Before the

MAHARASHTRA ELECTRICITY REGULATORY COMMISSION

World Trade Centre, Centre No. 1, 13th Floor, Cuffe Parade, Mumbai 400 005

Tel. 022 22163964/65/69

Email: mercindia@merc.gov.in

Website: www.merc.gov.in

CASE NO. 221 OF 2022

In the matter of

Case of The Tata Power Company Limited (Generation) for approval of final true-up of Annual Revenue Requirement (ARR) for FY 2019-20, FY 2020-21 and FY 2021-22, provisional true-up of ARR for FY 2022-23, and revised ARR and Tariff for FY 2023-24 and FY 2024-25

Coram

Sanjay Kumar, Chairperson

I. M. Bohari, Member

Mukesh Khullar, Member

ORDER

Dated: 31 March, 2023

The Tata Power Company Limited-Generation (TPC-G) filed a Petition on 1 November, 2022 for approval of final true-up of ARR for FY 2019-20, FY 2020-21 and FY 2021-22, provisional true-up of ARR for FY 2022-23, and revised ARR and tariff for FY 2023-24 and FY 2024-25. Subsequently, TPC-G submitted the Revised Consolidated Petition on 26 December, 2022.

The Petition has been filed in accordance with the MERC (Multi Year Tariff) Regulations, 2015 (**MYT Regulations, 2015**) for true-up of FY 2019-20, MERC (Multi Year Tariff) Regulations, 2019 (**MYT Regulations, 2019**) for true-up of FY 2020-21 and FY 2021-22, provisional true-up of FY 2022-23, and revised tariff for FY 2023-24 and FY 2024-25.

The Commission, in exercise of the powers vested in it under Sections 61 and 62 of the Electricity Act (**EA**), 2003 and all other powers enabling it in this behalf, and after taking into consideration the submissions made by TPC-G, upon Public consultation process, and upon considering all other relevant material, has approved the true-up of ARR for FY 2019-20, FY 2020-21 and FY 2021-22, provisional true-up of ARR for FY 2022- 23, and revised ARR and tariff for FY 2023-24 and FY 2024-25.

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LIST OF ABBREVIATIONS

AEC	Auxiliary Energy Consumption
AEML	Adani Electricity Mumbai Limited
AFC	Annual Fixed Charges
APM	Administered Prince Mechanism
ARR	Aggregate Revenue Requirement
ATE	Appellate Tribunal for Electricity
BEST	The Brihanmumbai Electric Supply & Transport Undertaking
CCGT	Combined Cycle Gas Turbine
DPR	Detailed Project Report
DSM	Deviation Settlement Mechanism
EA	Electricity Act
GFA	Gross Fixed Assets
GSHR	Gross Station Heat Rate
GT	Generator Transformer
H1	Half year period from April to September
H1	Half year period from April to September
H2	Half year period from October to March
H2	Half year period from October to March
HBA	Harga Batubara Acuan
HOSS	Head Office & Support Services
ICI	Indonesian Coal Index
IoWC	Interest on Working Capital
kcal	kilo calories
kL	kilo litre
kWh	kilo Watt hour
MAT	Minimum Alternate Tax
MSLDC	Maharashtra State Load Despatch Centre
MSPGCL	Maharashtra State Power Generation Company Limited
MT	Metric Tonne
MTR	Mid Term Review
MU	Milliion Units
MW	Mega Watt
MYT	Multi Year Tariff
NTI	Non-Tariff Income
O&M	Operation & Maintenance
PLF	Plant Load Factor
PPA	Power Purchase Agreement/Arrangement
RLNG	Regasified Liquified Natural Gas
RoE	Return on Equity
TPC	The Tata Power Company Limited
TPC-D	The Tata Power Company Limited-Distribution
TPC-G	The Tata Power Company Limited-Generation
TPC-T	The Tata Power Company Limited-Transmission
USD	United States Dollar

1 BACKGROUND AND BRIEF HISTORY

1.1 INTRODUCTION

1.1.1 The Tata Power Company Limited (TPC) is an integrated Utility engaged in Generation, Transmission and Distribution of electricity. TPC-G's installed generation capacity is 1377 MW as on 1 April, 2019, comprising 447 MW of Hydro Generation and 930 MW of Coal/Gas/Oil-fired Thermal Generation, which supplies power to BEST and TPC's own Distribution Business. The supply of power from TPC's 1377 MW is governed under Power Purchase Agreement/Arrangement (PPA) approved by the Commission upto FY 2023-24.

1.2 MYT REGULATIONS

1.2.1 The Commission notified the MYT Regulations, 2015 on 8 December, 2015 and notified the first amendment on 29 November, 2017. These Regulations are applicable for the 3rd Control Period from FY 2016-17 to FY 2019-20.

1.2.2 Subsequently, the Commission notified the MYT Regulations, 2019 on 1 August, 2019, which are applicable for the 4th Control Period from FY 2020-21 to FY 2024-25.

1.3 MYT ORDER FOR 4TH CONTROL PERIOD

1.3.1 Vide its Order dated 30 March, 2020 in Case No. 300 of 2019, the Commission approved the Tariff for the 4th MYT Control Period from FY 2020-21 to FY 2024-25. In the said Order, the Commission had also approved the final true-up for FY 2017-18, FY 2018-19 and provisional true-up for FY 2019-20.

1.4 REVIEW ORDER ON MYT ORDER FOR 4TH CONTROL PERIOD

1.4.1 TPC-G filed a Petition for review of the Commission's MYT Order in Case No. 300 of 2019. Vide its Order dated 27 June, 2020 in Case No. 94 of 2020, the Commission disposed of the Review Petition partly allowing review and with certain directions to TPC-G.

1.4.2 Adani Electricity Mumbai Limited-Distribution (AEML-D) filed the Petition in Case No. 163 of 2020 seeking reconciliation of the issue of standby charges payable by the Mumbai Distribution Licensees to TPC (towards TPC's cost of service for providing standby capacity to the Mumbai Distribution Licensees such as AEML, which inter alia includes the charges towards the then standby arrangement between MSEDCL and TPC), for the period from FY 1999-2000 to FY 2003-04, decided by the Commission in the MYT Order dated 30 March, 2020 in Case No. 300 of 2020 with Clarificatory Order dated 20

August, 2019 passed by the Hon'ble Supreme Court in MA No. 1404 of 2019 in Civil Appeal No. 415 of 2007. The Commission disposed of the Petition allowing the same with certain directions to TPC-G.

1.5 MID TERM REVIEW FOR 4TH CONTROL PERIOD

1.5.1 In accordance with Regulation 5.1(b) of the MYT Regulations, 2019, the Mid Term Review (MTR) Petition for 4th MYT Control Period was to be filed by 1 November, 2022 comprising:

(i) Final true-up for FY 2019-20 to be carried out in accordance with the MYT Regulations, 2015;

(ii) Final true-up for FY 2020-21 and FY 2021-22 to be carried out in accordance with the MYT Regulations, 2019;

(iii) Provisional true-up for FY 2022-23 to be carried out in accordance with the MYT Regulations, 2019;

(iv) Revised ARR and Tariff for FY 2023-24 and FY 2024-25.

1.5.2 TPC-G filed its MTR Petition for the 4th MYT Control Period on 1 November, 2022.

1.5.3 The Office of the Commission issued the data gaps to the Petitioner on 15 November, 2022. TPC-G submitted the replies to first set of data gaps on 30 November, 2022, on 6, 9 and 12 December, 2022. The Technical Validation Session (TVS) was held on 13 December, 2022. The list of persons who attended the TVS is at Appendix-I.

1.5.4 During the TVS, TPC-G was directed to provide additional information and clarifications on the issues raised, and to submit a revised Petition after incorporating all the necessary data and changes. TPC-G submitted its replies to the data gaps and filed its revised Petition on 26 December, 2022 with the following prayers:

"

- *Accept the Truing Up of FY 2019-20 as worked out in this Petition in accordance with the guidelines & principles outlined in MYT Regulations, 2015 and its First Amendment dated 29th November 2017;*
- *Accept the Truing Up of FY 2020-21 and FY 2021-22 as worked out in this Petition in accordance with the guidelines & principles outlined in MYT Regulations, 2019;*
- *Accept the Provisional Truing-up of FY 2022-23 as worked out in this Petition in accordance with the guidelines & principles outlined in MYT Regulations, 2019;*
- *Allow part of Unit - 6 assets to continue as common assets from the year FY 2018-19;*

- *Allow the transfer of assets pertaining to Transmission from the Generation Business of Tata Power to the Transmission Business of Tata Power;*
- *Accept the ARR projections of Annual Revenue Requirement for year FY 2023-24 and FY 2024-25 as worked out in this Petition in accordance with the guidelines & principles outlined in MYT Regulations, 2019;*
- *Determine the tariff of Thermal and Hydro Generating Stations for FY 2023-24 and FY 2024-25 as worked out in this Petition in accordance with the guidelines & principles outlined in MYT Regulations, 2019;*

………"

1.6 ADMISSION OF PETITION AND PUBLIC CONSULTATION PROCESS

1.6.1 The Commission admitted the revised MYT Petition on 26 December, 2022. In accordance with Section 64 of the Act., the Commission directed TPC-G to publish its Petition in the prescribed abridged form and manner to ensure adequate public participation, and to reply expeditiously to the suggestions and objections received.

TPC-G issued a Public Notice inviting suggestions and objections from the public. The Public Notice was published in the daily newspapers Indian Express (English), Financial Express (English), Loksatta (Marathi) and Saamana (Marathi) on 29 December, 2022. The copies of the Petition and its summary were made available for inspection/purchase at TPC-G's offices and on its website (ww.tatapower.com). The Public Notice and Executive Summary of the Petition were also made available on the websites of the Commission (www.merc.gov.in) in downloadable format. The Public Notice specified that the suggestions and objections, in English or Marathi, be filed with proof of service on TPC-G.

1.6.2 The e-Public Hearing was held on 31 January, 2023 at 10.30 hrs through video conference. The list of persons who attended the e-Public Hearing is at Appendix-II.

1.6.3 The Commission has ensured that the due process contemplated under law to ensure transparency and public participation was followed at every stage and adequate opportunity was given to all concerned to express their views.

1.6.4 The suggestions and objections received in writing /through online filing on the Commission's website as well as during the e-Public Hearing, along with

TPC-G's responses and the Commission's rulings have been summarised in Chapter 2 of this Order.

