

# **GUJARAT ELECTRICITY REGULATORY COMMISSION**



## **Tariff Order**

Truing up for FY 2017-18,  
Mid-term Review of FY 2019-20 & FY 2020-21  
and  
Determination of Tariff for FY 2019-20

**For**

**Torrent Power Limited - Generation  
Ahmedabad**

**Case No. 1763 of 2018**

**24<sup>th</sup> April, 2019**

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**GUJARAT ELECTRICITY REGULATORY COMMISSION  
(GERC)**

**GANDHINAGAR**

**Tariff Order**

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## ABBREVIATIONS

A&G	Administration and General Expenses
ARR	Aggregate Revenue Requirement
C&I	Control Systems & Instrumentation
CAPEX	Capital Expenditure
CERC	Central Electricity Regulatory Commission
CHP	Coal Handling Plant
DISCOM	Distribution Company
EA	Electricity Act, 2003
FPPPA	Fuel and Power Purchase Price Adjustment
FY	Financial Year
GERC	Gujarat Electricity Regulatory Commission
GFA	Gross Fixed Asset
GoG	Government of Gujarat
GoI	Government of India
HT	High Tension
IND AS	Indian Accounting Standards
kV	Kilo Volt
kVA	Kilo Volt Ampere
kVAh	Kilo Volt Ampere Hour
kWh	Kilo Watt Hour
LT	Low Tension
MoEF	Ministry of Environment & Forests
MTR	Mid-term Review
MUs	Million Units
MW	Mega Watt
MYT	Multi-Year Tariff
O&M	Operations and Maintenance
p. a.	Per Annum
PPA	Power Purchase Agreement
R&M	Repairs and Maintenance
SBI	State Bank of India
SLDC	State Load Despatch Centre





## Before the Gujarat Electricity Regulatory Commission at Gandhinagar

**Case No. 1763 of 2018**

**Date of the Order: 24<sup>th</sup> April, 2019**

### **CORAM**

Shri Anand Kumar, Chairman

Shri K. M. Shringarpure, Member

Shri P. J. Thakkar, Member

### **ORDER**

## **1. Background and Brief History**

### **1.1 Background**

Torrent Power Limited – Generation Business (Ahmedabad Power Plant) (hereinafter referred to as TPL-G (APP) or the Petitioner) filed the present Petition under Section 62 of the Electricity Act, 2003 (EA, 2003), read in conjunction with Gujarat Electricity Regulatory Commission (Multi-Year Tariff) Regulations, 2016 for True up of FY 2017-18, Mid-Term Review of FY 2019-20 and FY 2020-21 and determination of tariff for FY 2019-20 for its Generation business at Ahmedabad on 30<sup>th</sup> November, 2018.

Gujarat Electricity Regulatory Commission (hereinafter referred to as the 'Commission') notified the GERC (MYT) Regulations, 2016 on 29<sup>th</sup> March, 2016, which is applicable for determination of tariff in all cases covered under the Regulations from 1<sup>st</sup> April, 2016 onwards. Regulation 17.2 (c) of the GERC (MYT) Regulations, 2016 provides for submission of detailed application comprising Truing up for FY 2017-18, Modification of the Aggregate Revenue Requirement for the remaining years of the control period, if any, with adequate justification for the same, Revenue from the sale



of power at existing tariffs and charges for the ensuing year (FY 2019-20), Revenue Gap or Revenue Surplus for the ensuing year of the Control Period, and determination of tariff for FY 2019-20.

After technical validation of the petition, it was registered on 4<sup>th</sup> December, 2018 and as provided under Regulation 29.1 of the GERC (MYT) Regulations, 2016, the Commission has proceeded with this Tariff Order.

## **1.2 Torrent Power Limited (TPL)**

Torrent Power Limited (TPL), a Company incorporated under the Companies Act, 1956, is carrying on the business of Generation and Distribution of Electricity in the cities of Ahmedabad, Gandhinagar and Surat. The present Petition has been filed by TPL- G (APP) for its Generation business in Ahmedabad.

TPL had assumed the business, consequent upon the amalgamation of Torrent Power Ahmedabad Limited (TPAL), Torrent Power Surat Limited (TPSL) and Torrent Power Generation Limited (TPGL) with Torrent Power Limited. Besides, TPL is also engaged in other businesses, which do not come under the regulatory purview of the Commission.

TPL has existing generation facilities, with a total installed capacity of 422 MW, at Ahmedabad and has a Combined Cycle Power Plant (CCPP) of 1147.5 MW (SUGEN) capacity near Surat out of which a share of 835 MW is allocated for Gujarat (Ahmedabad, Gandhinagar and Surat). The generation facility at Ahmedabad consists of a 422 MW coal based Thermal Power Plant at Sabarmati, out of which 'C' station with 60 MW capacity has been decommissioned during FY 2018-19.

## **1.3 Commission's Order for Approval of final ARR for FY 2016-17 and Approval of Multi-Year ARR for FY 2016-17 to FY 2020-21**

The Petitioner filed its petition for Truing up of FY 2015-16, Approval of Final ARR for FY 2016-17, Approval of Multi-Year ARR for FY 2016-17 to FY 2020-21 and Determination of tariff for FY 2017-18 on 29<sup>th</sup> November, 2016. The Petition was registered on 3<sup>rd</sup> December, 2016 (Case No. 1626 of 2016). The Commission vide order dated 9<sup>th</sup> June, 2017 approved the Truing up for FY 2015-16, Final ARR for FY 2016-17, Multi-Year ARR for FY 2016-17 to FY 2020-21 and determined the tariff for FY 2017-18.





## **1.4 Commission Order for approval of True up of FY 2016-17 and tariff of FY 2018-19**

The Petitioner filed its Petition for Truing up of FY 2016-17 and determination of Tariff for FY 2018-19 on 30<sup>th</sup> December, 2017. The Petition was registered on 3<sup>rd</sup> January, 2018 (Case No. 1695 of 2018). The Commission vide Order dated 31<sup>st</sup> March, 2018 approved the Truing up for FY 2016-17 and determined the Tariff for FY 2018-19.

## **1.5 Background of the present Petition**

Regulation 16.2 (iii) of the GERC (MYT) Regulations, 2016 provides for the truing up of previous year's expenses and revenue based on audited accounts vis-à-vis the approved forecast and categorization of variation in performance as those caused by factors within the control of the applicant (controllable factors) and those caused by factors beyond the control of the applicant (uncontrollable factors).

Regulation 16.2 (vi) of the GERC (MYT) Regulations, 2016 provides for annual determination of tariff for the Generating Company, Transmission Licensee, SLDC, Distribution Wire Business and Retail Supply Business, for each financial year, within the Control Period based on the approved forecast and results of the truing up exercise. Further, the second proviso to Regulation 16.2 (i) provides for Mid-term Review as under:

“.....

*Provided further that a Mid-term Review of the Aggregate Revenue Requirement shall be undertaken for the Generating Company, Transmission Licensee, SLDC and Distribution Licensee on an application that shall be filed by the utilities along with the Petition for truing-up for the second year of the Control Period and tariff determination for the fourth year of the Control Period;*

.....”

## **1.6 Registration of Current Petition and Public Hearing Process**

TPL-G (APP) filed the current Petition for Truing up of FY 2017-18, Mid-term Review of FY 2019-20 and FY 2020-21 and Determination of Tariff for FY 2019-20 on 30<sup>th</sup> November, 2018. After technical validation of the petition, it was registered on 4<sup>th</sup> December, 2018 (Case No. 1763 of 2018) and as provided under Regulation 29.1 of



the GERC (MYT) Regulations, 2016, the Commission has proceeded with the tariff order.

In accordance with Section 64 of the Electricity Act, 2003, the Commission directed TPL to publish its application in the newspapers to ensure public participation.

The Public Notice, inviting objections / suggestions from the stakeholders on the petition filed by TPL-G (APP), was published in the following newspapers:

**Table 1-1: List of Newspapers (Petitioner)**

Sl. No.	Name of Newspaper	Language	Date of Publication
1.	Indian Express	English	11/12/2018
2.	NavGujarat Samay	Gujarati	11/12/2018
3.	Gujarat Guardian	Gujarati	11/12/2018

The Petitioner also placed the public notice and the petition on its website ([www.torrentpower.com](http://www.torrentpower.com)) for inviting objections and suggestions. The interested parties / stakeholders were asked to file their objections / suggestions on the petition on or before 10<sup>th</sup> January, 2019.

The Commission also placed the Petition and additional details received from the Petitioner on its website ([www.gercin.org](http://www.gercin.org)) for information and study of all the stakeholders.

The Commission received objections / suggestions from consumers / consumer organizations as shown in the Table below. The Commission examined the objections / suggestions received from the stakeholders and fixed the date for public hearing for the petition on 5<sup>th</sup> February, 2019 at the Commission's Office at Gandhinagar and subsequently a communication was sent to the objectors to take part in the public hearing process for presenting their views in person before the Commission.

The Commission also issued a notice for public hearing in the following newspapers in order to solicit wider participation by the stakeholders:

**Table 1-2: List of Newspapers (Commission)**

Sl. No.	Name of the Newspaper	Language	Date of publication
1.	DNA	English	01/02/2019
2.	Gujarat Samachar	Gujarati	01/02/2019
3.	Sandesh	Gujarati	01/02/2019



The status of stakeholders who submitted their written suggestion / objections, those who remained present in public hearing, those who could not attend the public hearing and those who made oral submissions is given in the Table below:

**Table 1-3: List of Stakeholders**

Sl. No.	Name of Stakeholders	Written Submission	Present on 05.02.2019	Oral Submission
1.	Shri K.K. Bajaj	Yes	Yes	Yes
2.	Laghu Udyog Bharati (LUB)	Yes	Yes	Yes
3.	Users Welfare Association (UWA)	Yes	Yes	Yes
4.	Utility Users' Welfare Association (UUWA)	Yes	Yes	Yes
5.	Gujarat Chamber of Commerce & Industry (GCCI)	Yes	Yes	Yes
6.	The Gujarat Dyestuff Manufacturers Association (GDMA)	Yes	Yes	Yes
7.	Shri R.G. Tillan	No	Yes	Yes

The issues raised by the objectors in the submissions with respect to the petition along with the response of TPL-G (APP) and the Commission's views on the response are given in Chapter 3.

## **1.7 Contents of this Order**

The Order is divided into **Seven Chapters** as under:

1. The **First Chapter** provides a background of the Petitioner, the petition and details of the public hearing process and the approach adopted for this order.
2. The **Second Chapter** outlines the summary of TPL-G (APP)'s Petition.
3. The **Third Chapter** deals with the objections raised by various stakeholders, TPL's response and Commission's views on the response.
4. The **Fourth Chapter** focuses on the details of Truing up for FY 2017-18.
5. The **Fifth Chapter** deals with the determination of revised ARR for FY 2019-20 and FY 2020-21.
6. The **Sixth Chapter** deals with determination of tariff for FY 2019-20
7. The **Seventh Chapter** deals with compliance of directives and issue of fresh directives.



## **1.8 Approach of this Order**

The GERC (MYT) Regulations, 2016, provides for Truing up of the previous year, and determination of tariff for the ensuing year. The Commission has approved ARR for five years of the control period from FY 2016-17 to FY 2021-22 vide Order dated 9<sup>th</sup> June, 2017.

The GERC (MYT) Regulations, 2016, also provides for modification of the ARR for the remaining years of the Control Period, at the time of Mid-term Review (MTR).

TPL-G (APP) has approached the Commission with the present Petition for Truing Up of FY 2017-18, MTR of FY 2019-20 and FY 2020-21 and determination of tariff for FY 2019-20.

The Commission has undertaken Truing up for FY 2017-18 based on the submissions of the Petitioner and the annual accounts for FY 2017-18. The Commission has computed the gains and losses for FY 2017-18, based on the annual accounts and prudence check, in accordance with the GERC (MYT) Regulations, 2016.

While truing up for FY 2017-18, the Commission has been primarily guided by the following principles:

- Controllable parameters have been considered at the level approved as per the MYT Order dated 9<sup>th</sup> June, 2017, unless the Commission considers that there are valid reasons for revision of the same.
- Uncontrollable parameters have been revised, based on the actual performance observed.
- The Truing up for FY 2017-18 has been considered based on the GERC (MYT) Regulations, 2016.

For the Mid-term Review of ARR for FY 2019-20 and FY 2020-21, the Commission has considered the GERC (MYT) Regulations, 2016 and amendments thereof as the base.

Determination of Tariff for FY 2019-20 has been considered as per the GERC (MYT) Regulations, 2016 and amendments thereof as the base.



## 2. Summary of TPL-G's Petition

### 2.1 Actual for FY 2017-18 submitted by TPL-G (APP)

TPL-G (APP) submitted the current Petition seeking approval of True-up for FY 2017-18. The detail of expenses under various heads of ARR are given in Table below:

**Table 2-1: Actual submitted by TPL for FY 2017-18**

Sl. No.	Particulars	True-Up FY (2017-18)		
		Approved in MYT Order	Claimed in Petition	Deviation
		(a)	(b)	(c) = (b) - (a)
1.	Fuel Related Expenses	786.98	771.23	(15.75)
2.	Operation & Maintenance Expenses	166.80	142.49	(24.31)
2.1	Water Charges	11.59	15.11	3.52
3.	Depreciation	47.71	47.74	0.03
4.	Interest & Finance Charges	7.19	4.45	(2.74)
5.	Interest on Working Capital	14.40	13.32	(1.08)
6.	Special allowance in lieu of Renovation & Modernisation	NA		
7.	SLDC Fees and Charges			
8.	<b>Total Revenue Expenditure</b>	<b>1,034.67</b>	<b>994.33</b>	<b>(40.34)</b>
9.	Add: Return on Equity	61.86	60.38	(1.48)
10.	Add: Income Tax	15.34	35.33	19.99
11.	Add: Incentive	-	-	-
12.	Less: Non-Tariff Income	17.43	19.34	1.91
13.	<b>Aggregate Revenue Requirement</b>	<b>1,094.44</b>	<b>1,070.70</b>	<b>(23.73)</b>

### 2.2 Revised ARR for FY 2019-20 and FY 2020-21 based on Mid-term Review

TPL-G (APP) has submitted the revised ARR for FY 2019-20 and FY 2020-21 as depicted in the Table below:



**Table 2-2: Revised ARR for FY 2019-20 and FY 2020-21**

(Rs. Crore)

Sl. No.	Particulars	MTR Period			
		FY 2019-20		FY 2020-21	
		Approved in MYT Order	Claimed in Petition	Approved in MYT Order	Claimed in Petition
1.	Fuel Related Expenses	788.48	843.73	803.81	849.35
2.	Operation & Maintenance Expenses	179.66	179.66	189.94	189.94
2.1	Water Charges	12.96	12.96	13.70	13.70
3.	Depreciation	46.44	46.44	48.83	48.83
4.	Interest & Finance Charges	0.86	0.86	-	-
5.	Interest on Working Capital	14.45	14.45	14.84	14.84
6.	Special allowance in lieu of Renovation & Modernisation	-	-	-	-
7.	SLDC Fees and Charges	-	-	-	-
<b>8.</b>	<b>Total Revenue Expenditure</b>	<b>1,042.84</b>	<b>1,098.09</b>	<b>1,071.12</b>	<b>1,116.65</b>
9.	Add: Return on Equity	60.03	60.03	62.11	62.11
10.	Add: Income Tax	15.34	15.34	15.34	15.34
11.	Less: Non-Tariff Income	17.43	17.43	17.43	17.43
<b>12.</b>	<b>Aggregate Revenue Requirement</b>	<b>1,100.78</b>	<b>1,156.03</b>	<b>1,131.14</b>	<b>1,176.67</b>

## 2.3 Request of TPL-G (APP)

Petitioner's Prayer:

- a) Admit the Petition for truing up for FY 2017-18, Mid-term Review of FY 2019-20 and FY 2020-21, and determination of tariff for FY 2019-20;
- b) Approve the trued up ARR of FY 2017-18;
- c) Approve the sharing of gains/losses as proposed by the Petitioner for FY 2017-18;
- d) Approve the revised ARR for FY 2019-20 and FY 2020-21 based on the Mid-term review;
- e) Allow recovery of the cost as per Judgments of the Hon'ble Tribunal in the Appeals filed by the Petitioner;



- f) Allow additions / alterations / changes / modifications to the petition at a future date;
- g) Permit the Petitioner to file all the necessary pleadings and documents in the proceedings and documents from time to time for effective consideration of the proceedings;
- h) Allow any other relief, order or direction which the Commission deems fit to be issued;
- i) Condone any inadvertent omissions / errors / rounding off difference / shortcomings.



### **3. Brief outline of Objections raised, Response from TPL-G and the Commission's View**

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#### **3.1 Stakeholder's suggestions / objections, Petitioner's response and the Commission's view**

In response to the public notice inviting objections/suggestions from the stakeholders on the petition filed by TPL-G for Truing up of FY 2017-18, Mid-term Review of FY 2019-20 & FY 2020-21 and determination of tariff for FY 2019-20 under the GERC (MYT) Regulations, 2016, the stakeholders, some consumers / consumer organisations filed their objections / suggestions in writing. Some of these objectors participated in the public hearing also. The Commission has considered objections connected with this petition in this Chapter. The objections / suggestions by the consumers / consumers organizations, the response of the Petitioner and the views of the Commission are given below:

##### **3.1.1. Issue: Performance**

The Objector appreciated the performance of TPL-G and submitted that the performance has improved by 10% in spite of ageing. The coal transit losses are 0.77% and within the limit of 0.8% specified by the Commission. The objector noted that C Station was kept under wet preservation during FY 2017-18 and sought confirmation whether the same has been retired or not.

##### **Response of TPL**

Plant Load Factor (PLF) is beyond the control of the Petitioner since it depends on the demand of consumers. For FY 2017-18, the Petitioner has not claimed any incentive. Further, the Petitioner has already retired the C station in FY 2018-19.

##### **Commission's View**

The Commission has noted the observations made by the objector and the response of the Petitioner.

##### **3.1.2. Issue: O&M Expenses**

The Petitioner has not provided the details of individual expenses incurred on the three parameters of O&M (Employee expenses, A&G, R&M expense) but has submitted





composite O&M expenses. The Commission may direct the Petitioner to provide detailed break up of O&M expenses.

Further, the Torrent Group is engaging contractors for its day-to-day work and showing its regular employees under O&M expenses, and requested that the details of contractors and payments be submitted.

### **Response of TPL**

The requisite details of O&M expenses incurred during FY 2017-18 is available in Form 3 of the Petition.

Regarding the engagement of contractors, all the allegations of the Objector are baseless as it accounts for all the expenditure in accordance with the applicable Accounting Standards and the O&M expenses are in line with the provisions of the GERC (MYT) Regulations, 2016.

### **Commission's View**

The Commission allows normative O&M expenses for Generation Business in a composite manner, i.e. employee expenses, A&G expenses, and R&M expenses together as one item of expenditure. Further, the Petitioner has submitted separate details of actual employee expenses, A&G expenses, and R&M expenses in the Petition and Formats.

### **3.1.3. Issue: Reduction in use of imported coal**

The blending of indigenous and imported coal in the ratio of 75:25 has resulted in increase in fuel cost. The blending ratio should be changed to 80:20, which would bring down fuel cost without disturbing efficiency parameters.

The Petitioner has imported coal and has also claimed that only C station is required to use imported coal for blending with indigenous coal. The Petitioner may clarify as to whether costly imported coal is required to be purchased when C Station is not in operation.

The cost advantage of using imported coal vs. domestic coal should be verified.

### **Response of TPL**

The Petitioner is procuring coal from M/s SECL, the subsidiary of CIL. The applicable Fuel Supply Agreement (FSA) signed with CIL is the standard agreement applicable



across the sector. The FSA fulfils only part of the Petitioner's coal requirement and for balance, it must procure imported coal. Further, to meet the technical requirements, it must procure and use imported coal.

Regarding blending ratio, the imported coal is being used for D, E & F Stations based on design criteria of boilers and to comply with environmental norms, as domestic coal has got higher ash content and lower calorific value.

Regarding import of costly coal for TPL stations, the imported coal is required to be used to meet the technical requirements and stringent environment norms.

### **Commission's View**

The Commission is of the view that it would be improper to stipulate any specific blending ratio, as there are several variables to be borne in mind. At the same time, the Petitioner should decide on the blending ratio of indigenous and imported coal, to optimise the generation performance parameters and cost of generation without compromising the environmental norms.

#### **3.1.4. Issue: Implication of new environmental norms**

The Commission should evaluate the capital expenditure requirements for meeting the new environment standards for all generating plants of the State and then only the same should be allowed to be incurred.

### **Response of TPL**

The Ministry of Environment & Forests (MoEF) has revised the environmental norms for thermal power plants vide its notification dated 07.12.2015. In order to comply with the revised norms, all the existing generating stations are required to incur capital expenditure for providing Flue Gas Desulphurisation (FGD). Based on the representation from various power plants, MoEF has granted exemption for implementation of revised norms and granted time to install FGD till December, 2022. The Petitioner has not considered any capital expenditure towards modification required for complying with MoEF notification in the present Petition and would approach the Commission at appropriate stage.

### **Commission's View**

The Petitioner has not proposed any capital expenditure in the present Control Period for meeting the new environment standards. The Commission sought clarification from



the Petitioner regarding the deadline for installation of the necessary equipment for meeting the prescribed environment standards. In response, the Petitioner clarified that the same have to be achieved by December, 2022, and the gestation period is around 1 year, hence, the Petitioner would approach the Commission for approval of the necessary capital expenditure in due course, when there is greater clarity and equipment prices have stabilised.

