

GUJARAT ELECTRICITY REGULATORY COMMISSION



Tariff Order

Truing up for FY 2020-21

and

Determination of Tariff for FY 2022-23

For

Torrent Power Limited – Generation

Ahmedabad

Case No. 2032 of 2021

31st March, 2022

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Before the Gujarat Electricity Regulatory Commission at Gandhinagar

Case No. 2032 of 2021

Date of Order: 31.03.2022

CORAM

Shri Anil Mukim, Chairman
Shri Mehul M. Gandhi, Member
Shri. S. R. Pandey, Member

ORDER

Chapter 1: Background and Brief History

1.1 Background

Torrent Power Limited (hereinafter referred to as TPL or the Petitioner) has filed the present Petition under Section 62 of the Electricity Act'2003, read in conjunction with Gujarat Electricity Regulatory Commission (Multi-Year Tariff) Regulations'2016, vide Suo-Motu Order No. 1995 of 2021 dated 24th September, 2021 for determination of tariff for its generating business at Ahmedabad for FY 2022-23.



Gujarat Electricity Regulatory Commission (hereinafter referred as “the Commission”) notified the GERC (Multi-Year Tariff) Regulations, 2016 on 29th March, 2016 which is applicable for determination of tariff in all cases covered under the Regulations from 1st April, 2016 onwards. Regulations 17.2 (b) of the GERC (Multi-Year Tariff) Regulations, 2016 provides for submission of detailed application comprising of Truing up and ARR for control period i.e., 29th March 2016 to 31st March 2021 and revenue gap or revenue surplus thereof for the ensuing year for the determination of tariff to be carried out under the GERC (MYT) Regulations, 2016 and amendment thereof from time to time.

The True up year and the ensuing year in the present case is FY 2020-21 and FY 2022-23 respectively, however, the GERC (MYT) Regulations, 2016 which has been notified on 29th March, 2016 were in force till 31st March 2021. While the Commission had initiated the process of framing the MYT Regulations for new Control Period of FY 2021-22 to FY 2025-26 by issuing public notice dated 10th August, 2020, the process was delayed due to circumstances and reasons beyond the control of the Commission. Considering the delay, the Commission vide its Suo-Motu Order No. 07 of 2020 dated 22nd December, 2020 deferred the 5-year control period for new MYT Regulations for one year. Due to ongoing pandemic, the process was further delayed due to circumstances and reasons beyond the control of the Commission. The Commission vide its Order in Suo-Motu Petition No. 1995 of 2021 dated 24th September, 2021 deferred the next MYT Control period by one more year and accordingly, all the concerned utilities and licensees were directed to file True up for FY 2020-21 and annual ARR for FY 2022-23 and application for determination of tariff for FY 2022-23 based on the principles and methodology as provided in the GERC (MYT) Regulations, 2016.

Subsequently, the Petitioner filed the current Petition for truing-up of FY 2020-21, and determination of ARR and tariff for FY 2022-23 on 30th November, 2021.

After technical validation of the petition, it was registered on 3rd December, 2021 and as provided under Regulation 29.1 of 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 Generation (Ahmedabad) 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 362 MW, at Ahmedabad and has a Combined Cycle Power Plant (CCPP) of 1147.5 MW (SUGEN) and its extension UNOSUGEN (382.5MW) capacity near Surat out of which a share of 835 MW from SUGEN and 278 MW from UNOSUGEN are allocated for Gujarat (Ahmedabad, Gandhinagar and Surat).

1.3 Commission's Order for 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 29th November, 2016. The petition was registered on 3rd December, 2016 (under Case No. 1626 of 2016). The Commission vide order dated 9th 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.

In continuation to above, the Petitioner filed a petition for Truing-up of FY 2016-17 and determination of tariff for FY 2018-19 on 30th December, 2017. The petition

was registered on 3rd January, 2018 (Case No.1695 of 2018). The Commission vide order dated 31st March, 2018 approved the Truing-Up for FY 2016-17 and determined the tariff for FY 2018-19.

The Petitioner filed a petition for Truing Up of FY 2017-18 and Mid-Term Review of ARR for FY 2019-20 and FY 2020-21 on 30th November, 2018. The Petition was registered on 4th December 2018 (Case No.1763 of 2018). The Commission approved the Truing-Up of FY 2017-18 and revised the ARR for FY 2019-20 and FY 2020-21 vide order dated 24th April, 2019.

The Petitioner filed a petition for Truing-up of FY 2018-19 and determination of tariff for FY 2020-21 on 30th November, 2019. The petition was registered on 4th December, 2019 (Case No.1843 of 2019). The Commission vide order dated 30th March, 2020 approved the Truing-Up for FY 2018-19 and determined the tariff for FY 2020-21.

The Petitioner filed a petition for Truing-up of FY 2019-20 and determination of tariff for FY 2021-22 on 8th January, 2021. The petition was registered on 11th January, 2021 (Case No.1925 of 2021). The Commission vide order dated 31st March, 2021 approved Truing-up of FY 2019-20 and determination of tariff for FY 2021-22.

1.4 Background of the Present Petition

The Commission has notified the GERC (MYT) Regulations, 2016 for the control period of FY 2016-17 to FY 2020-21. 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).

Further, 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.

The Commission, vide its order dated 24th September, 2021 has directed the utilities to file the petition for determination of tariff for FY 2022-23 based on the principles and methodology as provided in the GERC (Multi Year Tariff) Regulation, 2016.

1.5 Registration of the Current Petition and the Public Hearing Process

The Petitioner submitted the current Petition for Truing-up of FY 2020-21 and determination of tariff for FY 2022-23 on 30th November, 2021. After technical validation of the petition, it was registered on 3rd December, 2021 (Case No. 2032 of 2021) and as provided under Regulation 29.1 of the GERC MYT Regulations, 2016, the Commission has proceeded with this tariff order.

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

The Public Notice, inviting objections / suggestions from the stakeholders on the Truing up and tariff determination petition filed by TPL, was published in the following newspapers:

Table 2-1 List of News Papers (Petitioner)

S. No.	Name of Newspaper	Language	Date of Publication
1	The Indian Express	English	11/12/2021
2	Navgujarat Samay (Ahemdabad Edition)	Gujarati	11/12/2021
3	Gujarat Guardian (Surat Edition)	Gujarati	11/12/2021

The Petitioner also placed the public notice and the petition on its website (www.torrentpower.com) for inviting objections and suggestions on the petition. The interested parties/stakeholders were asked to file their objections/suggestions on the petition on or before 10th January, 2022.

The Commission also placed the petition and additional details received subsequently from the Petitioner on its website (www.gercin.org) for information and study for all the stakeholders.

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

Table 2-2 List of Newspapers (Commission)

S. No.	Name of Newspaper	Language	Date of Publication
1	The Times of India	English	06/02/2022
2	Sandesh	Gujarati	06/02/2022
3	Gujarat Samachar	Gujarati	06/02/2022

The Commission received objections / suggestions from the consumers / consumer organizations as shown in Table below. The Commission examined the objections / suggestions received from the stakeholders and fixed the date for public hearing for the petition on 15th February, 2022 through Video Conferencing considering prevailing Covid situation. Subsequently a communication and Microsoft TEAMS Platform link was sent to the objectors to take part in the public hearing process via video conferencing for presenting their views before the Commission. The stakeholders who desired to remain present at the Commission's office, were arranged Video Conferencing facility at the office of the Commission.

The Commission also published the notice for Virtual Public Hearing (through video conferencing) on the Commission's website www.gercin.org intimating the date and venues as given below in order to solicit participation by the objectors who have submitted their objections, comments and also by any stakeholders who are interested.

Petitions	Date & Time	Venue
TPL-G, TPL-D(A), TPL-D(S) and TPL-D(D)	15 th February 2022 at 11:30 A.M	GERC Office, Gandhinagar (through Microsoft Teams Platform)

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

Table 2-3 List of Stakeholders

S. No.	Name of Stakeholders	Written Submission	Oral Submission	Presence in Public Hearing
1	Shri K.K Bajaj	Yes	Yes	Yes
2	Shri Vishnubhai Desai	Yes	Yes	Yes
3	Consumer Protection & Action Committee	Yes	No	No
4	Users Welfare Associations	Yes	Yes	Yes
5	Roop Textiles Mills	Yes	No	No
6	Utility Users' Welfare Association	Yes	No	No
7	Gujarat Krushi Vij Grahak Surakshya Sangha	No	No	Yes
8	Shri Himanshu Umrajwala	No	No	Yes

A short note on the main issues raised by the objectors in the submission in respect of the petition, along with the response of TPL-G (APP) and the Commission's views on the response, are given in Chapter 3.

1.6 Approach of this Order

The GERC (Multi-Year Tariff) Regulations, 2016 provide for "Truing up" of the previous year and determination of Tariff for the ensuing year.

The Commission on 9th June, 2017 passed order for truing up of FY 2015-16, determination of final ARR for FY 2016-17, determination of ARR for the third Control Period i.e. FY 2016-17 to FY 2020-21 and determination of tariff for the FY 2017-18.

TPL has approached the Commission with the present Petition for "Truing up" of the FY 2020-21 and determination of Tariff for the FY 2022-23.

The Commission has undertaken the "Truing up" for FY 2020-21, based on the submissions of the Petitioner. The Commission has undertaken the computation of

gains and losses for FY 2020-21, based on the annual accounts and final ARR for FY 2020-21 approved vide MTR Order dated 24th April 2019 in Case No. 1763/2018.

While truing up of FY 2020-21, the Commission has been primarily guided by the following principles:

- Controllable parameters have been considered at the level approved under the MYT order, 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 the FY 2020-21 has been considered, based on the GERC (MYT) Regulations, 2016.

Determination of ARR and Tariff for FY 2022-23 has been considered as per the methodology and principles adopted in the GERC (Multi- Year Tariff) Regulations, 2016 and amendment thereof as the base. Truing up of FY 2022-23 shall be carried out based on the principles and methodology adopted in GERC (MYT) Regulations, 2016.

1.7 Contents of this Order

The Order is divided into six chapters as detailed under;

1. The first chapter provides a brief background regarding the Petitioner, the petition on hand and details of the public hearing process and approach adopted in this Order.
2. The second chapter outlines the summary of TPL'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 2020-21.
5. The fifth chapter deals with the determination of Tariff for FY 2022-23.

6. The sixth chapter deals with compliance of directives and issue of fresh directives.



Chapter 2: Summary of TPL-Generation’s Petition

2.1 Actual for FY 2020-21 submitted by TPL-G (APP)

2.1.1 TPL-G (APP) submitted the current petition seeking approval of True-Up for ARR of FY 2020-21. The details of expenses under various heads of ARR are given in Table below;

Table 2-1 Actual claimed by TPL (G) APP for FY 2020-21 (Rs. Crore)

Particulars	MTR Order	Actual
Variable Cost	817.70	422.97
O&M Expenses	189.94	126.42
Water Charges	13.70	12.66
Depreciation	51.03	48.39
Interest on Loan	-	1.07
Interest on Working Capital	13.27	12.35
Return on Equity	63.73	59.47
Income Tax	15.34	20.83
Incentive	-	-
Less: Non-Tariff Income	17.43	9.63
Net ARR	1,147.27	694.52

2.1.2 The trued-up ARR of TPL-G (APP) is shown in the table below;

Table 2-2 Trued-up ARR claimed by TPL (G) APP for FY 2020-21 (Rs. Crore)

Particulars	Unit	Claimed
ARR as per MTR	(a)	1,147.27
Gains/(Losses) due to Uncontrollable Factors	(b)	389.20
Gains/(Losses) due to Controllable Factors	(c)	63.56
Pass through as Tariff	d= -(c/3+b)	(410.39)
ARR True-Up	e= a + d	736.89

2.2 ARR for FY 2022-23

2.2.1 TPL-G (APP) has also furnished the ARR of FY 2022-23 as depicted in the table below;

Table 2-3 ARR of TPL (G) APP for FY 2022-23 (Rs. Crore)

Particulars	Submitted
-------------	-----------

Torrent Power Limited – Generation
Truing up for FY 2020-21 and Determination of Tariff for FY 2022-23

Variable Cost	1,086.31
O&M Expenses	163.60
Water Charges	26.61
Depreciation	50.74
Interest on Loan	-
Interest on Working Capital	15.14
Return on Equity	62.37
Income Tax	20.83
Incentive	-
Less: Non-Tariff Income	13.11
Net ARR	1,412.49

2.3 Prayers of TPL-G (APP)'s before the Commission

2.3.1 While filing the petition for Truing-Up of FY 2020-21 including ARR of FY 2022-23, TPL-G (APP) has submits following prayers before the Commission;

- a) Admit the petition for truing up of FY 2020-21, Aggregate Revenue Requirement for FY 2022-23, and determination of tariff for FY 2022-23.
- b) Approve the trued up ARR of FY 2020-21 including impact of change in law as set out in the petition.
- c) Approve the sharing of gains/ losses as proposed for FY 2020-21.
- d) Approve the Aggregate Revenue Requirement for FY 2022-23.
- e) Allow recovery of the costs as per the Judgments/ orders of the Hon'ble Tribunal/ Hon'ble Commission in the Appeals/ Review Petitions filed by the Petitioner.
- f) Allow additions/ alterations/ changes/ modifications to the petition at a future date.
- g) Permit the Petitioner to file all necessary pleadings and documents in the proceeding and documents from time to time for effective consideration of the proceeding.
- 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.