1.7 ORGANISATION OF THE ORDER

1.7.1 This Order is organised in the following eleven (11) chapters:

- **Chapter 1** provides a brief history of the regulatory process undertaken by the Commission.
- **Chapter 2** sets out the suggestions and objections received in writing /through online filing on the Commission's website as well as during the e-Public Hearing. These have been summarized issue-wise, followed by the response of TPC-G and the rulings of the Commission.
- **Chapter 3** deals with the impact of other Orders.
- **Chapter 4** deals with the approval of final true-up of FY 2019-20.
- **Chapter 5** deals with the approval of final true-up of FY 2020-21 and FY 2021-22.
- **Chapter 6** deals with the provisional true-up of FY 2022-23.
- **Chapter 7** deals with the cumulative Revenue Gap till FY 2022-23.
- **Chapter 8** deals with the approval of revised Tariff for FY 2023-24 and FY 2024-25.
- **Chapter 9** deals with summary of approved tariff for FY 2023-24 and FY 2024-25
- **Chapter 10** summarises the Commission directives.
- **Chapter 11** covers the applicability of the Order.

2 SUGGESTIONS/OBJECTIONS RECEIVED, RESPONSE OF TPC-G AND COMMISSION'S VIEWS

2.1 GENERATION ESTIMATES FOR H2 OF FY 2022-23

Suggestions/Objections

2.1.1 Adani Electricity Mumbai Limited (AEML) submitted that TPC-G has projected the Plant Load Factor (PLF) of 50.54% and 55.79% for H2 of FY 2022-23 whereas the actual PLF for H1 of FY 2022-23 was 69.84% and 73.21% for Units 5 and 8 respectively. The lower generation estimates for H2 of FY 2022-23 is to subdue the fuel cost estimates. The generation estimates from Units 5 and 8 has to be considered at realistic levels in light of the limitations on the import of power from outside Mumbai due to transmission constraints.

TPC-G's Response

2.1.2 The generation estimates for H2 of FY 2022-23 are based on the demand of the contracted distribution licensees in the recent past and availability of the Units considering planned outages. TPC-G will generate as per its projected availability, demand of the distribution licensees and in adherence to the Regulations and directives of the appropriate authorities under the prevailing laws and regulations. The issue of transmission constraint is not in the scope of the present Petition.

Commission's View

2.1.3 The Commission has carried out the provisional true-up of FY 2022-23 in this Order. For the purpose of provisional true-up, the Commission has considered the generation projections as submitted by TPC-G, which shall be subject to final true-up.

2.2 IMPORTED COAL PRICE FOR FY 2023-24 AND FY 2024-25

Suggestions/Objections

2.2.1 AEML submitted that, in the MYT Petition, TPC-G has proposed to consider the weighted average of actual coal prices for the period July-September 2019 for the purpose of tariff determination for the 4th Control Period. In the present MTR Petition, TPC-G has proposed to consider the lower coal price than the actual for the period from July-September 2022 stating the actual prices for the said period to be an aberration. TPC-G has considered the coal price of Rs. 10938/MT and Rs. 8700/MT for FY 2023-24 and FY 2024-25 respectively whereas, the actual coal price for the period from July-September 2022 was Rs. 17560/MT. The proposal of TPC-G results in subdued energy charges.

TPC-G has submitted that the current high prices of coal are not likely to sustain in future and therefore it has proposed significant reduction in coal price from April 2023 onwards. However, various reports and news articles predict that coal prices are going to remain at significant higher levels in the year 2023. From the month wise Harga Batubara Acuan (HBA) index for the period from February 2022-January 2023, it can be observed that the index, after witnessing reduction in November and December 2022 has increased in January 2023 (@ USD 305.21/MT).

2.2.2 The comparison of HBA, Indonesian Coal Index (ICI)-3 and ICI-4 indices submitted by TPC-G is incorrect. Mere comparison of HBA with ICI-3 (5000 GAR) and ICI-4 (4200 GAR) is inappropriate. The comparison should be for the corresponding grade/GCV of coal. From the comparison of indices namely HPB 4500, ICI-3 (prorated to 4850), HPB 4200 and ICI-4200 GAR, it can be observed that ICI-3 and ICI-4 have also been fluctuating significantly. While in the recent months, ICI-3 and ICI-4 prices have been lower than corresponding HPB prices, in the past they have been higher also. Hence, the movement of the prices in future is uncertain. Further, while the current geopolitical situation will continue to put pressure on high calorific value Australian coal, it would naturally reflect in lower rank Indonesian coal, as well such as ICI-3, 4 and 5.

2.2.3 TPC-G has not submitted documentary evidence to substantiate that it has entered to long term contract based on ICI-3 or ICI-4 index. Further, given the relative variability of the indices, TPC-G has not clarified if it would shift to HBA linked procurement if ICI rose above HBA. Hence, it would be realistic to consider the latest 3 months' coal prices for approving the energy charges for FY 2023-24 and FY 2024-25. As per Regulation 50.6 of the MYT Regulations, 2019 the energy charge is to be computed considering the landed cost of fuel for the preceding three (3) months.

TPC-G's Response

2.2.4 At the time of filing of MYT Petition, the coal prices were stable and therefore, it was prudent to consider the then latest available prices. However, situations have changed subsequently due to which TPC-G has taken certain corrective actions by changing the coal procurement strategy and the realistic impact has been factored in the MTR Petition for projections of the ensuing years. TPC-G has made detailed submission on the projected coal price for FY 2023-24 and FY 2024-25 citing the abnormality of the coal prices and steps taken for optimisation of fuel cost.

2.2.5 The procurement of coal in H1 of FY 2022-23 was based on HBA linked price. TPC-G has changed the procurement reference index from HBA to ICI-3 and ICI-4 as currently, there is large gap between HBA index and ICI-3 and ICI-4. Coal procurement has already been initiated on ICI-3 and ICI-4 indices and therefore, considering the coal price for ensuing years based on HBA indices is incorrect. TPC-G has submitted the contracts placed till date, to the Commission. By shifting coal procurement to the combination of ICI-3 and ICI-4 indices, reduction in coal price can be achieved by almost 35%.

2.2.6 Further, TPC-G has planned to procure coal at lowest index/competitive price to optimize the cost of generation. TPC-G has been closely monitoring the indices on day-to-day basis and would maintain the flexibility in the contracts to factor in favourable trends while executing the contracts.

Commission's View

2.2.7 The Commission has analysed the actual coal prices and accordingly approved the tariff for FY 2023-24 and FY 2024-25 as detailed in Chapter 8 of the Order.

2.3 GENERATION FROM HYDEL STATIONS

Suggestions/Objections

2.3.1 AEML submitted that the Commission, in its Order dated 3 November, 2022 in Case No. 29 of 2022, directed Maharashtra State Load Despatch Centre (MSLDC) to frame a draft procedure for operation of Bhira Pumped Storage Unit stipulating the roles and responsibilities of different entities, timeframe of submission of schedules and other information exchange among the parties, energy accounting, treatment under the DSM Regulations etc. based on principles laid down in the Order and the other applicable Regulations. Maharashtra State Power Generation Company Limited (MSPGCL)'s Rawalje power plant (2x40 MW) is in the downstream of this Bhira Pumped Storage Unit. There may be various situations whereby, the MSPGCL's hydro plant may not get sufficient water due to operation of Bhira Pumped Storage Unit.

TPC-G's Response

2.3.2 TPC-G's Petition in Case No. 29 of 2022 was filed for operationalisation of Bhira Pumped Storage Unit wherein the procedures and operational modalities were part of the Petition. The Commission directed MSLDC to come up with a detailed procedure and by the time, the project gets operationalised, MSLDC, in compliance to the directions of the Commission, would have finalised the procedure. Further, with respect to the operations of Rawalje plant, the plant modifications have been planned after due consultation with MSPGCL and the construction activities were taken up after obtaining MSPGCL's concurrence.

Commission's View

2.3.3 The Commission has taken note of the suggestions/objections and TPC-G's response thereof.

2.4 GENERATION FLEXIBILITY THROUGH BUNDLING OF POWER

Suggestions/Objections

2.4.1 AEML submitted that the Commission, in its Order dated 5 November, 2019 in Case No. 121 of 2019 directed MSLDC to prepare appropriate procedures for the required changes in the Deviation Settlement Mechanism (DSM) framework. Till the time, same are notified by the Commission, TPC-G's proposal for reduction in cost of generation will not pan out.

TPC-G's Response

2.4.2 The generation flexibility is under active consideration by TPC-G as one of the initiatives to optimize its cost of thermal generation. The impact of the same has not been factored in the tariff proposals in the Petition. TPC-G will approach the Commission at an appropriate time after the finalisation of procedures and will adhere to the directions of the Commission/appropriate authority.

Commission's View

2.4.3 The Commission has taken note of the suggestions/objections and TPC-G's response thereof.

2.5 REFUND OF STANDBY CHARGES

Suggestions/Objections

2.5.1 AEML-D submitted that in accordance with the Commission's direction, TPC-G has submitted the impact due to refund of Standby Charges in its Petition. TPC-G may be directed to refund the same to the distribution licensees. Further, by virtue of tariffs for FY 2020-21 for AEML-D determined by considering the full Standby Charges viz., Rs. 35.53 Crore, the actual revenue for FY 2020-21 includes the same. The ARR claimed by AEML-D for FY 2020-21 in its MTR Petition does not include the said amount, thereby, the said amount of Rs. 35.53 Crore has been proposed to be refunded to its consumers along with holding cost. Therefore, the refund of Standby Charges along with holding cost, as approved by the Commission in the MTR Order of TPC-G, shall be retained by AEML-D.

TPC-G's Response

2.5.2 TPC-G has submitted the computations of the refund of the Standby Charges received, in its Petition. TPC-G shall comply with the Commission's directions in this regard. The treatment of the same for AEML-D is not within the purview of the present Petition.

Commission's View

2.5.3 The Commission has approved the Standby Charges to be refunded along with holding cost by TPC-G in this Order. The treatment of the same in the Aggregate Revenue Requirement (ARR)s of the respective distribution licensee shall be detailed in the respective MTR Orders.

3 IMPACT OF OTHER ORDERS

3.1 ORDER IN CASE NO. 94 OF 2020

Background

3.1.1 TPC-G had filed the Review Petition in Case No. 94 of 2020 against the Commission's MYT Order dated 30 March, 2020 in Case No. 300 of 2019 seeking review on certain aspects. The Commission, vide its Review Order dated 27 June, 2020 partly allowed the review on the issues raised by TPC-G and ruled as under:

*"**1. The prayer for revision in Interest on Working capital for FY 2017-18 and FY 2018- 19 is partly allowed. The net impact on ARR is allowed as Rs. 0.04 Crore for FY 2017- 18. This impact of the same will be considered during MTR proceedings. However, the associated Carrying/(Holding) cost shall not be allowed as TPC-G has made incorrect submission in its MYT Petition and revised the computations for Unit 5 in the present Petition, in response to the Commission's query under review Petition.***

2. The prayer for consideration of portion of Common assets of Unit 6 while removing GFA for Unit 6 from Unit 5 to 7 and Hydro stations is dismissed as being without merit and not admissible for review on this issue.

3. The prayer for consideration of revised Hydro Incentives for FY 2017-18 and FY 2018-19 is allowed. The net impact on ARR allowed is Rs. 3.96 Crore for FY 2017-18 and Rs. 4.52 Crore for FY 2018-19. This impact along with carrying cost will be considered at time of MTR proceedings.

