tata Power-G had made a submission for the consideration of the Entry Tax amount in the MYT Petition in Case No. 32 of 2016 for FY 2014-15 and FY 2015-16, wherein the Hon'ble Commission vide its order dated 8th August, 2016 had approved the Entry Tax amount for both the years. The relevant extract of the Order for FY 2015-16 has been reproduced below:

> *5.3.9.2 The Commission has examined the supporting documents provided by TPC-G, and has accordingly considered the Entry Tax amount to be recovered from TPC-D, RInfra-D and BEST. The Commission has computed the recovery of Entry Tax as submitted by TPC-G and has considered it separately along with the recovery of the other past Revenue Gaps.*

Table 86: Recovery of Entry Tax, as approved by Commission for FY 2015-16(Rs. Crore)

Particulars	TPC-D	RInfra-D	BEST	Total
Entry Tax	15.56	7.36	13.39	36.31

Tata Power-G requests the Hon'ble Commission to approve the past recovery of Entry Tax of Rs. 97.35 Crores from Tata Power-D, RInfra-D and BEST as worked out in the Table 2.16 above along with the applicable carrying cost.

94. With respect to Entry Tax, we have enclosed a note as **Annexure 2-4** detailing the status of the Entry Tax litigations along with the impact depending on the outcome of the matter. We had earlier made a similar submission on the Entry Tax issue vide our letter CREG/MUM/MERC/2017/193 dated 11th September, 2017 to apprise the Hon'ble Commission of the status of the matter.

2.1.7 O&M Expenditure

95. The actual O&M expenditure including Brand Equity for Thermal Generating Station (Units 4 to 7) and Hydro Generating Stations was **Rs. 446.26 Crores** for FY 2015-16. The breakup of O&M expenditure is given in the Table below:

Table 2-19: O&M Expenditure for Unit 4 to 7 & Hydro Generating Stations – FY 2015-16

Rs. Crores

Particulars	As per MYT Order	FY 2015-16 (Actuals)	Difference
Employee Expenses		175.38	
Administration & General Expenses (Inclusive of Brand equity)		107.81	
Repair and Maintenance		163.07	
Total	**503.08**	**446.26**	**-56.82**

As can be seen from the above Table, the actual O&M expenditure for FY 2015-16 is lower than the normative values approved by the Hon'ble Commission for FY 2015-16 in the MYT Order. The detailed breakup of base O&M expenses has been provided in specified Petition formats (viz., F3 and F3.1 to F3.3) as prescribed by the Hon'ble Commission.

- **Overall O&M expenditure for FY 2015-16**

96. As described in the sections above, the total O&M expenditure before any adjustments for FY 2015-16 is Rs. 446.26 Crores. However, based on the Truing Up Orders of previous Financial Years and the methodology adopted by the Hon'ble Commission therein, the total O&M expenditure of Unit 4 to 7 & Hydro Generating Stations for FY 2015-16 is adjusted for the following:

a) Brand Equity:

97. The Hon'ble Commission had directed to compute the Brand Equity based on the revenue earned in the previous financial year i.e. based on revenue of FY 2014-15 for FY 2015-16 truing up. In view of this, there is a small difference between the actual Brand Equity and the amount arrived at based on the methodology as directed by the Hon'ble Commission. The actual overall O&M expenditure has been adjusted to this extent of differential amount.

98. The Brand Equity computation as directed by the Hon'ble Commission based on the revenue of FY 2014-15 is as shown in the Table below:

Table 2-20: Computation of Brand Equity – FY 2015-16

Particulars	Basis	Unit 4-7&H Petition (FY 2015-16)
Revenue from Mumbai Licence Area Business based on allocation statement for FY 2014-15	a	2410.92
Add: Cash discount	b	0.00
Add: Income in respect of services rendered	c	0.93
Add: delayed Payment charges	d	0.14
Total revenue to be considered	e=a+b+c+d	2411.98
Contribution to Tata Brand Equity	f=0.25%*e	6.03
Service tax @18 %	g=service tax*f	1.09
Total Contribution to Brand Equity including Service Tax	h=f+g	7.12

b) Expenditure related to Corporate Social Responsibility (CSR):

99. The Hon'ble Commission in its previous Orders on Generation had disallowed the expenditure towards CSR. On account of the same, the CSR expenditure has been removed from the overall O&M expenditure and is not a part of the O&M expenditure reported above. Hence, no separate deduction towards CSR is required for truing up of O&M expenses of FY 2015-16.

c) Expenditure related to Hydro Colony Consumption:

100. Based on the methodology approved in the MYT Tariff Order of Tata Power-G, the colony consumption has been considered under the O&M expenditure. The cost of the same is computed by considering the energy rate for FY 2015-16 as tabulated below:

Table 2-21: Hydro Colony Consumption cost for FY 2015-16

Particulars	Unit	Basis	FY 2015-16
Hydro Colony Consumption	%	a	0.22%
Hydro Colony Consumption	MUS	b	2.42
AFC for the year	Rs Cr	c	315.59
Annual Net generation	MUs	d	1064.72
Energy Charge Considered for Colony Consumption	Rs/kWh	e=c/d*10	2.96
Hydro Colony Consumption	**Rs Cr**	**f=e*b/10**	**0.72**

101. By considering all the above adjustments, the O&M expenditure for the year FY 2015-16 works out to be as follows:

Table 2-22: Summary of O&M expenditure after adjustments - FY 2015-16

Rs. Crores

Particulars	Basis	MYT Order	FY 2015-16 (Actuals)
Employee Expenses	a		175.38
Administration & General Expenses (Inclusive of Tata brand Equity)	b		107.81
Repair and Maintenance Expenses	c		163.07
Total	**d=a+b+c**	**503.08**	**446.26**
Less			
Brand equity Considered in Accounts	e		7.00
Add:			
Allocation of Tata Brand Equity Expenses to Tata Power-G as per MERC methodology	f		7.12
Total	**h=d-e+f+g**	**503.08**	**446.38**
Add: Hydro Colony consumption cost	g		0.72
Grand Total	**i=h+g**		**447.10**

102. As can be seen from the above Table, the total O&M expenditure for Unit 4 to 7 & Hydro Generating Stations for FY 2015-16 is lower than the normative O&M expenses of Rs. 503.08 Crores approved by the Hon'ble Commission in the MYT Order. Accordingly, Tata Power-G request the Hon'ble Commission to approve the actual O&M expenditure of **Rs. 447.10 Crores** for Truing up of FY 2015-16 which includes **Rs 446.38 Crores** towards O&M and **Rs 0.72 Crores** towards Hydro Colony Consumption.

2.1.8 Capital Expenditure & Capitalisation

103. Tata Power-G has executed capital expenditure schemes resulting into a total capitalisation of **Rs. 191.34 Crores** in FY 2015-16 for its Unit 4 to 7 and Hydro Generating Stations. The break-up of the actual capitalisation is provided below:

Table 2-23: Capitalisation for U 4 to 7 & Hydro Generating Stations - FY 2015-16

Rs. Crores

	FY 2015-16 Actual
DPR Capitalisation	163.30
Non-DPR Capitalisation	28.04
Total Capitalisation	191.34
Ratio of Non-DPR to DPR Capitalistion	**17.17%**

104. It is submitted that out of the total capitalisation of **Rs. 191.34 Crores**, the capitalisation on account of the DPR schemes (including merged DPRs) is to the extent of **Rs. 163.30 Crores** and balance **Rs. 28.04 Crores** is on account of the Non-DPR Schemes. The Ratio Non-DPR capitalisation to DPR capitalisation is around **17.17%** and the same is well within the limit of 20% specified by the Hon'ble Commission in its recent MYT Order.

105. Accordingly, Tata Power-G requests the Hon'ble Commission to approve the total actual capitalisation of **Rs. 191.34 Crores** for FY 2015-16.

2.1.9 Depreciation

106. Tata Power - G has computed the Depreciation by applying the rates as specified in the Deprecation schedule in the Regulation 31.2 (b) of the MYT Regulations, 2011. Based on the same, the Depreciation for the FY 2015-16 is **Rs. 140.36 Crores.** On this basis, the rate of depreciation as a percentage of the Average GFA works out to the following:

Table 2-24: Depreciation for U 4 to 7 & Hydro Generating Stations – FY 2015-16

Rs. Crores

Particulars	**FY 2015-16 (Actuals)**
Average GFA	4244.81
Depreciation	140.36
% Depreciation	**3.31%**

107. Tata Power-G requests the Hon'ble Commission to approve the Depreciation of **Rs. 140.36 Crores** for Unit 4 to 7 & Hydro Generating Stations for FY 2015-16.

2.1.10 Interest on Loan Capital and Finance Charges

108. The Interest costs have been categorised under the following two heads:

- Interest on Loan Capital
- Other Finance Charges
- Interest on Working Capital

- **Interest on Loan Capital**

109. Tata Power, in the past has taken various long term loans to finance the capital expenditure nature projects in line with the Debt : Equity structure of 70% : 30%. Accordingly, Tata Power has availed fresh loan from IDFC Bank (Sanctioned amount: Rs. 250 Crores, Amount drawn: Rs. 70 crores) and HDFC Bank (Sanctioned amount: Rs. 250 Crores, Amount drawn: Rs. 70 crores) and also drawn balance amount from Kotak Mahindra Bank (Sanctioned amount – Rs. 250 Crores, Amount drawn – Rs. 221.24 Crores). The details of fresh long term loans taken during FY 2015-16 have been provided below:

- **HDFC Loan**

110. Tata Power has raised a loan for Rs. 250 Crores from HDFC Bank for funding its capital expenditure on the terms as outlined in the Table below:

Table 2-25: Details of New Loan

HDFC Loan	
Amount	250 crores
Rate of Interest	10.30 % p.a. linked to Base Rate.
Repayment Schedule	2 Years moratorium, Quarterly repayment of 6.5 % of Drawal amount per anum for the first 10 years and 35 % in the last year.

- **IDFC Loan**

111. Tata Power has raised a loan for Rs. 250 Crores from IDFC Bank for funding its capital expenditure on the terms as outlined in the Table below:

Table 2-26: Details of New Loan

IDFC Loan	
Amount	250 crores
Rate of Interest	10.30 % p.a. linked to Base Rate.
Repayment Schedule	2 Years moratorium, Quarterly repayment of 6.5 % of Drawal amount per anum for the first 10 years and 35 % in the last year.

112. Loans from various banks have been allocated to different Business Areas (Generation, Transmission and Distribution) based on the ratio of capitalisation of the respective Business Areas in FY 2015-16. The balance loan is assumed to be financed through normative loans. Based on this the allocation of loan for various Businesses is presented below:

Table 2-27: Details of Loan allocation for FY 2015-16

Rs. Crores

		U4 to 7 & Hydro	U-8	G	T	D	Total GTD
Capitalisation	a	191.34	27.51	218.85	266.89	264.37	750.11
Debt	b=0.7*a	133.94	19.26	153.20	186.82	185.06	525.08
%	c=b/B%	26%	4%	29%	36%	35%	100%
Kotak_250	d=c*D	56.43	8.11	64.55	78.72	77.97	221.24
IDFC_250	e=c*E	17.86	2.57	20.42	24.91	24.67	70.00
HDFC_250	f=c*f	17.86	2.57	20.42	24.91	24.67	70.00
Total Actual Loan Drawl	g=d+e+f	92.15	13.25	105.40	128.53	127.32	361.24
Normative	h=b-g	41.79	6.01	47.80	58.29	57.74	163.84

113. Based on the actual loan drawls, the computation of the Interest Rates has been presented in the Table below:

Table 2-28: Interest Rate for Loan Capital - FY 2015-16

Perticulars	Basis	Rs. Crores
Opening Balance of loan	a	892.19
Drawal During the year	b	92.15
Repayment of loan	c	64.33
Closing Balance of Loan	d=a+b-c	920.01
Interest Expense (Rs Crs)	e	97.14
Applicable Interest Rate	**f=e/a**	**10.89%**

114. Considering the above actual loan drawls and interest rates, the weighted average interest rate for FY 2015-16 works out to **10.89%.** The total Interest chargeable for FY 2015-16 works out to **Rs. 79.18 Crores** as shown in the Table below:

Table 2-29: Interest on Loan Capital for FY 2015-16

Particulars	Rs Crores
Opening Balance	730.39
Additions	133.94
Repayments	140.36
Closing Balance	**723.97**
Effective Interest Rate	10.89%
Total Interest Expense	**79.18**

Tata Power-G requests the Hon'ble Commission to approve the Interest Expense of Rs. 79.18 Crores for Unit 4 to 7 & Hydro Generating Stations for FY 2015-16.

2.1.11 Other Finance Charges

115. The finance charges incurred by Tata Power – G attributable to Thermal Generating Station (Unit 4 to 7) and Hydro Generating Stations is **Rs. 0.73 Crores**.

2.1.12 Interest on Working Capital

116. The Interest on Working Capital has been computed based on the elements as specified in the Regulation 35.1 (a), (b) and (c) of MYT Regulations, 2011 for Coal, Oil fired and Hydro Generating Stations respectively. With respect to Unit 6, we have taken the average Oil stock value for computation of Working Capital requirement. For the purpose of computing the interest on working capital for FY 2015-16, an interest rate of **14.75%** has been considered in line with Regulation 35.1 of MYT Regulations, 2011.

117. The Interest on Working Capital of Tata Power - G (Thermal (Unit 4 to 7) and Hydro Generating Station) for FY 2015-16 works out to **Rs. 71.47 Crores**. The computation of the same is as given in the Table below. Further, the details of computation of Thermal (Unit 4 to 7) as well as Hydro Generating Stations have been provided in the formats enclosed with this Petition as prescribed by the Hon'ble Commission.

Table 2-30: Working Capital – Thermal and Hydro Generating Stations – FY 2015-16

Rs. Crores

Particulars	Regulation		Approved	Actual
Thermal / Gas Fired Stations				
2 months Fuel Cost for Unit 5 (Coal)	35.1 (a) (i)	a	165.13	165.58
2 months Fuel Cost for Unit 6 (Oil)	35.1 (a) (ii)	b	5.87	111.45
1 months Fuel Cost for Unit 7 (Gas)	35.1 (b) (i)	c	27.15	28.04
Fuel Cost		**d = a+b+c**	**198.15**	**305.07**
O & M Cost for 1 Month	35.1 (a) (iv)	f	33.07	30.35
Maintenance of spares 1% of Historical cost	35.1 (a) (v)	g	27.04	27.06
Receivables for sale of Electricity to BEST	35.1 (a) (vi) & (d)	h	182.79	238.07
Less : Payables for fuel -h	35.1 (a) (vii)	i	112.65	166.55
Total Thermal Working Capital		**j =d+f+g+h-i**	**328.41**	**434.00**
Hydro Generating Stations				
O & M Cost for 1 Month	35.1 (c) (i)	k	8.85	10.06
Maintenance of spares 1% of Historical cost	35.1 (c) (ii)	l	13.73	13.71
Receivables for sale of Electricity to BEST	35.1 (c) (iii) & (d)	m	23.84	26.92
Total Hydro Working Capital		**o=k+l+m**	**46.42**	**50.69**
Total Working Capital		p = j + o	**374.83**	**484.69**
Rate of Interest		q	14.75%	14.75%
Interest on Working Capital		**r = q * p**	**55.29**	**71.49**

Tata Power-G requests the Hon'ble Commission to approve the Interest on Working Capital of Rs. 71.49 Crores in case of Unit 4 to 7 & Hydro Generating Stations for FY 2015-16.

2.1.13 Return on Equity

118. Considering the capitalised expenditure and normative Debt : Equity ratio of 70:30, the Return on Equity (RoE) allowed as per Regulation 32.2.1 of the MYT Regulations, 2011 is 15.5% of equity. Accordingly, the RoE for FY 2015-16 has been worked out as shown in the Table below:

Table 2-31: Return on Equity for Unit 4 to 7 & Hydro Generating Stations – FY 2015-16

Rs. Crores

Particulars	FY 2015-16 (Actuals)
Regulatory Equity at the beginning of the year	1517.48
Less: Equity Portion of Assets De-Capitalised During the Year	*-4.09*
Capital Expenditure Capitalised during the Year	191.34
Equity portion of capital expenditure Capitalised during the ye	57.40
Regulatory Equity at the end of the year	**1570.80**
RoE Computation	
Return on Regulatory Equity at the beginning of the year	235.21
Total Return on Regulatory Equity	**235.21**

Tata Power-G requests the Hon'ble Commission to approve the RoE of Rs. 235.21 Crores for Unit 4 to 7 & Hydro Generating Stations for FY 2015-16.

2.1.14 Income Tax

119. The MYT Regulations, 2011 specify the following for Income Tax:

34.1 The Commission, in its MYT Order, shall provisionally approve Income Tax payable for each year of the Control Period, if any, based on the actual income tax paid on permissible return as allowed by the Commission relating to the electricity business regulated by the Commission, as per latest Audited Accounts available for the applicant, subject to prudence check:

Provided that no Income Tax shall be considered on the amount of efficiency gains and incentive earned by the Generating Companies, Transmission Licensees and Distribution Licensees.

Provided further that the Generating Company, Transmission Licensee and Distribution Licensee shall bill the Income Tax under a separate head called "Income Tax Reimbursement" in their respective bills.

34.2 Variation between Income Tax actually paid and approved, if any, on the income stream of the regulated business of Generating Companies, Transmission Licensees and Distribution Licensees shall be reimbursed to/recovered from the Generating Companies, Transmission Licensees and Distribution Licensees, based on the documentary evidence submitted at the time of Mid-term Performance Review and MYT Order of third Control Period, subject to prudence check.

34.3 Under-recovery or over-recovery of any amount from the beneficiaries or the consumers on account of such income tax having been passed on to them shall be on the basis of income-tax assessment under the Income-Tax Act, 1961, as certified by the statutory auditors. The Generating Company, or the Transmission Licensee or Distribution Licensee, as the case may be, may include this variation in its Mid-term Performance Review Petition and MYT Petition of third Control Period:

Provided that tax on any income stream from other than the business regulated by the Commission shall not constitute a pass through component in tariff and tax on such other income shall be borne by the Generating Company or Transmission Licensee or the Distribution Licensee, as the case may be.

120. Based on the above, Income tax payable is computed as follows:

Table 2-32: Income Tax – Unit 4 to 7 & Hydro Generating Stations – FY 2015-16

Rs Crores

Sr.No.	Particulars	Basis	Trombay & Hydro Stations
1	Total Revenue	A	2453.59
2	Less: Incentive and efficiency gains	B	73.26
3	Total Expenses	C	1983.97
4	Profit before Tax	D = A - B - C	396.36
5	Depreciation considered in Expenses	E	140.36
6	Other dissallowance while computing Income Tax	F	17.04
7	Total Tax dissallowances	G = E + F	157.40
9	Tax Depreciation	H	204.75
10	Other expenses allowed for computing Income Tax	I	0.90
11	Deduction - U/s 80 IA	J	25.25
12	Total Tax allowances	K = H + I + J	230.89
13	**Total Taxable Income**	**L = D + G - K**	**322.87**
14	Corporate Tax Rate	M	34.61%
15	**Tax Payable at Normal rate**	**N = L*M**	**111.74**
16	**MAT Computation**		
17	**Profit before Tax**	**O**	**396.36**
18	Add: Dissallowances under Income Tax (U/s 14 A, provision for doubtful debt)	P	0.91
19	Less: Deduction under Income Tax (Exempt Income, FBT, Wealth Tax, Withdrawal from Income)	Q	0.00
20	Book Profit	R = O + P - Q	397.28
21	MAT Rate	S	21.3416%
22	**Tax payable under MAT**	**T = R*S**	**84.78**
23	MAT credit available	U	0
24	**Tax applicable**	**V**	**111.74**
25	**Tax applicable after MAT credit**	**W=V-U**	**111.74**

Tata Power-G requests the Hon'ble Commission to approve the Income Tax of Rs. 111.74 Crores in case of Unit 4 to 7 & Hydro Generating Stations for FY 2015-16.

2.1.15 Non-Tariff Income

121. The Non-Tariff Income for FY 2015-16 for Unit 4 to 7 and Hydro Generating Stations stood at **Rs. 16.43 Crores**. The Non-Tariff Income comprises of the following:

- Recurring Items : **Rs. 4.81 Crores**
- Non-Recurring Items: **Rs. 11.63 Crores**

122. The detailed breakup of the actual Non-Tariff Income for FY 2015-16 is presented in the Table below:

Table 2-33: Non-Tariff Income – Unit 4 to 7 and Hydro Generating Stations – FY 2015-16

Rs. Crores

Particulars	Approved by the Hon'ble Commission	FY 2015-16 (Actuals)
Recurring		**4.81**
Rents		4.46
Income from services rendered		0.35
Non-Recurring		**11.63**
Delayed Payment Charges		0.00
Interest on Delayed Payment		5.09
Interest On Loans & Advances - - Staff.		0.19
Sale of Scrap		5.34
Other/Miscellaneous receipts		-1.22
Interest on Other Investments		0.00
VAT Refund		13.46
Profit/Loss on sale /Retirement of Assets		0.00
Liquidated Damages		0.83
Sale of Fly Ash		1.94
Interest on Deferred Taxation Liability Fund Investments		0.00
Interest on ST Deposit with Bank		0.00
Total Non Tariff Income	**16.73**	**16.43**

Tata Power-G requests the Hon'ble Commission to approve the Non-Tariff of Rs. 16.43 Crores in case of Unit 4 to 7 & Hydro Generating Stations for FY 2015-16.

2.1.16 Annual Fixed Charges

123. Based on the various costs outlined above and the adjustment for the fixed cost of Unit 4 and share allocation of Unit 8, the Annual Fixed Charges for FY 2015-16 are as given below:

Table 2-34: Annual Fixed Charges of Unit 4 to 7 & Hydro Generating Stations– FY 2015-16

Rs Crores

Particulars	As per MYT Order	FY 2015-16 (Actuals)	Variation
O&M Charges	503.08	484.90	18.18
Interest on Long Term Loans	79.36	79.18	0.18
Interest on Working Capital	55.29	71.49	-16.20
Interest and Finance Charges	0.00	0.73	-0.73
Depreciation	141.17	140.36	0.81
Income Tax	98.89	111.74	-12.85
Return on Equity	235.21	235.21	0.00
Annual Fixed Charges	**1113.00**	**1123.61**	**-10.61**
Less:			
Non Tariff Income	16.73	16.43	0.30
Unit 4 Fixed Charges	12.75	12.63	0.12
Allocation to Unit 8 towards shared capacity	12.50	12.50	0.00
Net Annual Fixed Charges	**1071.02**	**1082.04**	**-11.02**

124. Regulation 44.1 (a) and 47.1 of the MYT Regulations, 2011 provide the norm for Full recovery of Annual Fixed Cost of Thermal and Hydro Generating Units respectively. As seen from the Table 2.11 presented in the earlier sections, the Thermal as well as Hydro Generating station of Tata Power-G have achieved the normative availability of 85% and 90% respectively. Hence, all generating units of Tata Power-G are entitled for full recovery of the Annual Fixed Cost for FY 2015-16.

2.1.17 Incentive on PLF and Capacity Index

125. As per Regulation 49.8 of MYT Regulations, 2011, Thermal generation in excess of Ex-Bus energy corresponding to Target Plant Load Factor of 85 % is eligible for PLF Incentive at a flat rate of 25 paise / kWh. Further, the 1st Proviso to the same regulation states that the actual generation shall also consider the generation loss on account of any backing down instruction from the Maharashtra State Load Despatch Centre. The

Generation loss details as certified by the Maharashtra State Load Despatch Centre (MSLDC) (refer **Annexure 2-2(a)**) for FY 2015-16 has been factored while computing the Thermal PLF Incentive as per Regulation 49.8 and the same has been presented below:

Table 2-35: PLF Incentive for Thermal Generating Stations – FY 2015-16

Generating Unit	Actual Gross Generation (Mus)	Actual Net Generation with Norm Aux Consumption (MUs)	Ex-Bus MUs Eligible due to Backing Down by MSLDC	Total Net generation including deemed Generation (Mus)	Net Generation at 85% PLF (MUs)	Energy eligible for Incentive (MUs)	Rate of Incentive (Rs/kWh)	Total Incentive (Rs Crores)
A	B	C	D	E = C + D	F	G = F - E	H	I = H*G/10
Unit-5	3503.45	3293.24	555.29	3848.53	3509.21	339.33	0.25	8.48
Unit-6	13.80	13.32	99.30	112.62	3602.54	0.00	0.25	0.00
Unit-7	1179.73	1144.34	197.77	1342.11	1303.63	38.47	0.25	0.96
Total	**4696.98**	**4450.90**	**852.36**	**5303.26**	**8415.38**	**377.80**	**0.75**	**9.44**

As seen from the table above, the Tata Power-G is eligible for total PLF incentive of Rs. 9.44 Crores for Unit 4 to 7 for FY 2015-16.

126. Further, the incentive on Hydro Generation more than design energy and normative availability is computed in line with provisions of Regulation 50.1 of MYT Regulations, 2011 as given below:

Table 2-36: Incentive on PLF & Capacity Index for Hydro Generating Stations – FY 2015-16

Rs. Crores

Particulars		Unit	Bhira	Bhivpuri	Khopoli	Total
Fixed Cost for Hydro	a	Rs Cr	125.86	78.32	111.45	315.63
Normative Availability	b	%	90.00%	90.00%	90.00%	90.00%
Actual Availability	c	%	90.61%	99.30%	99.82%	
Normative Capacity Charge for FY 2015-16	d=0.5*a*c/b	%	63.36	43.20	61.81	168.37
Design Energy	b	MUs	744.12	193.23	174.68	1112.03
Auxiliary Consumption	c	%	2.04%	2.04%	2.04%	
Net Design Energy	d =b*(1-c)	MUs	728.94	189.29	171.12	1089.34
Energy Charge Rate	e = 0.5*a/d	Rs/kWh	0.86	2.07	3.26	
Actual Generation	f	MUs	617.47	224.58	222.67	1064.72
Energy Charge	**g=e* d/10 + 0.8*(f-d)/10**	Rs Cr	54.01	41.98	59.85	155.84
Total Incentive		**Rs Cr**	**0.00**	**6.87**	**10.20**	**17.07**

Tata Power-G requests the Hon'ble Commission to approve the total incentive of Rs. 26.52 Crores in case of Unit 4 to 7 & Hydro Generating Stations for FY 2015-16.

2.1.18 Sharing of Gains & Losses

127. The Hon’ble Commission in its MYT Regulations, 2011 has provided the following methodology for treatment of sharing and gains and sharing of losses:

> *14.1 The approved aggregate gain to the Generating Company or Transmission Licensee or Distribution 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 tariff over such period as may be stipulated in the Order of the Commission under Regulation 11.6;

(b) The balance amount, which will amount to two-third of such gain, may be utilised at the discretion of the Generating Company or Transmission Licensee or Distribution Licensee.

14.2 The approved aggregate loss to the Generating Company or Transmission Licensee or Distribution 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 tariff over such period as may be stipulated in the Order of the Commission under Regulation 11.6; and

(b) The balance amount of loss shall be absorbed by the Generating Company or Transmission Licensee or Distribution Licensee.

14.3 Gains and losses on account of controllable factors during the second Control Period shall be shared with the consumers at the time of Mid-term Performance Review and also at the time of tariff determination process of third Control Period."

128. Tata Power - G has submitted the actual expenditure under various heads and the reasons for the variations of the same. In this section, the various heads of expenditures have been categorised into two viz. (i) controllable and (ii) uncontrollable. After such categorisation, the gains and loss for controllable expenditure has been computed and the sharing between the beneficiaries and Tata Power - G has been presented for the approval of the Hon'ble Commission.

129. The treatment to various heads of Expenditure has been given in the Table below:

Table 2-37: Categorisation of Heads of Expenses – FY 2015-16

Sr. No.	Particulars	Category	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, charges 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 Hon'ble 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 Hon'ble Commission
7	Income Tax	Uncontrollable	
8	Return on Equity	Uncontrollable	Computed based on principles outlined by the Hon'ble Commission in the Tariff regulations
9	Non-tariff income	Uncontrollable	**Controllable** to the extent of the recurring portion of such non-tariff income

- **Gain/Loss on account of Fuel Costs Thermal Generating Station**

130. As explained, the changes in fuel cost due to operational parameters of the generation units would be considered as controllable. Accordingly, Gains/Losses on account of fuel costs are worked out as below:

Table 2-38: Gain / (Loss) due to variation in Heat Rate – FY 2015-16

Particulars		Unit 5	Unit 6	Unit 7	Total Fuel Cost
Fuel Cost (Rs. Crores)	a	921.13	13.95	310.76	1245.84
Actual Heat Rate (kcal/kWh)	b	2520	3054	2136	
Normative Heat Rate (kcal/kWh)	c	2581	2594	2085	
Fuel Cost applying Normative Heat Rate (Rs. Crores)	d = c / b x a	943.60	11.85	303.35	1258.80
Net Gains/ (Loss) (Rs. Crores)	e = d - a	22.47	-2.10	-7.41	12.96
Passed on to Distribution Licensees (Rs Crores)	**f = 1/3 x e**	**7.49**	**-0.70**	**-2.47**	**4.32**

131. It may be observed from the Table above that Unit 5 operated at a cost lower than the fuel cost at normative values of Heat Rate. However, the Heat Rate for Unit 6 is higher owing to the frequent start-up and shut down of the plant and its operation at an abnormally low PLF i.e. mostly at technical minimum. Further, Unit 7 operated at a cost higher than the fuel cost at normative values of Heat Rate on account of open cycle operation experienced due to forced outage as explained in the earlier section. The net gain is **Rs. 12.96 Crores**. Accordingly, an Efficiency Gain of **Rs. 4.32 Crores** on account of variation in the Heat Rates has been considered to be passed on to the Distribution Licensees.

- **Gain / Loss on account of Auxiliary consumption**

132. The efficiency gains/ (loss) on account of variation in the % Auxiliary Consumptions of Generating Units is as given below:

Table 2-39: Gain / (Loss) due to variation in Aux. Consumption – FY 2015-16

(Rs. Crores)

Sr. No.	Particulars	Basis	Units	Unit 5	Unit 6	Unit 7	Hydro	Total
1	Gross Generation	a	MUs	3503.45	13.80	1179.73	1098.67	5795.65
2	Actual Aux. Cons.	b	%	5.87%	6.96%	2.63%	2.87%	
3	Normative Aux. Cons.	c	%	6.00%	3.50%	2.86%	2.04%	
4	Difference in Net Generation	d=a*(c-b)	MUs	4.42	-0.48	2.75	-9.12	-2.43
5	Approved Energy Rate	e=T.O.	Rs/kWh	3.08	5.84	2.62	1.48	
6	**Efficiency Gain / (loss) due to variation in Aux. Con.**	**f=d*e/10**	**Rs Crores**	**1.36**	**-0.28**	**0.72**	**-1.35**	**0.45**
7	**Passed to the Dist Licensee**	**g=1/3*f**	**Rs Crores**					**0.15**

133. As can be seen from the above Table, there is a net gain due to variation in Auxiliary Consumption equal to **Rs. 0.45 Crores.** Accordingly, an Efficiency gain of **Rs. 0.15 Crores** is considered to be passed on to the Distribution Licensees.

- **Gain / (Loss) on account of O&M Expenditure**

134. Tata Power-G, in the previous section has presented the actual O&M expenditure under various heads of expenditure. To arrive at the Gain / (Loss), the O&M expenditure has been categorised into two viz. (i) controllable and (ii) uncontrollable. Accordingly, the uncontrollable expenditure has been presented below:

<u>Uncontrollable O&M Expenditure on account of property tax</u>

135. In this regards, Tata Power-G wishes to submit that the Property Tax which is levied by Municipal Corporation of Greater Mumbai (MCGM) and governed by the 'Mumbai Municipal Corporation Act 1888 (MMC Act) is an uncontrollable expenditure. Vide Mah Act 11 of 2009, the State of Maharashtra amended the MMC Act, 1888 which enabled MCGM to levy Property Tax based on 'capital value' of the properties as against the rateable value of properties as per the earlier provision in the MMC Act, 1888. The extract of the Section 140 A in the MMC Act is as given below:

> *"Property taxes to be levied on capital value and the rate thereof.*
>
> *Notwithstanding anything contained in Section 140 or any other provisions of this Act, the Corporation may pass a resolution to adopt levy of property tax on buildings and lands in Brihan Mumbai on the basis of capital value of the buildings and lands on and from such date and at such rates, as the Corporation may determine in accordance with the provisions of Section 128……"*

136. As per the above-mentioned amendment, the Property Tax paid for FY 2015-16 is highlighted in the Table below along with the amount payable prior to amendment

Table 2-40: Uncontrollable Expenditure in O&M for FY 2015-16

Rs Crores

Expenditure as reflected in accounts		FY 2015-16
Actual Tax paid in the year	a	12.88
Property Tax paid/payable prior to MCGM revision	b	8.96
Uncontrollable to be claimed in truing up	**c=a-b**	**3.92**

137. The difference between Property Tax payment before and after amendment has been considered as uncontrollable expenditure for truing up.

138. The uncontrollable expenditure has been defined as follows in the MYT Regulations, 2011:

> *The "uncontrollable factors" shall comprise of the following factors which were beyond the control of, and could not be mitigated by the applicant, as determined by the Commission. List of uncontrollable factors is as follows:*
>
> *(a) Force Majeure events, such as acts of war, fire, natural calamities, etc.;*
> *(b) Change in law;*
> *(c) Variation in fuel cost on account of variation in coal, oil and all primary-secondary fuel prices;*
> *(d) Taxes and Duties;*
> *(e) Variation in the cost of power generation and/or power purchase due to the circumstances specified in Regulation 26; and*
> *(f) Variation in freight rates;*

139. Accordingly, the additional Property Tax payment of **Rs. 3.92 Crores** needs to be considered as an uncontrollable factor while computing efficiency Gain / (Loss) on account of variation in O&M expenses. This is further supported by an ATE judgment in Appeal No. 173 of 2009 in favor of Tata Power with respect to the treatment of

uncontrollable nature of Statutory expenses while computation of Gain / (Loss) on account of variation in O&M expenses of the Appellant. The same was then allowed by the Commission in its Tariff Order dated 15th February, 2012 in Case No. 105 of 2011. The relevant extract of the said tariff order is reproduced below for reference:

"…

the Commission had issued its Tariff Order on TPC-G's ARR Petition for FY 2009-10 on May 28, 2009 in Case No. 111 of 2008. In the said Order, the Commission had carried out the final Truing up of the expenditure and revenue for FY 2007-08, provisional Truing up for FY 2008-09 and approved the tariff for FY 2009-10. TPC-G filed an Appeal (Appeal No. 173 of 2009) before the Hon'ble ATE against the said order.

"…..

3.1.4 Reduction in gains due to inclusion of FBT in Employee Expenditure TPC-G submitted that in its Appeal No. 173 of 2009 before Hon'ble ATE, it had contended that the Commission has failed to consider that fringe benefit tax (FBT) is a statutory expense and is uncontrollable in nature and therefore, the same should be allowed as pass through. The Hon'ble ATE's decision on this issue is as follows:

28. It cannot be disputed that it is a statutory expense and hence it has to be construed as uncontrollable. The State Commission in its MYT order had approved the O&M expenses which did not envisage the FBT. As FBT was levied subsequently, it will not be proper to compare the approved O&M expenses with the actual O&M expenses. The correct approach would be to compare the actual O&M expenses without FBT with the approved expenditure, compute the gains and loss and then add the FBT paid by the Appellant to allow for the pass through for uncontrollable factors.

29. The State Commission's Tariff Regulations provide that any increase in O&M expenses on account of uncontrollable expenses are entitled to be treated as pass through in the computation of the efficiency gains.

*30. In view of the above, **the State Commission is directed to consider FBT as a pass through being an element of tax or in the alternative to allow as pass through as uncontrollable factor in O&M expenses and thereafter compare actual O&M expenses excluding FBT with approved O&M expenses for computation of sharing of gains and loss for controllable factors.** Accordingly ordered"*

140. However, in spite of the above ruling, the Hon'ble Commission in their Order in Case No. 32 of 2016 had not considered this uncontrollable expenditure for FY 2014-15 stating the following:

> *4.3.22.8 The normative O&M expenses are derived through the methodology specified in the MYT Regulations. Therefore, the normative O&M expenses are being approved on a composite basis, without segregation of costs into employee, A&G and R&M expenses, in line with the earlier Orders. An average escalation of 5.72% is being allowed on different components of O&M expenses. These components may have different escalation rates, and are not individually considered for Truing-up. Increase in any type of taxation is also subsumed as part of the composite escalation rate. …*

141. Tata Power-G has challenged this Order with the Hon'ble ATE in Appeal No. 244 of 2015. However, the plea was rejected by the Hon'ble ATE and subsequently in the review as well. Tata Power-G has subsequently approached the Hon'ble Supreme Court regarding this matter in Appeal Nos. 1356 to 1358 of 2017.

142. Considering the above, without prejudice to our appeal with the Hon'ble Supreme Court, Tata Power-G has not considered the uncontrollable expenditure while arriving at the Gain / (Loss). Tata Power-G will approach the Hon'ble Commission for consideration of the uncontrollable expenditure depending on the judgment of the Hon'ble Supreme Court.

143. The Gain / (Loss) for the O&M expenditure have been computed and the sharing between the Distribution Licensees and Tata Power-G has been presented in the Table below for the consideration of the Hon'ble Commission.

