

**GUJARAT ELECTRICITY REGULATORY
COMMISSION
(GERC)**



Tariff Order
Truing up for FY 2021-22
and
Determination of Tariff for FY 2023-24

For
Torrent Power Limited – (Generation)
Ahmedabad

Case No. 2178 of 2023
31st March, 2023

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GUJARAT ELECTRICITY REGULATORY COMMISSION (GERC)
GANDHINAGAR

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ABBREVIATIONS

A&G	Administration and General Expenses
ARR	Aggregate Revenue Requirement
CAPEX	Capital Expenditure
CERC	Central Electricity Regulatory Commission
DISCOM	Distribution Company
EA	Electricity Act, 2003
FPPPA	Fuel and Power Purchase Price Adjustment
FY	Financial Year
GERC	Gujarat Electricity Regulatory Commission
GFA	Gross Fixed Assets
GoG	Government of Gujarat
HT	High Tension
Kv	Kilo Volt
kVA	Kilo Volt Ampere
kVAh	Kilo Volt Ampere Hour
kWh	Kilo Watt Hour
LT	Low Tension
MTR	Mid-Term Review
MUs	Million Units (Million kWh)
MW	Mega Watt
MYT	Multi-Year Tariff
O&M	Operations and Maintenance
p.a.	Per Annum
PPA	Power Purchase Agreement
R&M	Repairs and Maintenance
SBI	State Bank of India
Second Control Period	FY 2011-12 to FY 2015-16
SLDC	State Load Despatch Centre
Third Control Period	FY 2016-17 to FY 2020-21



Before the Gujarat Electricity Regulatory Commission at Gandhinagar

Case No. 2178 of 2023

Date of the Order: 31/03/2023

CORAM

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

ORDER

1. Background and Brief History

1.1. Background

1.1.1 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. 2140 of 2022 dated 20th October, 2022 for determination of tariff for its generating business at Ahmedabad for FY 2023-



24.

- 1.1.2 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.
- 1.1.3 The True up year and the ensuing year in the present case is FY 2021-22 and FY 2023-24 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 the 4th Control Period and 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 by 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. Further, the Commission vide its Order in Suo-Motu Petition No. 2140 of 2022 dated 20th October, 2022 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 2021-22 and annual ARR for FY 2023-24 and application for determination of tariff for FY 2023-24 based on the principles and methodology as provided in the GERC (MYT) Regulations, 2016 on or before 15th December, 2022. In this regard, the petitioner sought time extension for filing of petition up-to 31st



December 2022.

1.1.4 Subsequently, the Petitioner filed the current Petition for truing-up of FY 2021-22, and determination of ARR and tariff for FY 2023-24 on 29th December, 2022.

1.1.5 After technical validation of the petition, it was registered on 9th January, 2023 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)

1.2.1 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.

1.2.2 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 Tariff Order for FY 2022-23

1.3.1 The Petitioner filed a petition for Truing-up of FY 2020-21 and determination of tariff for FY 2022-23 on 30th November, 2021. The petition was registered on 03rd December, 2021 (Case No. 2032 of 2021). The Commission vide order dated 31st March, 2022 approved Truing-up of FY 2020-21 and determination of tariff for FY



2022-23.

1.4. Background of the present petition

- 1.4.1 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).
- 1.4.2 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.
- 1.4.3 The Commission, vide its order dated 20th October, 2022 has directed the utilities to file the petition for determination of tariff for FY 2023-24 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

- 1.5.1 The Petitioner submitted the current Petition for Truing-up of FY 2021-22 and determination of tariff for FY 2023-24 on 29th December, 2022. After technical validation of the petition, it was registered on 9th January, 2023 (Case No. 2178 of 2023) and as provided under Regulation 29.1 of the GERC MYT Regulations, 2016, the Commission has proceeded with this tariff order.
- 1.5.2 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.
- 1.5.3 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 1.1: List of News Papers (Petitioner)

S. No.	Name of Newspaper	Language	Date of Publication
1	The Indian Express (Ahmedabad Edition)	English	14/01/2023
2	Navgujarat Samay (Ahmedabad Edition)	Gujarati	14/01/2023
3	Gujarat Guardian (Surat Edition)	Gujarati	14/01/2023

1.5.4 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 13th February, 2023.

1.5.5 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.

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

Table 1.2: List of Newspapers (Commission)

S. No.	Name of Newspaper	Language	Date of Publication
1	The Indian Express	English	21/02/2023
2	Divya Bhaskar	Gujarati	21/02/2023
3	Gujarat Samachar	Gujarati	22/02/2023

1.5.7 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 02nd March, 2023 at 11.30 a.m.

Table 1.3: Venue & Schedule of Public Hearing

Petitions	Date & Time	Venue
TPL-G, TPL-D(A), TPL-D(S) and TPL-D(D)	02 nd March 2023 at 11:30 A.M	GERC Office, Gandhinagar



1.5.8 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 1.4: List of Stakeholders

S. No.	Name of Stakeholders	Written Submission	Oral Submission	Presence in Public Hearing
1	Shri Vishnubhai Desai	Yes	No	No
2	Shri K.K. Bajaj	Yes	Yes	Yes

1.5.9 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

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

1.6.2 TPL has approached the Commission with the present Petition for “Truing up” of the FY 2021-22 and determination of Tariff for the FY 2023-24.

1.6.3 The Commission has undertaken the “Truing up” for FY 2021-22, based on the submissions of the Petitioner. The Commission has undertaken the computation of gains and losses for FY 2021-22, based on the annual accounts and final ARR for FY 2021-22 approved in the Tariff Order dated 31st March, 2021 in Case No. 1925/2021.

1.6.4 While truing up of FY 2021-22, 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 2021-22 has been considered, based on the GERC (MYT) Regulations, 2016.

1.6.5 Determination of ARR and Tariff for FY 2023-24 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 2023-24 shall be carried out based on the principles and methodology adopted in GERC (MYT) Regulations, 2016.

1.7.Contents of this Order

1.7.1 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 2021-22.
5. The fifth chapter deals with the determination of Tariff for FY 2022-24.
6. The sixth chapter deals with compliance of directives and issue of fresh directives.



2. Summary of TPL-Generation’s Petition

2.1. Actual for FY 2021-22 submitted by TPL-G (APP)

2.1.1 TPL-G (APP) submitted the current petition seeking approval of True-Up for ARR of FY 2021-22. The details of expenses under various heads of ARR are given in Table below:

Table 2.1: Actual claimed by TPL (G) APP for FY2021-22 (Rs. Cr)

Particulars	Order	Actual
Fuel Related Expenses	837.84	805.55
O&M Expenses	170.41	144.18
Water Charges	15.26	21.18
Depreciation	49.94	49.18
Interest on Loan	-	1.37
Interest on Working Capital	13.59	13.21
Return on Equity	62.15	60.27
Income Tax	23.39	13.78
Incentive	-	-
Less: Non-Tariff Income	15.23	15.10
Net ARR	1,157.35	1,093.61

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 2021-22 (Rs. Crore)

Particulars	Unit	Claimed
ARR as per Order	(a)	1,157.35
Gains/(Losses) due to Uncontrollable Factors	(b)	25.62
Gains/(Losses) due to Controllable Factors	(c)	38.12
Pass through as Tariff	(d) = -{(c/3} + b)	(38.32)
ARR True-Up	(e) = a + d	1119.02

2.2.ARR for FY 2023-24

2.2.1 TPL-G (APP) has also furnished the ARR for FY 2023-24 as depicted in the Table below:

Table 2.3: ARR of TPL (G) APP for FY 2023-24 (Rs. Crore)

Particulars	Submitted
Fuel Related Expenses	1,107.26
O&M Expenses	165.77
Water Charges	27.79
Depreciation	52.35
Interest on Loan	0.29
Interest on Working Capital	15.23
Return on Equity	64.15
Income Tax	13.78
Incentive	-
Less: Non-Tariff Income	15.10
Net ARR	1,431.52

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

2.3.1 While filing the petition for Truing-Up of FY 2021-22 including ARR of FY 2023-24, TPL-G (APP) has submits following prayers before the Commission;

- a) Admit the petition for truing up of FY 2021-22, Aggregate Revenue Requirement for FY 2023-24, and determination of tariff for FY 2023-24.
- b) Approve the trued up ARR of FY 2021-22
- c) Approve the sharing of gains/ losses as proposed for FY 2021-22.
- d) Approve the Aggregate Revenue Requirement for FY 2023-24.
- 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.



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

3.1.1 In response to the public notice inviting objections / suggestions from stakeholders on the Petition filed by TPL-G for Truing up of FY 2021-22 and determination of ARR for FY 2023-24 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:

3.2.High Expenses

3.2.1 The Objector has submitted the petitioner have shown high expenses despite the facts that the tariff charges are so high. The petition of petitioner is filed with motive to increase the prices in near future. It is submitted that the Petitioner is required to be directed to adopt some measures which are still not complied.

Petitioner's Response: The Petitioner denies the allegation of the Objector and submits that it has filed the current petition for approval of the tariff proposal to recover the expenditure incurred, in line with the provisions of the Act, National Tariff Policy and GERC Regulations.

Commission's View: The Expenses claimed by the petitioner are approved by the commission only after prudence check with respect to the audited accounts and GERC Regulations.

3.3.Use of Smart Meters

3.3.1 It is submitted that the smart meters are not installed and hence, the same is leading to extra charges on public at large for satisfying the profit of the petitioner company despite there is guidelines from the government of India for smart



meters.

Petitioner’s Response: TPL in its Reply to the same issues in Petition No. 2179 of 2023 as stated as:

“The Objector has stated that the Petitioner has not installed smart meters leading to extra charges on public and that there are guidelines from Government of India for smart meters.

The Petitioner would like to submit that contention of the Objector is not correct. Regarding the installation of smart meters, the Petitioner would like to clarify that the technology of smart meters is still at nascent stage. The Petitioner is evaluating the options and has proposed capex for replacement of consumer/ DT/ feeder meters with smart meter in a phased manner.”

Commission’s View: The Commission has noted the objector’s submission and the Petitioner’s reply.

3.4.Old Plant and Machinery

3.4.1 The objector has submitted That the plant and machinery used by the petitioner company is also old and therefore, in absence of any new investment the production is low and price is high and therefore, the petitioner is required to be directed to lower the tariff price.