4. The prayer for removal of depreciation of Unit 4 for FY 2017-18 is dismissed as not admissible for review on this issue. However, considering the additional replies of TPC-G relating to Income Tax, which were not considered earlier, the ARR allowed for FY 2018-19 for Unit 5 to 7 and Hydro Stations has been reduced by Rs. 13.24 Crore. This impact along with holding cost will be considered at time of MTR proceedings.

5. The prayer to consider actual expenses of Unit 6 for computation of base O&M Expenses for MYT Control is dismissed as not admissible for review on this issue.

6. There are two errors identified by the Commission in the present review proceeding due to incorrect sharing of gains/losses on Auxiliary Consumption for Unit 5 to 7 and Hydro for FY 2017-18 and incorrect allocation of shared capacity

to Unit 8 for FY 2018-19. These errors have an impact of total reduction in ARR by Rs. 3.78 Crore (Rs 2.40 Crore on account of incorrect sharing of gains/losses and Rs 1.38 Crore on account of incorrect allocation of Unit-8 shared capacity). This impact along with associated impact on other components of ARR and applicable holding cost will be considered at time of MTR proceedings."

TPC-G's Submission

3.1.2 Accordingly, TPC-G has claimed the impact of Review Order as under:

Table 3.1: Impact of Review Order for FY 2017-18 (Rs. Crore)

Particulars	Units 5,7 & Hydro	Unit 8
IoWC for FY 2017-18	0.04	0.00
Sharing of gains/losses on Auxiliary Consumption	-2.41	-1.38
Hydro Incentives for FY 2017-18	3.97	0.00
Total Impact without carrying cost	**1.60**	**-1.38**

Table 3.2: Impact of Review Order for FY 2018-19 (Rs. Crore)

Particulars	Units 5,7 & Hydro
Hydro Incentives for FY 2018-19	4.52
Revised Income Tax	-13.24
Total Impact without carrying cost	**-8.72**

3.1.3 TPC-G submitted that it has preferred an Appeal before the Hon'ble ATE on some of the above issues in Appeal No. 144 of 2021. TPC-G submitted that the above claims are subject to the outcome of the Appeal No. 144 of 2021.

3.1.4 TPC-G has considered the above claimed amounts in its claim of total gap/(surplus) upto FY 2022-23. TPC-G has claimed the carrying cost on the said amounts from FY 2019-20 onwards.

Commission's Analysis and Ruling

3.1.5 The impact of issues admitted by the Commission in the Review Order are as under:

Table 3.3: Impact of Review Order approved by the Commission for FY 2017-18 (Rs. Crore)

Particulars	Units 5,7 & Hydro
IoWC for FY 2017-18	0.04
Sharing of gains/losses on Auxiliary Consumption	-2.40
Hydro Incentives for FY 2017-18	3.96
Total Impact without carrying cost	**1.60**

Table 3.4: Impact of Review Order approved by the Commission for FY 2018-19 (Rs. Crore)

Particulars	Units 5,7 & Hydro	Unit 8
Hydro Incentives for FY 2018-19	4.52	-
Revised Income Tax	-13.24	-
Allocation of shared capacity	-	-1.38
Total Impact without carrying cost	**-8.72**	**-1.38**

3.1.6 The Commission has considered the above amounts in computing the cumulative revenue gap/(surplus) upto FY 2022-23 as detailed in Chapter 7 of the Order.

3.1.7 TPC-G has claimed carrying/(holding) cost on the said amounts from FY 2019-20 onwards. However, the claim is not in line with the rulings in the Review Order wherein, the Commission had disallowed the carrying cost on the amount of Rs. 0.04 Crore towards IoWC for FY 2017-18 for Units 5,7 & Hydro. Further, TPC-G has not claimed the carrying/(holding) cost from FY 2017-18/FY 2018-19 onwards for the approved amounts for the corresponding years. The Commission has considered the carrying/(holding) cost on the approved amounts, in accordance with the rulings of the Commission in the Review Order, from FY 2017-18/FY 2018-19 as applicable.

3.2 IMPACT OF COMMON ASSETS OF UNIT 6

Background

3.2.1 The Commission, in the MYT Order, in the final true-up of FY 2017-18 and FY 2018-19 ruled as under:

"4.8.4 The Commission notes TPC-G's submission that some of Assets which are booked under Unit 6 are still being used by Other Units. The Commission asked TPC-G to submit the complete details of assets which are being used by other units. TPC-G in response to the Commission's query clarified that certain assets related to Chlorination Plant, Cooling Water Jetty, De-mineralisation Plant, 220 kV Switchyard, Condensate Polishing Unit, SCADA System are going to continue to be in service irrespective of Unit 6.

4.8.5 As per the present methodology, the cost of Common assets is allocated to each Unit and recovery of such assets is allowed through Annual Fixed Charges of such Unit. If the Unit is retired or not tied up, having considered the same principle adopted in the previous Orders, cost allocated to such Units is also not to be considered for recovery. But after perusal of list of assets given by TPC-G, it is noted that some of assets which are commonly used e.g., 220 kV Switchyard, *SCADA, etc. are entirely booked under Unit 6. These assets are required to be considered for computation of fixed costs for Other units. However, there is no clarity on use of assets by other Units by perusing list provided as to whether all the assets proposed to be allocated to other Units and there is no duplicity of the Assets.*

4.8.6 In view of the above, the Commission opines that ***mere consideration of assets on basis of list provided would not be appropriate as it has cost implication in tariff. Also, it is important to understand use, nature and cost of Common assets based on verification of assets on site for each Unit. The Commission will consider this issue separately after TPC-G submits verifiable details of the assets with proper justification confirming the usage of common assets by the running units. The Commission, on the basis of the detailed submission by TPC-G on this issue will initiate a third party verification of assets and will take final view in the matter****. In this regard, the Commission at this stage has not considered the assets of Rs. 26.03 Crore pertaining to allocation of Unit 6 to other Units for determination of fixed costs for Other Units and the Commission will take appropriate view in the matter during the MTR proceedings.*

4.8.7 Accordingly, the Commission at this stage has decided to remove entire amount of Gross Fixed Assets of Unit 6 from Gross Fixed Assets as on March 31, 2018 for Unit 5 to 7 and Hydro Generating Station. Subsequently, the adjustment has been made in
removal of normative debt amount and regulatory equity amount.”

“4.11.5 Regarding the Unit 6, as discussed in earlier section of this Chapter, the Commission at this stage has decided to remove entire asset of Unit 6, including the common assets submitted by TPC-G. Accordingly, the Commission has reduced GFA amount of Rs. 571.28 Crore (Rs. 545.25 Crore + Rs. 26.03) for Unit 6 from Closing GFA of FY 2017-18.” (emphasis provided)

3.2.2 TPC-G, in its Review Petition, claimed that out of the asset value of Rs. 26.03 Crore, the assets amounting to Rs. 7 Crore pertain to Unit 8. TPC-G submitted that, in addition to deduction of the amount of Rs. 26.03 Crore from GFA of Units 5,7 & Hydro, the amount of Rs. 7 Crore has been deducted from GFA of Unit 8 amounting to double deduction. In this regard, the Commission, in the Review Order, ruled as under:

“13.9 Further, the bifurcation of assets of Rs. 26.03 Crore (which is submitted in present review proceeding) was not submitted to the Commission earlier. This is a new submission made before the Commission in the Review Petition. Considering

the submission of TPC-G in the Review Petition regarding the allocation of assets, it appears that GFA of Rs. 7 Crore has been deducted twice. However, the criteria regarding new evidence for accepting as a ground for Review under Regulation 85 (a) of the MERC (Conduct of Business) Regulations, 2004 states that the Review Petitioner should have "discovered new and important matter or evidence which, after the exercise of due diligence, was not within his knowledge or could not be produced by him at the time when the direction, decision or order was passed". This criterion is not fulfilled in this case, as the present information was very much available with TPC-G and was not made available to the Commission, despite specific query in this regard. Accordingly, TPC-G cannot be allowed to claim relief under Review."

TPC-G's Submission

3.2.3 TPC-G submitted that it had made a submission regarding the same vide its letter dated 27 October, 2022. TPC-G has claimed the additional depreciation, RoE and O&M expenses of Rs. 0.88 Crore, Rs. 1.21 Crore and Rs. 4.42 Crore respectively for Units 5,7 & Hydro for FY 2018-19.

Commission's Analysis and Ruling

3.2.4 TPC-G, in the Review Petition, submitted that out of the total assets amounting to Rs. 26.03 Crore, the assets amounting to Rs. 7 Crore have to be allocated to Unit 8 whereas, in the present Petition, it has considered entire assets addition for Units 5,7. The Commission takes a serious note of the inconsistent submissions of TPC-G.

3.2.5 The third-party verification of the common assets amounting to Rs. 26.03 Crore is yet to be undertaken. The Commission, for the purpose of this Order has provisionally considered the assets of Rs. 26.03 Crore in the GFA of Units 5,7 & Hydro from FY 2019-20 onwards.

3.2.6 The Commission has perused TPC-G's claim of additional depreciation, RoE and O&M expenses of Rs. 0.88 Crore, Rs. 1.21 Crore and Rs. 4.42 Crore respectively for Units 5,7 & Hydro for FY 2018-19 and finds the same to be in Order. The Commission has considered the said amounts in computing the cumulative revenue gap/(surplus) upto FY 2022-23 as detailed in Chapter 7 of the Order.

3.3 ORDER IN CASE NO. 163 OF 2020

Background

3.3.1 AEML-D has filed the Petition in Case No. 163 of 2020 seeking reconciliation of the issue of Standby Charges decided in the Order dated 30 March 2020 in Case No. 300 of 2020 with the Clarificatory Order dated 20 August 2019 passed by the Hon'ble Supreme Court in MA No. 1404 of 2019 in Civil Appeal No. 415 of 2007. The Commission, vide its Order dated 21 December, 2020 in the said case ruled as under:

*"**ORDER***

…

2. In light of the Clarificatory Order dated 20 August 2019 by the Hon'ble Supreme Court and discussions made at Para. 10 to Para. 21 of this Order, the Commission revises its decision of allowing Tata Power Company Ltd.- Generation to recover the amount determined towards Standby Charges in its Multi Year Tariff Order dated 30 March 2020 in Case No. 300 of 2019 from BEST Undertaking, Adani Electricity Mumbai Ltd.- Distribution and Tata Power Company Ltd.-Distribution.

3. Tata Power Company Ltd.-Generation is directed not to recover the component of Standby Charges in the balance instalments from the above Distribution Licensees. Also, the amount refundable to BEST Undertaking, Adani Electricity Mumbai Ltd.- Distribution and Tata Power Company Ltd.- Distribution by Tata Power Company Ltd.-Generation on account of component of Standby Charges already paid in the past instalments by them, may be claimed, alongwith the associated holding cost in the respective forthcoming Mid-Term Review Petitions by these Distribution Licensees which would be adjusted in the respective MidTerm Review Orders of these utilities.