Table 2-41: Gain / (Loss) due to variation in O&M Expenditure – FY 2015-16

Rs Crores

Sr. No.	Particulars		Units	Unit 4 to 7 and Hydro Stations
1	Approved Cost of O & M	a	Rs Crores	503.08
2	Actual O&M *(Less Colony Consumption)*	b	Rs Crores	446.38
3	**O&M Gain / (Loss)**	**c=a-b**	**Rs Crores**	56.70
4	**Passed to Distribution Licensees**	**d=1/3*c**	**Rs Crores**	**18.90**

- **Energy Charge Shortfall for Bhira Hydro Generating Station**

144. Lower rainfall in the Bhira catchment area has resulted in the total generation from Bhira Hydro Generating Station being lower than the Design Energy, consequently resulting in an Energy Charge shortfall of **Rs. 9.69 Crores** for Tata Power-G during FY 2015-16 as explained in the Table below:

Table 2-42: Energy Charge Shortfall for Bhira Hydro Generating Station for FY 2015-16

Parameter			For Bhira Generating Station for FY 2015-16
Approved Energy Charge	a=50%*AFC	Rs. Crores	62.425
Annual Design Energy	b	MUs	744.12
Approved Aux Consumption	c	%	1.96%
Net Annual Design Energy	d=b*(1-c)	MUs	729.54
Monthly Actual Net Generation	e	MUs	617.47
Energy Charge Rate	f	Rs/kWh	0.854
Energy Charge	**g**	**Rs Crores**	52.73
Energy Charge Shortfall	**h=a-g**	**Rs Crores**	**9.69**

145. As a part of its MYT Order for Tata Power-G in Case No. 32 of 2016, the Hon'ble Commission has approved the low rainfall during FY 2015-16 as an uncontrollable factor for Tata Power-G and has ruled as under:

> *"5.3.5.6 The Commission recognizes that rainfall during FY 2015-16 was unusually low in the catchment areas of the Hydro Generating Stations, because of which their generation has been lower than the Design Energy. The release of 30 MCM water from Mulshi dam to provide relief in the drought-affected areas was also beyond the control of TPC-G. Accordingly, the Commission has considered the impact on the gross generation of the Hydro Generating Stations as submitted by TPC-G.*
>
> *5.3.5.8 In accordance with the Regulations, the Commission will consider the impact of lower generation than the Design Energy for computing the future Energy Charge at the time of final True-up of the respective years of the 3rd Control Period."*

Accordingly, Tata Power-G requests the Hon'ble Commission to approve the Energy Charge shortfall at Rs. 9.69 crores for FY 2015-16 for Bhira Generating Station and consider the recovery of the same during FY 2017-18 as per the Regulation 50.5 and 50.6 of MERC (MYT) Regulations, 2011 along with the associated cost as applicable.

2.1.19 Revenue from Power Supply

146. Tata Power-G has earned a total Revenue of Rs. 2351.62 Crores from the Distribution Licensees, Tata Power-D and BEST for FY 2015-16. The breakup of the total Revenue earned for the year FY 2015-16 is given as below:

Table 2-43: Revenue from Generation Business – FY 2015-16

Rs. Crores

Particulars	BEST	Tata Power-D	Total
Energy	2812.97	2684.76	5497.73
Fixed Charges	485.70	463.47	949.17
Incentive	0.00	0.00	0.00
Energy Charges	717.63	684.82	1402.45
Revenue from FBSM final settlement	-0.20	-0.09	-0.29
Considered for ARR Value	**1203.13**	**1148.20**	**2351.33**

2.1.20 Net Entitlement and Resultant Gap/ (Surplus) U 4 to 7 and Hydro Stations

147. The net entitlement and the gap for the FY 2015-16 on the basis of the discussions above is shown in the Table below:

Table 2-44: Aggregate Revenue Requirement -U4 to 7 & Hydro Generating Stations– FY 2015-16

Rs. Crores

Sr. No.	Particulars	Approved in the MYT	Entitlement as per the Regulations	Efficiency Gains / (Loss) from Controllable factors shared with Consumers	Net Entitlement after Impact of Gains / (Loss) from Controllable factors
A	**Revenue**	**2368.70**	**2367.77**		**2367.77**
	- Power Supply	2351.97	2351.33	0.00	2351.33
	- Non-Tariff Income	16.73	16.43	0.00	16.43
B	**Expenditure**				
1	*Fuel Related Expenses*	1242.97	1258.80	4.32	1254.48
2	*Aux. Consumption Benefit*		0.45	0.15	0.30
3	*Operation & Maintenance*	503.08	503.08	18.90	484.18
4	*Depreciation*	141.17	140.36		140.36
5	*Interest on Long-term Loan*	79.36	79.18		79.18
6	*Other Charges*		0.73		0.73
7	*Interest on Working Capital*	55.29	71.49		71.49
8	*Add Colony Consumption of*		0.72		0.72
9	*Income tax*	98.89	111.74		111.74
10	*Return on Equity*	235.21	235.21		235.21
11	**Total Expenditure**	**2355.97**	**2401.75**	**23.37**	**2378.38**
12	Incentive (PLF, Hydro		26.52		26.52
C	**Total Expenditure Including Incentive**	**2355.97**	**2428.27**	**23.37**	**2404.90**
13	**Less:**				
14	*Fixed cost portion of Unit 4*	12.75	12.63		12.63
15	*Allocation for U 8 for Shared Capacity*	12.50	12.50	0.00	12.50
D	**Total ARR for FY 2015-16**	**2330.72**	**2403.14**	**23.37**	**2379.77**
E	**Net Gap/(Surplus)**	**-37.98**			**12.00**

Based on the Table above, Tata Power-G request the Hon'ble Commission to approve a Gap of Rs. 12.00 Crores for Unit 4 to 7 and Hydro Generating Stations for FY 2015-16.

2.1.21 Gap/ (Surplus) for Unit 6 Operation under MSLDC directives

148. As has been explained in the earlier section, Unit 6 had operated under MSLDC directions. The Hon’ble Commission had approved the fuel cost for this generation at actual operating parameters on a provisional basis and the same has been recovered

from the Distribution Licensees. However, in view of an inadvertent error in considering the correct ratio for Billing in case of BEST and Tata Power-D, a minor surplus is appearing for FY 2015-16 which has been considered while computing sharing of Gap / (Surplus) as shown in the Table below:

Table 2-45: Revenue Recovery for Unit 6 Operation under MSLDC direction – FY 2015-16

(Rs. Crores)

	Basis	BEST	Tata Power-D	Rinfra-D	Total
Actual Fuel Cost	**a**	6.56	7.92	9.65	24.13
Revenue recovered	b	6.58	8.62	9.65	24.85
Gap / (Surplus)	(c = a-b)	-0.02	-0.70	0.00	-0.72

2.1.22 Sharing of Gap/ (Surplus)

149. Considering all the above, the Net Gap / (Surplus) for Tata Power-G for Unit 4 to 7 and Hydro Generating Stations for FY 2015-16 and the sharing amongst the Distribution Licensees is as shown in the Table below:

Table 2-46: Net Gap / (Surplus) – Unit 4 to 7 & Hydro Stations – FY 2015-16

(Rs. Crores)

Particulars	BEST	Tata Power-D	RInfra-D	Total
Gap / (Surplus) of Trombay Station & Hydro for FY 2015-16	6.14	5.86	0.00	12.00
Recovery of Entry Tax for FY 2007-08 (Paid in FY 2015-16)	22.79	26.48	12.53	61.79
Recovery of Entry Tax for FY 2011-12 (Paid in FY 2015-16)	18.07	17.49		35.56
Gap / (Surplus) of Unit 6 Operation as per MSLDC for FY 2015-16	-0.02	-0.70	0.00	-0.72
Final Total Gap/(Surplus) for FY 2015-16 w/o carrying cost	**46.97**	**49.13**	**12.53**	**108.63**

150. As can be seen from the above Table, there is a net gap for Tata Power-D, BEST and RInfra-D which needs to be recovered. The net amount recoverable along with interest has been worked out separately in subsequent chapters.

2.2 Performance of Unit 8

151. Tata Power-G has a coal fired Unit No. 8 at Trombay with installed generation capacity of 250 MW and the Unit was commissioned on 29th March 2009. The entire generation capacity of this Unit is tied up with two Mumbai Distribution Companies i.e. Tata Power-D and BEST at a ratio of 60 % and 40 % i.e. 150 MW and 100 MW respectively.

152. The actual performance has been compared with the values of approved parameters by the Hon'ble Commission in its MYT Order dated 8th August, 2016 in Case No. 32 of 2016. The Operational and Financial Performance of the Unit for the Financial Year 2015-16 has been explained in the sections below.

Operational Performance – FY 2015-16

2.2.1 Generation

153. The various parameters pertaining to the actual operational performance of the Unit 8 for FY 2015-16 are as given in the Table below:

Table 2-47: Operational Performance of Unit 8 - FY 2015-16

Particulars	UoM	As per MYT	FY 2015-16	Difference
Gross Generation	MUs	1883.34	1883.34	0.00
Auxiliary Consumption	%	8.50%	6.20%	-2.30%
Net Generation	MUs	1723.26	1766.63	43.37
Station Heat Rate	kcal/kWh	2450	2300	-150
Availability	%	95%	94.72%	0%
PLF	%	85.76%	85.76%	0%

154. As can be seen from the above Table, Gross Generation from Unit 8 is recorded at **1883.34 MUs** during FY 2015-16 and is the same as approved in the MYT Order in Case No. 32 of 2016. The Net generation from the Unit stood at **1766.63 MUs**. Tata Power-G

requests the Hon'ble Commission to approve the actual Gross Generation of **1883.34 MUs** for FY 2015-16.

2.2.2 Heat Rate

155. Unit 8 has demonstrated a good operational performance during FY 2015-16 and has achieved an actual Heat Rate of **2300 kcal / kwh** which lower by 150 kcal / kwh than the approved normative heat rate of 2450 kcal / kwh.

2.2.3 Availability

156. As mentioned in the Table 2.43 above, the actual Availability of Unit 8 for FY 2015-16 is **94.72%** which is significantly higher than the requirement of normative Availability of 85%. As per Regulation 44.1 (a) of MERC (MYT) Regulations, 2011, the Unit 8 is entitled for Recovery of full Annual Fixed Cost for FY 2015-16. The availability certificate issued by MSLDC for FY 2015-16 is attached as **Annexure 2-1(a)** to this Petition.

2.2.4 Auxiliary Consumption

157. Unit 8 has achieved an actual Auxiliary Consumption of **6.20%**, significantly lower than the approved normative Auxiliary Consumption of 8.5%.

Financial Performance

158. The performance of Unit 8 for FY 2015-16 under various heads is stated in the sections below.

2.2.5 Fuel Cost

159. The details of the various fuel related parameters for Unit 8 are provided in the Table below:

Table 2-48: Fuel Cost for Unit 8 - FY 2015-16

Particulars	MYT Order	FY 2015-16 (Actual)
Fuel Consumption (MT)		
Coal		895358
Oil		374
GCV (kcal / kg)		
Coal	4828	4832
Oil	10462	10459
Fuel Price (Rs/MT)		
Coal	4978	4982
Oil	50651	51513
Actual Fuel Cost (Cr.)	**448.38**	**448.76**

160. As the various fuel parameters of Unit 8 for FY 2015-16 were provisionally trued up during the MYT Order, there is no major variation in the approved parameters in the MYT Order vis-à-vis the actuals for FY 2015-16.

161. Accordingly, Tata Power-G requests the Hon'ble Commission to approve the Normative Fuel Cost of Rs. 482.65 crores for FY 2015-16 and consider the Actual Fuel Cost of **Rs. 448.76 Crores** for computation of sharing of gains as per the MYT Regulations, 2011.

2.2.6 O&M Expenditure

162. The actual O&M expenditure for FY 2015-16 was **Rs. 64.04 Crores**. The breakup of O&M expenditure is given in the Table below:

Table 2-49: Actual O&M Expenditure of Unit 8 – FY 2015-16

Rs. Crores

Particulars	As per MTR Order	FY 2015-16 (Actuals)
Employee Expenses		21.78
Administration & General Expenses (Inclusive of Brand equity)		11.13
Repair and Maintenance		31.12
Total	**46.25**	**64.04**

163. As can be seen from the above Table, the actual O&M expenditure for FY 2015-16 is higher than the approved O&M expenditure of Rs. 46.25 Crores for FY 2015-16 in the MYT Order.

Further, the A&G Expenses for FY 2015-16 are higher than that of FY 2014-15 mainly on account of increase in Insurance expenditure by 4.54 crores due to inclusion of Loss of profit clause in the insurance policy

The detailed breakup of O&M expenses has been provided in specified Petition formats (viz., F3 and F3.1 to F3.3) as prescribed by the Hon'ble Commission.

- **Overall O&M expenditure of Unit 8 for FY 2015-16**

164. As described in the sections above, the total O&M expenditure of Unit 8 for FY 2015-16 is **Rs. 64.04 Crores**. However, based on the Truing up Orders of previous Financial Years and the methodology adopted by the Hon'ble Commission therein, the total O&M expenditure of Unit 8 for FY 2015-16 is adjusted for the following:

a) Brand Equity:

165. The Hon'ble Commission had directed to compute the Brand Equity based on the revenue earned in the previous financial year i.e. based on revenue of FY 2014-15 for FY 2015-16 truing up. In view of this, there is a small difference between the actual Brand Equity and the amount arrived at on the methodology as directed by the Hon'ble

Commission. The actual overall O&M expenditure of Unit 8 has been adjusted to this extent of differential amount.

166. The Brand Equity computation based on the revenue of FY 2014-15 is as shown in the Table below:

Table 2-50: Computation of Brand Equity -Unit 8 – FY 2015-16

(Rs. Crores)

Particulars	Basis	Unit 8 Petition (FY 2015-16)
Revenue from Mumbai Licence Business based on allocation statement for FY 2014-15	a	287.55
Add: Cash discount	b	0.00
Add: Income in respect of services rendered	c	0.26
Add: Delayed Payment charges	d	0.04
Total revenue to be considered	e=a+b+c+d	287.85
Contribution to Tata Brand Equity	f=0.25%*e	0.72
Service tax @18 %	g=service tax*f	0.13
Total Contribution to Brand Equity including Service Tax	h=f+g	**0.85**

b) Expenditure related to Corporate Social Responsibility (CSR)

167. The Hon'ble Commission, in their previous Tariff Orders on Generation had disallowed the expenditure towards CSR. On account of the same, the CSR expenditure has been removed from the overall O&M expenditure and is not a part of the O&M expenditure reported above. Hence, no separate deduction towards CSR is required for truing up of O&M expenses of FY 2015-16.

168. By considering all the above adjustments, the O&M expenditure for the year FY 2015-16 works out as given below:

Table 2-51: O&M expenditure of Unit 8 after adjustment for FY 2015-16

Rs. Crores

Particulars		Normative	FY 2015-16 (Actuals)
Employee Expenses	a		21.78
Administration & General Expenses (Inclusive of Tata brand Equity)	b		11.13
Repair and Maintenance	c		31.12
Total	**d=a+b+c**		**64.04**
Less			
Brand equity Considered in Audited Accounts	e		2.13
Add:			
Allocation of Brand Equity Expenses to Tata Power-G as per MERC methodology	f		0.85
Total	**j=d-e+f**	**46.25**	**62.76**

169. As seen from the table above, the total O&M expenditure for Unit 8 for FY 2015-16 is higher than the Normative O&M expenses of Rs. 46.25 Crores as specified in the Regulation 46 of the MYT Regulations, 2011.

Accordingly, Tata Power-G request the Hon'ble Commission to approve the actual O&M expenditure of Rs. 62.76 Crores in case of Unit 8 for FY 2015-16.

2.2.7 Capital Expenditure and Capitalisation

170. The total capitalisation for Unit 8 for FY 2015-16 including HOSS capitalisation is **Rs. 27.51 Crores** in comparison with the approved capitalisation of **Rs. 18.06 Crores** in the MYT Order issued by the Hon'ble Commission.

Table 2-52: Capitalisation - FY 2015-16

Rs. Crores

	FY 2015-16 Actual
DPR Capitalisation	24.48
Non-DPR Capitalisation	3.06
Total Capitalisation	27.51
Ratio of Non-DPR to DPR Capitalistion	**12.50%**

171. It is submitted that out of the total capitalisation of **Rs. 27.51 Crores**, the capitalisation on account of DPR schemes (including merged DPRs) is to the extent of **Rs. 24.48 Crores** and the balance of **Rs. 3.06 Crores** is on account of Non-DPR Schemes which forms about **12.50%** of the total DPR schemes. The same is within the limit of 20% as set by the Hon'ble Commission in its MYT order.

Tata Power-G request the Hon'ble Commission to approve the actual capitalisation of Rs. 27.51 Crores in case of Unit 8 for FY 2015-16.

2.2.8 Depreciation

172. Tata Power - G has computed the Depreciation by applying the rates as specified in the Deprecation schedule in the Regulation 31.2 (b) of the MYT Regulations, 2011. Based on the same, the Depreciation for the FY 2015-16 is **Rs. 60.93 Crores**. On this basis, the rate of depreciation as a percentage of the Average GFA works out as follows:

Table 2-53: Depreciation - Unit 8 – FY 2015-16

Rs. Crores

Particulars	FY 2015-16 (Actuals)
Opening GFA	1167.53
Depreciation	60.93
Closing GFA	1194.47
% Depreciation (on average GFA)	**5.16%**

Tata Power-G requests the Hon'ble Commission to approve the Depreciation of Rs. 60.93 Crores in case of Unit 8 for FY 2015-16.

2.2.9 Interest and Finance Charges

The Interest costs have been categorised under the following three heads:

- Interest on Loan Capital
- Other Finance Charges
- Interest on Working Capital

2.2.9.1 Interest on Loan Capital

173. Tata Power, in the past has taken various long term loans to finance the capital expenditure nature projects in line with the Debt : Equity structure of 70% : 30%. Accordingly, Tata Power has availed fresh loan from IDFC Bank (Sanctioned amount: Rs. 250 Crores, Amount drawn: Rs. 70 Crores) and HDFC Bank (Sanctioned amount: Rs. 250 Crores, Amount drawn: Rs. 70 Crores) and also drawn balance amount from Kotak Mahindra Bank (Sanctioned amount – Rs. 250 Crores, Amount drawn – Rs. 221.24 Crores).

174. Loans from various banks have been allocated to different Business Areas (Generation, Transmission and Distribution) based on the ratio of capitalisation of the respective Business Areas in FY 2015-16. The balance loan is assumed to be financed through normative loan. Based on the allocation of loan for Unit as provided in the interest on loan capital section earlier, the computation of the Interest Rate has been presented in the Table below:

Table 2-54: Applicable Interest Rate - FY 2015-16

Perticulars		**Rs. Crores**
Opening Balance of loan	a	599.32
Drawal During the year	b	13.25
Repayment of loan	c	43.08
Closing Balance of Loan	d=1+b-c	569.50
Interest Expense (Rs Crs)	e	66.25
Applicable Interest Rate	**f=e/a**	**11.05%**

175. Considering the above actual loan drawls and interest rates, the weighted average interest rate for FY 2015-16 works out to **11.05%.** The detailed computation of weighted average Interest Rate is enclosed in the Form F6 of the Petition formats attached with this Petition.

176. The interest charges for FY 2015-16 work out to **Rs. 58.86 Crores** as shown in the Table below:

Table 2-55: Interest on Loan Capital for FY 2015-16

Particulars		**Rs Crores**
Opening Balance	a	553.25
Additions	b	19.26
Repayments	c	60.93
Closing Balance	**d=a+b-c**	**511.58**
Effective Interest Rate	e	11.05%
Total Interest Expense	**f=(a+d)/2*e**	**58.86**

Tata Power-G requests the Hon'ble Commission to approve the Interest on Loan Capital of Rs. 58.86 Crores in case of Unit 8 for FY 2015-16.

2.2.9.2 Other Finance Charges

177. The finance charges incurred by Tata Power – G attributable to Unit 8 is **Rs. 0.72 Crores.**

2.2.10 Interest on Working Capital

178. The Interest on working capital has been computed based on the elements as specified in the Regulation 35.1 (a) of MYT Regulations, 2011. For the purpose of computing the interest on working capital for FY 2015-16, an interest rate of **14.75** % has been considered in line with Regulation 35.1 (e) of MYT Regulations, 2011 and is equal to the Rate of Interest as approved by the Hon'ble Commission in MTR Order dated 26th June, 2015 in Case No. 06 of 2015 i.e. during tariff determination of FY 2015-16.

179. The Interest on Working Capital on Unit 8 for FY 2015-16 works out to be **Rs. 15.62 Crores**. The computation is as given below and the detailed working has been provided in the form F 2.4 U8 (IoWC) annexed to this Petition.

Table 2-56: Interest on Working Capital – Unit 8 – FY 2015-16

Particulars	MYT Order	FY 2015-16 (Actuals)
Fuel Cost	85.33	79.66
O & M expenses	3.65	4.31
Maintenance Spares	10.97	11.68
Receivables	52.35	50.09
less: Payables	42.67	39.83
Total Working Capital requirement	**109.64**	**105.91**
Interest Rate (%)	14.75%	14.75%
Working Capital Interest	**16.17**	**15.62**

Tata Power-G requests the Hon'ble Commission to approve the Interest on Working Capital of Rs. 15.62 Crores in case of Unit 8 for FY 2015-16.

2.2.11 Return on Equity

180. Considering the capitalised expenditure and normative Debt : Equity ratio of 70:30, the Return on Equity (RoE) allowed as per Regulation 32.2.1 of the MYT Regulations, 2011 is 15.5% of equity. Accordingly, the RoE for FY 2015-16 has been worked out as shown in the Table below:

Table 2-57: Return on Regulatory Equity - Unit 8 – FY 2015-16

Rs. Crores

Particulars	FY 2015-16
Regulatory Equity at the beginning of the year	350.25
Less: Equity Portion of Assets De-Capitalised During the Year	*-0.17*
Capital Expenditure Capitalised during the Year	27.51
Equity portion of capital expenditure Capitalised during the year	*8.25*
Regulatory Equity at the end of the year	358.34
Return on Regulatory Equity at the beginning of the year @ 15.5 %	**54.29**

Tata Power-G request the Hon'ble Commission to approve the Return on Equity of Rs. 54.29 Crores in case of Unit 8 for FY 2015-16.

2.2.12 Income Tax

181. Income Tax of Unit 8 for FY 2015-16 in line with the requirement of MYT Regulations, 2011 works out as follows:

Table 2-58: Income Tax for Unit 8– FY 2015-16

Rs Crores

Sr.No.	Particulars		Unit 8
1	Total Revenue	A	767.30
2	Less: Incentive and efficiency gains	B	34.39
3	Total Expenses	C	646.92
4	Profit before Tax	D = A - B - C	85.98
5	Tax adjustment		
6	**Add**		
7	Depreciation considered in Expenses	E	60.93
8	Other dissallowance while computing Income Tax	F	3.13
9	Total Tax dissallowances	G = E + F	64.06
10	**Less**		
11	Tax Depreciation	H	69.22
12	Other expenses allowed for computing Income Tax	I	0.00
13	Deduction - U/s 80 IA	J	31.45
14	Total Tax allowances	K = H + I + J	100.67
15	**Total Taxable Income**	**L = D + G - K**	**49.37**
16	Corporate Tax Rate	M	34.61%
17	**Tax Payable at Normal rate**	**N = L*M**	**17.09**
18	**MAT Computation**		
19	**Profit before Tax**	**O**	**85.98**
20	Add: Dissallowances under Income Tax (U/s 14 A, provision for doubtful debt)	P	-0.23
21	Less: Deduction under Income Tax (Exempt Income, FBT, Wealth Tax, Withdrawal from Income)	Q	0.00
22	Book Profit	R = O + P - Q	85.75
23	MAT Rate	S	21.3416%
24	**Tax payable under MAT**	**T = R*S**	**18.30**
25	**Tax applicable**	**U = max(N,T)**	**18.30**

Tata Power-G requests the Hon'ble Commission to approve the Income Tax of Rs. 18.30 Crores in case of Unit 8 for FY 2015-16.

2.2.13 Non-Tariff Income for Unit 8

182. The Non-Tariff Income for FY 2015-16 is **Rs. 2.90 Crores** and comprises of the following:

- Recurring Items : **Rs. 0.25 Crores**
- Non-Recurring Items : **Rs. 2.65 Crores**

Table 2-59: Non-Tariff Income for Unit 8 – FY 2015-16

Rs Crores

Particulars	FY 2015-16 (Actuals)
Recurring	**0.25**
Rents	*0.25*
Income from services rendered	*0.00*
Non-Recurring	**2.65**
Delayed Payment Charges	*0.00*
Interest on Delayed Payment	*1.77*
Interest On Loans & Advances - - Staff.	*0.01*
Sale of Scrap	*0.54*
Other/Miscellaneous receipts	*0.33*
VAT Refund	*0.00*
Liquidated Damages	*0.00*
Sale of Fly Ash	*0.00*
Misc Revenue	*0.00*
Total Non Tariff Income	**2.90**

Tata Power-G requests the Hon'ble Commission to approve the Non-Tariff income of Rs. 2.90 Crores in case of Unit 8 for FY 2015-16.

2.2.14 PLF Incentive

183. As per the Regulation 49.8 of MYT Regulations, 2011, thermal generation in excess of Ex-Bus energy corresponding to Target Plant Load Factor of 85% is eligible for PLF Incentive at a flat rate of 25 paise/kWh. Further, the 1st Proviso to the same regulation

states that the actual generation shall also consider the generation loss on account of any backing down instruction from the MSLDC. The Generation loss details as certified by MSLDC (refer **Annexure 2-7**) for Unit 8 for FY 2015-16 has been factored in while computing the thermal PLF Incentive and the same has been presented below:

Table 2-60: PLF Incentive for Unit 8 – FY 2015-16

Generating Unit	Actual Gross Generation (Mus)	Actual Net Generation with Norm Aux Consumption (MUs)	Ex-Bus MUs Eligible due to Backing Down by MSLDC	Total Net generation including deemed Generation (Mus)	Net Generation at 85% PLF (MUs)	Energy eligible for Incentive (MUs)	Rate of Incentive (Rs/kWh)	Total Incentive (Rs Crores)
a	b	c	d	e=c+d	f	g=f-e	h	i=h*g/10
Unit-8	1883.34	1723.25	119.19	1842.44	1707.94	134.50	0.25	3.36

Tata Power-G request the Hon'ble Commission to approve the PLF Incentive of Rs. 3.36 Crores in case of Unit 8 for FY 2015-16.

2.2.15 Sharing of Gains & Losses

184. The Hon'ble Commission in its MYT Regulations, 2011 had approved the methodology for treatment of sharing and gains and sharing of losses. Tata Power - G in the sections above has presented the actual expenditure under various heads and the reasons for the variations of the same. The various heads of expenditures have been categorised into two viz. (i) controllable and (ii) uncontrollable as explained in the earlier section. After such categorisation, the gains and loss for controllable expenditure has been computed and the sharing between the Distribution Licensees and Tata Power - G has been presented for the consideration of the Hon'ble Commission.

2.2.16 Gains / (Losses) on account of Heat Rate

185. As explained, the changes in fuel cost due to operational parameters of the generation unit would be considered as controllable. In Order to compute the Gain/Losses of Unit 8 we have considered normative Heat Rate, normative secondary fuel oil consumption,

fuel prices and fuel calorific value. Various fuel parameters considered at Trombay Station level for computation of the total fuel costs for FY 2015-16. Accordingly, the total gain / loss attributable to Heat Rate is provided in the following table:

Table 2-61: Gains and Loss due to Variation in Heat Rate – FY 2015-16

Rs Crores

Particulars	Basis		FY 2015-16
Fuel Cost	**a**	**Rs Cr**	**448.76**
Cost of Generation	b	Rs/Kwh	2.56
Gross Generation	c	Mus	1883.34
Fuel Cost applying Normative Heat Rate	**d= bxc/10**	**Rs Cr**	**482.25**
Net Gains/ (Loss)	e = d - a	Rs Cr	33.49
Passed on to the Distribution Licensees	**f = 1/3 x e**	**Rs Cr**	**11.16**

186. Accordingly, an Efficiency gain of **Rs. 11.16 Crores** for FY 2015-16 on account of improvement in Station Heat Rate may be passed on to the Distribution Licensees.

2.2.17 Gain / (Loss) on account of Auxiliary consumption

187. In addition to the variation in Heat Rate, there is variation in the actual Auxiliary Consumption of the Unit as compared to the normative Auxiliary Consumption. The Gain / (Loss) on account of this is as follows:

Table 2-62: Gains and Loss due to variation in Aux. Consumption – FY 2015-16

Rs Crores

Particulars	Basis		FY 2015-16
Gross Generation	a	MUs	1883.34
% normative Auxiliary	b	%	8.50%
% Actual Auxiliary	c	%	6.20%
Additional Generation	d =a*(b-c)	MUs	43.37
Approved Energy Charges	e	Rs/kWh	3.01
Net Gains/ (Loss)	f=d*e/10	Rs Cr	13.06
Passed on to the Dist. Licensees	**g=f/3**	**Rs Cr**	**4.35**

188. As can be seen from the table above, Gain of **Rs. 4.35 Crores** has been considered to be passed on to the Distribution Licensees.

2.2.18 Gain / (Loss) on account of O&M Expenditure

189. The Gain / (Loss) for FY 2015-16 on account of O&M Expenditure is computed as below:

Table 2-63: Gain / (Loss) due to variation in O&M costs - Unit 8 – FY 2015-16

Rs Crores

Sr. No.	Particulars		Unit 8
1	Approved O&M expenditure	a	46.25
2	Actual O&M expenditure	b	62.76
3	**O&M Gain / (Loss)**	**e=a-b**	**(16.51)**
4	**Passed to the Distribution Licensees**	**f=e*1/3**	**(5.50)**

190. As can be seen from the Table above, the actual O&M expenditure being higher than the normative, a Loss of **Rs. 5.50 Crores** is required to be passed on to the Distribution Licensees.

2.2.19 Revenue from Power Supply

191. Tata Power-G has earned a total Revenue of **Rs. 760.14 Crores** from the Distribution Licensees: Tata Power-D and BEST for FY 2015-16 for Unit 8. The breakup of total revenue earned for the year FY 2015-16 is given as below:

Table 2-64: Revenue from Unit 8 Generation – FY 2015-16

Rs. Crores

Particulars	BEST	Tata Power-D	Total
Energy (Mus)	706.65	1059.98	1766.63
Fixed Charges	105.54	158.31	263.85
Incentive	0.15	0.23	0.38
Energy Charges	198.36	297.54	495.90
Revenue from FBSM final settlement	0.00	0.00	0.00
Considered for ARR Value	**304.05**	**456.08**	**760.14**

2.2.20 Net Entitlement and Resultant Gap/ (Surplus)

192. The net entitlement and the Gap / (Surplus) for FY 2015-16 on the basis of the discussions above is shown in the Table below:

Table 2-65: Aggregate Revenue Requirement - Unit 8 – FY 2015-16

Rs. Crores

Sr. No.	Particulars	Approved in the MYT Order	Entitlement as per the Regulations	Efficiency Gains / (Loss) from Controllable factors shared with Consumers	Net Entitlement after Impact of Gains / (Loss) from Controllable factors
I	**Revenue**	**762.56**	**763.04**		**763.04**
	- Power Supply	760.30	760.14		760.14
	- Non-Tariff Income	2.26	2.90		2.90
II	**Expenditure**				
1	Fuel Related Expenses	448.38	482.25	11.16	471.08
2	Auxiliary Consumption Benefit	0.00	13.06	4.35	8.70
3	Operation & Maintenance Expenses	46.25	46.25	-5.50	51.75
4	Depreciation	64.46	60.93		60.93
5	Interest on Long-term Loan Capital	56.61	58.86		58.86
6	Interest on Working Capital	15.34	15.62		15.62
7	Other Finance Charges	0.00	0.72		0.72
8	Income tax	24.49	18.30		18.30
9	Return on Equity	53.19	54.29		54.29
10	**Total Expenditure**	**708.73**	**750.27**	**10.01**	**740.26**
11	PLF Incentive	0.00	3.36		3.36
12	**Total Including Incentive**	**708.73**	**753.63**	**10.01**	**743.62**
III	**Gap / (Surplus)**				
	Add:				
IV	**Expenditure towards shared capacity of Unit 4 to 7**	**12.50**	**12.50**		**12.50**
V	**Net Gap/(Surplus)**	**(41.33)**	**3.10**		**(6.91)**

193. As can be seen from the Table above, the surplis for FY 2015-16 which is computed by finding the difference between the Revenue earned for FY 2015-16 and the expenditure of FY 2015-16 is found to be **Rs. 6.91 Crores** for Unit 8.

2.2.21 Sharing of Gap/ (Surplus)

194. The sharing of Surplus would be in the ratio of MUs supplied in FY 2015-16 through Unit 8. The interest computation and the share of each Distribution Licensee is given in the Table below:

Table 2-66: Share of the Gap/ (Surplus) – Unit 8 - FY 2015-16

Benefeciaries	Energy Consumed by Beneficiaries in FY 2015-16	Share of Gap/ (Surplus) (Rs. Crores)
BEST	706.65	(2.77)
Tata Power - D	1059.98	(4.15)
Total	**1766.63**	**(6.91)**

195. Tata Power – G requests the Hon'ble Commission consider the above submissions for Truing up of Unit 8 for FY 2015-16.

2.3 Sharing of Gap/ (Surplus) of Tata Power-G – FY 2015-16

196. Based on the computation of Gap / (Surplus) of Unit 4 to 7 & Hydro Generating Stations and Unit 8 for FY 2015-16, sharing of Total Gap / (Surplus) of Tata Power-G for FY 2015-16 without carrying cost is presented below. The computation of the carrying cost is presented in the computation of Past Recovery in subsequent sections.

Table 2-67: Share of the Gap/ (Surplus) – Tata Power-G - FY 2015-16

(Rs. Crores)

Particulars	BEST	Tata Power-D	RInfra-D	Total
Gap / (Surplus) of Trombay Station & Hydro for FY 2015-16	6.14	5.86	0.00	12.00
Recovery of Entry Tax for FY 2007-08 (Paid in FY 2015-16)	22.79	26.48	12.53	61.79
Recovery of Entry Tax for FY 2011-12 (Paid in FY 2015-16)	18.07	17.49		35.56
Gap / (Surplus) of Unit 6 Operation as per MSLDC for FY 2015-16	-0.02	-0.70	0.00	-0.72
Final Total Gap/(Surplus) for FY 2015-16 w/o carrying cost	**46.97**	**49.13**	**12.53**	**108.63**

b) **Gap / (Surplus) of Unit 8**

Particulars	BEST	Tata Power-D	RInfra-D	Total
Gap / (Surplus) of Unit 8 for FY 2015-16	-2.77	-4.15	0.00	-6.91
Final Total Gap/(Surplus) for FY 2015-16 w/o carrying cost	**-2.77**	**-4.15**	**0.00**	**-6.91**

c) Total Gap Surplus of Tata Power-G w/o CC

Particulars	BEST	Tata Power-D	RInfra-D	Total
Total Gap/(Surplus) of Tata Power-G for FY 2015-16 w/o carrying cost	**44.21**	**44.98**	**12.53**	**101.72**

Tata Power-G requests the Hon'ble Commission to approve the total Gap of Rs. 101.72 Crores for FY 2015-16 and the sharing amongst the Distribution Licensees.

3. TRUING UP FOR FY 2016-17

197. This section discusses and presents the actual performance of Generating Stations of Tata Power-G for FY 2016-17. The actual performance has been compared with the values of approved parameters by the Hon'ble Commission in its MYT Order dated 8th August, 2016 issued in Case No. 32 of 2016. The computation is carried out separately for (i) Unit 4 to 7 & Hydro Stations and (ii) Unit 8. Accordingly, the performance of Tata Power-G for FY 2016-17 is outlined below:

3.1 Performance of Unit 4 to 7 and Hydro Generating Stations

198. The operational as well as financial performance of Unit 4 to 7 and the Hydro Generating Stations of Tata Power - G for FY 2016-17 is presented in the sections below:

Operational Performance – FY 2016-17

3.1.1 Generation

199. The actual generation of Tata Power - G for FY 2016-17 is as given in the Table below:

Table 3-1: Gross Generation of Unit 4 to7 & Hydro Stations for FY 2016-17

MUs

Generating Station	MYT Order (Approved)	FY 2016-17 (Actuals)	Difference
Hydro Stations			
Khopoli	271.00	287.20	16.20
Bhivpuri	279.00	242.16	-36.84
Bhira	875.00	951.63	76.63
Total Hydro	**1425.00**	**1480.99**	**55.99**
Unit 4	0.00	0.00	0.00
Unit 5	3316.00	3116.31	-199.69
Unit 6	0.00	0.06	0.06
Unit 6 (Under MSLDC directions)	0.00	0.00	0.00
Unit 7	884.12	1413.21	529.09
Total Thermal	**4200.12**	**4529.58**	**329.46**
Total	**5625.12**	**6010.56**	**385.44**

200. As seen from the Table above, during the FY 2016-17, Tata Power-G achieved a total gross generation of **6010.56 MUs.** The Unit-wise operational performance details are as explained below:

Unit 5:

201. Gross Generation of **3116.31 MUs** from Unit 5 for the FY 2016-17 is lower than the gross generation approved by the Hon'ble Commission in the MYT Order for FY 2016-17 as per system demand.