Petitioner’s Response: The Objector has raised concerns regarding old plant and machinery and observed that there is low investment leading to low production and high price. The Petitioner would like to submit that the Petitioner keeps its plant and machinery in well maintained condition through regular O&M activities to ensure efficiency of its operations. However, production depends on demand which is beyond the control of the licensee.

Commission’s View: The regulations stipulate norms on the technical performance of the power plant and the expenses are approved after prudence check and as per the GERC regulations.



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. Performance Review of Ahmedabad Power Plant

3.6.1 The objector has submitted that the performance of Petitioners' coal based old plants is appreciable and in spite of ageing these plants are running satisfactorily. It is also submitted that the performance of all three plants have improved drastically giving benefit to consumers of Petitioner. The comparison of performance compared to last year is remarkable and appreciated by Respondent. This should be a lesson for Govt Generation Company who is giving lame excuse of ageing of plant. The Respondent requests Hon'ble Commission to grant incentive to Generating Companies based on Plant Load Factor and not Plant Availability Factor. Actual Performance of Petitioner should be based on PLF only.

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).

3.7. Blending ratio of Indigenous and Imported Coal

3.7.1 The objector has submitted that the usage of imported coal should be reduced and the blending ratio of 90:10 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: 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.

3.8. Extension to meet New Environmental Norms

3.8.1 The objector has referred to the media articles on power plants missing deadline on FGD implementation and has also requested the Hon'ble Commission to direct the Petitioner to represent to the Ministry for granting extension in timeline for compliance to new Environmental Norms.

Petitioner's Response: The Ministry of Environment & Forests (MoEF) has revised the environmental norms for thermal power plants. In order to comply with these revised norms, the generating stations exceeding SO₂ Norms are required to incur capex inter alia for providing Flue Gas Desulphurization (FGD) systems within stipulated time. 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.



3.9.Retirement of Sabarmati Generating Station by 2027

3.9.1 The objector has proposed to retire the Sabarmati generating station and establishing new power capacity to cater to the load of Ahmedabad, Gandhinagar and Surat.

Petitioner’s Response: The Petitioner submitted that the Petitioner would like to submit that the Petitioner has already initiated the work of establishing the Bulk Supply Points in Ahmedabad/Gandhinagar to enhance its import capacity. Further, due to transmission network constraints, operation of Sabarmati Plant is required to be continued to cater to the demand of the consumers.

Regarding the Objectors suggestion about establishing new coal-based capacity, the Petitioner will review the overall situation and keep the Hon’ble Commission apprised on the same.

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



4. Truing up for FY 2021-22

4.1. Introduction

4.1.1 This chapter deals with the truing-up of FY 2021-22 for TPL-G Ahmedabad Power Plant (APP). The Commission has studied and analyzed each component of the ARR for FY 2021-22 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 2021 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 2021

Sabarmati Thermal Power Plant (Coal Based)			
Name of Station	Capacity in MW	Year of COD	Age/Years
D-Station	120	1978/2004* Upgrading Capacity	43
E-Station	121	1984	37
F-Station	121	1988	33

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 2021-22 for individual stations. The Commission has taken up the truing up of the annual performance

parameters for FY 2021-22, 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 2021-22 has computed after considering annual shutdown of the unit without factoring the forced outage. TPL-G (APP) submits that the reason for variation in actual and approved availability is due to longer forced outage at D station due to Generator Stator Failure. However, in E and F station, the Petitioner has achieved higher availability.

Table 4.2: Plant Availability Factor of TPL-G (APP) for FY 2021-22

Station	Order	Actual
D-Station	87.08%	84.26%
E-Station	92.42%	95.95%
F-Station	93.49%	95.87%

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 Tariff Order dated 31st March, 2021.

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 92.05% 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.

4.4.4 Hence, for truing up for FY 2021-22, the PAF considered is as given in the Table



below:

Table 4.3: Plant Availability Factor of TPL-G (APP) approved for truing up for FY 2021-22

Station	Order	Actual	Approved
D-Station	87.08%	84.26%	87.08%
E-Station	92.42%	95.95%	92.42%
F-Station	93.49%	95.87%	93.49%

4.5.Plant Load Factor (PLF)

Petitioner’s submission:

4.5.1 TPL-G (APP) has submitted that the actual plant load factor for all the thermal generating stations of TPL-G (APP) is low as compared to the Order due to variation in the offtake. It has further submitted that PLF is dependent on the actual offtake which in turn depends on the drawl by the consumers of the licensee which is beyond the control of the Petitioner.

4.5.2 Therefore, the Petitioner considers the actual plant load factor for various stations for FY 2021-22 for truing-up purpose as an uncontrollable parameter, which are tabulated as below:

Table 4.4: Plant Load Factor of TPL-G (APP) for FY 2021-22

Station	Order	Actual
D-Station	80.84%	63.64%
E-Station	86.18%	83.78%
F-Station	87.81%	83.10%

Commission’s analysis:

4.5.3 It is observed that actual plant load factor for all the thermal generating stations of TPL-G (APP) is low as compared to the Tariff Order dated 31st March, 2021 because of variation in the offtake. Further, it has been observed that the actual PLF of TPL-G (APP) for FY 2021-22 is 76.88%, which has been provided by the Petitioner vide



additional details dated 18.02.2023.

4.5.4 Therefore, the Commission considers the actual plant load factor of FY 2021-22 for these stations for truing-up purpose as an uncontrollable parameter, which is as per the Proviso 53.2 of the GERC (MYT) Regulations, 2016.

Table 4.5: Plant Load Factor of TPL-G (APP) approved for truing up for FY 2021-22

Station	Order	Actual	Approved
D-Station	80.84%	63.64%	63.64%
E-Station	86.18%	83.78%	83.78%
F-Station	87.81%	83.10%	83.10%

4.6. Auxiliary consumption

Petitioner's submission:

4.6.1 TPL-G(APP) has submitted that it has been making continuous efforts to maintain the auxiliary consumption at/below approved levels and in turn has achieved lower auxiliary consumption level at E & F stations. However, in D station the auxiliary consumption is marginally higher than approved due to generator stator failure/ lower offtake.

4.6.2 It 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 2021-22

Station	Order	Actual
D-Station	9.00%	9.28%
E-Station	9.00%	8.55%
F-Station	9.00%	8.82%

Commission's analysis

4.6.3 It is noted that for the all the Stations of TPL-G (APP) except D-Station, the actual auxiliary consumption is lower than that approved in the Tariff Order dated 31st



March, 2021.

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 Tariff Order dated 31st March, 2021 for FY 2021-22 for truing up purpose.

Table 4.7: Auxiliary consumption of TPL-G (APP) approved for truing up for FY 2021-22

Station	Order	Actual	Approved
D-Station	9.00%	9.28%	9.00%
E-Station	9.00%	8.55%	9.00%
F-Station	9.00%	8.82%	9.00%

4.7. Station Heat Rate (SHR)

Petitioner's submission:

4.7.1 TPL-G (APP) has submitted that during FY 2021-22, SHR of all the three stations was better than approved in the order. 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 2021-22 (kCal/kWh)

Station	Order	Actual
D-Station	2,450	2,435
E-Station	2,455	2,428
F-Station	2,455	2,395

Commission's analysis:

4.7.2 The Commission notes that the SHR achieved for all the three Stations of TPL (G) APP is better than the approved levels. For the purpose of True-up for FY 2021-22, the Commission approves the SHR as approved in the Tariff Order dated 31st March, 2021, which is tabulated as below;

Table 4.9: Station Heat Rate approved for TPL-G (APP) in truing up for FY 2021-22 (kCal/kWh)

Station	Order	Actual	Approved
D-Station	2,450	2,435	2,450
E-Station	2,455	2,428	2,455
F-Station	2,455	2,395	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, all the three stations has achieved the lower SFC owing to continuous efforts and better preventive maintenance. As SFC is a controllable parameter it should be considered for sharing of gains/losses.

Table 4.10: Secondary Fuel Oil Consumption of TPL-G (APP) claimed for FY 2021-22 (ml/kWh)

Station	Order	Actual
D-Station	1.00	0.50
E-Station	1.00	0.17
F-Station	1.00	0.17

Commission's analysis:

4.8.2 The actual Secondary Fuel Consumption (SFC) for all the three station is lower than the approved values.

4.8.3 Since, the Secondary Fuel Consumption is a controllable parameter, thus, the Commission approves the SFC on normative basis as approved in the Tariff Order dated 31st March, 2021 for Truing-Up of FY 2021-22.

Table 4.11: Secondary Fuel Oil Consumption of TPL-G (APP) approved for truing up for FY 2021-22 (ml/kWh)

Station	Order	Actual	Approved
D-Station	1.00	0.50	1.00
E-Station	1.00	0.17	1.00
F-Station	1.00	0.17	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 1.96% during FY 2021-22 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 controllable parameter in its calculation as per MYT Regulations.

Table 4.12: Transit Loss of TPL-G (APP) claimed for FY 2021-22

Stations	Order	Actual
All Coal Based	0.80%	1.96%

Commission’s analysis:

4.9.2 It is noted that the transit losses have been occurred due to various uncontrollable factors such as the issue of accuracy of weighbridge at loading end, moisture loss, windage and seepage losses. However, the Commission has considered the normative transit losses for truing up for FY 2021-22 as per the GERC (MYT) Regulations, 2016, as given in the Table below:

Table 4.13: Transit loss approved for truing up for FY 2021-22

Stations	Order	Actual	Approved
All Coal Based	0.80%	1.96%	0.80%

4.10. Summary of performance parameters approved for truing up of FY 2021-22

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 2021-22, for truing up purpose are listed in the Table below:



Table 4.14: Performance parameters for TPL-G (APP) stations approved for truing up for the FY 2021-22

Station	PAF (%)	PLF (%)	Aux. Consumption (%)	Station Heat rate (Kcal/kWh)	SFC (gm/kWh)	Transit Loss(%)
D-Station	87.08%	63.64%	9.00%	2,450	1.00	0.80%
E-Station	92.42%	83.78%	9.00%	2,455	1.00	0.80%
F-Station	93.49%	83.10%	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 2021-22 are given in the Table below:

Table 4.15: The gross and net generation of power for truing up for FY 2021-22

Particulars	Order	Actual	Approved
D-Station			
Capacity (MW)	120.00	120.00	120.00
PLF (%)	80.84%	63.64%	63.64%
Gross Generation (MU)	849.78	668.98	668.98
Auxiliary Consumption (%)	9.00%	9.28%	9.00%
Auxiliary Consumption (MU)	76.48	62.11	60.21
Net Generation (MU)	773.30	606.88	608.77
E-Station			
Capacity (MW)	121.00	121.00	121.00
PLF (%)	86.18%	83.78%	83.78%
Gross Generation (MU)	913.47	888.05	888.05
Auxiliary Consumption (%)	9.00%	8.55%	9.00%
Auxiliary Consumption (MU)	82.21	75.95	79.92
Net Generation (MU)	831.26	812.10	808.13
F-Station			
Capacity (MW)	121.00	121.00	121.00
PLF (%)	87.81%	83.10%	83.10%
Gross Generation (MU)	930.80	880.83	880.83
Auxiliary Consumption (%)	9.00%	8.82%	9.00%
Auxiliary Consumption (MU)	83.77	77.70	79.27
Net Generation (MU)	847.03	803.12	801.55
TPL-G (APP)			
Gross Generation (MU)	2694.05	2437.86	2437.86
Auxiliary Consumption (MU)	242.46	215.76	219.41
Net Generation (MU)	2451.59	2222.1	2218.45

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 2021-22.