***4. Tata Power Company Ltd.-Generation is directed to submit the computation of impact on account of this Order (refund of already recovered Standby Charges to the Distribution Licensees, alongwith the holding cost) in its forthcoming Mid Term Review Petition which would be considered by the Commission while approving its Annual Revenue Requirement under the Mid Term Review Petition.**"*

TPC-G's Submission

3.3.2 In compliance to the above directive, TPC-G submitted the amount received through instalments as under:

Table 3.5: Amount received from distribution licensees as submitted by TPC-G (Rs. Crore)

Instalment Month	AEML	BEST	TPC-D	Total
April 2020	2.96	3.72	2.21	**8.89**
May 2020	2.96	3.72	2.21	**8.89**
June 2020	2.96	3.72	2.21	**8.89**
July 2020	2.96	3.72	2.21	**8.89**
August 2020	2.96	3.72	2.21	**8.89**
September 2020	2.96	3.72	2.21	**8.89**
October 2020	2.96	3.72	2.21	**8.89**
November 2020	2.96	3.72	2.21	**8.89**
Total	**23.69**	**29.72**	**17.67**	**71.08**

3.3.3 In accordance with the Commission's directive, the impact on this account is as under:

Table 3.6: Total impact as submitted by TPC-G (Rs. Crore)

Particulars	Units	AEML	BEST	TPC-D	Total
Principal amount	**Rs. Crore**	**23.69**	**29.72**	**17.67**	**71.08**
Rate of interest					
FY 2019-20	%	9.66%	9.66%	9.66%	
FY 2020-21	%	8.57%	8.57%	8.57%	
FY 2021-22	%	8.50%	8.50%	8.50%	
FY 2022-23	%	8.50%	8.50%	8.50%	
Holding cost					
FY 2019-20	Rs. Crore	1.14	1.44	0.85	**3.43**
FY 2020-21	Rs. Crore	2.03	2.55	1.51	**6.09**
FY 2021-22	Rs. Crore	2.01	2.53	1.50	**6.04**
FY 2022-23	Rs. Crore	2.01	2.53	1.50	**6.04**
Total	**Rs. Crore**	**7.20**	**9.03**	**5.37**	**21.61**
Total amount	**Rs. Crore**	**30.89**	**38.75**	**23.04**	**92.69**

Commission's Analysis and Ruling

3.3.4 The Commission has gone through the submissions of TPC-G. As against the total approved amount of Rs. 106.61 Crore, TPC-G has recovered the amount of Rs. 71.08 Crore upto November, 2020 in monthly instalments from April-November, 2020. However, TPC-G has claimed the holding cost on the total recovered amount, during the period from April-November 2020, from FY 2019-20 onwards. The Commission does not find the holding cost claim of TPC-G to be in order as the same has been computed from mid-year of FY 2019-20 (half year) onwards on the entire recovered amount from the respective distribution licensee.

3.3.5 The Commission approves the principal amount of Rs. 71.08 Crore as claimed by TPC-G. As regards holding cost, the Commission has considered the holding cost from the actual date of receipt of each instalment from the respective distribution licensee upto March, 2023. Accordingly, the Commission approves the total amount to be refunded by TPC-G is as shown in the Table below:

Table 3.7: Standby Charges to be refunded by TPC-G (Rs. Crore)

Distribution Licensee	Claimed			Approved		
	Principal amount	Holding cost	Total amount	Principal amount	Holding cost	Total amount
AEML	23.69	7.20	**30.89**	23.69	5.53	**29.21**
BEST	29.72	9.03	**38.75**	29.72	6.92	**36.64**
TPC-D	17.67	5.37	**23.04**	17.67	4.11	**21.78**
Total	**71.08**	**21.61**	**92.69**	**71.08**	**16.55**	**87.63**

3.3.6 The Commission directs TPC-G to refund the above approved amount for each distribution licensee in the month of April 2023.

4 FINAL TRUE-UP OF ARR FOR FY 2019-20

4.1 BACKGROUND

4.1.1 The Commission vide the MYT Order dated 8 August, 2016 in Case No. 32 of 2016 for 3rd Control Period from FY 2016-17 to FY 2019-20 approved the tariff for FY 2019-20. The Commission vide the MTR Order dated 12 September, 2018 in Case No. 65 of 2018 for 3rd Control Period from FY 2016-17 to FY 2019-20 approved the revised tariff for FY 2019-20.

4.1.2 The Commission vide the MYT Order dated 30 March, 2020 in Case No. 300 of 2019 for 4th Control Period from FY 2019-20 to FY 2024-25 approved the provisional true-up for FY 2019-20. TPC-G, in the present Petition has sought the final true-up for FY 2019-20 based on the actual expenditure and revenue as per the Audited Accounts for FY 2019-20 under the MYT Regulations, 2015. TPC-G also submitted the auditor's report on the reconciliation between the total expenses, revenue, assets and liabilities of the company and the expenses, revenue, assets and liabilities separately for TPC-G for FY 2019-20 in compliance to Regulation 2.1(1)(viii) of the MYT Regulations, 2015. The analysis of the true-up undertaken by the Commission is provided below.

4.1.3 Before delving into the detailed analysis, the Commission highlights a serious lapse on the part of TPC-G in the present tariff proceedings. Several discrepancies were observed in the Original Petition as well as the Revised Consolidated Petition filed by TPC-G, which were subsequently rectified by TPC-G after the Commission sought clarifications. The Commission directs TPC-G to take adequate precautions while filing the Petitions before the Commission to avoid such errors and discrepancies.

4.2 GENERATION CAPACITY

4.2.1 TPC-G has the installed capacity of 1377 MW comprising of thermal capacity of 930 MW and hydel capacity of 447 MW, fully contracted with The Brihanmumbai Electric Supply & Transport Undertaking (BEST) and The Tata Power Company Limited-Distribution (TPC-D).

Table 4.1: Generation capacity

Unit/Station	Type of fuel	Installed capacity	BEST Share		TPC-D Share	
		MW	MW	%	MW	%
Unit 5	Coal, Oil and Gas	500	256	51.20%	244	48.80%
Unit 7	Gas	180	92	51.11%	88	48.89%
Unit 8	Coal	250	100	40.00%	150	60.00%
Total Thermal (A)		**930**	**448**	**48.17%**	**482**	**51.83%**

Unit/Station	Type of fuel	Installed capacity	BEST Share		TPC-D Share	
		MW	MW	%	MW	%
Bhira	-	300	154	51.33%	146	48.67%
Bhivpuri	-	75	38	50.67%	37	49.33%
Khopoli	-	72	37	51.39%	35	48.61%
Total Hydro (B)		**447**	**229**	**51.23%**	**218**	**48.77%**
Grand Total (A+B)		**1377**	**677**	**49.16%**	**700**	**50.84%**

4.2.2 In line with the approach adopted in the earlier Order, the Commission has carried out the detailed analysis of the true-up of Units 5,7 & Hydro and Unit 8 separately as discussed in the following paragraphs.

4.3 PERFORMANCE OF UNITS 5,7 & HYDRO

4.3.1 The Commission has approved the norms of operation for FY 2019-20 based on the norms specified in the MYT Regulations, 2015 and considering other aspects as detailed out in respective Orders. TPC-G has submitted the actual performance in FY 2019-20, which is in variation of the norms approved by the Commission. TPC-G's submissions on the actual performance in FY 2019-20 and the Commission's analysis is detailed hereunder.

4.4 AVAILABILITY & PLANT LOAD FACTOR (PLF) (UNITS 5,7 & HYDRO)

TPC-G's submission

4.4.1 The Availability and PLF for FY 2019-20 is as shown in the Table below:

Table 4.2: Availability and PLF for Units 5,7 & Hydro for FY 2019-20

Unit/Station	Target Availability	Availability		PLF	
		Approved in provisional true-up	Actual	Approved in provisional true-up	Actual
Thermal					
Unit 5	85.00%	95%	97.90%	70.93%	71.50%
Unit 7	85.00%	91%	92.38%	73.88%	71.91%
Hydro					
Bhira	90.00%	97%	95.48%	-	-
Bhivpuri	90.00%	99%	97.55%	-	-
Khopoli	90.00%	96%	98.36%	-	-

4.4.2 TPC-G submitted the MSLDC certificate for the actual Availability and PLF.

Commission's Analysis and Ruling

4.4.3 As per the MYT Regulations, 2015, recovery of full AFC is allowable at target Availability. The actual Availability as certified by MSLDC is higher than the target Availability for Units 5,7 and hydel stations. Therefore, the Commission has approved the recovery of full trued-up AFC for FY 2019-20.

4.4.4 MYT Regulations, 2015 specify the target PLF of 85% for thermal generating stations, to be eligible for the incentive for actual generation in excess of ex-bus energy corresponding to target PLF. The actual PLFs of Units 5,7 as certified by MSLDC are lower than the target PLF for incentive and hence, no incentive is admissible.

4.5 GROSS GENERATION (UNITS 5,7 & HYDRO)

TPC-G's submission

4.5.1 The gross generation for FY 2019-20 as shown in the Table below:

Table 4.3: Gross generation for Units 5,7 & Hydro for FY 2019-20 as claimed by TPC-G (MU)

Unit/Station	Approved in provisional true-up	Actual
Thermal		
Unit 5	3115.28	3140.47
Unit 7	1168.13	1136.96
Total Thermal	**4283.41**	**4277.43**
Hydro		
Bhira	904.04	840.82
Bhivpuri	313.96	343.87
Khopoli	297.05	333.99
Total Hydro	**1515.05**	**1518.68**
Total	**5798.46**	**5796.11**

Commission's Analysis and Ruling

4.5.2 The actual thermal generation from Unit 5 and Unit 7 was in line with as provisionally approved number in the MYT Order. The actual generation from Bhira was 840.82 MU as against the approved generation of 904.04 MU in the MYT. In reply to a query in this regard, TPC-G submitted that the reduction in the generation from Bhira was due to shut down for 33 days as against planned 23 days for major overhaul of 150 MW unit. The actual generation for other Hydro Bhivpuri and Khopoli is higher as against the approved provisionally in the MYT.