### **3.1.5. Issue: Revenue**

As to why revenue has not been submitted station-wise when the fixed cost, variable cost and total expenses are shown station-wise.

#### **Response of TPL**

The Petitioner prepares and maintains the accounts as per the Accounting Standards specified in accordance with the Companies Act, 2013. The segregated Financial Statements for the FY 2017-18, duly certified by the Statutory Auditors of the Company, have been made available along with the Petition. Further, the Petitioner has been filing separate financial statements for each of its business along with the petition before the Commission. The Petitioner denied that it has infringed any provision of the Electricity Act, 2003 or the Regulations framed thereunder.

#### **Commission's View**

The response of the Petitioner is self explanatory.

### **3.1.6. Issue: Power purchase**

The proposal is dependent on normative and actual expenses. The details of seller or cost are not given, and the details of purchaser of electricity, cost and tariff of TPL-G (AMGEN) is also not given.

There is no PPA between TPL-G and TPL-D. There is no legal binding on the Distribution Licensee to procure power from its own generation plant till any PPA is approved by the Commission. The Commission may direct TPL-D to procure power by inviting competitive bids as per guidelines of Ministry of Power, to reduce tariff. The total cost of Rs. 4.44 per unit of the generating plant is higher than the rate prevalent in the Power Exchange and rates available in open access market.



Further, the Objector, during the public hearing held on 5<sup>th</sup> February, 2019, submitted that there is no PPA between TPL-G and TPL-D and asserted that power should be purchased through competitive bids only rather than MoU.

### **Response of TPL**

The Petitioner submitted that TPL-G (APP) is an embedded generation plant and is one of the approved sources of power purchase. The variation in the power purchase cost from TPL-G (APP) is attributable to uncontrollable factors such as fuel and transportation cost. The purchase of power from TPL-G (APP) is at the regulated tariff. TPL-G (APP) further submitted that the GERC (MYT) Regulations, 2016 specifies power purchase cost as a legitimate item of expenditure.

### **Commission's View**

The generation tariff is determined by the Commission, on the basis of normative expenses and normative parameters and actual fuel prices and actual calorific value of fuel. AMGEN sells its entire power to TPL-D (A) and TPL-D (S).

#### **3.1.7. Issue: Accounting Statement**

The Accounting Statement submitted by TPL-G is not separate accounts required to be maintained in accordance with Regulation 17.3 of the GERC (MYT) Regulations, 2016 read with Sections 41 and 51 of EA, 2003.

The Commission is yet to frame Regulations for Regulatory Accounts as mentioned in the GERC (MYT) Regulations, 2016. TPL is not following the AS-17 Standard, which requires segment-wise reporting particularly for vertically integrated companies doing regulated and non-regulated business and such Companies are loading their non-regulated business expenditure on the regulated business. The Commission may direct the Petitioner to comply with mandatory requirement of accounting statement and send it to the Institute of Chartered Accountants of India for verification of its sanctity to ensure confirmation to Sections 41 and 51 of EA, 2003, Clause 17.3 of the GERC (MYT) Regulations, 2016 and Clause 40 of the GERC (Distribution Licensee) Regulations, 2005.

### **Response of TPL**

The Petitioner prepares and maintains the accounts as per the Accounting Standards specified in accordance with the Companies Act, 2013. The segregated Financial Statements for FY 2017-18, duly certified by the Statutory Auditors of the Company,



have been made available along with the Petition. TPL has been filing separate financial statements for each of its businesses along with the Petition before the Commission. The Petitioner has not infringed any provision of the Electricity Act, 2003 or the Regulations framed thereunder.

### **Commission's View**

The Petitioner has submitted the separate accounts for TPL-G and each licenced entity, duly certified by their Statutory Auditors, in accordance with the EA, 2003 and the GERC (MYT) Regulations, 2016, which have been considered by the Commission for truing up the expenses and revenue for FY 2017-18, after exercising prudence check.

#### **3.1.8. Issue: Security Deposit**

TPL-D has not transferred the advance electricity consumption charges to TPL-G. The objector raised doubt over the account finalisation in this regard. The objector further stated that certification of auditors for compliance with Regulations 17 and 52 of the GERC (MYT) Regulations, 2016 is not shown and accounting of security deposit from consumers in TPL-G accounts needs to be investigated. In the light of above, the objector requested that the sum of Rs. 13.32 Crore should be quashed.

The Objector further requested that the interest on working capital and finance charges should stand reduced in line with the above.

### **Response of TPL**

The allegations made by the objector are refuted. The security deposit amount is being collected by TPL-D from retail consumers as per the provisions of the GERC Security Deposit Regulations, 2005 and the same is being accounted for in the ARR of the Distribution business, in line with the provisions of the GERC (MYT) Regulations, 2016. Therefore, the contentions of the Objector are contrary to the provisions of the applicable GERC Regulations.

### **Commission's View**

The Security Deposits collected by the Distribution Licensees are used to meet their working capital requirements and are not required to be transferred to the generation entity supplying electricity to the Distribution Licensee. Further, the working capital requirement and interest thereon have been allowed on normative basis, in accordance with the GERC (MYT) Regulations, 2016.



### **3.1.9. Issue: Return on Equity**

There is a mismatch in the opening and closing equity in the audited accounts and ARR. Further, Rs. 168.23 Crores is transferred to H.O. as per Notes 13 and 14 of the Audited Accounts.

#### **Response of TPL**

The Petitioner has filed the Petition in line with the GERC (MYT) Regulations, 2016 under the provisions of the Electricity Act, 2003 whereas the Accounting Statement is prepared as per provisions of the Companies Act and in accordance with Accounting Standards duly certified by the Statutory Auditors of the Company. Thus, both are prepared under different statutes and are not directly comparable. Further, all the requisite information for the present proceedings is furnished in the Petition in accordance with the GERC (MYT) Regulations.

#### **Commission's View**

The Return on Equity is allowed on normative basis in accordance with the GERC (MYT) Regulations, 2016. The normative debt:equity ratio of 70:30 is considered by the Commission, subject to actual equity being capped at 30% of capitalisation or actual, whichever is lower. Hence, the actual equity as per the Audited Accounts will not tally with the equity considered by the Commission for the purpose of allowing Return on Equity.

### **3.1.10. Issue: Non-Tariff Income**

There is a mismatch in the Non-Tariff Income submitted in the ARR Petition, i.e. Rs. 19.34 Crore, whereas it is shown as Rs. 21.94 Crore in the Audited Accounts. Further, the amount of receipts of Non-Tariff Income as per Regulation 52 (by way of distribution) amounting to Rs. 163.44 Crores is not shown in the ARR Petition.

#### **Response of TPL**

The Petitioner has provided all the requisite details in Form no. 9 of the Petition.

#### **Commission's View**

Head-wise analysis of true-up of expenses and revenue for FY 2017-18 have been elaborated in Chapter 4 of this Order. The Petitioner has submitted the separate



annual accounts for the generation business and each licenced entity, duly certified by the Statutory Auditors of the Company which have been considered by the Commission for truing up the expenses and revenue for FY 2017-18, after exercising prudence check.

### **3.1.11. Issue: Revised ARR and carry forward**

The Commission may direct TPL-G to submit the revised ARR Petition as per the GERC (MYT) Regulations, 2016, and carry forward the sum accrued by way of defective accounting in ARR during last five years.

#### **Response of TPL**

All the allegations and contentions raised in the objection which are contrary to or inconsistent with what has been stated by the Petitioner in the petition are denied.

#### **Commission's View**

Head-wise analysis of true-up of expenses and revenue for FY 2017-18 and revised figures for FY 2019-20 have been elaborated in Chapter 4 and Chapter 5 of this Order. While computing the cumulative Revenue Gap/(Surplus), the past unrecovered Revenue Gap/(Surplus), if any, have also been considered, along with the Revenue Gap/(Surplus) for previous years considered in the ARR of FY 2017-18, in order to have a like-to-like comparison of the cumulative ARR approved by the Commission for FY 2017-18.

### **3.1.12. Issue: Reconciliation of ARR and Audited Accounts**

The Objector sought reconciliation of the figures indicated in the Petition and Audited Accounts for FY 2017-18.

#### **Response of TPL**

The petition has been filed in line with the GERC (MYT) Regulations, 2016 under the provisions of the Electricity Act, 2003 whereas the Accounting Statements is prepared as per provisions of the Companies Act and in accordance with Accounting Standards and it is duly certified by the Statutory Auditors of the Company. Thus, both are prepared under different statute and are not directly comparable.



### **Commission's View**

The response of the Petitioner is self explanatory. However, the Commission has explained in detail the reconciliation of figures in annual accounts and ARR in Chapter 4 of this Order.

#### **3.1.13. Issue: Income Tax**

The Income Tax paid for generation business has increased from Rs. 15.34 Crore (MYT Order) to Rs. 35.33 Crore as claimed by TPL-G in the ARR Petition. However, no documentary evidence nor certificate of Chartered Accountant is submitted in the Petition. The Commission may verify the actual Income Tax paid by TPL-G for its operations.

#### **Response of TPL**

The Petitioner has made the payment of Income Tax for the Company as a whole and the same gets reflected in the Company's Financial Statement duly audited by the Statutory Auditors. The copies of challan for payment of Income Tax are submitted to the Commission.

### **Commission's View**

The Commission sought the necessary documentary evidence for payment of Income Tax and has allowed the Income Tax in the true-up for FY 2017-18.

#### **3.1.14. Issue: Mid-term Review**

In the light of several irregularities in the submissions of TPL, Mid-Term Review Petition of TPL should not be accepted, and determining revised tariffs when the MYT Order is in force is against the spirit of the GERC (MYT) Regulations, and only true-up is required to be done. Further, during the public hearing, the objector (LUB) submitted that the Commission should certify that the Petition is complete before publishing for comments.

TPL has not mentioned the reasons and not submitted any evidence for deviation between the Mid-Term Review figures and the figures approved in the MYT Order, as provided in Clause 19 of the GERC (MYT) Regulations, 2016. The Petition is incomplete and is not in compliance with the provisions of EA, 2003 and the GERC (MYT) Regulations, 2016 and hence, the Petitioner be directed to submit the missing / concealed details in the Petition.





## **Response of TPL**

All the requisite information regarding major variation in the MYT approved expenditures is already provided in the Petition.

Regarding the incomplete Petition and directions for submission of missing/concealed details, the Petitioner refuted the allegations as baseless and submitted that it has furnished all the information in line with the GERC (MYT) Regulations. Further, all the details submitted to the Commission in the present Petition are hosted on the website of the Petitioner.

## **Commission's View**

The MTR Petition has been filed by the Petitioner under Regulation 16.1 of the GERC (MYT) Regulations, 2016, which specifies the MYT Framework, the relevant part of which is reproduced below:

“ .....

*Provided further that a Mid-term Review of the Aggregate Revenue Requirement shall be undertaken for the Generating Company, Transmission Licensee, SLDC and Distribution Licensee on an application that shall be filed by the utilities along with the Petition for truing-up for the second year of the Control Period and tariff determination for the fourth year of the Control Period;*

.....”

The Commission also sought and obtained the necessary justification for the revised figures for FY 2019-20 and FY 2020-21 in the MTR Petition, and has approved the revised ARR for FY 2019-20 after prudence check.

### **3.1.15. Issue: Capital investment**

The capital cost claimed in the truing up for FY 2017-18 is Rs. 21.46 Crore against MYT approved figure of Rs. 9.40 Crore. No reasons or evidences have been submitted in the Petition for such higher expenditure in spite of generation falling every year and no cost benefit analysis has been given by the Petitioner for such investment. The Petitioner is platinum coating the assets and submitted that more than Rs. 1,800 Crore have been invested during the last two years, which is huge as compared to the benchmark capital cost of Rs. 3 to 3.5 Crore per MW as per Forum of Regulators (FOR).



The Objector submitted during the hearing held on 5<sup>th</sup> February, 2019 that the capital expenditure is much higher than that approved in the MYT order.

Further, the Objector submitted that TPL-G (APP) instead of incurring Capital Expenditure on old plants, should stop running the plants and set up new technologically advanced plants.

### **Response of TPL**

The Petitioner refuted the allegation of the Objectors and submitted that it has furnished the necessary details in the Petition in accordance with the provisions of the GERC (MYT) Regulations, 2016.

Regarding the setting up of new technologically advanced plants, the Petitioner submitted that considering the vintage and small size of the plant, the performance of TPL-G (APP) plants have been at par with other similarly situated plants. The Petitioner has not proposed any change in the approved Capital Expenditure of TPL-G (APP).

### **Commission's View**

The Commission has approved the actual capital expenditure incurred by the Petitioner, after due prudence check, as elaborated in Chapter 4 of this Order.

### **3.1.16. Issue: Fuel Cost or variable cost**

The Objector referred to Clause 58.6 of the GERC (MYT) Regulations, 2016, which provides for submission of copies of bills and details of parameters of GCV and price of fuel, i.e. domestic coal, imported coal, e-auction coal, lignite, natural gas, RLNG, liquid fuel, etc., details of blending ratio, proportion of e-auction coal, to be displayed on the website of the Generating Company. Such details are neither available on the website nor submitted in the Tariff Petition and not mentioned in the accounting statement. Further, no cost records are submitted in the Tariff Petition or in the accounting statement as prescribed by Central Government under Section 209(1)(d) of the Companies Act, 1956 and as contemplated in Clause 17.3 of the GERC (MYT) Regulations, 2016.

### **Response of TPL**

The Petitioner clarified that Regulation 58.6 pertains to providing information to the beneficiaries of the generating stations and is extraneous to the present proceedings.



The Petitioner further submitted that it has furnished all the details of cost data as part of the Petition. The Petitioner prepares and maintains the accounts as per the Accounting Standards in accordance with the Companies Act, 2013. The segregated Financial Statements for FY 2017-18, duly certified by the Statutory Auditors of the Company, have been made available along with the Petition.

### **Commission's View**

The Commission has approved the fuel cost incurred by the Petitioner, after due prudence check, as elaborated in Chapter 4 of this Order.

### **3.1.17. Issue: Fixed cost**

The gross generation of FY 2017-18 is 2,638.79 MUs, which is only 71.38% PLF and net generation is 2,406.44 MUs. C Station has not generated any electricity. The fixed cost recovery should be allowed at 80% PLF and on prorata basis.

Further, the Objector, during the public hearing held on 5<sup>th</sup> February, 2019, submitted that fixed cost should be reduced on prorata basis for 'C' station not working.

### **Response of TPL**

The contention of the Objector is erroneous and contrary to the provisions of the GERC (MYT) Regulations.

### **Commission's View**

The Commission has allowed the fixed cost recovery linked to the actual vis-à-vis normative availability of the Station on pro-rata basis, in accordance with the GERC (MYT) Regulations, 2016.



## 4. Truing up for FY 2017-18

### 4.1 Introduction

This Chapter deals with the truing up of FY 2017-18 for TPL-G Ahmedabad Power Plant (APP). The Commission has examined and analysed each component of the ARR for FY 2017-18 in the following paragraphs.

#### 4.1.1 Generating Stations of TPL-G (APP)

TPL has existing coal based thermal power generation facilities with total installed capacity of 422 MW at Sabarmati, Ahmedabad [TPL-G (APP)] consisting of 4 units, viz., C-Station (60 MW), D-Station (120 MW), E-Station (121 MW) and F-Station (121 MW). TPL also commissioned a combined cycle power plant (CCPP) of 1147.5 MW (SUGEN) at Akhakhol village near Surat in FY 2009-10. For its distribution business, TPL sources power from its own generation facilities in Ahmedabad, SUGEN (to the extent of 835 MW), and balance from other sources.

The Commission is required to determine the generation cost for the TPL-G (APP) stations only, as SUGEN plant being inter-state generating station, falls within the jurisdiction of the Central Electricity Regulatory Commission (CERC). The generation costs of these stations are discussed as below:

The details of the stations existing as on 1<sup>st</sup> April 2017 along with their capacities and dates of commissioning are given in the Table below:

**Table 4-1: Capacity, COD and age of TPL-G (APP) Stations as on 1<sup>st</sup> April, 2017**

Sabarmati Thermal Power Plant (Coal Based)			
Name of Station	Capacity in MW	Year of COD	Age (Years)
C Station	60 (2*30 MW)	1961/1997* (Year of turbine retrofitting)	58 (Retired in FY 2018-19)
D Station	120	1978/2004* (Up-rating capacity)	40
E Station	121	1984	34
F Station	121	1988	30



## 4.2 Operational Performance Parameters

The fuel cost of a generation station depends on (i) the performance parameters such as Plant Load Factor (PLF), Station Heat Rate (SHR), Auxiliary Consumption, Secondary Fuel Oil Consumption and Transit Loss, and (ii) cost parameters such as Gross Calorific Value of fuel, type of fuel and price of fuel, etc.

TPL has submitted the actual operational performance on Plant Availability Factor (PAF), Plant Load Factor (PLF), Station Heat Rate (SHR), Auxiliary Consumption, Specific Oil Consumption, and Coal Transit Loss for FY 2017-18 for individual stations. The Commission has taken up the truing up of the annual performance parameters for FY 2017-18, as discussed in the following sections.

### 4.2.1 Plant Availability Factor (PAF)

#### Petitioner's submission

TPL-G (APP) submitted that the actual plant availability of the Units has been computed considering the planned shutdown and the forced outages of the Units during FY 2017-18. The PAF approved in the MYT Order dated 9<sup>th</sup> June, 2017 and the actual as furnished by TPL-G (APP) in the true-up Petition for FY 2017-18 are given in the Table below:

**Table 4-2: Plant Availability Factor of TPL-G (APP) for FY 2017-18**

Sl. No.	Stations	Approved in the MYT Order	Actual
1.	D Station	92.16%	93.25%
2.	E Station	94.83%	96.88%
3.	F Station	89.49%	89.51%

TPL-G (APP) submitted that at the time of filing of the MYT Petition, the estimated availability of the Units was based on the annual planned maintenance schedule. TPL-G (APP) submitted that the reason for variation in actual and approved availability for D & E station, is due to the variation in actual forced outages during FY 2017-18, whereas C station was kept under reserve shutdown mode.

#### Commission's Analysis

In accordance with Regulation 53.1 of the GERC (MYT) Regulations, 2016, Normative Annual Plant Availability Factor (NAPAF) for full recovery of annual fixed charges is



85% for all thermal generating stations. Since the actual PAF for all the stations of TPL has been more than 85%, they are eligible for full recovery of fixed charges as per the GERC (MYT) Regulations, 2016. TPL-G (APP) submitted the Actual Availability of the Stations as per SLDC Certificate.

**The Commission for truing up purpose has considered the PAF as per SLDC Certificate.**

Hence, for truing up for FY 2017-18, the PAF considered is as given in the Table below:

**Table 4-3 Plant Availability Factor of TPL-G (APP) approved for truing up for FY 2017-18**

Sl. No.	Stations	Approved in the MYT Order	Actual	Approved for truing up
1.	D Station	92.16%	93.25%	93.25%
2.	E Station	94.83%	96.88%	96.88%
3.	F Station	89.49%	89.51%	89.51%

#### **4.2.2 Plant Load Factor (PLF)**

##### **Petitioner's submission**

TPL-G (APP) has submitted the actual PLF of different stations for FY 2017-18. The PLF approved in the MYT Order dated 9<sup>th</sup> June, 2017 and the actual as furnished by TPL-G (APP) in the true-up Petition for FY 2017-18 are given in the Table below:

**Table 4-4: Plant Load Factor of TPL-G (APP) for FY 2017-18**

Sl. No.	Station	Approved in the MYT Order	Actual
1.	D Station	79.32%	79.62%
2.	E Station	86.53%	87.43%
3.	F Station	82.95%	82.56%

TPL-G (APP) submitted that the actual PLF is higher than the approved PLF primarily due to variation in the demand. Further, C station was kept under reserve shutdown during the year. TPL-G (APP) also submitted that PLF is dependent on actual system demand which in turn depends upon the drawal by the consumers of the licensee, which is beyond the control of the Petitioner. Therefore, the variation in PLF is uncontrollable.

### **Commission's Analysis**

As regards Plant Load Factor, TPL-G (APP) in a data gap reply submitted the SLDC document for actual generation of D, E & F stations during FY 2017-18 based on which PLF has been worked out.

The actual PLF is higher than the levels approved in the MYT Order dated 9<sup>th</sup> June, 2017 for all stations of TPL-G (APP) except for F Station, where it is marginally lower than the approved one. C Station of TPL-G (APP) was not operated during FY 2017-18 due to reserve shut down, therefore PLF of C Station has been zero % during FY 2017-18.

**The Commission has considered the actual Plant Load Factor for various stations at actuals for FY 2017-18 for truing up purposes, as it is an uncontrollable parameter.**

**Table 4-5: Plant Load Factor of TPL-G (APP) approved for truing up for FY 2017-18**

<b>Sl. No.</b>	<b>Station</b>	<b>Approved in the MYT Order</b>	<b>Actual</b>	<b>Approved for truing up</b>
1.	D Station	79.32%	79.62%	79.62%
2.	E Station	86.53%	87.43%	87.43%
3.	F Station	82.95%	82.56%	82.56%

### **4.2.3 Auxiliary Consumption**

#### **Petitioner's Submission**

TPL-G (APP) has submitted the actual auxiliary consumption of different stations for FY 2017-18. The auxiliary consumption approved in the MYT Order dated 9<sup>th</sup> June, 2017 and the actual as furnished in the true-up Petition for FY 2017-18 are given in the Table below:

**Table 4-6 Auxiliary Consumption of TPL-G (APP) for FY 2017-18**

<b>Sl. No.</b>	<b>Station</b>	<b>Approved in the MYT Order</b>	<b>Actual</b>
1.	D Station	9.00%	9.05%
2.	E Station	9.00%	8.40%
3.	F Station	9.00%	8.92%

TPL-G (APP) submitted that it has made continuous efforts to maintain the auxiliary consumption at approved levels. TPL-G (APP) submitted that the actual auxiliary



consumption was lower than the approved value due to variation in demand. TPL-G (APP) further submitted that in the present Petition for the purpose of quantification of gains / losses, it has considered the entire variation in auxiliary consumption as controllable.