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 2021-22, as given in the Table below

Table 4.16: The mix of different types of coal for FY 2021-22

Sr. No.	Stations	Indigenous Coal (%)	Imported Coal (%)
1	D Station	76.12%	23.88%
2	E Station	90.56%	9.44%
3	F Station	84.79%	15.21%

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 2021-22, as given in the Table below:

Table 4.17: Wt. Av. Gross Calorific value (GCV) of Different Fuels for Coal--based

Stations for FY 2021-22

Particulars	Approved in Order	Actuals for FY 2021-22
Indigenous Coal (kcal / kg)	4,378	4,172
Imported Coal (kcal / kg)	4,742	4,852
Secondary Fuel Oil (kcal / L)	9,984	10,103

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 2021-22, as given in the Table below:

Table 4.18: Wt. Av. Price / unit of fuels for FY 2021-22 (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	5,184.43	8,800.19	43,842.48

4.15.2 TPL-G (APP) has furnished the actual Wt. Av. cost / MT of different fuels for different stations for FY 2021-22, as given in the Table below:

Table 4.19: Av. Price / Unit of Fuels for FY 2021-22 (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	5,338	8,728	47,262
2	E Station	5,299	9,017	50,098
3	F Station	5,313	8,662	46,254

Table 4.20: Blending Ratio (in %)

Sr. No.	Station	Indigenous coal	Imported coal
1	D Station	76.12%	23.88%
2	E Station	90.56%	9.44%
3	F Station	84.79%	15.21%

Commission’s analysis:

4.15.3 On a query from the Commission while approving truing-up of FY 2021-22, TPL has stated that fuel allocation to units generally depends on supply and quality of coal. During FY 2021-22, it has made efforts to optimize the generation cost by using higher Domestic Coal vis-à-vis Imported Coal. It has further submitted that due to ratio Indigenous Coal vis-à-vis Imported Coal has improved.

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

Table 4.21: GCV of coal and oil for FY 2021-22

Particulars	D Station	E Station	F Station
GCV of Coal (K.Cal / Kg)	4,331	4,234	4,280
GCV of Oil (K.Cal / L)	10,100	10,100	10,113

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

Table 4.22: Price of coal and oil for FY 2021-22

Particulars	D Station	E Station	F Station
Indigenous Coal (Rs / MT)	5,338	5,299	5,313
Imported Coal (Rs / MT)	8,728	9,017	8,662
Oil (Rs / KL)	47,262	50,098	46,254

4.15.6 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 2021-22, 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, along with actual furnished by TPL-G (APP), are as given in the Table below:

Table 4.23: Fuel Cost of TPL-G (APP) for truing up for FY 2021-22

Station	As per Actual 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	669	607	231	3.80	669	609	231	3.80
E-Station	888	812	288	3.55	888	808	292	3.60
F-Station	881	803	287	3.57	881	802	294	3.66

4.17. Variation between actual costs and approved costs

Table 4.24: Total Fuel Cost approved for TPL-G (APP) for truing up for FY 2021-22 (Rs. Crore)

Particulars	As per Actual Claimed	Approved
Total Fuel Cost	805.55	817.43

4.17.1 The Commission has verified the actual fuel cost submitted by TPL-G (APP) with the annual accounts of FY 2021-22. It has been observed that the fuel cost as per the accounts has been Rs. 804.77 Crore whereas it has claimed Rs. 805.55 Crore. In this regard, it has stated that the fuel cost claimed in Petition is after netting of the reversal of the provision for SECL compensation pertaining to FY 2019-20 to the tune of Rs. 0.78 Crore.

4.17.2 On perusal of the Tariff Order in Case No. 1925/2021 dated 31.03.2021 in the matter of Truing up of FY 2019-20 and Determination of Tariff for FY 2021-22, it has been observed that the fuel cost for FY 2019-20 as per the accounts had been Rs. 684.30 Crore whereas it had claimed Rs. 683.52 Crore and accordingly, the Commission had considered Rs. 683.52 Crore as fuel cost for FY 2019-20 at the

time of Truing up exercise and computed the gain/losses for the Petitioner.

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

4.18. Gains and losses in fuel costs due to controllable factors

4.18.1 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 4.25: Approved Gains / (Losses) from Fuel Expenses (due to Controllable Factors) for FY 2021-22 (Rs. Crore)

Station	Fuel cost arrived at with approved parameters for actual net generation for FY 2021-22	Actual fuel cost at actual parameters for FY 2021-22	Gains / (Losses) due to controllable factors
D-Station	230.85	230.89	(0.04)
E-Station	292.46	287.99	4.47
F-Station	294.13	286.66	7.47

**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.*

4.19. Gains and losses in fuel costs due to uncontrollable factors

4.19.1 The Commission has computed the fuel expenses, so derived by considering the fuel costs as approved in the Tariff Order dated 31st March, 2021 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 4.26: Approved Gains / (Losses) from Fuel Expenses (due to Uncontrollable Factors) for FY 2021-22 (Rs. Crore)

Station	Fuel cost approved in Order	Actual fuel cost with Approved parameters for FY 2021-22	Gains / (Losses) due to uncontrollable factors
D-Station	264.24	230.85	33.39
E-Station	283.44	292.46	(9.02)
F-Station	290.15	294.13	(3.98)

4.20. Operation and Maintenance (O&M) expenses

Petitioner’s submission:

4.20.1 TPL-G (APP) has submitted that the O&M expenses incurred during FY 2021- 22 are marginally lower than the approved in Order and the variation is to be considered as controllable, which is tabulated as below:

Table 4.27: O&M Expenses claimed by of TPL-G (APP) for FY 2021-22 (Rs. Crore)

Particulars	Approved in Order	Claimed by Petitioner
Operation & Maintenance Expenses	170.41	144.18

Commission’s analysis:

4.20.2 Employee expenses as per annual accounts are Rs. 57.07 Crore net of expenses capitalized of Rs. 18.02 Crore. The Petitioner has added commission to non-executive directors of Rs. 0.15 Crore expenses (from A&G expense head) and deducted remeasurement of defined benefit plans of Rs. 0.59 Crore as appeared in the P&L Statement. Accordingly, the employee expenses are Rs. 56.63 Crore is approved for FY 2021-22 for the Petitioner.

4.20.3 A&G expense as per annual accounts are Rs. 40.25 Crore net of expenses capitalized of Rs. 17.93 Crore. The Petitioner has claimed A&G expenses after reduction on account of Commission to Non-Executive Directors (Rs. 0.15 Crore), Water Charges (Rs. 21.88 Crore), Advertisement Expenses (Rs. 0.03 Crore), Expenses relating to retired stations (Rs. 0.03 Crore), Provision carried forward (Rs. 0.25 Crore), Amount written off (Rs. 0.05 Crore) and addition of Lease payments (Rs. 0.96

Crore). Accordingly, the Commission approves the A&G expense of Rs. 19.53 Crore.

4.20.4 R&M expenses as per annual accounts are Rs. 68.04 Crore. The Petitioner has claimed R & M expense of Rs. 68.03 Crore net of Rs. 0.01 Crore against R & M expenses pertaining to retired assets. The Commission accordingly approves R & M expense of Rs. 68.03 Crore.

4.20.5 The Commission, accordingly, approves the O&M expenses of Rs. 144.18 Crore, for truing up of FY 2021-22.

4.20.6 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 2021-22 is approved by the Commission as given in the Table below:

Table 4.28: O&M Expenses and Gains / (Losses) Approved in truing up for FY 2021-22 (Rs. Crore)

Particulars	Approved in Order	Approved in Truing-Up	Deviation	Gains/(Losses) due to Controllable	Gains/(Losses) due to Uncontrollable
O&M Expenses	170.41	144.18	26.23	26.23	-

4.21. Water Charges

Petitioner's submission:

4.21.1 TPL-G (APP) has claimed Rs. 21.18 Crore towards actual water charges in the truing up for FY 2021-22, as against Rs. 15.26 Crore approved in the ARR Order. The existing Regulation provides that water charges are to be allowed as per actual. The details are given in the Table below:

Table 4.29: Water Charges Claimed in the truing up by TPL-G (APP) for FY 2021-22 (Rs. Crore)

Particulars	Approved in Order	Claimed by Petitioner
Water Charges	15.26	21.18

Commission’s analysis:

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

4.21.3 The Commission verified the water charges from the annual accounts and approves the water charges at Rs. 21.18 Crore for FY 2021-22. The deviation is considered as uncontrollable and the gains and losses are considered as detailed below;

Table 4.30: Gains / (Losses) Approved for Water Charges in the truing up for FY 2021-22 (Rs. Crore)

Particulars	Approved in Order	Approved in Truing-Up	Deviation	Gains/(Losses) due to Uncontrollable
Water Charges	15.26	21.18	(5.92)	(5.92)

4.22. Capital expenditure, Capitalisation and Sources of Funding

Petitioner’s submission:

4.22.1 TPL-G (APP) has claimed Rs. 26.48 Crore towards actual capital expenditure for FY 2021-22, as against Rs. 21.31 Crore approved in the Order. The main reason for variation in actual vis-à-vis approved capital expenditure is the overhauling of ESP, turbine along with SSS-1 and valve Motor Control Centre along with French well Power & Motor Control Centre in station D among others. Summary of capital expenditure incurred during FY 2021-22 is tabulated as under;

Table 4.31: Capital Expenditure Claimed by TPL-G (APP) For FY 2021-22 (Rs. Crore)

Particulars	Approved in Order	Claimed by Petitioner
Boiler works	5.00	12.73
Turbine works	4.00	3.30

Particulars	Approved in Order	Claimed by Petitioner
Electrical works	7.45	6.63
C&I and CHP works	2.10	0.64
Civil works	0.50	0.79
Others	2.00	1.56
Miscellaneous	0.26	0.83
Total Cost	21.31	26.48

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

a) Normal Capital Expenditure – TPL G (APP) incurred the expenditure of Rs. 25.65 Crore against approval of Rs. 21.05 Crore. The details of actual expenditure is as under:

- Boiler Works – Expenditure under this head has been incurred primarily towards overhauling of ESP in D station required to adhere to the environmental norms and sustain ESP performance. Expenditure is also incurred towards pressure part replacement, replacement of mill components and ash line.
- Turbine Works – Major expenditure incurred under this head is towards D station turbine overhauling.
- Electrical Works – Major expenditure incurred under this head is towards procurement, installation, testing and commissioning of D station SSS-1 and valve Motor Control Centre along with French well Power & Motor Control Centre.
- C&I and CHP Works – During FY 2021-22, expenditure incurred is towards procurement of standard testing instruments and upgradation of conveyor Belt Weighers.
- Civil Works – Expenditure has been incurred towards refurbishment works of control room and turbine building ceiling.
- Others – Under this head, expenditure has been incurred towards various refurbishment works of French well and bore well, water cooling system, HVAC

system.