Chapter 3: Brief outline of Objections raised, Response from TPL-G and the Commission's View

In response to the public notice inviting objections / suggestions from stakeholders on the Petition filed by TPL-G for Truing up of FY 2020-21 and determination of ARR for FY 2022-23 under the GERC (MYT) Regulations, 2016, a number of Consumers/ organizations filed their objections / suggestions in writing. Some of these objectors participated in the public hearing also. The objections / suggestions by the consumer/consumers organizations, the response from the Petitioner and the views of the Commission are given below:

3.1 Incentive for Good Performance

3.1.1 The Objector has submitted that the incentive for good performance for Coal based generating stations shall be based on Plant Load Factor (PLF) and not on Plant Availability Factor (PAF).

Petitioner's Response: Plant Load Factor is beyond the control of the Petitioner as it depends on the demand of the consumers. Concept of incentive contemplates motivating/ encouraging one to stimulate greater output. Therefore, incentive should be linked with the performance parameters within the control of the Petitioner.

Commission's View: Regulation 60 of GERC (MYT) Regulations 2016 specifies that incentive for thermal generating station shall be payable corresponding to Normative Annual Plant Load Factor (NAPLF).

3.2 Breakup of Operation & Maintenance Expenses

3.2.1 The objection has sought breakup of O&M costs. Variation in employee expenses due to wage revision and gratuity shall be allowed after due diligence and validation.

Petitioner’s Response: Details of the O&M costs incurred during FY 2020-21 is furnished in the formats of the Petition. The wage settlement of unionized employees of Ahmedabad was concluded and its impact was considered accordingly in FY 2020-21. Impact of change in gratuity ceiling has also been factored in FY 2020-21. These developments have resulted in increase in the employee cost.

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 Formats of the petition which are also placed on GERC’s website. The Commission has considered the variation in O&M expenses after due diligence, prudence check and validation.

3.3 Blending ratio of Indigenous and Imported Coal

3.3.1 The objector has submitted that the usage of imported coal should be reduced and the blending ratio of 80:20 to be achieved.

Petitioner’s Response: The Fuel Supply Agreement with CIL fulfils only a part of the Petitioner’s coal requirement and for balance, it has to procure imported coal. To meet the technical requirements, it has to procure and use imported coal.

Commission’s View: 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 optimize the generation performance parameters and cost of generation without compromising the environmental norms.

3.4 Evaluation of CAPEX requirements to meet New Environmental Norms

3.4.1 The objector has submitted that the capex for meeting the new environmental standards for all generating plants of the State should be evaluated by the Commission and then only the same may be allowed to be incurred.

Petitioner’s Response: In order to comply with the revised norms of MoEF, all the generating stations are required to incur capex inter alia for Flue Gas Desulphurization (FGD) systems. Presently, TPL has not considered any capex towards modifications required for complying with the MoEF notification, in the present petition.

Commission’s View: The Commission has noted the suggestion made by the Objector and the response of the Petitioner. However, the Commission has already directed the Petitioner to put up a consolidated plan for CAPEX vis-à-vis cost benefit analysis so that needful action shall be carried out.

3.5 Audit of TPL-G from CAG or Independent agency

3.5.1 The objector has suggested to carry out the audit from CAG or independent agency for TPL-G (APP).

Petitioner’s Response: The Petitioner prepares and maintains the accounts as per the Accounting Standards issued by the Chartered Accountants of India and the same is duly verified by the Statutory Auditors of the Company.

Commission’s View: The Commission has noted the suggestion made by the Objector and the response of the Petitioner.

3.6 Gratuity under O&M Expenses

3.6.1 The objector has submitted that the gratuity amount should be approved after prudence check.

Petitioner’s Response: The Petitioner has submitted that the impact of gratuity arrives during FY 2020-21 due to increase in ceiling of gratuity to Rs. 20 Lakh from Rs. 10 Lakh as per amendment in Payment of Gratuity Act, 1972.

Commission’s View: Impact of gratuity is on account of change in law and the treatment of the same is being considered by the Commission as per the GERC (MYT) Tariff Regulations, 2016.

3.7 Lower Power Generation and higher production cost of TPL-G (APP)

3.7.1 The objector has submitted that during FY 2020-21, TPL-G (APP) generation has been reduced by 48% which leads to burden of higher fixed cost. Per unit cost of AMGEN is on higher side as compared to bilateral due to aging of plant therefore, the same needs to be disallowed. Also, non-operation of TPL-G (APP) will help in reducing the pollution of city.

Petitioner’s Response: The Petitioner has submitted that during FY 2020-21, there is a variation in generation due to lower offtake by TPL-D due to pandemic, which is beyond the control of TPL-G (APP). Due to variation in offtake, the auxiliary consumption resulting in higher side. Regarding per unit generation cost, fixed cost remains the same, however, due to lower offtake the per unit cost increases and therefore, overall cost of generation works out to higher.

Commission’s View: The Commission has noted the suggestion made by the Objector and the response of the Petitioner.

3.8 Replacing Sabarmati Generating Station with new technology

3.8.1 The objector has proposed to replace the Sabarmati generating station having higher cost with new technology.

Petitioner’s Response: The Petitioner submitted that TPL-G (APP) has achieving its performance parameters at par with other similarly situated plants. State is facing the issue of lower in-state generation. Due to this, the Petitioner is also facing difficulty in getting necessary NOC for availing open access from SLDC for bringing interstate supply of power. Therefore, operation of TPL-G (APP) becomes relevant and critical.

Commission’s View: The Commission has noted the suggestion made by the Objector and the response of the Petitioner.



Chapter 4: Truing-Up for FY 2020-21

4.1 Introduction

4.1.1 This chapter deals with the truing-up of FY 2020-21 for TPL-G Ahmedabad Power Plant (APP). The Commission has studied and analysed each component of the ARR for FY 2020-21 in the following paragraphs.

4.2 Generating Stations of TPL-G (APP)

4.2.1 TPL-G (APP) has existing coal based thermal power generating facilities with total installed capacity of 362 MW at Sabarmati, Ahmedabad that consist of 3 units viz. D-Station (120 MW), E-Station (121 MW) and F-Station (121 MW).

4.2.2 The details of the stations existing as on 1st April 2019 along with their capacities and dates of commission are given in the table below;

Table 4-1 Capacity, COD and age of TPL-G (APP) Stations as on 1st April 2020

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

4.3 Operational Performance Parameters

4.3.1 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.

4.3.2 TPL has submitted the actual operational performance on Plant Availability Factor (PAF), Plant Load Factor (PLF), Station Heat Rate (SHR), Auxiliary

Consumption and Specific Oil Consumption and coal transit loss for FY 2020-21 for individual stations. The Commission has taken up the truing up of the annual performance parameters for FY 2020-21, as discussed in the following sections.

4.4 Plant Availability Factor (PAF)

Petitioner’s Submission:

4.4.1 TPL-G (APP) has submitted that the actual plant availability factor for its three stations for FY 2020-21 has been computed considering planned shutdown and the forced outages of the units during the year. TPL-G (APP) submits that the reason for variation in actual and approved availability is due to lower planned maintenance days at D station and lower forced outage at F station during FY 2020-21. At E station, while the maintenance days were lower, the forced outages were higher primarily due to Major Overhauling of Boiler Secondary Air Preheater resulting in minor reduction in availability.

Table 4-2 Plant Availability Factor (PAF) of TPL-G (APP) in FY 2020-21

Station	MTR Order	Actual
D-Station	84.14%	85.27%
E-Station	93.49%	90.94%
F-Station	94.29%	95.05%

Commission’s Analysis:

4.4.2 As defined in Regulation 22.2 of the Gujarat Electricity Regulatory Commission (Multi-Year Tariff) Regulations, 2016, Plant Availability Factor is a controllable parameter, therefore, the Commission considers the Plant Availability Factor for various stations as approved in MTR Order dated 24th April, 2019.

4.4.3 However, for full recovery of annual fixed charges the Normative Plant Availability Factor shall be 85% as defined under Regulation 53.1 of the GERC (MYT) Regulations, 2016, and TPL-G (APP) has already furnished the SLDC certificate verifying the consolidated availability of 90.43% of all the Stations

which is higher than that of normative, therefore, Commission approves the eligibility of TPL-G (APP) for full recovery of annual fixed charges based on normative plant availability factor.

Table 4-3 PAF of TPL-G (APP) approved for FY 2020-21

Station	MTR Order	Actual	Approved
D-Station	84.14%	85.27%	84.14%
E-Station	93.49%	90.94%	93.49%
F-Station	94.29%	95.05%	94.29%

4.5 Plant Load Factor (PLF)

Petitioner's Submission:

4.5.1 TPL-G (APP) has submitted that the actual PLF for FY 2020-21 is on lower side as compared to approved in MTR Order due to variation in the offtake as the PLF is dependent on actual offtake which in turn depends upon the drawal by the consumers of the licensee which is beyond the control of the Petitioner.

4.5.2 The actual PLF as furnished by TPL is shown as below:

Table 4-4 Plant Load Factor of TPL-G (APP) for FY 2020-21

Station	MTR Order	Actual
D-Station	83.54%	30.90%
E-Station	92.90%	56.91%
F-Station	93.89%	44.88%

Commission's Analysis:

4.5.3 It is found in the analysis that actual plant load factor for all the thermal generating stations of TPL-G (APP) is low as compared to MTR Order because of partial load operation and backing down.

4.5.4 Therefore, the Commission considers the actual plant load factor for various stations for FY 2020-21 for truing-up purpose as it is an uncontrollable parameter.

Table 4-5 Plant Load Factor of TPL-G (APP) approved for FY 2020-21

Station	MTR Order	Actual	Approved
D-Station	83.54%	30.90%	30.90%
E-Station	92.90%	56.91%	56.91%
F-Station	93.89%	44.88%	44.88%

4.6 Auxiliary Consumption

Petitioner’s Submission:

4.6.1 TPL has submitted that due to variation in offtake, the actual auxiliary consumption is higher than the approved values in MTR Order as the plants had to be backdown.

4.6.2 TPL has submitted that it has made continuous efforts to maintain the auxiliary consumption at below approved levels. In turn, the actual auxiliary consumption was lower than the approved values on over all basis. TPL has also submitted that in the present petition for the purpose of quantification of gains/loss, the Petitioner has considered the variation in Auxiliary consumption as controllable parameter.

Table 4-6 Auxiliary consumption of TPL-G (APP) for FY 2020-21

Station	MTR Order	Actual
D-Station	9.00%	10.63%
E-Station	9.00%	9.51%
F-Station	9.00%	9.55%

Commission’s Analysis:

4.6.3 It is noted that for all the Stations of TPL-G (APP), the actual auxiliary consumption is higher than that approved in MTR Order.

4.6.4 As per GERC MYT Regulations, 2016, auxiliary consumption is a controllable parameter, therefore, the Commission approves the auxiliary consumption for

various stations, as approved in the MTR Order dated 24th April, 2019 for FY 2020-21 for truing up purpose.

Table 4-7 Auxiliary consumption of TPL-G (APP) approved for FY 2020-21

Station	MTR Order	Actual	Approved
D-Station	9.00%	10.63%	9.00%
E-Station	9.00%	9.51%	9.00%
F-Station	9.00%	9.55%	9.00%

4.7 Station Heat Rate (SHR)

Petitioner's Submission:

4.7.1 TPL-G (APP) has submitted that during FY 2020-21, SHR of E & F station was lower whereas for D station it was marginally higher. The variation in SHR is a controllable parameter within the operating range of PLF and the same should be considered for sharing of gains/losses.

Table 4-8 Station Heat Rate of TPL-G (APP) claimed for FY 2020-21 (Kcal/kWh)

Station	MTR Order	Actual
D-Station	2,450	2,454
E-Station	2,455	2,448
F-Station	2,455	2,427

Commission's Analysis:

4.7.2 The Commission notes that the SHR achieved for E and F Station of TPL (G) APP is below the approved levels and for D station it is almost at the same level approved in MTR Order. For the purpose of True-up for FY 2020-21, the Commission approves the SHR as approved in MTR Order as given in the Table below:

Table 4-9 Station Heat Rate of TPL-G (APP) approved for FY 2020-21 (Kcal/kWh)

Station	MTR Order	Actual	Approved
D-Station	2,450	2,454	2,450
E-Station	2,455	2,448	2,455
F-Station	2,455	2,427	2,455

4.8 Secondary Fuel Oil Consumption (SFC)

Petitioner’s Submission:

4.8.1 TPL-G (APP) has submitted that during FY 2020-21, stations E&F has achieved the lower SFC due to lower forced outages owing to continuous efforts and better preventive maintenance. While, in D station, SFC consumption was higher as compared to norms and as SFC is a controllable parameter it should be considered for sharing of gains/losses.

Table 4-10 SFC of TPL-G (APP) claimed for FY 2020-21 (ml/kWh)

Station	MTR Order	Actual
D-Station	1.00	2.07
E-Station	1.00	0.22
F-Station	1.00	0.60

Commission’s Analysis:

4.8.2 The actual Secondary Fuel Consumption (SFC) for station E& F is lower than the approved values, however, for station D, SFC is on higher side as compared to approved.

4.8.3 Since, the Secondary Fuel Consumption is a controllable parameter, thus, the Commission approves the SFC on normative basis as approved in MTR Order for Truing-Up of FY 2020-21.

Table 4-11 SFC of TPL – G (APP) approved for FY 2020-21

Station	MTR Order	Actual	Approved
D-Station	1.00	2.07	1.00
E-Station	1.00	0.22	1.00
F-Station	1.00	0.60	1.00

4.9 Transit Loss

Petitioner’s Submission:

4.9.1 TPL-G (APP) has submitted that it has achieved actual transit loss of 1.25% during FY 2020-21 against the targeted loss transit level of 0.80%, as there are various uncontrollable factors such as issue of accuracy of weighbridge at loading end, moisture loss, windage, and seepage losses due to which transit loss exists. Despite the above it has considered the transit loss as a controllable parameter in its calculation as per MYT Regulations.