### **Commission's Analysis**

The Commission notes that actual auxiliary consumption for D station is marginally higher than the approved norms while for Stations E and F, it is lower.

**The Commission approves the auxiliary consumption for various stations, as approved in the MYT Order dated 9<sup>th</sup> June, 2017 for FY 2017-18, for truing up purposes, as it is a controllable parameter, as given in the Table below:**

**Table 4-7: Auxiliary consumption approved for truing up for FY 2017-18**

Sl. No.	Station	Approved in the MYT Order	Actual	Approved for Truing up
1.	D Station	9.00%	9.05%	9.00%
2.	E Station	9.00%	8.40%	9.00%
3.	F Station	9.00%	8.92%	9.00%

## **4.2.4 Station Heat Rate (SHR)**

### **Petitioner's Submission**

TPL-G (APP) has submitted the Station Heat Rate (SHR) of different stations for FY 2017-18. The SHR approved in the MYT Order dated 9<sup>th</sup> June, 2017 and the actual as furnished in the true-up Petition for FY 2017-18 are given in the Table below:

**Table 4-8: Station Heat rate of TPL-G (APP) claimed for FY 2017-18**  
**(kcal/kWh)**

Sl. No.	Station	Approved in the MYT Order	Actual
1.	D Station	2450.00	2435.00
2.	E Station	2455.00	2438.00
3.	F Station	2455.00	2445.00

TPL-G (APP) submitted that it is making all efforts to improve and maintain the SHR at the approved level.



TPL-G (APP) further submitted that the variation in SHR is a controllable parameter within the operating range of PLF and the variation in fuel consumption on account of this should be considered for sharing of gains/losses.

### **Commission's Analysis**

The Commission notes that actual SHR for D, E and F stations is lower than the approved norms for FY 2017-18.

The Commission for truing up purpose approves SHR for TPL-G (APP) as approved in the MYT Order dated 9<sup>th</sup> June, 2017.

**Table 4-9 Station Heat rate approved by Commission for TPL-G (APP) in FY 2017-18**  
**(Kcal/kWh)**

Sl. No.	Station	Approved in the MYT Order	Actual	Approved for truing up
1.	D Station	2450.00	2435.00	2450.00
2.	E Station	2455.00	2438.00	2455.00
3.	F Station	2455.00	2445.00	2455.00

## **4.2.5 Secondary Fuel Consumption (SFC)**

### **Petitioner's Submission**

TPL-G (APP) submitted the actual Secondary Fuel Oil Consumption (SFC) of different stations for FY 2017-18. The SFC approved in the MYT Order dated 9<sup>th</sup> June, 2017 and the actual as furnished in the true-up Petition for FY 2017-18 are given in the Table below:

**Table 4-10 Secondary Fuel Oil Consumption of TPL-G (APP) for FY 2017-18**  
**(ml/kWh)**

Sl. No.	Station	Approved in the MYT Order	Actual
1.	D Station	1.00	0.54
2.	E Station	1.00	0.18
3.	F Station	1.00	0.37

The Petitioner submitted that during FY 2017-18, TPL-G (APP) achieved lower than normative SFC due to lower forced outages.

### **Commission's Analysis**

The actual SFC is lower than the approved values for all the stations. Since the SFC is a controllable performance parameter, for truing up purpose, the Commission

approves the SFC values as approved in the MYT Order dated 9<sup>th</sup> June, 2017 for FY 2017-18, as given in the Table below:

**Table 4-11 Secondary Fuel Oil Consumption approved for truing up for FY 2017-18**  
**(ml/kWh)**

Sl. No.	Station	Approved in the MYT Order	Actual	Approved for truing up
1.	D Station	1.00	0.54	1.00
2.	E Station	1.00	0.18	1.00
3.	F Station	1.00	0.37	1.00

## 4.2.6 Transit Loss

### Petitioner's Submission

TPL-G (APP) submitted that against the transit loss of 0.80% approved by the Commission for FY 2017-18, it has achieved the actual transit loss of 0.77%. TPL-G (APP) also submitted that it has been making continuous efforts to contain the Transit Losses. However, there are various uncontrollable factors such as issue of accuracy of weighbridge at loading end, moisture loss, windage and slippage losses due to which transit loss exists. Therefore, any further reduction in the transit loss is beyond the control of TPL-G (APP). TPL-G (APP) further submitted that it has considered the transit loss as controllable parameter in its calculation as per the GERC (MYT) Regulations, 2016.

**Table 4-12: Transit Loss of TPL-G (APP) for FY 2017-18**

Sl. No.	Particulars	Approved in the MYT Order	Actual
1.	All Coal-based Stations	0.80%	0.77%

### Commission's Analysis

The Commission has noted the submission of the Petitioner regarding the transit loss of 0.77%. The Commission has considered the normative transit losses for truing up of FY 2017-18 as per the GERC (MYT) Regulations, 2016, as given in the Table below:

**Table 4-13: Transit loss approved for truing up for FY 2017-18**

Sl. No.	Particulars	Approved in the MYT Order	Actual	Approved for truing up
1.	All Coal-based Stations	0.80%	0.77%	0.80%

#### **4.2.7 Summary of performance parameters approved for Truing up of FY 2017-18**

Based on the analysis in the preceding paragraphs, the performance parameters approved for different power generation stations of TPL-G (APP) of FY 2017-18, for truing up purpose are listed in the Table below:

**Table 4-14: Performance parameters for TPL-G (APP) stations approved for truing up for FY 2017-18**

Sl. No.	Station	PAF	PLF	Aux. Consumption	Station Heat Rate kcal/kWh (on GCV basis)	Secondary fuel Oil consumption (ml/kWh)	Transit loss of coal
1.	D Station	93.25%	79.62%	9.00%	2450.00	1.00	0.80%
2.	E Station	96.88%	87.43%	9.00%	2455.00	1.00	0.80%
3.	F Station	89.51%	82.56%	9.00%	2455.00	1.00	0.80%

#### **4.3 Gross and Net Generation**

The gross and net generation of power in different stations, as per actuals submitted by TPL-G (APP) and as approved for truing up purpose for FY 2017-18 are given in the Table below:

**Table 4-15: Gross and Net Generation of power for truing up for FY 2017-18**

Sl. No.	Stations	As per actuals submitted by TPL			As approved by the Commission			
		Gross Generation (MU)	Aux. consumption (%)	Net Generation (MU)	Gross Generation (MU)	Aux consumption (%)	Aux, consumption (MU)	Net Generation (MU)
1.	C Station	0.01	-	(0.75)	0.01		0.76	(0.75)
2.	D Station	836.96	9.05%	761.25	836.96	9.00%	75.33	761.63
3.	E Station	926.69	8.40%	848.82	926.69	9.00%	83.40	843.29
4.	F Station	875.13	8.92%	797.11	875.13	9.00%	78.76	796.37
	<b>Total</b>	<b>2638.79</b>		<b>2406.44</b>	<b>2638.79</b>		<b>238.25</b>	<b>2400.54</b>

#### **4.4 Cost Parameters**

The cost parameters include GCV of fuel, mix of fuel and price of fuel. The Sabarmati C, D, E & F Stations of TPL-G (APP) run on coal as the primary fuel. A mix of indigenous and imported coal is used in these stations.



TPL-G (APP) submitted the details of actual Wt. Avg. GCV of mix of coal and Wt. Av price of fuel for different stations for FY 2017-18, as discussed below.

#### **4.4.1 Mix of Coal**

##### **Petitioner's Analysis**

TPL-G (APP) furnished the details of actual percentage of mix of indigenous and imported coal in its D, E and F Stations during FY 2017-18, as given in the Table below:

**Table 4-16: The Mix of different types of coal for FY 2017-18**

Sl. No.	Stations	Indigenous Coal	Imported Coal
1.	D Station	59%	41%
2.	E Stations	77%	23%
3.	F Stations	83%	17%

##### **Commission's Analysis**

The Commission, after due validation, approves the percentage mix of coal as furnished by TPL-G (APP) for individual stations and considers the same for truing up purpose as these are uncontrollable items. The approved mix of coal for FY 2017-18 is as shown in the Table below:

**Table 4-17: Mix of different types of coal for FY 2017-18 as approved by the Commission**

Sl. No.	Stations	Indigenous Coal	Imported Coal
1.	D Station	59%	41%
2.	E Stations	77%	23%
3.	F Stations	83%	17%

#### **4.4.2 Calorific Value (GCV) of Fuel**

##### **Petitioner's Submission**

TPL-G (APP) has furnished the actual Calorific Value of fuels for all the stations put together for FY 2017-18, as given in the Table below:

**Table 4-18: Calorific value of Fuel of TPL-G (APP) for FY 2017-18**

Sl. No.	Particulars	Approved in the MYT Order	Actual
1.	Indigenous Coal (kcal/kg)	4053	4057
2.	Imported Coal (kcal/kg)	4888	4862
3.	Secondary Fuel Oil (kcal/L)	9970	9970



### **Commission's Analysis**

The Commission after due validation approves the Wt. Avg. GCV of fuels as furnished by TPL for all the stations together and considers the same for truing up purposes for FY 2017-18, as these are uncontrollable items.

#### **4.4.3 Wt. Avg. Prices of Fuel**

TPL has furnished the actual Wt. Avg. Price of different fuels for all the stations for FY 2017-18, as given in the Table below:

**Table 4-19: Wt. Avg. Price of fuels for FY 2017-18 (Actual) for Different Stations**

Sl. No.	Station	Wt. Avg. Price of Indigenous coal (Rs./MT)	Wt. Avg. Price of Imported coal (Rs./MT)	Wt. Avg. Price of Secondary Fuel Oil (Rs./kl)
1.	D Station	5208	5838	31906
2.	E Stations	5171	5941	31936
3.	F Stations	5208	5943	31990

### **Commission's Analysis**

As regards Wt. Avg. price of coal, TPL-G (APP) in its reply to data gaps, submitted the actual landed price of indigenous coal and imported coal for FY 2017-18. The Commission after due validation approves the Wt. Avg. Prices of Fuels (actual) as furnished by TPL for individual stations and considers the same for truing up purpose for FY 2017-18, as these are uncontrollable items.

**Table 4-20: Approved Wt. Avg. Price of fuels for FY 2017-18 for Different Stations**

Sl. No.	Station	Wt. Avg. Price of Indigenous coal (Rs./MT)	Wt. Avg. Price of Imported coal (Rs./MT)	Wt. Avg. Price of Secondary Fuel Oil (Rs./kl)
1.	D Station	5208	5838	31906
2.	E Stations	5171	5941	31936
3.	F Stations	5208	5943	31990

## **4.5 Fuel Cost**

Based on the performance and cost parameters, the normative fuel cost approved for each of the stations, along with actual furnished by TPL, are as given in the Table below:

**Table 4-21 Fuel Cost for truing up of FY 2017-18**

Sl. No.	Stations	As per actual submitted by TPL				As approved by the Commission			
		Gross Generation (MU)	Net Generation (MU)	Fuel cost (Rs. Crore)	Fuel cost per unit net (Rs. /kWh)	Gross Generation (MU)	Net Generation (MU)	Fuel cost (Rs. Crore)	Fuel cost per unit net (Rs. /kWh)
1.	C Station	0.01	(0.75)	-	-	0.01	(0.75)	-	
2.	D Station	836.96	761.25	241.00	3.17	836.96	761.63	243.24	3.20
3.	E Stations	926.69	848.82	271.68	3.20	926.69	843.29	277.07	3.26
4.	F Stations	875.13	797.11	258.55	3.24	875.13	796.37	261.05	3.27
	<b>Total</b>	<b>2638.79</b>	<b>2406.44</b>	<b>771.22</b>		<b>2638.79</b>	<b>2400.54</b>	<b>781.36</b>	

Detailed computation of the fuel cost for each of the stations (except C station) has been given in Annexures 1 to 3 at the end of this Order.

#### **4.5.1 Variation between actual costs and approved costs**

The Commission has computed the normative fuel cost for the purpose of computing the gains/losses due to controllable factors.

The Commission has verified the actual fuel cost submitted by TPL-G (APP) with the annual accounts and observed that the fuel cost as per annual accounts is Rs. 770.75 Crore whereas the actual fuel cost as submitted by TPL-G (APP) in the Petition is Rs 771.22 Crore. As regards the difference between the aforesaid figures, the Petitioner submitted that the difference in fuel cost claimed with that of Financial statements is due to reversal of the provision of Rs. 0.48 Crore which was not considered in true up Order of FY 2016-17 dated 31<sup>st</sup> March, 2018. Accordingly, the Petitioner has claimed the fuel cost of Rs. 771.22 Crore in the true-up Petition for FY 2017-18.

The fuel costs of all stations put together, as claimed in the true-up Petition for FY 2017-18 and that approved in the truing up is given in the Table below:

**Table 4-22: Fuel cost Approved for truing up for FY 2017-18**  
**(Rs. Crore)**

Sl. No.	Particular	As per actual (Claimed)	Approved
1.	Total Fuel cost	771.22	781.36

#### 4.5.2 Gains and Losses in fuel costs due to Controllable Factors

TPL-G (APP) has arrived at the fuel expenses incurred for FY 2017-18, on the basis of the actual operational parameters, such as SHR, auxiliary consumption, SFC, and transit loss of coal. The Commission has compared the fuel expenses so derived by TPL-G (APP) with the fuel expenses computed on the basis of the approved operational performance parameters for actual net generation for computation of gains / losses on account of variation in these parameters and approves the gains / losses station-wise, as given in the Table below:

**Table 4-23: Approved Gains/(Losses) from Fuel Expenses (due to Controllable Factors) for FY 2017-18**

(Rs. Crore)

Sl. No.	Station	Fuel cost arrived at with approved parameters for actual net generation	Actual fuel cost at actual parameters	Gains/(Losses) due to Controllable factors
1.	D Station	243.24	241.00	2.24
2.	E Stations	277.07	271.68	5.39
3.	F Stations	261.05	258.55	2.50
	<b>Total</b>	<b>781.36</b>	<b>771.22</b>	<b>10.14</b>

*\*Note: Detailed computation of the fuel cost for each of the stations, with approved parameters for actual net generation, has been given in Annexure 1 to 3 at the end of this Order.*

#### 4.5.3 Gains and Losses in fuel costs due to Uncontrollable Factors

The Commission has computed the fuel expenses, so derived by considering the fuel costs as approved in the MYT Order dated 9<sup>th</sup> June, 2017 vis-à-vis the fuel costs as per actuals, on the basis of the approved operational performance parameters such as SHR, auxiliary consumption, SFC and transit loss of coal for actual net generation for computation of gains / losses on account of variation in the fuel costs and approves the gains / losses station-wise, as uncontrollable, as given in the Table below:

**Table 4-24 Approved Gains/(Losses) from Fuel Expenses (due to Uncontrollable Factors) for FY 2017-18**

(Rs. Crore)

Sl. No.	Station	Fuel cost approved in the MYT Order	Actual fuel cost approved with approved parameters	Gains/(Losses) due to Un Controllable factor
1.	D Station	249.14	243.24	5.90
2.	E Stations	274.60	277.07	(2.47)
3.	F Stations	263.24	261.05	2.19
	<b>Total</b>	<b>786.98</b>	<b>781.36</b>	<b>5.62</b>



## 4.6 Fixed Charges

### 4.6.1 Operation and Maintenance Expenses

TPL-G (APP) has claimed Rs. 142.49 Crore as O&M expenses as against Rs. 166.80 Crore of composite O&M expenses approved for FY 2017-18 in the MYT Order dated 9<sup>th</sup> June, 2017.

**Table 4-25: O&M Expenses of TPL-G (APP) Claimed for FY 2017-18**  
**(Rs. Crore)**

Sl. No.	Particulars	Approved in the MYT Order	Actual Claimed
1.	Operation and Maintenance Expenses	166.80	142.49

#### Petitioner's Submission

The Petitioner submitted that the O&M expenses are lower than the approved expenses and the variation in O&M Expenses should be considered as controllable except due to changes in law and the factors beyond the control of the Petitioner. The Petitioner has considered the entire O&M expenses as controllable.

#### Commission's Analysis

TPL-G (APP) has submitted the actual O&M expenses at Rs. 142.49 Crore inclusive of negative impact of re-measurement of the defined benefit plans of Rs. (4.38) Crore in the truing up for FY 2017-18.

The Commission observed that TPL in their Standalone Financial Statement has shown Rs. 20.49 Crore towards "Remeasurement of defined Benefit Plans" while the total amount shown by TPL-G (APP), TPL-D (A), TPL-D (S) and TPL-D (D) is Rs. 16.85 Crore. The Commission asked TPL to submit the reconciliation of the amount of Rs. 20.50 Crore with the amount of Rs. 16.85 Crore shown by TPL in its Petitions for true-up for FY 2017-18. The Commission also asked TPL to clarify regarding the treatment of the Income Tax of Rs. 7.16 Crore relating to above defined benefit plans in the true-up Petitions filed by TPL. TPL-G replied that the difference between total amounts claimed and amounts reported in the Consolidated Accounts is on account of other business units of TPL, and that the Income Tax related to above defined benefit plans has already been factored into the Income Tax computed by the Petitioner.

The actual O&M cost as per the annual accounts consists of Employee Expenses of Rs. 68.99 Crore and Other Expenses of Rs. 96.77 Crore net of expenses capitalized





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of Rs. 14.52 Crore. These also include Donations of Rs 1.20 Crore, Water Charges of Rs.15.11 Crore, Insurance Claim Receipt of Rs 1.20 Crore, Corporate Social Responsibility expenses of Rs. 1.17 Crore and expenses pertaining to Vatva unit of Rs. 0.21 Crore, which have been deducted along with the negative impact of Rs. (4.38) Crore on account of Remeasurement of Defined Benefit Plans as appearing in the Statement of Profit & Loss by TPL-G (APP) to arrive at the O&M expenses claimed in the Petition.

It is observed that the Petitioner has deducted the Insurance Claim Receipt of Rs. 1.20 Crore from the Non-Tariff Income and also reduced the A&G expenses by the same amount. However, in line with the approach followed by the Commission in previous Orders, the Commission has considered the Insurance Claim Receipt of Rs. 1.20 Crore under Non-Tariff Income and also considered the same amount under actual A&G expenses.

The Commission noticed a significant difference in Employee Expenses and A&G Expenses (Gross) between the amount approved in MYT Order and the actual amount. In response to the data gap query, TPL-G (APP) submitted that the actuarial loss on gratuity is shown as other comprehensive income rather than other under O&M expenses, in accordance with IND AS.

**The Commission, accordingly, approves the O&M Expenses of Rs.143.69 Crore, as shown in the Table below:**

**Table 4-26: Approved O&M Expenses for truing up for FY 2017-18 for TPL-G (APP)**  
**(Rs. Crore)**

Sl. No.	Particular	Approved in the MYT Order	Actual Claimed	Approved for truing up
1.	Operation and Maintenance Expenses	166.80	142.49	143.69

Accordingly, the Gain/(Losses) on account of O&M expenses is approved by the Commission in the truing up of FY 2017-18 as given in the Table below:

**Table 4-27 O&M Expenses and Gains/(Losses) approved in truing up for FY 2017-18**  
**(Rs. Crore)**

Sl. No.	Particular	Approved in MYT Order	Approved in truing up	Deviation	Gains / (Losses) due to Controllable factors	Gains / (Losses) due to uncontrollable factors
1.	O&M Expenses	166.80	143.69	23.11	23.11	-



## 4.6.2 Water Charges

### Petitioner's Submission

TPL-G (APP) has claimed Rs. 15.11 Crore towards actual water charges in the truing up for FY 2017-18 as against Rs. 11.59 Crore approved in the MYT Order dated 9<sup>th</sup> June, 2017.

TPL-G (APP) submitted that the existing Regulations provide that water charges are to be allowed as per actuals. The details are given in the Table below:

**Table 4-28: Water charges claimed in the truing up by TPL-G (APP) for FY 2017-18**  
**(Rs. Crore)**

Sl. No.	Particulars	Approved in the MYT Order	Actual Claimed
1.	Water Charges	11.59	15.11

### Commission's Analysis

The GERC (MYT) Regulations, 2016 clearly specify that the water charges shall be allowed separately over and above the O&M Expenses, as per actuals.