- b) Misc. Capital Expenditure – TPL G (APP) incurred an expenditure of Rs. 0.83 Crore. The expenditure has been incurred towards Common server installation and IT.

4.22.3 TPL-G (APP) has claimed actual capitalization of Rs. 26.77 Crore for FY 2021- 22, as against Rs. 21.31 Crore approved in the Order as shown in table below:

Table 4.32: Capitalisation and Sources of Funding Claimed in truing up for FY 2021-22 (Rs. Crore)

Particulars	Approved in Order	Claimed by Petitioner
Opening GFA	1,179.18	1,133.40
Addition to GFA	21.31	26.77
Deletion to GFA	-	3.70
Closing GFA	1,200.49	1,156.47

Commission’s analysis:

4.22.4 The Petitioner has claimed capex of Rs. 26.48 Crore for FY 2021-22, as per the audited annual accounts the capex is worked out to Rs. 26.48 Crore. The Petitioner has furnished the details of project-wise breakup of actual capitalization of Rs. 26.77 Crore with details of Opening CWIP as on 1st April, 2021, CAPEX during the year and Closing CWIP as on 31st March, 2022 in form 4.3 of the petition. The Petitioner has furnished the detailed project/scheme- wise explanation of the major capital expenditure incurred and capitalization during FY 2021-22 as deliberated under Petitioner’s submission and not repeated here due to brevity.

4.22.5 The Petitioner has considered opening GFA for FY 2021-22 at Rs.1,133.40 crore based on the closing GFA approved in truing up for FY 2020-21, the same is being considered by the Commission.

4.22.6 TPL-G (APP) has de-capitalized assets to the extent of Rs. 3.70 Crore during FY 2021-22. However, it is observed that deductions from GFA is at Rs. 2.48 crore as per (Note 4.1) of the audited annual accounts for FY 2021-22. 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-capitalized assets at Rs. 3.70 Crore and accordingly adjustments made to GFA in truing up for FY 2021-22.

4.22.7 The Commission accordingly approves the opening GFA, addition to GFA during the year and closing GFA for FY 2021-22 as tabulated below:

Table 4.33: Approved Capitalisation and Sources of Funding in truing up for FY 2021-22 (Rs. Crore)

Particulars	Claimed by Petitioner	Approved by Commission
Opening GFA	1,133.40	1,133.40
Addition to GFA	26.77	26.77
Deletion to GFA	3.70	3.70
Closing GFA	1,156.47	1,156.47
Capitalisation	26.77	26.77
Normative Debt @70%	18.74	18.74
Normative Equity @30%	8.03	8.03

4.23. Depreciation

Petitioner's submission:

4.23.1 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. 49.18 Crore for FY 2021-22, as against Rs. 49.94 Crore approved in the Order, as detailed in table below;

Table 4.34: Depreciation claimed by TPL-G (APP) for FY 2021-22 (Rs. Crore)

Particulars	Approved in Order	Claimed by Petitioner
Depreciation	49.94	49.18

Commission's analysis:

4.23.2 The Commission has verified the depreciation from the annual accounts for FY

2021-22 and observed that depreciation as per annual accounts is Rs. 49.96 Crore. However, the Petitioner has claimed depreciation of Rs. 49.18 Crore in truing up for FY 2021-22.

4.23.3 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.

4.23.4 The Commission, accordingly, approves the depreciation of Rs. 49.18 Crore for FY 2021-22, the deviation in depreciation as compared to approved in the Order is considered as uncontrollable as the depreciation is dependent on capitalization. The Commission, accordingly, approves the gains/(losses) on account of depreciation for FY 2021-22, as tabulated below:

Table 4.35: Depreciation and Gains/Losses approved by the Commission for FY 2021-22 (Rs. Crore)

Particulars	Approved in Order	Approved in Truing-Up	Deviation	Gains/(Losses) due to Uncontrollable
Depreciation	49.94	49.18	0.76	0.76

4.24. Interest and Finance expenses

Petitioner's submission:

4.24.1 TPL-G (APP) has claimed a sum of Rs. 1.37 Crore towards actual interest and finance expenses for FY 2021-22 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 4.36: Interest and finance charges claimed in truing up for TPL-G (APP) for FY2021-22 (Rs. Crore)

Particulars	Approved in Order	Claimed by Petitioner
Opening Balance	3.93	-

Particulars	Approved in Order	Claimed by Petitioner
Less; reduction of normative loan due to retirement	-	0.30
Addition of Loan	14.92	18.74
Repayment during year	49.94	49.18
Closing Balance	(31.09)	-
Average Loan	-	-
Weighted average rate of interest (%)	8.55%	7.30%
Interest Expenses	-	-
Finance Charges	-	1.37

Commission’s analysis:

4.24.2 The Commission has considered opening loan balance as on 01.04.2021 equal to the closing loan balance of NIL approved in truing up FY 2021- 22. 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.

4.24.3 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.

4.24.4 Accordingly, based on the actual capitalization achieved by TPL-G (APP) during FY 2021-22 and the approved normative borrowings considering the interest rate of 7.30%, the Commission has computed the interest, as tabulated below:

Table 4.37: Interest Approved by the Commission in the truing up for FY 2021-22 (Rs. Crore)

Particulars	Claimed by Petitioner	Approved in Truing-Up
Opening Balance	-	-
Less; reduction of normative loan due to retirement	0.30	0.30
Addition of Loan	18.74	18.74
Repayment during year	49.18	49.18
Closing Balance	-	-
Average Loan	-	-
Weighted average rate of interest (%)	7.30%	7.30%
Interest Expenses	-	-
Finance Costs	1.37	1.37



4.24.5 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.

4.24.6 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.”

4.24.7 The Commission, accordingly, approves the gains/losses on account of interest and finance charges as uncontrollable for FY 2021-22, as tabulated below;

Table 4.38: Gains / (Losses) Approved in the truing up for FY 2021-22 (Rs. Crore)

Particulars	Approved in Order	Approved in Truing-Up	Deviation	Gains/(Losses) due to Uncontrollable
Interest & Finance Charges	-	1.37	(1.37)	(1.37)

4.25. Interest on Working Capital

Petitioner’s submission:

4.25.1 TPL-G (APP) has claimed Rs. 13.21 Crore towards interest on working capital for FY 2021-22, as against Rs. 13.59 Crore approved in the Order as tabled below:

Table 4.39: Interest on Working Capital Claimed for FY 2021-22 (Rs. Crore)



Particulars	Approved in Order	Claimed by Petitioner
Cost of Coal for 1.5 Months	104.81	113.57
Secondary fuel oil for 2 months	1.77	2.15
O&M expenses for 1 month	14.20	12.02
Maintenance Spares @1% of GFA	11.79	11.33
Receivables for 1 month	-	-
Working Capital Requirement	132.57	139.07
Rate of Interest (%)	10.25%	9.50%
Interest on Working Capital	13.59	13.21

Commission's Analysis:

4.25.2 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.

4.25.3 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.”

4.25.4 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 7.00% prevailing during the financial year 2021-22 plus 250 basis points. Accordingly, the rate of interest on working capital has been worked out to be 9.50%.

4.25.5 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 4.40: Interest on Working Capital approved for FY 2021-22 (Rs. Crore)

Particulars	Claimed By Petitioner	Approved for Truing-Up
Cost of Coal for 1.5 Months	113.57	113.57
Secondary fuel oil for 2 months	2.15	2.15
O&M expenses for 1 month	12.02	12.02
Maintenance Spares @1% of GFA	11.33	11.33
Receivables for 1 month	-	-
Working Capital Requirement	139.07	139.07
Rate of Interest (%)	9.50%	9.50%
Interest on Working Capital	13.21	13.21

4.25.6 As indicated above, the Commission has analyzed 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.

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

4.25.8 The Commission, accordingly, approves the gains/(losses) on account of interest

on working capital for FY 2021-22 as tabulated below:

Table 4.41: Gains/(Losses) in IoWC approved for FY 2021-22 (Rs. Crore)

Particulars	Approved in Order	Approved in Truing-Up	Deviation	Gains/(Losses) due to Uncontrollable
Interest on Working Capital	13.59	13.21	0.38	0.38

4.26. Return on Equity

Petitioner's submission

4.26.1 TPL-G (APP) has claimed a sum of Rs. 60.27 Crore towards return on equity for FY 2021-22, as against Rs. 62.15 Crore approved in ARR 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 4.42: Return on Equity claimed by the TPL -G (APP) for FY 2021-22 (Rs. Crore)

Particulars	Approved in Order	Claimed By Petitioner
Opening Equity	440.75	427.01
Equity Addition	6.39	8.03
Reduction in equity on account of retirement	-	1.11
Closing Equity	447.14	433.93
<i>Return on Equity at beginning of year</i>	<i>61.71</i>	<i>59.78</i>
<i>Return on Equity addition during year</i>	<i>0.45</i>	<i>0.48</i>
Total Return on Equity	62.15	60.27

Commission's analysis:

4.26.2 The Commission has considered opening equity as on 01.04.2021 equal to closing equity of FY 2020-21 as approved in truing-up and the additional equity is considered @30% of the value of net asset addition as approved above.