4.5.3 The Commission has considered the actual gross generation as submitted by TPC-G.

Table 4.4: Gross generation for Units 5,7 & Hydro for FY 2019-20 approved by the Commission (MU)

Unit/Station	Approved in provisional true-up	Actual	Approved
Thermal			
Unit 5	3115.28	3140.47	3140.47
Unit 7	1168.13	1136.96	1136.96
Total Thermal	**4283.41**	**4277.43**	**4277.43**
Hydro			
Bhira	904.04	840.82	840.82
Bhivpuri	313.96	343.87	343.87
Khopoli	297.05	333.99	333.99
Total Hydro	**1515.05**	**1518.68**	**1518.68**
Total	**5798.46**	**5796.11**	**5796.11**

4.5.4 The Commission approves the gross generation for Units 5,7 & Hydro as per Table 4.4 for FY 2019-20.

4.6 AUXILIARY ENERGY CONSUMPTION (AEC) (UNITS 5,7 & HYDRO)

TPC-G's submission

4.6.1 The AEC for FY 2019-20 is as shown in the Table below:

Table 4.5: AEC for Units 5,7 & Hydro for FY 2019-20 as claimed by TPC-G

Unit/Station	Approved in provisional true-up	Actual
Thermal		
Unit 5	6.00%	5.79%
Unit 7	3.00%	3.11%
Hydro	1.55%	1.69%

4.6.2 The actual AEC for Unit 5 is within the norms specified by the Commission.

4.6.3 For Unit 7, the Commission has approved normative AEC of 3% for closed cycle operation and 1% for open cycle operation. Accordingly, based on the actual generation during closed cycle and open cycle modes of operation of 1133.35 MU and 3.61 MU respectively, the revised normative AEC works out to 2.99%. The actual AEC for Unit 7 is higher than the norms specified by the Commission. The higher AEC was due to auxiliary consumption during economic shutdown period (25 days), forced outage period (5.3 days) and increased number of start-ups due to forced outage and economic shutdown.

4.6.4 For hydel stations, the actual AEC is 1.69% as against the norm of 1.55%. The break-up of the actual AEC is as shown in the Table below:

Table 4.6: AEC for hydro stations for FY 2019-20 as claimed by TPC-G

Particulars	Approved in provisional true-up	Actual
Auxiliary consumption including static excitation	1.00%	0.69%
Energy for Nallah Diversion	0.37%	0.26%
GT losses	-	0.59%
Total losses	**1.37%**	**1.54%**
Head works consumption	0.18%	0.15%
Condenser mode operation	-	0.01%
Total auxiliary consumption	**1.55%**	**1.69%**

4.6.5 TPC-G requested the Commission to approve the actual AEC as claimed by it.

Commission's Analysis and Ruling

4.6.6 The actual AEC of Unit 5 is less than the norm whereas, the actual AEC of Unit 7 is higher than the norm due to auxiliary consumption during economic shutdown period (25 days), forced outage period (5.3 days) and increased number of start-ups due to forced outage and economic shutdown.

4.6.7 The actual AEC of hydro is higher than the norm. The actual AEC is inclusive of auxiliary consumption towards GT losses and condenser mode operation. In line with the approach adopted in the earlier Orders, the Commission is not approving auxiliary consumption towards GT losses and condenser mode operation. In response to the Commission's query, TPC-G submitted station wise AEC. The actual AEC is 1.37% for Bhira, 1.49% for Bhivpuri and 2.71% for Khopoli. In reply to a query regarding the higher AEC of Khopoli, TPC-G submitted that the AEC of Khopoli is comparatively higher on account of the following reasons:

- Khopoli has more widespread area resulting in higher headworks consumption.
- Comparatively more nallah diversion schemes operate at Khopoli.

4.6.8 The Commission had approved the combined AEC for hydro Stations. Hence, the same approach is adopted, and AEC combined for all hydro Stations is approved for the purpose of truing up.

4.6.9 The Commission had approved normative auxiliary consumption of 1%. In addition, the Commission approved auxiliary consumption for Nallah diversion of 0.37% and headworks consumption of 0.18%.

4.6.10 As regards Nallah diversion schemes, in response to Commission's query, TPC-G submitted the benefits derived from Nallah diversion schemes as under:

Table 4.7: Benefits derived from Nallah diversion schemes, for FY 2019-20 as submitted by TPC-G

Particulars	Units	Bhira	Bhivpuri	Khopoli	Total
Nallah diversion	MCM	36.60	9.93	60.74	**107.27**
Pumping energy for Nallah diversion	MU	1.72	0.00	2.22	**3.94**
Generation from diverted water	MU	42.43	12.27	71.33	**126.03**

4.6.11 From the above Table, it is observed that, additional energy has been generated from the pumped water due to Nallah diversion. Hence the total normative auxiliary consumption norm approved for hydro stations including nallah diversion and headworks distribution losses works out to be 1.55% as shown in Table below:

Table 4.8: AEC for hydro stations for FY 2019-20 approved by the Commission

Particulars	Approved in provisional true-up	Actual	Approved
Auxiliary consumption including static excitation	1.00%	0.69%	1.00%
Energy for Nallah Diversion	0.37%	0.26%	0.37%
GT losses	-	0.59%	-
Total losses	**1.37%**	**1.54%**	**1.37%**
Head works consumption	0.18%	0.15%	0.18%
Condenser mode operation	-	0.01%	-
Total auxiliary consumption	**1.55%**	**1.69%**	**1.55%**

4.6.12 Based on the above, the AEC approved by the Commission is as shown in the Table below:

Table 4.9: AEC for Units 5,7 & Hydro for FY 2019-20 approved by the Commission

Unit/Station	Approved in provisional true-up	Actual	Normative Approved
Thermal			
Unit 5	6.00%	5.79%	6.00%
Unit 7	3.00%	3.11%	2.99%
Hydro	1.55%	1.69%	1.55%

4.6.13 The Commission approves the AEC for Units 5,7 & Hydro as per Table 4.9 for FY 2019-20.

4.6.14 The Commission has considered the Auxiliary Consumption as a controllable parameter in accordance with the MYT Regulations, 2015. Hence, the difference between the actual Auxiliary Consumption as submitted by TPC-G and normative Auxiliary Consumption as approved by the Commission in this Order has been considered for computing the sharing of efficiency gains as per principles laid out in MYT Regulations, 2015.

4.7 GROSS STATION HEAT RATE (GSHR) (UNITS 5,7)

TPC-G's submission

4.7.1 The GSHR for FY 2019-20 is as shown in the Table below:

Table 4.10: GSHR for Units 5,7 for FY 2019-20 as claimed by TPC-G (kcal/kWh)

Unit/Station	Approved in provisional true-up	Actual
Unit 5	2549.00	2545.56
Unit 7	2035.00	2034.73

4.7.2 The actual GSHR for Unit 5 is lower than the norm.

4.7.3 For Unit 7, the Commission has approved normative GSHR of 2035 kcal/kWh for closed cycle operation and 2900 kcal/kWh for open cycle operation. Accordingly, based on the actual generation during closed cycle and open cycle modes of operation of 1133.35 MU and 3.61 MU respectively, the revised normative GSHR works out to 2037.74 kcal/kWh. The actual GSHR for Unit 7 is lower than the norm.

Commission's Analysis and Ruling

4.7.4 For Unit 7, the Commission had approved the normative GSHR of 2035 kcal/kWh and 2900 kcal/kWh for closed cycle and open cycle operation, respectively. The Commission has perused the normative GSHR for Unit 7, based on the actual generation in closed cycle and open cycle, as claimed by TPC-G of revised normative and finds the same in order.

4.7.5 The actual GSHR for Unit 5 and Unit 7 are lower than the norm for the respective Unit. The Commission has considered the GSHR as a controllable parameter in accordance with the MYT Regulations, 2015. Hence, the difference between the actual GSHR as submitted by TPC-G and revised normative GSHR as approved by the Commission in this Order has been considered for computing the sharing of efficiency gains as per principles laid out in MYT Regulations, 2015.

Table 4.11: GSHR for Units 5,7 for FY 2019-20 approved by the Commission (kcal/kWh)

Unit/Station	Approved in provisional true-up	Actual	Normative Approved
Unit 5	2549.00	2545.56	2549.00
Unit 7	2035.00	2034.73	2037.74

4.7.6 The Commission approves the GSHR for Units 5,7 as per Table 4.11 for FY 2019-20.

4.8 FUEL COST (UNITS 5,7)

TPC-G's submission

4.8.1 TPC-G has claimed the actual fuel cost of Rs. 1352.76 Crore. The details of fuel related parameters for FY 2019-20 are as shown in the Table below:

Table 4.12: Fuel consumption and cost for Units 5,7 for FY 2019-20 as claimed by TPC-G

Particulars	Units	Unit 5	Unit 7
Fuel consumption			
APM Gas	MT	58424.52	175850.66
RLNG	MT	178.29	51.28
Coal	MT	1542141.79	NA
LSHS	MT	207.64	NA
Kerosene	KL	39.99	NA
HSD	KL	7.76	NA
GCV (As fired)			
APM Gas	kCal/Kg	13160.26	13151.64
RLNG	kCal/Kg	13097.85	13130.10
Coal	kCal/Kg	4682.10	NA
LSHS	kCal/Kg	10366.83	NA
Kerosene	Kcal/Litre	8918.37	NA
HSD	Kcal/Litre	9216.21	NA
Price			
APM Gas	Rs/MT	16164.88	16521.28
RLNG	Rs/MT	43487.03	39385.27
Coal	Rs/MT	6259.96	NA
LSHS	Rs/MT	55367.04	NA
Kerosene	Rs/KL	59381.94	NA
HSD	Rs/KL	66416.98	NA
Total cost	**Rs. Crore**	**1062.03**	**290.73**

4.8.2 In compliance to the directions of the Commission in the MTR Order in Case

No. 65 of 2018, TPC-G has not included the claim of Rs. 135.53 Crore towards Custom Duty share in the present Petition, as the matter is sub-judice before the Hon'ble Supreme Court.

Commission's Analysis and Ruling

4.8.3 TPC-G, in its submissions on energy charges for FY 2023-24 and FY 2024-25 in the Petition, submitted the comparison of HBA and ICI 3 indices. In this regard, TPC-G was asked to submit the justification for procuring the coal on HBA basis (higher imported coal price) and not ICI basis (lower imported coal price) since significant difference was being witnessed between the two since the year 2018 onwards. In this regard, TPC-G submitted that the although the trend in ICI and HBA was showing gap in the year 2018, comparatively, the difference was very low. TPC-G submitted that it had started trials for different types of coal with low GCV during FY 2018-19 but, many problems were faced with the coal samples tried at that time, such as issues related to loading/unloading, frequent choking of coal feeders, coal mill trippings resulting in high level of deviations in boiler performance. Hence, the efforts were stopped due to the problems with samples identified at that time.

4.8.4 TPC-G submitted that the difference in the landed coal price under both the mechanisms HBA/ICI were quite low and it was possible for TPC-G to use HBA mechanism and still supply power at competitive price. Till March, 2022, HBA procurement was favourable compared to ICI, due to HBA premium coal with ultra-low ash, ultra-low sulphur, and better GCV at lower rate. The load demand from procurers was high and it was possible to achieve competitive cost of generation even after procurement of coal under the HBA mechanism, without compromising the environmental norms. TPC-G submitted that the decision of changing coal is not linked to only the HBA/ICI difference but other factors like technical feasibility of using low GCV coal, supply chain, logistics and storage arrangements need to be studied with the identified coal before adopting new sources of coal.