Unit 6:

202. Unit 6 of Tata Power-G is placed higher in the Merit Order Despatch (MoD) on account of its variable cost being very high. Further, as the Hon'ble Commission is aware, the Unit 6 is under economic shutdown based on the request of its beneficiaries i.e. Tata Power-D and BEST.

203. However, the Unit was under planned overhaul during April, 2016 and was trial synchronised for integrated checks of the entire Units and has accordingly resulted into a miniscule generation of **0.06 MUs** during FY 2016-17.

Unit 7:

204. The Unit 7 gross generation for the year FY 2016-17 is **1413.21 MUs** and is higher than the generation approved by the Hon'ble Commission for FY 2016-17 in the MYT Order.

Hydro Generating Stations:

205. The total gross Hydro generation for FY 2016-17 is recorded to be **1480.99 MUs** which is higher than the gross generation of **1425.00 MUs** approved by the Hon'ble Commission in the MYT Order.

Accordingly, Tata Power-G requests the Hon'ble Commission to approve the Gross Generation of 6010.56 MUs for Unit 4 to 7 & Hydro Stations for FY 2016-17.

3.1.2 Heat Rate

206. Heat rates for the Thermal Generating Units of Tata Power-G for FY 2016-17 in comparison with the normative values as per the MYT Regulations, 2015 are as follows:

Table 3-2: Heat Rate of Thermal Generating Station - FY 2016-17

(kcal/kWh)

Generating Unit	As per MYT Regulations	FY 2016-17 (Actuals)	Difference
Unit 5	2525	2516	-9
Unit 6*	2544	0	-2544
Unit 7	2023	1996	-27

** Unit 6 was under Economy Shutdown during FY 2016-17*

Unit 5:

207. The actual Heat Rates of Unit 5 is lower than the Normative Heat Rate as per MYT Regulations, 2011. We request the Hon'ble Commission to approve the same.

Unit 6:

208. Unit 6 was under economic shut down throughout FY 2016-17, hence, Heat Rate was not applicable for the Unit.

Unit 7:

209. The Hon'ble Commission has approved Normative Heat rates for Trombay Unit 7 as 2023 kcal / kwh and 2900 kcal / kwh under CLosed Cycle operation and Open cycle operation respectively in the MYT Order of Tata Power-G in Case No. 32 of 2016. Accordingly, based on the Generation from Unit 7 during open cycle and closed cycle mode, revised normative heat rate has been worked in the Table below:

Table 3-3: Revised Normative Heat Rate for Unit 7 - FY 2016-17

kcal/ kwh

Mode of Operation	Normative Heat Rate	Gross Generation (MUs)	Revised Heat Rate	Actual Heat Rate
Open Cycle	2900	1.25	2024	1996
Closed Cycle	2023	1411.96		

210. As seen from the table above, the actual Heat Rate of Unit 7 is lower than the revised Normative Heat Rate as per MYT Regulations, 2015.

Tata Power-G request the Hon'ble Commission to approve the actual Heat Rates for the Thermal Generating Units as specified above.

3.1.3 Auxiliary Consumption

211. The Auxiliary Consumption for the Thermal Generating Units and Hydro Generating Stations for FY 2016-17 is as given in the Table below:

Table 3-4: Auxiliary Consumption - FY 2016-17

%

Generating Unit	Approved	FY 2016-17 (Actuals)	Difference
Hydro *(W/O colony Consumption)*	1.56%	2.50%	0.94%
Unit 5	6.00%	5.86%	-0.14%
Unit 6*	3.50%	-	-
Unit 7	3.00%	2.95%	-0.05%

** Unit 6 was under Economy Shutdown during FY 2016-17*

212. As seen from the above Table, the auxiliary consumption in the case of Unit 5 and 7 is within the norms specified by the Hon'ble Commission. The auxiliary consumption for Hydro Generating Stations and Unit 6 is higher as compared to the approved values in the MYT Order.

Unit 6:

213. Regarding 500 MW Trombay Unit 6, we wish to submit that this unit has been taken out of service and kept under Economy Shutdown solely based on the request of its Beneficiaries. This was done to lower the impact of Highest Cost of Generation on them, ultimately benefitting the consumers of Mumbai. Further, the Unit 6 was required to be brought into Load service to take care of the demand of island City of Mumbai in case of system emergencies (Peak requirements, Reduction in embedded Generation level etc..). Considering this, in order to perform its obligation as per the requirement of the beneficiaries / system, Tata Power-G needed to maintain the Unit in service worthiness condition so that the unit can be brought on line as per requirement.

214. As a consequence of above two situations, it is pertinent to note that Unit 6 of Tata Power-G, like any other Thermal Generating Plant, needs basic minimum amount of energy to keep it and its critical auxiliaries in service worthy condition. Further, in FY 2016-17, Unit 6 has operated completely under standby mode. Hence, like Unit 4 which was provided with Auxiliary consumption for standby mode, Unit 6, under similar conditions also need to be provided with the auxiliary consumption under standby mode. We have in the earlier section provided in detail the adverse impact of helping the Distribution Licensees reduce the cost of power purchase by keeping the Unit under economic shutdown. Considering the fact that the performance of Unit 6 under standby mode cannot be compared with the performance of the unit under normal operating conditions and such economic shut down has benefitted the consumers, we request the Hon'ble Commission to approve the actual Auxiliary Consumption of Unit 6 for FY 2016-17 and the situation being reasonably out of control of Tata Power-G, not apply Efficiency Gain / (Loss) to the same.

Tata Power-G requests the Hon'ble Commission to approve the actual Auxiliary Consumption of 20.72 MUs for FY 2016-17

and

To invoke its powers under Regulation 102 of MYT Regulations, 2015 to exempt the same from the computation of gain/(loss) on account of auxiliary consumption of Unit 6 as the same pertains to economy shut down of the Unit 6 for FY 2016-17.

Hydro Generating Stations:

215. The Auxiliary Consumption for the Hydro Generating Stations is **2.50%**. The various components are explained below:

- ***Auxiliary Consumption including Static Excitation:***

216. Auxiliary Energy Consumption at **0.76%** under this head is lower than the approved value.

- ***Pumping Energy for Nallah Diversion***

217. The actual energy consumed towards Nallah Diversion schemes is **0.41%** for FY 2016-17 for the pumped quantum of water of **100.51 MCM**. The Hon'ble Commission in the MYT Order in Case No. 32 of 2016 has approved a normative Auxiliary Consumption of **0.38%** for FY 2016-17 towards energy consumption of Nallah Diversion. Considering the principles laid down by the Hon'ble Commission and as explained in the sections earlier, the revised Auxiliary Energy Consumption norm for 'Pumping Energy for Nallah Diversion' works out to be **0.55%**. The computation of revised Auxiliary consumption norm towards pumping energy required for Nallah Diversion Schemes for FY 2016-17 works out as follows:

Table 3-5: Normative Pumping Energy for Nallah Diversion Schemes - FY 2016-17

Pariculars	Unit		As per MYT Tariff Order
Average of Energy consumed from Pumping as per MYT Order in Case 32 of 2016	MUs	a	5.39
Average of Water Pumped as per MYT Order in Case 32 of 2016	MCM	b	66.30
Actual water Pumped in FY 2016-17	MCM	c	100.51
Mus based on the Average MCM water flow for as per MYT Order	MUs	d = a *c/b	8.17
Gross Hydro Generation	MUs	e	1480.99
% normative Auxiliary Consumption	%	f=d/e	0.55%

- ***GT Losses:***

218. Auxiliary Energy Consumption under this head is **1.14%** and is higher than the approved value.

- ***Headworks Consumption:***

219. The Hon'ble Commission in its MYT Order in Case No. 32 of 2016 had approved additional Auxiliary Energy Consumption of 0.18% under this head. The actual Percentage Auxiliary consumption under this head for FY 2016-17 is **0.17%** and the same is lower than the approved percentage auxiliary consumption by the Hon'ble Commission.

- ***Colony Consumption***

220. As per the methodology approved by the Hon’ble Commission in its MTR Tariff Order, Tata Power-G has excluded the colony consumption from the total Auxiliary Consumption.

221. Considering all the above, the auxiliary consumption percent in comparison with the normative auxiliary consumption for the year FY 2016-17 works out as follows:

Table 3-6: Auxiliary Consumption of Hydro Generating Stations - FY 2016-17

%

Sr. No.	Particulars		Approved	FY 2016-17	Diff
1	Auxiliary Consumption including Static Excitation	a	1.00%	0.76%	-0.24%
2	Energy for Nallah Diversion	b	0.55%	0.41%	-0.14%
3	GT Losses	c	0.00%	1.14%	1.14%
4	**Total Losses**	**d =a+b+c**	**1.55%**	**2.32%**	**0.77%**
5	Head Works Consumption	e	0.18%	0.17%	-0.01%
6	Condenser Mode of operation	f	0%	0.01%	0.01%
7	Housing Colony Consumption	g		0.16%	0.16%
8	**Total**	**h =d+e+f+g**	**1.73%**	**2.66%**	**0.92%**
9	**Auxiliary Consumption net of Colony Consumption**	**i=h-g**		**2.50%**	**0.77%**

We request the Hon'ble Commission to approve the Auxiliary Energy Consumption of 2.50% for Hydro Generating Stations for FY 2016-17 and consider the same for the purpose of calculation of Efficiency Gain / (Loss) on account of Controllable Parameters.

3.1.4 Availability

222. The actual Availability achieved for the year FY 2016-17 for the Thermal Generating Units and the Hydro Generating Stations is as shown in the Table below:

Table 3-7: Availability Unit 4 to 7 and APAF for Hydro Generating Stations – FY 2016-17

Station	FY 2016-17	
	Normative	Actual
Thermal		
Unit 5	85.0%	88.55%
Unit 6	85.0%	99.56%
Unit 7	85.0%	98.33%
Hydro		
Khopoli	90.0%	99.91%
Bhivpuri	90.0%	99.65%
Bhira	90.0%	99.71%

223. As can be seen from the above Table, Availability of all Thermal Generating Units is greater than the normative Availability of 85% as specified in Regulation 44.1 of the MYT Regulations, 2015. Thus, in line with Regulation 48.2 of MYT Regulations, 2015, all Thermal Generating Units of Tata Power-G are entitled for recovery of full Annual Fixed Cost (AFC) for FY 2016-17.

224. Further, Actual Annual Plant Availability Factor (APAF) in case of all Hydro Generating Stations has been significantly higher than the Normative Plant Availability Factor (NAPAF) of 90% as specified in Regulation 46.1 of the MYT Regulations, 2015.

225. The Availability certificate as issued by MSLDC for FY 2016-17 is attached as **Annexure-3-1(a)** to this Petition.

Financial Performance:

226. The financial performance of the Thermal Generating Stations and Hydro Generating Stations at Bhira, Bhivpuri and Khopoli in FY 2016-17 under the various heads is stated in the sections below:

3.1.5 Fuel Cost

227. The total fuel cost for FY 2016-17 was **Rs. 1115.83 Crores**. The details of various fuel related parameters are given in the Table below:

Table 3-8: Fuel Cost for Thermal Generating Station – FY 2016-17

Particulars	MYT Order	FY 2016-17 (Actuals)
Consumption (MT)		
Gas - APM		176335
Gas - RLNG		46162
Coal		1604909
Oil *(combined)*		232
GCV (kcal/kg)		
Gas - APM	13127	13165
Gas - Non APM	13162	13168
Gas - RLNG	13162	13046
Coal	4828	4816
Oil	10462	10408
Price (Rs./MT)		
Gas - APM	15761	10843
Gas - Non APM	16046	11663
Gas - RLNG	36388	32608
Coal	4978	5394
Oil	50651	52821
Total Fuel Cost *(Rs. Crores)*		**1115.83**

228. On comparison of the various fuel price parameters as approved in the MYT Order in Case No. 32 of 2016, the variation in the approved parameters in the MYT Order vis-à-vis the actuals parameters for FY 2016-17, there is no major variations in the final audited fuel parameters for FY 2016-17.

229. With respect to fuel cost, it may be noted that there is a withdrawal of claim of Rs. 29.66 Crores by GAIL during FY 2016-17 raised in FY 2013-14 towards the supply of APM gas for Unit 7. The Hon'ble Commission, in their Order in Case No. 06 of 2015 dated 26th June, 2015 on Truing Up of FY 2013-14, had allowed this cost to be recovered from the beneficiaries. Hence, the impact of withdrawal of Claim by M/s GAIL has been considered by Tata Power-G while claiming the Fuel Cost for FY 2016-17. Tata Power-G has claimed a Total fuel cost of Rs. 1082.34 crores after reducing the impact of withdrawal of Claim by M/s GAIL of Rs. 37.51 crores (inclusive of the holding cost for FY 2014-15 and FY 2015-16) from the actual Fuel Cost of Rs. 1115.83 crores for FY 2016-17.

Further, we wish to clarify that Tata Power-G has considered the actual Fuel cost of Rs. 1115.83 crores for computation of Efficiency gains / (loss) on account of variation in Heat Rate of FY 2016-17 as the same in an outcome of the operational performance exhibited by generating units during the financial year under Truing up exercise.

The computation of refund to GAIL along with carrying cost has been calculated as shown in Table below:

Table 3-9: Computation of GAIL Refund amount along with holding cost

Particulars		Rs Cr
Amount to be refunded towards GAIL charges collected in FY 2013-14		(29.07)
Holding Cost FY 2014-15	14.75%	(4.29)
Holding Cost FY 2015-16	14.29%	(4.15)
Total Holding Cost of refund		**(8.44)**
Total Impact of GAIL refund including Holding Cost		(37.51)

230. Generating unit wise fuel-wise break-up of the above expenditures is given in the Table below:

Table 3-10: Unit wise Fuel Cost – FY 2016-17

(Rs. Crores)

Unit	Fuel Cost
Unit 5	880.34
Unit 6	0.00
Unit 7	235.49
Total	**1,115.83**

Accordingly, Tata Power-G Requests the Hon'ble Commission to approve the actual Fuel Cost for Unit 5, Unit 6 and Unit 7 for FY 2016-17 at Rs. 1,115.83 Crores.

- **Adjustment in Fuel Cost pertaining to past Period**

231. As mentioned in Para 90, the actual recovery towards entry tax for FY 2012-13 in FY 2016-17 is **Rs 38.66 Crores.**

We Request the Hon'ble Commission to approve the recovery of Rs. 38.66 Crores for FY 2016-17.

232. As explained in the paragraph above, the amount towards the entry tax is pertaining to the period FY 2012-13, when Tata Power-G was supplying power to two Distribution Utilities i.e. Tata Power-D, and BEST. Hence, this amount is to be charged in the ratio of sales of Distribution Utilities in the respective year. It is to be noted that the sales considered is the combination of Unit 4 to 8 and Hydro sales for the FY 2012-13. The computation of the same is given below:

Table 3-11: Recovery of Entry Tax – FY 2016-17

Period		Unit	Total	Tata Power-D	BEST
FY 2012-13	Sales	MUs	10328.8	5244.84	5083.97
FY 2012-13	Ratio	%	100%	50.78%	49.22%
FY 2012-13	**Entry tax**	**Rs Cr**	**38.66**	**19.63**	**19.03**

3.1.6 O&M Expenditure

233. MYT Regulations, 2015 specify the following with respect to O&M expenditure for existing Generating Stations:

45.1 Generating Stations/Units that achieved COD before August 26, 2005

a) The Operation and Maintenance expenses for Generating Stations that achieved COD before the date of coming into effect of the MERC (Terms and Conditions of Tariff) Regulations, 2005, shall be computed in accordance with this Regulation.

b) The Operation and Maintenance expenses excluding water charges and including insurance shall be derived on the basis of the average of the Trued-up Operation and Maintenance expenses after adding/deducting the share of efficiency gains/losses, for the three Years ending March 31, 2015, excluding abnormal Operation and Maintenance expenses, if any, subject to prudence check by the Commission.

c) The average of such Operation and Maintenance expenses shall be considered as Operation and Maintenance expenses for the Year ended March 31, 2014, and shall be escalated at the escalation rate of 5.72% to arrive at the Operation and Maintenance expenses for the base year commencing April 1, 2015.

d) The O&M expenses for each subsequent year shall be determined by escalating the base expenses determined above for FY 2015-16, at the inflation factor considering 60% weightage for the actual point to point inflation over Wholesale Price Index numbers as per Office of Economic Advisor of Government of India in the previous year and 40% weightage for the actual Consumer Price Index for Industrial Workers (all India) as per Labour Bureau, Government of India in the previous year, as reduced by an efficiency factor of 1%, to arrive at permissible O&M expenses for each Year of the Control Period:
Provided that a different efficiency factor may be stipulated by the Commission from time to time:

Provided further that at the time of Truing-up the O&M expenses for the different years during the Control Period, the inflation factor considering 60% weightage for the actual point to point inflation over Wholesale Price Index numbers as per Office of Economic Advisor of Government of India in the concerned year and 40% weightage for the actual Consumer Price Index for Industrial Workers (all India) as per Labour Bureau, Government of India in the concerned year, as reduced by an efficiency factor of 1% or any other value as may be stipulated by the Commission from time to time, shall be considered.

e) Water Charges shall be allowed separately as per actuals, based on water consumption depending upon type of plant, type of cooling water system etc., subject to prudence check:

Provided that in the MYT Order, the Commission shall provisionally approve the Water Charges for each year of the Control Period based on the actual Water

Charges as per latest Audited Accounts available for the Generating Company, subject to prudence check.

234. Subsequently, the Hon'ble Commission has notified Maharashtra Electricity Regulatory Commission (Multi Year Tariff) (First Amendment) Regulations, 2017 on 29th November, 2017 wherein the Regulation 45.1 a to d were amended as follows:

3. Amendments to Regulation 45.1 (a) to (d)—

Regulation 45.1 (a) to (d) of the principal Regulations applicable to Generating Stations that have achieved commercial operations prior to 26 August, 2005 shall be substituted by the following :—

"45.1…(a) The Operation and Maintenance expenses for Generating Stations which achieved COD before the date of coming into effect of the MERC (Terms and Conditions of Tariff) Regulations, 2005, shall be computed in accordance with this Regulation.

(b) The Operation and Maintenance expenses, excluding water charges and including insurance, shall be derived on the basis of the Final Trued-up Operation and Maintenance expenses after adding/deducting the sharing of efficiency gains/losses, for the year ending March 31, 2016, excluding abnormal expenses, if any, subject to prudence check by the Commission, and shall be considered as the Base Year Operation and Maintenance expenses.

(c) The Operation and Maintenance expenses for each subsequent year shall be determined by escalating these Base Year expenses of FY 2015-16 by an inflation factor with 50% weightage to the average yearly inflation derived based on the monthly Wholesale Price Index of the past five financial years as per the Office of Economic Advisor of Government of India and 50% weightage to the average yearly inflation derived based on the monthly Consumer Price Index for Industrial Workers (all-India) of the past five financial years as per the Labour Bureau,

Government of India, as reduced by an efficiency factor of 1% or as may be stipulated by the Commission from time to time, to arrive at the permissible Operation and Maintenance expenses for each year of the Control Period :

Provided that, in the Truing-up of the O&M expenses for any particular year of the Control Period, an inflation factor with 50% weightage to the average yearly inflation derived based on the monthly Wholesale Price Index of the past five financial years (including the year of Truing-up) and 50% weightage to the average yearly inflation derived based on the monthly Consumer Price Index for Industrial Workers (all-India) of the past five financial years (including the year of Truing-up), as reduced by an efficiency factor of 1% or as may be stipulated by the Commission from time to time, shall be applied to arrive at the permissible Operation and Maintenance Expenses for that year.”

235. Further, the Hon'ble Commission in their MYT Order in Case No. 32 of 2016 for Tata Power-G had approved the following O&M expenditure as per MYT Regulations, 2015:

Table 131: O&M Expenses as approved by Commission for Units 4 to 7 and Hydro Generating Stations for 3rd Control Period (Rs. Crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
O&M Expenses	498.98	513.81	529.09	544.82
Water Charges	11.46	11.46	11.46	11.46
Total O&M Expenses	**510.44**	**525.27**	**540.55**	**556.28**

236. Considering the amendment, the revised normative O&M expenditure for FY 2016-17 has been worked out as follows:

237. The Final Trued-up Operation and Maintenance expenses after adding/deducting the sharing of efficiency gains/losses, for the year ending March 31, 2016, excluding abnormal expenses has been considered as arrived at in the previous section of truing up for FY 2015-16.

238. The escalation factor as per the first amendment is arrived at as explained in the Table below:

Table 3-12: Escalation Rate for O&M Expenditure for FY 2016-17

Financial Year	WPI	CPI
2012-13	7.36%	10.44%
2013-14	5.98%	9.68%
2014-15	2.00%	6.29%
2015-16	-2.49%	5.65%
2016-17	3.70%	4.12%
5 year average	**3.31%**	**7.24%**
Weightages	50%	50%
Revised Escalation rate	5.27%	
Efficiency Factor	1%	
Revised Escalation rate for Generating Units	**4.27%**	

239. Considering the final trued up O&M expenditure for FY 2015-16 and the revised escalation rate as shown in the Table above, the revised normative O&M expenditure for FY 2016-17 is as shown in the Table below:

Table 3-13: Revised Normative O&M Expenditure for FY 2016-17

Particulars	Units		FY 2016-17
Final Trued up O&M expenditure for FY 2015-16	Rs. Crores	a	484.18
Less: Water Charges	Rs. Crores	b	8.46
O&M Expenditure considered for escalation	Rs. Crores	c=a-b	475.72
Escalation Rate as per First Amendment of MYT Regulations, 2015	%	d	4.27%
O&M Expenditure Norm for FY 2016-17	**Rs. Crores**	**e=c*(1+d)**	**496.05**

240. As seen from the above Table, the revised Table, the revised O&M expenditure norm works out to **Rs. 496.05 Crores** excluding Water Charges.

241. The actual O&M expenditure including Brand Equity and excluding Water Charges for Thermal Generating Station (Units 4 to 7) and Hydro Generating Stations was **Rs. 503.06 Crores** for FY 2016-17. The breakup of O&M expenditure is given in the Table below:

Table 3-14: O&M Expenditure for Unit 4 to 7 & Hydro Generating Stations – FY 2016-17

Rs. Crores

Particulars	As per Amendment	FY 2016-17 (Actuals)	Difference
Employee Expenses		195.72	
Administration & General Expenses (Inclusive of Brand equity)		100.48	
Repair and maintenance		206.86	
Total	**496.05**	**503.06**	**7.01**
Water Charges	11.46	12.32	
Total	**507.51**	**515.38**	**7.87**

242. As can be seen from the above Table, the actual O&M expenditure for FY 2016-17 is higher than the approved values for FY 2016-17 when compared without taking into account the approved values for water charges in the MYT Order. The detailed breakup of base O&M expenses has been provided in specified Petition formats (viz., F3 and F3.1 to F3.3) as prescribed by the Hon'ble Commission. Regarding increase in the employee expenses over that of FY 2015-16 is mainly on account of wage revision of Non-Management staff and increase in the Actuarial amount for Gratuity provision.

243. Further, in line with the provisions of the Regulation 45.1 (e) of MYT Regulations, 2015, Tata Power-G requests the Hon'ble Commission to approve the actual Water charges for FY 2016-17 as **Rs. 12.32 crores** as against the approved value of **Rs. 11.46 crores** in the MYT Order.

- **Overall O&M expenditure for FY 2016-17**

244. As described in the sections above, the total O&M expenditure before any adjustments for FY 2016-17 is **Rs. 515.38 Crores** including actual water charges for FY 2016-17.

However, based on the Truing up Orders of previous Financial Years and the methodology adopted by the Hon'ble Commission therein, the total O&M expenditure of Unit 4 to 7 & Hydro Stations for FY 2016-17 is adjusted for the following:

d) Brand Equity:

245. The Hon'ble Commission had directed to compute the Brand Equity based on the revenue earned in the previous financial year i.e. based on revenue of FY 2015-16 for the purpose of truing up of FY 2016-17. In view of this, there is a small difference between the actual Brand Equity amount booked in the accounts and the amount arrived at based on the methodology as directed by the Hon'ble Commission. The actual overall O&M expenditure has accordingly been adjusted to this extent of differential amount.

246. The Brand Equity computation as directed by the Hon'ble Commission based on the revenue of FY 2015-16 is as shown in the Table below:

Table 3-15: Computation of Brand Equity – FY 2016-17

Particulars	Basis	Petition (FY 2016-17)
Revenue from Mumbai Licence Business based on allocation statement	a	2,366.62
Add: Cash discount	b	-
Add: Income in respect of services rendered	c	0.35
Add: delayed Payment charges	d	-
Total revenue to be considered	e=a+b+c+d	2,366.97
Contribution to Tata Brand Equity	f=0.25%*e	5.92
Service tax @18.5%	g=service tax*f	1.09
Total Contribution to Brand Equity including Service Tax	h=f+g	**7.01**

e) Expenditure related to Corporate Social Responsibility (CSR):

247. The Hon'ble Commission in its previous Orders on Tariff Petitions of Tata Power-G, had disallowed the expenditure towards CSR work. Following the same principle, the CSR

expenditure so made during FY 2016-17 has been removed from the overall O&M expenditure and is not a part of the O&M expenditure claimed in the present Petition. Hence, no separate deduction towards CSR related expenditure is required for carrying out the truing up of O&M expenses of of U 4 to 7 & Hydro Generating Stations for FY 2016-17.

248. By considering all the above adjustments, the O&M expenditure for the year FY 2016-17 shall be as follows:

Table 3-16: Summary of O&M expenditure after adjustment for FY 2016-17

Rs. Crores

Particulars		MYT Order	FY 2016-17 (Actuals)
Employee Expenses	a		195.72
Administration & General Expenses (Inclusive of Tata brand Equity)	b		100.48
Repair and Maintenance Expenses	c		206.86
Total	**d=a+b+c**	**496.05**	**503.06**
Less			
Brand equity Considered in Accounts	e		6.17
Add:			
Allocation of Tata Brand Equity Expenses to Tata Power-G as per MERC methodology	f		7.01
Water Charges	g	12.32	12.32
Total	**h=d-e+f+g**	**508.37**	**516.23**

249. As seen from the Table above, the total O&M expenditure for Unit 4 to 7 & Hydro Stations for FY 2016-17 is higher than the normative O&M expenses of **Rs. 508.37 Crores** as approved by the Hon'ble Commission in the MYT Order including the water charges at actuals for FY 2016-17. This is mainly on account of the provision of **Rs. 62.74 crores** made towards the write off of the Oil and Spares of Trombay Unit 6 in line with intimation given by the Tata Power-G to the Hon'ble Commission vide its letter no. CREG / MUM / MERC / 2017 / 248 dated 1st November, 2017.

Accordingly, Tata Power-G request the Hon'ble Commission to approve the actual O&M expenditure of Rs. 516.23 Crores for Truing up of FY 2016-17.

3.1.7 Capital Expenditure & Capitalisation

250. Tata Power-G has executed the capital expenditure schemes resulting into a total capitalisation of **Rs. 92.05 Crores** in FY 2016-17 for its Unit 4 to 7 and Hydro Generating Stations. The break-up of the actual capitalisation is provided below:

Table 3-17: Capitalisation for U 4 to 7 & Hydro Generating Stations FY 2016-17

Rs. Crores

	FY 2016-17 Actual
DPR Capitalisation	76.37
Non-DPR Capitalisation	15.68
Total Capitalisation	92.05
Ratio of Non-DPR to DPR Capitalistion	**20.53%**

251. It is submitted that out of the total capitalisation of **Rs. 92.05 Crores**, the capitalisation on account of DPR schemes (including merged DPRs) is to the extent of **Rs. 76.37 Crores** and balance **Rs. 15.68 Crores** is on account of Non-DPR Schemes. The Ratio Non-DPR capitalisation to DPR capitalisation is around **20.53%** on account lower DPR Capitalisation in FY 2016-17 as compared to approved DPR Capitalisation of **Rs. 130.38 Crores** in the MYT Order in Case No. 32 of 2016**.** With respect to the lower capitalisation of DPR schemes, we wish to submit that the execution of a DPR scheme named “Replacement of U-5 ESP” was required to rephrased to accommodate the revision in detailed engineering, specification and vendor finalization on account of revision of environment norms by MoEFCC (see **Annexure 3-2**). Hence, lower DPR capitalisation and its impact on Non-DPR : DPR ratio was beyond the control of Tata Power-G. In view of the above and in line with the provision to the Regulation 23.6 of the MYT Regulations, 2015, Tata Power-G requests the Hon'ble Commission to approve the

marginal increase of 1.64 % of non-DPR capitalization over and above the limit of 20% as specified by the Hon'ble Commission in MYT Regulations, 2015.

Accordingly, Tata Power-G requests the Hon'ble Commission to approve the total actual capitalisation of Rs. 92.05 crores for FY 2016-17.

3.1.8 Depreciation

252. Tata Power-G has computed the Depreciation by applying the rates as specified in the Deprecation schedule in the Regulation 27 of the MYT Regulations, 2015. Based on the same, the Depreciation for the FY 2016-17 is **Rs. 151.35 Crores**. On this basis, the rate of depreciation as a percentage of the average of opening and closing GFA works out to the following:

Table 3-18: Depreciation for U 4 to 7 & Hydro Generating Stations – FY 2016-17

Rs. Crores

Particulars	FY 2016-17 (Actuals)
Opening GFA	4333.68
Depreciation	151.35
Closing GFA	4377.04
% Depreciation	**3.48%**

Tata Power-G requests the Hon'ble Commission to approve the depreciation of Rs. 151.35 Crores for Unit 5 to 7 & Hydro Generating Stations for FY 2016-17.

3.1.9 Interest on Loan Capital and Finance Charges

253. The Interest costs have been categorised under the following three heads:

- Interest on Loan Capital
- Interest on Working Capital

- Other Finance Charges

- **Interest on Loan Capital**

254. Tata Power as a whole, has been availing various long term loans to finance its capital expenditure nature projects in line with the Debt: Equity structure of 70: 30 as per the Regulation 26.1 of the MYT Regulations, 2015. Accordingly, during FY 2016-17, Tata Power as an entity, has availed fresh corporate loan facility from State Bank of India (SBI) with the sanctioned amount of Rs. 2000 Crores for the purpose of funding the ongoing Capex for Mumbai Operations, Repayment of high cost debt as may be required by the Company. The copy of the sanction letter of the same has been attached as **Annexure-3-3** to this Petition. Out of these Rs. 2000 Crores corporate loan facility, Tata Power has utilised **Rs. 27.60 Crores** for funding its Capital works in Mumbai Licence Area Business during FY 2016-17. The brief details of this loan have been provided below.

- **SBI**

255. Tata Power has raised a loan for **Rs. 27.60 Crores** from SBI for funding its capital works on the terms as outlined in the Table below:

Table 3-19: Details of the New Loans

SBI Loan	
Amount	27.60 Crores
Rate of Interest	9.50 % p.a. linked to Base Rate.
Repayment Schedule	1 Year moratorium, Quarterly repayment of 6.5 % of Drawal amount per anum for the first 6 years, 12.5 % in 8th Year, 25 % each in the last two years.

256. Additionally, the amounts withdrawn from the earlier approved tranche from IDFC and HDFC banks (**Rs. 180.00 Crores** each) have been allocated to three Business Areas i.e. Generation, Transmission and Distribution based on the ratio of capitalisation of the respective Business Area in FY 2016-17. The balance loan if any, is assumed to be

financed through normative loan. Based on this, the allocation of various loans amongst Generation, Transmission and Distribution Business of Tata Power during FY 2016-17 is presented below:

Table 3-20: Details of Loan allocation for FY 2016-17

Rs. Crore

		U4 to 7 & Hydro	U-8	G	T	D	Total GTD
Capitalisation	a	92.05	12.06	104.11	187.53	262.11	553.75
Debt	b=0.7*a	64.44	8.44	72.88	131.27	183.47	387.62
%	c=b/B%	17%	2%	19%	34%	47%	100%
IDFC_250	d=c*D	29.92	3.92	33.84	60.96	85.20	180.00
HDFC_250	e=c*E	29.92	3.92	33.84	60.96	85.20	180.00
SBI CAG	f=c*F	4.59	0.60	5.19	9.35	13.07	27.62
Total Actual Loan Drawl	g=d+e+f	64.44	8.44	72.88	131.27	183.47	387.62
Normative Loan	h=b-g	0.00	0.00	0.00	0.00	0.00	0.00

257. As per the 1st Proviso to the Regulations 29.5 of MYT Regulations, 2015, for the purpose of Truing-up of FY 2016-17, the weighted average rate of interest computed based on the new drawls and repayments made with respect to the actual Long-Term Loan portfolio during FY 2016-17 shall be the rate of interest. Accordingly, the computation of the weighted average Interest Rate for FY 2016-17 has been presented in the Table below:

Table 3-21: Interest Rate for Loan Capital for FY 2016-17

Particulars		Rs. Crores
Opening Balance of loan	a	920.01
Drawal During the year	b	64.44
Repayment of loan	c	140.95
Closing Balance of Loan	d=1+b-c	843.50
Interest Expense (Rs Crs)	e	92.65
Applicable Interest Rate	**f=e/a**	**10.07%**

258. As shown in the Table above, the weighted average interest rate expressed as the Percentage of the Opening of Actual Loan balance for FY 2016-17 works out to be **10.07%.** Further, loan wise detailed computation of weighted average Interest Rate has been provided in the Petition formats (Refer Form F6) attached with this Petition as prescribed by the Hon'ble Commission.

259. The Interest Charges for FY 2016-17 on application of the above interest rate on the Opening Loan balance for FY 2016-17 works out to **Rs. 68.53 Crores** as shown in the Table below:

Table 3-22: Interest on Loan Capital for FY 2016-17

Particulars	Rs Crores
Opening Balance	723.97
Additions	64.44
Repayments	151.35
Closing Balance	**637.06**
Effective Interest Rate	10.07%
Total Interest Expense	**68.53**

Tata Power-G requests the Hon'ble Commission to approve the amount of Rs. 68.53 Crores for Unit 4 to 7 & Hydro Generating Stations for FY 2016-17.

- **Other Finance Charges**

260. The finance charges incurred by Tata Power–G attributable to Thermal and Hydro Generating Stations during FY 2016-17 is **Rs. 0.45 Crores.**

3.1.10 Interest on Working Capital

261. The Interest on Working Capital has been computed based on the elements as specified in Regulation 31.1 of the MYT Regulations, 2015 for Coal, Oil fired, Combined Cycle and Hydro Generating Stations.

262. Subsequently, the first amendment of MYT Regulations, 2015 was notified on 29th November, 2017 wherein the definition of Base Rate was amended as below:

*2.1(10) "**Base Rate**" shall mean the one-year Marginal Cost of Funds-based Lending Rate ('MCLR') as declared by the State Bank of India from time to time;*

263. Accordingly, Tata Power-T for the purpose of computation of the Interest on Working Capital for FY 2016-17, has considered the Working Capital as specified in Regulation 31.1 and interest rate in accordance with the First Amendment of MYT Regulations, 2015. The Interest Rate for FY 2016-17 has been worked out in Section 1.4 of this petition and the rate works out to 10.30%.

264. The Interest on Working Capital of Tata Power - G for FY 2016-17 works out to **Rs. 41.10 Crores**. The computation of the same is as given below. The details of the computations of Thermal as well as Hydro Generating Stations have been provided in the Petition formats attached with this Petition.

Table 3-23: Working Capital – Thermal and Hydro Generating Stations – FY 2016-17

Rs. Crores

Particulars	Regulation		Approved	Actual
Thermal / Gas Fired Stations				
2 months Fuel Cost for Unit 5 (Coal)	31.1 (a) (i) &(ii)	a	158.16	146.89
2 months Fuel Cost for Unit 6 (Oil)	31.1 (b) (i) &(ii)	b	0.00	108.48
1 months Fuel Cost for Unit 7 (Gas)	31.1 (c) (i)	c	25.16	18.58
Fuel Cost		**d = a+b+c**	**183.33**	**273.96**
O & M Cost for 1 Month	31.1 (a) to (c) (iii)	f	33.55	33.43
Maintenance of spares 1% of Historical cost	31.1 (a) to (c) (iv)	g	28.37	28.28
Receivables for sale of Electricity to BEST (for 45 Days)	31.1 (a) to (c) (v)	h	130.28	164.21
Less : Payables for fuel (30 Days)	31.1 (a) to (c) (vi)	i	104.25	146.27
Total Thermal Working Capital		**j =d+f+g+h-i**	**271.28**	**353.61**
Hydro Generating Stations				
O & M Cost for 1 Month	31.1 (d) (i)	k	8.98	9.15
Maintenance of spares 1% of Historical cost	31.1 (d) (ii)	l	14.29	14.27
Receivables for sale of Electricity to BEST	31.1 (d) (iii)	m	17.40	21.55
Total Hydro Working Capital		**o=k+l+m**	**40.67**	**44.98**
Total Working Capital		p = j + o	**311.96**	**398.59**
Rate of Interest		q	10.80%	10.31%
Interest on Working Capital		**r = q * p**	**33.69**	**41.10**

Tata Power-G requests the Hon'ble Commission to approve the Interest on Working Capital of Rs. 41.10 Crores in case of Unit 4 to 7 & Hydro Stations for FY 2016-17.