4.26.3 The Commission, accordingly, approves the return on equity for FY 2021-22 as

detailed below:

Table 4.43: Return on Equity approved in the truing up for FY 2021-22 (Rs. Crore)

Particulars	Claimed By Petitioner	Approved for Truing-Up
Opening Equity	427.01	427.01
Equity Addition	8.03	8.03
Reduction in equity on account of retirement	1.11	1.11
Closing Equity	433.93	433.93
<i>Return on Equity at beginning of year</i>	<i>59.78</i>	<i>59.78</i>
<i>Return on Equity addition during year</i>	<i>0.48</i>	<i>0.48</i>
Total Return on Equity	60.27	60.27

4.26.4 The Commission, accordingly, approves the Gains/(Losses) on account of return on equity in the truing up for FY 2021-22, as detailed below:

Table 4.44: Return on Equity and Gains/(Losses) approved in the truing up for FY 2021-22 (Rs. Crore)

Particulars	Approved in Order	Approved in Truing-Up	Deviation	Gains/(Losses) due to Uncontrollable
Return on Equity	62.15	60.27	1.89	1.89

4.27. Income Tax

Petitioner's submission:

4.27.1 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. 13.78 Crore towards income tax for FY 2021-22, as against Rs. 23.39 Crore approved in the Order as detailed below:

Table 4.45: Income Tax Claimed for TPL-G (APP) for FY 2021-22 (Rs. Crore)

Particulars	Approved in Order	Claimed By Petitioner
Income Tax	23.39	13.78

Commission’s analysis:

- 4.27.2 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.
- 4.27.3 The Commission has verified the PBT figures from the annual accounts for FY 2021-22. The Petitioner has shown a PBT of Rs. 120.83 Crore. The PBT as per standalone financial statement of TPL is Rs. 1817.41 Crore and the total tax paid by the Company as a whole is Rs. 207.30 Crore. It is observed that during FY 2021-22, the Petitioner has paid Minimum Alternate Tax (MAT) of 17.47%, though the effective tax rate works out to be 11.41%. Applying the effective tax rate of 11.41% on the PBT of TPL-G (APP), the income tax for TPL- G (APP) works out to be Rs. 13.78 Crore.
- 4.27.4 On query from the Commission regarding any refund of income tax of past years have been received in FY 21-22, in this regard, it has submitted that the refund of Rs. 0.34 Crore pertaining to FY 2016-17. It has further submitted that the Commission has allowed recovery of Income Tax by applying MAT rate on PBT during true-up of FY 2016-17. Hence, it has not considered in FY 2021-22 Tax claim. Further query on this, it has stated that the Commission has allowed the MAT rate of instead of claim of effective Tax rate for FY 2016-17. it has further submitted that there is no change in the income tax approved for FY 2016-17 even after considering refund of Rs. 0.34 Crore received for FY 2016-17.
- 4.27.5 It has learnt that the TPL as whole has received an Income Tax refund of Rs. 0.34 Crore pertaining to FY 2016-17. It is fact that TPL 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. It is also fact that the Petitioner has computed the Income Tax by applying the ratio of PBT. However, the Commission first verified the copies of



challans of income tax paid for the truing up year TPL as a whole and allowed the income tax based on the MAT Rate or effective Tax Rate, which is lower. However, it has stated that TPL as whole has received an Income Tax refund of Rs. 0.34 Crore pertaining to FY 2016-17. Hence, it is appropriate to adjust this amount between the regulated business as it received in this true up year. On the perusal of the Commission’s Order in Case No. 1695/2018 dtd. 31.03.2018, the Commission has observed following thing;

“The share of income tax for TPL(G) in the total tax TPL (G), TPL (A), TPL (S) and TPL(Dahej) of Rs.112.73 Crore (net of tax credit) as computed above works out to Rs. 6.92 Crore considering PBT net of Remeasurement of Defined Benefit Plans and tax credit.”

4.27.6 Accordingly, the Commission has apportioned between TPL (G), TPL (A), TPL (S) and TPL(Dahej) of Rs. 0.34 Crore based on the ratio as approved in the Truing up exercise of FY 2016-17, which is tabulated as below:

Table 4.46: Computation of Taxes for Regulated Entities by TPL (Rs. Crore)

Particulars	TPL-G (APP)	TPL-D (A)	TPL-D (S)	TPL-D (D)	TPL
PBT	34.21	327.04	195.81	(1.70)	583.94
Actual tax paid					129.89
Income-tax Claimed	7.61	72.75	43.56	-	
Income -tax approved	6.92	66.18	39.62		112.73
Ratio	6.14%	58.71%	35.15%		
Refund amount	0.02	0.20	0.12		0.34

4.27.7 From the above table, it has been observed that the share w.r.t. TPL-G (APP) is worked out as Rs. 0.02 Crore towards refund of Rs. 0.34 Crore pertaining to FY 2016-17.

4.27.8 The Commission, accordingly, approves the income tax at Rs. Rs. 13.76 Crore for truing-up of FY 2021-22. The Commission has treated the income tax as an uncontrollable expense and accordingly, approves the gains/(losses) on account of

income tax for FY 2021-22 as tabulated below:

Table 4.47: Gains / (Losses) due to Income Tax Approved in the truing up for FY 2021-22 (Rs. Crore)

Particulars	Approved in Order	Approved in Truing-Up	Deviation	Gains/(Losses) due to Uncontrollable
Income Tax	23.39	13.76	9.63	9.63

4.28. Non-Tariff Income

Petitioner's submission:

4.28.1 TPL-G (APP) has submitted that the actual Non-Tariff Income is at Rs. 15.10 Crore for FY 2021-22, as against of Rs. 15.23 Crore as approved in the Order as shown table below:

Table 4.48: Non-Tariff Income for TPL-G (APP) claimed for FY 2021-22 (Rs. Crore)

Particulars	Approved in Order	Claimed By Petitioner
Non-Tariff Income	15.23	15.10

Commission's analysis:

4.28.2 As per the annual accounts for FY 2021-22, the non-tariff income of TPL-G (APP) is Rs. 15.14 Crore. The Petitioner has excluded income from retired stations of Rs. 0.04 Crore.

4.28.3 The Commission, accordingly, approves the Non-Tariff Income at Rs. 15.10 Crore for FY 2021-22, the deviation of Rs. 0.13 Crore, which is considered as uncontrollable factor. The Commission, accordingly, approved gains/(losses) on account of non-tariff income for FY 2021-22 as tabulated below:

Table 4.49: Non-Tariff Income and gains/(losses) approved in the truing up for FY 2021-22 (Rs. Crore)

Particulars	Approved in Order	Approved in Truing-Up	Deviation	Gains/(Losses) due to Uncontrollable
Non-Tariff Income	15.23	15.10	0.13	0.13

4.29. Incentive

Petitioner’s submission:

4.29.1 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:

4.29.2 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.”

4.29.3 Since, the petitioner has not achieved higher PLF than the normative PLF of 85% during FY 2021-22, the Commission has not considered incentive in truing up for FY 2021-22.

4.30. Trued up ARR for FY 2021-22

4.30.1 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 2021-22. Accordingly, the Commission has computed the sharing of gains and losses for FY 2021-22, based on the truing up for each of the components discussed in the above paragraphs. The ARR approved in the order, as claimed by TPL-G (APP) and as approved in truing up for FY 2021-22 along with sharing of gains/(losses) computed in accordance with the GERC (MYT) Regulations, 2016, is given in the Table below:

Table 4.50: ARR Approved in truing up for FY 2021-22 (Rs. Crore)



Torrent Power Limited – Generation
Truing up for FY 2021-22 and Determination of Tariff for FY 2023-24

Particulars	Approved in Order	Claimed by Petitioner	Approved in Truing-Up	Deviation	Gains/(Losses) due to Controllable	Gains/(Losses) due to Uncontrollable
Variable Cost	837.84	805.55	817.43	32.28	11.89	20.40
Water Charges	15.26	21.18	21.18	-5.92		-5.92
O&M Expenses	170.41	144.18	144.18	26.23	26.23	
Depreciation	49.94	49.18	49.18	0.76		0.76
Interest & Finance Charges	-	1.37	1.37	-1.37		-1.37
Interest on Working Capital	13.59	13.21	13.21	0.38		0.38
Return on Equity	62.15	60.27	60.27	1.89		1.89
Income Tax	23.39	13.78	13.76	9.63		9.63
Incentive	-	-	-	-		-
Less: Non-Tariff Income	15.23	15.10	15.10	0.13		0.13
Net ARR	1,157.35	1,093.61	1,105.48	51.87	38.12	25.63

4.31. Sharing of Gains / Losses for FY 2021-22

4.31.1 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:

4.31.2 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.

4.31.3 Regarding O&M expenses, it is submitted that the variation should be considered as controllable except due to changes in law and the factors beyond the control. As stated in O & M Expenses above, the increase in Employee expenses owing to change in law and wage revision is considered as uncontrollable.

4.31.4 The variation in ROE, Interest expenses and depreciation on account of variation in capitalization and interest rates has been treated as uncontrollable. Similarly, the variation in income tax and non-tariff income has been treated as uncontrollable.

4.31.5 The 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.

4.31.6 It is submitted 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.

4.31.7 Based on the above, the sharing of gains and losses due to controllable factors is summarised below:

Table 4.51: Controllable Sharing of gains/losses claimed by TPL-G (APP) for FY 2021-22 (Rs. Crore)

Particulars	Pass through by Adjustment in Tariff	To be retained/ absorbed	Total
Controllable gain	12.71	25.41	38.12
Controllable loss	-	-	-
Total	12.71	25.41	38.12

4.31.8 The following is the summary of ARR recoverable by TPL-G (APP) from TPL-D

towards supply of electricity to TPL-D.

Table 4.52: Trued-up ARR claimed by TPL-G (APP) for FY 2021-22

Particulars	Formula	Rs. Crore
ARR as per Order	(a)	1,157.35
Gains/(Losses) due to Uncontrollable Factors	(b)	25.62
Gains/(Losses) due to Controllable Factors	(c)	38.12
Pas through as Tariff	$d=-(c/3+b)$	(38.32)
ARR True-Up	e= a + d	1119.02

Commission's analysis:

4.31.9 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 2021-22 in the Order dated 31st March, 2021. The Commission, accordingly, considered the gains and adjusted against the ARR trued up for FY 2021-22 to arrive at the revenue (Gap)/Surplus to be carried forward into the ARR of FY 2023-24.