The Commission had approved water charges of Rs. 11.59 Crore for FY 2017-18 in the MYT Order. The Commission has verified the water charges from the annual accounts and accordingly approves the actual water charges of Rs. 15.11 Crore in the truing up for FY 2017-18, as shown in the Table below:

**Table 4-29: Approved Water Charges for TPL-G (APP) for truing up for FY 2017-18**  
**(Rs. Crore)**

Sl. No.	Particulars	Approved in the MYT Order	Actual Claimed	Approved for truing up
1.	Water Charges	11.59	15.11	15.11

The deviation is considered as uncontrollable and the gains and losses are considered as detailed below:

**Table 4-30: Gains/(Losses) Approved for Water Charges in the truing up for FY 2017-18**  
**(Rs. Crore)**

Sl. No.	Particulars	Approved in MYT Order	Approved in truing up	Deviation	Gains / (Losses) due to Controllable factors	Gains / (Losses) due to uncontrollable factors
1.	Water Charges	11.59	15.11	(3.52)	-	(3.52)



#### 4.6.3 Capital Expenditure, Capitalization and sources of Funding

##### Petitioner's Submission

TPL-G (APP) has claimed actual capital expenditure of Rs. 21.46 Crore in the truing up for FY 2017-18, as against Rs. 9.40 Crore approved in the MYT Order for FY 2017-18 as shown in the Table below:

**Table 4-31: Capital Expenditure Claimed by TPL-G (APP) for FY 2017-18**

(Rs. Crore)			
Sl. No.	Particulars	Approved in the MYT Order	Actual Claimed
1.	Refurbishment of D, E & F Station	-	0.18
2.	Shifting of services from C station	-	1.11
3.	Refurbishment of D, E & F Station boiler system	1.00	-
4.	Boiler Works	2.00	6.57
5.	Turbine Works	4.00	3.63
6.	Electrical Works	1.40	2.96
7.	C&I Works	-	0.52
8.	CHP Works	-	1.47
9.	Civil Works	1.00	3.15
10.	Others	-	1.14
11.	Misc.	-	0.72
	<b>Total</b>	<b>9.40</b>	<b>21.46</b>

The main reasons for variation in the capital expenditure against the approved capital expenditure are described below:

- a) **Refurbishment of D, E and F station** – the work of refurbishment of D, E & F station was continued. Expenditure of Rs. 0.18 Crore was incurred towards epoxy lining work at PRDS floors of D & E stations to avoid water seepage in control room and panel room as well as refurbishment of structural foundation.
- b) **Shifting of services from C station**– Since C station is being operated in reserve shutdown mode, the work of shifting of critical services from C station has been initiated during FY 2017-18.
- c) **Refurbishment of D, E & F Station Boiler system**- As per RLA recommendations, boiler components and pressure parts have been replaced under boiler works project in a phased manner. Therefore, activities planned under refurbishment of D, E, & F station boiler system project have been dropped.



d) **Normal Capital Expenditure** – TPL G (APP) incurred expenditure of Rs. 19.45 Crore against approval of Rs. 8.40 Crore. The major variation is on account of the following:

- Boiler Works- Expenditure incurred towards execution of deferred projects pertaining to refurbishment of dry and wet ash handling system and repairing & replacement of boiler component of DEF station.
- Turbine Works- Expenditure incurred towards procurement of turbine generator critical spares, E station cooling tower internals, and components for pumps. The project of minor overhauling of E & F station turbine has been dropped looking to the performance and behaviour of the turbines.
- Electrical Works – Higher expenditure incurred due to execution of deferred projects pertaining to procurement of breakers, upgradation of electrical system, test equipment, control cubicle, numeric relays and Variable Frequency Drive and battery work.
- C&I Works – Major expenditure incurred towards deferred projects of replacement of UPS system, switches at D Station and combustion analysers at D/E/F station.
- CHP Works - Expenditure incurred towards the critical components and spares of equipment of coal handling plant (CHP).
- Civil works- Expenditure incurred towards refurbishment of ash silo along with skimmer and development of diesel garage along with renovation of buildings and roads.
- Others – Major expenditure has been incurred towards new bore well and network provision, bore well / french well pump set to phase out old pump set, and thermographic camera.

e) **Misc. Capital Expenditure** – TPL G (APP) incurred miscellaneous capital expenditure of Rs. 0.72 Crore. The majority of such expenditure has been incurred towards deferred projects of procurement of CCTV camera/Recording system, weighbridge, etc.



TPL-G (APP) has claimed actual capitalisation of Rs. 19.46 Crore in the truing up for FY 2017-18, as against Rs. 7.03 Crore approved in the MYT Order for FY 2017-18, as shown in the Table below:

**Table 4-32: Capitalisation submitted by TPL-G (APP) in FY 2017-18**  
**(Rs. Crore)**

Sl. No.	Particulars	Approved in the MYT Order	Actual Claimed
1.	Opening GFA	1,179.22	1,149.20
2.	Addition to the GFA	7.03	19.46
3.	Deletion from GFA	-	22.62
4.	Closing GFA	1,186.25	1,146.04
5.	Capitalisation considered for Debt	7.03	(3.16)
6.	Capitalisation considered for Equity	7.03	(3.16)
7.	Normative debt@70%	4.92	(2.21)
8.	Normative Equity@30%	2.11	(0.95)

### Commission's Analysis

TPL-G (APP) has claimed actual capital expenditure of Rs. 21.46 Crore and capitalisation of Rs. 19.46 Crore against the capital expenditure and capitalisation of Rs. 9.40 Crore and Rs. 7.03 Crore, respectively, approved in the MYT Order for FY 2017-18.

The Commission sought the details of scheme-wise breakup of actual capitalisation of Rs. 19.46 Crore with details of Opening CWIP as on 1<sup>st</sup> April, 2017 and Closing CWIP as on 31<sup>st</sup> March, 2018, which TPL-G (APP) provided.

The Commission observed that there is a significant variation in the value of Opening GFA in the annual accounts and Petition. TPL-G (APP) in a written submission stated that the Fixed Asset Schedule of annual accounts is on NFA basis as per IND AS. However, TPL-G (APP) also submitted fixed asset schedule on GFA basis as per the GERC (MYT) Regulations, 2016.

The Commission observed that the actual capital expenditure was much higher than the capital expenditure approved in the MYT Order for FY 2017-18. However, the majority of the capital expenditure incurred in FY 2017-18 is against schemes that were approved for FY 2016-17 but were deferred on account of delay in receipt of spare parts, etc. Further, TPL-G (APP) has decapitalised the assets to the extent of Rs. 22.62 Crore during FY 2017-18, and reduced the capitalisation during the year by the amount

of deletion of fixed assets to work out net capitalisation for debt and equity component as provided in Regulation 33 of the GERC (MYT) Regulation, 2016.

**The Commission approves the capitalisation and sources of funding, as shown in the Table below in the truing up for FY 2017-18.**

**Table 4-33: Approved Capitalisation and Sources of Funding in truing up for FY 2017-18**

(Rs. Crore)				
Sl. No.	Particulars	Approved in the MYT Order	Actual Claimed	Approved in truing up
1.	Opening GFA	1179.22	1149.20	1149.20
2.	Addition to the GFA	7.03	19.46	19.46
3.	Deletion to GFA	-	22.62	22.62
4.	Closing GFA	1,186.25	1,146.04	1,146.04
5.	Capitalisation considered for Debt	7.03	(3.16)	(3.16)
6.	Capitalisation considered for Equity	7.03	(3.16)	(3.16)
7.	Normative debt@70%	4.92	(2.21)	(2.21)
8.	Normative Equity@30%	2.11	(0.95)	(0.95)

#### 4.6.4 Interest Expenses

##### Petitioner's Submission

TPL-G (APP) has claimed a sum of Rs. 4.45 Crore towards interest expenses in the truing up for FY 2017-18, as against Rs. 7.19 Crore approved in the MYT Order for FY 2017-18, as detailed in the Table below:

**Table 4-34: Total Interest Expenses Claimed in truing up for TPL-G (APP) for FY 2017-18**

(Rs. Crore)			
Sl. No.	Particulars	Approved in the MYT Order	Actual Claimed
1.	Interest Expenses	7.19	4.45

TPL-G (APP) has submitted that the GERC (MYT) Regulations, 2016 provide for the calculation of interest expenses on normative basis by considering the amount of depreciation as the amount of repayment.

The Petitioner submitted that it has considered the interest expenses on normative basis as per the GERC (MYT) Regulations, 2016. The Petitioner submitted that it has calculated the interest expenses by applying the Weighted Average Rate of interest of

the actual loan portfolio during the year on the loan component, while repayment has been considered equal to the depreciation for the year.

TPL-G (APP) claimed the eligible interest expenses for FY 2017-18 as shown in the Table below:

**Table 4-35 Interest Expenses claimed in the truing up for FY 2017-18**  
**(Rs. Crore)**

Sl. No.	Particulars	Actual
1.	Capitalisation considered for Debt	(3.16)
2.	Normative Debt @ 70%	(2.21)
3.	Opening Balance	73.79
4.	New Borrowings	(2.21)
5.	Repayments	47.74
6.	Closing Balance	23.84
7.	<b>Interest Expense@ 8.55%</b>	<b>4.17</b>
8.	Other Borrowing Cost	0.28
9.	<b>Total Interest &amp; Finance Charges</b>	<b>4.45</b>

The Petitioner submitted that the variation as shown in the Table below in the Interest expenses compared to the actual expenses is to be treated as uncontrollable as it depends on the quantum of actual capitalization and variation in the rate of interest.

**Table 4-36: Interest Expenses for TPL-G (APP)**  
**(Rs. Crore)**

Sl. No.	Particulars	Approved in MYT Order	Actual Claimed	Deviation
1.	Interest Expense	7.19	4.45	2.74

### Commission's Analysis

The Commission has considered the Closing loan balance as on 31.03.2017 as the Opening loan balance of FY 2017-18. The additional loan considered is 70% of the value of assets added during the year after deduction of the value of assets retired during the year.

As per the first proviso of Regulation 38.5 of the GERC (MYT) Regulations, 2016, at the time of truing up, the weighted average rate of interest calculated on the basis of the actual loan portfolio during the year applicable to the Generating Company shall be considered as the rate of interest. Accordingly, the Commission has worked out interest rate of 8.55% based on information such as lender-wise loan portfolio with periodical variation in interest rate, principal repayment and tenure during FY 2017-18



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as received from TPL-G (APP). The Commission has considered the other borrowing cost as Rs. 0.28 Crore as per Note 24 of the annual accounts. The Commission has considered the depreciation, as computed subsequently, as equal to the normative repayment, in accordance with the MYT Regulations.

Accordingly, based on the actual capitalisation achieved by TPL-G (APP) during FY 2017-18 and the approved normative borrowing, and considering the interest rate of 8.55%, the Commission has computed the allowable interest expenses, as shown in the Table below:

**Table 4-37: Interest and Finance charges approved by the Commission in the truing up for FY 2017-18**

(Rs. Crore)				
Sl. No.	Particulars	Approved in MYT Order	Actual Claimed	Approved in truing up
1.	Opening Balance of Loans	97.08	73.79	73.79
2.	Less: Reduction of Loans due to retirement or replacement of assets	0.00	15.83	15.83
3.	Addition of Loans due to capitalisation during the year	4.92	13.62	13.62
4.	Repayment of Loans during the year	47.71	47.74	47.74
5.	Closing Balance of Loans	54.29	23.83	23.84
6.	Average Balance of Loans	75.69	48.81	48.81
7.	Weighted average Rate of Interest on actual Loans (%)	9.50%	8.55%	8.55%
8.	Interest Expenses	7.19	4.17	4.17
9.	Finance Charges	-	0.28	0.28
10.	<b>Total Interest &amp; Finance Charges</b>	<b>7.19</b>	<b>4.45</b>	<b>4.45</b>

**The Commission, accordingly, approves the interest and finance charges of Rs. 4.45 Crore in the truing up for FY 2017-18.**

As regards the computation of gains / losses, Regulation 22.2 of the GERC (MYT) Regulations, 2016 provides as under:

*“Regulation 22.2 of the GERC (MYT) Regulations, 2016 considers variations in capitalization on account of time and/or cost overruns/ efficiencies in the implementation of a capital expenditure project not attributable to an approved change in scope of such project, change in statutory levies or force majeure events, as a controllable factor. If the gain is on account of lesser capital expenditure and capitalisation, it cannot be attributed to the efficiency of the utility to allow 2/3<sup>rd</sup> of the gain to the utility. Similarly, if the loss is on account of more capital expenditure and capitalisation due to bonafide reasons, the utility cannot be penalised by allowing only 1/3<sup>rd</sup> of the loss in the ARR. Accordingly,*





*the Commission has decided to consider variation in capitalisation as uncontrollable. Hence, the components of ARR related to capitalisation, like interest and finance charges, depreciation and return on equity are also considered as uncontrollable.”*

**The Commission has considered the similar approach while truing up for FY 2017-18 and accordingly approves the gains / (losses) on account of interest and finance charges as uncontrollable in the truing up for FY 2017-18, as shown in the Table below:**

**Table 4-38: Gains/(Losses) approved for Interest and Finance Charges in the truing up for FY 2017-18**

(Rs. Crore)

Sl. No.	Particulars	Approved in MYT Order	Approved in truing up	Deviation	Gains/ (Losses) due to Controllable factor	Gains / (Losses) due to uncontrollable factor
1.	Interest and Finance Charges	7.19	4.45	2.74	-	2.74

#### **4.6.5 Interest on Working Capital**

##### **Petitioner’s Submission**

TPL-G (APP) submitted that the interest on working capital is arrived at by applying interest rate of 10.50% on the working capital requirement computed as per the GERC (MYT) Regulations, 2016.

TPL-G (APP) has claimed Rs. 13.32 Crore interest on working capital in the truing up of FY 2017-18, as against Rs. 14.40 Crore approved in the MYT Order dated 9<sup>th</sup> June, 2017 as shown in the Table below:

**Table 4-39: Interest on Working Capital of TPL-G (APP) Claimed for FY 2017-18**

(Rs. Crore)

Sl. No.	Particulars	Approved in the MYT Order	Actual Claimed
1.	Coal cost for 1.5 months	96.00	102.10
2.	Secondary Fuel cost for 2 months	1.39	1.40
3.	O&M Expense for 1 month	13.90	11.87
4.	1% GFA for Maintenance spares	11.79	11.49
5.	Receivables for 1 month	-	-
6.	Working capital Requirement	123.08	126.87
7.	Interest Rate (%)	11.70%	10.50%
8.	<b>Interest on Working Capital</b>	<b>14.40</b>	<b>13.32</b>



The Petitioner further submitted that the variation in working capital requirement is primarily on account of variation in actual fuel costs and O&M expenses. Further, there is a variation in interest rate applicable on working capital requirement. The Petitioner submitted that variation between the MYT approved interest on working capital and actual interest on working capital was primarily attributable to uncontrollable factors and has accordingly treated as uncontrollable.

### **Commission's Analysis**

The Commission has examined the computation of normative working capital and interest thereon in accordance with the GERC (MYT) Regulations, 2016.

Regulation 40.1 of the GERC (MYT) Regulations, 2016 provides as under:

*"40.1 Generation:*

*(a) In case of coal based/oil-based/lignite-fired generating stations, working capital shall cover:*

- (i) Cost of coal or lignite for one (1) month for pit-head generating stations and one and a half (1 1/2) months for non-pit-head generating stations, corresponding to target availability; plus*
- (ii) Cost of oil for one (1) month corresponding to target availability; plus*
- (iii) Cost of secondary fuel oil for two (2) months corresponding to target availability; plus*
- (iv) Operation and Maintenance expenses for one (1) month; plus*
- (v) Maintenance spares at one (1) per cent of the historical cost; plus*
- (vi) Receivables for sale of electricity equivalent to one (1) month of the sum of annual fixed charges and energy charges calculated on target availability:*

*Provided that in case of own generating stations, 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 these Regulations:*

*Provided further that at the time of truing up for any year, the working capital requirement shall be re-calculated on the basis of the values of components of working capital approved by the Commission in the truing up;"*



Accordingly, the Commission has worked out the working capital requirement considering Normative Target Availability of 85% for all the stations (D, E & F) of TPL-G (APP). This is as per Regulation 53.1 of the GERC (MYT) Regulations, 2016.

The working capital comprises 1.5 months of coal cost, 2 months' of secondary fuel cost, 1 month of O&M expenses, maintenance spares at 1% of historical cost of assets, and receivables equivalent to 1 month.

As regards the rate of interest on working capital, the Commission vide Notification No. 7 of 2016 dated 2<sup>nd</sup> December, 2016 has amended Regulation 40.1 (d) of the GERC (MYT) Regulations, 2016 as under:

*“Interest on working capital shall be allowed at a rate equal to the State Bank Base Rate (SBBR) / 1 year State Bank of India (SBI) Marginal Cost of Funds Based Lending Rate (MCLR) / any replacement thereof by SBI for the time being in effect applicable for 1 year period, as may be applicable as on 1<sup>st</sup> April of the financial year in which the Petition is filed plus 250 basis points:*

*Provided that at the time of truing up for any year, interest on working capital shall be allowed at a rate equal to the weighted average State Bank Base Rate (SBBR) / 1 year State Bank of India (SBI) Marginal Cost of Funds Based Lending Rate (MCLR) / any replacement thereof by SBI for the time being in effect applicable for 1 year period, as may be applicable prevailing during the financial year plus 250 basis points.”*

In line with the above proviso to Regulation 40.1 (d), the Commission has considered the weighted average of 1-year State Bank of India (SBI) Marginal Cost of Funds Based Lending Rate (MCLR) of 8.00% prevailing during FY 2017-18 plus 250 basis points. Accordingly, the rate of interest on working capital has been worked out to be 10.50%.

Based on the O&M expenses and other expenses now approved in the Truing up, the revised normative working capital requirement and interest thereon calculated at 10.50%, are detailed in the Table below:

**Table 4-40: Interest on Working Capital Approved in the truing up for FY 2017-18**  
**(Rs. Crore)**

Sl. No.	Particulars	Approved in the MYT Order	Actual Claimed	Approved in truing up
1.	Coal cost for 1.5 months	96.00	102.10	104.27
2.	Secondary fuel cost for 2 months	1.39	1.40	1.44



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Sl. No.	Particulars	Approved in the MYT Order	Actual Claimed	Approved in truing up
3.	O&M Expense for 1 month	13.9	11.87	11.97
4.	1% GFA for Maintenance spares	11.79	11.49	11.49
5.	Receivables for 1 month	-	-	
6.	Working Capital Requirement	123.08	126.86	129.17
7.	Interest Rate (%)	11.70%	10.50%	10.50%
8.	<b>Interest on Working Capital</b>	<b>14.40</b>	<b>13.32</b>	<b>13.56</b>

The Commission, accordingly, approves the interest on working capital (IoWC) at Rs. 13.56 Crore in the truing up for FY 2017-18.

The difference between the Interest on Working Capital approved in the MYT Order and that approved in the true-up is considered as uncontrollable.

**The Commission, accordingly, approves the Gains / (Losses) on account of Interest on Working Capital in the truing up for FY 2017-18, as detailed in the Table below:**

**Table 4-41: Gains/(losses) in Interest on Working Capital Approved in the truing up for FY 2017-18**

(Rs. Crore)						
Sl. No.	Particulars	Approved in MYT Order	Approved in truing up	Deviation	Gains / (Losses) due to Controllable factors	Gains / (Losses) due to uncontrollable factors
1.	Interest on Working Capital	14.40	13.56	0.84	-	0.84

#### 4.6.6 Depreciation

##### Petitioner's Submission

TPL-G (APP) has claimed depreciation of Rs. 47.74 Crore in the truing up for FY 2017-18, as against Rs. 47.71 Crore approved in the MYT Order dated 9<sup>th</sup> June, 2017, as detailed in the Table below:

**Table 4-42: Depreciation of TPL-G (APP) Claimed for FY 2017-18**

(Rs. Crore)			
Sl. No.	Particulars	Approved in the MYT Order	Actual Claimed
1.	Depreciation	47.71	47.74



TPL-G (APP) submitted that the depreciation rates, as per the CERC (Terms and Conditions of Tariff) Regulations, 2004, are applied on the opening GFA of FY 2009-10 and for addition of assets from 1<sup>st</sup> April, 2009 onwards the depreciation has been computed at the rates specified in the GERC Regulations.

The Petitioner submitted that the variation in depreciation amount compared to the approved amount be treated as uncontrollable.

### **Commission's Analysis**

The Commission has considered the Opening Balance of assets as on 01.04.2017 equal to Closing Balance of FY 2016-17 as approved in the Tariff Order dated 31<sup>st</sup> March, 2018. The Commission has verified the depreciation computed by the Petitioner, with the rates specified in the CERC (Terms and Conditions of Tariff) Regulations, 2004 as well as in the GERC (MYT) Regulations, 2016.

**The Commission, accordingly, approves the depreciation at Rs. 47.74 Crore in the truing up for FY 2017-18.**

**The Commission, also, approves the Gains / (Losses) on account of depreciation in the truing up for FY 2017-18, as detailed in the Table below:**

**Table 4-43: Gains/(losses) approved for Depreciation in truing up for FY 2017-18**

(Rs. Crore)						
Sl. No.	Particular	Approved in MYT Order	Approved in truing up	Deviation	Gains / (Losses) due to Controllable factors	Gains / (Losses) due to uncontrollable factors
1.	Depreciation	47.71	47.74	(0.03)	-	(0.03)

## **4.6.7 Return on Equity**

### **Petitioner's Submission**

TPL-G (APP) has claimed Return on Equity of Rs. 60.38 Crore in the truing up for FY 2017-18, as against Rs. 61.86 Crore approved in the MYT Order dated 9<sup>th</sup> June, 2017, as detailed in the Table below:

**Table 4-44: Return on Equity of TPL-G (APP) Claimed for FY 2017-18**  
**(Rs. Crore)**

Sl. No.	Particulars	Approved in the MYT Order	Actual Claimed
1.	Opening Equity	440.77	431.76
2.	Equity Addition	2.11	(0.95)
3.	Closing Equity	442.88	430.81
4.	<b>Return on Equity</b>	<b>61.86</b>	<b>60.38</b>

TPL-G (APP) has submitted that the Return on Equity has been computed at 14.00% on the average of the Opening and Closing Balance of Equity for FY 2017-18. The Closing Balance of Equity has been arrived at considering additional Equity @ 30% of the net capitalisation during the year. The Petitioner requested the Commission to consider the variation in Return on Equity as uncontrollable and allow the same for the purpose of true-up.