4.8.5 The Commission has taken note of the submission of TPC-G. The Commission finds that although price of ICI coal in Rs./MT terms is comparatively lower, the GCV of such coal is also comparatively lower which would require more coal to be burnt. In addition, the coal properties also vary which can adversely impact the compliance to other statutory requirements like emission norms. The Commission, in the MYT Order for the 3rd Control Period from FY 2016-17 to FY 2019-20 had not issued any directions concerning the source of coal for TPC-G. Therefore, the Commission finds it prudent to consider the actual coal as procured by TPC-G in the true-up of FY

2019-20.

4.8.6 The Commission sought the monthly fuel bills and monthly Unit wise fuel receipts, calorific value and price of fuel for FY 2019-20. The Commission has gone through the such details of monthly fuel receipts, calorific value and price. The variation in fuel price and calorific value has been considered as part of FAC and has already been passed through monthly under that mechanism.

4.8.7 In reply to a Commission's query, TPC-G submitted the reconciliation of fuel cost claimed for true-up with the actual fuel cost as per the audited accounts as under:

Table 4.13: Reconciliation of actual fuel cost for FY 2019-20 as submitted by TPC-G

Particulars	Amount (Rs. Crore)
Actual fuel cost as per the financial statements	1782.11
Add: Forex loss	10.07
Add: Entry tax	68.04
Total	**1860.22**
Actual fuel cost claimed for Units 5,7	1352.76
Actual fuel cost claimed for Unit 8	507.46
Total	**1860.22**

4.8.8 As regards the forex loss claimed by TPC-G, the Commission finds that such forex variation is pass through in bills as per the contractual agreement for imported coal. Hence, the Commission has considered the forex loss in actual fuel cost.

4.8.9 As regards entry tax, the Commission, in line with the true-up of FY 2018-19 has approved the entry tax claimed by TPC-G.

4.8.10 In view of the above, the Commission has approved the Unit wise actual fuel cost for FY 2019-20 as claimed by TPC-G.

4.9 ADDITIONAL CAPITALISATION (UNITS 5,7 & HYDRO)

TPC-G's submission

4.9.1 TPC-G has claimed the actual capitalisation of Rs. 86.78 Crore as against the approved capitalisation of Rs. 88.11 Crore for FY 2019-20. The claimed capitalisation of Rs. 86.78 Crore is inclusive of DPR schemes amounting to Rs. 66.08 Crore and non-DPR schemes amounting to Rs. 20.70 Crore. Accordingly, the ratio of Non-DPR capitalisation to DPR capitalisation is 31.33%.

Table 4.14: Additional capitalisation for Units 5,7 & Hydro for FY 2019-20 as claimed

by TPC-G (Rs. Crore)

Unit/Station	Approved in provisional true-up	Actual
DPR schemes	73.42	66.08
Non-DPR schemes	14.68	20.70
Total	**88.11**	**86.78**

4.9.2 The actual capitalisation towards DPR schemes is lower than that approved in the MYT Order. However, there are certain capital expenditures of smaller value of essential nature required for sustenance of the plants. Hence, lower DPR related capital expenditure has resulted in higher ratio of Non-DPR to DPR capitalisation.

4.9.3 TPC-G requested the Commission to approve the actual capitalisation of Rs. 86.78 Crore for FY 2019-20.

Commission's Analysis and Ruling

4.9.4 Regulation 23.6 of MYT Regulations, 2015 specifies that amount of capitalisation towards non-DPR schemes for any year shall not exceed 20% of amount of capitalisation approved against the DPR Schemes for that respective year. The Commission notes that non-DPR capitalisation claimed by TPC-G is higher than 20% of DPR capitalisation. In reply to a query in this regard, TPC-G submitted that since the capitalisation of DPR schemes is very low, the ratio of Non-DPR to DPR capitalisation is higher than the ceiling limit. Further, the total capitalisation is very low as compared to GFA. Hence, TPC-G requested the Commission to exercise its power to remove difficulties as provided in Regulation 102 of MYT Regulations 2015 and to approve the non-DPR capitalisation beyond the ceiling limit as an exception subject to a limit of 1% of the GFA of the Unit.

4.9.5 Regarding the DPR capitalisation, the Commission has gone through details of capitalisation undertaken by TPC-G towards each DPR scheme. Further, the Commission verified based on least cost approach adopted by TPC-G while undertaking the DPR schemes. In reply to a query in this regard, TPC-G submitted as under:

- The company follows a very detailed, systematic procurement process that ensures transparency and competition resulting in procurement of material and services at Competitive Prices. All the activities related to procurement of materials as well as services right from budget availability till preparation of purchase order has been configured through workflow in SAP ERP.
- For major procurement of material and services sealed bids are invited from various registered vendors in SAP and the same has been evaluated by applicable

technical and financial expertise. The vendors are finalised based on the best technical and commercial offer.

- Further the company ensures that adequate vendor base is available for equipment and for registering a new vendor in SAP, a systematic process has been institutionalised.

4.9.6 The Commission also directed TPC-G to submit the cost benefit analysis for each scheme along with the documentary evidence for all the assets put to use during FY 2019-20. In reply, TPC-G submitted the project completion reports.

4.9.7 The Commission notes that out of total DPR capitalization of Rs. 66.08 Cr. claimed by TPC-G for Unit 5, 7 and Hydro for FY 2019-20, major capitalization (i.e. Rs. 60.13 Cr.) pertains to the DPR scheme for " Unit 7 Gas Turbine optimized life extension". The objective of this scheme was to extend the life of Unit 7 Gas Turbine as it had already run 2,10,000 operating hours. TPC-G Unit 7 has been commissioned in year 1993 and hence it had completed its useful life of 25 years in year 2018. In order to ensure its reliable operation beyond the stipulated life for further five years i.e., from FY 2019 to FY 2024, TPC-G had submitted the DPR for in principle approval of the Commission. The Commission had approved the DPR on 3 January 2019 with the approved cost of Rs. 66.42 Cr. The scheme has been implemented in FY 2019-20 with the life of Unit 7 Gas Turbine till year 2024. On similar line, rest of the DPR schemes amounting to about Rs 6 Crore have been verified for their cost benefit analysis and have been considered for approval based on the project completion and cost benefit reports.

4.9.8 The Commission has gone through the submissions of TPC-G on the non-DPR schemes. The claimed actual capitalisation towards non-DPR schemes is higher than the ceiling limit. As regards the non-DPR schemes, Hon'ble ATE in its Judgment in Appeal No. 160 of 2012 ruled as under:

*"110. **<u>We do not find infirmity in the State Commission restricting the capital expenditure on non-DPR schemes to 20% of the capitalisation approved for DPR Scheme</u>**. However, we feel that the DPR schemes which had not approved and were awaiting approval of the State Commission should be considered by the State Commission and allowed after prudence check…."*

4.9.9 Regulation 23.6 of MYT Regulations, 2015 provides that the amount of capitalisation against non-DPR schemes for any year shall not exceed 20% of the amount of capitalisation approved against DPR schemes for that year. However, the Commission may allow capitalisation against non-DPR schemes for any Year in excess of 20% on a request made by the generating company. TPC-G has requested the Commission to allow non-DPR capitalization which is 31.33% of the DPR capitalization against the ceiling of 20% Non-DPR capitalization specified in the MYT Regulations. TPC-G has stated that as the capitalisation of DPR schemes is very low, the ratio of Non-DPR to DPR capitalisation is higher than the ceiling limit. Further, there are certain capital expenditures of smaller value of essential nature required for sustenance of the plants. Hence, lower DPR related capital expenditure has resulted in higher ratio of Non-DPR to DPR capitalisation. In this context, the Commission notes that as per MYT Order, the approved DPR capitalization was Rs. 73.42 Crore whereas the actual DPR capitalization is Rs. 66.08 Crore Thus, TPC-G has not been able to undertake the DPR capitalization at the same level of approved DPR capitalization as per the MYT Order. While the actual DPR capitalization is lower than the approved DPR capitalization, the actual non-DPR capitalization (Rs. 20.70 Crore) is higher than the approved non-DPR capitalization (Rs. 14.68 Crore). Thus, there is departure of the approved capitalization on part of TPC-G while implementing its DPR and Non-DPR schemes. TPC-G has also stated that there are certain capital expenditures of smaller value of essential nature required for sustenance of the plants. However, if the above argument is accepted, the restriction of 20% Non-DPR capitalisation would not be applicable to any Generating Station making the corresponding regulation redundant. The Commission is of the view that TPC-G is required to plan its capital expenditure in such a way that, in routine, the relative Regulations are complied with and only in exceptional cases such as force majeure etc. TPC-G is required to seek relaxation or exemption from the Regulations.

4.9.10 Hence, the Commission does not find it prudent to invoke the discretionary power under proviso to Regulation 23.6 of MYT Regulations and allow the actual non-DPR capitalisation as claimed by TPC-G. **In line with the approach adopted in MYT Order dated 30 March, 2020 in Case No. 300 of 2019 and approach adopted for other generating Utilities, the Commission has restricted the Non-DPR Capitalisation to 20% of the approved DPR capitalisation.** Based on the above, the additional capitalisation approved by the Commission is as shown in the Table below:

Table 4.15: Additional capitalisation for Units 5,7 & Hydro for FY 2019-20 approved by the Commission (Rs. Crore)

Unit/Station	Approved in provisional true-up	Actual	Approved
DPR schemes	73.42	66.08	66.08
Non-DPR schemes	14.68	20.70	13.22
Total	**88.11**	**86.78**	**79.30**

4.9.11 The Commission approves the additional capitalisation for Units 5,7 & Hydro as per Table 4.15 for FY 2019-20.

4.10 MEANS OF FINANCE OF ADDITIONAL CAPITALISATION (UNITS 5,7 & HYDRO)

TPC-G's submission

4.10.1 The means of finance for the claimed additional capitalisation has been considered in the debt-equity ratio of 70:30.

Commission's Analysis and Ruling

4.10.2 In line with the true-up of previous years, the Commission has considered the means of finance of the approved additional capitalisation in the debt: equity ratio of 70:30.

4.11 ANNUAL FIXED CHARGES (AFC) (UNITS 5,7 & HYDRO)

4.11.1 Regulation 40 of the MYT Regulations, 2015 specifies the components of AFC as follows:

a. Operation and Maintenance (O&M) expenses
b. Depreciation
c. Interest on Loan
d. Interest on Working Capital (IoWC)
e. Return on Equity (RoE)
f. Income Tax

Less:

g. Non-Tariff Income (NTI)

4.12 OPERATION AND MAINTENANCE (O&M) EXPENSES (UNITS 5,7 & HYDRO)

TPC-G's submission

4.12.1 TPC-G has claimed the revised normative O&M expenses for FY 2019-20 considering approved normative O&M expenses in the MYT Order along with the normative O&M expenses for the common assets retained from Unit 6 and the escalation rate as per MYT Regulations, 2015. TPC-G has claimed the revised normative O&M expenses of Rs. 380.15 Crore. As against the same, the actual O&M expenses for FY 2019-20 is Rs. 368.49 Crore. The actual O&M expenses of Rs. 368.49 Crore is exclusive of Brand Equity of Rs. 0.14 Crore and water charges of Rs. 4.06 Crore. The Brand Equity expenses have not been claimed in accordance with the Commission's directions, which is subject to the outcome of the Appeal pending before the Hon'ble ATE in this regard.