Table 4.53: Approved Trued up ARR incl. Gains/(Losses) for TPL-G (APP) for FY 2021-22 (Rs. Crore)

Particulars	Formula	Rs. Crore
ARR as per Tariff Order dated 31st March, 2021	(a)	1,157.34
Gains/(Losses) due to Uncontrollable Factors	(b)	25.63
Gains/(Losses) due to Controllable Factors	(c)	38.12
Pas through as Tariff	$d=-(c/3+b)$	(37.07)
ARR True-Up	e= a + d	1119.00

4.31.10 The Commission approves the total ARR of Rs. 1119.00 Crore of TPL-G (APP) for FY 2021-22 and the same is considered as the actual cost of power purchased from TPL-G (APP) for FY 2021-22 in the ARR of TPL Distribution.

5. Aggregate Revenue Requirement (ARR) for FY 2023-24 and Determination of tariff for FY 2023-24

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. Further, Commission vide its order dated 20th October 2022 has directed utilities to file the petition for truing up of FY 2021-22, ARR of FY 2023-24, and determination of tariff of FY 2023-24 as per the provisions of the MYT Regulations, 2016. Accordingly, the Petitioner has arrived at the ARR for the FY 2023-24 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 2023-24 for individual stations. The Commission has taken up the estimates of the annual performance parameters for FY 2023-24, 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 2023-24 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 2023-24

Sr. No.	Station	No. of Days
1	D- Station	51
2	E- Station	12
3	F- Station	12

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. Based on the above details, TPL-G (APP) has projected the PAF as shown in the Table below.

Table 5.2: Projected Plant Availability Factor (PAF) for FY 2023-24

Sr. No.	Station	PAF
1	D- Station	85.55%
2	E- Station	94.30%
3	F- Station	94.30%

Commission’s analysis:

5.3.3 The Commission has analyzed 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 2023-24

Sr. No.	Station	Projected by Petitioner	Approved by Commission
1	D- Station	85.55%	85.55%
2	E- Station	94.30%	94.30%
3	F- Station	94.30%	94.30%



5.4.Plant Load Factor (PLF)

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 2023-24 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 2023-24

S. No.	Station	PLF
1	D- Station	81.44%
2	E- Station	92.37%
3	F- Station	92.09%

Commission’s analysis:

5.4.2 The Commission has analysed the submission made by TPL about projecting the PLF considering the aging of the equipment 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 2023-24

S. No.	Station	Projected by Petitioner	Approved by Commission
1	D- Station	81.44%	81.44%
2	E- Station	92.37%	92.37%
3	F- Station	92.09%	92.09%

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 2023-24 based on the principle and methodology enunciated in MYT Regulations, 2016 as given in table below:

Table 5.6: Projected Auxiliary Consumption (Aux. Con.) for FY 2023-24

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 2023-24

S. 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 SHR of different stations for FY 2023-24 based on the

principle and the methodology enunciated in the MYT Regulation, 2016, as given in the table below:

Table 5.8: Projected Station Heat Rate (SHR) for FY 2023-24

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 for TPL-G (APP) for FY 2023-24

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 (SFO Con.) for FY 2023-24

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 2023-24. 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 TPL-G (APP) for FY 2023-24

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 of coal

Petitioner's submission:

5.8.1 TPL has projected transit loss of coal for FY 2023-24 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 2023-24

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 (Multi Year Tariff) Regulations, 2016. It is observed by the Commission that during last two years the transit losses for the Petitioner have been more than the normative transit loss of 0.80%. However, the Petitioner has proposed for all the stations at the level of approved levels of the GERC (MYT) Regulations, 2016. Accordingly, the Commission approves the transit losses for all the stations, which is in accordance with the GERC (MYT) Regulations, 2016, which is tabulated as below:

Table 5.13: Approved Transit loss of coal for TPL-G (APP) for FY 2023-24

Station	Transit Loss
All Stations	0.80%

5.9. Summary of Performance parameters approved

5.9.1 Based on the decisions in the earlier paragraphs the performance parameters approved by the Commission for the FY 2023-24 for different stations are summarized as in the table below:

Table 5.14: Approved performance parameters for TPL-G (APP) for FY 2023-24

Station	PAF (%)	PLF (%)	Aux. Consumption (%)	Station Heat rate (Kcal/kWh)	SFC (gm/kWh)	Transit Loss (%)
D-Station	85.55%	81.44%	9.00%	2,450	1.00	0.80%
E-Station	94.30%	92.37%	9.00%	2,455	1.00	0.80%
F-Station	94.30%	92.09%	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 2023-24

Particulars	Projected	Approved
D-Station		
Capacity (MW)	120.00	120.00
PLF (%)	81.44%	81.44%
Gross Generation (MU)	858.48	858.48
Auxiliary Consumption (%)	9.00%	9.00%
Auxiliary Consumption (MU)	77.26	77.26
Net Generation (MU)	781.22	781.22
E-Station		
Capacity (MW)	121.00	121.00
PLF (%)	92.37%	92.37%
Gross Generation (MU)	981.72	981.72
Auxiliary Consumption (%)	9.00%	9.00%
Auxiliary Consumption (MU)	88.35	88.35

Particulars	Projected	Approved
Net Generation (MU)	893.36	893.36
F-Station		
Capacity (MW)	121.00	121.00
PLF (%)	92.09%	92.09%
Gross Generation (MU)	978.83	978.83
Auxiliary Consumption (%)	9.00%	9.00%
Auxiliary Consumption (MU)	88.09	88.09
Net Generation (MU)	890.74	890.74
TPL-G (APP)		
Gross Generation (MU)	2,819.03	2,819.03
Auxiliary Consumption (MU)	253.71	253.71
Net Generation (MU)	2,565.31	2,565.31

5.11. Cost Parameters

Petitioners 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 2023-24.

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 2023-24 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 2023-24.

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 (GCV) of fuel for FY 2023-24

Particulars	GCV
Indigenous Coal (Kcal/Kg)	4,193
Imported Coal (Kcal/Kg)	4,750
Secondary Fuel Oil (Kcal/L)	10,106

5.11.4 The price of primary and secondary fuel considered for FY 2023-24 is as under

Table 5.17: Price of Fuel for FY 2023-24

Particulars	Amount
Indigenous Coal (Rs./Tonne)	1242.29
Imported Coal (Rs./Tonne)	2309.07
Secondary Fuel Oil (Rs./K.Litre)	5776.97

Commission’s analysis:

5.11.5 It has been observed that the Petitioner has considered the rates of Rs. 1242.92 per MT, Rs. 2309.07 per MT and Rs. 5776.97 per K Litre for Indigenous, Imported and Secondary Fuel Oil respectively for FY 2023-24, while estimating the fuel costs for all the stations of AMGEN. On query regarding this, it has been stated that there is typographical error has crept, where in unit of measurement is shown as Rs. /Tonne instead of Rs. /MKcal.

5.11.6 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 2023-24. However, the Commission has considered actual fuel wise and station wise fuel purchase price of FY 2021-22 for the purpose of calculating fuel cost for FY 2023-24 as shown in table below:

Table 5.18: Cost Parameters approved for different fuels for FY 2023-24

Particulars	Projected by Petitioner			Approved by Commission		
	D-Station	E-Station	F-Station	D-Station	E-Station	F-Station
Indigenous Coal (%)	68.66%	72.54%	72.26%	76.12%	90.56%	84.79%
Imported Coal (%)	31.34%	27.46%	27.74%	23.88%	9.44%	15.21%
Indigenous Coal (Rs/MT)	5,369	5,369	5,369	5,338	5,299	5,313
Imported Coal (Rs/MT)	10,764	10,764	10,764	8,728	9,017	8,662
Oil (Rs/KL)	58,384	58,384	58,384	47,262	50,098	46,254
GCV of Coal (K.Cal/Kg)	4,368	4,346	4,348	4,368	4,346	4,348
GCV of Oil (K.Cal/L)	10,106	10,106	10,106	10,106	10,106	10,106

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 for FY 2023-24

Station	As per Projected 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	858	781	343	4.39	858	781	298	3.81
E-Station	982	893	383	4.28	982	893	316	3.54
F-Station	979	891	382	4.29	979	891	324	3.64

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*

Commission's analysis:

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 FY 2023-24

Particulars	As per Claimed	Approved
Total Fuel Cost	1,107.26	937.68

5.13. Operation and Maintenance (O&M) Expenses

Petitioner's submission:

5.13.1 TPL-G (APP) has submitted it has projected O&M expenses for FY 2023-24 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 2019-20 to FY 2021-22) with FY 2020-21 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 TPL-G (APP) for FY 2023-24 (Rs. Crore)

Particulars	Projected by Petitioner
Operation & Maintenance Expenses	165.77

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 2019-20 to FY 2021-22. The average of these three years expenses considered to be O&M Expenses of FY 2020-21. The O&M Expenses arrived for FY 2020-21 are escalated @ 5.72% year-on-year to arrive at O&M Expenses for FY 2023-24 at Rs. 165.77 Crore. The Commission, accordingly, approves the O&M expenses for FY 2023-24 as given hereunder:

Table 5.22: O&M Expenses approved by the Commission for FY 2023-24 (Rs. Crore)

Particulars	Claimed in Petition	Approved by Commission
Operation & Maintenance Expenses	165.77	165.77

5.14. Water Charges

Petitioner’s submission

5.14.1 TPL-G (APP) has projected Rs.22.79 Crore towards water charges for FY 2023-24

Commission’s analysis

5.14.2 The Commission provisionally considers the water charges at Rs. 21.18 Crore for FY 2023-24 based on the actual expenses allowed in FY 2021-22 in Rs./ kl in terms of Regulation 54(b) of GERC MYT Regulations, 2016.