3.1.11 Return on Equity

265. Considering the capitalised expenditure and normative Debt : Equity ratio of 70:30, the Return on Equity (RoE) allowed as per Regulation 28.1 and 28.3 of the MYT Regulations, 2015 is 15.5% of opening equity of the year and 50% additions during the year. Accordingly, the RoE for FY 2016-17 has been worked out as shown in the Table below:

Table 3-24: Return on Equity for Unit 4 to 7 & Hydro Generating Stations – FY 2016-17

Rs. Crores

Particulars	FY 2016-17 (Actuals)
Regulatory Equity at the beginning of the year	1570.80
Less: Equity Portion of Assets De-Capitalised During the Year	*-14.61*
Capital Expenditure Capitalised during the Year	92.05
Equity portion of capital expenditure Capitalised during the year	27.62
Regulatory Equity at the end of the year	**1583.81**
RoE Computation	
Return on Regulatory Equity at the beginning of the year	243.47
Return on Regulatory Equity during the year	2.14
Total Return on Regulatory Equity	**245.61**

Tata Power-G requests the Hon'ble Commission to approve the RoE of Rs. 245.61 Crores in case of Unit 4 to 7 & Hydro Generating Stations for FY 2016-17.

3.1.12 Income Tax

266. The computation of the Income Tax payable for FY 2016-17 based on the methodology explained in the corresponding section on Income Tax in truing up of FY 2015-16, is shown in the Table below:

Table 3-25: Income Tax – Unit 4 to 7 & Hydro Stations – FY 2016-17

Rs Crores

Sr.No.	Particulars		Trombay & Hydro Stations
1	Total Revenue	A	2348.63
2	Less: Incentive and efficiency gains	B	53.62
3	Total Expenses	C	1901.46
4	Profit before Tax	D = A - B - C	393.55
5	Depreciation considered in Expenses	E	151.35
6	Other dissallowance while computing Income Tax	F	11.74
7	Total Tax dissallowances	G = E + F	163.09
9	Tax Depreciation	H	163.95
10	Other expenses allowed for computing Income Tax	I	0.76
11	Deduction - U/s 80 IA	J	18.40
12	Total Tax allowances	K = H + I + J	183.11
13	**Total Taxable Income**	**L = D + G - K**	**373.53**
14	Corporate Tax Rate	M	34.61%
15	**Tax Payable at Normal rate**	**N = L*M**	**129.27**
16	<u>**MAT Computation**</u>		
17	**Profit before Tax**	**O**	**393.55**
18	Add: Disallowances under Income Tax (U/s 14 A, provision for doubtful debt)	P	0.06
19	Less: Deduction under Income Tax (Exempt Income, FBT, Wealth Tax, Withdrawal from Income)	Q	0.00
20	Book Profit	R = O + P - Q	393.61
21	MAT Rate	S	21.3416%
22	**Tax payable under MAT**	**T = R*S**	**84.00**
23	MAT credit available	U	0
24	**Tax applicable**	**V**	**129.27**
25	**Tax applicable after MAT credit**	**W=V-U**	**129.27**

Tata Power-G requests the Hon'ble Commission to approve the Income Tax of Rs. 129.27 Crores in case of Unit 4 to 7 & Hydro Stations for FY 2016-17.

3.1.13 Non-Tariff Income

267. The Non-Tariff Income received by Tata Power-G under the various heads as specified by the Hon'bl Commission in the Regulation 43.2 of MYT Regulations, 2015 has been accounted as the Non-Tariff Income for FY 2016-17 for Unit 4 to 7 and Hydro Generating Stations and the same stood at **Rs. 25.62 Crores**. The Non-Tariff Income comprises of the following:

A) Recurring Items : **Rs. 7.12 Crores**

B) Non-Recurring Items: **Rs. 18.50 Crores**

268. The detailed breakup of the actual Non-Tariff Income is presented in the Table below:

Table 3-26: Non-Tariff Income – Thermal and Hydro Generating Stations – FY 2016-17

Rs. Crores

Particulars	MYT Order	FY 2016-17 (Actuals)
Recurring		**7.12**
Rents		6.98
Income from services rendered		0.14
Non-Recurring		**18.50**
Delayed Payment Charges		0.00
Interest on Delayed Payment		0.68
Interest On Loans & Advances - - Staff.		0.16
Sale of Scrap		5.21
Other/Miscellaneous receipts		3.39
Interest on Other Investments		0.00
VAT Refund		4.26
Profit/Loss on sale /Retirement of Assets		0.00
Liquidated Damages		1.40
Sale of Fly Ash		1.79
Interest on Deferred Taxation Liability Fund Investments		0.00
Interest on ST Deposit with Bank		0.00
Net Income from Suppy to Housing Colony & Cosntruction works		1.61
Total Non Tariff Income	**16.73**	**25.62**

Tata Power-G requests the Hon'ble Commission to approve the Non-Tariff of Rs. 25.62 Crores in case of Unit 4 to 7 & Hydro Generating Stations for FY 2016-17.

3.1.14 Annual Fixed Charges

269. Based on the various costs as outlined above, and the adjustment for the fixed cost of Unit 4 and share allocation of Unit 8, the Annual Fixed Charges for FY 2016-17 are as given below:

Table 3-27: Annual Fixed Charges of Thermal and Hydro Generating Stations– FY 2016-17

Rs Crores

Particulars	As per MYT Order	FY 2016-17 (Actuals)	Variation
O&M Charges	507.51	510.99	-3.48
Interest on Long Term Loans	76.66	68.53	8.13
Interest on Working Capital	33.69	41.75	-8.06
Interest and Finance Charges	0.00	0.45	-0.45
Depreciation	146.59	151.35	-4.76
Income Tax	98.89	129.27	-30.38
Return on Equity	247.50	245.61	1.89
Annual Fixed Charges	**1110.84**	**1147.95**	**-37.11**
Less:			
Non Tariff Income	16.73	25.62	-8.89
Unit 4 Fixed Charges	12.00	12.20	-0.20
Allocation to Unit 8 towards shared capacity	12.43	12.50	-0.07
Net Annual Fixed Charges	**1069.68**	**1097.63**	**-27.95**

270. Regulation 44.1 and 46.1 of the MYT Regulations, 2015 provide the norm for Full recovery of Annual Fixed Cost of Thermal and Hydro Generating Units respectively. As seen from the Table 3.7 presented in the earlier sections, the Thermal as well as Hydro

Generating Stations of Tata Power-G have achieved the normative availability of 85% and 90% respectively. Hence, all generating units of Tata Power-G are entitled for full recovery of the Annual Fixed Cost for FY 2016-17.

3.1.15 Incentive on PLF and Capacity Index:

Thermal Incentive:

271. As per the Regulation 44.3 and 48.7 of MYT Regulations, 2015, Thermal Generation in excess of Ex-Bus energy corresponding to Target Plant Load Factor of 85% is eligible for PLF Incentive at a flat rate of 25 paise/kWh. The computation of the thermal PLF Incentive for FY 2016-17 is presented in the table below:

Table 3-28: PLF Incentive for Thermal Stations – FY 2016-17

Generating Unit	Actual Gross Generation (Mus)	Actual Net Generation with Norm Aux Consumption (MUs)	Net Generation at 85% PLF (MUs)	Energy eligible for Incentive (MUs)	Rate of Incentive (Rs/kWh)	Total Incentive (Rs Crores)
a	b	c	d	e=c-e	f	g=e*f/10
Unit-5	3116.31	2929.33	3499.62	0.00	0.25	0.00
Unit-6	0.00	0.00	3611.31	0.00	0.25	0.00
Unit-7	1413.21	1370.82	1300.07	70.74	0.25	1.77
Total	**4529.52**	**4300.14**	**8411.00**	**70.74**	**0.25**	**1.77**

272. As seen from the Table above, 180 MW Unit 7 of Tata Power-G is the only one eligible for total PLF incentive of **Rs. 1.77 crores** for FY 2016-17.

We request the Hon'ble Commission to approve the total PLF incentive of Rs. 1.77 Crores during truing up of Unit 4 to 7 & Hydro Generating Stations for FY 2016-17.

Hydro Capacity Index:

273. The incentive on Hydro Generation more than design energy and normative availability is computed in line with provisions of Regulation 49.1 of MYT Regulations, 2015 as given below:

Table 3-29: Incentive on PLF & Capacity Index for Hydro Generating Stations – FY 2016-17

Rs. Crores

Particulars		Unit	Bhira	Bhivpuri	Khopoli	Total
Fixed Cost for Hydro	a	Rs Cr	140.33	78.80	117.85	336.97
Normative Availability	b	%	90.00%	90.00%	90.00%	0.90
Actual Availability	c	%	99.71%	99.65%	99.91%	
Normative Capacity Charge for FY 2016-17	d=0.5*a*c/b	%	77.73	43.62	65.41	186.77
Design Energy	b	MUs	744.12	193.23	174.68	1112.03
Auxiliary Consumption	c	%	1.73%	1.73%	1.73%	
Net Design Energy	d =b*(1-c)	MUs	731.23	189.88	171.66	1092.77
Energy Charge Rate	e = 0.5*a/d	Rs/kWh	0.96	2.07	3.43	
Actual Generation	f	MUs	928.66	236.88	276.10	1441.65
Energy Charge	**g=e* d/10 + 0.8*(f-d)/10**	Rs Cr	87.93	43.63	68.32	199.88
Total Incentive		**Rs Cr**	**25.34**	**8.45**	**15.89**	**49.68**

Tata Power-G requests the Hon'ble Commission to approve the total incentive of Rs. 51.45 Crores in case of Unit 4 to 7 & Hydro Generating Stations for FY 2016-17.

3.1.16 Sharing of Gains & Losses

274. The Hon’ble Commission in its MYT Tariff Regulations, 2015 has provided the following methodology for treatment of sharing and gains and sharing of losses:

"11. Mechanism for sharing of gains or losses on account of controllable factors—

11.1 The approved aggregate gain to the Generating Company or Licensee or MSLDC on account of controllable factors shall be dealt with in the following manner: —

(a) Two-third of the amount of such gain shall be passed on as a rebate in Tariff over such period as may be stipulated in the Order of the Commission under Regulation 8.4;

(b) The balance amount of such gain shall be retained by the Generating Company or Licensee or MSLDC.

11.2 The approved aggregate loss to the Generating Company or Licensee or MSLDC 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 Tariff over such period as may be stipulated in the Order of the Commission under Regulation 8.4;

(b) The balance amount of such loss shall be absorbed by the Generating Company or Licensee or MSLDC.

275. Tata Power-G has submitted the actual expenditure under various heads and the reasons for the variations of the same. In this section, the gains and loss on account of controllable factors has been computed and the sharing between the beneficiaries and Tata Power - G has been presented for the approval of the Hon'ble Commission as a part of Truing up exercise for FY 2016-17.

3.1.17 Gains/Losses on account of Heat Rate:

276. As per the Regulation 9.2 (d) of MYT Regulations, 2015, the increase / decrease in the fuel cost due to variation in performance parameters of the generation units i.e. heat rate in case of Thermal Generating units would be considered as a controllable

expenditure. Accordingly, Gains/Losses on account of variation in Heat Rate for Thermal Generating units of Tata Power-G works out as below:

Table 3-30: Gain / (Loss) due to variation in Heat Rate – FY 2016-17

Particulars		Unit 5	Unit 6*	Unit 7	Total Fuel Cost
Fuel Cost (Rs. Crores)	a	880.34	0.00	235.49	1115.83
Actual Heat Rate (kcal/kWh)	b	2516	0	1996	
Normative Heat Rate (kcal/kWh)	c	2525	0	2024	
Fuel Cost applying Normative Heat Rate (Rs. Crores)	d = c / b x a	883.52	0.00	238.80	1122.32
Net Gain/ (Loss) (Rs. Crores)	e = d - a	3.18	0.00	3.31	6.50
Passed on to Distribution Licensees (Rs Crores)	**f = 2/3 x e**	**2.12**	**0.00**	**2.21**	**4.33**

** - Unit 6 under Economy Shutdown during FY 2016-17*

277. It may be observed from the Table above that Unit 5 and Unit 7 were operated at a fuel cost lower than the fuel cost on account of superior operational performance resulting in actual Heat Rates of FY 2016-17 being lower than the normative values approved by the Hon'ble Commission. Further, the 500 MW Unit 6 owing to its high cost of generation, was under economy shutdown during FY 2016-17.

278. The net gain on account of Heat Rate is **Rs. 6.50 Crores.** In line with the Regulation 11 of MYT Regulations, 2015, the Efficiency Gain of **Rs. 4.33 Crores** being two thirds of the total Gain on account of variation in the Station Heat Rates has been considered to be passed on as rebate in Tariff to the Distribution Licensees for FY 2016-17.

3.1.18 Gains / Losses on account of Auxiliary consumption:

279. As per the Regulation 9.2 (d) of MYT Regulations, 2015, the increase / decrease in the auxiliary consumption due to variation in performance parameters of the Generation units i.e. % auxiliary consumption would be considered as a controllable expenditure. As elaborated in the section 3.1.3, we have not considered the efficiency gains/ (loss) on account of variation in the % Auxiliary Consumptions of Trombay Unit 6.

280. The computation of efficiency gains/ (loss) on account of variation in the % Auxiliary Consumptions of Generating Units is as given below:

Table 3-31: Gain / (Loss) due to variation in Auxiliary Consumption – FY 2016-17

(Rs. Crores)

Sr. No.	Particulars		Units	Unit 5	Unit 6*	Unit 7	Hydro	Total
1	Gross Generation	a	MUs	3116	0	1413	1099	5628.24
2	Actual Aux. Cons.	b	%	5.87%	0.00%	2.95%	2.50%	
3	Normative Aux. Cons.	c	%	6.00%	3.50%	3.00%	1.73%	
4	Difference in Net Generation	d=a*(c-b)	MUs	3.93	0.00	0.71	-8.41	-3.77
5	Approved Energy Rate	e=T.O.	Rs/kWh	2.84	9.38	2.36	1.39	
6	**Efficiency Gain / (loss) due to variation in Aux. Con.**	**f=d*e/10**	**Rs Crores**	**1.12**	**0.00**	**0.17**	**-1.17**	**0.12**
7	**Passed to the Dist Licensee**	**g=2/3*f**	**Rs Crores**					**0.08**

281. As can be seen from the above Table, there is a net Gain due to variation in Auxiliary Consumption equal to **Rs. 0.12 Crores**. Accordingly, in line with the Regulation 11 of MYT Regulations, 2015, an Efficiency Gain of **Rs. 0.08 Crores** is considered to be passed on as rebate in Tariff to the Distribution Licensees for FY 2016-17.

3.1.19 Gain / (Loss) on account of O&M Expenditure

282. As per the Regulation 9.2 (f) of MYT Regulations, 2015, the increase / decrease in the Operation and Maintenance expenses of the Generation units would be considered as a controllable expenditure.

283. Accordingly, Tata Power-G has computed the Gain / (Loss) due to variation of O&M expenses for FY 2016-17 as shown in the Table below:

Table 3-32: Gains and Loss due to variation in O&M Expenditure – FY 2016-17

Rs Crores

Sr. No.	Particulars		Unit 5 to 7 and Hydro Stations
1	Approved O & M expenses w/o water charges	a	496.05
2	Actual O & M Expenses	b	516.23
3	Actual Water Charges	c	12.32
4	Actual O&M Expenses w/o water charges	d=b-c	503.91
5	Gain / (Loss) due to variation over Normative O&M expenses	e=a-d	-7.86
6	**Passed to Distribution Licensee**	**f=1/3*e**	**(2.62)**
7	**O&M Entitlement**	**g=a-f+c**	**510.99**

284. As can be seen from the above Table, there is a net efficiency loss due to variation in Operation and Maintenance Expenses equal to **Rs. 7.86 Crores**. Accordingly, in line with the Regulation 11 of MYT Regulations, 2015, the Efficiency loss of **Rs. 2.62 Crores** is considered to be passed on as an additional charge in Tariff to the Distribution Licensees for FY 2016-17.

3.1.20 Gain / (Loss) on account of variation in Interest on Working Capital

285. As per the Regulation 9.2 (e) of MYT Regulations, 2015, the variation in Interest on Working Capital of the generation company would be considered as a controllable expenditure. Accordingly, Tata Power-G has computed the Gain / (Loss) due to variation in Interest on Working Capital for FY 2016-17 as shown in the table below:

Table 3-33: Gains / Loss due to variation in Interest on Working Capital – FY 2016-17

Rs Crores

Sr. No.	Particulars		Units	Unit 5 to 7 and Hydro Stations
1	Interest on Working Capital (IoWC)- Normative	1	Rs Crores	41.10
2	Interest on Working Capital - Actual	2	Rs Crores	43.03
3	Gain / (Loss) due variation over Normative IoWC	3	Rs Crores	-1.93
6	**Passed to Distribution Licensee**	**4 = 3 *1/3**	**Rs Cr**	**(0.64)**
7	**Normative IoWC Entitlement**	**7 = 4 + 3 + 2**		**41.75**

286. As can be seen from the above Table, there is a net loss due to variation in Interest on Working Capital equal to **Rs. 1.93 crores**. Accordingly, in line with the Regulation 11 of MYT Regulations, 2015, an Efficiency loss of **Rs. 0.64 Crores** is considered to be passed on as rebate in Tariff to the Distribution Licensees for FY 2016-17.

3.1.21 Revenue from Power Supply for Thermal and Hydro Generating Stations

287. Tata Power-G has earned a total Revenue of **Rs. 2232.92 Crores** from the Distribution Licensees, Tata Power-D and BEST for FY 2016-17. The breakup of total Revenue earned for the year FY 2016-17 is given as below:

Table 3-34: Revenue from Generation Business – FY 2016-17

Rs. Crores

Particulars		BEST	Tata Power-D	Total
Energy	MUS	2929.96	2796.01	5725.97
Fixed Charges	Rs Cr	479.37	457.45	936.82
Incentive	Rs Cr	0.90	0.86	1.77
Energy Charges	Rs Cr	662.08	631.81	1293.90
Revenue from FBSM final settlement (Jan'13,Nov'12,	Rs Cr	0.22	0.21	0.44
Considered for ARR Value	**Rs Cr**	**1142.58**	**1090.33**	**2232.92**

3.1.22 Net Entitlement and Resultant Gap/ (Surplus) U 4 to 7 and Hydro Stations

288. The net entitlement and the gap for the FY 2016-17 on the basis of the discussions above is shown in the Table below:

Table 3-35: Aggregate Revenue Requirement -U4 to 7 & Hydro Generating Stations– FY 2016-17

Rs. Crores

Sr. No.	Particulars	Approved in the MYT	Entitlement as per the Regulations	Efficiency Gains / (Loss) from Controllable factors shared with Consumers	Net Entitlement after Impact of Gains / (Loss) from Controllable factors
A	**Revenue**	**0.00**	**2258.53**		**2258.53**
	- Power Supply	0.00	2232.92	0.00	2232.92
	- Non-Tariff Income	0.00	25.62	0.00	25.62
B	**Expenditure**				
1	*Fuel Related Expenses*	0.00	1122.32	4.33	1082.34
2	*Aux. Consumption Benefit*		0.12	0.08	0.04
3	*Operation & Maintenance*	507.51	516.23	-2.62	510.99
4	*Depreciation*	0.00	151.35		151.35
5	*Interest on Long-term Loan*	0.00	68.53		68.53
6	*Other Charges*		0.45		0.45
7	*Interest on Working Capital*	0.00	41.10	-0.64	41.75
8	*Income tax*	0.00	129.27		129.27
9	*Return on Equity*	247.50	245.61		245.61
10	**Total Expenditure**	**755.01**	**2274.99**	**1.15**	**2230.34**
11	Incentive (PLF, Hydro	0.00	51.45		51.45
C	**Total Expenditure Including Incentive**		**2326.44**	**1.15**	**2281.79**
12	**Less:**				
13	*Fixed cost portion of Unit 4*	12.75	12.20		12.20
14	*Allocation for U 8 for Shared Capacity*	12.50	12.50	0.00	12.50
D	**Total ARR for FY 2016-17**		**2301.74**	**1.15**	**2257.08**
E	**Net Gap/(Surplus)**		**43.20**		**-1.45**

289. Based on the Table above, Tata Power-G request the Hon'ble Commission to approve a surplus of **Rs. 1.45 Crores** for Unit 4 to 7 and Hydro Generating Stations for FY 2016-17.

290. As can be seen from the above Table, there is a net surplus for Tata Power-D, BEST and RInfra-D which needs to be approved for refund. The net amount refundable along with interest has been worked out separately in subsequent chapters.

3.2 Performance of Unit 8

291. The actual performance of Unit 8 has been compared with the values of approved parameters by the Hon'ble Commission in its MYT Order dated 8th August, 2016 in Case No. 32 of 2016. The Operational and Financial Performance of the Unit for the Financial Year 2016-17 has been explained in the sections below.

Operational Performance – FY 2016-17

3.2.1 Generation

292. The various parameters pertaining to the actual operational performance of the Unit 8 for FY 2016-17 are as given in the Table below:

Table 3-36: Operational Performance of Unit 8 for FY 2016-17

Particulars	UoM	As per MYT	FY 2016-17	Difference
Gross Generation	MUs	1862.59	1864.56	1.97
Auxiliary Consumption	%	8.50%	6.20%	-2.30%
Net Generation	MUs	1704.27	1749.00	44.73
Station Heat Rate	Kcal/kWh	2450	2296	-154
Availability	%	93%	97.40%	5%
PLF	%	85.05%	85.14%	0%

293. As can be seen from the above Table, total Gross Generation from Unit 8 is recorded at **1864.56 MUs** during FY 2016-17 and the same is similar to that approved in the MYT Order in Case No. 32 of 2016. The Net generation from unit stood at **1749.00 MUs.**

Tata Power-G requests the Hon'ble Commission to approve the actual Gross Generation of 1864.56 MUs for Truing up of Unit 8 for FY 2016-17.

3.2.2 Heat Rate

294. Unit 8 of Tata Power-G has demonstrated a strong operational performance during FY 2016-17 and has achieved an actual heat rate of **2296 kcal/kwh** against the approved normative heat rate of **2450 kcal/kwh**.

3.2.3 Availability

295. As mentioned in the Table 3.34 above, the actual Availability of Unit 8 for FY 2016-17 is **97.40%** as compared to normative Availability of **85%.** As per Regulation 44.1 of MYT Regulations, 2015, Unit 8 is entitled for recovery of full Annual Fixed Cost for FY 2016-17. The availability certificate issued by MSLDC for FY 2016-17 is attached as **Annexure 3-1(a)** to this Petition.

3.2.4 Auxiliary Consumption

296. Unit 8 has achieved an actual Auxiliary Consumption of **6.20%** as compared to the approved normative Auxiliary Consumption of **8.50 %**.

Financial Performance

297. The performance of Unit 8 for FY 2016-17 under the various heads is stated in the sections below.

3.2.5 Fuel Cost

298. The details of the various fuel related parameters for Unit 8 are provided in the Table below.

Table 3-37: Fuel Cost for Unit 8 - FY 2016-17

Particulars	MYT Order	FY 2016-17 (Actual)
Fuel Consumption (MT)		
Coal		887801
Oil		312
GCV (Kcal/kg)		
Coal	4888	4819
Oil	10459	10408
Fuel Price (Rs/MT)		
Coal	5003	5464
Oil	51605	53018
Actual Fuel Cost (Rs. Crores)		**486.83**

299. As the various fuel parameters of Unit 8 for FY 2016-17 were provisionally trued up during the MYT Order, there is no major variation in the approved parameters in the MYT Order vis-à-vis the actuals except the coal price for FY 2016-17. The price of Coal mentioned in the above table is at Trombay Station level.

Tata Power-G requests the Hon'ble Commission to approve the Normative Fuel Cost of Rs. 569.88 Crores for FY 2016-17 and consider the Actual Fuel Cost of Rs. 486.83 Crores for computation of sharing of gains as per the MYT Regulations, 2015.

3.2.6 O&M Expenditure

300. The actual O&M expenditure of Unit 8 for FY 2016-17 was **Rs. 73.85 Crores**. The breakup of O&M expenditure is given in the Table below:

Table 3-38: Actual O&M Expenditure of Unit 8 – FY 2016-17

Rs. Crores

Particulars	As per MYT Order	FY 2016-17 (Actuals)	Difference
Employee Expenses		29.41	
Administration & General Expenses (Inclusive of Brand equity)		12.96	
Repair and Maintenance		31.49	
Total	**59.50**	**73.85**	**14.35**

301. As can be seen from the Table above, the actual O&M expenditure for FY 2016-17 is higher than the approved O&M expenditure of Rs. 59.50 Crores for FY 2016-17 in the MYT Order. The detailed breakup of O&M expenses has been provided in specified Petition formats (viz., F3 and F3.1 to F3.3) as prescribed by the Hon'ble Commission. Regarding increase in the employee expenses over that of FY 2015-16 is mainly on account of wage revision of Non-Management staff and increase in the Actuarial amount for Gratuity provision.

3.2.6.1 Overall O&M expenditure for FY 2016-17

302. As described in the sections above, the total O&M expenditure for Unit 8 for FY 2016-17 is **Rs. 73.85 Crores**. However, based on the Truing up Orders of previous Financial Years and the methodology adopted by the Hon'ble Commission therein, the total O&M expenditure of Unit 8 for FY 2016-17 is adjusted for the following:

c) Brand Equity:

303. The Hon'ble Commission had directed to compute the Brand Equity based on the revenue earned in the previous financial year i.e. based on revenue of FY 2015-16 for the purpose of FY 2016-17 truing up. In view of this, there is a small difference between the actual Brand Equity and the amount arrived at on the methodology as directed by the Hon'ble Commission. The actual overall O&M expenditure of Unit 8 has been adjusted to this extent of differential amount.

304. The Brand Equity computation as directed by the Hon'ble Commission based on the revenue of FY 2015-16 is as shown in the Table below:

Table 3-39: Computation of Brand Equity -Unit 8 – FY 2016-17

(Rs. Crores)

Particulars	Basis	Unit 8 Petition (FY 2016-17)
Revenue from Mumbai based on allocation statement for FY 2015-16	a	897.91
Add: Cash discount	b	0.00
Add: Income in respect of services rendered	c	0.00
Add: Delayed Payment charges	d	0.00
Total revenue to be considered	e=a+b+c+d	897.91
Contribution to Tata Brand Equity	f=0.25%*e	2.24
Service tax @18.5%	g=service tax*f	0.42
Total Contribution to Brand Equity including Service Tax	h=f+g	**2.66**

d) Expenditure related to Corporate Social Responsibility (CSR)

305. The Hon'ble Commission in its previous Orders on Generation had disallowed the expenditure towards CSR. On account of the same, the CSR expenditure so made has been removed from the overall O&M expenditure and is not a part of the O&M expenditure reported above. Hence, no separate deduction towards CSR is required for truing up of O&M expenses of FY 2016-17.

306. By considering all the above adjustments, the O&M expenditure for the year FY 2016-17 works out as given below:

Table 3-40: O&M expenditure of Unit 8 after adjustment for FY 2016-17

Rs. Crores

Particulars		Normative	FY 2016-17 (Actuals)
Employee Expenses	a		29.41
Administration & General Expenses (Inclusive of Tata brand Equity)	b		12.96
Repair and Maintenance	c		31.49
Total	**d=a+b+c**		**73.85**
Less			
Brand equity Considered in Audited Accounts	e		2.24
Add:			
Allocation of Brand Equity Expenses to Tata Power-G as per MERC methodology	f		2.66
Total	**j=d-e+f**	**59.50**	**74.27**

Accordingly, Tata Power-G request the Hon'ble Commission to approve the actual O&M expenditure of Rs. 74.27 Crores in case of Unit 8 for FY 2016-17.

3.2.7 Capital Expenditure and Capitalisation

307. The total capitalisation for Unit 8 for FY 2016-17 including HOSS capitalisation is **Rs. 12.06 Crores** in comparison with the approved capitalisation of **Rs. 1.14 Crores** in the MYT Order issued by the Hon'ble Commission.

Table 3-41: Capitalisation in FY 2016-17

Rs. Crores

	FY 2016-17 Actual
DPR Capitalisation	9.44
Non-DPR Capitalisation	2.61
Total Capitalisation	12.06
Ratio of Non-DPR to DPR Capitalistion	**27.66%**

308. It is submitted that out of the total capitalisation of **Rs. 12.06 Crores**, the capitalisation on account of DPR schemes (including merged DPRs) is to the extent of **Rs. 9.44 Crores** and the balance of **Rs. 2.61 Crores** is on account of Non-DPR Schemes which forms about **27.66%** of total DPR schemes. The same is exceeding the limit of 20% as set by the Hon'ble Commission in its MYT Regulations, 2015.

309. In line with the provision to the Regulation 23.6 of the MYT Regulations, 2015, Tata Power-G requests the Hon'ble Commission to approve the marginal increase of around 7 % of non-DPR capitalization over and above the limit of 20% as specified by the Hon'ble Commission in MYT Regulations, 2015.

Tata Power-G request the Hon'ble Commission to approve the total capitalisation of Rs. 12.06 crores including the subsequent impact arising out of Insurance Claim settlement in case of Unit 8 for FY 2016-17.

3.2.8 Depreciation

310. Tata Power - G had computed the Depreciation by applying the rates as specified in the Deprecation schedule in the Regulation 27 of the MYT Regulations, 2015. Based on the same, the Depreciation for the FY 2016-17 is **Rs. 61.41 Crores**. On this basis, the rate of Depreciation as a percentage of the average of opening and closing GFA works out to the following:

Table 3-42: Depreciation - Unit 8 – FY 2016-17

Rs. Crores

Particulars	FY 2016-17 (Actuals)
Opening GFA	1200.45
Depreciation	61.41
% Depreciation	**5.12%**

Tata Power-G requests the Hon'ble Commission to approve the depreciation of Rs. 61.41 Crores in case of Unit 8 for FY 2016-17.

3.2.9 Interest and Finance Charges

311. The Interest costs have been categorised under the following three heads:

- Interest on Loan Capital
- Other Finance Charges
- Interest on Working Capital

3.2.9.1 Interest on Loan Capital

312. Tata Power as a whole, has been availing various long term loans to finance its capital expenditure nature projects in line with the Debt: Equity structure of 70: 30 as per the Regulation 26.1 of the MYT Regulations, 2015. Accordingly, during FY 2016-17, Tata Power as an entity, has availed fresh corporate loan facility from State Bank of India (SBI) with the sanctioned amount of Rs. 2000 Crores for the purpose of funding the ongoing Capex for Mumbai Operations, as may be required by the Company. The copy of the sanction letter of the same has been attached as **Annexure 3.3** to this Petition. Out of these Rs. 2000 crores corporate loan facility, Tata Power has utilised **Rs. 27.60 Crores** for funding its Capital works in Mumbai Licence Area Business during FY 2016-17. The brief details of this loan have been provided in the similar section of the FY 2016-17 Truing up section for Unit 4 to 7 & Hydro Generating Stations.

313. Loans from various banks have been allocated to different Business Areas (Generation, Transmission and Distribution) based on the ratio of capitalisation of the respective Business Areas in FY 2016-17. The balance loan is assumed to be financed through normative loan. Based on this the allocation of loan for Unit as provided in the interest on loan capital section earlier, the computation of the Interest Rates has been presented in the Table below:

Table 3-43: Applicable Interest Rate for FY 2016-17

Particulars		**Rs. Crores**
Opening Balance of loan	a	569.50
Drawal During the year	b	8.44
Repayment of loan	c	48.65
Closing Balance of Loan	d=1+b-c	529.28
Interest Expense (Rs Crs)	e	59.65
Applicable Interest Rate	**f=e/a**	**10.47%**

314. Considering the above actual loan drawls and interest rates, the weighted average interest rate for FY 2016-17 works out to **10.47%.** The detailed computation of weighted average Interest Rate is enclosed in the formats attached to this Petition.

315. The interest charges for FY 2016-17 work out to **Rs. 50.81 Crores** as shown in the Table below:

Table 3-44: Interest on Loan Capital for FY 2016-17

Particulars	**Rs Crores**
Opening Balance	511.58
Additions	8.44
Repayments	61.41
Closing Balance	**458.61**
Effective Interest Rate	10.47%
Total Interest Expense	**50.81**

Tata Power-G requests the Hon'ble Commission to approve the Interest on Loan Capital of Rs. 50.81 Crores in case of Unit 8 for FY 2016-17.

3.2.9.2 Other Finance Charges

316. The finance charges incurred by Tata Power–G attributable to Unit 8 is **Rs. 0.57 Crores.**

3.2.10 Interest on Working Capital

317. The Interest on Working Capital has been computed based on the elements as specified in the Regulation 31 of MYT Regulations, 2015. For the purpose of computing the interest on working capital for FY 2016-17, an interest rate of **10.31%** has been considered in line with the 1st amendment to Regulation 2.1 (10) of MYT Regulations, 2015 dated 29th November 2017 i.e. one year MCLR prevalent during FY 2016-17.

318. The Interest on Working Capital on Unit 8 for FY 2016-17 works out to be **Rs. 10.33 Crores**. The detailed computation is as given below. The detailed working of the above has been provided in the Petition format F 2.4 U8 (IoWC) annexed to this Petition.

Table 3-45: Working Capital – Unit 8 – FY 2016-17

Rs. Crores

Particulars	Units	MYT Order	FY 2016-17 (Actuals)
Fuel Cost	Rs. Crores	85.33	86.07
O & M expenses	Rs. Crores	3.65	5.37
Maintenance Spares	Rs. Crores	10.97	11.94
Receivables	Rs. Crores	52.35	39.80
less: Payables	Rs. Crores	42.67	43.03
Total Working Capital requirement	**Rs. Crores**	**109.64**	**100.15**
Interest Rate (%)	%	14.75%	10.31%
Working Capital Interest	**Rs. Crores**	**16.17**	**10.33**

Tata Power-G requests the Hon'ble Commission to approve the Interest on Working Capital of Rs. 10.33 Crores in case of Unit 8 for FY 2016-17.

3.2.11 Return on Equity

319. Considering the capitalised expenditure and normative Debt : Equity ratio of 70:30, the Return on Equity (RoE) allowed as per Regulation 28.1 and 28.3 of the MYT Regulations, 2015 is 15.5% of equity. Accordingly, the RoE for FY 2016-17 has been worked out as shown in the Table below:

Table 3-46: Return on Regulatory Equity - Unit 8 – FY 2016-17

Rs. Crores

Particulars	FY 2016-17
Regulatory Equity at the beginning of the year	358.34
Less: *Equity Portion of Assets De-Capitalised During the Year*	*-0.03*
Capital Expenditure Capitalised during the Year	12.06
Equity portion of capital expenditure Capitalised during the year	*3.62*
Regulatory Equity at the end of the year	361.92
RoE Computation	
Return on Regulatory Equity at the beginning of the year	55.54
Return on Regulatory Equity during the year	0.28
Total Return on Regulatory Equity	**55.82**

Tata Power-G request the Hon'ble Commission to approve the Return on Equity of Rs. 55.82 Crores in case of Unit 8 for FY 2016-17.

3.2.12 Income Tax

320. Income Tax of Unit 8 for FY 2016-17 in line with the requirement of MYT Regulations, 2015 works out as follows:

Table 3-47: Income Tax for Unit 8– FY 2016-17

Rs Crores

Sr.No.	Particulars		Unit 8
1	Total Revenue	A	805.73
2	Less: Incentive and efficiency gains	B	14.26
3	Total Expenses	C	692.70
4	Profit before Tax	D = A - B - C	98.77
5	Tax adjustment		
6	**Add**		
7	Depreciation considered in Expenses	E	61.41
8	Other dissallowance while computing Income Tax	F	15.15
9	Total Tax dissallowances	G = E + F	76.57
10	**Less**		
11	Tax Depreciation	H	57.21
12	Other expenses allowed for computing Income Tax	I	0.01
13	Deduction - U/s 80 IA	J	90.48
14	Total Tax allowances	K = H + I + J	147.70
15	**Total Taxable Income**	**L = D + G - K**	**27.63**
16	Corporate Tax Rate	M	34.61%
17	**Tax Payable at Normal rate**	**N = L*M**	**9.56**
18	**MAT Computation**		
19	**Profit before Tax**	**O**	**98.77**
20	Add: Dissallowances under Income Tax (U/s 14 A, provision for doubtful debt)	P	0.00
21	Less: Deduction under Income Tax (Exempt Income, FBT, Wealth Tax, Withdrawal from Income)	Q	0.00
22	Book Profit	R = O + P - Q	98.77
23	MAT Rate	S	21.3416%
24	**Tax payable under MAT**	**T = R*S**	**21.08**
25	**Tax applicable**	**U = max(N,T)**	**21.08**

While calculating the Income Tax for FY 2016-17, the deduction under 80IA has been considered as per the tax returns filed for FY 2016-17. However, as the tax assessment is yet to be completed any adjustment post completion will be done in the next tariff petition.

Tata Power-G requests the Hon'ble Commission to approve the Income Tax of Rs. 21.08 Crores in case of Unit 8 for FY 2016-17.

3.2.13 Non-Tariff Income for Unit 8

321. The Non-Tariff Income for FY 2016-17 is **Rs. 0.48 Crores** and comprises of the following:

- Recurring Items : **Rs. 0.25 Crores**
- Non-Recurring Items : **Rs. 0.23 Crores**

Table 3-48: Non-Tariff Income for Unit 8 – FY 2016-17

Rs Crores

Particulars	FY 2016-17 (Actuals)
Recurring	**0.25**
Rents	*0.25*
Income from services rendered	*0.00*
Non-Recurring	**0.23**
Delayed Payment Charges	*0.00*
Interest on Delayed Payment	*-0.06*
Interest On Loans & Advances - - Staff.	*0.01*
Sale of Scrap	*0.00*
Other/Miscellaneous receipts	*0.27*
VAT Refund	*0.00*
Liquidated Damages	*0.00*
Sale of Fly Ash	*0.00*
Misc Revenue	*0.01*
Total Non Tariff Income	**0.48**

Tata Power-G requests the Hon'ble Commission to approve the Non-Tariff income of Rs. 0.48 Crores in case of Unit 8 for FY 2016-17.