Table 4-12 Transit Loss of TPL-G (APP) claimed for FY 2020-21

Stations	MTR Order	Actual
All Coal Based	0.80%	1.25%

Commission’s Analysis:

4.9.2 The Commission has considered the normative transit losses for truing up for FY 2020-21 as per the GERC (MYT) Regulations, 2016, as given in the Table below:

Table 4-13 Transit loss approved for FY 2020-21

Stations	MTR Order	Actual	Approved
All Coal Based	0.80%	1.25%	0.80%

4.10 Summary of Performance Parameters approved for FY 2020-21

4.10.1 Based on the analysis in the preceding paragraphs, the performance parameters approved for different power generation stations of TPL-G (APP) for FY 2020-21, for truing up purpose are listed in the Table below:

Table 4-14 Performance parameters of TPL-G stations approved for FY 2020-21

Station	PAF (%)	PLF (%)	Aux. Consumption (%)	Station Heat rate (Kcal/kWh)	SFC (gm/kWh)	Transit Loss (%)
D-Station	84.14%	30.90%	9.00%	2,450	1.00	0.80%
E-Station	93.49%	56.91%	9.00%	2,455	1.00	0.80%
F-Station	94.29%	44.88%	9.00%	2,455	1.00	0.80%

4.11 Gross and Net Generation

4.11.1 The gross and net generation of power in different stations, as per actuals submitted by TPL and as approved for truing up purpose for the FY 2020-21 are given in the Table below:

Table 4-15 Gross and Net Generation Approved for FY 2020-21

Particulars	MTR Order	Actual	Approved
D-Station			
Capacity (MW)	120.00	120.00	120.00
PLF (%)	83.54%	30.90%	30.90%
Gross Generation (MU)	878.16	324.84	324.84
Auxiliary Consumption (%)	9.00%	10.63%	9.00%
Auxiliary Consumption (MU)	79.03	34.53	29.24
Net Generation (MU)	799.12	290.31	295.60
E-Station			
Capacity (MW)	121.00	121.00	121.00
PLF (%)	92.90%	56.91%	56.91%
Gross Generation (MU)	984.73	603.28	603.28
Auxiliary Consumption (%)	88.63	9.51%	9.00%
Auxiliary Consumption (MU)	9.00%	57.35	54.29
Net Generation (MU)	896.11	545.92	548.98
F-Station			
Capacity (MW)	121.00	121.00	121.00
PLF (%)	93.89%	44.88%	44.88%
Gross Generation (MU)	995.14	475.68	475.68
Auxiliary Consumption (%)	9.00%	9.55%	9.00%
Auxiliary Consumption (MU)	89.56	45.43	42.81
Net Generation (MU)	905.58	430.25	432.87
TPL-G (APP)			
Gross Generation (MU)	2,858.03	1,403.79	1,403.79
Auxiliary Consumption (MU)	257.22	137.31	126.34
Net Generation (MU)	2,600.81	1,266.47	1,277.45

4.12 Cost Parameters

4.12.1 The cost parameters include GCV of fuel, mix of fuel and price of fuel. The Sabarmati 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 submitted

the details of actual Wt. Av. GCV of mix of coal and Wt. Av price of fuel for different stations, as discussed below for FY 2020-21.

4.13 Mix of Coal

Petitioner’s Submission:

4.13.1 TPL-G (APP) has furnished the details of actual percentages of the mix of indigenous and imported coal in its coal-based power stations during the FY 2020-21, as given in the Table below:

Table 4-16 The mix of different types of coal for FY 2020-21

Sr. No.	Stations	Indigenous Coal (%)	Imported Coal (%)
1	D Station	76.81%	23.19%
2	E Station	81.58%	18.42%
3	F Station	78.45%	21.55%

Commission’s Analysis:

4.13.2 The Commission, after due validation approve the percentage mix of coal as furnished by TPL- G (APP) for individual stations and considered the same for truing up purpose as these are uncontrollable items.

4.14 Wt. Av. Gross Calorific Value (GCV) of Fuel

Petitioner’s Submission:

4.14.1 TPL-G (APP) has furnished the actual Wt. Av. Gross Calorific Value of fuels for all the stations put together for FY 2020-21, as given in the Table below:

Table 4-17 Wt. Av. Gross Calorific value (GCV) of Different Fuels for Coal--based Stations for FY 2020-21

Particulars	Approved in MTR Order	Actuals for FY 2020-21
Indigenous Coal (kcal / kg)	4,402	4,254
Imported Coal (kcal / kg)	4,886	4,754
Secondary Fuel Oil (kcal / L)	9,837	10,079

Commission’s Analysis:

4.14.2 The Commission, after due validation approve the Wt. Av. Gross Calorific Value of fuels as furnished by TPL-G (APP) for all the station together and considered the same for truing up purpose as these are uncontrollable items.

4.15 Wt. Av. Prices of Fuel

Petitioner’s Submission:

4.15.1 TPL-G (APP) has furnished the actual Wt. Av. Price per unit of different fuels for all the stations put together for FY 2020-21, as given in the Table below:

Table 4-18 Wt. Av. Price / unit of fuels for FY 2020-21 (Actual)

Sr. No.	Station	Wt. Av. cost of Indigenous coal (Rs/MT)	Wt. Av. cost of Imported coal (Rs/MT)	Wt. Av. cost of Secondary Fuel Oil (Rs/Kl)
1	All the Coal stations	5,019	6,315	39,688

4.15.2 TPL-G (APP) has furnished the actual Wt. Av. cost / MT of different fuels for different stations for FY 2020-21, as given in the Table below:

Table 4-19 Av. Price / Unit of Fuels for FY 2020-21 (Actual) for Different Stations

Sr. No.	Station	Av. Price of Indigenous coal (Rs./MT)	Av. Price of Imported coal (Rs./MT)	Av. Price of Secondary oil (Rs./kL)
1	D Station	5,355	6,232	39,629
2	E Station	5,394	6,217	41,192
3	F Station	5,369	6,237	39,112

Commission’s Analysis:

4.15.3 It is noted that the percentage use of imported coal in FY 2020-21 in all stations is more than that in FY 2019-20 except in D station as shown below:

Sr. No	Station	% of Imported Coal	
		FY 2019-20	FY 2020-21
1	D Station	46.25%	23.19%
2	E Station	10.40%	18.42%
3	F Station	18.19%	21.55%

4.15.4 On a query from the Commission while approving truing-up of FY 2020-21, TPL has stated that the due to COVID-19 lockdown was imposed and hence AMGEN had to shut-down all units for two months, even after lifting lockdown in phased manner, there was low power demand in subsequent months. Based on original generation plan, AMGEN procured two shipments of imported coal. Due to drastic reduction in power demand on account of COVID-19, AMGEN had no option but to increase the imported coal consumption to the extent possible to avoid deterioration of imported coal quality.

4.15.5 Wt. Av. GCV of indigenous coal and imported coal for each station considered by TPL as per actuals are as given below:

Particulars	D Station	E Station	F Station
GCV of Coal (K.Cal/Kg)	4,378	4,344	4,358
GCV of Oil (K.Cal / L)	10,074	10,141	10,062

4.15.6 Price of indigenous coal, imported coal and oil for each station considered by TPL as per actuals given below:

Particulars	D Station	E Station	F Station
Indigenous Coal (Rs / MT)	5,355	5,394	5,369
Imported Coal (Rs / MT)	6,232	6,217	6,237
Oil (Rs / KL)	39,629	41,192	39,112

4.15.7 The Commission, after due validation, approves the Wt. Av. GCV of fuels, percentage mix of coal and prices of fuels (actual), as furnished by TPL-G (APP) for individual stations and considered for truing up purpose for FY 2020-21, as these are uncontrollable items.

4.16 Fuel Costs

4.16.1 Based on the performance and cost parameters, the normative fuel costs for each of the stations of TPL-G (APP) are as given below;

Table 4-20 Fuel Cost of TPL-G (APP) for truing up for FY 2020-21

Torrent Power Limited – Generation
Truing up for FY 2020-21 and Determination of Tariff for FY 2022-23

Station	As per Actual Submitted by TPL				As Approved by the Commission			
	Gross Gen. (MU)	Net Gen. (MU)	Fuel Cost (Rs. Crore)	Fuel Cost (Rs./kWh)	Gross Gen. (MU)	Net Gen. (MU)	Fuel Cost (Rs. Crore)	Fuel Cost (Rs./kWh)
	D-Station	325	290	100	3.46	325	296	97
E-Station	603	546	184	3.37	603	549	184	3.37
F-Station	476	430	139	3.22	476	433	139	3.24

Table 4-21 Total Fuel Cost approved for TPL-G (APP) for FY 2020-21 (Rs. Crore)

Particulars	As per Actual Claimed	Approved
Total Fuel Cost	422.97	420.71

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

4.17 Gains and Losses in fuel costs due to Controllable Factors

4.17.1 The Commission has compared the fuel expenses, so derived by TPL-G (APP) with the fuel expenses, 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 4-22 Approved Gains/(Losses) from Fuel Expenses (due to Controllable Factors) for FY 2020-21 (Rs. Crore)

Station	Fuel cost arrived at with approved parameters for actual net generation for FY 2020-21	Actual fuel cost at actual parameters for FY 2020-21	Gains / (Losses) due to controllable factors
D-Station	97.17	100.39	(3.22)
E-Station	184.16	184.06	0.10
F-Station	139.38	138.52	0.86

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.

4.18 Gains and Losses in fuel costs due to Uncontrollable Factors

4.18.1 The Commission has computed the fuel expenses, so derived by considering the fuel costs as approved in the MTR Order vis-à-vis the fuel costs as per

actuals, on the basis of the approved operational performance parameters such as station heat rate (SHR), auxiliary consumption, specific fuel oil 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, which is uncontrollable, as given in the Table below:

Table 4-23 Approved Gains/(Losses) from Fuel Expenses (due to Uncontrollable Factors) for FY 2020-21 (Rs. Crore)

Station	Fuel cost approved in MTR Order	Actual fuel cost with Approved parameters for FY 2020-21	Gains / (Losses) due to uncontrollable factors
D-Station	250.89	97.17	153.72
E-Station	281.91	184.16	97.75
F-Station	284.89	139.38	145.51

4.19 Operation & Maintenance (O&M) Expenses

Petitioner’s Submission:

4.19.1 TPL-G (APP) has submitted that the O&M expenses incurred during FY 2020-21 are lower than the approved in MTR Order and the variation is to be considered as controllable except due to changes in law and the factors beyond the control.

4.19.2 The Petitioner further submitted that the Government of India vide notification dated 29th March 2018 has increased the upper ceiling of gratuity to Rs.20 lakhs from Rs.10 lakhs resulting in increase in the employee cost. The said notification i.e., amendment in the Payment of Gratuity Act, 1972 is a change in law in terms of Regulations 2(15) of the MYT Regulations, 2016 and has resulted in the increase in Employee Cost by Rs. 2.29 Crore for FY 2020-21.

4.19.3 The Petitioner has submitted that despite such increase, has been able to reduce the overall O&M expenses vis-à-vis approved and requested the Commission to consider the O&M expenses as claimed in the table below.

Table 4-24 O&M Expenses claimed by of TPL-G (APP) for FY 2020-21 (Rs. Crore)

Particulars	Approved in MTR Order	Claimed by Petitioner
Operation & Maintenance Expenses	189.94	126.42

Commission’s Analysis:

4.19.4 Employee expenses as per annual accounts are Rs. 55.32 Crore net of expenses capitalized of Rs. 18.05 Crore. The Petitioner has added commission to non-executive directors of Rs. 0.45 Crore (from A&G expense head) and deducted expense towards Re-measurement of Defined Benefit Plans of Rs. 1.15 Crore as appearing in P & L Statement. Accordingly, the employee expenses are Rs. 54.62 Crore.

4.19.5 A&G expense as per annual accounts are Rs. 29.35 Crore net of expenses capitalized of Rs. 12.08 Crore. The Petitioner has claimed A&G expenses after reduction on account of Commission to Non-Executive Directors (Rs. 0.45 Crore), Water Charges (Rs. 12.66 Crore), Advertisement Expenses (Rs. 0.02 Crore), Expenses relating to retired stations (Rs. 0.02 Crore), Provision carried forward (Rs. 0.25 Crore) and addition of Lease payments (Rs. 0.90 Crore). Accordingly, the Commission approves the A&G expense of Rs. 17.30 Crore.

4.19.1 R&M expenses as per annual accounts are Rs. 54.51 Crore. The Petitioner has claimed R & M expense of Rs. 54.49 Crore net of Rs. 0.02 Crore against R & M expenses pertaining to retired assets. The Commission accordingly approves R & M expense of Rs. 54.49 Crore.

4.19.2 The Commission, accordingly, approves the O&M expenses of Rs. 126.41 Crore, for truing up of FY 2020-21.

4.19.3 It is noted that due to increase in ceiling of gratuity to Rs. 20 Lakh from Rs. 10 Lakh in line to amendment of Payment of Gratuity Act, 1972, there is an increase of Rs. 2.29 Crore in employee cost of TPL-G (APP). The Commission has duly verified the same from the auditor’s certificate furnished by the Petitioner and the same is considered as uncontrollable factor.