#### **Commission's Analysis**

TPL-G (APP) has considered Closing Equity as on 31<sup>st</sup> March, 2017 equal as the Opening Equity of FY 2017-18. TPL-G (APP) has de-capitalised assets of Rs 22.62 Crore during the year and has accordingly reduced the value of capitalisation during the year by the value of such de-capitalisation. The additional Equity is considered @ 30% of the value of net asset addition as approved in Table 4-33 of this Order.

**The Commission, accordingly, approves the Return on Equity of Rs. 60.38 Crore in the truing up for FY 2017-18, as detailed in the Table below:**

**Table 4-45: Return on Equity approved in truing up for FY 2017-18**  
**(Rs. Crore)**

Sl. No.	Particulars	Approved in the MYT Order	Actual Claimed	Approved in truing up
1.	Opening Equity	440.77	431.76	431.76
2.	Net Equity Addition	2.11	(0.95)	(0.95)
3.	Closing Equity	442.88	430.81	430.81
4.	Average Equity	441.83	431.29	431.29
5.	Rate of Return on Equity	14%	14%	14%
6.	<b>Return on Equity</b>	<b>61.86</b>	<b>60.38</b>	<b>60.38</b>

**The Commission, accordingly, approves the Gains / Losses on account of Return on Equity in the truing up for FY 2017-18, as detailed below:**

**Table 4-46: Return on Equity and Gains/(Losses) Approved in the truing up for FY 2017-18**

(Rs. Crore)						
Sl. No.	Particulars	Approved in MYT Order	Approved in truing up	Deviation	Gains / (Losses) due to Controllable factors	Gains / (Losses) due to uncontrollable factors
1.	Return on Equity	61.86	60.38	1.48	-	1.48

#### **4.6.8 Income Tax**

##### **Petitioner's Submission**

TPL-G (APP) has claimed a sum of Rs. 35.33 Crore towards Income Tax in the truing up for FY 2017-18, as against Rs. 15.34 Crore approved in the MYT Order dated 9<sup>th</sup> June, 2017, as detailed in the Table below:

**Table 4-47: Income Tax of TPL-G (APP) Claimed for FY 2017-18**  
(Rs. Crore)

Sl. No.	Particulars	Approved in the MYT Order	Actual Claimed
1.	Income Tax	15.34	35.33

TPL-G (APP) submitted that it has claimed the Income Tax of Rs. 35.33 Crore for FY 2017-18 considering the total Tax paid and the ratio of Profit before Tax (PBT) of TPL-G (APP) and PBT of the Company as a whole as per the audited accounts.

##### **Commission's Analysis**

The Commission asked TPL to furnish the details of segregation of Income Tax paid by the Company in respect of TPL-G (APP) along with copies of Challans of Income Tax paid and whether it has received any refund of Income Tax in FY 2017-18. In reply, TPL-G (APP) submitted copies of challans and confirmed that it has received credits for prior periods to the tune of Rs. 4.82 Crore in FY 2017-18. It further submitted that being a single corporate entity, Income Tax is paid for the Company as a whole.

The Commission sought the computation of Income Tax of Rs. 35.33 Crore based on ratio of PBT of TPL-G (APP) and PBT of Company, which was submitted by TPL-G (APP). TPL submitted that the computation of Income Tax has been done in line with the approach adopted by the Commission in the previous Order, viz., the Tax has been computed by applying the MAT rate of 21.3416% as against the actual Tax rate of



22.09% for the Company as a whole, and the Tax credit of Rs. 4.82 crore for the Company as a whole has been considered proportionately for TPL-G, TPL-D (A) and TPL-D (S), as TPL-D (D) had a book loss. Accordingly, TPL-G submitted the computation of Income Tax of Rs. 35.33 crore for TPL-G.

**The Commission, accordingly, approves the Income Tax at Rs. 35.33 Crore in the truing up for FY 2017-18.**

The Commission has treated the Income Tax as an uncontrollable expense. The Commission, accordingly, approves the gains / losses on account of Income Tax in the truing up for FY 2017-18, as detailed in the Table below:

**Table 4-48: Income Tax and Gains/(Losses) due to Income Tax Approved in the truing up for FY 2017-18**

(Rs. Crore)						
Sl. No.	Particulars	Approved in MYT Order	Approved in truing	Deviation	Gains / (Losses) due to Controllable factor	Gains / (Losses) due to uncontrollable factor
1.	Income Tax	15.34	35.33	(19.99)	-	(19.99)

#### **4.6.9 Non-Tariff Income**

##### **Petitioner's submission**

TPL-G (APP) has claimed actual Non-Tariff Income of Rs. 19.34 Crore in FY 2017-18, as against Rs. 17.43 Crore approved in the MYT Order dated 9<sup>th</sup> June, 2017 as shown in the Table below:

**Table 4-49 Non-tariff Income for TPL-G (APP) claimed for FY 2017-18**

(Rs. Crore)			
Sl. No.	Particulars	Approved in the MYT Order	Actual claimed
1.	Non-Tariff Income	17.43	19.34

The Petitioner submitted that the variation in Non-Tariff Income is uncontrollable and requested the Commission to consider the same for the purpose of truing up.

##### **Commission's Analysis**

The Non-Tariff Income of TPL (G) is Rs. 21.94 Crore as per annual accounts, however, the Petitioner has excluded the Insurance Claim Receipt of Rs. 1.20 Crore and Income





pertaining to Vatva unit of Rs. 1.40 Crore to arrive at the amount of Rs. 19.34 Crore. As discussed in O&M expenses, the Insurance Claim Receipt is a part of Non-Tariff Income and the same is not required to be deducted from Non-Tariff Income.

The Commission, accordingly, approves the Non-Tariff Income at Rs.20.54 Crore after excluding Rs. 1.40 Crore pertaining to Vatva unit only from the total Non-Tariff Income of Rs. 21.94 Crore in the truing up for FY 2017-18, as shown in the Table below:

**Table 4-50: Non Tariff Income approved in the truing up for FY 2017-18**  
**(Rs. Crore)**

Sl. No.	Particulars	Approved in the MYT Order	Actual claimed	Approved in truing
1.	Non-Tariff Income	17.43	19.34	20.54

**The deviation in the Non-Tariff Income is considered as uncontrollable factor and accordingly the Commission approves the gains / losses on account of Non-Tariff Income in the truing up for FY 2017-18 as shown in the Table below:**

**Table 4-51: Non-tariff Income and gains/losses approved in the truing up for FY 2017-18**

**(Rs. Crore)**

Sl. No.	Particulars	Approved for in MYT Order	Approved in truing up	Deviation	Gains / (Losses) due to Controllable factor	Gains / (Losses) due to uncontrollable factor
1.	Non-Tariff Income	17.43	20.54	(3.11)	-	(3.11)

#### **4.6.10 Incentive**

##### **Petitioner's submission**

As per the GERC (MYT) Regulations, 2016, the incentive payable to a Thermal Generating Station shall be calculated in accordance with the actual PLF achieved against the normative PLF of 85%. The Petitioner submitted that as the overall PLF of Ahmedabad generating station is lower than 85%, it has not claimed any incentive.

##### **Commission's Analysis**

As the PLF of TPL-G (APP) is lower than the normative PLF of 85%, the Commission has not allowed any incentive in truing up of FY 2017-18, as per Regulation 53.2 (a) of the GERC (MYT) Regulations, 2016.



## 4.7 Revised ARR for FY 2017-18

The Commission has reviewed the performance of TPL-G (APP) under Regulation 22 of the GERC (MYT) Regulations, 2016, with reference to the annual accounts for FY 2017-18.

The Commission conducted a third-party audit of TPL and discrepancy was found on eleven (11) heads, viz., Other borrowing expenses, Sponsorship Expenses, Gardening Expenses, Security Expenses, Provisioning carried for long in the books, expenses related to non-regulatory affairs, etc. The total amount computed in the audit against the above discrepancy was Rs. 14.45 Crore for TPL-G (APP), TPL-D(A), TPL-D(S) and TPL-D(D) for the period from FY 2011-12 to FY 2014-15.

The Commission sought the details from TPL regarding the amounts for the above 11 heads for FY 2015-16, FY 2016-17 and FY 2017-18. The Commission also asked TPL to submit head-wise and year-wise amounts adjusted separately in the True up for FY 2017-18 filed by TPL-G (APP), TPL-D(A), TPL-D(S) and TPL-D(D) on account of discrepancies identified in third party audit. TPL replied that the amounts on account of “other borrowing expenses” have been adjusted directly in the true-up of TPL-D(A) and TPL-D(S). TPL also replied that the necessary consideration has been duly given in the true-up of subsequent years, i.e., FY 2016-17 and FY 2017-18.

As stated above, the total impact for TPL-G (APP), TPL-D (A), TPL-D (S) and TPL-D (D) for the period from FY 2011-12 to FY 2014-15 has been worked out by the Third Party Auditor as Rs. 14.45 crore. The head-wise and entity-wise break-up is given in the Table below:

**Table 4-52: Head-wise and Entity-wise Break-up of Impact assessed by Third Party Auditor on account of Accounting Issues**

(Rs. Crore)

Sl. No.	Issue	TPL-G	TPL-D (A)	TPL-D (S)	TPL-D (D)	Total	TPL's Contention
1.	Depreciation claim from 1 <sup>st</sup> day of month	1.69	2.75	0.92	0.42	5.77	As per Accounting Standards
2.	Other Borrowing Cost	0.01	0.78			0.79	Agreed to reverse
3.	Capital vs. Revenue Expenses	0.04	0.04			0.09	As per Accounting Standards



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Sl. No.	Issue	TPL-G	TPL-D (A)	TPL-D (S)	TPL-D (D)	Total	TPL's Contention
4.	Sponsorship Expenses	0.16	0.71	0.24		1.11	Part of CSR - requested for allowance
5.	Gardening Expenses	0.00	1.12			1.12	Part of CSR - requested for allowance
6.	Security Expenses	0.09	0.01			0.09	Part of CSR - requested for allowance
7.	Provisions carried for long in books	0.99				0.99	As per Accounting Standards
8.	Interest on Water Charges	0.10				0.10	No delay - efforts to reduce cost
9.	Damage Charges under ESI Audit	0.03				0.03	Efforts to reduce cost
10.	Depreciation claim without keeping Salvage Value	0.40	1.20	0.84		2.44	As per Accounting Standards
11.	Expenses related to Non-Regulatory Affairs	0.31	1.06	0.52		1.90	TPL Claim appropriate
	<b>TOTAL</b>	<b>3.84</b>	<b>7.67</b>	<b>2.52</b>	<b>0.42</b>	<b>14.45</b>	

TPL has contended that only the impact of Sl. No. 2, i.e., Other Borrowing Cost, needs to be reversed, as the same has been inadvertently claimed. However, the Commission is of the view that the impact on account of certain other heads also needs to be adjusted, as discussed below:

1. The impact of Sl. No. 2 of Rs. 0.01 Crore as per the above Table is adjusted, as agreed by TPL, in the ARR.
2. TPL's contentions regarding Sl. No. 1 (Depreciation claim from 1<sup>st</sup> day of the month), Sl. No. 3 (Capital vs. Revenue expenses) and Sl. No. 10 (Depreciation claim without keeping salvage value for IT assets), are appropriate, as the treatment is in accordance with the Accounting Standards and have been clearly mentioned in the Notes to Accounts.
3. TPL's contentions regarding Sl. No. 4 (Sponsorship Expenses), Sl. No. 5 (Gardening Expenses), Sl. No. 6 (Security Expenses) and Sl. No. 11 (Expenses related to non-regulatory affairs) are not appropriate, as the same have to be



incurred by TPL as part of its corporate responsibility and cannot be passed on to the consumers, and hence, need to be deducted from the ARR of the regulated business. The total reduction in the ARR on this account works out to Rs. 0.57 Crore.

4. As regards Sl. No. 7, the entire amount of provisioning of Rs. 0.99 Crore is against TPL-G, against Lease rent for ash dumping plots, which is pending for finalization for years. The Commission in the previous Order had directed TPL to write back these provisions, and seek pass through of the actual costs in this regard, as and when incurred. Accordingly, the Commission has reduced this amount of Rs. 0.99 crore from the ARR of TPL-G for FY 2017-18, with liberty to TPL-G to approach the Commission for pass through of the appropriate costs in this regard, as and when incurred.
5. As regards Sl. No. 8 and Sl. No. 9, the Commission finds merit in TPL's contention that these costs were not initially incurred as TPL had challenged the levy of these charges, and the net impact on account of these charges were finally lower than what they were originally, and hence, the consumers have benefited from TPL's actions in this regard. Hence, these amounts have not been considered for reduction from the ARR of FY 2017-18.
6. Thus, the total amount considered for reduction from the ARR for FY 2017-18 is Rs. 1.56 Crore.
7. The above impact has been assessed only up to FY 2014-15, and TPL should submit the year-wise, entity-wise and head-wise adjustment for the subsequent period, in the next Tariff Petition, for necessary adjustment of the ARR.

Accordingly, the Commission has computed the sharing of gains and losses for FY 2017-18, based on the truing up for each of the components discussed in the above paragraphs. The ARR approved in the MYT Order dated 9<sup>th</sup> June, 2017, as claimed by TPL-G (APP) and as approved in truing up for FY 2017-18, along with sharing of gains / losses computed in accordance with the GERC (MYT) Regulations, 2016, is given in the Table below:



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**Table 4-53: ARR Approved in truing up for FY 2017-18**

							(Rs. Crore)
Sl. No.	Particulars	Approved in MYT Order	Actual Claimed	Approved in truing up	Deviation + / (-)	Gains / (Losses) due to Controllable factor	Gains / (Losses) due to Uncontrollable factor
1.	Variable Cost	786.98	771.23	781.36	15.76	10.14	5.62
2.	O&M Expenses	166.80	142.49	143.69	23.11	23.11	-
3.	Water Charges	11.59	15.11	15.11	(3.52)	-	(3.52)
4.	Depreciation	47.71	47.74	47.74	(0.03)	-	(0.03)
5.	Interest on Loans	7.19	4.45	4.45	2.74	-	2.74
6.	Interest on Working Capital	14.40	13.32	13.56	0.84		0.84
7.	<b>Total Revenue Expenditure</b>	<b>1034.67</b>	<b>994.33</b>	<b>1005.92</b>	<b>38.90</b>	<b>33.25</b>	<b>5.65</b>
8.	Add: Return on Equity	61.86	60.38	60.38	1.48	-	1.48
9.	Add: Income Tax	15.34	35.33	35.33	(19.99)	-	(19.99)
10.	Add: Incentive	-	-	-	-	-	-
11.	Less: Non-Tariff Income	17.43	19.34	20.54	(3.11)	-	(3.11)
12.	Less: Impact of Third Party Audit			(1.56)	1.56	-	1.56
13.	<b>Total</b>	<b>1094.44</b>	<b>1070.70</b>	<b>1079.53</b>	<b>25.05</b>	<b>33.25</b>	<b>(8.20)</b>

#### 4.8 Sharing of Gains/(losses) for FY 2017-18

As regards the pass through of gains/losses on account of controllable and uncontrollable factors, the relevant Regulations are reproduced below:

***“Regulation 23. Mechanism for pass-through of gains or losses, on account of uncontrollable factors***

*23.1 The approved aggregate gain or loss to the Generating Company or Transmission Licensee or SLDC or Distribution Licensee on account of uncontrollable factors shall be passed through as an adjustment in the tariff of the Generating Company or Transmission Licensee or SLDC or Distribution*



*Licensee over such period as may be specified in the Order of the Commission passed under these Regulations.*

*23.2 The Generating Company or Transmission Licensee or SLDC or Distribution Licensee shall submit such details of the variation between expenses incurred and revenue earned and the figures approved by the Commission, in the prescribed format to the Commission, along with the detailed computations and supporting documents as may be required for verification by the Commission.*

*23.3 Nothing contained in this Regulation 23 shall apply in respect of any gain or loss arising out of variations in the price of fuel and power purchase, which shall be dealt with as specified by the Commission from time to time.*

**Regulation 24. Mechanism for sharing of gains or losses on account of controllable factors**

*“24.1 The approved aggregate gain to the Generating Company or Transmission Licensee or SLDC 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 tariffs over such period as may be stipulated in the Order of the Commission under Regulation 21.6;*

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

*24.2 The approved aggregate loss to the Generating Company or Transmission Licensee or SLDC 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 tariffs over such period as may be stipulated in the Order of the Commission under Regulation 21.6; and*

*(b) The balance amount of loss, which will amount to two-thirds of such loss, shall be absorbed by the Generating Company or Transmission Licensee or SLDC or Distribution Licensee.”*



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The Trued up ARR claimed by TPL-G (APP) for FY 2017-18 is given in the Table below:

**Table 4-54 Revised ARR claimed by TPL-G (APP) for FY 2017-18**

(Rs. Crore)

Sl. No.	Particulars	Legend	Amount
1.	ARR as per MYT Order	a	1094.44
2.	Gains/(Losses) due to uncontrollable Factors	b	(10.42)
3.	Gains/(Losses) due to controllable Factor	c	34.14
4.	Pass through as Tariff	$d=c/3+b$	(0.96)
5.	<b>ARR True-up</b>	<b><math>e=a+d</math></b>	<b>1093.48</b>

The ARR approved for TPL-G (APP) in the truing up for FY 2017-18, after sharing of gains/(losses) is given in the Table below:

**Table 4-55 Revised ARR approved for TPL-G (APP) for FY 2017-18**

(Rs. Crore)

Sl. No.	Particulars	Legend	Amount
1.	ARR as per MYT Order	a	1094.44
2.	Gains/(Losses) due to uncontrollable Factors	b	(8.20)
3.	Gains/(Losses) due to controllable Factor	c	33.25
4.	Pass through as Tariff	$d=c/3+b$	(2.88)
5.	<b>ARR True-up</b>	<b><math>e=a+d</math></b>	<b>1091.55</b>

The Commission approves the total ARR of Rs. 1091.55 crore for TPL-G (APP) for FY 2017-18 and the same is considered as the actual cost of power purchase from TPL-G (APP) for FY 2017-18 in the ARR of TPL-Distribution.



## **5. Determination of Revised Aggregate Revenue Requirement (ARR) for FY 2019-20 and FY 2020-21**

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### **5.1 Introduction**

This Chapter deals with the determination of Revised ARR for FY 2019-20 and FY 2020-21 for TPL-G (APP) Ahmedabad Power Plant.

#### **5.1.1 Generating Stations of TPL-G (APP) and their Performance**

The details of generating stations of TPL-G (APP) expected to be in service as on 1<sup>st</sup> April, 2019 along with their capacities, are as given in the Table below:

**Table 5-1: Capacity, COD and age of TPL-G (APP) Generating Stations as on 1<sup>st</sup> April, 2019**

Name of Station	Capacity in MW	Year of COD	Age/Years
<b>Sabarmati Thermal Power Plant (Coal Based)</b>			
D Station	120	1978/2004* (Up-rating capacity)	41
E Station	121	1984	35
F Station	121	1988	31

### **5.2 Operational Performance Parameters**

#### **5.2.1 Plant Availability Factor**

##### **Petitioner's Submission**

TPL-G (APP) submitted that the Commission in the MYT Order had approved the PLF for different stations as projected by TPL-G (APP). Considering the age and size of the units, it will be difficult to maintain higher availability as the Units will be vulnerable to faults and breakdowns.

TPL-G (APP) submitted that the revised plant availability factor has been computed after considering annual shut down of the Unit without factoring the forced outage. Accordingly, the station wise revised estimates of PAF is provided in the Table below:





**Table 5-2: Plant Availability Factor (PAF) of TPL-G (APP) for FY 2019-20 & FY 2020-21**

Sl. No.	Stations	FY 2019-20		FY 2020-21	
		Approved in the MYT Order	Revised Estimate	Approved in the MYT Order	Revised Estimate
1.	D Station	94.84%	94.30%	84.14%	84.14%
2.	E Station	94.84%	94.30%	94.83%	93.49%
3.	F Station	84.18%	84.18%	94.83%	94.29%

TPL-G (APP) requested the Commission to consider the PAF as provided in the Table above for FY 2019-20 and FY 2020-21. TPL-G (APP) also submitted that the PAF may undergo change due to forced outages and other unforeseen circumstances.

### **Commission's Analysis**

The Commission notes that the availability projected by TPL-G (APP) is based on the annual shut down of the Unit without factoring the forced outage. TPL-G (APP) has revised the availability for Station D and E for FY 2019-20 and revised the availability for Station E and F for FY 2020-21. Accordingly, the Commission approves the Availability as projected by TPL-G (APP).

However, it is clarified that the Normative Plant Availability Factor (NAPAF) for recovery of full fixed costs shall be 85% for all Units, in accordance with the GERC (MYT) Regulations, 2016. TPL-G (APP) shall submit a certificate from SLDC certifying annual PAF for each station separately, at the time of truing up.