3.2.14 PLF Incentive

322. As per the Regulation 44.3 and 48.7 of MYT Regulations, 2015, Thermal generation in excess of Ex-Bus energy corresponding to Target Plant Load Factor of 85% is eligible for

PLF Incentive at a flat rate of 25 paise/kWh. The computation of thermal PLF Incentive for FY 2016-17 is presented in the Table below:

Table 3-49: PLF Incentive for Unit 8 – FY 2016-17

Generating Unit	Actual Gross Generation (Mus)	Actual Net Generation with Norm Aux Consumption (MUs)	Net Generation at 85% PLF (MUs)	Energy eligible for Incentive (MUs)	Rate of Incentive (Rs/kWh)	Total Incentive (Rs Crores)
a	b	c	d	e=c-d	f	g=e*f/10
Unit-8	1864.56	1706.07	1703.27	2.80	0.25	0.07

Tata Power-G request the Hon'ble Commission to approve the PLF Incentive of Rs. 0.07 Crores in case of Unit 8 for FY 2016-17.

3.2.15 Sharing of Gains & Losses

323. As described in the earlier sections, the Hon'ble Commission in their MYT Regulations, 2015 have provided the methodology for treatment of sharing of gains and sharing of losses in Regulation 11. Further, Tata Power - G has submitted the actual expenditure under various heads and the reasons for the variations of the same. In this section, the gains and loss on account of controllable factors has been computed and the sharing between the beneficiaries and Tata Power - G has been presented for the approval of the Hon'ble Commission as a part of Truing up exercise for FY 2016-17.

3.2.16 Gains/Losses on account of Heat Rate:

324. As per the Regulation 9.2 (d) of MYT Regulations, 2015, the increase / decrease in the fuel cost due to variation in performance parameters of the Generation Units would be considered as a controllable expenditure. Accordingly, Gains/Losses on account of variation in Heat Rate for Unit 8 of Tata Power-G works out as below:

Table 3-50: Gain / (Loss) due to variation in Heat Rate – FY 2016-17

Rs Crores

Particulars			FY 2016-17
Fuel Cost	**a**	**Rs Cr**	**486.83**
Cost of Generation	b	Rs/Kwh	2.77
Gross Generation	c	Mus	1864.56
Fuel Cost applying Normative Heat Rate	**d= bxc/10**	**Rs Cr**	**517.26**
Net Gains/ (Loss)	e = d - a	Rs Cr	30.43
Passed on to the Distribution Licensees	**f = 2/3 x e**	**Rs Cr**	**20.29**

325. It may be observed from the Table above that Unit 8 was operated at a fuel cost lower than the fuel cost on account of superior operational performance resulting in to actual Heat Rates of FY 2016-17 being lower than the normative values approved by the Hon'ble Commission.

326. The net gain is **Rs. 30.43 Crores.** Accordingly, in line with the Regulation 11 of MYT Regulations, 2015, an Efficiency Gain of **Rs. 20.29 Crores** on account of variation in the Unit Heat Rate has been considered to be passed as rebate in Tariff to the Distribution Licensees for FY 2016-17.

3.2.17 Gains / Losses on account of Auxiliary consumption:

327. As per the Regulation 9.2 (d) of MYT Regulations, 2015, the increase / decrease in the auxiliary consumption due to variation in performance parameters of the generation units i.e. % auxiliary consumption would be considered as a controllable expenditure. The computation of efficiency gain / (loss) on account of variation in the % Auxiliary Consumptions of Unit 8 is as given below:

Table 3-51: Gain / (Loss) due to variation in Aux. Consumption – FY 2016-17

Rs Crores

Particulars			FY 2016-17
Gross Generation	a	MUs	1864.56
% normative Auxiliary	b	%	8.50%
% Actual Auxiliary	c	%	6.20%
Additional Generation	d =a*(b-c)	MUs	42.93
Approved Energy Charges	e	Rs/kWh	2.83
Net Gains/ (Loss)	f=d*e/10	Rs Cr	12.15
Passed on to the Dist. Licensees	**g=f*2/3**	**Rs Cr**	**8.10**

328. As can be seen from the above Table, there is a net gain due to variation in Auxiliary Consumption equal to **Rs. 12.15 Crores**. Accordingly, in line with the Regulation 11 of MYT Regulations, 2015, an Efficiency Gain of **Rs. 8.10 Crores** is considered to be passed on as a rebate in Tariff to the Distribution Licensees for FY 2016-17.

3.2.18 Gain / (Loss) on account of O&M Expenditure

329. As per the Regulation 9.2 (f) of MYT Regulations, 2015, variation in Operation and Maintenance expenses of the Generating Unit would be considered as a controllable expenditure. Accordingly, Tata Power-G has computed the Gain / (Loss) due to variation of O&M expenses for FY 2016-17 as shown in the Table below:

Table 3-52: Gains and Loss due to variation in O&M Expenditure – FY 2016-17

Rs Crores

Sr. No.	Particulars		Unit 8
1	Approved Cost of O & M	a	59.50
2	Actual O & M	b	74.27
3	**O & M Gain / (Loss)**	**c=a-b**	**(14.77)**
4	**Passed to the Dist Licensee**	**d=c*1/3**	**(4.92)**

330. As can be seen from the above Table, there is a net loss due to variation in Operation and Maintenance Expenses equal to **Rs. 14.77 Crores**. Accordingly, in line with the Regulation 11 of MYT Regulations, 2015, an Efficiency loss of **Rs. 4.92 Crores** is considered to be passed on as an additional charge in Tariff to the Distribution Licensees for FY 2016-17.

3.2.19 Gain / (Loss) on account of variation in Interest on Working Capital

331. As per the Regulation 9.2 (e) of MYT Regulations, 2015, the variation in Interest on Working Capital of the generation company would be considered as a controllable expenditure. Accordingly, Tata Power-G has computed the Gain / (Loss) due to variation in Interest on Working Capital for FY 2016-17 as shown in the Table below:

Table 3-53: Gains / Loss due to variation in Interest on Working Capital – FY 2016-17

Rs Crores

Sr. No.	Particulars		Units	Unit 8
1	Interest on Working Capital (IoWC)- Normative	a	Rs Crores	10.33
2	Interest on Working Capital - Actual	b	Rs Crores	19.37
3	Gain / (Loss) due variation over Normative IoWC	c=a-b	Rs Crores	-9.04
4	**Passed to Distribution Licensee**	**d=1/3*c**	**Rs Cr**	**(3.01)**

332. As can be seen from the above Table, there is a net loss due to variation in Interest on Working Capital equal to **Rs. 9.04 crores**. Accordingly, in line with the Regulation 11 of MYT Regulations, 2015, an Efficiency loss of **Rs. 3.01 Crores** is considered to be passed on as additional charge in Tariff to the Distribution Licensees for FY 2016-17.

3.2.20 Revenue from Power Supply

333. Tata Power-G has earned a total Revenue of **Rs. 805.25 Crores** from Tata Power-D and BEST for FY 2016-17 towards Unit 8 generation. The breakup of total revenue earned for the year FY 2016-17 is given as below:

Table 3-54: Revenue from Unit 8 Generation – FY 2016-17

Rs. Crores

Particulars	BEST	Tata Power-D	Total
Energy (Mus)	699.60	1049.40	1749.00
Fixed Charges	107.87	161.80	269.67
Incentive	0.03	0.04	0.07
Energy Charges	214.20	321.29	535.49
Revenue from FBSM final settlement	0.01	0.01	0.02
Total Revenue For Tata power G Unit 8	**322.10**	**483.15**	**805.25**

3.2.21 Net Entitlement and Resultant Gap/ (Surplus)

334. The net entitlement and the Gap / (Surplus) for FY 2016-17 for Unit 8 on the basis of the discussions above is shown in the Table below:

Table 3-55: Aggregate Revenue Requirement - Unit 8 – FY 2016-17

Rs. Crores

Sr. No.	Particulars	Approved in the MYT Order	Entitlement as per the Regulations	Efficiency Gains / (Loss) from Controllable factors shared with Consumers	Net Entitlement after Impact of Gains / (Loss) from Controllable factors
I	**Revenue**	**2.26**	**805.73**		**805.73**
	- Power Supply		805.25		805.25
	- Non-Tariff Income	2.26	0.48		0.48
II	**Expenditure**				
1	Fuel Related Expenses		517.26	20.29	496.98
2	Auxiliary Consumption Benefit	-	12.15	8.10	4.05
3	Operation & Maintenance Expenses	59.50	74.27	(4.92)	64.42
4	Depreciation	-	61.41		61.41
5	Interest on Long-term Loan Capital	56.61	50.81		50.81
6	Interest on Working Capital	15.34	19.37	(3.01)	13.34
7	Other Finance Charges	-	0.57		0.57
8	Income tax	24.49	21.08		21.08
9	Return on Equity	53.19	55.82		55.82
10	**Total Expenditure**	**209.13**	**812.75**	**20.45**	**768.49**
11	PLF Incentive	-	0.07		0.07
12	**Total Including Incentive**	**209.13**	**812.82**		**768.56**
III	**Gap / (Surplus)**				
	Add:				
IV	**Expenditure towards shared capacity of Unit 4 to 7**	**12.50**	**12.50**		**12.50**
V	**Net Gap/(Surplus)**	**219.37**	**19.59**		**(24.67)**

335. As can be seen from the Table above, the surplus for FY 2016-17 which is computed by finding the difference between the Revenue earned for FY 2016-17 and the expenditure of FY 2016-17 is found to be **Rs.24.67 Crores** for Unit 8.

3.2.22 Sharing of Gap/ (Surplus)

336. The sharing of Surplus would be in the ratio of MUs supplied in FY 2016-17 through Unit 8. The share of each Distribution Licensees is given in the Table below:

Table 3-56: Share of the Gap/ (Surplus) – Unit 8 - FY 2016-17

Benefeciaries	Energy Consumed by Beneficiaries in FY 2016-17	Share of Gap/ (Surplus) (Rs. Crores)
BEST	699.60	(9.87)
Tata Power - D	1049.40	(14.80)
Total	**1749.00**	**(24.67)**

337. Tata Power – G requests the Hon'ble Commission consider the above submissions for Truing up of Unit 8 for FY 2016-17.

3.3 Sharing of Gap/ (Surplus) of Tata Power-G – FY 2016-17

338. Based on the computation of Gap / (Surplus) of Unit 5 to 7 & Hydro Stations and Unit 8 for FY 2016-17, sharing of Total Gap surplus of Tata Power-G for FY 2016-17 without carrying cost is presented below. The computation of the carrying cost is presented in the computation of Past Recovery in subsequent sections.

Table 3-57: Share of the Gap/ (Surplus) – Tata Power-G - FY 2016-17

(Rs. Crores)

Particulars	BEST	Tata Power-D	RInfra-D	Total
Gap / (Surplus) of Trombay Station & Hydro for FY 2016-17	-0.74	-0.71	0.00	-1.45
Recovery of Entry Tax for FY 2012-13 (Paid in FY 2016-17)	19.03	19.63		38.66
Final Total Gap/(Surplus) for FY 2016-17 w/o carrying cost	**18.29**	**18.92**	**0.00**	**37.21**

b) **Gap / (Surplus) of Unit 8**

Particulars	BEST	Tata Power-D	RInfra-D	Total
Gap / (Surplus) of Unit 8 for FY 2016-17	-9.87	-14.80	0.00	-24.67
Additional Impact of Unit 8 Insurance Claim Settlement				
Final Total Gap/(Surplus) for FY 2016-17 w/o carrying cost	**-9.87**	**-14.80**	**0.00**	**-24.67**

c) Total Gap Surplus of Tata Power-G w/o CC

Particulars	BEST	Tata Power-D	RInfra-D	Total
Total Gap/(Surplus) of Tata Power-G for FY 2016-17 w/o carrying cost	**8.42**	**4.12**	**0.00**	**12.54**

Tata Power-G requests the Hon'ble Commission to approve the total Gap of Rs. 12.54 Crores for FY 2016-17 and the sharing amongst the Distribution Licensees.

3.4 Additional Capitalisation based on Insurance Claim Settlement toward Unit 8 Fire Incident in FY 2013-14:

339. The Hon'ble Commission in its MYT Order in Case No. 32 of 2016 while recognizing the Unit 8 fire incident happened in FY 2013-14 as a force majeure, had mentioned as follows regarding the consideration of insurance claim settlement of Trombay Unit 8 for the purpose of gain / loss calculations pertaining to Truing up of FY 2014-15:

> *4.4.15.26 As regards the insurance claim, the Commission notes that, since some work is still in progress, the final claim settlement is not possible at this stage. Accordingly, the Commission has not considered the amount pertaining to this while computing the gains and losses for FY 2014-15. It would take it up issue in the subsequent MTR exercise, at which time TPC-G should submit the details of expenditure incurred on*

restoration of Unit-8, insurance claimed, insurance received and other relevant information.

4.4.15.27 The Commission notes that TPC-G has provided detailed responses to the directives in the MTR Order along with supporting material. After examining these, the Commission is of the view that the forced outage of Unit-8 on 9 January, 2014 was a Force Majeure event beyond the control of TPC-G. Accordingly, the Commission allows the pro rata reduction in the AFC for Unit-8 based on the methodology in the MTR Order."

340. Accordingly, Tata Power-G is submitting following details pertaining to Insurance claim settlement for damage to Unit 8 on account of incident happened on 9th January 2014. As an outcome of the series of discussions and site visits of Insurance personnel, Tata Power-G had raised an insurance claim of Rs. 174.02 Crores to the insurance company towards the expenditure incurred for the restoration of Unit 8. After detailed rounds of discussions with the Insurance company officials, the claim was finally settled during FY 2016-17. The final amount approved by the Insurance Company in line with the provisions of the insurance policy availed by Tata Power-G stands at Rs. 144.29 Crores. Considering this, Rs. 29.46 Crores cannot be recovered by Tata Power-G based on the critera followed by the Insurance Company as per the Insurance Policy while approving the claim. Further, Tata Power-G has received an amount of Rs. 0.27 Crores through sale of scrap generated from the unit restoration activity. Accordingly, the net amount not recovered is Rs. 29.46 Crores.

341. The details of this expenditure not recovered are described below:

- **Civil Maintenance related expenditure (Rs. 6.55 Crores):**

a) Painting of de-aerator i.e. an equipment installed on boiler structure, Transformer & Auxiliary transformer was carried out worth Rs. 5.4 Crores. The debris & fumes had affected the equipment exterior and the power plant being in a highly corrosive atmosphere, this painting was necessary to keep the critical equipment in good condition. However, this was not agreed by the Insurance company.

b) Further, an expenditure of Rs. 1.08 Crores was not considered by the Insurance Company on an adhoc basis citing a hyper technical reason that the painting work execution was beyond restoration cut-off date of 21st November, 2014. The Hon'ble Commission would appreciate the fact that the unit commissioning activities were more important and hence were given preference over the less critical jobs like painting activity. Further, certain painting could be carried out only after the completion of recommissioning activities.

c) An expenditure of Rs. 0.08 Crores related to flooring & upkeeping of affected areas, testing of concrete & carpentry work to send the affected material to BHEL for repairs was disallowed though pertaining to the repair activity.

342. It is pertinent to note that all the above-mentioned activities were required to bring the unit back to its normal and safe operating situation as on before the accident took place. However, this legitimate expenditure of Rs. 6.55 Crores was not considered based on their understanding.

- **Receipt of material post recommissioning (Rs. 3.88 Crores).**

343. For quick mobilization of material and manpower, an Open order was placed on M/s BHEL to supply Turbine spares from its various divisions. Tata Power-G received the material and services worth Rs. 3.88 crores. This amount was not allowed by the insurance only on a hyper technical reason that these are received after the resynchronisation of Unit 8 and hence can not be allowed as per the provisions of the Insurance Policy.

344. Regarding this, we wish to submit that the said expenditure has been done primarily for the procurement of new Turbine Bearings (02 nos.) from M/s BHEL. The fire incident at Unit 8 had resulted into serious damage to the Turbine Bearings (04 nos.) which mandated its replacement. Further, dismantling of the Turbine was possible only after replacement of all four damaged bearings by using spare bearings available at stores. In

such event, Tata Power-G had only two options i.e. either dismantle the turbine by using the spare Bearings available in stores and return them to stores after getting them repaired from M/s BHEL OR wait for receipt of the new bearings from M/s BHEL to carry out the dismantling of the machine.

345. In the interest of time to bring the Unit back in Operation as early as possible, Tata Power-G exercised the first option of using the spare bearings available at its stores for immediate dismantling of the unit. The standard lead time of procurement of these bearings as per BHEL is around 18 Months, which could have been brought down maximum possible to 5 to 6 months. However, this option if exercised would have resulted in delay in recommissioning of Unit 8 by another 5 to 6 months leading to non-availability of coal based generation to Mumbai consumers. Subsequently, out of four spare bearings used for dismantling, sent thereafter for carrying out repairs at BHEL, two bearings were received on 29.10.2015 i.e. almost one year after the resynchronization of Unit 8 on 21st November, 2014.

346. However, the intention with which the spare bearings were used to facilitate the dismantling of turbine could not stand the test of the provisions of insurance policy purely on a technical ground as two out of four bearings were received after resynchronisation of Unit 8 and the expenditure of these bearings was disallowed by the Insurance Company on a hyper technical reason that the new bearings were not actually utilised for unit restoration activities.

347. Hence, considering the above, Tata Power-G request the Hon'ble Commission to approve the expense of Rs. 3.88 crores as a part of capitalisation during FY 2014-15.

- **Procurement of services of M/s Siemens for investigation of blade material and Steam Turbine (Rs. 1.06 Crores):**

348. We wish to submit that the said expenditure has been done for procurement of service of M/s Siemens for carrying out the investigation of blade material as well as Steam Turbine. This legitimate expenditure was not considered by the Insurance Company on a

hyper technical reason as the same has not been carried out by the OEM of the machine i.e. M/s BHEL (Bharat Heavy Electrical Limited). But the same was not considered to be a part of repairs. However, we wish to submit that, the said services of M/s Siemens were procured in discussion with M/s BHEL as the required study is not currently being done by them. In fact, to the best of our knowledge, M/s BHEL had asked M/s Siemens to provide technical support for carry out similar studies of Root Cause Analysis of Steam Turbine supplied for Suratgarh Plant's Unit no. 6 which was supplied by M/s BHEL.

- **Expenses towards Electrical and Instrumentation activities (Rs. 0.17 Crores):**
- **Standard Deductions applicable to the Insurance Policy (Rs. 9.60 Crores):**

349. We wish to submit that the Insurance Policy has certain provisions towards the standard deduction which it applies to any claim filed by the insurer. The applicable clauses and the deductions thereto has been explained below:

a. Deductible Clause:

The Deductible clause of Large Risk Insurance Policy taken by Tata Power-G mentions as follows:

Deductible: 5% of the Claim subject to a minimum of Rs. 50 Lakhs.

Accordingly, Insurance Company has deducted Rs. 7.59 Crores from the final claim of Rs. 174.02 Crores.

b. Exclusion Clause:

Exclusion clause 8.2.6 of Large Risk Insurance Policy taken by Tata Power-G mentions as follows:

Clause 8.2: Perils Excluded: The insurer shall not be liable for

….

Clause 8.2.6: wear and tear, rust, corrosion, erosion, cavitation, boiler scale, incrustation, deterioration, settling, gradual cracking, gradual developing deformation or distortion, gradual deterioration due to *atmospheric conditions or due to other causes, but this exclusion shall be limited to the items immediately affected and shall not exclude liability for loss or damage to other parts of the property insured as a consequence thereof;*

….

Accordingly, Insurance Company has deducted Rs. 2.00 Crores towards the fatigue failure and change in metallurgy, from the final claim of Rs. 174.02 Crores.

- **Stores material issued in recommissioning (Rs. 2.38 Crores):**

350. We wish to submit that there were many such material like small bearings, lamps, clamps, fasteners etc. which were used at site during a continuous process of recommissioning. However, these items though used in actual were not allowed with a reason that these large numbers of items cannot be identified at site. However, we wish to submit that the said material has been used for the purpose of recommissioning.

351. The expenditures described above were legitimate expenditures carried out for the repairs of Unit 8, however, they were not considered based on technical clauses and the understanding of the Insurance Company. Hence, we request the Hon’ble Commission to allow this expenditure as an additional capitalization towards Unit 8. The total amount proposed to be recovered vis a vis the total amount of Rs. 29.46 Crores not considered by the Hon’ble Commission is presented in the Table below:

Table 3-58: Additional Capitalisation in FY 2014-15 – Unit 8

Sr. No.	Claim Area	Amount claimed from Insurance	Amount Approved	Total	Amount Claimed
A	**Expenses Against Purchase Orders**	**166.55**	**154.68**	**11.87**	
1	*Civil Maintenance Department*	*16.09*	*9.54*	*6.55*	*6.55*
2	*Electrical Maintenance Department*	*2.79*	*2.63*	*0.16*	*0.16*
3	*Instrumentation Maintenance Department*	*0.95*	*0.93*	*0.02*	*0.02*
4	*Mechanical Maintenance Department*	*146.72*	*141.78*	*4.94*	*4.94*
5	*VAT Credit*	*included above*	*-0.20*	*0.20*	*0.00*
B	**Expenses Against Purchase Orders not considered in (A)**	**0.36**	**0**	**0.36**	**0.36**
C	**Expenses not supported by Purchase Orders**	**0.02**	**0**	**0.02**	**0.02**
D	**Expenses Against Stores Material issued in FY'14**	**1.60**	**0**	**1.6**	**1.6**
E	**Expenses Against Stores Material issued in FY'15**	**-0.40**	**0**	**-0.4**	**-0.4**
F	**Expenses Against Stores Material issued in FY'16**	**0.80**	**0**	**0.8**	**0.8**
G	**IDC Charged for Project**	**4.63**	**0**	**4.63**	**0**
H	**Staff Cost apportioned for Project**	**0.46**	**0**	**0.46**	**0**
I	**Deductions as per Policy**	**0.00**	**-10.39**	**10.39**	
1	*For Fatigue Failure & Change in*	*0.00*	*-2.00*	*2.00*	*2.00*
2	*Salvage*	*0.00*	*-0.79*	*0.79*	*0.00*
3	*Policy Excess @ 5%*	*0.00*	*-7.59*	*7.59*	*7.59*
J	**Net Claim Approved**	**174.02**	**144.29**	**29.73**	
K	Amount received from Scrap generated @ Trombay Unit 8	*0.00*	*0.27*		*0.00*
L	**Total Amount received by Tata Power-G**	**174.02**	**144.56**	**29.46**	**23.65**

In view of the above, Tata Power-G requests the Hon'ble Commission to approve the Capitalisation of Rs. 23.65 crores in FY 2014-15 which was made towards the reinstatement of Unit 8 assets.

The impact of the above has been presented below:

3.4.1 Impact on Capitalisation for FY 2014-15

352. The impact of the above capitalisation of Rs. 23.65 Crores is as follows:

Table 3-59: Revised Capitalisation for FY 2014-15

Rs Crores

Particulars	FY 2014-15
Total Capitalisation allowed for FY 2014-15 *(Refer Table 57, Page 104 of Order in Case 32 of 2016)*	46.89
Add: Capitalisation based on Insurance Claim Settlement towards Unit 8 Fire Incident in FY 2013-14	23.65
Revised Capitalisation	**70.54**

3.4.2 Impact on GFA for FY 2014-15

353. Further, on account of additional capitalisation requested for FY 2014-15 as above, the closing GFA for FY 2014-15 will be as follows:

Table 3-60: Revised Closing GFA for FY 2014-15

Rs. Crores

Particulars	FY 2014-15
Closing GFA approved for FY 2014-15 *(Refer Table 60 , Page 107 of Order in Case 32 of 2016)*	1143.88
Add GFA for Insurance Claim Settlement towards Unt 8 Fire Incident in FY 2013-14	23.65
Revised Closing GFA for FY 2014-15	**1167.53**

3.4.3 Additional Depreciation for FY 2014-15

Table 3-61: Revised Depreciation for FY 2014-15

Rs Crores

Particulars	Approved FY 2014-15	Revised FY 2014-15
Opening GFA	1097.42	1097.42
Addition	46.89	70.54
Retirement	-0.43	-0.43
Closing GFA	1143.88	1167.53
Depreciation Rate	5.15%	5.15%
Depreciation as per revised capitalization	57.69	58.30
Impact on Depreciation		**0.61**

3.4.4 Additional Interest on Loan for FY 2014-15

Table 3-62: Revised Interest on Loan for FY 2014-15

Rs Crores

Particulars		Approved FY 2014-15	Revised FY 2014-15
Average Interest rate (%)	a	11.08%	11.08%
Openining balance of loan	b	561.58	561.58
Capitalisation	c	46.89	70.54
Drawal during the year	d=c*70%	32.82	49.38
Repayment	e	57.69	58.30
Closing balance of loan	f=b+c-d	536.71	552.66
Interest on Loan	g=(b+f)/2*a	**60.85**	**61.73**
Additional Interest on Loan for FY 2014-15	**h=g2-g1**		**0.88**

3.4.5 Net Impact of Additional Capitalisation for FY 2014-15

354. The net impact of the additional capitalisation FY 2014-15 is as shown in the Table below:

Table 3-63: Net Impact of additional capitalisation FY 2014-15

Rs Crores

Particulars	Approved in Review Order
Interest on Loan	0.88
Depreciation	0.61
Total Impact	**1.49**

355. The impact of the additional capitalisation and its associated carrying cost has been shown in the Past Recovery section in this Petition. We request the Hon'ble Commission to approve the same.

4. PROVISIONAL TRUING UP FOR FY 2017-18

356. This section discusses and presents the estimated performance of Tata Power-G for FY 2017-18. The estimated performance has been compared with the performance approved by the Hon'ble Commission in its MYT Order dated 8th August 2016 in Case No. 32 of 2016. A projection for the second half of the year has also been drawn based on the actual performance of H1 of FY 2017-18 and MYT projections made for the FY 2017-18.

357. In addition to the above, we have made detailed submissions with respect to:

- Transfer of Certain Assets from Tata Power-G to the Transmission Business of Tata Power (Tata Power-T) and the consequent financial impact to be considered during FY 2017-18.

- Past Recovery pertaining to additional Custom Duty paid on Imported Coal Shipments received during the period 17th March, 2012 to 27th February, 2013.

358. The estimated performance of Tata Power-G for FY 2017-18 for the purpose of provisional truing up is outlined below:

4.1 Performance of Unit 4 to 7 and Hydro Generating Stations

359. The estimated operational as well as financial performance of Unit 4 to 7 (Thermal) and the Hydro Generating Stations of Tata Power-G for FY 2017-18 is presented in the sections below:

Operational Performance - FY 2017-18

4.1.1 Generation

360. The actual generation of Tata Power-G for H1 FY 2017-18 and the estimated generation for H2 FY 2017-18 is provided in the following table:

Table 4-1: Gross Generation of Unit 4 to 7 & Hydro Stations for FY 2017-18

MUs

Generating Unit	MYT Order (Approved)	FY 2017-18 H1 (Actual)	FY 2017-18 H2 (Provisional)	FY 2017-18 (Estimate)	Difference
Hydro Stations					
Khopoli	274	173.04	135.78	308.82	34.82
Bhivpuri	297	126.20	191.55	317.75	20.75
Bhira	899	490.05	405.21	895.26	-3.74
Total Hydro	**1470**	**789.29**	**732.54**	**1,521.82**	**51.82**
Thermal					
Unit 5	3723	1701.80	1442.84	3,144.64	-578.36
Unit 6	0	0	0	-	-
Unit 6 (under MSLDC direction)	0	0	0	-	-
Unit 7	884	674.15	629.41	1,303.56	419.44
Total Thermal	**4607**	**2375.95**	**2072.25**	**4,448.20**	**-158.92**
Total	**6077**	**3165.24**	**2804.79**	**5970.03**	**-107.09**

361. As seen from the Table above, it is estimated that the Thermal and Hydro Generating Stations would together achieve a generation of **5970.03 MUs.** The unit wise operational performance details are as explained below:

Unit 4:

362. Unit 4 has been decommissioned in FY 2016-17 and has not been in service for the last four years. Accordingly, there is no generation of Unit 4 for this financial year.

Unit 5:

363. The Unit has achieved a generation of **1701.80 MUs** in H1 of FY 2017-18. Based on the Availability of the Unit and its position in the MoD, the estimated generation for H2 of FY 2017-18 is **1442.84 MUs**. Thus, Unit 5 is expected to generate **3,144.64 MUs i**n FY 2017-18 which is lower than the gross generation approved by the Hon'ble Commission in the MYT Order for FY 2017-18 on account of low system demand.

Unit 6:

364. Unit 6 of Tata Power-G is placed higher in the Merit Order Dispatch (MoD) on account of its variable cost being very high. Further, as the Hon'ble Commission is aware, the Unit 6 is under economic shutdown based on the request of its beneficiaries i.e. Tata Power-D and BEST. Accordingly, there has been no generation in H1 of FY 2017-18 and the same trend is expected in H2 of FY 2017-18 by this Unit.

Unit 7:

365. The Unit has generated **674.15 MUs** in H1 of FY 2017-18. The estimated generation in H2 of FY 2017-18 is **629.41 MUs** based on the generation of H1 and the estimated availability in H2. Thus the estimated generation of **1303.56 MUs** for the year is higher than the approved generation in the MYT Order. This is mainly on account of higher gas availability in FY 2017-18.

Hydro Generating Stations:

366. The total actual Hydro generation for H1 FY 2017-18 is **789.29 MUs** and the estimated generation for H2 FY 2017-18 is **732.54 MUs** resulting in a total estimated generation of **1,521.82 MUs**.

Accordingly, Tata Power-G requests the Hon'ble Commission to provisionally approve the Gross Generation of 5970 MUs for Unit 4 to 7 and Hydro Generating Stations for FY 2017-18.

4.1.2 Heat Rate

367. Heat Rates for the Thermal Generating Units in comparison with that of the norms approved in the MYT Tariff Order is as follows:

Table 4-2: Heat Rate of Thermal Generating Units - FY 2017-18

(kcal/kWh)

Generating Unit	As per MYT Regulations	FY 2017-18 H1 (Actual)	FY 2017-18 H2 (Provisional)	FY 2017-18 (Estimate)	Difference
Unit 5	2533	2530	2524	2527	-6
Unit 6 -Regulated	2549	0	0	0	-2549
Unit 7	2027	2014	2045	2030	3

Unit 5:

368. The Heat Rate of Unit 5 is expected to be lower than the Normative Heat Rate as per the MYT Regulations, 2015. We request the Hon'ble Commission to provisionally approve the same.

Unit 6:

369. The Unit 6 has been under an economic shutdown mode and is expected to remain shut for the remainder of the year.

Unit 7:

370. The estimated Heat Rate of Unit 7 is expected to be marginally higher than the approved norm for FY 2017-18 mainly on account of lower PLF during Q2 of FY 2017-18 due to lower availability of fuel gas. Tata Power-G requests the Hon'ble Commission to

provisionally approve the estimated heat rate of 2030 kcal / kWh for the year FY 2017-18.

4.1.3 Auxiliary Consumption

371. The Auxiliary Consumption for the Thermal Generating Units at Trombay and Hydro Generating Stations for FY 2017-18 is as given in the table below:

Table 4-3 Auxiliary Consumption of Unit 4 to 7 & Hydro Generating Stations for FY 2017-18

%

Generating Unit	Approved	FY 2017-18 H1 (Actual)	FY 2017-18 H2 (Provisional)	FY 2017-18 (Estimate)	Difference
Hydro- W/O colony Consumption	1.55%	2.51%	2.03%	2.28%	0.73%
Unit 5	6.00%	5.43%	6.03%	5.70%	-0.30%
Unit 6 Under Regulated*	3.50%	10.05	11.47	21.52	21.52
Unit 7	3.00%	2.91%	2.97%	2.94%	-0.06%

Note: Unit 6 Aux consumption is in MUs

Thermal Generating Stations

Unit 5 and Unit 7

372. As seen from the above Table, the Auxiliary Consumption in the case of Unit 5 and Unit 7 is within the norms specified by the Hon'ble Commission. Tata Power-G requests the Hon'ble Commission to provisionally approve the estimated Auxiliary Consumption of 5.70% and 2.94% for Unit 5 and Unit 7 respectively.

Unit 6

373. As per submission made in the previous paragraphs of Truing up of FY 2015-16 and 2016-17 above, Unit 6 of Tata Power-G, like any other Generating Unit needs basic minimum amount of energy to keep it and its critical auxiliaries in service worthy condition. Further, during H1 of FY 2017-18, the Unit was not required to operate and it is considered that it may not be required to operate in H2 of FY 2017-18 either. Considering this, although the Unit is required to be available, there would be no

generation from this Unit. Under this condition and as explained in previous section, Auxiliary Consumption under standby mode is required for Unit 6. Accordingly**,** Tata Power-G requests the Hon'ble Commission to provisionally approve the estimated Auxiliary Consumption of 21.52 MUs for FY 2017-18.

Hydro Generating Stations

374. The estimated Auxiliary Consumption of the Hydro Generating Stations for FY 2017-18 is **2.29%**. Tata Power-G requests the Hon'ble Commission to provisionally approve the estimated auxiliary consumption of 2.29% of the Hydro Generating Stations for FY 2017-18.

4.1.4 Availability

375. The estimated availability for the year FY 2017-18 is tabulated below:

Table 4-4: Availability of Unit 4 to 7 & Hydro Stations for FY 2017-18

%

Station	FY 2017-18				Difference
	Normative	H1 (Actual)	H2 (Projection)	Estimation	
Thermal					
Unit 5	97.4%	98%	90%	94%	-4%
Unit 6	92.5%	100%	100%	100%	8%
Unit 7	97.4%	96%	100%	98%	1%
Hydro					
Khopoli	99.58%	100%	100%	100%	0%
Bhivpuri	98.18%	99%	100%	99%	1%
Bhira	96.39%	100%	97%	98%	2%

Thermal Generating Stations:

376. As can be seen from the above table, the estimated availability of all Thermal Generating Units is greater than the normative availability of 85% as specified in Regulation 44.1 of the MYT Regulations, 2015.

Hydro Generating Stations:

377. The estimated Annual Availability of all Hydro Generating Stations is higher than the normative availability of 85% as specified in Regulation 44.1 of the MYT Regulations, 2015.

Financial Performance - FY 2017-18

378. The estimated financial performance of the Thermal Generating Station and the Hydro Generating Stations in FY 2017-18 under the various heads is stated in the sections below:

4.1.5 Fuel Cost

379. The estimated total fuel cost for FY 2017-18 is **Rs 1245.34 Crores**. The details of the various fuel related parameters are given in the Table below:

Table 4-5: Fuel Cost of Unit 4 to 7 & Hydro Generating Stations for FY 2017-18

Particulars	MYT Order	FY 2017-18 H1 (Actual)	FY 2017-18 H2 (Provisional)	FY 2017-18 (Estimate)
Consumption (MT)				
Gas - APM		*126757*	*97948*	224706
Gas - NAPM		*233*	*0*	233
Gas - RLNG		*202*	*1263*	1465
Coal		*853575*	*757227*	1610802
Oil (combined)		*207*	*563*	770
GCV (kcal/kg)				
Gas - APM	13157	13118	13140	13127
Gas - NAPM	13163	13168	0	13168
Gas - RLNG	13085	13107	13014	13027
Coal	4888	4679	4780	4726
Oil	10459	10327	10376	10365
Price (Rs./MT)				
Gas - APM	14857	9434	10827	10041
Gas - NAPM	15217	9813	0	9813
Gas - RLNG	28526	36619	38924	38606
Coal	5003	5988	6584	6268
Oil	51605	52975	54115	53809
Total Fuel Cost (Rs. Crores)		**632.77**	**612.58**	**1245.34**

380. It is submitted that Tata Power-G would continue to use the fuels as have been used in the past i.e. Imported Coal, Domestic Natural Gas (under APM mechanism), Oil (LSHS) and Imported RLNG (Regasified Liquid Natural Gas) for its Generating Units at Trombay.

381. Tata Power-G, has considered the actual fuel cost of H1 FY 2017-18. For computing the fuel cost for the balance period of FY 2017-18, based on its interaction with market and internal research, Tata Power-G has considered the following:

382. The price of APM and Non-APM gas reduced drastically by almost 37% compared to the MYT Order approved figures whereas the RLNG price has increased by around 28%. The price of coal has also risen by around 20% while Oil has marginally increased by around 3%. For estimating the fuel prices for H2 of FY 2017-18, average of the fuel prices of the last three months have been considered.

383. Accordingly, Tata Power-G requests the Hon'ble Commission to provisionally approve the fuel cost for the Thermal Generating Units 5, 6 and 7 for FY 2017-18 at **Rs. 1245.34 Crores**.

4.1.6 Additional Custom Duty on Imported Coal

384. Tata Power-G procures Imported Coal for its Thermal Generating Units 5 and 8 at Trombay. As per the prevalent rules, this imported coal falls under the category of "steaming Non-coking coal" and does not attract Basic Custom Duty ("BCD") or in other words 'Nil' rate of BCD is applicable along with 1% of Countervailing Duties ("CVD") as per Government of India notification No. 12/2012 dated 17th March, 2012 (Refer **Annexure 4-1**).