4.19.4 Further, as per Regulation 22 of the GERC (MYT) Regulations, 2016, the variation in O&M expenses is to be considered as controllable except the change in law and wage revision. Accordingly, as per the GERC (MYT) Regulations, 2016 Gain/(Losses) on account of O&M expenses in the truing up of FY 2020-21 is approved by the Commission as given in the Table below:

Table 4-25 O&M Expenses and Gains / (Losses) Approved for FY 2020-21 (Rs. Crore)

Particulars	Approved in MTR Order	Approved in Truing-Up	Deviation	Gains/(Losses) due to Controllable	Gains/(Losses) due to Uncontrollable
O&M Expenses	189.94	126.41	63.53	65.82	(2.29)

4.20 Water Charges

Petitioner’s Submission:

4.20.1 TPL-G (APP) has claimed Rs. 12.66 Crore towards actual water charges in the truing up for FY 2020-21, as against Rs. 13.70 Crore approved in the MTR Order. The existing Regulation provides that water charges are to be allowed as per actual. The details are given in the Table below:

Table 4-26 Water Charges Claimed by TPL-G (APP) for FY 2020-21 (Rs. Crore)

Particulars	Approved in MTR Order	Claimed by Petitioner
Water Charges	13.70	12.66

Commission’s Analysis:

4.20.2 Regulation 54(b) of the GERC MYT Regulations, 2016 specify the water charges shall be allowed separately as per actuals.

4.20.3 The Commission verified the water charges from the annual accounts and approves the water charges at Rs. 12.66 Crore for FY 2020-21. The deviation is considered as uncontrollable and the gains and losses are considered as detailed below;

Table 4-27 Gains / (Losses) Approved for FY 2020-21 (Rs. Crore)

Particulars	Approved in MTR Order	Approved in Truing-Up	Deviation	Gains/(Losses) due to Uncontrollable
Water Charges	13.70	12.66	1.04	1.04

4.21 Capital Expenditure, Capitalisation and Sources of Funding

Petitioner’s Submission:

4.21.1 TPL-G (APP) has claimed Rs. 17.25 Crore towards actual capital expenditure for FY 2020-21, as against Rs. 81.40 Crore approved in the MTR Order. The main reason for variation in actual vis-à-vis approved capital expenditure is on account of deferred capex planned under refurbishment of D,E & F stations, major expenditure of DCS upgradation at D stations has also been deferred. Summary of capital expenditure incurred during FY 2020-21 is tabulated as under;

Table 4-28 Capital Expenditure Claimed by TPL-G (APP) For FY 2020-21 (Rs. Crore)

Particulars	Approved in MTR Order	Claimed by Petitioner
Refurbishment of D, E & F Station	30.00	-
Boiler works	15.40	8.67
Turbine works	11.00	1.04
Electrical works	4.00	3.09
C&I works	16.00	1.73
CHP works	-	0.33
Civil works	5.00	0.73
Others	-	0.96
Miscellaneous	-	0.70
Total Cost	81.40	17.25

4.21.2 The petitioner has submitted the main reasons for variation in the capital expenditure against the approved items are described below:

- a) Refurbishment of D, E and F station boiler system – Since boiler components and pressure parts have been replaced under boiler works project in a phased manner, capex planned under refurbishment of D, E, & F station boiler system project has been deferred.
- b) Normal Capital Expenditure – TPL G (APP) incurred the expenditure of Rs. 16.55 Crore against approval of Rs. 51.40 Crore. The detail of actual expenditure is as under:
- Boiler Works – Expenditure incurred primarily towards refurbishment of boiler secondary air preheater in E station, overhauling of ESP in D & F station, pressure part replacement, replacement of mill components of E & F station and pumps.
 - Turbine Works – Main expenditure incurred is towards generator overhauling and lube oil filtration of turbine.
 - Electrical Works – Major expenditure incurred is towards upgradation of 415V MCC at D station, cable laying for D station and DM plant, installation, testing & commissioning of 220 V DC battery bank.
 - C&I Works – Major expenditure of DCS upgradation at D station has been deferred based on OEM. During FY 2020-21, major expenditure incurred is towards procurement of latest flue gas analysers and components of turbine supervisory system at D/E/F station.
 - CHP Works – Expenditure has been incurred towards gearbox procurement, conveyer frame procurement and mist cannon.
 - Civil Works – Expenditure has been incurred towards refurbishment works of switchyard gantry structure, road, plant area, and furniture.
 - Others – Expenditure incurred towards preventive measures for Covid-19 like sensors, dispensers, and taps. Additionally, need based capex is also incurred towards water cooling system, telemetry and HVAC system.
- c) Misc. Capital Expenditure – TPL G (APP) incurred an expenditure of Rs. 0.70 Crore towards Common server installation and IT.

4.21.3 TPL-G (APP) has claimed actual capitalisation of Rs. 18.23 Crore for FY 2020-21, as against Rs. 60.86 Crore approved in MTR Order as shown in table below;

Table 4-29 Capitalisation Claimed for FY 2020-21 (Rs. Crore)

Particulars	Approved in MTR Order	Claimed by Petitioner
Opening GFA	1,197.36	1,118.32
Addition to GFA	60.86	18.23
Deletion to GFA	-	3.15
Closing GFA	1,258.22	1,133.40

Commission’s Analysis:

- 4.21.4 The Petitioner has claimed capex of Rs. 17.25 Crore for FY 2020-21, as per the audited annual accounts the capex is worked out to Rs. 17.25 Crore.
- 4.21.5 The Petitioner has furnished the details of project-wise breakup of actual capitalization of Rs. 18.23 Crore with details of Opening CWIP as on 1st April, 2020, CAPEX during the year and Closing CWIP as on 31st March, 2021 in form 4.3 of the petition. The Petitioner has furnished the detailed project/scheme-wise explanation of the major capital expenditure incurred and capitalisation during FY 2020-21 as deliberated under Petitioner’s submission and not repeated here due to brevity.
- 4.21.6 The Petitioner has considered opening GFA for FY 2020-21 at Rs.1,118.32 crore based on the closing GFA approved in truing up for FY 2019-20, the same is being considered by the Commission.
- 4.21.7 TPL-G (APP) has de-capitalised assets to the extent of Rs. 3.15 Crore during FY 2020-21. However, it is observed that deductions from GFA is at Rs. 2.11 crore as per (Note 4.1) of the audited annual accounts for FY 2020-21. The Commission has addressed the petitioner to furnish the details for the discrepancy against which the Petitioner has reported that the fixed asset shown in the annual accounts is on Net Fixed Assets (NFA) basis as per Ind AS and the same is shown on Gross Fixed Assets (GFA) basis in the petition as per GERC MYT Regulations. Hence, the Commission considers de-capitalised assets at Rs. 3.15 Crore and accordingly adjustments made to GFA in truing up for FY 2020-21.

4.21.8 The Commission accordingly approves the opening GFA, addition to GFA during the year and closing GFA for FY 2020-21 as tabulated below;

Table 4-30 Approved Capitalisation for FY 2020-21 (Rs. Crore)

Particulars	Claimed by Petitioner	Approved by Commission
Opening GFA	1,118.32	1,118.32
Addition to GFA	18.23	18.23
Deletion to GFA	3.15	3.15
Closing GFA	1,133.40	1,133.40
Capitalisation	18.23	18.23
Normative Debt @70%	12.76	12.76
Normative Equity @30%	5.47	5.47

4.22 Depreciation

Petitioner’s Submission:

4.22.1 TPL-G (APP) has submitted that the depreciation rates, as per CERC (Terms and Conditions of Tariff) Regulations, 2004, are applied on the opening GFA of FY 2009-10 and for addition of assets from 1st April, 2009 onwards the depreciation has been computed at the rates specified in the GERC Regulations. TPL-G (APP) has claimed depreciation of Rs. 48.39 Crore for FY 2020-21, as against Rs. 51.03 Crore approved in the MTR Order, as detailed in table below;

Table 4-31 Depreciation claimed by TPL-G (APP) for FY 2020-21 (Rs. Crore)

Particulars	Approved in MTR Order	Claimed by Petitioner
Depreciation	51.03	48.39

Commission’s Analysis:

4.22.2 The Commission has verified the depreciation from the annual accounts for FY 2020-21 and observed that depreciation as per annual accounts is Rs. 49.12 Crore. However, the Petitioner has claimed depreciation of Rs. 48.39 Crore in truing up for FY 2020-21.

4.22.3 The Commission has addressed the Petitioner to furnish the details for the discrepancy against which the Petitioner has reported that depreciation has been claimed in accordance with the applicable regulations. The fixed assets schedule of annual accounts is on net fixed assets basis as per Ind. AS.

4.22.4 The Commission, accordingly, approves the depreciation of Rs. 48.39 Crore for FY 2020-21, the deviation in depreciation as compared to approved in MTR Order is considered as uncontrollable as the depreciation is dependent on capitalisation. The Commission, accordingly, approves the gains/(losses) on account of depreciation for FY 2020-21, as tabulated below;

Table 4-32 Depreciation and Gains/Losses approved for FY 2020-21 (Rs. Crore)

Particulars	Approved in MTR Order	Approved in Truing-Up	Deviation	Gains/(Losses) due to Uncontrollable
Depreciation	51.03	48.39	2.64	2.64

4.23 Interest Expenses

Petitioner’s Submission:

4.23.1 TPL-G (APP) has claimed a sum of Rs. 1.07 Crore towards actual interest and finance expenses for FY 2020-21 on normative basis as per GERC MYT Regulations, 2016. Petitioner further submits that the variation in interest expenses compared to approved is to be treated as uncontrollable as it depends on quantum of actual capitalization and variation in interest rates.

Table 4-33 Interest and finance charges claimed for FY 2020-21 (Rs. Crore)

Particulars	Approved in MTR Order	Claimed by Petitioner
Opening Balance	-	12.36
Less; reduction of normative loan due to retirement	-	0.33
Addition of Loan	42.60	12.76
Repayment during year	51.03	48.39
Closing Balance	(8.43)	-
Average Loan	(4.21)	6.18

Particulars	Approved in MTR Order	Claimed by Petitioner
Weighted average rate of interest (%)	8.55%	7.85%
Interest Expenses	-	0.48
Other Borrowing Costs	-	0.59

Commission’s Analysis:

- 4.23.2 The Commission has considered opening loan balance as on 01.04.2020 equal to the closing loan balance of Rs. 12.36 crore approved in truing up FY 2019-20. Addition to loan during the year is considered at 70% of net value of assets added during the year and repayment is considered equal to the depreciation for the year.
- 4.23.3 As per first proviso of Regulation 38.5 of the GERC (MYT) Regulations, 2016, the Commission has verified the weighted average rate of interest on basis of actual loan portfolio during the year.
- 4.23.4 Accordingly, based on the actual capitalization achieved by TPL-G (APP) during FY 2020-21 and the approved normative borrowings considering the interest rate of 7.85%, the Commission has computed the interest, as tabulated below;

Table 4-34 Interest Approved by the Commission for FY 2020-21 (Rs. Crore)

Particulars	Claimed by Petitioner	Approved in Truing-Up
Opening Balance	12.36	12.36
Less; reduction of normative loan due to retirement	0.33	0.33
Addition of Loan	12.76	12.76
Repayment during year	48.39	48.39
Closing Balance	-	-
Average Loan	6.18	6.18
Weighted average rate of interest (%)	7.85%	7.85%
Interest Expenses	0.48	0.48
Other Borrowing Costs	0.59	0.59

4.23.1 With regard to 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 capitalization, it cannot be attributed to the efficiency of the utility to allow 2/3rd of the gain to the utility. Similarly, if the loss is on account of more capital expenditure and capitalization due to bonafide reasons, the utility cannot be penalized by allowing only 1/3rd of the loss in the ARR.”

4.23.2 The Commission, in terms of regulations, has considered variation in capitalization as uncontrollable and accordingly dependent components of ARR of interest on loan, depreciation and Return on Equity are also considered as uncontrollable.”

4.23.3 The Commission, accordingly, approves the gains/losses on account of interest and finance charges as uncontrollable for FY 2020-21, as tabulated below;

Table 4-35 Gains / (Losses) Approved for FY 2020-21 (Rs. Crore)

Particulars	Approved in MTR Order	Approved in Truing-Up	Deviation	Gains/(Losses) due to Uncontrollable
Interest & Finance Charges	-	1.07	(1.07)	(1.07)

4.24 Interest on Working Capital

Petitioner’s Submission:

4.24.1 TPL-G (APP) has claimed Rs. 12.35 Crore towards interest on working capital for FY 2020-21, as against Rs. 13.27 Crore approved in MTR Order as tabled below;

Table 4-36 Interest on Working Capital Claimed for FY 2020-21 (Rs. Crore)

Particulars	Approved in MTR Order	Claimed By Petitioner
Cost of Coal for 1.5 Months	95.27	105.49
Secondary fuel oil for 2 months	1.50	1.80
O&M expenses for 1 month	15.83	10.53
Maintenance Spares @1% of GFA	11.97	11.18
Receivables for 1 month	-	-
Working Capital Requirement	124.57	129.01
Rate of Interest (%)	10.65%	9.57%
Interest on Working Capital	13.27	12.35

Commission’s Analysis:

4.24.2 The Commission has examined the computation of normative working capital and interest thereon under the GERC (MYT) Regulations, 2016. Regulation 40.1 of GERC (MYT) Regulations 2006 specify the norms for thermal generating stations for computation of working capital requirement and interest on working capital thereon. According to the regulations the working capital requirement comprises of 1 and ½ month of coal cost, 1 month cost of oil, 2 months’ secondary fuel oil cost, 1-month O&M expenses, maintenance spares at 1% of historical cost of GFA and receivables equivalent to 1 month. Regulations specify 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.* As such receivables equivalent to one month is not considered for working capital requirement.