Commission's Analysis and Ruling

4.12.2 The Commission sought the computations of revised normative O&M expenses claimed by TPC-G for FY 2019-20. From the computations, certain discrepancies have been observed and clarifications were sought from TPC-G. **The Commission, in the provisional true-up of FY 2019-20, had considered the base O&M expenses for projecting the normative O&M expenses as Rs. 421.65 Crore whereas, TPC-G, in its true-up claims, has considered the base O&M expenses for FY 2019-20 as Rs. 368.68 Crore**. In reply to queries in this regard, TPC-G submitted that the normative O&M expenses have been considered as Rs. 380.15 Crore as against the actual O&M expenses of Rs. 368.49 Crore. TPC-G has not replied to the clarification sought.

4.12.3 Regulation 45.1 of the MYT Regulations, 2015 specifies the methodology for determination of normative O&M expenses for thermal Generating Stations that achieved COD before 26 August, 2005. Regulation 47.1 of MYT Regulations, 2015 specifies the methodology for determining the normative O&M expenses for existing Hydro Generating Stations. Further, vide the First Amendment to the MYT Regulations, 2015, the Commission had revised the methodology of computing the escalation rate as under:

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

4.12.4 Following the same approach, the Commission has computed the annual escalation factor of 2.59% to give effect to the First Amendment to the MYT Regulations, 2015. The revised escalation factor has been computed considering the base inflation series of 2004-05, as the same series was considered at the time approval of O&M expense for FY 2019-20 in the MYT Order.

4.12.5 TPC-G has claimed the actual water charges of Rs. 4.07 Crore. In reply to a query in this regard, TPC-G submitted the details of invoices.

4.12.6 In accordance with the methodology adopted in the true-up of FY 2018-19, the revised normative O&M expenses for FY 2019-20 have to be arrived at by escalating the approved O&M expense in final true up of FY 2018-19 by 2.59% to give effect to the First Amendment to the MYT Regulations, 2015. TPC-G while computing the O&M expenses for FY 2019-20 has considered the base O&M expenses equivalent to actual O&M expenses for FY 2018-19 instead of normative O&M expenses for FY 2018-19 in accordance with the provisions of MYT Regulations, 2015. The normative O&M expenses thus works out to Rs. 421.65 Crore for FY 2018-19. However, TPC-G has not submitted the clarification for the variation in base O&M expenses even after providing ample opportunity. The Commission has considered the normative O&M expenses approved in the final true-up of FY 2018-19 as the base O&M expenses for FY 2019-20. In addition to the same, the Commission has considered the O&M expenses on account of addition to opening GFA of Rs. 26.03 Crore for FY 2019-20 in proportion of the total O&M expenses to the total GFA of Unit 6. Accordingly, the Commission has considered the base O&M expenses for FY 2019-20 as Rs. 426.34 Crore. The same has been escalated by 2.59% to arrive at the normative O&M expenses for FY 2019-20. In addition to the normative O&M expenses, the Commission has considered the actual water charges separately based on actual as per Regulation 45.1 of MYT Regulations 2015.

Table 4.16: Normative O&M expenses for Units 5,7 & Hydro for FY 2019-20 (Rs. Crore)

Particulars	Approved in provisional true-up	Claimed	Approved
Normative O&M expenses (A)	432.19	380.15	437.38
Water charges (B)	5.00	4.07	4.07
Total (A+B)	**437.19**	**384.22**	**441.45**

4.12.7 The Commission approves the normative O&M expenses for Units 5,7 & Hydro as per Table 4.16 for FY 2019-20.

4.12.8 TPC-G has claimed the actual O&M expenses (including water charges and excluding Brand Equity) of Rs. 372.56 Crore. TPC-G submitted the details of cost centres of LA Services and HOSS. The Commission directed TPC-G to submit the justification for allocation of the expenses of the following HO Services:

- Business Collab-Clea: Cost Centre 1900022010;
- Regulations – Delhi: Cost Centre 1900022013;
- Corp Sustainability: Cost Centre 1900022018;

- FCG: Cost Centre 1900022019;
- Corp CSR: Cost Centre 1900022029.

4.12.9 In reply, TPC-G submitted the justification for the allocation of expenses of the above HO services as under:

4.12.10 Business collaboration: TPC-G submitted that this function undertakes projects to enable Tata Power to Design, Develop and Deliver unique products/processes/services across Generation, Transmission and Distribution by way of technological interventions for delivery innovating, sustainable, scalable and cost-effective solutions for the consumers. Some of the key projects undertaken for TPC-G as under:

- Design and development of high rise structure painting robot for painting of tall structures like tall buildings and chimney.
- Vertical generator air gap inspection bot for inspection during short outages for preventive maintenance.
- Under Water Inspection device for identification of water leakages, inspection of under water pumps.
- Low voltage high intensity custom weather-proof LED lighting system for safety improvement during work inside boilers, tanks, tunnels and large diameter pipelines.

4.12.11 Regulations-Delhi: The activities related to dealing with legal matters for representing TPC-G in various forums like ATE, Supreme Court, CEA, Ministry of Power, MNRE are dealt through the Regulations-Delhi office.

4.12.12 Corp-Sustainability: Tata Power has been reporting its sustainability performance including Mumbai operations under Business Responsibility and Sustainability Reporting (BRSR) based on the National Guidelines for Responsible Business Conduct (NGRBC). Accordingly, this function provides services for mapping GHG emissions at Mumbai location and Sustainability reporting related study, Sustainability communications, Sustainability Awareness Programs e.g., to shift to clean energy solutions with energy supply to Mumbai consumers.

4.12.13 Financial Concurrence Group (FCG): This department carries out activities pertaining to the procurement process to ensure adherence to bidding / contract policy, evaluation and optimization of tenders, bids, review of Order placement memos for all three businesses of Mumbai License Area and hence the cost of this department has been allocated to TPC-G, T, D.

4.12.14 Corp CSR: Expenses of Corp CSR cost center which are allocated to regulated business are of administrative nature. Corporate Social responsibility expenses incurred by Tata Power as per section 135 of Companies Act are not allocated to regulated business. Hence no separate deduction towards CSR is required from the O&M expenses of Regulated business.

4.12.15 TPC-G submitted the allocation of the expenses under the above heads to TPC-G as under:

Table 4.17: Allocation of expenses of shared services as submitted by TPC-G (Rs. Crore)

Cost centre	Allocation to TPC-G
Business collaboration	-0.04
Regulations-Delhi	0.81
Corp-Sustainability	0.55
FCG	0.34
Corp CSR	0.41
Total	**2.08**

4.12.16 On perusal of the head wise details of actual O&M expenses, the Commission directed TPC-G to submit the justification for the expenses claimed under the following heads of A&G expenses:

- Cost of service procured.
- Loss on sale/retirement of assets.
- Others – A&G

4.12.17 In reply, TPC-G submitted the break-up of the expenses claimed under the above heads as under:

Table 4.18: Item wise details of A&G expenses for Units 5,7 & Hydro as submitted by TPC-G (Rs. Crore)

Cost of services procured		Others-A&G		Loss on sale/retirement of assets	
Item	**Amount**	**Item**	**Amount**	**Item**	**Amount**
Security Guard Payment	10.42	Other Fees- Consent Fees, MPCB , Consent Fees, Leasing Fees	1.88	Loss/gain on retirement/sale of fixed assets	3.30
Housekeeping services	3.70	Guest House Expenses	0.67		
Ambient Air Monitoring	1.06	Transport Expenses	0.26		
Operation and Maintenance related minor services	0.82	Canteen Expenses	0.19		
Others	2.70	Quality Management System	0.04		
Allocation of HOSS	3.08	Other	0.33		
Total	**21.78**	Total Secondary Expense	1.02		
		Total	**4.39**		

4.12.18 Based on the details and reasons submitted by TPC-G, the actual O&M expenses as claimed have been considered for working out the sharing of gains. The break-up of actual O&M expenses for FY 2019-20 is as shown in the Table below:

Table 4.19: Break-up of actual O&M expenses for FY 2019-20

Particulars	Amount (Rs. Crore)
Employee expenses	199.08
R&M expenses	111.75
A&G expenses	97.14
Less: O&M expenses capitalised	39.48
Net O&M expenses	**368.49**
Water charges	4.07
Total O&M expenses	**372.56**

4.12.19 As against the normative O&M expenses of Rs. 441.45 Crore, the actual O&M expenses (including water charges and excluding Brand Equity) amounts to Rs. 372.56 Crore thereby, there is efficiency gain in O&M expenses. The Commission has considered the O&M expenses as a controllable in accordance with the MYT Regulations, 2015. Hence, the difference between the actual O&M expenses and normative O&M expenses as approved by the Commission in this Order has been considered for computing the sharing of efficiency gains as per principles laid out in MYT Regulations, 2015.

4.13 DEPRECIATION (UNITS 5,7 & HYDRO)

TPC-G's submission

4.13.1 TPC-G has computed the depreciation by applying the rates as specified in the depreciation schedule in the of the MYT Regulations, 2015. Based on the same, TPC-G requested the Commission to approve the depreciation of Rs. 121.41 Crore.

Commission's Analysis and Ruling

4.13.2 In the final true-up of FY 2018-19, the Commission had approved the closing GFA for FY 2018-19 as Rs. 3787.52 Crore. The Commission has considered the same as the opening GFA for FY 2019-20. In addition, as discussed in Chapter 3 of the Order, the Commission has considered the GFA of Rs. 26.03 Crore towards common assets from Unit 6. Accordingly, the Commission has considered the opening GFA for FY 2019-20 as Rs. 3813.55 Crore, which is the same as claimed by TPC-G.

4.13.3 The approved additional capitalisation has been considered as the GFA addition during the year. The deduction from GFA during the year has been considered the same as claimed by TPC-G. The depreciation rate has been considered the same as claimed by TPC-G.