385. A similar procurement of 2564176 MT of imported coal made by Tata Power-G during 17.03.2012 to 27.02.2013 was taken up for scrutiny and detailed investigation was carried out by The Special Intelligence and Investigation Branch ("SIIB") of the customs. During the investigation of SIIB (I), on the basis of calculation based on universal formulae, it was declared that the coal imported by Tata Power-G is not a "steaming Non-coking coal" but it falls under "Bituminous Coal" having a volatile matter limit exceeding 14% and a calorific value limit more than 5833 kcal/kg, which is not eligible for Basic Custom Duty exemption.

386. Subsequently, Tata Power-G was directed to make the payment of differential Custom Duty amount of 11% for 46 shipments amounting to 71 bills. As directed, Tata Power-G has paid the differential duty on the bill of entries (8 Nos.) assessed during the period from 17/03/2012 to 30/04/2012 for an amount of Rs. 17,14,04,122/- (Rs. 17.14 Crores) under protest vide our letter dated 14/03/2013. (Refer **Annexure 4-2**)

387. Subsequently, a letter was received from office of the Commissioner of Customs, SIIB(I) to Tata Power-G stating that total differential duty payable was Rs. 135,52,44,996/- (Rs.

135.52 Crores) and directed Tata Power-G to pay the balance of Rs. 118,38,40,875/- (Rs. 118.38 Crores).

388. Tata Power-G has paid the differential duty of Rs. 118,38,40,875/- (Rs. 118.38 Crores) under protest vide letter dated 26th March, 2013. (Refer **Annexure 4-3** to this submission).

389. Accordingly, Tata Power-G has paid Rs. 135,52,44,996/- (Rs. 135.52 Crores) towards differential Custom Duty demanded by Customs on account of classifying the imported Coal under "Bituminous Coal" (11 % Customs Duty) instead of "Steam Coal" (1 % Customs Duty). Tata Power-G has made this payment under protest, without prejudice to their rights and contentions for 46 coal shipments received during the period from 17th March, 2012 to 27th February, 2013.

390. The office of the Commissioner of Customs (import) issued a detailed order on the matter on 12th June, 2014 upholding the stand of Customs. The Order is enclosed as **Annexure 4-4** to this letter. Tata Power-G had filed an appeal with Custom, Excise and Service Tax Appellate Tribunal (CESTAT) on 27th August, 2014 against this Order.

391. However, the issue involved was common for various importers all over India and various appeals were raised, hence, it was decided by the CESTAT to constitute a larger bench and hear all matters comprehensively. The extract of the order dated 9th October, 2015 is reproduced below -

> *"4. Since the issue involved is common for various importers all over India, the matter involving many appeals were referred to the Larger Bench…"*

392. As given in the interim order nos.4-96/2017 dated 31st January, 2017, regarding the classification of the coal, different benches of CESTAT have taken different views at the instance of the parties. The Chennai, Ahmedabad and Mumbai Benches, prima facie, considered these as 'Steam Coal' attracting no duty. On the other hand, Bangalore

Bench of the CESTAT considered it as 'Bituminous Coal' attracting duty of 5%. This decision of the Bangalore Bench, where the coal was considered as 'Bituminous Coal' was challenged by some of the aggrieved before the Hon'ble Supreme Court.

393. During the course of arguments in CESTAT, it was informed that the matter is subjudice before the Hon'ble Supreme Court. In the view of this, the Larger Bench Passed an interim order dated 16th January, 2017 and liberty granted to the applicants to come again before the Tribunal after having the final verdict from the Apex Court.

394. It is pertinent to note that since the matter was subjudice, Tata Power-G did not include this amount in the fuel cost for the year FY 2011-12 and FY 2012-13 during ARR. Hence, the same was not recovered from BEST and Tata Power-D at that point of time.

395. However, in view of the uncertainty post the Order from CESTAT dated 16th January, 2017, the matter being subjudice with the Hon'ble Supreme Court and the fact that Tata Power-G has already paid this amount under protest, Tata Power-G has raised the bills on BEST and Tata Power-D to recover the aforesaid Additional Customs Duty amount paid, as per the Table shown below:

Table 4-6: Amount billed to BEST & Tata Power-D for past recovery of Additional Custom Duty

Particulars			BEST	Tata Power-D	Total
Unit 5					
Share of Distribution Licensees as per PPA	%	a	51.17%	48.83%	100.00%
Generation share during the period March, 2012 to February, 2013	Mus	b=a*B	1842.97	1,758.69	3601.665
Unit 8					
Share of Distribution Licensees as per PPA	%	c	40.00%	60.00%	100.00%
Generation share during the period March, 2012 to February, 2013	MUs	d=c*D	708.74	1,063.11	1771.84
Total Generation Share	MUs	e=b+d	2551.71	2,821.80	5373.51
Ratio	%	f=e/E	47.49%	52.51%	100%
Custom Duty Share	Rs. Crores	g=f*G	**64.36**	**71.17**	**135.53**

396. Considering the above submission, we request the Hon'ble Commission to consider this amount in the ARR for FY 2017-18. It may be noted that this amount does not include any interest accrued on the said additional duty paid. Further it may be noted that Tata Power-D has initiated the payments in instalments however, BEST has stated that they would pay based on the approval of the Hon'ble Commission. Accordingly, we have not considered the amount of Rs 64.36 Crores billed to BEST in the billed revenue of FY 2017-18.

4.1.7 Transfer of Assets from Generation Business

397. As the Hon'ble Commission is aware, Tata Power is an integrated Utility having the Businesses of Generation, Transmission and Distribution. Consequent to the enactment of the Electricity Act, 2003 and the subsequent directives of this Hon'ble Commission, the Generation (Tata Power-G), Transmission (Tata Power-T) and Distribution Businesses (Tata Power-D) of Tata Power have been operating as separate regulated entities.

398. We are proposing transfer of certain assets from the Trombay Generating Station to the Transmission Business and the same is described in detail as below:

399. The Trombay Generating Station was established in 1956 and originally had 3 generating Units viz. Unit 1, Unit 2, and Unit 3. In the year 1965, Unit 4 was commissioned at Trombay. All these Units were connected to the intra-state Transmission System of Maharashtra through 110 kV switchyard and its associated equipment at Trombay.

400. The 110 kV switchyard at Trombay is connected to many of the critical Transmission Receiving Stations like Carnac, Dharavi, Parel, Chembur etc. and is one of the tie points with the MSETCL Transmission Network. In addition, there are certain consumers who have been provided outlets from the 110 kV Switchyard.

401. Further, there is a 22 kV switchyard at Trombay which gets the power through 4 nos. three winding 110 kV / 22 kV / 3.3 kV Distribution Transformers. The outlets from this switchyard are primarily used to provide power supply to consumers. The tertiary winding at 3.3 kV is further step down to 415 V and is used to meet all the auxiliary consumption of the 110 kV switchyard along with associated equipment. (The Single Line Diagrams are enclosed as **Annexure 4-5** to this submission.)

402. In the 1980s and 1990s additional Units 5, 6 and 7 were added at Trombay and a separate 220 kV switchyard was constructed to transmit the power generated to the load centres. Subsequently, Unit 8 which was commissioned in 2010, was also connected to the 220 kV switchyard. The 220 kV switchyard was connected to the 110 kV switchyard through 2 Interconnecting Transformers (ICTs).

403. The Unit 1, Unit 2 and Unit 3 were decommissioned in the years 1994, 1993 and 1992 respectively after they had served their useful life. Subsequently, Unit 4 was decommissioned in FY 2016-17.

404. However, the 110 kV switchyard continues to remain connected to the Receiving Stations in Mumbai, MSETCL and the consumers as mentioned above. With the decommissioning of the Generating Units 1, 2, 3 and 4 the 110 kV switchyard and all the associated equipment now serves as a Transmission Receiving Station. In view of this, it is proposed to transfer these assets to the Transmission Business of Tata Power (Tata Power-T) which is a Transmission Licensee.

405. The list of Assets to be transferred is enclosed as **Annexure 4-6**.

406. The financial impact of this transfer and the consequent impact on the ARR of Tata Power-G is discussed below:

407. The transfer is considered to be taken into effect from 1st April, 2017. Accordingly, with this proposed transfer of assets, GFA of Rs. 53.94 Crores (pertaining to 110 kV

switchyard, 22 kV switchyard, 3.3 kV and 415 V equipment and all other associated equipment) will get added to asset base of Tata Power-T and the same amount of assets will get reduced from Tata Power-G.

408. Accordingly, the opening GFA of FY 2017-18 for Tata Power-G would be the closing GFA of FY 2016-17 as arrived at in the previous section minus the GFA of the assets to be transferred from Tata Power-G to Tata Power-T. Further, considering Debt: Equity ratio of 70:30, the opening equity has also been computed. The same is as shown in the Tables below:

Table 4-7: GFA Excluding Transfer of Assets - FY 2017-18

Rs Crore

Particulars		FY 2017-18
Opening GFA of FY 2017-18	a	4,377.04
Less: GFA of Assets to be transferred	b	53.94
Opening GFA of FY 2017-18 including assets to be transferred	**c=a-b**	**4,323.10**

409. Similarly, opening equity for FY 2017-18 considering the transfer of assets is as shown in the Table below:

Table 4-8: Opening Equity excluding Transfer of Assets - FY 2017-18

Rs Crore

Particulars		FY 2017-18
Opening Equity of FY 2017-18	a	1,583.81
Reduce Equity of Assets to be transferred	b	16.18
Opening Equity including Assets to be transferred	**c=a-b**	**1,567.63**

410. The Depreciation of assets to be transferred has been considered in the Depreciation computation in the section below in line with the provisions of MYT Regulations, 2015.

411. Further, the Loan for the assets to be transferred has to be considered only for those assets whose Depreciation is less than 70%. Accordingly, the assets prior to FY 2015-16 have depreciated beyond 70%. Hence, for the purpose of arriving at the opening loan, the assets added during FY 2015-16 and FY 2016-17 have been considered and applying the Debt: Equity Ratio of 70:30, the Opening Loan amount has been arrived at as shown in the Table below:

Table 4-9: Opening Loan for assets to be transferred - FY 2017-18

Rs Crore

Loan		FY 2015-16	FY 2016-17
Opening Balance	a	-	14.49
Asset added during the year	b	23.41	15.83
Addition of loan	c=b*70%	16.39	11.08
Repayment = Depreciation	d	(1.90)	(5.90)
Closing	**e=a+c+d**	**14.49**	**19.67**

412. As can be seen from the above Table, the Opening Loan for assets to be transferred for FY 2017-18 works out to **Rs. 19.67 Crores**.

413. With respect to the O&M expenditure for these assets, it is submitted that the O&M expenditure for the Generating Station is on an overall basis and it would be very difficult to derive the normative O&M expenditure for the assets to be transferred from the overall O&M expenditure provided for the Generating Station. However, there is a bay wise and line circuit km. (ckt. km.) wise norm provided for the Transmission Licensees in the MYT Regulations, 2015. These norms and the number of bays and lines to be transferred at various voltage levels have been used to arrive at the O&M expenditure for the assets to be transferred. Accordingly, the O&M expenditure to be deducted from the Generation O&M has been arrived at as presented in the Tables below:

Table 4-10: O&M Expenditure to be deducted on account of transfer of assets - FY 2017-18

Rs Crores

Particulars	FY 2017-18
Tata Power-T Normative O&M - including transfer of assets from Tata Power-G	204.84
Tata Power-T Normative O&M - without transfer of assets from Tata Power-G	192.13
O&M Expenditure for Assets transferred	**12.71**

414. The ARR for FY 2017-18 has been arrived at considering the revised GFA, reduced Equity, Loan and O&M expenditure on account of transfer of assets and the same is presented in this section. The deduction in Tata Power-G ARR will get added to the ARR of the Transmission Business of Tata Power i.e. Tata Power-T.

4.1.8 O&M Expenditure

415. Tata Power-G has considered the normative O&M expenditure computed as per the Regulation 45.1 (a) to (d) of the MYT (First Amendment) Regulations, 2015. The escalation rate has been considered same as that arrived for FY 2016-17 and further adding the Water Charges as approved in the MYT Order in Case No. 32 of 2016. Further, as explained in the earlier section there would be a reduction in the O&M expenditure on account of transfer of assets. The same has been deducted to arrive at the O&M expenditure to be considered for FY 2017-18. The O&M expenditure for FY 2017-18 accordingly works out as follows:

Table 4-11: O&M Expenditure Unit 4 to 7 and Hydro Generating Station - FY 2017-18

Particulars	Units		FY 2017-18
Normative O&M expenditure for FY 2016-17 w/o Water Charges	Rs. Crores	a	496.05
Escalation Rate as per First Amendment of MYT Regulations, 2015	%	b	4.27%
Normative O&M expenditure for FY 2017-18 w/o Water Charges	Rs. Crores	c=a*(1+b)	517.25
Add: Water Charges as per MYT Order	Rs. Crores	d	11.46
Less: O&M Expenditure for transferred assets	Rs. Crores	e	12.71
O&M Expenditure for FY 2017-18	**Rs. Crores**	**f=c+d-e**	**515.99**

Tata Power-G requests the Hon'ble Commission to provisionally approve the O&M Expenses of Rs. 515.99 Crores for FY 2017-18.

4.1.9 Capital Expenditure & Capitalisation

416. The Hon'ble Commission had approved a capitalisation of **Rs 174.26 Crores** in the MYT Order dated 8th August, 2016 in Case No. 32 of 2016. Against this the capitalisation estimated capitalisation for FY 2017-18 is **Rs 66.48 Crores**. The breakup of the estimated capitalisation is as follows:

Table 4-12: Capitalisation for Unit 4 to 7 & Hydro Stations for FY 2017-18

Rs. Crores

Particulars	Capitalisation
DPR	55.67
Non DPR	10.81
Total Capitalisation	**66.48**
Ratio of Non-DPR to DPR Capitalistion	**19.42%**

417. It is submitted that out of the total estimated capitalisation of **Rs 66.48 Crores**, the capitalisation on account of DPR schemes (including merged DPRs) is to the extent of **Rs 55.67 Crores** and the balance of **Rs 10.81 Crores** is on account of Non-DPR schemes. The

ratio of Non-DPR to DPR is estimated to be around **19.42%** which is within the limit of 20% set by the Hon'ble Commission.

Tata Power-G requests the Hon'ble Commission to provisionally approve the total actual capitalisation of Rs 66.48 Crores.

4.1.10 Depreciation

418. Tata Power-G has computed the Depreciation for FY 2017-18 by considering the Depreciation Rate of FY 2016-17 truing up and the average of opening and closing GFA for FY 2017-18. The GFA of the transferred assets has been excluded from the GFA of FY 2017-18 thus Depreciation of these assets is not factored in. Based on the same, the Depreciation for FY 2017-18 is estimated to be **Rs 151.38 Crores**.

Table 4-13: Depreciation - Unit 4 to 7 & Hydro for FY 2017-18

Rs Crores

Particulars		FY 2017-18
Opening GFA excluding transferred assets	a	4323.10
Closing GFA excluding transferred assets	b	4389.58
Average GFA	c=(a+b)/2	4356.34
Rate of Depreciation as per FY 2016-17	d	3.48%
Depreciation FY 2017-18	e=c*d	**151.38**

4.1.11 Interest on Loan Capital

419. Based on the closing balance of loans for FY 2016-17, additional capitalisation estimated for FY 2017-18, impact of loan on account of transfer of assets, interest rate equivalent to that computed for FY 2016-17 as per Regulation 29.5 of the MYT Regulations, 2015 and repayment equal to Depreciation, the interest on loan for Thermal and Hydro Generating Stations works out as given below.

Table 4-14: Interest on Loan Capital - FY 2017-18

Particulars		Rs Crores
Closing Balance FY 2016-17	a	637.06
Less: Loan on account of Transfer of Assets	b	19.67
Opening Balance of FY 2017-18	c=a-b	617.39
Additions	d	46.54
Repayments	e	151.38
Closing Balance	f=c+d-e	512.54
Effective Interest Rate	g	10.07%
Total Interest Expense	**:(c+f)/2**	**56.90**

Tata Power-G requests the Hon'ble Commission to provisionally approve Rs. 56.90 Crores towards Interest on Loan Capital for FY 2017-18.

4.1.12 Interest on Working Capital

420. The Interest on Working Capital for FY 2017-18 has been computed based on the elements specified in Regulation 31.1 of the MYT Regulations, 2015. As per the Regulation 2.1 (10) of MYT Regulations (First Amendment), 2015 the Base Rate to be considered as the Interest Rate for computing Interest on Working Capital is the One Year SBI MCLR Rate as specified by SBI from time to time. The weighted average One Year SBI MCLR Rate for FY 2017-18 (April to December, 2017) is **9.49 %**. The estimated interest of Working Capital is computed as follows:

Table 4-15: Interest on Working Capital for FY 2017-18

Rs. Crores

Particulars		Approved	Actual
Thermal/Gas Fired Stations			
2 months Fuel Cost for Unit 5 (Coal)	a	158.67	208.46
2 months Fuel Cost for Unit 6 (Oil/Coal)	b	0.00	0.00
1 months Fuel Cost for Unit 7 (Gas)	c	25.21	17.44
Fuel Cost	**d=sum a to c**	**183.88**	**225.89**
O & M Cost for 1 Month	e	43.77	33.76
Maintenance of spares 1% of Historical cost	f	44.19	28.09
Receivables for sale of Electricity to BEST	g	149.36	144.38
Less : Payables for fuel	h	104.55	121.67
Total Thermal Working Capital	**i=d+e+f+g-h**	**316.65**	**310.45**
Hydro Generating Stations			
O & M Cost for 1 Month	k	9.24	9.24
Maintenance of spares 1% of Historical cost	l	14.29	14.36
Receivables for sale of Electricity to BEST	m	17.59	18.16
Total Hydro Working Capital	**n=k+l+m**	**41.12**	**41.77**
Total Working Capital	**j**	**357.77**	**352.21**
Rate of Interest		10.80%	9.49%
Interest on working capital	**k=i*j**	**38.64**	**33.44**

Tata Power-G requests the Hon'ble Commission to provisionally approve the estimated Interest on Working Capital of Rs 33.44 Crores.

4.1.13 Return on Equity

421. Considering the capitalised expenditure and the Debt:Equity norm of 70:30, the reduction in equity on account of transfer of assets, the Return on Equity allowed as per Regulation 28.1 and 28.3 of the MYT Regulations, 2015 is 15.5%. In view of this, the RoE for FY 2017-18 works out to **Rs. 244.53 Crores**. Further, as the year has yet not ended, there has been no retirement/de-capitalisation of assets considered for the purposes of this provisional true-up. The detailed computation of the Return on Equity for FY 2017-18 is given below:

Table 4-16: Return on Equity for FY 2017-18

Rs. Crores

Particulars	FY 2017-18 (Actuals)
Regulatory Equity at the beginning of the year	1567.63
Less: Equity Portion of Assets De-Capitalised During the Year	
Capital Expenditure Capitalised during the Year	66.48
Equity portion of capital expenditure Capitalised during the ye	19.95
Regulatory Equity at the end of the year	**1587.57**
Return Computation	
Return on Regulatory Equity at the beginning of the year	242.98
Return on Equity portion of capital expenditure Capitalised	1.55
Total Return on Regulatory Equity	**244.53**

Tata Power-G requests the Hon'ble Commission to provisionally approve the estimated Return on Regulatory Equity of Rs 244.53 Crores for FY 2017-18.

4.1.14 Income Tax

422. As per Regulation 33.1 of the MYT Regulations, 2015, the Hon'ble Commission shall provisionally approve the Income Tax payable as per the latest available Audited Accounts, subject to prudence check. The Income Tax payable for the FY 2016-17 is **Rs 129.27 Crores** based on Audited Accounts. In line with the above, the provisional Income Tax payable for FY 2017-18 is same as that of FY 2016-17 as follows:

Table 4-17: Income Tax for FY 2017-18

Rs Crores

Sr.No.	Particulars	Trombay & Hydro Stations
1	Income Tax	129.27

Tata Power-G hereby requests the Hon'ble Commission to provisionally approve the estimated Income Tax of Rs 129.27 Crores.

4.1.15 Non-Tariff Income

423. The Non-Tariff Income has been considered same as actuals of FY 2016-17.

Table 4-18: Non-Tariff Income

Rs. Crores

Particulars	Approved by the Hon'ble Commission	FY 2017-18 (Estimated)
Non-Tariff Income	16.73	25.62

424. Tata Power-G requests the Hon'ble Commission to provisionally approve the Non-Tariff Income of **Rs 25.62 Crores** for FY 2017-18.

4.1.16 Annual Fixed Charges

425. Based on the projections of the various elements given in the preceding paragraphs, the Annual Fixed Charges for FY 2017-18 for Unit 4 to 7 & Hydro after adjusting the Unit 4 Fixed Charges and Shared Capacity Charges borne by Unit 8 are as given below:

Table 4-19: Annual Fixed Charges for Unit 4 to 7 & Hydro - FY 2017-18

Rs Crores

Particulars	Approved as per MYT	FY 2017-18 (Estimate)
O&M Charges	503.28	515.99
Interest on Long Term Loans	72.97	56.90
Interest on Working Capital	34.20	33.44
Interest and Finance Charge	0.00	0.00
Depreciation	149.94	151.38
Income Tax	98.89	129.27
Return on Equity	255.10	244.53
Annual Fixed Charges	**1114.38**	**1131.51**
Less:		
Non Tariff Income	16.73	25.62
Unit 4 Fixed Charges	11.56	12.20
Unit 8 allocation towards shared capacity	12.50	12.50
Net Annual Fixed Charges	**1073.59**	**1081.19**

Tata Power-G hereby requests the Hon'ble Commission to provisionally approve the Annual Fixed Charges of Rs 1081.19 Crores for FY 2017-18.

4.1.17 Energy Charges

Net Generation

426. The projections of the generation for FY 2017-18 H2 have been made after running the merit order model for the load projections of BEST and Tata Power-D as the entire capacity is being shared between these two licensees from 1st April, 2011 onwards. Further, all Units have been made available but no generation from Unit 6 is considered for period H2 of FY 2017-18. Based on this, the Net Generation plan of Unit 4 to 7 & Hydro unit wise and fuel wise is provided below:

Table 4-20: Estimated Net Generation for Unit 4 to 7 & Hydro (FY 2017-18)

Mus

Unit	Fuel	FY 2017-18		
		H1	H2	H1+H2
Unit 4	Auxiliary	0.00	0.00	0.00
Unit 5	APM	114.26	0.00	114.26
Unit 5	RLNG	0.74	6.05	6.79
Unit 5	Coal	1493.58	1347.67	2841.25
Unit 5	Oil	0.78	2.18	2.95
Unit 5	NAPM	0.00	0.00	0.00
Unit 6	Oil	0.00	0.00	0.00
Unit 6	RLNG	-10.05	-10.97	-21.02
Unit 7	APM	652.73	610.63	1263.36
Unit 7	RLNG	0.30	0.09	0.39
Unit 7	NAPM	1.48	0.00	1.48
Unit 7	OC APM	0.00	0.00	0.00
Unit 7	OC NAPM	0.00	0.00	0.00
Bhira		478.66	396.66	875.32
Bhivpuri		123.55	188.38	311.93
Khopoli		165.94	132.65	298.58
Total		**3021.96**	**2673.34**	**5695.30**

Energy Charges

427. The Energy Charges (Rs./kWh) and the Energy Cost (Rs. Crores) have been computed based on the normative parameters and in line with Regulation 48.5 of MYT Regulations, 2015. Considering this, the projection of Energy Cost for FY 2017-18 is given in Table below:

Table 4-21: Projections of Energy Charge - Unit 4 to 7 & Hydro Generating Stations - FY 2017-18

Unit	Fuel	FY 2017-18 H1			FY 2017-18 H2			FY 2017-18		
		Net Generation	Rs/kWh	Rs Crores	Net Generation	Rs/kWh	Rs Cr	Net Generation	Rs/kWh	Rs. Crores
Unit 4	Auxiliary	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unit 5	APM	114.26	1.94	22.15	0.00	0.00	0.00	114.26	1.94	22.15
Unit 5	RLNG	0.74	7.56	0.56	6.05	8.06	4.87	6.79	8.01	5.43
Unit 5	Coal	1493.58	3.41	509.21	1347.67	3.60	484.94	2841.25	3.50	994.15
Unit 5	Oil	0.78	14.12	1.10	2.18	14.11	3.07	2.95	14.11	4.16
Unit 5	NAPM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unit 6	Oil	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unit 6	RLNG	-10.05	0.00	0.00	-10.97	0.00	0.00	-21.02	0.00	0.00
Unit 7	APM	652.73	1.50	98.12	610.63	1.70	103.75	1263.36	1.60	201.87
Unit 7	RLNG	0.30	5.76	0.17	0.09	6.25	0.06	0.39	5.88	0.23
Unit 7	NAPM	1.48	1.56	0.23	0.00	0.00	0.00	1.48	1.56	0.23
Unit 7	OC APM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unit 7	OC NAPM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bhira		478.66	0.76	36.38	396.66	0.81	32.14	875.32	0.78	68.52
Bhivpuri		123.55	1.79	22.12	188.38	1.22	22.89	311.93	1.44	45.00
Khopoli		165.94	2.88	47.79	132.65	0.99	13.13	298.58	2.04	60.92
Total		**3021.96**	**2.44**	**737.82**	**2673.34**	**2.49**	**664.86**	**5695.30**	**2.46**	**1402.68**

4.1.18 Revenue from Power Supply

428. Tata Power-G estimates to earn a total revenue of **Rs. 2415.59 Crores** from Tata Power-D and BEST for FY 2017-18. The breakup of total revenue to be earned for the year is given below:

Table 4-22: Revenue Projections for Unit 4 to 7 & Hydro - FY 2017-18

Particulars		BEST	TPC-D	Total
Energy	MUS	1546.34	1475.63	3021.96
Fixed Charges	Rs Cr	247.80	236.46	484.26
Incentive	Rs Cr	0.03	0.03	0.05
Energy Charges	Rs Cr	377.54	360.28	737.82
Cash Discount	Rs Cr			
Recovery of Addnl Custom Duty	Rs Cr	0.00	31.68	31.68
Revenue Received	**Rs Cr**	**625.37**	**628.45**	**1253.82**

Total Revenue for U4to7 & Hydro - H2

Rs. Crores

Particulars		BEST	TPC-D	Total
Energy	MUS	1367.95	1305.39	2673.34
Fixed Charges	Rs Cr	247.80	236.46	484.26
Incentive	Rs Cr	0.00	0.00	0.00
Energy Charges	Rs Cr	340.20	324.64	664.84
Recovery of Addnl Custom Duty	Rs Cr	0.00	12.67	12.67
Considered for ARR Value	**Rs Cr**	**588.00**	**573.78**	**1161.78**

Total Revenue *Rs. Crores*

Particulars		BEST	TPC-D	Total
Energy	MUS	2914.29	2781.02	5695.30
Fixed Charges	Rs Cr	495.59	472.93	968.52
Incentive		0.03	0.03	0.05
Energy Charges	Rs Cr	717.74	684.92	1402.66
Recovery of Addnl Custom Duty	Rs Cr	0.00	44.36	44.36
Considered for ARR Value	**Rs Cr**	**1213.36**	**1202.23**	**2415.59**
Total Estimated Revenue FY 2017-18		**1213.36**	**1202.23**	**2415.59**

Tata Power-G requests the Hon'ble Commission to provisionally approve the estimate revenue of Rs 2415.59 Crores for the year FY 2017-18.

4.1.19 Net Entitlement and Resultant Gap/ (Surplus)

429. The estimated Annual Revenue Requirement for FY 2017-18, based on the computations of the various elements and the resultant Gap / (Surplus) has been presented in the Table below:

Table 4-23: Estimated ARR and Resultant Gap/(Surplus) - Unit 4 to 7 & Hydro

Rs. Crores

Sr. No.	Particulars	Approved in the MYT	Net Entitlement after Impact of Gains / (Loss) from Controllable factors
I	**Revenue**		**2441.21**
	- Power Supply		2415.59
	- Non-Tariff Income	16.73	25.62
II	**Expenditure**		
1	Fuel Related Expenses		1245.34
2	Operation & Maintenance Expenses with uncontrollable expenditure	515.99	515.99
3	Depreciation	149.94	151.38
4	Interest on Long-term Loan Capital	72.97	56.90
5	Interest on Working Capital	34.20	33.44
6	Add Colony Consumption of Hydro	0.00	0.00
7	Income tax	98.89	129.27
8	Return on Equity	255.10	244.53
9	**Total Expenditure**	**1127.09**	**2376.86**
	Less:		
10	**Fixed cost of Unit 4**	**11.56**	**12.20**
11	**Allocation for Unit 8 for Shared Capacity**	**12.50**	**12.50**
III	**Total ARR for FY 2017-18**	**1103.03**	**2352.15**
IV	**Net Gap/(Surplus)**		**-89.06**

430. As can be seen from the above Table, there is an estimated Surplus of **Rs. 89.06 Crores** in ARR during FY 2017-18.

Tata Power-G requests the Hon'ble Commission to approve the provisional Surplus of Rs. 89.06 Crores for FY 2017-18.

4.2 Performance of Unit 8

431. The actual performance of the 250 MW Unit 8 has been compared with the values of approved parameters by the Hon'ble Commission in its MYT Order dated 8th August, 2016 in Case No. 32 of 2016. The Operational and Financial Performance of the Unit for the Financial Year 2016-17 has been explained in the sections below.

Operational Performance - FY 2017-18

432. The various parameters pertaining to the estimated operational performance of Unit 8 for FY 2017-18 are as given in Table below:

Table 4-24: Projected Operational Performance of Unit 8 - FY 2017-18

Particulars	UoM	As per MYT	FY 2017-18 H1 (Actual)	FY 2017-18 H2 (Projected)	FY 2017-18 (Estimate)	Difference
Gross Generation	MUs	1863.00	962.64	828.54	1791.18	-71.82
Auxiliary Consumption	%	8.50%	6.20%	6.34%	6.26%	-2.24%
Net Generation	MUs	1704.65	902.96	776.02	1678.97	-25.67
Station Heat Rate	kcal/kWh	2450	2309	2301	2305	-145
Gross Availability	%	97.21%	100.00%	86.63%	93.33%	-4%
PLF	%	85.07%	87.67%	75.87%	81.79%	-3.3%

4.2.1 Generation

433. The gross Generation of Unit 8 in H1 FY 2017-18 was **962.64 MUs**, whereas the Generation estimated in H2 FY 2017-18 is **828.54 MUs** resulting in a total generation of **1791.18** MUs.

434. The lower generation in H2 as compared to the MYT Order is on account of lower system demand.

Tata Power-G requests the Hon'ble Commission to provisionally approve generation of 1791.18 MUs for Unit 8 for FY 2017-18.

4.2.2 Heat Rate

435. As in FY 2016-17, Unit 8 is expected to demonstrate a good operational performance during FY 2017-18 and an actual heat rate of **2305 kcal / kWh** is estimated which is lower than the approved normative heat rate of **2450 kcal / kWh**.

4.2.3 Availability

436. As seen from the Table, the gross availability of Unit 8 in H1 has been **100.00%** whereas it is estimated to be **86.63%** in H2 of FY 2017-18. As explained above, the Availability in H2 is lower in comparison to H1 on account of boiler recertification and LP turbine inspection. The estimated availability for FY 2017-18 is **93.33%** and is above the normative level of 85% availability.

4.2.4 Auxiliary Consumption

437. The Auxiliary Consumption for the Unit 8 of Tata Power for H1 FY 2015-16 was **6.20%** and is estimated to be **6.34%** in H2 FY 2015-16. The overall Auxiliary Consumption for FY 2015-16 would be **6.26%** which is within the normative auxiliary consumption level of 8.50%.

Financial Performance - FY 2017-18

438. The performance of Unit 8 for FY 2017-18 under the various heads is stated in the sections below:

4.2.5 Fuel Cost

439. The details of the various fuel related parameters for Unit 8 are provided in the Table below:

Table 4-25: Fuel Cost for Unit 8 - FY 2017-18

Particulars	MYT Order	FY 2017-18 H1 (Actual)	FY 2017-18 H2 (Provisional)	FY 2017-18 (Estimate)
Fuel Consumption (MT)				
Coal		464488	398464	862952
Oil (combined)		120	247	367
GCV (Kcal/kg)				
Coal	4888	4783	4778	4781
Oil	10459	10327	10405	10381
Fuel Price (Rs/MT)				
Coal	5003	5984	6609	6273
Oil	51605	53653	55500	54933
Total Fuel Cost (Rs. Crores)		**278.61**	**264.73**	**543.34**

440. Tata Power-G, has considered the actual fuel cost of H1 FY 2017-18 and estimated fuel cost for H2 FY 2017-18. For computing the fuel cost for the balance period of FY 2017-18, based on its interaction with market and internal research, Tata Power-G has considered the following:

441. The price of coal has risen drastically by around 20% while Oil has marginally increased by around 3%. For estimating the fuel prices for H2 of FY 2017-18, average of the fuel prices of the last three months have been considered. The details of the various fuel related parameters for Unit 8 are provided in the Table below:

Table 4-26: Fuel Parameters - Unit 8 -FY 2017-18

Price Rs/MT		Secondary Oil Norms kg/kWh	Calorific Value Kcal/kg		Heat Rate Kcal/kWh		Energy Charge Rs/kWh		Total	Normative Aux Consumption	Energy Rate
Coal	Oil		Coal	Oil	Coal	Oil	Coal	Oil	Rs/kWh	%	Rs/kWh
6273	54933	0.45	4781	10381	2445	5	3.21	0.02	3.23	8.50%	3.53

442. The fuel costs owing to these parameters are as follows:

Table 4-27: Fuel Costs - Unit 8 (FY 2017-18)

Rs. Crores

Particulars	H1	H2	Total
Coal	277.97	263.36	541.33
Oil	0.64	1.37	2.01
Total	**278.61**	**264.73**	**543.34**

Tata Power-G requests the Hon'ble Commission to provisionally approve the projected Fuel Cost of Rs 543.34 Crores for FY 2017-18.

4.2.6 O&M Expenditure

443. Since Unit 8 is has been commissioned after 2005, the O&M Expenditure for Unit 8 is expected to be as per the normative value of **Rs. 24.99 Lakhs / MW** for FY 2017-18. The applicable O&M expenditure for FY 2017-18 for Unit 8 is as shown in the Table below. The same has been approved by the Hon'ble Commission in the MYT Order dated 8th August, 2016 in Case No. 32 of 2016.

Table 4-28: O&M Expenditure for Unit 8 - FY 2017-18

Capacity - MW	Norm for FY 2017-18 Rs Lakh / MW	O&M
a	b	c=a*b/100
250	24.99	62.48

4.2.7 Capital Expenditure & Capitalisation

444. The total capitalisation for Unit 8 for FY 2017-18 is estimated to be **Rs. 0.53 Crores**.

Table 4-29: Capitalisation of Unit 8 - FY 2017-18

Rs. Crores

Particulars	Capitalisation
DPR	0.48
Non DPR	0.05
Total Capitalisation	**0.53**
Ratio of Non-DPR to DPR	**10.75%**

445. It is submitted that out of the total capitalisation of **Rs 0.53 Crores**, the capitalisation on account of DPR schemes (including merged DPRs) is to the extent of **Rs 0.48 Crores** and balance **Rs 0.05 Crores** is on the account of Non-DPR schemes which forms about **10.75%** of the total DPR schemes.

Tata Power-G requests the Hon'ble Commission to provisionally approve the capitalisation of Rs 0.53 Crores for Unit 8 in FY 2017-18.

4.2.8 Depreciation

446. Tata Power-G has computed the Depreciation for Unit 8 for FY 2017-18 by considering the Depreciation Rate of FY 2016-17 truing up and the average of opening and closing GFA for FY 2017-18. Based on the same, the Depreciation for FY 2017-18 for Unit 8 is estimated to be **Rs 61.73 Crores**.

Table 4-30: Depreciation of Unit 8 - FY 2017-18

Particulars		**Rs Crores**
Opening GFA	**a**	**1206.42**
Closing GFA	**b**	**1206.95**
Average GFA	c=(a+b)/2	1206.69
Rate of Depreciation as per FY 2016-17	d	5.12%
Depreciation FY 2017-18	e=c*d	**61.73**

Tata Power-G requests the Hon'ble Commission to provisionally approve the Depreciation of Rs 61.73 Crores for Unit 8 in FY 2017-18.

4.2.9 Interest on Loan Capital

447. Based on the closing balance of loans for FY 2016-17 and the additional capitalisation estimated for FY 2017-18, the Interest on Loan considering the interest rate equivalent to that computed for FY 2016-17 as per Regulation 29.5 of the MYT Regulations, 2015, works out as given below. Further, the repayment of loans is considered as equal to the Depreciation for FY 2017-18 as per Regulation 29.3 of the MYT Regulations, 2015.

Table 4-31: Interest on Loan Capital - Unit 8 - FY 2017-18

Particulars	Rs. Crores
Opening Balance	458.61
Addition of Loan	0.37
Repayment	61.73
Closing Balance	397.25
Interest	10.47%
Interest for FY 2017-18	**44.83**

Tata Power-G requests the Hon'ble Commission to provisionally approve Rs 44.83 Crores towards Interest on Loan Capital for FY 2017-18.