4.24.3 With regard to rate of interest on working capital, the Commission vide notification No. 7 of 2016 dated 2nd December, 2016 has amended its Regulation 40.1 (d) of the GERC (MYT) Regulations, 2016 as given 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 1st 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.”

4.24.4 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 7.07% prevailing during the financial year 2020-21 plus 250 basis points. Accordingly, the rate of interest on working capital has been worked out to be 9.57%.

4.24.5 Based on the O&M expenses and other expenses now approved in the Truing up, the working capital and interest thereon calculated as detailed in the Table below:

Table 4-37 Interest on Working Capital approved for FY 2020-21 (Rs. Crore)

Particulars	Claimed By Petitioner	Approved for Truing-Up
Cost of Coal for 1.5 Months	105.49	105.49
Secondary fuel oil for 2 months	1.80	1.80
O&M expenses for 1 month	10.53	10.53
Maintenance Spares @1% of GFA	11.18	11.18
Receivables for 1 month	-	-
Working Capital Requirement	129.01	129.01
Rate of Interest (%)	9.57%	9.57%
Interest on Working Capital	12.35	12.35

4.24.6 As indicated above, the Commission has analysed various components controllable and uncontrollable to arrive at the approved figure of working capital, based on which, the interest on working capital has been computed.

After working out the interest on working capital, the Commission has treated the interest as an uncontrollable cost for purpose of estimating gains/(losses).

4.24.7 The Commission, accordingly, approves the gains/(losses) on account of interest on working capital for FY 2020-21 as tabulated below;

Table 4-38 Gains/(Losses) in IoWC approved for FY 2020-21 (Rs. Crore)

Particulars	Approved in MTR Order	Approved in Truing-Up	Deviation	Gains/(Losses) due to Uncontrollable
Interest on Working Capital	13.27	12.35	0.92	0.92

4.25 Return on Equity

Petitioner’s Submission:

4.25.1 TPL-G (APP) has claimed a sum of Rs. 59.47 Crore towards return on equity for FY 2020-21, as against Rs. 63.73 Crore approved in MTR Order, TPL-G (APP) further submits that closing balance of equity has been arrived at considering additional equity of 30% of the capitalisation during the year, as tabled below;

Table 4-39 Return on Equity claimed by the TPL -G (APP) for FY 2020-21 (Rs. Crore)

Particulars	Approved in MTR Order	Claimed By Petitioner
Opening Equity	446.09	422.49
Equity Addition	18.26	5.47
Reduction in equity on account of retirement	-	0.95
Closing Equity	464.35	427.01
<i>Return on Equity at beginning of year</i>	<i>62.45</i>	<i>59.15</i>
<i>Return on Equity addition during year</i>	<i>1.28</i>	<i>0.32</i>
Total Return on Equity	63.73	59.47

Commission’s Analysis:

4.25.2 The Commission has considered opening equity as on 01.04.2020 equal to closing equity of FY 2019-20 as approved in truing-up and the additional

equity is considered @30% of the value of net asset addition as approved above.

4.25.3 The Commission, accordingly, approves the return on equity for FY 2020-21 as detailed below;

Table 4-40 Return on Equity approved for FY 2020-21 (Rs. Crore)

Particulars	Claimed By Petitioner	Approved for Truing-Up
Opening Equity	422.49	422.49
Equity Addition	5.47	5.47
Reduction in equity on account of retirement	0.95	0.95
Closing Equity	427.01	427.01
Return on Equity at beginning of year	59.15	59.15
Return on Equity addition during year	0.32	0.32
Total Return on Equity	59.47	59.47

4.25.4 The Commission, accordingly, approves the gains/(losses) on account of return on equity for FY 2020-21 as tabulated below;

Table 4-41 RoE and Gains/(Losses) approved for FY 2020-21 (Rs. Crore)

Particulars	Approved in MTR Order	Approved in Truing-Up	Deviation	Gains/(Losses) due to Uncontrollable
Return on Equity	63.73	59.47	4.27	4.27

4.26 Income Tax

Petitioner's Submission:

4.26.1 TPL-G (APP) has submitted that it has claimed the income tax considering the total tax paid for TPL as a whole and the ratio of PBT of TPL-(G) (APP) and PBT of the company as a whole as per the annual accounts. TPL-G (APP) has claimed an amount of Rs. 20.83 Crore towards income tax for FY 2020-21, as against Rs. 15.34 Crore approved in MTR Order as detailed below;

Table 4-42 Income Tax Claimed for TPL-G (APP) for FY 2020-21 (Rs. Crore)

Particulars	Approved in MTR Order	Claimed By Petitioner
Income Tax	15.34	20.83

Commission’s Analysis:

4.26.2 The Commission had asked TPL to furnish the details of segregation of income tax paid by TPL in respect of TPL-G (APP) along with copies of challans of income tax paid. In its reply, TPL-G (APP) stated that being a single corporate entity, income tax is paid for the company as a whole and submitted copies of challans of income tax paid for the year. The Petitioner has computed the Income Tax by applying the ratio of PBT and after adjustment of tax credit.

4.26.3 The Commission has verified the PBT figures from the annual accounts for FY 2020-21. The Petitioner has shown a PBT of Rs. 119.23 Crore including Re-measurement of Defined Benefit Plans. The PBT as per standalone financial statement of TPL (including Re-measurement of Defined Benefit Plans) is Rs. 1588.42 Crore and the total tax paid by the Company as a whole is Rs. 287 Crore. It is observed that during FY 2020-21, the Petitioner has paid Minimum Alternate Tax (MAT) of 17.47%, though the effective tax rate works out to be 18.07%. Applying the MAT rate of 17.47% on the PBT of TPL-G (APP), the income tax for TPL- G (APP) works out to be Rs. 20.83 Crore.

4.26.4 The Commission, accordingly, approves the income tax at Rs. Rs. 20.83 Crore for truing-up of FY 2020-21. The Commission has treated the income tax as an uncontrollable expense and accordingly, approves the gains/(losses) on account of income tax for FY 2020-21 as tabulated below;

Table 4-43 Gains / (Losses) due to Income Tax Approved for FY 2020-21 (Rs. Crore)

Particulars	Approved in MTR Order	Approved in Truing-Up	Deviation	Gains/(Losses) due to Uncontrollable
Income Tax	15.34	20.83	(5.49)	(5.49)

4.27 Non-Tariff Income

Petitioner’s Submission:

4.27.1 TPL-G (APP) has submitted that the actual Non-Tariff Income is at Rs. 9.63 Crore for FY 2020-21, as against of Rs. 17.43 Crore as approved in MTR Order as shown table below;

Table 4-44 Non-Tariff Income claimed for FY 2020-21 (Rs. Crore)

Particulars	Approved in MTR Order	Claimed By Petitioner
Non-Tariff Income	17.43	9.63

Commission’s Analysis:

4.27.2 As per the annual accounts for FY 2020-21, the non-tariff income of TPL-G (APP) is Rs. 9.64 Crore. The Petitioner has excluded income from retired stations of Rs. 0.01 Crore.

4.27.3 The Commission, accordingly, approves the Non-Tariff Income at Rs. 9.63 Crore for FY 2020-21, the deviation of Rs. 7.80 Crore, which is loss and considered as uncontrollable factor. The Commission, accordingly, approved gains/(losses) on account of non-tariff income for FY 2020-21 as tabulated below;

Table 4-45 NTI and Gains/(losses) approved for FY 2020-21 (Rs. Crore)

Particulars	Approved in MTR Order	Approved in Truing-Up	Deviation	Gains/(Losses) due to Uncontrollable
Non-Tariff Income	17.43	9.63	7.80	7.80

4.28 Incentive

Petitioner’s Submission:

4.28.1 As per the GERC (MYT) Regulations, 2016, the incentive payable to a Thermal Generating Station shall be calculated in accordance with the Plant Load Factor

(PLF) achieved against the normative PLF of 85%. It is submitted that the PLF of Ahmedabad generating station is lower than 85% incentive is not claimed.

Commission’s Analysis:

4.28.2 The GERC MYT Regulations, 2016 provide for payment of incentive to a thermal generating station, the relevant clause is reproduced below:

“60. Incentive to a thermal generating station or unit thereof shall be payable at a flat rate of 50 paise/kWh for ex-bus scheduled energy corresponding to scheduled generation in excess of ex-bus energy corresponding to Normative Annual Plant Load Factor (NAPLF) as specified in Regulation 53.2.”

4.28.3 Since, the Petitioner has not achieved higher PLF than the normative PLF of 85% during FY 2020-21, the Commission has not considered incentive in truing-up for FY 2020-21.

4.29 Trued-UP ARR for FY 2020-21

4.29.1 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 2020-21. Accordingly, the Commission has computed the sharing of gains and losses for FY 2020-21, based on the truing up for each of the components discussed in the above paragraphs. The ARR approved in the MTR order, as claimed by TPL-G (APP) and as approved in truing up for FY 2020-21 along with sharing of gains/(losses) computed in accordance with the GERC (MYT) Regulations, 2016, is given in the Table below:

Table 4-46 ARR Approved in truing up for FY 2020-21 (Rs. Crore)

Particulars	Approved in MTR Order	Claimed By Petitioner	Approved in Truing-Up	Deviation	Gains/(Losses) due to Controllable	Gains/(Losses) due to Uncontrollable
Variable Cost	817.70	422.97	420.71	394.73	(2.25)	396.99
Water Charges	13.70	12.66	12.66	1.04	-	1.04

Torrent Power Limited – Generation
Truing up for FY 2020-21 and Determination of Tariff for FY 2022-23

Particulars	Approved in MTR Order	Claimed By Petitioner	Approved in Truing-Up	Deviation	Gains/(Losses) due to Controllable	Gains/(Losses) due to Uncontrollable
O&M Expenses	189.94	126.42	126.41	63.53	65.82	(2.29)
Depreciation	51.03	48.39	48.39	2.64	-	2.64
Interest & Finance Charges	-	1.07	1.07	(1.07)	-	(1.07)
Interest on Working Capital	13.27	12.35	12.35	0.92	-	0.92
Return on Equity	63.73	59.47	59.47	4.27	-	4.27
Income Tax	15.34	20.83	20.83	(5.49)	-	(5.49)
Incentive	-	-	-	-	-	-
Less: Non-Tariff Income	17.43	9.63	9.63	7.80	-	7.80
Net ARR	1,147.27	694.52	692.25	455.02	63.57	389.20

4.30 Sharing of Gains/Losses for FY 2020-21

4.30.1 The Commission has analysed the gains/(losses) on account of uncontrollable and controllable factors. The relevant regulations are extracted 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.”

Petitioner’s Submission:

4.30.2 The Petitioner has submitted that variation in variable cost is mainly on account of uncontrollable factors such as change in off-take, fuel price, mix and calorific value. It also includes the variation inefficiency parameters like secondary fuel consumption, auxiliary consumption, transit loss and station heat rate, which are controllable. The entire variation on account of efficiency parameters is attributed to the controllable factors for sharing of gains/losses as per the Regulations. The variation in fuel price, mix and calorific value along

with off-take are uncontrollable and accordingly, the variation in variable cost due to these factors has been treated as uncontrollable.

4.30.3 The Petitioner further submitted that the variation in O&M expenses should be considered as controllable except due to change in law and the factors beyond the control.

4.30.4 Variation in ROE, Interest expenses and depreciation on account of variation in capitalization and interest rates is to be treated as uncontrollable. Similarly, variation in income tax and non-tariff income is to be treated as uncontrollable.

4.30.5 Variation in the working capital requirement is mainly due to variation in the fuel cost, which is uncontrollable. Similarly, the variation in interest rate is also uncontrollable. Therefore, as per the MYT Regulations, 2016, the variation in interest on working capital is to be treated as uncontrollable.

4.30.6 The Petitioner further submits that any variation on account of uncontrollable factor is a part of the (gap)/ surplus identified for the year and is passed on to the consumer through adjustment in tariff as per the Regulation 23 of the MYT Regulations, 2016. In case of variation due to controllable factors, the gains and losses have to be dealt with as per Regulation 24. Based on the above, the sharing of gains/(losses) due to controllable factors as submitted by TPL-G (APP) is summarised below;

Table 4-47 Sharing of Gains/(Losses) claimed by TPL-G for FY 2020-21 (Rs. Crore)

Particulars	Pass through by Adjustment in Tariff	To be retained/ absorbed	Total
Controllable	21.94	43.87	65.81
Uncontrollable	(0.75)	(1.50)	(2.25)
Total	21.19	42.37	63.56

4.30.7 The following is the summary of ARR recoverable by TPL-G (APP) from TPL-D towards supply of electricity to TPL-D.

Table 4-48 Trued-up ARR claimed by TPL-G (APP) for FY 2020-21 (Rs. Crore)

Particulars	Formula	Rs. Crore
ARR as per MTR	(a)	1,147.27
Gains/(Losses) due to Uncontrollable Factors	(b)	389.20
Gains/(Losses) due to Controllable Factors	(c)	63.56
Pas through as Tariff	$d=-(c/3+b)$	(410.39)
ARR True-Up	$e= a + b$	736.89

Commission’s Analysis:

4.30.8 The Commission based on the detailed analysis in earlier paragraphs has considered the gains/(losses) due to variation in the costs approved in truing up vis-à-vis costs approved for FY 2020-21 in the MTR Order. The Commission, accordingly, considered the gains and adjusted against the ARR trued up for FY 2020-21 to arrive at the revenue (Gap)/Surplus to be carried forward into the ARR of FY 2022-23.