## **5.2.2 Plant Load Factor**

### **Petitioner's submission**

TPL has revised the estimated Plant Load Factor for the Stations D, E & F for the remaining years of the Control Period as given in the Table below:

**Table 5-3: Projected Plant Load Factor for FY 2019-20 & FY 2020-21**

Sl. No.	Stations	FY 2019-20		FY 2019-20	
		Approved in the MYT Order	Revised Estimate	Approved in the MYT Order	Revised Estimate
1.	D Station	82.76%	92.16%	75.08%	83.54%
2.	E Station	87.12%	92.62%	88.83%	92.90%
3.	F Station	78.74%	83.21%	90.13%	93.89%



TPL-G (APP) submitted that considering the requirement of TPL-D, the overall PLF of Sabarmati Station for FY 2019-20 and FY 2020-21 is likely to be higher as compared to PLF approved in the MYT Order. TPL-G (APP) added that PLF is dependent on the actual system demand, which in turn depends upon the drawal of consumers and the same is beyond the control of TPL-G (APP).

### **Commission's Analysis**

The Commission notes that TPL-G (APP) has projected the PLF based on the projected availability and demand, which is higher than that approved in the MYT Order. The Commission accordingly approves the higher PLF as projected by the Petitioner.

It is clarified that for the purpose of incentive calculation at the time of truing up, the normative PLF shall be considered for each station of TPL-G (APP) as per Regulation 53.2 of the GERC (MYT) Regulations, 2016. TPL-G (APP) shall submit a certificate from SLDC certifying annual PLF for each station separately, at the time of truing up.

### **5.2.3 Auxiliary Consumption**

#### **Petitioner's submission**

TPL-G (APP) has projected the auxiliary consumption for D, E & F stations for FY 2019-20 and FY 2020-21, as given in the Table below:

**Table 5-4: Projected Auxiliary Consumption for FY 2019-20 & FY 2020-21**

Sl. No.	Stations	FY 2019-20		FY 2020-21	
		Approved in the MYT Order	Revised Estimate	Approved in the MYT Order	Revised Estimate
1.	D Station	9.00%	9.00%	9.00%	9.00%
2.	E Station	9.00%	9.00%	9.00%	9.00%
3.	F Station	9.00%	9.00%	9.00%	9.00%

TPL-G (APP) submitted that it has considered the auxiliary consumption at same level as approved in the MYT Order.

### **Commission's Analysis**

Since there is no change proposed by the Petitioner for Auxiliary Consumption in the MYT Order, the Commission approves the auxiliary consumption for different stations in accordance as given in the Table below:

**Table 5-5: Approved Auxiliary Consumption for FY 2019-20 & FY 2020-21**

Sl. No.	Stations	FY 2019-20			FY 2020-21		
		Approved in the MYT Order	Revised Estimate	Approved in the MTR Order	Approved in the MYT Order	Revised Estimate	Approved in the MTR Order
1.	D Station	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
2.	E Station	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
3.	F Station	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%

#### **5.2.4 Station Heat Rate (SHR)**

##### **Petitioner's Submission**

TPL-G (APP) has projected the SHR of stations D, E & F for FY 2019-20 and FY 2020-21, as given in the Table below:

**Table 5-6: Projected Station Heat Rate for TPL-G (APP) for FY 2019-20 & FY 2020-21**  
**(kcal/kWh)**

Sl. No.	Stations	FY 2019-20		FY 2020-21	
		Approved in the MYT Order	Revised Estimate	Approved in the MYT Order	Revised Estimate
1.	D Station	2450	2450	2450	2450
2.	E Station	2455	2455	2455	2455
3.	F Station	2455	2455	2455	2455

TPL-G (APP) submitted that it has considered the SHR for all stations at the levels approved in the MYT Order.

##### **Commission's Analysis**

The Commission notes that TPL-G (APP) has not revised the SHR projection for FY 2019-20 and FY 2020-21 and has considered the SHR for the stations at the levels approved in the MYT Order.

Accordingly, the Commission approves the Station Heat Rate for FY 2019-20 and FY 2020-21 as shown in the Table below:

**Table 5-7: Approved Station Heat Rate for FY 2019-20 & FY 2020-21**

(kcal/kWh)

Sl. No.	Stations	FY 2019-20			FY 2020-21		
		Approved in the MYT order	Revised Estimate	Approved in the MTR Order	Approved in the MYT order	Revised Estimate	Approved in the MTR Order
1.	D Station	2450	2450	2450	2450	2450	2450
2.	E Station	2455	2455	2455	2455	2455	2455
3.	F Station	2455	2455	2455	2455	2455	2455

### 5.2.5 Secondary Fuel Oil Consumption (SFC)

#### Petitioner's Submission

For FY 2019-20 and FY 2020-21, TPL-G (APP) has proposed SFC at the levels specified by the Commission in the GERC (MYT) Regulations, 2016 as shown in the Table below for each station:

**Table 5-8: Projected Secondary Fuel Oil Consumption for the Remaining Control period FY 2019-20 & FY 2020-21**

(ml/kWh)

Sl. No.	Stations	FY 2019-20		FY 2020-21	
		Approved in the MYT Order	Revised Estimate	Approved in the MYT Order	Revised Estimate
1.	D Stations	1.00	1.00	1.00	1.00
2.	E Stations	1.00	1.00	1.00	1.00
3.	F Stations	1.00	1.00	1.00	1.00

#### Commission's Analysis

The Commission notes that TPL-G (APP) has projected the SFC at the levels specified in the GERC (MYT) Regulations, 2016. Accordingly, the Commission approves the Secondary Fuel Oil consumption as shown in the Table below:

**Table 5-9: Approved SFC for FY 2019-20 & FY 2020-21**

(ml/kWh)

Sl. No.	Stations	FY 2019-20			FY 2020-21		
		Approved in the MYT order	Revised Estimate	Approved in the MTR Order	Approved in the MYT order	Revised Estimate	Approved in the MTR Order
1.	D Station	1.00	1.00	1.00	1.00	1.00	1.00
2.	E Station	1.00	1.00	1.00	1.00	1.00	1.00
3.	F Station	1.00	1.00	1.00	1.00	1.00	1.00



## 5.2.6 Transit Loss of Coal

### Petitioner's submission

TPL has projected transit loss of coal for FY 2019-20 and FY 2020-21 as given in the Table below:

**Table 5-10: Projected Transit loss of coal for TPL-G (APP) for FY 2019-20 & FY 2020-21**

Sl. No.	Particulars	FY 2019-20		FY 2020-21	
		Approved in the MYT Order	Revised Estimate	Approved in the MYT Order	Revised Estimate
1.	Transit Loss (%)	0.80	0.80	0.80	0.80

TPL-G (APP) submitted that it is incurring transit loss on account of various uncontrollable factors, i.e.,

- i. Transit loss on account of natural factors such as evaporation, wind and seepage of fine coal through wagon, is directly related to the distance travelled. This is evident from the difference in the transit loss norms specified for pit head stations and non-pit head stations.
- ii. Theft and pilferage during transportation are the other contributory factors towards higher transit loss.

TPL-G (APP) submitted that it would approach the Commission for appropriate adjustment in light of the above factors at the time of truing up or at an appropriate stage.

### Commission's Analysis

The Commission approves the transit loss in accordance with the GERC (MYT) Regulations, 2016 as given in the Table below:

**Table 5-11: Approved Transit Loss of coal for TPL-G (APP) for FY 2019-20 & FY 2020-21**

Sl. No.	Stations	FY 2019-20			FY 2020-21		
		Approved in the MYT Order	Revised Estimate	Approved in the MTR Order	Approved in the MYT Order	Revised Estimate	Approved in the MTR Order
1.	Transit Loss (%)	0.80	0.80	0.80	0.80	0.80	0.80

### 5.2.7 Performance Parameters Approved

Based on the decisions in the earlier paragraphs, the performance parameters approved by the Commission for FY 2019-20 and FY 2020-21 for different stations are summarized in the Table below:

**Table 5-12: Approved parameters of PAF, PLF, Auxiliary consumption, Station Heat Rate, specific Oil consumption and Transit Loss for FY 2019-20 & FY 2020-21**

Stn	PAF (%)		PLF (%)		Auxiliary Consumption (%)	
	FY 2019-20	FY 2020-21	FY 2019-20	FY 2020-21	FY 2019-20	FY 2020-21
D	94.30	84.14	92.16	83.54	9.00	9.00
E	94.30	93.49	92.62	92.90	9.00	9.00
F	84.18	94.29	83.21	93.89	9.00	9.00
Stn	SHR (kcal/kWh)		SFC Consumption (ml/kWh)		Transit Loss (%)	
	FY 2019-20	FY 2020-21	FY 2019-20	FY 2020-21	FY 2019-20	FY 2020-21
D	2450	2450	1.00	1.00	0.80	0.80
E	2455	2455	1.00	1.00	0.80	0.80
F	2455	2455	1.00	1.00	0.80	0.80

### 5.3 Projected Gross and Net Generation

#### Petitioner's submission

TPL-G (APP) has projected the revised estimates of gross and net generation of different Stations based on the projected PLF and auxiliary consumption for FY 2019-20 and FY 2020-21 as given in the Table below:

**Table 5-13: Revised Estimate for Gross and Net Generation for FY 2019-20 & FY 2020-21 (MU)**

Sl. No.	Station	Approved in the MYT Order for FY 2019-20		Revised Estimate for FY 2019-20		Approved in the MYT Order for FY 2020-21		Revised Estimate for FY 2020-21	
		Gross	Net	Gross	Net	Gross	Net	Gross	Net
1.	D Station	872.34	793.83	971.39	883.97	789.23	718.20	878.16	799.12
2.	E Stations	926.02	842.67	984.43	895.83	941.59	856.90	984.73	896.11
3.	F Stations	836.95	761.62	884.39	804.79	955.36	869.40	995.14	905.58

#### Commission's Analysis

The gross and net generation for different stations of TPL-G (APP) as approved by the Commission based on the approved PLF and auxiliary consumption as discussed in the earlier paragraphs, are as given in the Table below:



**Table 5-14 Approved Gross and Net Generation for TPL-G (APP) for FY 2019-20 & FY 2020-21**

Sl. No.	Station	(MU)			
		FY 2019-20		FY 2020-21	
		Gross	Net	Gross	Net
1.	D Station	971.39	883.97	878.16	799.12
2.	E Stations	984.43	895.83	984.73	896.11
3.	F Stations	884.39	804.79	995.14	905.58

## **5.4 Generation Costs - Variable (Energy) & Capacity (Fixed) Charges**

### **5.4.1 Variable Cost (Energy Charges)**

The performance parameters for different stations have been approved for FY 2019-20 & FY 2020-21 as discussed in the earlier paragraphs. The variable cost (mostly fuel cost) depends on the cost parameters such as GCV of fuel used, blending ratio of coal, and price of fuel. TPL-G (APP) stations run on a mix of indigenous and imported coal.

TPL-G (APP) projections and the Commission's analysis on the mix of coal, Wt. Avg. GCV of fuels to be consumed, and Wt. Av Price of fuel for different stations are discussed below:

### **5.4.2 Blending Ratio of Coal**

#### **Petitioner's Submission**

TPL-G (APP) has considered blending of indigenous and imported coal for FY 2019-20 and FY 2020-21 in the ratio of 77:23 for Station D and in the ratio of 72:28 for Stations E and F.

#### **Commission's Analysis**

The Commission has analysed the submission made by TPL-G (APP) along with the details of FPPPA for H1 of FY 2018-19. Accordingly, the Commission approves the blending ratio of coal of 74:26 for FY 2019-20 and FY 2020-21 as per actuals of H1 of FY 2018-19 as shown in the Table below as against 70:30 blending ratio approved for the period in the MYT Order dated 9<sup>th</sup> June, 2017:



**Table 5-15: Approved Blending Ratio of Coal for FY 2019-20 & FY 2020-21**

Sl. No.	Stations	Revised Estimate for FY 2019-20 & FY 2020-21		Approved in MTR Order for FY 2019-20 & FY 2020-21	
		Indigenous Coal (%)	Imported Coal (%)	Indigenous Coal (%)	Imported Coal (%)
1.	D Station	77%	23%	74%	26%
2.	E Stations	72%	28%	74%	26%
3.	F Stations	72%	28%	74%	26%

### 5.4.3 Weighted Average Gross Calorific Value of Fuel

#### Petitioner's Submission

TPL-G (APP) submitted the revised estimate for GCV for FY 2019-20 and FY 2020-21 as shown in the Table below:

**Table 5-16: Projected Wt. Av GCV of fuel of TPL-G (APP) for FY 2019-20 & FY 2020-21**

Sl. No.	Particulars	FY 2019-20	FY 2020-21
1.	Indigenous Coal (kcal/kg)	4273	4273
2.	Imported Coal (kcal/Kg)	4809	4809
3.	Secondary Fuel Oil (kcal/L)	9837	9837

#### Commission's Analysis

The Commission has noted the submission done by TPL-G (APP). The Commission sought the details of month-wise GCV of Indigenous and Imported coal received during H1 of FY 2018-19, which was submitted by TPL-G (APP) vide their letter dated 11<sup>th</sup> January, 2019, as shown in the Table below:

**Table 5-17: Details of GCV of Indigenous coal and Imported coal for H1 of FY 2018-19 (kcal/kg)**

Sl. No.	FY 2018-19	Indigenous Coal	Imported Coal
1.	April	4362	4726
2.	May	4261	4832
3.	June	4284	4919
4.	July	4063	4725
5.	August	4313	4847
6.	September	4368	4737

The GCV considered by the Petitioner is the average GCV of the first six months of FY 2018-19. The GCV of Coal for individual Stations has been computed by considering





the GCV of Indigenous Coal and Imported Coal in the blending ratio and the value as submitted by TPL-G (APP) in the FPPPA submissions for H1 of FY 2018-19. Accordingly, the Commission has approved the GCV of blended coal and GCV of Oil for Individual stations as shown in the Table below:

**Table 5-18: Approved GCV of coal and Oil for FY 2019-20 & FY 2020-21**

Sl. No.	Particulars	FY 2019-20		FY 2020-21	
		Revised Estimate	Approved in MTR Order	Revised Estimate	Approved in MTR Order
	<b>D Station</b>				
1.	GCV of Coal (kcal/kg)	4395	4528	4395	4528
2.	GCV of Oil (kcal/kL)	9837	9837	9837	9837
	<b>E Station</b>				
1.	GCV of Coal (kcal/kg)	4421	4528	4421	4528
2.	GCV of Oil (kcal/kL)	9837	9837	9837	9837
	<b>F Station</b>				
1.	GCV of Coal (kcal/kg)	4421	4528	4421	4528
2.	GCV of Oil (kcal/kL)	9837	9837	9837	9837

#### 5.4.4 Weighted Average Price of Fuel

##### Petitioner's Submission

TPL has projected the Wt. Av prices of different fuels for FY 2019-20 and FY 2020-21 as given in the Table below:

**Table 5-19: Projected Wt. Avg. price of different fuels of TPL-G (APP) for FY 2019-20 & FY 2020-21**

Sl. No.	Particulars	FY 2019-20		FY 2020-21	
		Approved in the MYT Order	Revised Estimate	Approved in the MYT Order	Revised Estimate
1.	Wt. Av cost of Indigenous Coal (Rs./MT)	5125.62	4876.00	5125.62	4876.00
2.	Wt. Av cost of Imported Coal (Rs./MT)	5330.98	6413.00	5330.98	6413.00
3.	Wt. Av cost of Secondary Fuel Oil (Rs./kL)	31613.00	33346.00	31613.00	33346.00

##### Commission's Analysis

The Commission has noted the submission made by TPL-G (APP). The Commission sought the details of computation of source-wise actual landed cost of Indigenous coal



and Imported coal for H1 of FY 2018-19, which was submitted by TPL-G (APP) vide their letter dated 11<sup>th</sup> January, 2019.

The Commission has computed the Wt. Avg. price of Indigenous and Imported coal considering the actual price of coal consumed during H1 of FY 2018-19 with the consideration of Transit loss of 0.80%. The price of Secondary Fuel Oil has been considered as projected by TPL-G. Accordingly, the Commission has approved the cost of coal for individual stations as shown in the Table below:

**Table 5-20: Approved Wt. Avg. prices of different fuels of TPL-G (APP) for the Remaining Control Period FY 2019-20 & FY 2020-21**

Sl. No.	Particulars	FY 2019-20	FY 2020-21
1.	Wt. Av price of Indigenous Coal (Rs./MT)	4,837.70	4,837.70
2.	Wt. Av price of Imported Coal (Rs./MT)	6,272.80	6,272.80
3.	Wt. Av price of Secondary Fuel Oil (Rs./kL)	33,346	33,346

## 5.5 Fuel Cost

The station- wise approved fuel costs for FY 2019-20 and FY 2020-21, based on the decisions of the Commission in the earlier paragraphs are as given below:

**Table 5-21 Approved Fuel cost of different stations of TPL-G (APP) for FY 2019-20 & FY 2020-21**

(Rs. Crore)

Sl. No.	Stations	FY 2019-20		FY 2020-21	
		Projected	Approved	Projected	Approved
1.	D Station	287.64	277.53	259.53	250.89
2.	E Stations	293.59	281.83	293.29	281.91
3.	F Stations	262.50	253.19	297.37	284.89
	<b>Total</b>	<b>843.73</b>	<b>812.54</b>	<b>849.35</b>	<b>817.70</b>

### 5.5.1 Fuel Cost per unit

#### Petitioner's Submission

The fuel costs of different stations per unit of gross and net generation as submitted by TPL-G (APP) are as given in the Table below:



**Table 5-22: Projected Fuel cost of different Stations of TPL-G (APP) for FY 2019-20 & FY 2020-21**

(Rs. /kWh)

Sl. No.	Stations	FY 2019-20		FY 2020-21	
		Gross	Net	Gross	Net
1.	D Station	2.96	3.25	2.96	3.25
2.	E Stations	2.98	3.28	2.98	3.27
3.	F Stations	2.97	3.26	2.98	3.27

### Commission's Analysis

The station-wise fuel cost per unit approved for FY 2019-20 and FY 2020-21 based on the decisions of the Commission in the earlier paragraphs are as given in the Table below:

**Table 5-23: Approved Fuel cost per Unit of different stations of TPL-G (APP) for FY 2019-20 & FY 2020-21**

(Rs. /kWh)

Sl. No.	Stations	FY 2019-20		FY 2020-21	
		Gross	Net	Gross	Net
1.	D Station	2.86	3.14	2.86	3.14
2.	E Stations	2.86	3.15	2.86	3.15
3.	F Stations	2.86	3.15	2.86	3.15

The details of the computation are given in **Annexure 4, 5 & 6**.

## 5.6 Fixed Charges

### Petitioner's submission

TPL-G (APP) submitted that the Ministry of Environment & Forests (MoEF) vide its notification dated 7<sup>th</sup> December, 2015 has revised the environmental norms for thermal power plants. In order to comply with these revised norms, all the existing generating stations are required to incur capex for providing flue gas desulphurisation (FGD) systems. Based on representations, MoEF has granted exemption from implementation of revised norms and granted time to install FGD till December, 2022. TPL-G (APP) has submitted that it has not considered any capex towards modifications required for complying with the MoEF notification in the present Petition and that it will take necessary actions in respect of compliance of revised environmental norms and will approach the Commission at appropriate stage.

TPL-G (APP) submitted that it has considered all the elements of fixed cost at the MYT approved levels for FY 2019-20 and FY 2020-21 and not sought any revision.



### **Commission's Analysis**

The Commission has noted the submission of TPL-G (APP).