4.2.10 Interest on Working Capital

448. The Interest on Working Capital for FY 2017-18 has been computed based on the elements specified in Regulation 31.1 of the MYT Regulations, 2015. As per the Regulation 2.1 (10) of MYT Regulations (First Amendment), 2015 the Base Rate to be considered as the Interest Rate for computing Interest on Working Capital is the one Year SBI MCLR Rate as specified by SBI from time to time. The weighted average one Year SBI MCLR Rate for FY 2017-18 (April to November 2017) is **9.49%**. The estimated interest of Working Capital is computed as follows:

Table 4-32: Interest on Working Capital - Unit 8 - FY 2017-18

Rs. Crores

Particulars	MYT Order	FY 2017-18
Fuel Cost	87.13	100.31
O & M expenses	5.21	5.21
Maintenance Spares	11.63	12.06
Receivables	39.47	43.53
less: Payables	43.56	50.16
Total Working Capital requirement	**99.88**	**110.96**
Interest Rate (%)	10.80%	9.49%
Working Capital Interest	**10.79**	**10.53**

Tata Power-G requests the Hon'ble Commission to provisionally approve the estimated Interest on Working Capital of Rs 10.53 Crores.

4.2.11 Return on Equity

449. Considering the capitalised expenditure and the Debt:Equity norm of 70:30, the Return on Equity allowed as per Regulation 28.1 and 28.3 of the MYT Regulations, 2015 is 15.5%. In view of this, the RoE for FY 2017-18 for Unit 8 works out to **Rs. 56.11 Crores**. Further, as the year has yet not ended, there has been no retirement/de-capitalisation of assets considered for the purposes of this provisional true-up. The detailed computation of the Return on Equity for FY 2017-18 is given below:

Table 4-33: Return on Regulatory Equity - Unit 8 - FY 2017-18

Rs. Crores

Particulars	FY 2017-18
Regulatory Equity at the beginning of the year	361.92
Less: Equity Portion of Assets De-Capitalised During the Year	
Capital Expenditure Capitalised during the Year	0.53
Equity portion of capital expenditure Capitalised during the year	*0.16*
Regulatory Equity at the end of the year	362.08
Return Computation	
Return on Regulatory Equity at the beginning of the year @ 15.5 %	56.10
Return on Equity portion of capital expenditure Capitalised	0.01
Total Return on Regulatory Equity	**56.11**

Tata Power-G requests the Hon'ble Commission to provisionally approve the estimated Return on Regulatory Equity of Rs 56.11 Crores for FY 2017-18.

4.2.12 Income Tax

450. As per Regulation 33.1 of the MYT Regulations, 2015, the Hon'ble Commission shall provisionally approve the Income Tax payable as per the latest available Audited Accounts, subject to prudence check. The Income Tax payable for the FY 2016-17 is **Rs 21.08 Crores** based on Audited Accounts. In line with the above, the provisional Income Tax payable for FY 2017-18 is same as that of FY 2016-17 as follows:

Table 4-34: Income Tax - Unit 8 - FY 2017-18

Rs. Crores

Particulars	Unit 8
Income Tax	21.08

Tata Power-G hereby requests the Hon'ble Commission to provisionally approve the estimated Income Tax of Rs 21.08 Crores.

4.2.13 Non-Tariff Income for Unit 8

451. For computation of the fixed charges of Unit 8 for FY 2017-18, the Non-Tariff Income is considered same as that approved by the Hon'ble Commission in their Order in Case No. 32 of 2016.

Table 4-35: Non-Tariff Income for Unit 8 - FY 2017-18

Rs Crores

Particulars	Approved	FY 2017-18
Non Tariff Income	**0.48**	0.48

Tata Power-G requests the Hon'ble Commission to provisionally approve the Non-Tariff Income of Rs. 0.48 Crores for FY 2017-18.

4.2.14 Annual Fixed Charges

452. Based on the projections of the various elements given in the preceding paragraphs, the Annual Fixed Charges for FY 2017-18 for Unit 8 after adjusting the Shared Assets Fixed Charges are as given below:

Table 4-36: Annual Fixed Charges for Unit 8 - FY 2017-18

Rs. Crores

Particulars	Approved	FY 2017-18
O&M Charges	62.48	62.48
Interest on Long Term Loans	42.98	44.83
Interest on Working Capital	10.79	10.53
Depreciation	65.19	61.73
Income Tax	24.49	21.08
Return on Equity	54.08	56.11
Add: Shared Capacity Allocation from Unit 4 to 7	12.50	12.50
Total Fixed Expenditure	**272.51**	**269.26**
Less: Non Tariff Income	*2.26*	*0.48*
Annual Fixed Charges	**270.25**	**268.78**

Tata Power-G hereby requests the Hon'ble Commission to provisionally approve the Annual Fixed Charges of Rs 268.78 Crores for FY 2017-18.

4.2.15 Revenue from Power Supply

453. Tata Power-G is estimated to earn a total Revenue of **Rs. 888.27 Crores** from Tata Power-D and BEST for FY 2017-18. The breakup of total revenue earned is given as below. While Tata Power-G has achieved a total Revenue of **Rs. 462.51 Crores** in H1, FY 2017-18, we estimate a total Revenue of **Rs. 425.76 Crores** in H2, FY 2017-18.

Table 4-37: Revenue from Power Supply from Unit 8 - FY 2017-18

Total Revenue For Tata power G Unit 8 H1

Particulars		BEST	Tata Power-D	Total
Energy	MUS	361.18	541.77	902.96
Fixed Charges	Rs Cr	54.05	81.07	135.12
Incentive	Rs Cr	0.27	0.40	0.67
Energy Charges	Rs Cr	123.03	184.54	307.57
Cash Discount	Rs Cr			
Recovery of Addnl Custom Duty	Rs Cr	0.00	19.15	19.15
Considered for ARR Value	**Rs Cr**	**177.34**	**285.17**	**462.51**

Total Revenue For Tata power G Unit 8 H2

Particulars		BEST	Tata Power-D	Total
Energy	MUS	310.41	465.61	776.02
Fixed Charges	Rs Cr	54.05	81.07	135.12
Incentive	Rs Cr	0.04	0.06	0.10
Energy Charges	Rs Cr	113.15	169.73	282.88
Cash Discount	Rs Cr			
Recovery of Addnl Custom Duty	Rs Cr	0.00	7.66	7.66
Considered for ARR Value	**Rs Cr**	**167.24**	**258.52**	**425.76**

Total Revenue For Tata power G Unit 8

Particulars		BEST	Tata Power-D	Total
Energy	MUS	671.59	1007.38	1678.97
Fixed Charges	Rs Cr	108.10	162.14	270.24
Incentive	Rs Cr	0.31	0.47	0.78
Energy Charges	Rs Cr	236.18	354.27	590.44
Cash Discount	Rs Cr			
Recovery of Addnl Custom Duty	Rs Cr	0.00	26.81	26.81
Considered for ARR Value	**Rs Cr**	**344.58**	**543.69**	**888.27**

Tata Power-G requests the Hon'ble Commission to provisionally approve a revenue from power sale of Rs 888.27 Crores for Unit 8 for the FY 2017-18.

4.2.16 Net Entitlement and Resultant Gap/(Surplus)

454. The estimated Annual Revenue Requirement for FY 2017-18, based on the computations of the various elements and the resultant Gap / (Surplus) has been presented in the Table below:

Table 4-38: Annual Revenue Requirement for Unit 8 - FY 2017-18

Rs. Crores

Sr. No.	Particulars	Approved in the MTR T.O.	Net Entitlement after Impact of Gains / (Loss) from Controllable factors
I	**Revenue**		**888.75**
	- Power Supply		888.27
	- Non-Tariff Income	0.48	0.48
II	**Expenditure**		
1	Fuel Related Expenses		543.34
2	Operation & Maintenance Expenses	62.48	62.48
3	Depreciation	60.73	61.73
4	Interest on Long-term Loan Capital	54.77	44.83
5	Interest on Working Capital	15.28	10.53
6	Income tax	20.25	21.08
7	Return on Equity	52.46	56.11
8	**Total Expenditure**	**265.97**	**800.09**
	Add:		
IV	**Expenditure towards shared capacity of Unit 4 to 7**	**12.50**	**12.50**
V	**Net Gap/(Surplus)**		**-76.16**

455. As can be seen from the above Table, there is a Net Surplus of **Rs 76.16 Crores** for Unit 8 in FY 2017-18

Tata Power-G requests the Hon'ble Commission to provisionally approve the Surplus of Rs. 76.16 Crores for Unit 8 in FY 2017-18.

5. REVISED ARR PROJECTIONS FOR FY 2018-19 AND FY 2019-20

5.1 Power Sale Arrangement of Tata Power-G

456. Tata Power – G has in place the existing approved Power Purchase Agreements ("PPA") with BEST Undertaking and Tata Power – D broadly in the ratio of 51:49 of its generating capacity comprising of Unit 4 to 7 & Hydro Stations. These PPAs are valid till 31st March 2018. Further, there is a PPA with 250 MW Unit 8 with BEST and Tata Power-D in the ratio 40:60.

457. The Hon'ble Commission, while issuing the MYT Tariff Orders of BEST Undertaking and Tata Power-D, had directed both the Distribution Licensees to file a Petition for approval Power Purchase Plans beyond 31st March, 2018. Accordingly, BEST Undertaking and Tata Power-D filed their respective submissions on Power Purchase plans for the approval of Hon'ble Commission in Case No. 25 of 2017 and Case No. 39 of 2017 respectively.

458. As per the Order issued by Hon'ble Commission in Case No. 25 of 2017 on 25th September 2017, the Hon'ble Commission directed BEST Undertaking to undertake Competitive Bidding for purchase of 750 MW power for three independent time slots of the day i.e. RTC, Peak 1 and Peak 2 for the period of 05 years starting from 1st April 2018.

459. Further, in order to safeguard the availability of power supply from Tata Power-G post 31st March 2018, BEST Undertaking has already written a letter to Tata Power-G on 29th September 2017, requesting for extension of existing PPAs with an open time frame subject to the final outcome of Competitive Bidding Process to be undertaken by it as per the Order of the Hon'ble Commission.

460. BEST carried out the Competitive Bidding process. However, it was observed by BEST Undertaking that the discovered price of power is more than the option available to it

under Section 62 of the EA, 2003 i.e. with Tata Power-G. Subsequently, BEST Undertaking in Case No. 176 of 2017, approached this Hon'ble Commission for:

- Cancellation of the Competitive Bidding process carried out for the reasons mentioned therein and permission for reinitiating the process with certain deviations as sought in the Petition, and

- To approve the extension of existing PPA with Tata Power-G under Section 62 of EA, 2003 for a period of 6 months.

461. Further, BEST has made an additional submission to the Hon'ble Commission requesting for the extension of the existing PPAs with Tata Power-G for a period of one year with the same terms and conditions. The Hon’ble Commission has issued an Order in Case 176 of 2017 in this matter extending the existing PPA by one year i.e. for FY 2018-19.

462. Similarly, on the request of Tata Power-D in its Case No. 39 of 2017, the Hon’ble Commission has extended the PPA for Tata Power-D with Tata Power-G by one year i.e. up to FY 2018-19. The power purchase tie up approved by the Hon’ble Commission for FY 2018-19 from Tata Power-G is as shown in the Table below:

Table 5-1: Power Purchase Tie up of Tata Power-G for FY 2018-19

Generation Unit	Capacity (MW)	Tie up with BEST (MW)	Tie up with Tata Power-D (MW)
Unit 5	500	256	244
Unit 7	180	92	88
Unit 8	250	100	122
Total Thermal Capacity	**930**	**448**	**454**
Bhira	300	154	146
Bhivpuri	75	38	37
Khopoli	72	37	35
Total Hydro Capacity	**447**	**229**	**218**
Total Generation Capacity	**1377**	**677**	**672**

463. With respect to the future years i.e. FY 2019-20 onwards Tata Power-G has received a proposal from Tata Power-D for power purchase tie up under Section 62 of EA 2003 from 250 MW Unit 8, 180 MW Unit 7 and Hydro Generating Stations – Bhivpuri (75 MW) and Khopoli (72 MW) with a caveat that Tata Power-D should have the first right of refusal for any power available with Tata Power-G which will make the blended power purchase rate cheaper for Tata Power-D in future.

464. Further, BEST has undertaken a competitive bidding approach under Section 63 of EA 2003 for procurement of power from FY 2019-20 onwards and the outcome of the same is awaited.

465. At the time of filing this petition, Tata Power-G does not have any proposal for tie up of power from 500 MW Unit 5 for the future years.

466. Tata Power-G has offered its Bhira Hydro Generating Station capacity through competitive bidding and the outcome of the same is awaited.

467. Considering the above developments in the recent past, it is submitted that at the time of filing this petition there is no concrete conclusion available with Tata Power-G with respect to Long Term / Medium Term Tie ups for Unit 5 and Bhira. However, considering that Tata Power-D has already made a proposal to Tata Power-G for power purchase tie up under Section 62. Tata Power-G is proposing the following for FY 2018-19 and FY 2019-20.

- Tata Power-G is proposing its Tariff for FY 2018-19 for all the units which have been tied up as per the directions of the Hon'ble Commission
- For FY 2019-20, Tata Power-G is proposing tariff only for the units where it has received a proposal for power purchase tie up from Tata Power-D i.e. 250 MW Unit 8, 180 MW Unit 7, 75 MW Bhivpuri Hydro and 72 MW Khopoli Hydro. Accordingly, there will be no tariff proposed for Unit 5 and Bhira.

- The 150 MW Unit 4 which has served its useful life and beyond has been decommissioned in FY 2016-17 and is no longer in service
- With respect to Unit 6, we wish to submit that on account of its high cost of generation, the unit was kept under economic shut down. For FY 2018-19 the Hon'ble Commission has not considered the tie up of power from Unit 6 with BEST and Tata Power-D. Considering the discussions with beneficiaries, it is understood that it may not get tied up in future also. Accordingly, Unit 6 has not been considered for projection of operational parameters. Further, it is important to note that as per the Daily Order dated 21st January 2016, the Case No. 133 of 2015 in the matter of "Committee Report submitted by CE(STU) in compliance to directives given in Order in Case No 172 of 2014 for recommendations for a protocol to resort to idle capacity and apportionment and commercial settlement, in case of disruption in Mumbai's embedded generation" is reserved for final Order. Depending on the outcome of the Order, Tata Power-G will approach the Hon'ble Commission for appropriate treatment of Unit 6.

468. Depending upon the finalisation of tie-ups during the course of the year, Tata Power-G will approach the Hon'ble Commission for Tariff Determination of other Units should the requirement arise.

469. For the purpose of arriving at the Tariffs for the balance Control Period, Tata Power-G has adopted the same philosophy of arriving at the fixed cost as per the MYT Order but has proposed determination of unit wise fixed cost and fuel wise energy charge for each of the Generating Units of Tata Power – G for only those capacities which are tied up/proposed for tie up.

We request the Hon'ble Commission to consider this approach while approving the Tariff for FY 2018-19 and FY 2019-20.

5.2 Revised Projections of ARR for FY 2018-19 and FY 2019-20

470. The sections below discuss and presents the estimated ARR for the balance two years of the third MYT Control Period i.e. FY 2018-19 and FY 2019-20 as per the philosophy mentioned above. It is submitted that calculations presented in this section have been computed as per the MYT Regulations, 2015 of the Hon'ble Commission notified on December 8, 2015 and the first amendment issued on 29th November 2017. The computation has been done considering the entire capacity of Tata Power-G however as explained above, tariff is proposed only for capacities where there is a tie up/proposal.

471. Before proceeding to compute the ARRs for the various years of the Control Period, it is necessary to present the recoveries of the past period along with the carrying cost as worked out in the previous section.

5.3 Recoveries of the Past Period

472. The Gap / (Surplus) of the past periods have been computed and presented in the earlier sections of the present Petition. The recovery with respect to the same has been computed with their carrying cost and presented in the Table below. Further, the share of each of the beneficiaries is also presented.

Table 5-2: Recoveries of the Past Period

Particulars		Approved in this Order				AS per MTR Petition			
		BEST	TPC-D	R Infra	Total	BEST	TPC-D	R Infra	Total
Gap / (Surplus) of Trombay Station & Hydro for FY 2015-16	Trombay Station & Hydro	(19.42)	(18.53)	0.00	(37.93)	6.14	5.86	0.00	**12.00**
Gap / (Surplus) of Unit 6 based on Revenue Billed as per MTR petition for Unit 6 generation based on MSLDC directions	Unit 6 (Under MSLDC Directive)	6.56	7.92	9.64	24.12	6.58	8.62	9.64	**24.84**
Entry Tax amount to be recovered pertaining to past period	Trombay Station & Hydro	13.39	15.56	7.36	36.31	40.85	43.97	12.53	**97.35**
Gap / (Surplus) of Unit 8 for FY 2015-16	Unit 8	(16.53)	(24.79)	0.00	(41.33)	(2.77)	(4.15)	0.00	**(6.91)**
Total Gap / (Surplus) for FY 2015-16		(16.00)	(19.85)	17.00	(18.84)	50.81	54.30	22.17	**127.28**
Incremental Gap / (Surplus) for FY 2015-16						**66.81**	**74.15**	**5.17**	**146.11**
Carrying									
FY 2015-16	14.29%					4.77	5.30	0.37	**10.44**
FY 2016-17	10.31%					6.89	7.65	0.53	**15.07**
FY 2017-18	9.49%					6.34	7.04	0.49	**13.87**
Total Gap / (Surplus) for FY 2015-16 including Carrying Cost -I						**84.81**	**94.13**	**6.56**	**185.50**
Gap / (Surplus) of Trombay Station & Hydro for FY 2016-17						**(0.74)**	**(0.71)**	**0.00**	(1.45)
Gap / (Surplus) of Trombay Unit 8 for FY 2016-17						(9.87)	(14.80)	0.00	(24.67)
Entry Tax amount to be recovered pertaining to past period	Trombay Station & Hydro					19.03	19.63		38.66
Total Gap /(Surplus) for FY 2016-17						8.42	4.12	0.00	12.54
FY 2016-17	10.31%					0.43	0.21	0.00	0.65
FY 2017-18	**9.49%**					**0.80**	**0.39**	**0.00**	**1.19**
Total Gap / (Surplus) for FY 2016-17 including Carrying Cost -II						**9.65**	**4.72**	**0.00**	**14.37**
Gap / (Surplus) of Trombay Station & Hydro for FY 2017-18						(45.57)	(43.49)	0.00	(89.06)
Gap / (Surplus) of Trombay Unit 8 for FY 2017-18						(30.46)	(45.70)	0.00	(76.16)
Entry Tax amount to be recovered pertaining to past period	Trombay Station & Hydro					10.37	10.71		21.08
Total Gap /(Surplus) for FY 2017-18-III						**(65.67)**	**(78.47)**	**0.00**	**(144.14)**
Custom Duty Impact including Carrying Cost for Unit 4 to 7 & Hydro						72.58	20.69	0.00	93.27
Custom Duty Impact including Carrying Cost for Unit 8						27.91	12.51	0.00	40.42
Custom Duty Impact including Carrying Cost -IV						**100.49**	**33.20**	**0.00**	**133.68**
Impact of Capitalisation towards reinstatement of U8 asset - V						**0.84**	**1.27**	**0.00**	**2.11**
Total Past Recovery to be Recovered I to V						**130.13**	**54.85**	**6.56**	**191.53**

473. Tata Power-G requests the approval of this Hon'ble Commission for immediate recovery of the Gap from the Distribution Utilities. In case the Hon'ble Commission decides the recovery from the Distribution Utilities in instalments, then appropriate interest for the delayed recovery shall be made applicable as has been done by this Hon'ble Commission in its pervious tariff orders.

5.4 Generating Stations of Tata Power-G

474. As the Hon'ble Commission is aware, the Generation Business of Tata Power had an installed capacity of 2027 MW. However, the 150 MW Unit 4 which has served its useful life and beyond has been decommissioned in FY 2016-17 and is no longer in service.

Accordingly, the existing installed capacity of the Generation Business of Tata Power is 1877 MW comprising of 447 MW of Hydro Generating capacity and 1430 MW of Thermal Generating capacity.

475. The station-wise and unit-wise break up of total operational capacity of the Generation Business of Tata Power is given in the following Table:

Table 5-3: Installed Generating Capacity

MW

Generation Unit	Type of Fuel	Unit Status	Capacity
Unit 5	Coal, Oil and Gas	Operational	500
Unit 6	Oil and Gas	Operational	500
Unit 7	Gas	Operational	180
Unit 8	Coal	Operational	250
Total Thermal Capacity			**1430**
Bhira	Hydro	Operational	300
Bhivpuri	Hydro	Operational	75
Khopoli	Hydro	Operational	72
Total Hydro Capacity			**447**
Total Generation Capacity			**1877**

476. The details of the arrangement for sale of power from a combination of Thermal and Hydro generating stations is expected to become clear end of the FY 2018-19 subject to outcomes of revised Competitive Bidding proposed to be undertaken by BEST Undertaking and the approval of Power Purchase Plan proposed by Tata Power-D. Hence, as explained above tariff is proposed only for capacities where there is a tie up/proposal.

477. With respect to Unit 6, we wish to submit that on account of its high cost of generation, the unit was kept under economic shut down. For FY 2018-19 the Hon'ble Commission has not considered the tie up of power from Unit 6 with BEST and Tata Power-D. Considering the discussions with beneficiaries, it is understood that it may not get tied up in future also. Accordingly Unit 6 has not been considered for projection of operational parameters. Further, it is important to note that as per the Daily Order

dated 21st January 2016, the Case No. 133 of 2015 in the matter of "*Committee Report submitted by CE(STU) in compliance to directives given in Order in Case No 172 of 2014 for recommendations for a protocol to resort to idle capacity and apportionment and commercial settlement, in case of disruption in Mumbai's embedded generation*" is reserved for final Order. Depending on the outcome of the Order, Tata Power-G will approach the Hon'ble Commission for appropriate treatment of Unit 6.

Accordingly, Tata Power-G requests the Hon'ble Commission to determine the Tariff for the balance two years of the third MYT Control Period i.e. for FY 2018-19 and FY 2019-20 considering the situation as explained above.

5.5 Aggregate Revenue Requirement as per MYT Regulations, 2015

478. Regulation 39.1 of MYT Regulations, 2015 permits Tata Power-G to recover Annual Fixed Charge and Energy Charge from its beneficiaries. The relevant extract of the regulation is reproduced below:

> *39.1 The Tariff for sale of electricity from a thermal power Generating Station shall comprise two parts, namely, Annual Fixed Charge and Energy Charge.*
>
> *39.2 The Tariff for sale of electricity from a hydro Generating Station shall comprise two parts, namely, Capacity Charge and Energy Charge".*

Accordingly, the Annual Fixed Charges and the Energy Charges are computed in the following sections:

5.6 Annual Fixed Charges

479. The Annual Fixed Charges of Generating station as specified in the Regulation 40 of the MYT Regulations, 2015 comprises of:

(a) Operation and Maintenance Expenses;

(b) Depreciation;

(c) Interest on Loan Capital;

(d) Interest on Working Capital;

(e) Return on Equity Capital;

(f) Income Tax;

Less

(g) Non-Tariff Income

The details of the computations of all the elements of Annual Fixed Cost over the balance period of the third Control Period have been presented in the sections below:

5.7 Operational Norms

5.7.1 Availability, Generation & Plant Load Factors

480. The Availability of the Generating Units has been estimated after considering the outage plan of Tata Power–G during FY 2018-19 and FY 2019-20.

- **Outage Plan and Availability**

481. The Outage Plan by Tata Power-G for various Generating Units is mainly for following reasons:

i. Updating Technology
ii. Performance improvement measures
iii. Statutory compliances
iv. Life sustenance, extension & enhancement
v. Scheduled & Preventive Maintenance

482. Further, the maintenance plan is prepared based on operational challenges, past operation, maintenance experience, OEM recommendations and major maintenance schedules. The proposed outage plan for various Units of Tata Power-G during FY 2018-19, FY 2019-20 has been updated in the form 2.8 (Outage) of the Petition formats attached to the present Petition. After considering the scheduled outage plan, the projected Availability of Thermal and the Hydro Generating Units of Tata Power-G is as given in the Table below:

Table 5-4: Availability of Generating Units for FY 2018-19 and FY 2019-20

%

	FY 2018-19	FY 2019-20
Unit 5	91.78%	
Unit 6	0.00%	
Unit 7	96.71%	87.16%
Unit 8	98.08%	91.80%
Hydro		
Bhira	98.27%	
Bhivpuri	95.64%	99.85%
Khopoli	97.80%	98.94%

483. As can be seen from the above Table, considering the planned outages of the generating units, the projected Availability of all the Generating Units is estimated to be above the Normative Availability requirement of 85% as per Regulation 44.1 of MYT Regulations, 2015 for all the Thermal Generating Stations and 90% for the Hydro Generating Stations as per Regulation 46.1 of MYT Regulations, 2015.

5.7.2 Gross Generation and PLF

484. The Gross Generation and Plant Load Factors of Generating Stations of Tata Power-G thereof has been projected at normative levels considering the availability of the respective generating units. The Generation and PLF from the various Units of Tata Power-G during the FY 2018-19 and FY 2019-20 is as follows:

Table 5-5: Gross, Net generation and PLF for FY 2018-19 and FY 2019-20

Generating Units	Gross Generation		Net Generation		% Availability (Hydro) / *PLF (Trombay)*	
	FY 2018-19 (Proj)	FY 2019-20 (Proj)	FY 2018-19 (Proj)	FY 2019-20 (Proj)	FY 2018-19 (Proj)	FY 2019-20 (Proj)
	(MUs)	(MUs)	(MUs)	(MUs)	(%)	(%)
Bhira	894		880		98.27%	
Bhivpuri	289	289	285	285	95.64%	99.85%
Khopoli	287	287	283	283	97.80%	98.94%
Unit 5	2960		2782		*68%*	
Unit 7	1348	1348	1307	1307	*85%*	*85%*
Unit 8	1881	1881	1721	1721	*86%*	*86%*
Thermal + Hydro	**7658**	**3804**	**7258**	**3595**		

5.7.3 Performance Parameters – Heat Rate and Auxiliary Consumption

485. For computing the Energy Charges for the future period the normative Heat Rate and Auxiliary Consumption as approved by the Hon'ble Commission in MYT Order has been considered by Tata Power-G.

Table 5-6: Heat Rate and Auxiliary Consumption for FY 2018-19 and FY 2019-20

Units	FY 2018-19 (Proj)		FY 2019-20 (Proj)	
	Heat Rate (Kcal/Kwh)	Aux Cons (%)	Heat Rate (Kcal/Kwh)	Aux Cons (%)
Thermal Units				
Unit 5	2541	6.00%	-	-
Unit 6	-	-	-	-
Unit 7 Combined Cycle	2031	3.00%	2035	3.00%
Unit 7 Open Cycle	2900	1.00%	2900	1.00%
Unit 8	2450	8.50%	2450	8.50%
Hydro Stations	NA	1.55%	NA	1.55%

5.8 Financial Parameters – FY 2018-19 to FY 2019-20

486. While arriving at the financial parameters for FY 2018-19 and FY 2019-20, the projections have been done on an overall basis considering all the Units of Tata Power-G. However, Tariff has been arrived at and proposed only for those generating Units where there is a tie up/proposal for tie up.

5.8.1 Operation and Maintenance Expenses

487. For FY 2018-19 and FY 2019-20, Tata Power – G has considered Operation and Maintenance Expenditure as per the MYT Order and corrected further in line with the provisions of the first amendment to MYT Regulations, 2015 notified on 29th November 2017.

488. Considering the above Regulations, the O&M Expenditure for the year FY 2017-18 as worked out in line with the amended MYT Regulations, 2015 have been considered as the base O&M expenditure and thereafter an escalation rate of 4.27% has been applied on this to arrive at the normative O&M Expenditure without water charges for FY 2018-19 and FY 2019-20. The detailed working for the same is as follows:

Table 5-7: O&M Expenditure – Thermal & Hydro Generating Stations FY 2018-19 and FY 2019-20

Rs. Crores

Particulars		FY 2018-19 (Proj)	FY 2019-20 (Proj)
Normative O&M of FY 2017-18 w/o water charges	a	504.53	526.09
New Escalation Factor	b	4.27%	4.27%
Revised Normative O&M w/o water charges	c=a*(1+b)	526.09	548.57
Water Charges approved in MYT Order	d	11.46	11.46
Total O & M expenses	e=c+d	537.55	560.03

- **O&M Expenditure – Unit 8**

489. Unit 8 has achieved COD after August 26, 2005. In view of this, the O&M Expenditure Norms for New Generating Stations are applicable to Unit 8. The norms as per MYT Regulations, 2015 are reproduced below:

45.2 New Generating Stations and Generating Stations that achieved COD on or after August 26, 2005

a) For Coal based Generating Stations:

(Rs. Lakhs/MW)

Particulars	200/210/250 MW Sets
FY 2016-17	23.80
FY 2017-18	24.99
FY 2018-19	26.24
FY 2019-20	27.55

490. Considering the above norms, the O&M Expenditure for Unit 8, is calculated as shown in the Table below:

Table 5-8: O & M Expenditure - Unit 8 – FY 2018-19 and FY 2019-20

Particulars	FY 2018-19 (Proj)	FY 2019-20 (Proj)
O&M Norm for 250 MW Unit (Rs. Lakhs/MW)	26.24	27.55
Projected O & M Expenditure as per norm (Rs Crores)	**65.60**	**68.88**

5.8.2 Capital Expenditure and Capitalisation Plan

491. The capital expenditure and capitalisation proposed during the Control Period is as shown in the Table below:

- **Thermal and Hydro Generating Stations**

Table 5-9: Capex & Capitalisation: Thermal & Hydro FY 2018-19 & FY 2019-20

Rs. Crores

Particulars	Capitalisation (Projections)	
	FY 2018-19	FY 2019-20
DPR	77.56	24.67
Non-DPR	13.59	2.83
Total	**91.15**	**27.50**
Non-DPR : DPR Ratio	18%	11%

492. As can be seen from the Table above, the Non-DPR:DPR Ratio is proposed to be maintained within 20% for FY 2018-19 and FY 2019-20.

- **Unit 8:**

Table 5-10: Capital Expenditure and Capitalisation - Unit 8 - FY 2018-19 to FY 2019-20

Rs. Crores

Particulars	Capitalisation (Projection)	
	FY 2018-19	FY 2019-20
DPR	1.70	0.00
Non-DPR	0.09	0.00
Total	**1.79**	**0.00**
Non-DPR : DPR	**5%**	**--**

- **Capex Requirement for compliance to Revised Emission Norms for Trombay:**

493. With respect to the above, we wish to submit that, in MYT Petition we had made the submission to the Hon'ble Commission a that , the Ministry of Environment, Forest and Climate Change ("MoEFCC") has issued a notification on 7th December 2015 in relation to revision of emission norms applicable to Thermal Power Plants. The abovementioned

notification defines amendment to the Environment (Protection) Rules, 1986 and will be called the Environment (Protection) Amendment Rules, 2015.

494. As per the timelines specified in the notifications, the Thermal Units i.e. 500 MW Unit No. 5 & 6, 180 MW CCGT Unit No. 7 and 250 MW Unit 8 at Trombay will have to meet the limits as applicable within a period of two years from the date of publication of the said notification i.e. by 6th December, 2017.

495. In a subsequent development, the MoEFCC has issued a draft notification (refer **Annexure-3.2)** with the modification that the requirements of zero water discharge would be applicable for plants commissioned after 1st January 2017 which will exempt the existing thermal units of Tata Power-G from incurring any additional expenditure to comply the norms. Since the final gazette notification is awaited from the MoEFCC, Tata Power-G is not proposing any expenditure in the current Petition and would approach the Hon’ble Commission for necessary approval if required as per the final notification from MoEFCC.

496. We request the Hon'ble Commission to take note of the same.

5.8.3 Depreciation

497. In line with Regulation 27 of MYT Regulations, 2015, Depreciation has been computed based on the estimated capitalisation and considering the depreciation rate as computed as a part of Truing Up of FY 2016-17. The same is provided in the Tables as follows:

- **Thermal & Hydro Generating Stations**

Table 5-11: Depreciation - Thermal and Hydro – FY 2018-19 & FY 2019-20

Rs. Crores

Particulars		FY 2018-19 (Proj)	FY 2019-20 (Proj)
Opening GFA	a	4389.58	4480.73
Capitalisation	b	91.15	27.50
Closing GFA	c=a+b	4480.73	4508.23
Average GFA	d=(a+c)/2	4435.16	4494.48
Depreciation Rate for FY 2016-17	e	**3.48%**	**3.48%**
Depreciation	f=d*e	154.12	156.18

- **Unit 8**

498. On similar lines, the Depreciation for Unit 8 has been worked out as follows:

Table 5-12: Depreciation - Unit 8 – FY 2018-19 & FY 2019-20

Rs. Crores

Particulars		**FY 2018-19 (Proj)**	**FY 2019-20 (Proj)**
Opening GFA	a	1206.95	1208.74
Capitalization	b	1.79	0.00
Closing GFA	c=a+b	1208.74	1208.74
Average GFA	d=(a+c)/2	1207.84	1208.74
Depreciation Rate as per FY 2016-17	e	5.12%	5.12%
Depreciation	f=e*d	61.79	61.84

5.8.4 Interest on Loan Capital

499. Based on the Closing Balance of long term loans for FY 2017-18 and the additional capitalisation during FY 2018-19 and FY 2019-20 with repayments equal to the estimated depreciation the interest on loan has been worked out for respective years as follows:

- **Thermal & Hydro Generating Stations**

Table 5-13: Computation of Interest - Thermal and Hydro – FY 2018-19 & FY 2019-20

Rs. Crore

Particulars	FY 2018-19 (Proj)	FY 2019-20 (Proj)
Opening Balance	512.54	422.22
Additions	63.80	19.25
Repayments	154.12	156.18
Closing Balance	422.22	285.29
Effective Interest Rate	10.07%	10.07%
Total Interest Expense	**47.07**	**35.63**

- **Unit 8**

Table 5-14: Computation of Interest – Unit 8 – FY 2018-19 & FY 2019-20

Rs. Crores

Particulars	FY 2018-19 (Proj)	FY 2019-20 (Proj)
Opening Balance	397.25	336.71
Additions	1.25	0.00
Repayments	61.79	61.84
Closing Balance	336.71	274.87
Effective Interest Rate	10.47%	10.47%
Total Interest Expense	**38.44**	**32.03**

- **Reduction of Loans due to Replacement of Assets**

500. The Hon'ble Commission in the MYT Regulations, 2015 has considered a reduction in loan (i.e –ve loan) to the extent of the 70% of the amount of value of the Gross Fixed Assets replaced or retired. We have, in this regard, through our letter No REG/MERC/10/177 dated 10th June, 2010, (**Annexure-5.1)** explained in detail the rationale for not considering the reduction in loans and enclosed this letter as a part of our submission for Business Plan of Tata Power-G. We are once again requesting the

Hon'ble Commission not to consider any reduction in loans due to retirement / replacement of assets. Further in our projections above, we have not considered any impact of the same.

501. Further, in this regard, we wish to submit that while computing the normative loan balance, we are deducting depreciation as deemed loan repayment. Hence, when the depreciation crosses the 70% of the asset value i.e. the amount for which the normative loan is considered, the closing balance of loan is automatically get reduced. Further, it may be noted that the majority of the assets retired have depreciated to 90% of their value. In view of this, as the retired asset has depreciated more than 70% of the book value and the entire normative loan relating to retired assets is repaid, no further reduction is required to be given in the computation of interest on loan.

502. We are once again requesting the Hon'ble Commission not to consider any reduction in loans due to retirement / replacement of assets.

5.8.5 Interest on Working Capital

503. Tata Power – G, while computing the Interest on Working Capital, has considered the following section of MYT Regulations, 2015:

31.1 Generation

(a) In case of coal based/lignite-fired Generating Stations, working capital shall cover:

(i) Cost of coal or lignite and limestone towards stock, if applicable, for fifteen days for pit-head Generating Stations and thirty days for non-pit-head Generating Stations, for generation corresponding to target availability, or the maximum coal/lignite stock storage capacity, whichever is lower;

(ii) Cost of coal or lignite and limestone for thirty days for generation corresponding to target availability;

(iii) Cost of secondary fuel oil for two months corresponding to target availability;

(iv) Operation and Maintenance expenses for one month;

(v) Maintenance spares at one per cent of the opening Gross Fixed Assets for the Year; and

(vi) Receivables for sale of electricity equivalent to forty-five days of the sum of annual fixed charges and energy charges computed at target availability:

minus

(vii) Payables for fuel (including oil and secondary fuel oil) to the extent of thirty days of the cost of fuel computed at target availability, depending on the modalities of payment

In case of Hydro power Generating Stations including pumped storage hydel electric generating Station, working capital shall cover:

(i) Operation and maintenance expenses for one month;

(ii) Maintenance spares at one per cent of the opening Gross Fixed Assets for the Year; and

(iii) Receivables for sale of electricity equivalent to forty-five days of the annual fixed charges computed on normative capacity index"

(b) In case of oil-fired Generating Stations, working capital shall cover:

(i) Cost of oil for thirty days towards stock, if applicable, for generation corresponding to target availability, or the maximum oil stock storage capacity, whichever is lower;

(ii) Cost of oil for thirty days for generation corresponding to target availability;

(iii) Operation and Maintenance expenses for one month;

(iv) Maintenance spares at one per cent of the opening Gross Fixed Assets for the Year; and

(v) Receivables for sale of electricity equivalent to forty-five days of the sum of annual fixed charges and energy charges computed on target availability:

minus

(vi) Payables for fuel to the extent of thirty days of the cost of fuel computed at target availability, depending on the modalities of payment:

...