Table 4-49 Approved Trued up ARR incl. Gains/(Losses) for FY 2020-21 (Rs. Crore)

Particulars	Formula	Rs. Crore
ARR as per MTR	(a)	1,147.27
Gains/(Losses) due to Uncontrollable Factors	(b)	389.20
Gains/(Losses) due to Controllable Factors	(c)	63.57
Pas through as Tariff	$d=-(c/3+b)$	(410.39)
ARR True-Up	$e= a + b$	736.88

4.30.9 The Commission approves the total ARR of Rs. 736.88 Crore of TPL-G (APP) for FY 2020-21 and the same is considered for working out the Power Purchased from TPL-G (APP) for FY 2020-21 in the ARR of TPL Distribution.

Chapter 5: ARR and Tariff Determination for FY 2022-23

5.1 Introduction

5.1.1 The MYT Regulations, 2016 defines control period at Regulations 2 (17) by stipulating it to be from 1st April 2016 to 31st March 2021. The Regulation 1.2 of the MYT Regulations, 2016 provides that these Regulations shall remain in force till 31st March 2021, unless otherwise reviewed/extended. The Commission, vide its order dated 24th September 2021 has directed the utilities to file the petition for truing up of FY 2020-21, ARR of FY 2022-23, and determination of tariff of FY 2022-23 as per the provisions of the MYT Regulations, 2016. Accordingly, the Petitioner has arrived at the ARR for the FY 2022-23 by computing each of the components as per the Regulations and principles enunciated by the Commission in the MYT Regulations, 2016.

5.2 Operational Performance Parameters

5.2.1 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.

5.2.2 TPL has submitted the estimates of operational performance on Plant Availability Factor (PAF), Plant Load Factor (PLF), Station Heat Rate (SHR), Auxiliary Consumption and Specific Oil Consumption and coal transit loss for FY 2022-23 for individual stations. The Commission has taken up the estimates of the annual performance parameters for FY 2022-23, as discussed in the following sections.

5.3 Plant Availability Factor (PAF)

Petitioner's Submission:



5.3.1 TPL-G (APP) has submitted that the plant availability factor for its three stations for FY 2022-23 has been computed considering annual planned shutdown without factoring forced outages factor. Accordingly, the planned maintenance days for each unit which is scheduled normally during November to February due to lower demand, is have been tabulated below;

Table 5-1 Annual Planned Maintenance of TPL-G (APP) for FY 2022-23

Sr. No.	Station	No. of Days
1	D- Station	12
2	E- Station	18
3	F- Station	18

5.3.2 Based on the above, TPL-G (APP) has projected PAF as tabulated below, which maybe undergo change due to forced outages and other unforeseen circumstances.

Table 5-2 Projected Plant Availability Factor (PAF) for FY 2022-23

Sr. No.	Station	PAF
1	D- Station	94.29%
2	E- Station	92.69%
3	F- Station	91.89%

Commission’s Analysis:

5.3.3 The Commission has analysed the submission made by the petitioner keeping in view the vintage of the machines, past performance etc. The Commission approves the PAF of each station, as projected by TPL as given in the Table below:

Table 5-3 Approved Plant Availability Factor for TPL-G (APP) for FY 2022-23

Sr. No.	Station	Projected by Petitioner	Approved by Commission
1	D- Station	94.29%	94.29%
2	E- Station	92.69%	92.69%
3	F- Station	91.89%	91.89%

5.4 Plant Load Factor (PLF) & Incentive

Petitioner’s Submission:

5.4.1 TPL-G (APP) has submitted that the PLF is proposed considering the factors like, aging and minimum technical load etc. The same may undergo change depending upon the variation in demand. TPL-G (APP) has also submitted that it has not considered any incentive for FY 2022-23 in this petition, however, the same shall be claim during True-up exercise based on actuals in accordance with the applicable Regulations. The projected PLF is tabulated as under;

Table 5-4 Projected Plant Load Factor (PLF) for FY 2022-23

Sr. No.	Station	PLF
1	D- Station	89.10%
2	E- Station	88.40%
3	F- Station	88.51%

Commission’s Analysis:

5.4.2 The Commission has analysed the submission made by TPL about projecting the PLF considering the aging of the equipments and planned maintenance schedules. The Commission accordingly approved PLF for different stations as projected by TPL in the Table below:

Table 5-5 Approved Plant Load Factor for TPL-G (APP) for FY 2022-23

Sr. No.	Station	Projected by Petitioner	Approved by Commission
1	D- Station	89.10%	89.10%
2	E- Station	88.40%	88.40%
3	F- Station	88.51%	88.51%

5.4.3 It is to be noted that for the purpose of incentive calculation while carrying out truing-up, the 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 in the truing-up exercise.

5.5 Auxiliary Consumption

Petitioner's Submission:

5.5.1 TPL has projected the auxiliary consumption for all the stations for FY 2022-23 based on the principle and methodology enunciated in MYT Regulations, 2016 as given in table below;

Table 5-6 Projected Auxiliary Consumption for FY 2022-23

Sr. No.	Station	Auxiliary Consumption
1	D- Station	9.00%
2	E- Station	9.00%
3	F- Station	9.00%

Commission's Analysis:

5.5.2 The Commission has analysed the submission made by the petitioner on vintage of the machines, past performance etc. accordingly approves auxiliary consumption norms for different stations on the basis of the GERC (MYT) Regulations, 2016 as given in the Table below:

Table 5-7 Approved Auxiliary consumption for TPL-G (APP) for FY 2022-23

Sr. No.	Station	Projected by Petitioner	Approved by Commission
1	D- Station	9.00%	9.00%
2	E- Station	9.00%	9.00%
3	F- Station	9.00%	9.00%

5.5.3 The Commission may revise the norms for the auxiliary energy consumption for the above, mentioned generating stations in case of Renovation and Modernization of the generating stations as envisaged in Regulation 53.7 (b) of the GERC (MYT) Regulations, 2016.

5.6 Station Heat Rate (SHR)

Petitioner's Submission:

5.6.1 TPL has projected the SHF for all the stations for FY 2022-23 based on the principle and methodology enunciated in MYT Regulations, 2016 as given in table below;

Table 5-8 Projected Station Heat Rate (SHR) for FY 2022-23

Sr. No.	Station	SHR (Kcal/kWh)
1	D- Station	2,450
2	E- Station	2,455
3	F- Station	2,455

Commission’s Analysis:

5.6.2 The SHR proposed for all the Stations are in accordance as per Regulation 53.3(b) of GERC MYT Regulations, 2016, therefore, the Commission approves the same for FY 2022-23. However, the Commission may revise the norms for the SHR for the above, mentioned generating stations in case of Renovation and Modernization of the generating stations as envisaged in Regulation 53.3 (b) of the GERC (MYT) Regulations, 2016.

Table 5-9 Approved Station Heat Rate (SHR) for FY 2022-23

Sr. No.	Station	SHR (Kcal/kWh)
1	D- Station	2,450
2	E- Station	2,455
3	F- Station	2,455

5.7 Secondary Fuel Oil Consumption (SFC)

Petitioner’s Submission:

5.7.1 TPL-G (APP) has projected SFC at the levels specified by the Commission in the GERC MYT Regulations, 2016 as shown in the Table below for each station:

Table 5-10 Projected Secondary Fuel Oil Consumption for FY 2022-23

Sr. No.	Station	SFC (ml/kWh)
1	D- Station	1.00
2	E- Station	1.00
3	F- Station	1.00

Commission’s Analysis:

5.7.2 The SFC proposed for all the Stations are in accordance as per Regulation 53.5(C) of GERC MYT Regulations, 2016, therefore, the Commission approves the same for FY 2022-23. However, the Commission may revise the norms for the SFC for the above, mentioned generating stations in case of Renovation and Modernization of the generating stations as envisaged in Regulation 53.5 (C) of the GERC (MYT) Regulations, 2016.

Table 5-11 Approved Secondary Fuel Oil Consumption for FY 2022-23

Sr. No.	Station	SFC (ml/kWh)
1	D- Station	1.00
2	E- Station	1.00
3	F- Station	1.00

5.8 Transit Loss

Petitioner’s Submission:

5.8.1 TPL has projected transit loss of coal for FY 2022-23 based on the principle and the methodology enunciated in the MYT Regulation, 2016 as given in the Table below:

Table 5-12 Projected Transit loss of coal for FY 2022-23

Station	Transit Loss
All Stations	0.80%

Commission’s Analysis:

5.8.2 Presently TPL-G (APP) has proposed transit loss for all the stations at the levels approved by the Commission in the GERC MYT Regulations, 2016, accordingly, the Commission approves the same.

Table 5-13 Approved Transit loss of coal for FY 2022-23

Station	Transit Loss
All Stations	0.80%

5.9 Summary of Performance Parameters approved for FY 2022-23

5.9.1 Based on the decisions in the earlier paragraphs the performance parameters approved by the Commission for FY 2022-23 for different stations are summarized as tabulated below;

Table 5-14 Performance parameters of TPL-G stations approved for FY 2022-23

Station	PAF (%)	PLF (%)	Aux. Consumption (%)	Station Heat rate (Kcal/kWh)	SFC (gm/kWh)	Transit Loss (%)
D-Station	94.29%	89.10%	9.00%	2,450	1.00	0.80%
E-Station	92.69%	88.40%	9.00%	2,455	1.00	0.80%
F-Station	91.89%	88.51%	9.00%	2,455	1.00	0.80%

5.10 Gross and Net Generation

5.10.1 The gross and net generation for different power stations of TPL-G (APP) as projected and approved based on the permissible parameters as discussed in the earlier paragraphs are as given in Table below:

Table 5-15 Gross and Net Generation Approved for FY 2022-23

Particulars	Projected	Approved
D-Station		
Capacity (MW)	120.00	120.00
PLF (%)	89.10%	89.10%
Gross Generation (MU)	936.67	936.67
Auxiliary Consumption (%)	9.00%	9.00%
Auxiliary Consumption (MU)	84.30	84.30
Net Generation (MU)	852.37	852.37
E-Station		
Capacity (MW)	121.00	121.00
PLF (%)	88.40%	88.40%
Gross Generation (MU)	936.96	936.96
Auxiliary Consumption (%)	9.00%	9.00%
Auxiliary Consumption (MU)	84.33	84.33
Net Generation (MU)	852.63	852.63
F-Station		
Capacity (MW)	121.00	121.00
PLF (%)	88.51%	88.51%
Gross Generation (MU)	938.12	938.12
Auxiliary Consumption (%)	9.00%	9.00%

Particulars	Projected	Approved
Auxiliary Consumption (MU)	84.43	84.43
Net Generation (MU)	853.69	853.69
TPL-G (APP)		
Gross Generation (MU)	2,811.75	2,811.75
Auxiliary Consumption (MU)	253.06	253.06
Net Generation (MU)	2,558.69	2,558.69

5.11 Cost Parameters

Petitioner’s Submission:

5.11.1 The cost parameters include GCV of fuel, mix of fuel and price of fuel. The Sabarmati 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 submitted the details of Wt. Av. GCV of mix of coal and Wt. Av price of fuel for different stations, as discussed below for FY 2022-23.

5.11.2 TPL-G (APP) has submitted that the estimates of fuel cost is being computed by considering actual PLF, Station Heat Rate and cost of calorific value of fuel for FY 2022-23 and has furnished the details of percentages of the mix of indigenous and imported coal in its coal-based power stations, the actual Wt. Av. Gross Calorific Value of fuels, Wt. Av. Price per unit and Cost/MT of different fuels for all the stations for FY 2022-23.

5.11.3 The calorific value of primary & secondary fuel is shown in the table below for the approval of the Hon’ble Commission.

Table 5-16 Gross Calorific Value of Fuel for FY 2022-23

Particulars	Transit Loss
Indigenous Coal (Kcal/Kg)	4,200
Imported Coal (Kcal/Kg)	4,750
Secondary Fuel Oil (Kcal/L)	9,984

5.11.4 The price of primary and secondary fuel considered for FY 2022-23 is as under:

Table 5-17 Price of Fuel for FY 2022-23

Particulars	Transit Loss
Indigenous Coal (Rs./Tonne)	5,662.72
Imported Coal (Rs./Tonne)	9,998.50
Secondary Fuel Oil (Rs./K.Litre)	43,926.18

Commission's Analysis:

5.11.5 The Commission has analysed the submission of TPL in respect to Wt. Av. GCV of fuels, percentage mix of coal and price of fuels for individual stations and the Commission has computed Wt. GCV of coal by considering the GCV of fuels for each station for FY 2022-23. However, the Commission has considered actual fuel wise and station wise fuel purchase price of FY 2020-21 for the purpose of calculating fuel cost for FY 2022-23 as shown in table below;

Table 5-18 Cost Parameters approved of different Fuels for FY 2022-23

Particulars	Projected by Petitioner			Approved by Commission		
	D-Station	E-Station	F-Station	D-Station	E-Station	F-Station
Indigenous Coal (%)	75.40%	74.47%	75.16%	75.40%	74.47%	75.16%
Imported Coal (%)	24.60%	25.53%	24.84%	24.60%	25.53%	24.84%
Indigenous Coal (Rs/MT)	5,879	5,879	5,879	5,355	5,394	5,369
Imported Coal (Rs/MT)	9,800	9,800	9,800	6,232	6,217	6,237
Oil (Rs/KL)	43,926	43,926	43,926	39,629	41,192	39,112
GCV of Coal (K.Cal/Kg)	4,335	4,340	4,337	4,335	4,340	4,337
GCV of Coal (K.Cal/L)	9,984	9,984	9,984	9,984	9,984	9,984

5.12 Fuel Costs

5.12.1 Based on the performance and cost parameters, the normative fuel costs for each of the stations of TPL-G (APP) are as given below;

Table 5-19 Approved Fuel Cost of TPL-G (APP) for truing up for FY 2022-23

Station	As per Projected Submitted by TPL				As Approved by the Commission			
	Gross Gen.	Net Gen.	Fuel Cost	Fuel Cost	Gross Gen.	Net Gen.	Fuel Cost	Fuel Cost
	(MU)	(MU)	(Rs. Crore)	(Rs./kWh)	(MU)	(MU)	(Rs. Crore)	(Rs./kWh)
D-Station	937	852	361	4.23	937	852	293	3.44
E-Station	937	853	363	4.26	937	853	295	3.46
F-Station	938	854	362	4.25	938	854	295	3.45

Note:* Detailed computation of the fuel cost for each of the stations, with approved parameters for actual net generation, has been given in Annexure-2.