Table 5.23: Water Charges Approved for FY 2023-24 (Rs. Crore)

Particulars	Projected by Petitioner	Approved by Commission
Water Charges	27.79	21.18

5.15. Capital Expenditure, Capitalization 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 modernization of the plants. Petitioner has projected capital expenditure of Rs. 81.39 Crore for FY 2023-24, as per the details given in table below:

Table 5.24: Capital expenditure claimed by TPL-G (APP) for FY 2023-24 (Rs. Crore)

Particulars	Claimed by Petitioner
Boiler works	6.79
Turbine works	13.00
Electrical works	12.85
C&I works	36.95
CHP works	6.25
Civil works	2.00
Others	1.32
Miscellaneous	2.23
Total Cost	81.39

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

- (a) Normal Capital Expenditure: The proposed capital expenditure is towards replacement of important parts/ system in light of the ageing effect on the equipment and wear and tear during the normal operations.
- Boiler Works: It is proposed to incur capex in a phased manner towards (i) BTG pressure parts replacement as they are subjected to high temperature and pressure in boiler area due to erosive nature of flue gas, (ii) Replacement of Raw Coal (RC) variator and Mill components, (iii) Replacement of Coal air pipe, Mill body, Gear Set, Raw Coal Variator (RCV), and (iv) Ash line replacement, Ash slurry pump spares, Bottom Ash Hopper

(BAH) gate, Ash Pond reverse water project.

- Turbine Works: Capital expenditure is proposed to be incurred towards D station turbine/ Generator major overhauling & generator stator and rotor replacement and High-Pressure Ash Water Pump (HPAWP), Low Pressure Ash Water Pump (LPAWP), Effluent pumps spares, Residual Fuel Oil (RFO) pump spares, Fire pump spares and Dewatering & mud pumps.
- Electrical Works: During FY 2023-24, expenditure is planned towards E station Generator Transformer (GT) & Interconnecting Transformer (ICT) - 1 Transformers rewinding, Procurement and replacement of Digital Automatic Voltage Regulator (DAVR) of D station, Procurement and replacement of Distribution Control System (DCS) 24 V battery banks and 24 V Supervisory Control and Data Acquisition System (SCADA) Battery Bank-1 & 2 of E and F station.
- Control & Instrumentation Works: The expenditure under this head is proposed towards D station Alstom DCS Upgradation due to obsolescence, Technical issue and outdated Operating System (OS) for Compliance to latest cyber policies. Expenditure is also proposed towards ABB DCS HMI Upgradation due to HMI Hardware obsolescence, outdated Operating System amongst other.
- CHP Works: Expenditure is proposed towards CHP and its ancillary systems, DG sets, and mobile vacuum plant.
- Capital Expenditure has also been planned towards replacement of cable trench covers and life assessment of plant structure. Expenditure is also planned towards cooling system, Supply, Installation, Testing & Commissioning of Linear Heat sensing cable system at coal conveyors and cable gallery.
- Miscellaneous: Other items include expenditure towards office and security related items, Mass Communication related items, office equipment and



facility works and IT assets.

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 by December, 2022 else additional cost is to be incurred. Considering changes being made at policy level, it will evaluate the requirement of CAPEX time to time and keep the Commission informed on the subject matter. Accordingly, 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. 83.84 Crore towards capitalization for FY 2023-24 and furnished the project/work-wise details of capitalization in form 4.3 to the petition.

Commission’s Analysis:

5.15.5 The Petitioner has projected capex of Rs. 81.39 Crore for FY 2023-24 as mentioned in Table 5.25 above along with justification for the capex projected for FY 2023-24.

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. 81.39 Crore for FY 2023-24 as projected by the Petitioner.

5.15.7 The Commission observed that during previous four years i.e., FY 2018-19 to FY 2021-22, the Petitioner has capitalised close to 99.71% amount to capital expenditure approved for the respective financial years. Thus, for FY 2023-24, the Commission accordingly approves the capitalisation of Rs. 83.60 Crore.

5.15.8 The Commission has approved closing GFA of Rs. 1,156.47 Crore in true-up of FY



2021-22 and the same is considered as opening GFA for FY 2022-23, further, the Commission has considered capitalisation of Rs. 29.94 Crore as approved in Tariff Order for FY 2022-23 and arrived at closing GFA for FY 2022-23 at Rs. 1,186.41 Crore and the same is considered as opening GFA for FY 2023-24.

5.15.9 The Commission, as deliberated above has considered the opening GFA, additions during the year and closing GFA for FY 2023-24 as given in table below:

Table 5.25: Gross Fixed Assets approved for FY 2023-24 for TPL-G (APP) (Rs. Crore)

Sr. No.	Particulars	Claimed by Petitioner	Approved by Commission
1	Opening GFA	1,195.52	1,186.41
2	Assets additions during year	83.84	83.60
3	Closing GFA	1,279.36	1,270.01

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 2023-24 (Rs. Crore)

Particulars	Claimed by Petitioner	Approved by Commission
Opening GFA	1,195.52	1,186.41
Addition to GFA	83.84	83.60
Closing GFA	1,279.36	1,270.01
Capitalisation	83.84	83.60
Normative Debt @70%	58.69	58.52
Normative Equity @30%	25.15	25.08

5.16. Depreciation

Petitioner's submission:

5.16.1 The Petitioner has projected Rs.52.35 Crore towards depreciation for FY 2023-24.

Commission's analysis:

5.16.2 The Commission has approved closing GFA of Rs. 1,156.47 Crore in true-up of FY

2021-22 and the same is considered as opening GFA for FY 2022-23, further, the Commission has considered capitalisation of Rs. 29.94 Crore as approved in Tariff Order for FY 2022-23 and arrived at closing GFA for FY 2022-23 at Rs. 1,186.41 Crore and the same is considered as opening GFA for FY 2023-24

5.16.3 The rate of depreciation on assets is considered as actual rates for FY 2021-22 and accordingly computed the depreciation for FY 2023-24 as tabulated below:

Table 5.27: Depreciation approved for FY 2023-24 (Rs. Crore)

Particulars	Claimed by Petitioner	Approved by Commission
Opening value of depreciable GFA	1,195.52	1,186.41
Addition during year	83.84	83.60
Closing GFA	1,279.36	1,270.01
Average depreciable assets	1237.44	1228.21
Depreciation allowed in ARR	52.35	52.34

5.17. Interest and Finance Charges

Petitioner's submission:

5.17.1 TPL-G (APP) has claimed Rs. 0.29 Crore interest on loans for FY 2023-24 on normative basis as per GERC MYT Regulations, 2016.

Table 5.28: Interest on loans projected by TPL-G (APP) for FY 2023-24 (Rs. Crore)

Particulars	Claimed By Petitioner
Opening Balance of Loans	-
Loan addition during the year	58.68
Deletion	-
Repayments during the year	52.35
Closing Balance of Loans	6.34
Average Loans	3.17
Rate of Interest (%)	9.25%
Interest Expense	0.29

Commission's analysis:

5.17.2 The Commission has approved the normative closing loan balance as NIL in truing-up for FY 2021-22. Addition to loan during FY 2023-24 is considered at 70% of net

value of assets added during the year and repayment is considered equal to the depreciation for the year. Further, the Commission has considered the actuals of FY 2021-22 as the weighted Avg. Interest Rate which was 7.30%, while computing the Interest expenses. The Commission, accordingly, approves Rs. 0.23 Crore interest on loan for FY 2023-24.

Table5.29: Interest on loans approved for FY 2023-24 (Rs. Crore)

Particulars	Claimed By Petitioner	Approved by Commission
Opening Balance of Loans	-	-
Loan addition during the year	58.68	58.52
Deletion	-	-
Repayments during the year	52.35	52.34
Closing Balance of Loans	6.34	6.56
Average Loans	3.17	3.28
Rate of Interest (%)	9.25%	7.30%
Interest Expense	0.29	0.23

5.18. Return on Equity

Petitioner's submission:

5.18.1 TPL-G (APP) has projected Rs. 64.15 Crore towards return on equity @14% for FY 2023-24:

Table 5.30: Return on Equity projected by TPL-G (APP) for FY 2023-24 (Rs. Crore)

Particulars	Claimed By Petitioner
Opening Equity	445.65
Equity Addition	25.15
Closing Equity	470.80
<i>Return on Equity at beginning of year</i>	<i>62.39</i>
<i>Return on Equity addition during year</i>	<i>1.76</i>
Total Return on Equity	64.15

Commission's analysis:

5.18.2 The Petitioner has adopted opening equity of Rs. 445.65 Crore for FY 2023-24. The Commission has approved the closing equity at Rs. 433.93 Crore in truing-up of FY 2021-22 and the same is considered as opening equity for FY 2022-23. The addition to equity is further updated based on capitalisation approved for FY 2022-

23 in Tariff Order dated 31.03.2022 and capitalisation approved for FY 2023-24.

5.18.3 The Commission, accordingly, computed the return on equity for FY 2023-24 as detailed below:

Table 5.31: Return on Equity approved by the Commission for FY 2023-24 (Rs. Crore)

Particulars	Claimed By Petitioner	Approved by Commission
Opening Equity	445.65	442.91
Equity Addition	25.15	25.08
Closing Equity	470.80	467.99
<i>Return on Equity at beginning of year</i>	<i>62.39</i>	<i>62.01</i>
<i>Return on Equity addition during year</i>	<i>1.761</i>	<i>1.76</i>
Total Return on Equity	64.15	63.76

5.19. Income Tax

Petitioner's submission:

5.19.1 TPL-G (APP) has projected the income tax at Rs. 13.78 Crore based on the actual tax paid for FY 2021-22 and in proportion to the PBT of TPL-G (APP).

Commission's analysis:

5.19.2 The Commission has approved Rs. 13.76 Crore towards income tax in true-up of FY 2021-22 and accordingly has provisionally considered Rs. 13.76 Crore towards income tax for FY 2023-24 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.

5.20. Interest on Working Capital

Petitioner's submission:

5.20.1 The Petitioner has submitted that the interest on working capital is computed as per the MYT Regulations 2016. The interest rate, being the SBI MCLR rate on 1st April, 2022 plus 250 basis points, of 9.50% 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 5.32: Interest on Working Capital projected by TPL-G (APP) for FY 2023-24
(Rs. Crore)**

Particulars	Claimed By Petitioner
Cost of Coal for 1.5 Months	131.87
Secondary fuel oil for 2 months	2.63
O&M expenses for 1 month	13.81
Maintenance Spares @1% of GFA	11.96
Receivables for 1 month	-
Working Capital Requirement	160.27
Rate of Interest (%)	9.50%
Interest on Working Capital	15.23

Commission’s analysis:

5.20.2 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.

5.20.3 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 2022 (7.00%) including 250 basis points.