(c) In case of Open Cycle Gas Turbine/Combined Cycle Generating Stations, working capital shall cover:

(i) Fuel cost for thirty days corresponding to target availability duly taking into account the mode of operation of the Generating Station on gas fuel and liquid fuel;

(ii) Liquid fuel stock for fifteen days corresponding to target availability;

(iii) Operation and maintenance expenses for one month;

(iv) Maintenance spares at one per cent of the opening Gross Fixed Assets for the Year; and

(v) Receivables for sale of electricity equivalent to forty-five days of the sum of annual fixed charges and energy charges computed on target availability:

minus

(vi) Payables for fuel (including liquid fuel stock) to the extent of thirty days of the cost of fuel computed at target availability, depending on the modalities of payment:

...

(d) In case of Hydro power Generating Stations including pumped storage hydel electric generating Station, working capital shall cover:

(i) Operation and maintenance expenses for one month;

(ii) Maintenance spares at one per cent of the opening Gross Fixed Assets for the Year; and

(iii) Receivables for sale of electricity equivalent to forty-five days of the annual fixed charges computed on normative capacity index:

...

(e) In case of own Generating Stations of the Retail Supply Business, no amount shall be allowed towards receivables, to the extent of supply of power by the Generation Business to the Retail Supply Business, in the computation of working capital in accordance with this Regulation.

(f) Rate of interest on working capital shall be on normative basis and shall be equal to the Base Rate as on the date on which the Petition for determination of Tariff is filed, plus 150 basis points:

504. Considering the above Norms for Interest on Working Capital and the applicable Interest Rate derived for FY 2016-17 in line with the first amendment to the MYT Regulations, 2015, the Interest on Working Capital works out as follows:

- **Thermal and Hydro Generating Stations**

Table 5-15: Interest on Working Capital – Thermal and Hydro – FY 2018-19 to FY 2019-20

(Rs. Crores)

Particulars		FY 2018-19	FY 2019-20
2 months Fuel Cost for Unit 5 (Coal)	a	197.32	198.48
2 months Fuel Cost for Unit 6 (Oil/Coal)	b	0.00	0.00
1 months Fuel Cost for Unit 7 (Gas)	c	17.79	17.88
2 months Fuel Cost	d=a+b+c	215.11	216.36
O & M Cost for 1 Month	e	44.80	46.67
Maintenance of spares 1% of Opening Gross Fixed Asset for the year	f	43.11	44.02
Receivables for sale of Electricity to BEST	g	159.65	159.59
Less : Payables for fuel	h	116.45	117.12
Total Working Capital	**i=d+e+f+g-h**	**346.22**	**349.53**
Rate of Interest	j	9.49%	9.49%
Interest on working capital	**k=i*j**	**32.87**	**33.18**

505. It may be noted that for Unit 6, we have not considered any working capital requirement towards fuel cost as generation considered is nil. We would approach the Hon'ble Commission to approve working capital based on actual generation / fuel stock.

- **Unit 8**

Table 5-16: Interest on Working Capital - Unit 8 – FY 2018-19 & FY 2019-20

Rs. Crores

Sr. No.	Particulars	Unit	FY 2018-19 (Proj)	FY 2019-20 (Proj)
1	Installed Capacity	MW	250	250
2	Heat rate of the Unit	kcal/kWh	2450	2450
3	Net No. of Units generated at 85% Availability	MU	1703	1708
4	Energy Rate	Rs/kWh	3.37	3.37
5	**Total Fuel Cost = (3*4/10)**	**Rs. Crores**	**574.16**	**575.73**
6	Fixed Charges	Rs. Crores	265.29	287.40
7	**Total**		**839.45**	**863.14**
8	Cost of Coal for Two months	Rs. Crores	95.69	95.96
9	O&M Expenses for one month	Rs. Crores	5.47	5.74
10	Maintenance of spares 1% of Opening Gross Fixed Asset for the year	Rs. Crores	12.07	12.09
11	Receivables for sale of Electricity for two Months for BEST	Rs. Crores	41.97	43.16
12	Less : Payables for fuel for one month	Rs. Crores	47.85	47.98
13	Total Working Capital	Rs. Crores	107.36	108.96
14	Rate of Interest	%	9.49%	9.49%
15	**Interest on Working Capital**	**Rs. Crores**	**10.19**	**10.34**

5.8.6 Return on Equity Capital

506. The MYT Regulations, 2015 allow recovery of Return on Equity Capital as per Regulation 28. The relevant paragraph reads as under:

28.1 Return on equity for a Generating Company shall be allowed on the equity capital determined in accordance with Regulation 26 for the assets put to use, at the rate of 15.5 per cent per annum in Indian Rupee terms.

...

28.3 The return on equity shall be computed in the following manner:

(a) Return at the allowable rate as per this Regulation, applied on the amount of equity capital at the commencement of the Year; plus

(b) Return at the allowable rate as per this Regulation, applied on 50 per cent of the equity capital portion of the allowable capital cost, for the investments put

to use in Generation Business or Transmission Business or Distribution Business or MSLDC, for such Year. "

507. Based on the above Regulations and projections of the Capitalisation during the Control Period, the Return on Equity works out to as given in the Table below:

- **Thermal & Hydro Generating Stations**

Table 5-17: Return on Equity – Thermal and Hydro – FY 2018-19 & FY 2019-20

Rs. Crores

Particulars	% RoE	FY 2018-19 (Proj)	FY 2019-20 (Proj)
Regulatory Equity at the Beginning of the year		1587.57	1614.92
Equity portion of the Net assets capitalised during the year		27.34	8.25
Regulatory Equity at the end of the year		1614.92	1623.17
Return on Regulatory Equity at the beginning of the year	15.50%	246.07	250.31
Return on Equity portion of capital expenditure Capitalised	15.50%	2.12	0.64
Total Return on Equity		**248.19**	**250.95**

- **Unit 8**

Table 5-18: Return on Equity - Unit 8 FY 2018-19 & FY 2019-20

Rs. Crores

Particulars	% RoE	FY 2018-19 (Proj)	FY 2019-20 (Proj)
Regulatory Equity at the Beginning of the year		362.08	362.62
Equity portion of the Net assets capitalised during the year		0.54	0.00
Regulatory Equity at the end of the year		362.62	362.62
Return on Regulatory Equity at the beginning of the year	15.50%	56.12	56.21
Return on Equity portion of capital expenditure Capitalised	15.50%	0.04	0.00
Total Return on Equity		**56.16**	**56.21**

5.8.7 Income Tax

508. In accordance to Regulation 33 of the MYT Regulations, 2015, Income Tax for FY 2018-19 and FY 2019-20 has been considered equal to the Income Tax computed for the Truing Up Year FY 2016-17. The same has been as shown in the Table below:

Table 5-19: Income Tax – Thermal and Hydro – FY 2018-19 & FY 2019-20

` *(Rs. Crores)*

Sr. No.	Particular	FY 2018-19	FY 2018-20
1	Income Tax	129.27	129.27

Table 5-20: Income Tax - Unit 8 – FY 2018-19 & FY 2019-20

` *(Rs. Crores)*

Sr. No.	Particular	FY 2018-19	FY 2018-20
1	Income Tax	21.08	21.08

5.8.8 Non-Tariff Income

509. For computation of the fixed charges of the Generating Units for FY 2018-19 and FY 2019-20, the Non-Tariff Income is considered same as that of actual of FY 2016-17.

Table 5-21: Non-Tariff Income - Thermal & Hydro - FY 2018-19 & FY 2019-20

Rs. Crores

	FY 2018-19 (Proj)	FY 2019-20 (Proj)
Non Tariff Income	25.62	25.62

Table 5-22: Non-Tariff Income – Unit 8 - FY 2018-19 & FY 2019-20

Rs. Crores

Particulars	FY 2018-19 (Proj)	FY 2019-20 (Proj)
Non Tariff Income	0.48	0.48

5.9 Annual Fixed Charges

510. Based on the projections of the various elements given in the preceding paragraphs, the Annual Fixed Charges for the years FY 2018-19 to FY 2019-20 for Thermal & Hydro and Unit 8 are as given in the Tables below:

- **Thermal and Hydro Generating Stations**

Table 5-23: Annual Fixed Charges - Thermal and Hydro – FY 2018-19 & FY 2019-20

Rs. Crores

Particulars	FY 2018-19 (Proj)	FY 2019-20 (Proj)
RoE	248.19	250.95
Depreciation	154.12	156.18
O&M	537.55	560.03
Interest on LT Loans	47.07	35.63
Interest on Working Capital	32.87	33.18
Less Non Tariff Income	-25.62	-25.62
Income Tax	129.27	129.27
Total Fixed Charges	**1123.46**	**1139.64**
Less: Unit 4 Fixed Charges	-12.35	-12.46
Less: Share of Unit 8 from Shared Service	-12.50	-37.50
Total Annual Fixed Charges	**1098.61**	**1089.67**

Note: Share of Unit 8 from Shared Service of Rs 37.50 is explained in the next section

- **Unit 8**

Table 5-24: Fixed Charges - Unit 8 – FY 2018-19 & FY 2019-20

Rs. Crore

Particulars	FY 2018-19 (Proj)	FY 2019-20 (Proj)
RoE	56.16	56.21
Depreciation	61.79	61.84
O&M	65.60	68.88
Interest on LT Loans	38.44	32.03
Interest on Working Capital	10.19	10.34
Income Tax	21.08	21.08
Add: Cost of Shared Services	12.50	37.50
Less: Non-Tariff Income	**-0.48**	**-0.48**
Total Annual Fixed Charges	**265.29**	**287.39**

5.10 Energy Charges

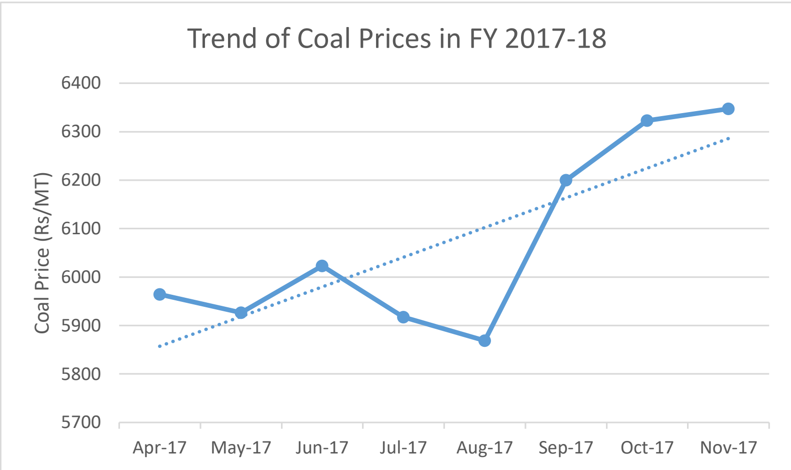
5.10.1 Fuel Prices and Fuel Supply Arrangements

511. As the Hon'ble Commission is aware, Tata Power-G uses Imported Coal, Domestic Natural Gas (under APM mechanism), Oil (LSHS) and Imported RLNG (Regasified Liquid Natural Gas) for its Generating Units at Trombay.

512. For the purpose of revised tariff determination i.e. Energy Charge rate for FY 2018-19 and FY 2019-20, the fuel price are required to be considered in line with the 1st Proviso to the Regulation 48.5 of MYT Regulations, 2015 which provides as follows:

Provided that the landed cost of primary fuel and secondary fuel for tariff determination shall be based on actual weighted average cost of primary fuel and secondary fuel of the three preceding months, and in the absence of landed costs for the three preceding months, latest procurement price of primary fuel and secondary fuel for the generating Station, preceding the first month for which the Tariff is to be determined for existing stations and immediately *preceding three months in case of new generating stations shall be taken into account :*

513. In this regards, we wish to submit to the Hon'ble Commission that the landed cost of coal has increased by around 36% from April 2016 which was @ Rs. 4826 PMT to the present levels of @ Rs. 6596 PMT., due to demand – supply situation on global coal market. The following graph shows the sudden jump experienced from April'17 to November'17.



514. Hence, in order to have a correct representation of coal prices for the purpose of tariff determination, we are proposing to use the weighted average of the coal prices from April, 2017 to November, 2017. Further we propose to consider the actual stacking loss of FY 2016-17 i.e. 103 Kcal/Kg for FY 2018-19 and FY 2019-20 which fairly represents the seasonal impacts on GCV of coal.

515. Accordingly, Coal cost for the purpose of arriving at the Energy Charge for FY 2018-19 and FY 2019-20 has been projected as shown in the Table below. With respect to the other fuels used in the Generating Units, the prices have been projected in line with the Regulations. The same has also been represented in the Table below:

Table 5-25: Fuel Parameters estimated for FY 2018-19 & FY 2019-20

Coal	Consumption (MT)	Rs / MT	Rs / Mkcal	GCV
Apr-17	236864.00	5964.27	1239.60	
May-17	206981.00	5926.51	1242.18	
Jun-17	182918.19	6022.85	1270.60	
Jul-17	210026.00	5917.56	1284.61	
Aug-17	232226.00	5868.92	1256.27	
Sep-17	249048.06	6200.05	1321.33	
Oct-17	213412.00	6323.07	1322.87	
Nov-17	191146.00	6347.02	1318.55	4.954
Weighted Average		**6068**	**1251**	**4.849**

APM	Consumption (MT)	Rs / MT	Rs / Mkcal
Sep-17	13461	9321	708.56
Oct-17	13961	10791	819.75
Nov-17	18855	10626	807.86
Weighted Average		**10296**	**783**

RLNG	Consumption (MT)	Rs / MT	Rs / Mkcal
Sep-17	0.00	0.00	0.00
Oct-17	1263	38924	2991
Nov-17	0.00	0.00	0.00
Weighted Average		**38924**	**2991**

Oil	Consumption (MT)	Rs / MT	Rs / Mkcal
Sep-17	58.52	53610	5191
Oct-17	359.22	53601	5190
Nov-17	24.40	53575	5168
Weighted Average		**53601**	**5189**

516. Considering all the above, the tariffs for various units are discussed in the next section.

6. Tariff for the Generation Business for FY 2018-19 & FY 2019-20

517. As discussed in the earlier section, we are presenting below fixed and energy charges Unit-wise for the reasons discussed in the previous chapter.

6.1 Projected Tariff for FY 2018-19 and FY 2019-20

518. Based on the discussions in the earlier chapter, the Tariffs for the FY 2018-19 and FY 2019-20 are projected in the subsequent paragraphs.

519. While determining the tariff of Unit 8, Tata Power-G has considered the Fixed Cost impact of the entire captive coal berth and coal handling system since it would be entirely utilised by Unit 8 considering that Unit 5 is not being tied up. In the earlier Tariff Orders, the Hon'ble Commission had arrived at a Fixed Cost component of Rs 12.50 Crores to be paid annually by Unit 8 for utilising the shared facilities of the other Units viz. Unit 4 to 7. While arriving at this computation the majority cost is towards utilisation of the coal facilities at Trombay which was used only by 500 MW Unit 5 and 250 MW Unit 8. Hence, for the purpose of determination of the tariff of Unit 8 for FY 2019-20, Tata Power-G has provisionally considered this cost as Rs 37.50 Crores being the total cost of Unit 5 and Unit 8 together. Tata Power-G will make a detailed submission for arriving at the actual cost at the time of Truing Up.

The computation for this additional Fixed Cost is as shown below:

Table 6-1: Additional Fixed Cost for Unit 8 for FY 2019-20

Parameter	Unit		Value
Approved Shared Capacity Cost for Unit 8 in previous Tariff Orders	Rs Crore.	a	12.50
Generating Capacity of Unit 8	MW	b	250
Generating Capacity of Unit 5	MW	c	500
Fixed Cost apportionment for Unit 8 considering Unit 5 not being tied up	**Rs Crore.**	**d=a*(b+c)/b**	**37.50**

6.1.1 Annual Fixed Charges

519. The Unit wise Fixed Cost for FY 2018-19 and FY 2019-20 are provided in the Table below:

Table 6-2: Component wise Fixed Cost for Tata Power-G for FY 2018-19

FY 2018-19

S.No	Particulars			Hydro				
		Unit 5	**Unit 7**	**Bhira**	**Bhivpuri**	**Khopoli**	**Unit 8**	***Remarks***
1	O&M Charges	256.32	58.14	42.28	27.19	46.08	65.60	*Based on Actuals & GFA*
2	Other Finance Charges	0.00	0.00	0.00	0.00	0.00	0.00	*Based on GFA*
3	Interest on Normative Debt	25.12	15.82	0.00	0.00	0.00	38.44	*Based on Capitalization*
4	Interest on Working Capital	22.65	3.79	1.60	0.97	1.49	10.19	
5	Depreciation & Related Debits	68.46	16.28	20.62	15.06	21.45	61.79	*Based on Capitalization*
6	Return on Equity	72.38	57.52	34.41	20.52	25.49	56.16	*Based on Capitalization*
7	Incentives	0.00	0.00	0.00	0.00	0.00	0.00	*Actuals*
8	Income Tax	38.34	30.46	18.22	10.87	13.50	21.08	*Based on ROE*
9	allocation of shared services	-5.58	-4.57	0.00	0.00	0.00	12.50	
10	**Gross Fixed Charges**	**477.68**	**177.45**	**117.13**	**74.61**	**108.02**	**265.77**	
11	Less: Non Tariff Income	7.58	6.20	3.58	1.99	3.07	0.48	*Based on GFA*
12	**Net Fixed Charges**	**470.10**	**171.25**	**113.55**	**72.62**	**104.96**	**265.29**	

Table 6-3: Component wise Fixed Cost for Tata Power-G for FY 2019-20

FY 2019-20

S.No	Particulars	Thermal		Hydro		Remarks
		Unit 7	Unit 8	Bhivpuri	Khopoli	
1	O&M Charges	60.57	68.88	28.33	48.01	*Based on Actuals & GFA*
2	Other Finance Charges	0.00	0.00	0.00	0.00	*Based on GFA*
3	Interest on Normative Debt	12.93	32.03	0.00	0.00	*Based on Capitalization*
4	Interest on Working Capital	3.82	10.34	1.01	1.54	
5	Depreciation & Related Debits	16.50	61.84	15.26	21.74	*Based on Capitalization*
6	Return on Equity	57.78	56.21	20.99	26.12	*Based on Capitalization*
7	Incentives	0.00	0.00	0.00	0.00	*Actuals*
7	Income Tax	30.26	21.08	10.99	13.68	*Based on ROE*
8	allocation of shared services	-4.54	37.50	0.00	0.00	
9	**Gross Fixed Charges**	**177.32**	**287.88**	**76.58**	**111.09**	
10	Less: Non Tariff Income	6.14	0.48	2.04	3.09	*Based on GFA*
11	**Net Fixed Charges**	**171.18**	**287.40**	**74.54**	**108.00**	

6.1.2 Capacity Charge and Energy Charge for Hydro

516. The Capacity Charge and the Energy Charge for the Hydro Generating Stations is computed for FY 2018-19 and FY 2019-20 in accordance with the Regulation 49 of the MYT Regulations, 2015. Details of the same have been provided in the Table below:

Table 6-4: Capacity & Energy Charge for Hydro Generating Stations for FY 2018-19 & FY 2019-20

			FY 2018-19				FY 2019-20	
Particulars		**Unit**	**Khopoli**	**Bhivpuri**	**Bhira**	**Total**	**Khopoli**	**Bhivpuri**
Fixed Cost for Hydro	a	Rs Cr	105	73	114	291	108	75
NAPAF	b	%	90%	90%	90%		90%	90%
Projected Availability	c	%	98%	96%	98%		99%	100%
Capacity Charges	**d=0.5*a*c/b**	**%**	**57.03**	**38.59**	**61.99**	**157.61**	**59.37**	**41.35**
Design Energy	b	MUs	175	193	744	1112	175	193
Auxiliary Consumption	c	%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%
Net Designed Energy	d =b*(1-c)	MUs	172	190	733	1095	172	190
Energy Charge Rate	e = 0.5*a/d	Rs/kWh	3.05	1.91	0.77		3.14	1.96
Actual Generation	f	MUs	283	285	880	1447	283	285
Energy Charge	g=e* d/10+ 0.9*(f-d)/10	Rs Cr	**62**	**45**	**68**	175	**64**	**46**
Incentive			**15**	**11**	**17**	42	**15**	**13**

6.1.3 Energy Charge for Thermal

517. The Energy Charges have been computed by considering the estimated fuel parameters and normative performance of the individual Generating Units for FY 2018-19 and FY 2019-20. The Unit wise Energy Charges on the basis of above assumptions are as given below:

Table 6-5: Energy Charge for Thermal Generating Units – FY 2018-19

Rs / Kwh

Unit	Fuel	FY 2018-19 (Proj)
Unit 5	APM	2.115
Unit 5	Oil	14.027
Unit 5	Coal	3.383
Unit 7	APM	1.639
Unit 7	RLNG	6.262
Unit 8	Coal	3.345
Unit 8	Oil	0.026

Table 6-6: Energy Charge for Thermal Generating Units –FY 2019-20

Rs / Kwh

Unit	Fuel	FY 2019-20 (Proj)
Unit 7	APM	1.642
Unit 7	RLNG	6.275
Unit 8	Coal	3.345
Unit 8	Oil	0.026

518. The computation of energy charges is based on the assumptions that the whole capacity of Tata Power-G will be tied up.

6.2 Past Recoveries from the Distribution Licensees

519. Tata Power – G in the section 5 has presented the recovery under various heads for the past period. The same needs to be recovered from the Distribution Licensees with whom Tata Power-G had tie up during the concerned periods.

6.2.1 Proposed Recovery

521. It is submitted that the above mentioned amounts are due to Tata Power – G from the various Distribution Licensees. Since, this amount is pertaining to FY 2015-16, FY 2016-17 and FY 2017-18 any further delay in recovery will have substantial financial impact on Tata Power-G.

522. We therefore propose the recovery of the amount within one month of the issue of the Order. Further, we request the Hon'ble Commission to consider the impact of carrying cost in case the Hon'ble Commission deem appropriate to allow recovery of the same in instalments.

7. COMPLIANCE TO DIRECTIVES

523. The Hon'ble Commission in its MYT Order in Case no. 32 of 2016 had given certain directives to Tata Power-G, the responses to which have been provided below:

Directive 1, 2:

10.1 Imported Coal Purchase

10.1.1 Regarding imported coal, the Commission directs TPC-G to ensure that all purchases, as well as ancillary arrangements such as carriage and transport up to the site, are undertaken through a transparent process of competitive bidding. All documents relating to such competitive bidding should be submitted to the Commission along with its next MTR Petition. TPC-G should also furnish all relevant details to enable scrutiny of the imported coal cost, including

a. Month-wise details of opening fuel stock, fuel received, fuel consumed and closing fuel stock.

b. GCV and weighted average price of opening stock of fuel as on April 1 of each year.

c. Month-wise supplier wise details of GCV and price of fuel received.

d. Month-wise computation of GCV as received and as fired.

e. Copies of all imported coal fuel bills.

10.1.2 While scrutinizing imported coal purchases of Generating Utilities, the Commission has observed that long-term contracts are generally more economical than short-term contracts. Accordingly, TPC-G should consider entering into long-term imported coal contracts linked to a suitable coal index, and in any case to set out the rationale for its choice among the options available in this regard in its MTR Petition.

Response:

At the outset, we wish to clarify that, between the time frame of the MYT Order i.e. 8th August 2016 and the filing of this petition, Tata Power-G has been purchasing imported coal, based on the existing contracts in place, after following global competitive bidding process and has not issued any new contracts for Imported Coal purchase and freight services.

With respect to procurement of imported coal during FY 2015-16 and FY 2016-17 for the operation of coal based Generating Unit 5 and Unit 8 at Trombay, we wish to submit that, Tata Power-G has followed a transparent competitive bidding process for selecting the supplier. Further, a detailed note giving relevant details of Competitive Bidding followed had been submitted as a part of our response dated 6th May, 2016 and 3rd August, 2016 to the queries raised by the Hon'ble Commission during the MYT Petition processing for the third MYT Control Period. The required details of the competitive bidding process have been provided again as given below:

A) Competitive bidding for procurement of Imported Coal for Trombay:

Background

Trombay has a requirement of 2.7 Million MT per annum. Tata Power had a contract for 1.3 Million MT Per annum with P. T Adaro on long term. The Coal required is of ultra-low Sulphur and low ash due to stringent environment norms at Trombay. To comply with this environment norms, the coal is found only in Indonesia and only with few suppliers. There are two main legs of the supply chain. The first is the Coal Supply and the other is freight arrangement for transporting coal from Indonesia to Mumbai (India). The coal is transported in vessels from Indonesia to India. The Vessel size is governed by the Mumbai port due to draft restriction at Mumbai Port and the max size is 75,000 MT, while during monsoon the max vessel size is restricted to 50,000 MT.

Coal Supply

Tata Power has existing contracts with Adaro and Samtan as below:

Table 7-1: Summary of Imported Coal Contracts

Sr no	Supplier	Contract	Quantity (Million MT)	Price Validity from	Price Validity from	Quantity Validity
1	Adaro	Contract No. 1	0.65	July 2015	June 2018	Dec 2018
2	Adaro	Contract No. 2	0.65	July 2015	June 2018	Dec 2018
3	Adaro	Contract No. 3	0.60	Aug 2015	Aug 2018	Aug 2018
4	Samtan	Contract No. 4	0.80	Aug 2015	Aug 2018	Aug 2018

In order to get the competitive Market Price, a Global Expression of Interest was floated on 25th March, 2015 in EXIM (Weekly newsletter) (**Annexure – 7.1**) and Platts International Coal Trader (Daily News Letter) (**Annexure – 7.2**).

Three Coal suppliers responded to our Global EOI due to limited availability of such ultra low sulphur, low ash coal and Mid Calorific Value in the world.

The three suppliers who had submitted their interest in the Global EOI were as follows:

1. PT Adaro Indonesia.
2. Samtan Co Ltd Korea.
3. PT Mitrabara, Indonesia

The Adaro and Samtan being our long term coal suppliers for more than a decade were natural qualifiers, however the Coal from new supplier PT Mitrabara was not cleared on technical grounds due to its slagging and fouling characteristics observed in trial shipments which were procured during January to March, 2015.

General conditions of Contract were shared with both the bidders and they were asked to quote premium over the monthly variable HPB pricing for three years term contract as is the present practice.

The supplies from Adaro and Samtan are mining coal from Indonesia. Indonesian Mining regulation mandates all the Coal suppliers to sell the coal at or above the HPB marker pricing based on Monthly HBA declared by Govt of Indonesia. Thus, HPB marker is the minimum statutory price above which a seller has to sell their coal. We wish to submit that, as desired by the Hon'ble Commission, the prices of these contracts are linked to Monthly HBA Index which is a statutory index / price.

Negotiations:

Individual negotiations were held with Samtan and Adaro by Cross Functional Team. After three rounds of negotiations with both the suppliers the premium was finally agreed.

Allocation of Supply Quantity:

The quantity of 1.4 Million MT per annum (+/-20%) was split as below:

1) 0.8 Million MT (+/-20%) to Samtan
2) 0.6 Million MT (+/-20%) to Adaro

This split was due to following reasons:

a) Tata Power already have large volume of 1.3 Million MT tied up with P.T Adaro under existing contracts and hence in order to have balance between two sources for better operational flexibility, Samtan was required to be given a significant quantity.

b) For the past one year the Calorific Value (CV) of Coal from Adaro Mines had come down to 4900 Kcal/Kg levels, due to depletion of coal mines. While the CV levels of Samtan were maintaining about 5000 Kcal/Kg. Operationally also it is beneficial to maximize the quantity from Samtan due to higher CV of Coal and its related indirect benefits.

c) Samtan produces 6.0 Million MT per annum out of which, Samtan had indicated that the maximum quantity offered in this enquiry to Tata Power is 0.8 Million MT per annum. Samtan does not offer such quantity of Coal to any other customer in India.

Thus, we wish to reiterate that, the discovery of Pricing of Imported coal used for coal based at Trombay is based on the competitive bidding route. The current pricing is valid up to 15th August, 2018. The pricing discovered under the competitive bidding route was also then extended to the long term coal contract with Adaro for a period of three years.

Freight

The second contract pertaining to coal procurement is the contract to ship this coal from Indonesia to India, Tata Power as a practice conducts competitive bidding for the freight arrangements. As desired by the Hon'ble Commission, Tata Power had conducted Global EOI in 2013 and had developed an exhaustive list of new vendors in the Global shipping market. Total eleven bidders were shortlisted. In 2015, the tender was floated on 23rd June, 2015 to these eleven reputed global shipping companies as given in the table below, for competitive price discovery.

Table 7-2: List of Freight Vendors participated in EOI

Sr no	Name of Vendor
1	Tata NYK
2	M Pallonji group
3	Mercator Ltd.
4	Oldendorff
5	Setaf Saget
6	Ultrabulk
7	N S United
8	PCL (Shipping)
9	Nobel Chartering
10	Kawasaki Kisen Kaisha
11	Hyundai Merchant Marine

Bidding process:

The bidding was conducted on an online e-bidding platform to receive the bids and to accept all the terms and conditions of the bidding documents. Out of 11 bidders, 6 bidders accepted the terms & conditions and submitted their bids online.

Reverse auction:

Since the number of bidders participated were high reverse auction was conducted. The reverse auction continued for 3 hours, the total no of bids submitted (i.e. to outbid the other bidder) were 19(Ex 7). The contract was awarded to the lowest bidder for a period of two years.

a. Month-wise details of opening fuel stock, fuel received, fuel consumed and closing fuel stock:

We wish to submit that, the required details regarding opening fuel stock, fuel received, fuel consumed and closing fuel stock of coal are submitted as a part of FAC submissions made by Tata Power-G vide following letters:

1. CREG / MUM / MERC / 2016 / 35 dated 15th February 2016
2. CREG / MUM / MERC / 2016 / 65 dated 17th March 2016
3. CREG / MUM / MERC / 2016 / 235 dated 2nd September 2016

Further, in the third MYT Control Period i.e. from FY 2016-17 onwards, the similar details were merged in the submission of the Distribution licensees to provide these details for source of Generation. Accordingly, Tata Power-D has made its submission including these details for Tata Power-G for FY 2016-17 vide its following Letters:

1. CREG / MUM / MERC / 2017 / 12 dated 12th January 2017
2. CREG / MUM / MERC / 2017 / 104 dated 22nd May 2017
3. CREG / MUM / MERC / 2017 / 135 dated 27th June 2017.

It is further mentioned that Hon'ble Commission has already approved the FAC submissions of Tata Power-D for FY 2015-16 and FY 2016-17 vide its letters dated 19th December 2016 and 9th January 2017 & 22nd September 2017 respectively after due scrutiny of the submissions made by Tata Power-D which includes above requested details of Imported Coal used by Tata Power-G.

b. GCV and weighted average price of opening stock of fuel as on April 1 of each year:

The GCV and weighted average price of opening stock of fuel as on April 1, 2015 is 4.981 kcal / kg and Rs. 5199.28 per MT respectively and the GCV and weighted average price of opening stock of fuel as on April 1, 2016 is 4.895 kcal / kg and Rs. 4952.64 per MT respectively.

c. Month-wise supplier wise details of GCV and price of fuel received. And Copies of all imported coal fuel bills.

The Copies of the bills pertaining to the purchase made during FY 2015-16 have already been submitted to the Hon'ble Commission in response to Data Gaps in MYT Petition in Case No. 32 of 2016.

d. Month-wise computation of GCV as received and as fired.

The computation of GCV as received and as fired is provided below:

Table 7-3: Coal Stacking Loss Calculations for Unit 5 for FY 2016-17

Month	Coal Fired	As Fired	Coal Received	As Received	Stacking Loss
Apr-16	150397	4.958	217708.694	4.912	-46
May-16	161421	4.830	279970.599	4.961	131
Jun-16	163147	4.770	186203.491	4.948	178
Jul-16	149029	4.696	245653.472	4.808	112
Aug-16	141511	4.854	261046.830	4.878	24
Sep-16	119555	4.744	170195.569	4.903	159
Oct-16	149193	4.803	299031.628	4.933	130
Nov-16	137334	4.836	157073.374	4.892	56
Dec-16	151953	4.826	129555.342	4.996	171
Jan-17	14540	4.747	158306.000	4.958	211
Feb-17	122826	4.799	148661.674	4.969	170
Mar-17	144002	4.855	191232.118	4.951	96
	1604909	**4.816**	**2444638.791**	**4.921**	**105**

Table 7-4: Coal Stacking Loss Calculations for Unit 8 for FY 2016-17

Month	Coal Fired	As Fired	Coal Received	As Received	Stacking Loss
Apr-16	82809	4.783	217708.694	4.912	129
May-16	84587	4.828	279970.599	4.961	133
Jun-16	77544	4.890	186203.491	4.948	58
Jul-16	80772	4.709	245653.472	4.808	99
Aug-16	77300	4.801	261046.830	4.878	77
Sep-16	75226	4.767	170195.569	4.903	136
Oct-16	78546	4.790	299031.628	4.933	143
Nov-16	76643	4.780	157073.374	4.892	112
Dec-16	32588	4.947	157073.374	4.996	49
Jan-17	76964	4.865	158306.000	4.958	93
Feb-17	68608	4.883	148661.674	4.969	86
Mar-17	76215	4.870	191232.118	4.951	81
	887801	**4.819**	**2472156.823**	**4.922**	**103**

Directive 3

10.2 Expiry of PPA

TPC-G has entered into different PPAs with BEST and TPC-D, which are expiring midway through the 3rd Control Period. The Commission directs TPC-G to submit its Petition for approval of its future generation sale arrangements at least 6 months before the expiry of these PPAs.

Response:

We wish to submit that, regarding the said directive, Tata Power-G vide its letter CREG/MUM/MERC/2017/230 dated 17th October, 2017 (**Annexure–7-3**), has requested the Hon'ble Commission to allow it to submit the said Petition, if applicable, once the process of power procurement of both BEST Undertaking and Tata Power-D has attained finality.

8. PRAYERS TO THE HON'BLE COMMISSION

In view of the above, the Petitioner respectfully prays that the Hon'ble Commission may:

- Accept the Truing-up for FY 2015-16 and past Gap / (Surplus) as worked out in this Petition in accordance with the guidelines & principles outlined in MYT Regulations, 2011;

- Accept the Truing Up of FY 2016-17 and past Gap / (Surplus) as worked out in this Petition in accordance with the guidelines & principles outlined in MYT Regulations, 2015 and its First Amendment dated 29th November, 2017;

- Accept the Provisional Truing-up of FY 2017-18 and and past Gap / (Surplus) as worked out in this Petition in accordance with the guidelines & principles outlined in MYT Regulations, 2015 and its First Amendment dated 29th November, 2017;

- Allow the transfer of assets pertaining to Transmission from the Generation Business of Tata Power to the Transmission Business of Tata Power.

- Accept the Revised projections of Annual Revenue Requirement for FY 2018-19 & FY 2019-20 as worked out in this Petition in accordance with the guidelines & principles outlined in MYT Regulations, 2015 and its First Amendment dated 29th November, 2017;

- Allow Tata Power-G to approach the Hon'ble Commission for Tariff determination after the expiry of the extension period of existing PPAs as requested by BEST in Case No. 176 of 2017.

- Condone any inadvertent omissions / errors / rounding off differences / shortcomings and permit Tata Power- G to add / change / modify / alter this filing and make further submissions as may be required at a future date;

- Pass such further and other orders, as the Hon'ble Commission may deem fit and proper, keeping in view the facts and circumstances of the case.

The Tata Power Company Limited - (Generation Business)

Petitioner

Place: Mumbai

Date: 15th June, 2018

9. ANNEXURES

The list of annexures attached in this petition is as follows:

Sr. No.	Particulars	Description
1	Annexure 2.1	Unit 6 Aux Consumption in Standby Mode
2	Annexure 2.2(a)	MSLDC Certificate for Availability, Backing Down and Generation for FY 2015-16 (Thermal)
3	Annexure 2.2(b)	MSLDC Certificate for Availability, Backing Down and Generation for FY 2015-16 (Hydro)
4	Annexure 2.3	Entry Tax Challan
5	Annexure 2.4	Note on Impact of Levy of Entry Tax on Tata Power-G
6	Annexure 3.1(a)	MSLDC Certificate for Availability, Backing Down and Generation for FY 2016-17 (Thermal)
7	Annexure 3.1(b)	MSLDC Certificate for Availability, Backing Down and Generation for FY 2015-16 (Hydro)
8	Annexure 3.2	Notification by MOEFCC
9	Annexure 4.1	Custom Duty - GoI Notification No. 12/2012
10	Annexure 4.2	Letter Payment for Addnl.Custom Duty dt.14.03.13
11	Annexure 4.3	Letter Payment for Addnl. Custom Duty dt. 26.03.13
12	Annexure 4.4	Custom Duty - Order - Commissioner of Customs
13	Annexure 4.5	Transmission Assets Transfer SLD
14	Annexure 4.6	Transmission Asset Transfer List
15	Annexure 5.1	Letter for In Principle Clearance of Investment Scheme
16	Annexure 7.1	Global EoI Ad in EXIM
17	Annexure 7.2	Global EoI Ad in Platts
18	Annexure 7.3	Letter for Approval of Future Sale Arrangements Tata Power-G
19	Annexure A	Annual Report - FY 2015-16

20	Annexure B	Annual Report - FY 2016-17