5.12.2 Any difference in fuel cost during the financial year due to variation in cost parameters is to be passed on to the consumers as per approved FPPPA formula as per GERC MYT Regulations, 2016.

Table 5-20 Total Fuel Cost approved for TPL-G (APP) for FY 2022-23 (Rs. Crore)

Particulars	As per Claimed	Approved
Total Fuel Cost	1,086.31	883.21

5.13 Operation & Maintenance (O&M) Expenses

Petitioner's Submission:

5.13.1 TPL-G (APP) has submitted it has projected O&M expenses for FY 2022-23 as per the stipulated trajectory of O&M expenses in GERC MYT Regulations, 2016 by considering approved O&M expenses of last 3 years (i.e., FY 2018-19 to FY 2020-21) with FY 2019-20 as base year and escalating by 5.72% per annum.

5.13.2 Further, Petitioner has submitted that the variation in O&M expenses does not consider the uncontrollable expenses such as the wage revision, change in law, change in levies/duties/taxes and charges, etc. and requested these components of uncontrollable factors and any such expenses on account of these factors are to be allowed over and above the normal allowable components.

Table 5-21 O&M Expenses claimed by of TPL-G (APP) for FY 2022-23 (Rs. Crore)

Particulars	Projected by Petitioner
Operation & Maintenance Expenses	163.60

Commission's Analysis:

5.13.3 As per GERC MYT Regulations, 2016 for projecting O&M expenses for FY 2022-23, the Commission has considered the actual O & M Expenses for FY 2018-19 to FY 2020-21. The average of these three years expenses considered to be O&M Expenses of FY 2019-20. The O&M Expenses arrived for FY 2019-20 are

escalated @ 5.72% year-on-year to arrive at O&M Expenses for FY 2022-23 at Rs. 163.60 Crore.

5.13.4 The Commission, accordingly, approves the O&M expenses for FY 2022-23 as given hereunder;

Table 5-22 O&M Expenses approved by the Commission for FY 2022-23 (Rs. Crore)

Particulars	Claimed in Petition	Approved by Commission
Operation & Maintenance Expenses	163.60	163.60

5.14 Water Charges

Petitioner's Submission:

5.14.1 TPL-G (APP) has projected Rs. 26.61 Crore towards water charges for FY 2022-23.

Commission's Analysis:

5.14.2 The Commission provisionally considers the water charges at Rs. 12.66 Crore for FY 2022-23 based on the actual expenses allowed in FY 2020-21 in terms of Regulation 54(b) of GERC MYT Regulations, 2016.

Table 5-23 Water Charges Approved for FY 2022-23 (Rs. Crore)

Particulars	Projected by Petitioner	Approved by Commission
Water Charges	26.61	12.66

5.15 Capital Expenditure, Capitalisation and Sources of Funding

Petitioner's Submission:

5.15.1 TPL-G (APP) submitted that to ensure smooth and consistent operations with higher level of efficiency periodical capex is needed on account of upgradation and modernisation of the plants. Petitioner has projected capital expenditure of Rs. 40.76 Crore for FY 2022-23, as per the details given in table below;

Table 5-24 CAPEX Projected by TPL-G (APP) For FY 2022-23 (Rs. Crore)

Particulars	Claimed by Petitioner
Boiler works	6.99
Turbine works	17.50
Electrical works	3.89
C&I works	8.20
Civil works	1.44
Others	0.65
Miscellaneous	2.09
Total Cost	40.76

5.15.2 The Petitioner has furnished the details of major capital expenditure as given below;

Boiler Works: Capex planned for FY 2022-23 towards (i) Replacement of RC variator, Mill components etc. in all Station, (ii) Replacement in strategic areas of Boiler comprising of the Water wall, Steam cooled wall & LTSH, tube nest in TG side etc. along with auxiliaries, (iii) ESP overhauling of F unit, (iv) ESP hopper replacement in E and F unit and (v) Pressure Part Replacement for all station.

Turbine Works: Capex planned for FY 2022-23 towards Turbine overhauling of all station as per the OEM guidelines and Refurbishment / replacement of BFP, CEP, CW pumps and related system components.

Electrical Works: Capex planned for FY 2022-23 towards Replacement of DC-1B HT Board, Replacement of existing lighting system and energy efficient lights for safety and energy efficiency.

Control & Instrumentation Works: Capex planned for FY 2022-23 towards upgradation of DCS HMI, HMI of ash handling system PLC and Turbo supervisory system with latest operating system. Expenditure is also planned towards procurement of stack emission monitoring/Control analyzers to ensure availability and reliability of measurements.

Miscellaneous: Capex planned towards office equipment Barcoding and RFID tags for material tracking and PIV for stores.

5.15.3 TPL-G (APP) further submitted that 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 these revised norms, all the existing generating stations are required to incur capex for providing FGD and TPL-G (APP) was also directed to install FGD. However, representations are being made before the MoEF to grant relief in this regard. Hence, the Petitioner has not considered any capex towards compliance with the MoEF notification in the present petition and shall approach the Commission at appropriate stage.

5.15.4 The Petitioner has projected Rs. 41.88 Crore towards capitalisation for FY 2022-23 and furnished the project/work-wise details of capitalisation in form 4.3 to the petition.

Commission’s Analysis:

5.15.5 The Petitioner has projected capex of Rs. 40.76 Crore for FY 2022-23 as detailed in Table 5.24 above along with justification for the capex projected for FY 2022-23.

5.15.6 The Commission opines that in order to operate the generating plants efficiently to meet the normative operational parameters and to ensure smooth and consistent operations with higher level of efficiency. The Capex planned by the Petitioner is needed and accordingly provisionally approves the Capex of Rs. 40.76 Crore for FY 2022-23 as projected by the Petitioner (Table 5.24 above).

5.15.7 The Commission observed that during previous four years i.e., FY 2017-18 to FY 2020-21, the Petitioner has capitalised close to 73.44% amount to capital expenditure approved for the respective financial years. Thus, for FY 2022-23, the Commission accordingly approves the capitalisation of Rs. 29.94 Crore.

5.15.8 The Commission has approved closing GFA of Rs. 1,133.40 Crore in true-up of FY 2020-21 and the same is considered as opening GFA for FY 2021-22, further, the Commission has considered capitalisation of Rs. 21.39 Crore as approved in Tariff Order for FY 2021-22 and arrived at closing GFA for FY 2021-22 at Rs. 1,154.71 Crore and the same is considered as opening GFA for FY 2022-23.

5.15.9 The Commission, as deliberated above has considered the opening GFA, additions during the year and closing GFA for FY 2022-23 as given in table below;

Table 5-25 Gross Fixed Assets approved for FY 2022-23 (Rs. Crore)

Sr. No.	Particulars	Claimed by Petitioner	Approved by Commission
1	Opening GFA	1,174.07	1,154.71
2	Assets additions during year	41.88	29.94
3	Closing GFA	1,215.95	1,184.65

5.15.10 The Commission in terms of GERC MYT Regulations, 2016 has approved the funding of capitalisation for normative debt-equity as tabulated under;

Table 5-26 Approved Capitalisation for FY 2022-23 (Rs. Crore)

Particulars	Claimed by Petitioner	Approved by Commission
Opening GFA	1,174.07	1,154.71
Addition to GFA	41.88	29.94
Closing GFA	1,215.95	1,184.65
Capitalisation	41.88	29.94
Normative Debt @70%	29.32	20.95
Normative Equity @30%	12.56	8.98

5.16 Depreciation

Petitioner's Submission:

5.16.1 The Petitioner has projected Rs. 50.74 Crore towards depreciation for FY 2022-23.

Commission’s Analysis:

5.16.2 The Commission has approved closing GFA of Rs. 1,133.40 Crore in true-up of FY 2020-21 and the same is considered as opening GFA for FY 2021-22, further, the Commission has considered capitalisation of Rs. 21.39 Crore as approved in Tariff Order for FY 2021-22 and arrived at closing GFA for FY 2021-22 at Rs. 1,154.71 Crore and the addition of GFA for FY 2022-23 is considered based on the capitalisation approved for FY 2022-23.

5.16.3 The rate of depreciation on assets is considered as actual rates for FY 2020-21 and accordingly computed the depreciation for FY 2022-23 as tabulated below;

Table 5-27 Depreciation approved for FY 2022-23 (Rs. Crore)

Particulars	Claimed by Petitioner	Approved by Commission
Opening value of depreciable GFA	1,174.07	1,154.71
Addition during year	41.88	29.94
Closing GFA	1,215.95	1,184.65
Average depreciable assets	1,195.01	1,169.68
Depreciation allowed in ARR	50.74	50.35

5.17 Interest Expenses

Petitioner’s Submission:

5.17.1 TPL-G (APP) has claimed NIL interest on loans for FY 2022-23 on normative basis as per GERC MYT Regulations, 2016.

Table 5-28 Interest on loans projected by TPL-G (APP) for FY 2022-23 (Rs. Crore)

Particulars	Claimed By Petitioner
Opening Balance of Loans	-
Loan addition during the year	29.32
Deletion	-
Repayments during the year	50.74
Closing Balance of Loans	-
Average Loans	-

Particulars	Claimed By Petitioner
Rate of Interest (%)	7.85%
Interest Expense	-

Commission’s Analysis:

5.17.2 The Commission has approved the normative closing loan balance as NIL in truing-up for FY 2020-21. Addition to loan during FY 2022-23 is considered at 70% of net value of assets added during the year and repayment is considered equal to the depreciation for the year. The Commission, accordingly, approves NIL interest on loan for FY 2022-23.

Table 5-29 Interest on loans approved for FY 2022-23 (Rs. Crore)

Particulars	Claimed By Petitioner	Approved by Commission
Opening Balance of Loans	-	-
Loan addition during the year	29.32	20.95
Deletion	-	-
Repayments during the year	50.74	50.35
Closing Balance of Loans	-	-
Average Loans	-	-
Rate of Interest (%)	7.85%	7.85%
Interest Expense	-	-

5.18 Interest on Working Capital

Petitioner’s Submission:

5.18.1 The Petitioner has submitted that interest on working capital is computed as per the MYT Regulations, 2016 and the interest rate of 9.57%, being the SBI MCLR rate on 1st April 2021 plus 250 basis points, is applied on the working capital requirement arrived at in accordance with the Regulations. The Petitioner has computed the working capital requirement and interest thereon as shown in table below;

Table 5-30 Interest on Working Capital Claimed for FY 2022-23 (Rs. Crore)

Particulars	Claimed By Petitioner
Cost of Coal for 1.5 Months	130.85
Secondary fuel oil for 2 months	1.97
O&M expenses for 1 month	13.63
Maintenance Spares @1% of GFA	11.74
Receivables for 1 month	-
Working Capital Requirement	158.20
Rate of Interest (%)	9.57%
Interest on Working Capital	15.14

Commission’s Analysis:

5.18.2 Regulation 40.1 of GERC (MYT) Regulations 2006 specify the norms for thermal generating stations for computation of working capital requirement and interest on working capital thereon. According to the regulations the working capital requirement comprises of 1 and ½ month of coal cost, 1 month cost of oil, 2 months’ secondary fuel oil cost, 1-month O&M expenses, maintenance spares at 1% of historical cost of GFA and receivables equivalent to 1 month. Regulations specify 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.* As such receivables equivalent to one month is not considered for working capital requirement.

5.18.3 In line with proviso to Regulation 40.1 (d) of GERC MYT Regulations, 2016, the Commission has considered rate of interest at 9.50% being the 1-year SBI MCLR as on 1st April 2021 (7.00%) including 250 basis points.