### **5.6.1 Operation and Maintenance (O&M) Expenses**

#### **Petitioner's submission**

TPL-G (APP) has projected the O&M expenses for FY 2019-20 and FY 2020-21 at the same level as approved in the MYT Order, as shown in the Table below:

**Table 5-24: O&M Expenses submitted by TPL-G (APP) for FY 2019-20 & FY 2020-21**  
**(Rs. Crore)**

Sl. No.	Particulars	FY 2019-20		FY 2020-21	
		Approved in the MYT Order	Revised Estimate	Approved in the MYT Order	Revised Estimate
1.	O&M Expenses	179.66	179.66	189.94	189.94

### **Commission's Analysis**

The Commission had, in the MYT Order, approved the O&M Expenses for FY 2019-20 and FY 2020-21 in accordance with the GERC (MYT) Regulations, 2016. The Commission notes that TPL-G (APP) has not projected any revision and considered the same values as approved in the MYT Order. The GERC (MYT) Regulations, 2016 also do not provide any scope for revising the approved O&M expenses at the time of MTR. Accordingly, the O&M expenses approved for FY 2019-20 and FY 2020-21 are given in the Table below:

**Table 5-25: Approved O&M expenses for the remaining years of the Control Period for FY 2019-20 & FY 2020-21**

**(Rs. Crore)**

Sl. No.	Particulars	FY 2019-20			FY 2020-21		
		Approved in MYT Order	Revised Estimate	Approved in MTR Order	Approved in MYT Order	Revised Estimate	Approved in MTR Order
1.	O&M Expenses	179.66	179.66	179.66	189.94	189.94	189.94

### **5.6.2 Water Charges**

#### **Petitioner's submission**

TPL-G (APP) has projected the water expenses for FY 2019-20 and FY 2020-21 at the same level as approved in the MYT Order, as shown in the Table below:



**Table 5-26: Water Charges as submitted by TPL-G (APP) for FY 2019-20 & FY 2020-21**  
**(Rs. Crore)**

Sl. No.	Particulars	FY 2019-20		FY 2020-21	
		Approved in MYT Order	Revised Estimate	Approved in MYT Order	Revised Estimate
1.	Water Charges	12.96	12.96	13.70	13.70

### Commission's Analysis

The Commission notes that TPL-G (APP) has projected the water expenses for FY 2019-20 and FY 2020-21 at the same level as approved in the MYT Order. Accordingly, the Commission approves the Water Charges as shown in the Table below:

**Table 5-27: Approved Water Charges for remaining years of the Control Period for FY 2019-20 & FY 2020-21**  
**(Rs. Crore)**

Sl. No.	Particulars	FY 2019-20			FY 2020-21		
		Approved in MYT Order	Revised Estimate	Approved in MTR Order	Approved in MYT Order	Revised Estimate	Approved in MTR Order
1.	Water Charges	12.96	12.96	12.96	13.70	13.70	13.70

### 5.6.3 Depreciation

#### Petitioner's submission

TPL-G (APP) has projected the Depreciation for FY 2019-20 and FY 2020-21 at the same level as approved in the MYT Order as shown in the Table below:

**Table 5-28: Depreciation as projected by TPL-G (APP) for FY 2019-20 & FY 2020-21**  
**(Rs. Crore)**

Sl. No	Particulars	FY 2019-20		FY 2020-21	
		Approved in MYT Order	Revised Estimate	Approved in MYT Order	Revised Estimate
1.	Depreciation	46.44	46.44	48.83	48.83

### Commission's Analysis

The Commission notes that TPL-G (APP) has projected the Depreciation for FY 2019-20 and FY 2020-21 at the same level as approved in the MYT Order. However, the Commission has revised the GFA and associated equity and loan balances for FY 2019-20 and FY 2020-21 based on the amounts approved in the true-up of FY 2017-18 as elaborated in Chapter 4 of this Order, and considering the addition to GFA and



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loan and equity for FY 2018-19, FY 2019-20 and FY 2020-21 at the same level as approved in the MYT Order. Accordingly, the Commission approves the Depreciation for FY 2019-20 and FY 2020-21 as shown in the Table below:

**Table 5-29: Depreciation as approved by the Commission for FY 2019-20 & FY 2020-21**  
**(Rs. Crore)**

Sl. No.	Particulars	FY 2019-20			FY 2020-21		
		Approved in MYT Order	Revised Estimate	Approved in MTR Order	Approved in MYT Order	Revised Estimate	Approved in MTR Order
1.	Depreciation	46.44	46.44	48.97	48.83	48.83	51.03

#### 5.6.4 Interest on Loans

##### Petitioner's Submission

TPL-G (APP) has projected the Interest on Loan for FY 2019-20 and FY 2020-21 at the same level as approved in the MYT Order as shown in the Table below:

**Table 5-30: Interest on loan projected by TPL-G (APP) for FY 2019-20 & FY 2020-21**  
**(Rs. Crore)**

Sl. No.	Particulars	FY 2019-20		FY 2020-21	
		Approved in MYT Order	Revised Estimate	Approved in MYT Order	Revised Estimate
1.	Interest on Loan	0.86	0.86	-	-

##### Commission's Analysis

The Commission notes that TPL-G (APP) has projected the Interest & Finance Charges for FY 2019-20 and FY 2020-21 at the same level as approved in the MYT Order. As stated earlier, the Commission has revised the GFA and associated equity and loan balances for FY 2019-20 and FY 2020-21 based on the amounts approved in the true-up of FY 2017-18 as elaborated in Chapter 4 of this Order, and considering the addition to GFA and loan and equity for FY 2018-19, FY 2019-20 and FY 2020-21 at the same level as approved in the MYT Order. For Applicable Interest Rate for FY 2019-20 and FY 2020-21, the Commission has considered the weighted average rate of interest equal to the weighted average interest rate considered while truing up for FY 2017-18.

Further in accordance with the Regulation 38.3 of the GERC (MYT) Regulations, 2016 the repayment for the year during FY 2019-20 and FY 2020-21 has been considered to be equal to the depreciation allowed for that year.



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Accordingly, the Commission approves the Interest and Finance Charges for FY 2019-20 and FY 2020-21 as shown in the Table below:

**Table 5-31: Approved Interest & Finance charges for FY 2019-20 & FY 2020-21**

(Rs. Crore)

Sl. No.	Particular	FY 2019-20			FY 2020-21		
		Approved in MYT Order	Revised Estimate	Approved in MTR Order	Approved in MYT Order	Revised Estimate	Approved in MTR Order
1.	Opening Balance of Loans	18.05		-	-		-
2.	Less: Reduction of Loans due to retirement or replacement of assets	-		-	-		-
3.	Addition to Loans due to capitalization during the year	26.85		26.85	42.60		42.60
4.	Repayment of Loans during the year	46.44		48.97	48.83		51.03
5.	Closing Balance of Loans			-	-		-
6.	Average Balance of Loans	9.02		-	-		-
7.	Wt. Avg. Rate of Interest on actual Loans (%)	9.50%		8.55%	9.50%		8.55%
8.	Interest Expenses	0.86		-	-		-
9.	Finance Charges			-	-		-
10.	<b>Total Interest &amp; Finance Charges</b>	<b>0.86</b>	<b>0.86</b>	-	-	-	-

### 5.6.5 Interest on Working Capital

#### Petitioner's Submission

TPL-G (APP) has projected the Interest on Working Capital for FY 2019-20 and FY 2020-21 at the same level as approved in the MYT Order as shown in the Table below:

**Table 5-32: Interest on Working Capital projected by TPL-G (APP) for FY 2019-20 & FY 2020-21**

(Rs. Crore)

Sl. No.	Particulars	FY 2019-20		FY 2020-21	
		Approved in MYT Order	Revised Estimate	Approved in MYT Order	Revised Estimate
1.	Interest on Working Capital	14.45	14.45	14.84	14.84



### **Commission's Analysis**

The Commission notes that TPL-G (APP) has projected the Interest on Working Capital for FY 2019-20 and FY 2020-21 at the same level as approved in the MYT Order.

The Commission has computed the revised working capital requirement and interest on working capital for FY 2019-20 and FY 2020-21 in accordance with the GERC (MYT) Regulations, 2016 and subsequent amendment thereof.

Accordingly, the Commission has worked out the working capital requirement considering Normative Target Availability of 85% for all the stations (D, E & F) of TPL-G (APP). This is as per Regulation 53.1 of the GERC (MYT) Regulations, 2016.

The working capital comprises 1.5 months of coal cost, 2 months' of secondary fuel cost, 1 month of O&M expenses, maintenance spares at 1% of historical cost of assets, and receivables equivalent to 1 month.

The Commission has also taken into account the revised fuel cost approved in this Order for the computation of working capital requirement.

In line with Regulation 40.1 (d) of the GERC (MYT) Regulations, 2016, the interest is worked out by considering the 1-year MCLR of SBI prevailing as on 1<sup>st</sup> April, 2018 with a spread of 250 basis points there on. Accordingly, the rate of interest on working capital has been worked out to be 10.65%.

Accordingly, the Commission approves the Interest on Working Capital for FY 2019-20 and FY 2020-21 as shown in the Table below:

**Table 5-33: Approved Interest on Working Capital for FY 2019-20 & FY 2020-21**  
**(Rs. Crore)**

Sl. No.	Particular	Norm	FY 2019-20			FY 2020-21		
			Approved in MYT Order	Revised Estimate	Approved in MTR Order	Approved in MYT Order	Revised Estimate	Approved in MTR Order
1.	Cost of Coal	1.5 months	95.92		95.53	98.05		95.27
2.	Cost of Oil		-		-	-		-
3.	Cost of Secondary Fuel Oil	2 months	1.39		1.50	1.42		1.50
4.	O&M Expenses	1 month	14.97		14.97	15.83		15.83





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Sl. No.	Particular	Norm	FY 2019-20			FY 2020-21		
			Approved in MYT Order	Revised Estimate	Approved in MTR Order	Approved in MYT Order	Revised Estimate	Approved in MTR Order
5.	Maintenance Spares	1% of GFA	11.20		11.59	11.58		11.97
6.	Receivables		-		-	-		-
7.	Total Working Capital Requirement		123.48		123.59	126.88		124.57
8.	Interest Rate (%)		11.70%		10.65%	11.70%		10.65%
9.	<b>Interest on Working Capital</b>		<b>14.45</b>	<b>14.45</b>	<b>13.16</b>	<b>14.84</b>	<b>14.84</b>	<b>13.27</b>

### 5.6.6 Return on Equity

#### Petitioner's submission

TPL-G (APP) has projected the Return on Equity for FY 2019-20 and FY 2020-21 at the same level as approved in the MYT Order as shown in the Table below:

**Table 5-34: Return on Equity Capital projected for FY 2019-20 & FY 2020-21**  
**(Rs. Crore)**

Sl. No.	Particulars	FY 2019-20		FY 2020-21	
		Approved in MYT Order	Revised Estimate	Approved in MYT Order	Revised Estimate
1.	Return on Equity	60.03	60.03	62.11	62.11

#### Commission's Analysis

The Commission notes that TPL-G (APP) has projected the Return on Equity Capital for FY 2019-20 and FY 2020-21 at the same level as approved in the MYT Order.

The Commission has computed the Return on Equity as per the GERC (MYT) Regulations, 2016. As stated earlier, the Commission has revised the GFA and associated equity and loan balances for FY 2019-20 and FY 2020-21 based on the amounts approved in the true-up of FY 2017-18 as elaborated in Chapter 4 of this Order, and considering the addition to GFA and loan and equity for FY 2018-19, FY 2019-20 and FY 2020-21 at the same level as approved in the MYT Order.

Accordingly, the Commission approves the Return on Equity for FY 2019-20 and FY 2020-21 as shown in the Table below:



**Table 5-35: Approved Return on Equity for FY 2019-20 & FY 2020-21**

(Rs. Crore)

Sl. No.	Particular	FY 2019-20			FY 2020-21		
		Approved in MYT Order	Revised Estimate	Approved in MTR Order	Approved in MYT Order	Revised Estimate	Approved in MTR Order
1.	Opening Equity	423.01		434.58	434.52		446.09
2.	Equity addition	11.51		11.51	18.26		18.26
3.	Closing Equity	434.52		446.09	452.78		464.35
4.	Average Equity	428.76		440.34	443.65		455.22
5.	<b>Return on Equity</b>	<b>60.03</b>	<b>60.03</b>	<b>61.65</b>	<b>62.11</b>	<b>62.11</b>	<b>63.73</b>

## 5.6.7 Income Tax

### Petitioner's Submission

TPL-G (APP) has projected the Income Tax for FY 2019-20 and FY 2020-21 at the same level as approved in the MYT Order as shown in the Table below:

**Table 5-36: Income Tax projected for FY 2019-20 & FY 2020-21**

(Rs. Crore)

Sl. No.	Particulars	FY 2019-20		FY 2020-21	
		Approved in MYT Order	Revised Estimate	Approved in MYT Order	Revised Estimate
1.	Income Tax	15.34	15.34	15.34	15.34

### Commission's Analysis

The Commission notes that TPL-G (APP) has projected the Income Tax for FY 2019-20 and FY 2020-21 at the same level as approved in the MYT Order. Accordingly, the Commission approves the Income Tax for FY 2019-20 and FY 2020-21 as shown in the Table below:

**Table 5-37: Approved Income Tax for FY 2019-20 & FY 2020-21**

(Rs. Crore)

Sl. No.	Particulars	FY 2019-20			FY 2020-21		
		Approved in MYT Order	Revised Estimate	Approved in MTR Order	Approved in MYT Order	Revised Estimate	Approved in MTR Order
1.	Income Tax	15.34	15.34	15.34	15.34	15.34	15.34



## 5.6.8 Non-Tariff Income

### Petitioner's Submission

TPL-G (APP) has projected the Non-Tariff Income for FY 2019-20 and FY 2020-21 at the same level as approved in the MYT Order as shown in the Table below:

**Table 5-38: Non-Tariff Income projected for FY 2019-20 & FY 2020-21**

(Rs. Crore)

Sl. No.	Particulars	FY 2019-20		FY 2020-21	
		Approved in MYT Order	Revised Estimate	Approved in MYT Order	Revised Estimate
1.	Non-Tariff Income	17.43	17.43	17.43	17.43

### Commission's Analysis

The Commission notes that TPL-G (APP) has projected the Non-Tariff Income for FY 2019-20 and FY 2020-21 at the same level as approved in the MYT Order. Accordingly, the Commission approves the Non -Tariff Income for FY 2019-20 and FY 2020-21 as shown in the Table below:

**Table 5-39: Approved Non-Tariff Income for FY 2019-20 & FY 2020-21**

(Rs. Crore)

Sl. No.	Particulars	FY 2019-20			FY 2020-21		
		Approved in MYT Order	Revised Estimate	Approved in MTR Order	Approved in MYT Order	Revised Estimate	Approved in MTR Order
1.	Non-Tariff Income	17.43	17.43	17.43	17.43	17.43	17.43

## 5.7 Aggregate Revenue Requirement

### Petitioner's Submission

The summary of approved ARR and revised estimates of ARR of TPL-G (APP) for FY 2019-20 and FY 2020-21 as submitted by TPL-G (APP) is shown in the Table below:

**Table 5-40: Revised ARR projected for FY 2019-20 & FY 2020-21**

(Rs. Crore)

Sl. No.	Particulars	FY 2019-20		FY 2020-21	
		Approved in MYT Order	Revised Estimate	Approved in MYT Order	Revised Estimate
1.	Variable Cost	788.48	843.73	803.81	849.35
2.	O&M Expenses	179.66	179.66	189.94	189.94
3.	Water Charges	12.96	12.96	13.70	13.70
4.	Depreciation	46.44	46.44	48.83	48.83



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Sl. No.	Particulars	FY 2019-20		FY 2020-21	
		Approved in MYT Order	Revised Estimate	Approved in MYT Order	Revised Estimate
5.	Interest on Loan	0.86	0.86	-	-
6.	Interest on Working Capital	14.45	14.45	14.84	14.84
7.	Return on Equity	60.03	60.03	62.11	62.11
8.	Income Tax	15.34	15.34	15.34	15.34
9.	Less: Non-Tariff Income	17.43	17.43	17.43	17.43
10.	<b>Total</b>	<b>1100.78</b>	<b>1156.03</b>	<b>1131.14</b>	<b>1176.67</b>

### Commission's Analysis

Based on the Commission's analysis and decisions, the revised fixed and variable charges for FY 2019-20 to FY 2020-21 have been determined as shown in the Table below:

**Table 5-41: Approved Aggregate Revenue Requirement for FY 2019-20 & FY 2020-21**  
**(Rs. Crore)**

Sl. No.	Particulars	FY 2019-20			FY 2020-21		
		Approved in MYT Order	Revised Estimate	Approved in MTR Order	Approved in MYT Order	Revised Estimate	Approved in MTR Order
1.	Variable Cost	788.48	843.73	812.54	803.81	849.35	817.70
2.	Operation & Maintenance Expenses	179.66	179.66	179.66	189.94	189.94	189.94
2.1	Water Charges	12.96	12.96	12.96	13.70	13.70	13.70
3.	Depreciation	46.44	46.44	48.97	48.83	48.83	51.03
4.	Interest & Finance Charges	0.86	0.86	-	-	-	-
5.	Interest on Working Capital	14.45	14.45	13.16	14.84	14.84	13.27
6.	<b>Total Revenue Expenditure</b>	<b>1,042.85</b>	<b>1,098.09</b>	<b>1,067.30</b>	<b>1,071.12</b>	<b>1,116.65</b>	<b>1,085.63</b>
7.	Add: Return on Equity	60.03	60.03	61.65	62.11	62.11	63.73
8.	Add: Income Tax	15.34	15.34	15.34	15.34	15.34	15.34
9.	Less: Non-Tariff Income	17.43	17.43	17.43	17.43	17.43	17.43
10.	<b>Aggregate Revenue Requirement</b>	<b>1,100.78</b>	<b>1,156.03</b>	<b>1,126.85</b>	<b>1,131.14</b>	<b>1,176.67</b>	<b>1,147.27</b>
11.	<b>Total Fixed Charges</b>	<b>312.31</b>	<b>312.31</b>	<b>314.31</b>	<b>327.33</b>	<b>327.33</b>	<b>329.57</b>
12.	<b>Total Variable Charges</b>	<b>788.48</b>	<b>843.73</b>	<b>812.54</b>	<b>803.81</b>	<b>849.35</b>	<b>817.70</b>



## 6. Determination of Generation Charges for FY 2019-20

### 6.1 Introduction

This Chapter deals with the determination of Fixed Charges as well as Variable Charges for FY 2019-20 for TPL-G (APP). The Commission has considered the Fixed and Variable charges approved in Table 5.43 of this Order as Fixed and Variable charge for FY 2019-20.

### 6.2 Approved ARR for FY 2019-20

Based on the approach, the Table below summarizes the fixed and variable charges for FY 2019-20

**Table 6-1: Approved ARR for FY 2019-20**

(Rs. Crore)		
Sl. No.	Particular	Approved in MTR Order for FY 2019-20
1.	Fuel Related Expenses	812.54
2.	Operation & Maintenance Expenses	179.66
2.1	Water Charges	12.96
3.	Depreciation	48.97
4.	Interest & Finance Charges	-
5.	Interest on Working Capital	13.16
6.	<b>Total Revenue Expenditure</b>	<b>1,067.30</b>
7.	Add: Return on Equity	61.65
8.	Add: Income Tax	15.34
9.	Less: Non-Tariff Income	17.43
10.	<b>Aggregate Revenue Requirement</b>	<b>1,126.85</b>
11.	<b>Total Fixed Charges</b>	<b>314.31</b>
12.	<b>Total Variable Charges</b>	<b>812.54</b>

### 6.3 Determination of Fixed Charges for FY 2019-20

The total Fixed Charges approved by the Commission for FY 2019-20 are Rs. 314.31 Crore.

### 6.4 Determination of Variable Charges for FY 2019-20

The Table below gives the Station-wise energy charges for FY 2019-20:

**Table 6-2: Approved Variable Charges for TPL-G (APP) for FY 2019-20**

<b>Sl. No.</b>	<b>Station</b>	<b>Approved Fuel Cost for FY 2019-20 (Rs. Crore)</b>	<b>Fuel Cost per unit gross (Rs. /kWh)</b>	<b>Fuel cost per unit net (Rs. /kWh)</b>
1.	D Station	277.53	2.86	3.14
2.	E Station	281.83	2.86	3.15
3.	F Station	253.19	2.86	3.15
	<b>Total</b>	<b>812.54</b>		



## 7. Compliance of Directives

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### 7.1 Earlier Directives

#### 7.1.1 Reduction in Fuel Cost

TPL-G is directed to explore the possibility of reduction in fuel cost including possibilities of utilization of washed coal.

##### **Compliance**

TPL-G (APP) submitted that it has evaluated the pros and cons of using washed coal and submitted a detailed report. Based on the inputs gathered, TPL-G (APP) is of the considered view that washing coal may not yield any gain for sustained and commercially viable generation.

##### **Commission Comment**

The Commission has noted the submission.

#### 7.1.2 Green Cess on Coal Cost

TPL-G is advised to take up the matter with appropriate authority to rationalize the Green Cess imposed on procurement of coal for charging the Green Cess in the ratio of RPO fulfilment by the State/entity.

It is also observed by the Commission that Green Cess is imposed by the Government of India uniformly across the coal quality. TPL-G is advised to take up the matter with appropriate authority to get the necessary amendment so as to reduce the overall cost of fuel.

##### **Compliance**

TPL-G (APP) submitted its representation to the Ministry of Coal, Government of India and requested it to consider the levy of Green Cess on the basis of Renewable Energy generation in the State.

##### **Commission Comment**

The Commission has noted the submission. The Petitioner is directed to pursue the matter with the appropriate Ministry at the Central Government.



## **7.2 New Directives**

- 7.2.1.** TPL shall submit a copy of the statutory clearances obtained and in force along with the date of validity for its units / generating plants (D, E & F) for environment norms.
- 7.2.2.** TPL shall submit capital expenditure plan, after doing cost benefit analysis, including implementation plan for meeting the new environmental norms of MoEF (GoI), if required, in 6 months' time.
- 7.2.3.** TPL shall submit phasing out plan, if any, for their generating units (D, E & F), since they have already completed the useful life and at the same time explore cost effective option for replacing such capacity for present and future requirement.