5.20.4 The working capital and interest thereon calculated for FY 2023-24 is tabulated as under:



Table 5.33: Interest on Working Capital approved for FY 2023-24 (Rs. Crore)

Particulars	Claimed By Petitioner	Approved by Commission
Cost of Coal for 1.5 Months	131.87	111.71
Secondary fuel oil for 2 months	2.63	1.08
O&M expenses for 1 month	13.81	13.81
Maintenance Spares @1% of GFA	11.96	11.86
Receivables for 1 month	-	-
Working Capital Requirement	160.27	138.46
Rate of Interest (%)	9.50%	9.50%
Interest on Working Capital	15.23	13.16

5.21. Non-Tariff Income

Petitioner's submission:

5.21.1 TPL-G (APP) has projected Non-Tariff Income at Rs. 15.10 Crore for FY 2023- 24 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. 15.10 Crore.

5.22. Aggregate Revenue Requirement (ARR) for FY 2023-24

Petitioner's submission:

5.22.1 The Petitioner has projected the ARR for FY 2023-24 as given in the table below:

Table 5.34: ARR projected by the Petitioner for FY 2023-24 (Rs. Crore)

Particulars	Claimed By Petitioner
Fuel Charges	1,107.26
Water Charges	27.79
O&M Expenses	165.77
Depreciation	52.35
Interest & Finance Charges	0.29
Interest on Working Capital	15.23
Return on Equity	64.15
Income Tax	13.78
Less: Non-Tariff Income	15.10
Net ARR	1,431.52

Commission’s analysis:

5.22.2 The Commission based on the costs/expenses approved in the preceding paragraphs has computed the ARR as given in the Table below:

Table 5.35: ARR approved in respect of TPL-G (APP) for FY 2023-24 (Rs. Crore)

Particulars	Claimed by Petitioner	Approved by Commission
Fuel Charges	1,107.26	937.68
Water Charges	27.79	21.18
O&M Expenses	165.77	165.77
Depreciation	52.35	52.34
Interest & Finance Charges	0.29	0.23
Interest on Working Capital	15.23	13.15
Return on Equity	64.15	63.76
Income Tax	13.78	13.76
Less: Non-Tariff Income	15.10	15.10
Net ARR	1,431.52	1252.79
Total Fixed Charges	324.26	315.11
Total variable Charges	1,107.26	937.68

5.23. Determination of Fixed Charges for FY 2023-24

5.23.1 The Commission has approved total fixed charges at Rs. 315.11 crore for FY 2023-24.

5.24. Determination of Variable Charges for FY 2023-24

5.24.1 The Table given below gives the Station wise energy charges for FY 2023-24

Table 5.36: Approved variable charges for TPL-G (APP) FY 2023-24

Particulars	Fuel cost approved for FY 2023-24 (Rs. Crore)	Fuel cost per unit Gross (Rs./kWh)	Fuel cost per unit Net (Rs./kWh)
D Station	298.02	3.47	3.81
E Station	315.85	3.22	3.54
F Station	323.82	3.31	3.64
Total	937.68	3.33	3.66

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 2023-24, as shown in the Table below:

Approved ARR for TPL-G (APP) for FY 2023-24

(Rs. Crore)

Particulars	FY 2023-24
Variable Cost	937.68
Water Charges	21.18
O&M Expenses	165.77
Depreciation	52.34
Interest & Finance Charges	0.23
Interest on Working Capital	13.16
Return on Equity	63.76
Income Tax	13.76
Less: Non-Tariff Income	15.10
Net ARR	1,252.79

This order shall come into force with effect from 1st April, 2023.

**-Sd-
S. R. Pandey
Member**

**-Sd-
Mehul M. Gandhi
Member**

**-Sd-
Anil Mukim
Chairman**

Place: Gandhinagar

Date: 31/03/2023



Annexure 1: Approved Fuel Costs for FY 2021-22 for True up D, E & F - Station

Item	Formula	Unit	D Station	E Station	F Station
Total Capacity	A1	MW	120	121	121
Actual PLF	A2	%	63.64%	83.78%	83.10%
Gross Generation	A=A1 x A2 x 8760	MUs	668.98	88.05	880.83
Auxiliary Consumption	C	%	9.00%	9.00%	9.00%
Auxiliary Consumption	B	MUs	60.21	79.92	79.27
Net Generation	Y=A - B	MUs	608.77	808.13	801.55
Station Heat Rate	D	Kcal/KWh	2,450	2,455	2,455
Sp. Oil Consumption	E	ml/kWh	1.00	1.00	1.00
Gross Calorific Value of Coal	F	kcal/kg	4,331	4,234	4,280
Calorific value of Oil	G	kcal/I	10,100	10,100	10,113
Overall Heat	H=A x D	G Cal	16,39,009	21,80,164	21,62,434
Heat from Oil	I=(A x E x G)/1000	G Cal	6,757	8,970	8,908
Heat from Coal	J=H-I	G Cal	16,32,252	21,71,194	21,53,526
Transit losses	K	%	0.80%	0.80%	0.80%
Coal Blend					
A) Indigenous Coal	X1	%	76.12%	90.56%	84.79%
B) Imported Coal	X2	%	23.88%	9.44%	15.21%
Actual Oil Consumption	L=A x E	kl	669	888	881
Actual Coal Consumption	M=(J X 1000)/F	MT	3,76,879	5,12,751	5,03,169
A) Indigenous Coal	Q1=M* X X1/(1-K)	MT	2,89,186	4,68,070	4,30,102
B) Imported Coal	Q2=M* X X2	MT	90,007	48,426	76,508
Price of Coal					
A) Indigenous Coal	P1	Rs/MT	5,338	5,299	5,313
B) Imported Coal	P3	Rs/MT	8,728	9,017	8,662
Price of Oil	P4	Rs/kl	47,262	50,098	46,254
Coal cost					
A) Indigenous Coal	N1=Q1 X P1	Rs Lakh	15,437	24,802	22,852
B) Imported Coal	N2=Q2 X P2	Rs Lakh	7,856	4,366	6,627
Total Coal Cost	N3=N1+N2	Rs Lakh	23,293	29,168	29,479
Oil Cost	N4=P3 x L/10^5	Rs Lakh	316	445	407
Other Charges (Please specify)	N5	Rs Lakh	(452)	(510)	(532)
Total Fuel Cost	O=N3+N4+N5	Rs Lakh	23,157	29,103	29,355
Fuel Cost/Unit Gross	P=O/(A*10)	Rs/kWh	3.46	3.28	3.33
Fuel Cost/Unit Net	Q=O/(Y*10)	Rs/kWh	3.80	3.60	3.66
Cost of fuel/G.Cal	R=(O/H)*10^5	Rs/Gcal	1,413	1,335	1,358
Actual Net Generation	Y	MUs	608.77	808.13	801.55
Gross Gen at 85 % PAF					
		MUs	893.52	900.97	900.97
Net Generation					
		MUs	813.10	819.88	819.88
Coal Cost					
		Rs. Crore	311.11	295.92	301.53
Oil Cost					
		Rs. Crore	4.22	4.51	4.17
Nor. Fuel Cost for act. Gen	S=YXQ/10	Rs. Crore	230.85	292.46	294.13



Annexure 2: Approved fuel costs for FY 2023-24 for – D, E & F Stations

Item	Derivation	Unit	Station D	Station E	Station F
Total Capacity	A1	MW	120	121	121
Target PLF	A2	%	81.44%	92.37%	92.09%
Gross Generation	A=A1 x A2 x	MUs	858.48	981.72	978.83
Auxiliary Consumption	C	%	9.00%	9.00%	9.00%
Auxiliary Consumption	B	MUs	77.26	88.35	88.09
Net Generation	Y=A - B	MUs	781.22	893.36	890.74
Station Heat Rate	D	Kcal/KWh	2,450	2,455	2,455
Sp. Oil Consumption	E	ml/kWh	1.00	1.00	1.00
Gross Calorific Value of Coal	F	kcal/kg	4,368	4,346	4,348
Calorific value of Oil	G	kcal/l	10,106	10,106	10,106
Overall Heat	H=A x D	G Cal	21,03,271	24,10,113	24,03,034
Heat from Oil	I=(A x E x G)/1000	G Cal	8,676	9,922	9,892
Heat from Coal	J=H-I	G Cal	20,94,595	24,00,191	23,93,142
Transit losses	K	%	0.80%	0.80%	0.8%
Coal Blend					
A) Indigenous Coal	X1	%	76%	91%	85%
B) Imported Coal	X2	%	24%	9%	15%
Actual Oil Consumption	L=A x E	kl	858	982	979
Actual Coal Consumption	M=(J X 1000)/F	MT	4,79,577	5,52,283	5,50,463
A) Indigenous Coal	Q1=M* x X1/(1-K)	MT	3,67,988	5,04,157	4,70,528
B) Imported Coal	Q2=M* X X2	MT	1,14,533	52,159	83,699
Price of Coal					
A) Indigenous Coal	P1	Rs/MT	5,338	5,299	5,313
B) Imported Coal	P2	Rs/MT	8,728	9,017	8,662
Price of Oil	P3	Rs/kl	47,262	50,098	46,254
Coal cost					
A) Indigenous Coal	N1=Q1 X P1/10 ⁵	Rs Lakh	19,643	26,714	25,000
B) Imported Coal	N2=Q2 X P2/10 ⁵	Rs Lakh	9,997	4,703	7,250
Total Coal Cost	N3=N1+N2	Rs Lakh	29,640	31,417	32,250
Oil Cost	N4=P3 x L/10 ⁵	Rs Lakh	406	492	453
Other Charges (Please specify)	N5	Rs Lakh	(244)	(324)	(321)
Total Fuel Cost	O=N3+N4+N5	Rs Lakh	29,802	31,585	32,382
Fuel Cost/Unit Gross	P=O/(A*10)	Rs/kWh	3.47	3.22	3.31
Fuel Cost/Unit Net	Q=O/(Y*10)	Rs/kWh	3.81	3.54	3.64
Cost of fuel/G.Cal	R=(O/H)*10 ⁵	Rs/Gcal	1,417	1,311	1,348
Net Generation	Y	MUs	781.22	893.36	890.74
Gross Gen at 85 % PAF		MUs	893.52	900.97	900.97
Net Generation		MUs	813.10	819.88	819.88
Coal Cost		Rs. Crore	308.50	288.33	296.85
Oil Cost		Rs. Crore	4.23	4.52	4.17
Nor. Fuel Cost for act. Gen	S=YXQ/10	Rs. Crore	297.64	316.25	324.23