5.18.4 The working capital and interest thereon calculated for FY 2022-23 is tabulated as under:

Table 5-31 Interest on Working Capital approved for FY 2022-23 (Rs. Crore)

Particulars	Claimed By Petitioner	Approved by Commission
Cost of Coal for 1.5 Months	130.85	106.65

Particulars	Claimed By Petitioner	Approved by Commission
Secondary fuel oil for 2 months	1.97	1.80
O&M expenses for 1 month	13.63	13.63
Maintenance Spares @1% of GFA	11.74	11.55
Receivables for 1 month	-	-
Working Capital Requirement	158.20	133.62
Rate of Interest (%)	9.57%	9.50%
Interest on Working Capital	15.14	12.69

5.19 Return on Equity

Petitioner's Submission:

5.19.1 TPL-G (APP) has projected Rs. 62.37 Crore towards return on equity @14% for FY 2022-23.

Table 5-32 Return on Equity projected by TPL-G (APP) for FY 2022-23 (Rs. Crore)

Particulars	Claimed By Petitioner
Opening Equity	439.22
Equity Addition	12.56
Closing Equity	451.78
<i>Return on Equity at beginning of year</i>	<i>61.49</i>
<i>Return on Equity addition during year</i>	<i>0.88</i>
Total Return on Equity	62.37

Commission's Analysis:

5.19.2 The Petitioner has adopted incorrect opening equity of Rs. 439.22 Crore for FY 2022-23 instead of Rs. 433.41 Crore (closing equity for FY 2020-21 Rs. 427.01 Crore + equity addition during FY 2021-22 Rs. 6.39 Crore being the 30% of capitalisation of Rs. 21.39 Crore as per Tariff Order dated 31.03.2021). The Commission has approved the closing equity at Rs. 427.01 Crore in truing-up of FY 2020-21 and the same is considered as opening equity for FY 2021-22. The addition to equity is further updated based on capitalisation approved for FY 2021-22 in Tariff Order dated 31.03.2021 and capitalisation approved for FY 2022-23.

5.19.3 The Commission, accordingly, computed the return on equity for FY 2022-23 as detailed below;

Table 5-33 Return on Equity approved for FY 2022-23 (Rs. Crore)

Particulars	Claimed By Petitioner	Approved by Commission
Opening Equity	439.22	433.41
Equity Addition	12.56	8.98
Closing Equity	451.78	442.39
<i>Return on Equity at beginning of year</i>	<i>61.49</i>	<i>60.68</i>
<i>Return on Equity addition during year</i>	<i>0.88</i>	<i>0.63</i>
Total Return on Equity	62.37	61.31

5.20 Income Tax

Petitioner's Submission:

5.20.1 TPL-G (APP) has projected the income tax at Rs. 20.83 Crore based on the actual tax paid for FY 2020-21 and in proportion to the PBT of TPL-G (APP).

Commission's Analysis:

5.20.2 The Commission has approved Rs. 20.83 Crore towards income tax in true-up of FY 2020-21 and accordingly has provisionally considered Rs. 20.83 Crore towards income tax for FY 2022-23 in terms of Regulation 41.1 subject to true up based on the actual tax paid for the relevant financial year as specified in Regulation 41.2 of GERC MYT Regulations, 2016.

5.21 Non-Tariff Income

Petitioner's Submission:

5.21.1 TPL-G (APP) has projected Non-Tariff Income at Rs. 13.11 Crore for FY 2022-23 considering the current trend.

Commission's Analysis:

5.21.2 Accordingly, the Commission has considered the projections of the Petitioner towards non-tariff income to the tune of Rs. 13.11 Crore.

5.22 Aggregate Revenue Requirement (ARR) for FY 2022-23

Petitioner’s Submission:

5.22.1 TPL-G (APP) has projected net ARR for FY 2022-23 as shown in table below:

Table 5-34 ARR of TPL-G (APP) for FY 2022-23 (Rs. Crore)

Particulars	Claimed By Petitioner
Variable Cost	1,086.31
Water Charges	26.61
O&M Expenses	163.60
Depreciation	50.74
Interest & Finance Charges	-
Interest on Working Capital	15.14
Return on Equity	62.37
Income Tax	20.83
Less: Non-Tariff Income	13.11
Net ARR	1,412.49

Commission’s Analysis:

5.22.2 The Commission based on the costs/expenses approved in the preceding paragraphs has computed the ARR give in table below;

Table 5-35 ARR Approved for FY 2022-23 (Rs. Crore)

Particulars	Claimed By Petitioner	Approved in Truing-Up
Variable Cost	1,086.31	883.21
Water Charges	26.61	12.66
O&M Expenses	163.60	163.60
Depreciation	50.74	50.35
Interest & Finance Charges	-	-
Interest on Working Capital	15.14	12.69
Return on Equity	62.37	61.31
Income Tax	20.83	20.83
Less: Non-Tariff Income	13.11	13.11

Particulars	Claimed By Petitioner	Approved in Truing-Up
Net ARR	1,412.49	1,191.54
Total Fixed Charges	326.18	308.33
Total variable Charges	1,086.31	883.21

5.23 Determination of Fixed Charges for FY 2022-23

5.23.1 The Commission has approved total fixed charges at Rs. 308.33 Crore for FY 2022-23.

5.24 Determination of Variable Charges for FY 2022-23

5.24.1 The table given below gives the station wise energy charges for FY 2022-23.

Table 5-36 Approved variable charges for TPL-G (APP) FY 2022-23

Particulars	Fuel cost approved for FY 2022-23 (Rs. Crore)	Fuel cost per unit Gross (Rs./kWh)	Fuel cost per unit Net (Rs./kWh)
D Station	293.05	3.13	3.44
E Station	295.40	3.15	3.46
F Station	294.76	3.14	3.45
Total	883.31	3.14	3.45

Chapter 6: Compliance of Directives

6.1 Earlier Directives

Directive No. 1 Implementation plan for Environment norms of MoEF

The Commission has directed the Petitioner to submit Implementation plan for meeting the new environment norms of MoEF:

Petitioner's Compliance:

TPL-G (APP) has submitted that due to small size of projects and Covid-19 situation prevailing during the year, no response has been received from the vendors and the Petitioner shall approach Hon'ble Commission in due course.

Commission's Comment:

The Commission has noted the submission of the Petitioner.

Directive No. 2 Plan for phasing out Generation Units

The Commission has directed the Petitioner to submit final plan for phasing out, if any, for its generating units and explore cost effective option for replacing such capacity:

Petitioner's Compliance:

TPL-G (APP) has submitted that there has been transmission constraint to source power from outside. However, TPL-G (APP) will review the situation and keep the Hon'ble Commission updated on the same.

Commission's Comment:

The Commission has noted the submission of the Petitioner and directs TPL to submit the final plan at the earliest.

Directive No. 3 Submission of Final Proposal with respect to Capex requirement for meeting Environment norms;

The Commission has directed the Petitioner to submit a consolidated plan for Capex for FGD for TPL-G (APP) along with cost benefit analysis with respect to consumers:

Petitioner’s Compliance:

TPL-G (APP) has submitted that due to small size of projects and Covid-19 situation prevailing during the year, no response has been received from the vendors and the Petitioner shall approach Hon’ble Commission in due course.

Commission’s Comment:

The Commission has noted the submission and directs the Petitioner to submit the plan at the earliest.

COMMISSION'S ORDER

The Commission approves the Aggregate Revenue Requirement for TPL-G (APP) for FY 2022-23, as shown in the Table below:

Approved ARR for TPL-G (APP) for FY 2022-23 (Rs. Crore)

Particulars	FY 2022-23
Variable Cost	883.21
Water Charges	12.66
O&M Expenses	163.60
Depreciation	50.35
Interest & Finance Charges	-
Interest on Working Capital	12.69
Return on Equity	61.31
Income Tax	20.83
Less: Non-Tariff Income	13.11
Net ARR	1,191.54

This order shall come into force with effect from 1st April 2022.

Sd/-
S. R. Pandey
Member

Sd/-
Mehul M. Gandhi
Member

Sd/-
ANIL MUKIM
Chairman

Place: Gandhinagar

Date: 31.03.2022



Torrent Power Limited – Generation
Truing up for FY 2020-21 and Determination of Tariff for FY 2022-23

Annexure 1 Approved Fuel Costs for FY 2020-21 for True up D,E & F – Station

Item	Derivation	Unit	D-Station	E-Station	F-Station
Total Capacity	A1	MW	120.00	121.00	121.00
Actual PLF	A2	%	30.90%	56.91%	44.88%
Gross Generation	A	MUs	325	603	476
Auxiliary Consumption	C	%	9.00%	9.00%	9.00%
Auxiliary Consumption	B	MUs	29	54.29	42.81
Net Generation	Y=A - B	MUs	296	549	433
Station Heat Rate	D	KCal/KWH.	2,450	2,455	2,455
Sp. Oil Consumption	E	ml/kWh	1	1	1
Gross Calorific Value of Coal	F	kcal/kg	4,378	4,344	4,358
Calorific value of Oil	G	kcal/l	10,074	10,141	10,062
Overall Heat	H=A x D	G Cal	795,852	1,481,041	1,167,785
Heat from Oil	I=(A x E x G)/1000	G Cal	3,272	6,118	4,786
Heat from Coal	J=H-I	G Cal	792,580	1,474,924	1,162,999
Transisit losses	K	%	0.80%	0.80%	0.80%
Coal Blend					
A) Indigenous Coal	X1	%	77%	82%	78%
C) Imported Coal	X3	%	23%	18%	22%
Actual Oil Consumption	L=A x E	MT	325	603	476
Actual Coal Consumption	M=(J X 1000)/F	MT	181,019	339,554	266,847
A) Indigenous Coal	Q1=M* x X1/(1-K)	MT	140,158	279,228	211,032
C) Imported Coal	Q3=M* X X3	MT	41,982	62,559	57,503
Price of Coal					
A) Indigenous Coal	P1	Rs/MT	5,355	5,394	5,369
C) Imported Coal	P3	Rs/MT	6,232	6,217	6,237
Price of Oil	P4	Rs/KL	39,629	41,192	39,112
Coal cost					
A) Indigenous Coal	N1=Q1 X P1	Rs Lakh	7,505	15,060	11,330
B) Imported Coal	N3=Q3 X P3	Rs Lakh	2,616	3,890	3,586
Total Coal Cost	N4=N1+N3	Rs Lakh	10,121	18,950	14,917
Oil Cost	N5=P4 x L/10 ⁵	Rs Lakh	129	249	186
Other Charges		Rs Lakh	(356)	(679)	(1,080)
Total Fuel Cost	O=N4 + N5	Rs Lakh	9,894	18,519	14,023
Fuel Cost/Unit Gross	P=O/(A*10)	Rs/kWh	3.05	3.07	2.95
Fuel Cost/Unit Net	Q=O/(Y*10)	Rs/kWh	3.35	3.37	3.24
Cost of fuel/KCal	R=(O/H)*10 ⁵	Rs/Gcal	1,243	1,250	1,201
Actual Net Generation	Y	MUs	290	546	430
Gross Gen at 85 % PLF			894	901	901
Net Generation			813	820	820
Coal Cost			27,840	28,301	28,254
Oil Cost			354	371	352
Nor. Fuel Cost for act. Gen	S=Q*Y/10	Rs. Crore	97	184	139

Torrent Power Limited – Generation
Truing up for FY 2020-21 and Determination of Tariff for FY 2022-23

Annexure 2 Approved Fuel Costs for FY 2022-23 for True up D,E & F – Station

Item	Derivation	Unit	D-Station	E-Station	F-Station
Total Capacity	A1	MW	120.00	121.00	121.00
PLF	A2	%	89.10%	88.40%	88.51%
Gross Generation	A	MUs	937	937	938
Auxiliary Consumption	C	%	9.00%	9.00%	9.00%
Auxiliary Consumption	B	MUs	84	84	84
Net Generation	Y=A - B	MUs	852	853	854
Station Heat Rate	D	KCal/KWH.	2,450	2,455	2,455
Sp. Oil Consumption	E	ml/kWh	1	1	1
Gross Calorific Value of Coal	F	kcal/kg	4,335	4,340	4,337
Calorific value of Oil	G	kcal/l	9,984	9,984	9,984
Overall Heat	H=A x D	G Cal	2,294,841	2,300,239	2,303,087
Heat from Oil	I=(A x E x G)/1000	G Cal	9,352	9,355	9,366
Heat from Coal	J=H-I	G Cal	2,285,489	2,290,884	2,293,721
Transisit losses	K	%	0.80%	0.80%	0.80%
Coal Blend					
A) Indigenous Coal	X1	%	75%	74%	75%
C) Imported Coal	X3	%	25%	26%	25%
Oil Consumption	L=A x E	MT	937	937	938
Coal Consumption	M=(J X 1000)/F	MT	527,178	527,806	528,922
A) Indigenous Coal	Q1=M* x X1/(1-K)	MT	400,675	396,250	400,766
C) Imported Coal	Q3=M* X X3	MT	129,709	134,726	131,362
Price of Coal					
A) Indigenous Coal	P1	Rs/MT	5,355	5,394	5,369
C) Imported Coal	P3	Rs/MT	6,232	6,217	6,237
Price of Oil	P4	Rs/KL	39,629	41,192	39,112
Coal cost					
A) Indigenous Coal	N1=Q1 X P1	Rs Lakh	21,455	21,372	21,517
B) Imported Coal	N3=Q3 X P3	Rs Lakh	8,083	8,376	8,193
Total Coal Cost	N4=N1+N3	Rs Lakh	29,538	29,748	29,710
Oil Cost	N5=P4 x L/10^5	Rs Lakh	371	386	367
Other Charges		Rs Lakh	(604)	(594)	(601)
Total Fuel Cost	O=N4 + N5	Rs Lakh	29,305	29,540	29,476
Fuel Cost/Unit Gross	P=O/(A*10)	Rs/kWh	3.13	3.15	3.14
Fuel Cost/Unit Net	Q=O/(Y*10)	Rs/kWh	3.44	3.46	3.45
Cost of fuel/Kcal	R=(O/H)*10^5	Rs/Gcal	1,277	1,284	1,280
Net Generation	Y	MUs	852	853	854
Gross Gen at 85 % PLF			894	901	901
Net Generation			813	820	820
Coal Cost			28,177	28,606	28,534
Oil Cost			354	371	352
Nor. Fuel Cost for Generation	S=Q*Y/10	Rs. Crore	293	295	295