## COMMISSION'S ORDER

The Commission approves the Aggregate Revenue Requirement (ARR) for TPL-G (APP) in the Mid-term Review for FY 2019-20 and FY 2020-21, as shown in the Table below:

**Approved ARR for TPL-G (APP) for FY 2019-20 and FY 2020-21**  
**(Rs. Crore)**

Sl. No.	Particulars	Approved in Mid-term Review	
		FY 2019-20	FY 2020-21
1.	Fuel Related Expenses	812.54	817.70
2.	Operation & Maintenance Expenses	179.66	189.94
2.1	Water Charges	12.96	13.70
3.	Depreciation	48.97	51.03
4.	Interest & Finance Charges	-	-
5.	Interest on Working Capital	13.16	13.27
6.	<b>Total Revenue Expenditure</b>	<b>1,067.30</b>	<b>1,085.63</b>
7.	Add: Return on Equity	61.65	63.73
8.	Add: Income Tax	15.34	15.34
9.	Less: Non-Tariff Income	17.43	17.43
10.	<b>Aggregate Revenue Requirement</b>	<b>1,126.85</b>	<b>1,147.27</b>

**This order shall come into force with effect from 1<sup>st</sup> May, 2019.**

Sd/-

**P. J. THAKKAR**  
Member

Sd/-

**K. M. SHRINGARPURE**  
Member

Sd/-

**ANAND KUMAR**  
Chairman

Place: Gandhinagar

Date: 24/04/2019





**Torrent Power Limited - Generation**  
**Truing Up for FY 2017-18, Mid-term Review of FY 2019-20 & FY 2020-21**  
**and Determination of Tariff for FY 2019-20**

**Annexure 1: D Station - Approved fuel costs for FY 2017-18 for True up**

Sl. No.	Item	Derivation	Unit	2017-18
1.	Total Capacity	A1	MW	120.00
2.	Actual PLF	A2	%	79.62%
3.	Gross Generation	$A=A1 \times A2 \times 8760$ or 8784 (leap year)	MU	836.96
4.	Auxiliary Consumption	C	%	9.00%
5.	Auxiliary Consumption	B	MU	75.33
6.	Net Generation	$Y=A - B$	MU	761.63
7.	Station Heat Rate	D	Kcal/kWh	2,450
8.	Sp. Oil Consumption	E	ml/kWh	1.00
9.	Gross Calorific Value of Coal	F	kcal/kg	4,387.79
10.	Calorific value of Oil	G	kcal/l	9,934.78
11.	Overall Heat	$H=A \times D$	G Cal	20,50,543.43
12.	Heat from Oil	$I=(A \times E \times G)/1000$	G Cal	8,314.98
13.	Heat from Coal	$J=H-I$	G Cal	20,42,228.45
14.	Transit losses	K	%	0.80%
15.	Coal Blend			
16.	A) Indigenous Coal	X1	%	58.90%
17.	B) Washed Coal	X2	%	
18.	C) Imported Coal	X3	%	41.10%
19.	Actual Oil Consumption	$L=A \times E$	Kl	836.96
20.	Actual Coal Consumption	$M=(J \times 1000)/F$	MT	4,65,434.68
21.	A) Indigenous Coal	$Q1=M \times X1/(1-K)$	MT	2,76,354.92
22.	B) Washed Coal	$Q2=M \times X2 / (1-K)$	MT	
23.	C) Imported Coal	$Q3=M \times X3$	MT	1,91,290.60
24.	Price of Coal			
25.	A) Indigenous Coal	P1	Rs./MT	5,208.43
26.	B) Washed Coal	P2	Rs./MT	
27.	C) Imported Coal	P3	Rs./MT	5,837.81
28.	Price of Oil	P4	Rs./kl	31,905.66
29.	Coal cost			
30.	A) Indigenous Coal	$N1=Q1 \times P1$	Rs. Lakh	14,393.75
31.	B) Washed Coal	$N2=Q2 \times P2$	Rs. Lakh	-
32.	C) Imported Coal	$N3=Q3 \times P3$	Rs. Lakh	11,167.18
33.	Total Coal Cost	$N4=N1+N2+N3$	Rs. Lakh	25,560.93
34.	Oil Cost	$N5=P4 \times L/10^5$	Rs. Lakh	267.04
35.	Other Charges (Please specify details)	N6	Rs. Lakh	(1,491.47)
36.	Other Adjustments (Please specify details)	N7	Rs. Lakh	
37.	Total Fuel Cost	$O=N4+N5+N6+N7$	Rs. Lakh	24,336.49
38.	Fuel Cost/Unit Gross	$P=O/(A \times 10)$	Rs./kWh	2.91
39.	Fuel Cost/Unit Net	$Q=O/(Y \times 10)$	Rs./kWh	3.20
40.	Cost of fuel/G.Cal	$R=(O/H) \times 10^5$	Rs./Gcal	1,186.83
41.	Actual Net Generation	S	MUs	761.25
42.	Normative Fuel Cost for actual Net Generation	$T=S \times Q/10$	Rs. Crore	243.24



**Torrent Power Limited - Generation**  
**Truing Up for FY 2017-18, Mid-term Review of FY 2019-20 & FY 2020-21**  
**and Determination of Tariff for FY 2019-20**

**Annexure 2: E Station - Approved fuel cost for FY 2017-18 for True up**

Sl. No.	Item	Derivation	Unit	2017-18
1.	Total Capacity	A1	MW	121.00
2.	Actual PLF	A2	%	87.43%
3.	Gross Generation	$A=A1 \times A2 \times 8760$ or 8784 (leap year)	MU	926.69
4.	Auxiliary Consumption	C	%	9.00%
5.	Auxiliary Consumption	B	MU	83.40
6.	Net Generation	$Y=A - B$	MU	843.29
7.	Station Heat Rate	D	Kcal/kWh	2,455
8.	Sp. Oil Consumption	E	ml/kWh	1.00
9.	Gross Calorific Value of Coal	F	kcal/kg	4,235.79
10.	Calorific value of Oil	G	kcal/l	10,011.83
11.	Overall Heat	$H=A \times D$	G Cal	22,75,033.77
12.	Heat from Oil	$I=(A \times E \times G)/1000$	G Cal	9,277.90
13.	Heat from Coal	$J=H-I$	G Cal	22,65,755.87
14.	Transit losses	K	%	0.80%
15.	Coal Blend			
16.	A) Indigenous Coal	X1	%	76.88%
17.	B) Washed Coal	X2	%	
18.	C) Imported Coal	X3	%	23.12%
19.	Actual Oil Consumption	$L=A \times E$	Kl	926.69
20.	Actual Coal Consumption	$M=(J \times 1000)/F$	MT	5,34,907.50
21.	A) Indigenous Coal	$Q1=M \times X1/(1-K)$	MT	4,14,550.50
22.	B) Washed Coal	$Q2=M \times X2 / (1-K)$	MT	-
23.	C) Imported Coal	$Q3=M \times X3$	MT	1,23,673.40
24.	Price of Coal			
25.	A) Indigenous Coal	P1	Rs./MT	5,170.73
26.	B) Washed Coal	P2	Rs./MT	
27.	C) Imported Coal	P3	Rs./MT	5,940.87
28.	Price of Oil	P4	Rs./kl	31,935.66
29.	Coal cost			
30.	A) Indigenous Coal	$N1=Q1 \times P1$	Rs. Lakh	21,435.31
31.	B) Washed Coal	$N2=Q2 \times P2$	Rs. Lakh	-
32.	C) Imported Coal	$N3=Q3 \times P3$	Rs. Lakh	7,347.27
33.	Total Coal Cost	$N4=N1+N2+N3$	Rs. Lakh	28,782.58
34.	Oil Cost	$N5=P4 \times L/10^5$	Rs. Lakh	295.95
35.	Other Charges (Please specify details)	N6	Rs. Lakh	(1,552.14)
36.	Other Adjustments (Please specify details)	N7	Rs. Lakh	
37.	Total Fuel Cost	$O=N4+N5+N6+N7$	Rs. Lakh	27,526.38
38.	Fuel Cost/Unit Gross	$P=O/(A \times 10)$	Rs./kWh	2.97
39.	Fuel Cost/Unit Net	$Q=O/(Y \times 10)$	Rs./kWh	3.26
40.	Cost of fuel/G.Cal	$R=(O/H) \times 10^5$	Rs./Gcal	1,209.93
41.	Actual Net Generation	S	MUs	848.82
42.	Normative Fuel Cost for actual Net Generation	$T=S \times Q/10$	Rs. Crore	277.07



**Torrent Power Limited - Generation**  
**Truing Up for FY 2017-18, Mid-term Review of FY 2019-20 & FY 2020-21**  
**and Determination of Tariff for FY 2019-20**

**Annexure 3: F Station - Approved fuel cost for FY 2017-18 for True up**

Sl. No.	Item	Derivation	Unit	2017-18
1.	Total Capacity	A1	MW	121.00
2.	Actual PLF	A2	%	82.56%
3.	Gross Generation	$A=A1 \times A2 \times 8760$ or 8784 (leap year)	MU	875.13
4.	Auxiliary Consumption	C	%	9.00%
5.	Auxiliary Consumption	B	MU	78.76
6.	Net Generation	$Y=A - B$	MU	796.37
7.	Station Heat Rate	D	Kcal/kWh	2,455
8.	Sp. Oil Consumption	E	ml/kWh	1.00
9.	Gross Calorific Value of Coal	F	kcal/kg	4,200.16
10.	Calorific value of Oil	G	kcal/l	9,964.99
11.	Overall Heat	$H=A \times D$	G Cal	21,48,436.29
12.	Heat from Oil	$I=(A \times E \times G)/1000$	G Cal	8,720.63
13.	Heat from Coal	$J=H-I$	G Cal	21,39,715.66
14.	Transit losses	K	%	0.80%
15.	Coal Blend			
16.	A) Indigenous Coal	X1	%	83.15%
17.	B) Washed Coal	X2	%	
18.	C) Imported Coal	X3	%	16.85%
19.	Actual Oil Consumption	$L=A \times E$	Kl	875.13
20.	Actual Coal Consumption	$M=(J \times 1000)/F$	MT	5,09,436.25
21.	A) Indigenous Coal	$Q1=M \times X1/(1-K)$	MT	4,27,021.64
22.	B) Washed Coal	$Q2=M \times X2 / (1-K)$	MT	
23.	C) Imported Coal	$Q3=M \times X3$	MT	85,830.78
24.	Price of Coal			
25.	A) Indigenous Coal	P1	Rs./MT	5,207.55
26.	B) Washed Coal	P2	Rs./MT	
27.	C) Imported Coal	P3	Rs./MT	5,943.29
28.	Price of Oil	P4	Rs./kl	31,989.91
29.	Coal cost			
30.	A) Indigenous Coal	$N1=Q1 \times P1$	Rs. Lakh	22,237.39
31.	B) Washed Coal	$N2=Q2 \times P2$	Rs. Lakh	-
32.	C) Imported Coal	$N3=Q3 \times P3$	Rs. Lakh	5,101.18
33.	Total Coal Cost	$N4=N1+N2+N3$	Rs. Lakh	27,338.56
34.	Oil Cost	$N5=P4 \times L/10^5$	Rs. Lakh	279.95
35.	Other Charges (Please specify details)	N6	Rs. Lakh	(1,537.97)
36.	Other Adjustments (Please specify details)	N7	Rs. Lakh	
37.	Total Fuel Cost	$O=N4+N5+N6+N7$	Rs. Lakh	26,080.54
38.	Fuel Cost/Unit Gross	$P=O/(A \times 10)$	Rs./kWh	2.98
39.	Fuel Cost/Unit Net	$Q=O/(Y \times 10)$	Rs./kWh	3.27
40.	Cost of fuel/G.Cal	$R=(O/H) \times 10^5$	Rs./Gcal	1,213.93
41.	Actual Net Generation	S	MUs	797.11
42.	Normative Fuel Cost for actual Net Generation	$T=S \times Q/10$	Rs. Crore	261.05



**Torrent Power Limited - Generation**  
**Truing Up for FY 2017-18, Mid-term Review of FY 2019-20 & FY 2020-21**  
**and Determination of Tariff for FY 2019-20**

**Annexure 4: D Station - Approved fuel cost for FY 2019-20 & FY 2020-21 after Mid-term Review**

Sl. No.	Item	Derivation	Unit	2019-20	2020-21
1.	Total Capacity	A1	MW	120.00	120.00
2.	Actual PLF	A2	%	92.16%	83.54%
3.	Gross Generation	$A=A1 \times A2 \times 8760$ or 8784 (leap year)	MU	971.39	878.16
4.	Auxiliary Consumption	C	%	9.00%	9.00%
5.	Auxiliary Consumption	B	MU	87.43	79.03
6.	Net Generation	$Y=A - B$	MU	883.97	799.12
7.	Station Heat Rate	D	Kcal/kWh	2,450	2450
8.	Sp. Oil Consumption	E	ml/kWh	1.00	1.00
9.	Gross Calorific Value of Coal	F	kcal/kg	4,528.00	4,528.00
10.	Calorific value of Oil	G	kcal/l	9,836.81	9,836.81
11.	Overall Heat	$H=A \times D$	G Cal	23,79,915.56	2151479.76
12.	Heat from Oil	$I=(A \times E \times G)/1000$	G Cal	9,555.42	8638.25
13.	Heat from Coal	$J=H-I$	G Cal	23,70,360.13	2142841.51
14.	Transit losses	K	%	0.80%	0.80%
15.	Coal Blend				
16.	A) Indigenous Coal	X1	%	74.00%	74.00%
17.	B) Washed Coal	X2	%		
18.	C) Imported Coal	X3	%	26.00%	26.00%
19.	Actual Oil Consumption	$L=A \times E$	Kl	971.39	878.16
20.	Actual Coal Consumption	$M=(J \times 1000)/F$	MT	5,23,489.43	4,73,242.38
21.	A) Indigenous Coal	$Q1=M \times X1/(1-K)$	MT	3,90,506.23	3,53,023.55
22.	B) Washed Coal	$Q2=M \times X2 / (1-K)$	MT	-	-
23.	C) Imported Coal	$Q3=M \times X3$	MT	1,36,107.25	1,23,043.02
24.	Price of Coal				
25.	A) Indigenous Coal	P1	Rs./MT	4,837.70	4837.70
26.	B) Washed Coal	P2	Rs./MT	-	-
27.	C) Imported Coal	P3	Rs./MT	6,272.80	6272.80
28.	Price of Oil	P4	Rs./kl	33,345.66	33345.66
29.	Coal cost				
30.	A) Indigenous Coal	$N1=Q1 \times P1$	Rs. Lakh	18,891.53	17,078.23
31.	B) Washed Coal	$N2=Q2 \times P2$	Rs. Lakh		
32.	C) Imported Coal	$N3=Q3 \times P3$	Rs. Lakh	8,537.74	7,718.24
33.	Total Coal Cost	$N4=N1+N2+N3$	Rs. Lakh	27,429.26	24,796.47
34.	Oil Cost	$N5=P4 \times L/10^5$	Rs. Lakh	323.92	292.83
35.	Other Charges (Please specify details)	N6	Rs. Lakh	-	-
36.	Other Adjustments (Please specify details)	N7	Rs. Lakh	-	-
37.	Total Fuel Cost	$O=N4+N5+N6+N7$	Rs. Lakh	27,753.18	25,089.30
38.	Fuel Cost/Unit Gross	$P=O/(A \times 10)$	Rs./kWh	2.86	2.86
39.	Fuel Cost/Unit Net	$Q=O/(Y \times 10)$	Rs./kWh	3.14	3.14



**Torrent Power Limited - Generation**  
**Truing Up for FY 2017-18, Mid-term Review of FY 2019-20 & FY 2020-21**  
**and Determination of Tariff for FY 2019-20**

**Annexure 5: E Station - Approved fuel cost for FY 2019-20 & FY 2020-21 after Mid-term Review**

Sl. No.	Item	Derivation	Unit	2019-20	2020-21
1.	Total Capacity	A1	MW	121.00	121.00
2.	Actual PLF	A2	%	92.62%	92.90%
3.	Gross Generation	$A=A1 \times A2 \times 8760$ or 8784 (leap year)	MU	984.43	984.73
4.	Auxiliary Consumption	C	%	9.00%	9.00%
5.	Auxiliary Consumption	B	MU	88.60	88.63
6.	Net Generation	$Y=A - B$	MU	895.83	896.11
7.	Station Heat Rate	D	Kcal/kWh	2455	2455
8.	Sp. Oil Consumption	E	ml/kWh	1.00	1.00
9.	Gross Calorific Value of Coal	F	kcal/kg	4,528.00	4,528.00
10.	Calorific value of Oil	G	kcal/l	9,836.81	9,836.81
11.	Overall Heat	$H=A \times D$	G Cal	24,16,779.58	24,17,515.79
12.	Heat from Oil	$I=(A \times E \times G)/1000$	G Cal	9,683.67	9,686.62
13.	Heat from Coal	$J=H-I$	G Cal	24,07,095.91	24,07,829.17
14.	Transit losses	K	%	0.80%	0.80%
15.	Coal Blend				
16.	A) Indigenous Coal	X1	%	74.00%	74.00%
17.	B) Washed Coal	X2	%		
18.	C) Imported Coal	X3	%	26.00%	26.00%
19.	Actual Oil Consumption	$L=A \times E$	Kl	984.43	984.73
20.	Actual Coal Consumption	$M=(J \times 1000)/F$	MT	5,31,602.45	5,31,764.39
21.	A) Indigenous Coal	$Q1=M^* \times X1/(1-K)$	MT	3,96,558.28	3,96,679.08
22.	B) Washed Coal	$Q2=M^* \times X2 / (1-K)$	MT	-	-
23.	C) Imported Coal	$Q3=M^* \times X3$	MT	1,38,216.64	1,38,258.74
24.	Price of Coal				
25.	A) Indigenous Coal	P1	Rs./MT	4,837.70	4,837.70
26.	B) Washed Coal	P2	Rs./MT		
27.	C) Imported Coal	P3	Rs./MT	6,272.80	6,272.80
28.	Price of Oil	P4	Rs./kl	33,345.66	33,345.66
29.	Coal cost				
30.	A) Indigenous Coal	$N1=Q1 \times P1$	Rs. Lakh	19,184.31	19,190.15
31.	B) Washed Coal	$N2=Q2 \times P2$	Rs. Lakh	-	-
32.	C) Imported Coal	$N3=Q3 \times P3$	Rs. Lakh	8,670.05	8,672.69
33.	Total Coal Cost	$N4=N1+N2+N3$	Rs. Lakh	27,854.36	27,862.84
34.	Oil Cost	$N5=P4 \times L/10^5$	Rs. Lakh	328.27	328.37
35.	Other Charges (Please specify details)	N6	Rs. Lakh	-	-
36.	Other Adjustments (Please specify details)	N7	Rs. Lakh	-	-
37.	Total Fuel Cost	$O=N4+N5+N6+N7$	Rs. Lakh	28,182.62	28,191.21
38.	Fuel Cost/Unit Gross	$P=O/(A \times 10)$	Rs./kWh	2.86	2.86
39.	Fuel Cost/Unit Net	$Q=O/(Y \times 10)$	Rs./kWh	3.15	3.15



**Torrent Power Limited - Generation**  
**Truing Up for FY 2017-18, Mid-term Review of FY 2019-20 & FY 2020-21**  
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**Annexure 6: F Station - Approved fuel cost for FY 2019-20 & FY 2020-21 after Mid-term Review**

Sl. No.	Item	Derivation	Unit	2019-20	2020-21
1.	Total Capacity	A1	MW	121.00	121.00
2.	Actual PLF	A2	%	83.21%	93.89%
3.	Gross Generation	$A=A1 \times A2 \times 8760$ or 8784 (leap year)	MU	884.39	995.14
4.	Auxiliary Consumption	C	%	9.00%	9.00%
5.	Auxiliary Consumption	B	MU	79.59	89.56
6.	Net Generation	$Y=A - B$	MU	804.79	905.58
7.	Station Heat Rate	D	Kcal/kWh	2455	2455
8.	Sp. Oil Consumption	E	ml/kWh	1.00	1.00
9.	Gross Calorific Value of Coal	F	kcal/kg	4,528.00	4,528.00
10.	Calorific value of Oil	G	kcal/l	9,836.81	9,836.81
11.	Overall Heat	$H=A \times D$	G Cal	21,71,172.16	24,43,078.97
12.	Heat from Oil	$I=(A \times E \times G)/1000$	G Cal	8,699.56	9,789.05
13.	Heat from Coal	$J=H-I$	G Cal	21,62,472.60	24,33,289.92
14.	Transit losses	K	%	0.80%	0.80%
15.	Coal Blend				
16.	A) Indigenous Coal	X1	%	74.00%	74.00%
17.	B) Washed Coal	X2	%		
18.	C) Imported Coal	X3	%	26.00%	26.00%
19.	Actual Oil Consumption	$L=A \times E$	Kl	884.39	995.14
20.	Actual Coal Consumption	$M=(J \times 1000)/F$	MT	4,77,577.87	5,37,387.35
21.	A) Indigenous Coal	$Q1=M \times X1/(1-K)$	MT	3,56,257.69	4,00,873.63
22.	B) Washed Coal	$Q2=M \times X2 / (1-K)$	MT	-	-
23.	C) Imported Coal	$Q3=M \times X3$	MT	1,24,170.25	1,39,720.71
24.	Price of Coal				
25.	A) Indigenous Coal	P1	Rs./MT	4,837.70	4,837.70
26.	B) Washed Coal	P2	Rs./MT	-	-
27.	C) Imported Coal	P3	Rs./MT	6,272.80	6,272.80
28.	Price of Oil	P4	Rs./kl	33,345.66	33,345.66
29.	Coal cost				
30.	A) Indigenous Coal	$N1=Q1 \times P1$	Rs. Lakh	17,234.68	19,393.07
31.	B) Washed Coal	$N2=Q2 \times P2$	Rs. Lakh	-	-
32.	C) Imported Coal	$N3=Q3 \times P3$	Rs. Lakh	7,788.95	8,764.40
33.	Total Coal Cost	$N4=N1+N2+N3$	Rs. Lakh	25,023.64	28,157.47
34.	Oil Cost	$N5=P4 \times L/10^5$	Rs. Lakh	294.90	331.84
35.	Other Charges (Please specify details)	N6	Rs. Lakh	-	-
36.	Other Adjustments (Please specify details)	N7	Rs. Lakh	-	-
37.	Total Fuel Cost	$O=N4+N5+N6+N7$	Rs. Lakh	25,318.54	28,489.31
38.	Fuel Cost/Unit Gross	$P=O/(A \times 10)$	Rs./kWh	2.86	2.86
39.	Fuel Cost/Unit Net	$Q=O/(Y \times 10)$	Rs./kWh	3.15	3.15