4.13.4 The depreciation approved by the Commission for FY 2019-20 is as shown in the Table below:

Table 4.20: Depreciation for Units 5,7 & Hydro for FY 2019-20 (Rs. Crore)

Particulars	Approved in provisional true-up	Claimed	Approved
Opening GFA	3787.52	3813.55	3813.55
Addition	88.11	86.78	79.30
Retirement	0.00	-18.75	-18.75
Closing GFA	3875.63	3881.58	3874.10
Depreciation rate	3.36%	3.16%	3.16%
Depreciation	128.71	121.41	121.30

4.13.5 The Commission approves the depreciation for Units 5,7 & Hydro as per Table 4.20 for FY 2019-20.

4.14 INTEREST ON LOAN (UNITS 5,7 & HYDRO)

TPC-G's submission

4.14.1 TPC-G has taken various long-term loans to finance the capital expenditure nature projects in line with the Debt: Equity structure of 70%:30%. Tata Power sources long term loans at a company level for its Generation, Transmission and Distribution businesses together to have negotiation advantage to avail better terms and conditions of loans.

4.14.2 In accordance with Regulation 29.5 of the MYT Regulations, 2015, based on the actual loan drawls, interest rates and the interest paid, the weighted average interest rate for FY 2019-20 works out to 8.41%. TPC-G has submitted the statements received from Banks certifying the Opening Balance, Closing Balance, Interest paid, and the applicable rate of interest.

4.14.3 TPC-G has claimed the interest charges of Rs. 27.29 Crore as against the interest charges of Rs. 27.76 Crore approved in the provisional true-up.

4.14.4 Further, TPC-G submitted that it has refinanced the long-term loan of IDFC 800 loan balance with Rs. 440 Crore loan facility from Axis Bank. In accordance with Regulation 29.10 of the MYT Regulations, 2015, TPC-G has claimed the amount of Rs. 0.65 Crore towards its entitlement of the net savings due to refinancing and refinancing charges. In addition, TPC-G has claimed the other finance charges of Rs. 0.44 Crore. Accordingly, TPC-G has claimed the total finance charges of Rs. 1.09 Crore.

Commission's Analysis and Ruling

4.14.5 In the final true-up of FY 2018-19, the Commission had approved the closing loan balance for FY 2018-19 as Rs. 354.85 Crore. The Commission has considered the same as the opening loan balance for FY 2019-20, which is the same as considered by TPC-G. **The debt portion of the common assets of Unit 6 amounting to Rs. 26.03 Crore has not been considered as there is no outstanding loan balance corresponding to such assets as per the opening loan balance claimed by TPC-G for Units 5,7 & Hydro for FY 2019-20**. The debt portion of the approved additional capitalisation has been considered as the loan addition during the year. The approved depreciation has been considered as the repayment for the year. The actual weighted average rate of interest has been applied to the average loan for the year for computing the interest expenses. Accordingly, the Commission has approved the interest expenses of Rs. 27.29 Crore.

4.14.6 As regards refinancing of IDFC 800 loan, the Commission directed TPC-G to submit the following:

- Methodology of computation of benefit accrued to the consumers.
- Broad terms such as basis of interest rate including margin, repayment terms, financing charges of original loan with refinanced loan etc.
- Amount of loan refinanced in FY 2019-20 and amount of loan considered against capitalisation in FY 2019-20.
- Copy of refinanced loan agreement.
- Basis of allocation of loan refinancing benefit amongst Generation, Transmission and Distribution businesses.
- Details of cost of refinancing along with supporting documents.

4.14.7 In reply, TPC-G submitted the following:

- TPC-G has followed the methodology adopted by the Commission in the MYT Order dated 30 March, 2020 in Case No. 300 of 2019 in the final true-up of FY 2017-18.
- The benchmark originally for IDFC First loans was 1 year benchmark rate and a spread / margin of 1.25% as per the sanction letter dated 15th September, 2011. In December 2017, IDFC First reset the same to 1 year MCLR + spread / margin of 5 bps. As on the date of repayment, the IDFC First MCLR was 9.2% and therefore the effective interest was 9.25%. Further, when the IDFC First loan was refinanced by Axis Bank facility was signed at Axis Bank 1-year MCLR + spread / margin of 0.25%. On the date of disbursement, the 1-year Axis Bank MCLR was 8.45%. Therefore, the effective interest rate was 8.70% leading to a saving of 0.55%.
- The amount of loan refinanced is Rs. 440 Crore and the loan amount considered

against the capitalisation in FY 2019-20 is Rs. 445.66 Crore.

- TPC-G submitted the copy of sanction letter of refinanced loan facility.
- The loan refinancing benefit has been allocated amongst Generation, Transmission and Distribution businesses in proportion to the capitalization for the respective function.
- The cost of refinancing of Rs. 0.44 Crore is the upfront fees (0.10 % of loan amount) paid as mentioned in the sanction letter from Axis Bank.

4.14.8 TPC-G, vide its submissions dated 30 January, 2023, revised the claim of entitlement of the net savings due to refinancing and refinancing charges to Rs. 0.63 Crore.

4.14.9 The Commission has computed the benefit of re-financing to TPC-G on annuity basis, considering the discount rate equal to the revised interest rate of 8.70% (i.e., refinancing rate). Further, the loan repayment has been considered equal to the depreciation, in accordance with regulatory principles. As there is a net benefit of the refinancing transaction, TPC-G has been allowed a share of 1/3rd of the benefit. The re-financing charges claimed by TPC-G have been allowed as the same are in line with the terms of refinancing.

Table 4.21: Benefits of refinancing approved by the Commission (Rs. Crore)

Particulars	Approved
NPV of saving (A)	11.94
Cost of refinancing (B)	0.44
Net gain (C=A-B)	11.50
Entitlement of saving to TPC (D=1/3rd of C)	3.83
Entitlement of saving to TPC-G (E)	0.49
Cost of refinancing attributable to TPC-G (F)	0.06
Total allowable to TPC-G (E+F)	**0.55**

4.14.10 In reply to a query regarding the other finance charges, TPC-G submitted that such charges are towards bank charges and related services. The Commission approves the other finance charges of Rs. 0.44 Crore as claimed by TPC-G.

4.14.11 Based on the above, the interest on loan and finance charges approved by the Commission is shown in the Table below:

Table 4.22: Interest on loan for Units 5,7 & Hydro for FY 2019-20 (Rs. Crore)

Particulars	Approved in provisional true-up	Claimed	Approved
Opening loan	354.85	354.85	354.85
Addition	61.68	60.74	55.51
Repayment	128.71	121.41	121.30
Closing loan	287.82	294.18	289.06

Particulars	Approved in provisional true-up	Claimed	Approved
Rate of interest on loan	8.64%	8.41%	8.41%
Interest on loan	**27.76**	**27.29**	**27.08**
Finance charges including benefit of Re-financing	0.00	1.07	0.99
Interest on loan & finance charges	**27.76**	**28.36**	**28.06**

4.14.12 The Commission approves the interest on loan & finance charges for Units 5,7 & Hydro as per Table 4.22 for FY 2019-20.

4.15 INTEREST ON WORKING CAPITAL (UNITS 5,7 & HYDRO)

TPC-G's submission

4.15.1 Interest on Working Capital (IoWC) has been computed based on Regulation 31.1 (a), (b) (c) and (d) of MYT Regulations, 2015. For the purpose of computing the interest on working capital, interest rate of 9.66% has been considered. TPC-G has claimed the interest on working capital of Rs. 26.11 Crore.

Commission's Analysis and Ruling

4.15.2 The Commission has computed IoWC in accordance with the MYT Regulations, 2015. In accordance with Regulation 31.1, the working capital comprising of the following components has been considered:

- Cost of coal towards stock, for thirty days, for Unit 5, for generation corresponding to lower of actual generation or target Availability;
- Cost of coal, for thirty days, for Unit 5, for generation corresponding to lower of actual generation or target Availability;
- Cost of APM gas, for thirty days, for Unit 7, for generation corresponding to lower of actual generation or target Availability;
- Approved normative O&M expenses of Units 5,7 & Hydro for one month;
- Maintenance spares at one percent of approved opening GFA for Units 5,7 & Hydro;
- Receivables for sale of electricity to BEST equivalent to 45 days of the sum of the trued-up AFC for Units 5,7 & Hydro and energy charges for Units 5&7 computed at lower of actual generation and target Availability;
- minus: payables for fuels to the extent of thirty days of the cost of coal for Unit 5 and APM gas for Unit 7 at lower of actual generation and target Availability.

4.15.3 The Commission observes that TPC-G has considered the working capital at target Availability which is not in accordance with the Regulations as the actual generation from Units 5&7 is less than that corresponding to target Availability.

4.15.4 The Commission has considered the rate of IoWC as 9.66% in accordance with the First Amendment to MYT Regulations, 2015, as follows:

Table 4.23: Interest on working capital for Units 5,7 & Hydro for FY 2019-20 (Rs. Crore)

Particulars	Approved in provisional true-up	Claimed	Approved
Working capital	323.03	337.06	288.34
Rate of interest	9.80%	9.66%	9.66%
IoWC	**31.65**	**32.55**	**27.85**

4.15.5 The Commission approves the normative IoWC for Units 5,7 & Hydro as per Table 4.23 for FY 2019-20.

4.15.6 TPC-G has claimed the actual interest on working capital of Rs. 22.83 Crore. In accordance with the proviso to Regulation 31.6 of the MYT Regulations, 2015, contribution of delay in receipt of payment to the actual interest on working capital shall have to be deducted from the actual interest on working capital before sharing of the efficiency gains or losses, as the case may be. In reply to a query in this regard, TPC-G submitted that it has not received any interest on delayed payment charges.

4.15.7 The Commission has considered IoWC as a controllable parameter in accordance with the MYT Regulations, 2015. Hence, the difference between the actual IoWC and normative IoWC as approved by the Commission in this Order has been considered for computing the sharing of efficiency gains as per principles laid out in MYT Regulations, 2015.

4.16 RETURN ON EQUITY (UNITS 5,7 & HYDRO)

TPC-G's submission

4.16.1 TPC-G submitted Return on Equity (RoE) allowed as per Regulation 28 of MYT Regulations, 2015 after considering the capitalised expenditure and normative Debt: Equity ratio of 70:30. TPC-G has claimed the RoE of Rs. 211.60 Crore.

Commission's Analysis and Ruling

4.16.2 In the final true-up of FY 2018-19, the Commission had approved the closing equity for FY 2018-19 as Rs. 1347.15 Crore. The Commission has considered the same as the opening equity for FY 2019-20. In addition, as discussed in Chapter 3 of the Order, the Commission has considered the equity portion amounting to 30% of GFA of Rs. 26.03 Crore towards common assets from Unit 6. Accordingly, the Commission has considered the opening equity for FY 2019-20 as Rs. 1354.96 Crore, which is the same as claimed by TPC-G.

4.16.3 The addition to equity has been considered as equivalent to the equity portion of the approved additional capitalisation for the year. The Commission has approved the RoE at the rate of return of 15.50% on the opening equity as well as on 50% of the addition during the year.

Table 4.24: RoE for Units 5,7 & Hydro for FY 2019-20 (Rs. Crore)

Particulars	Approved in provisional true-up	Claimed	Approved
Opening equity	1347.15	1354.96	1354.96
Reduction of equity towards de-capitalised assets	0.00	-5.62	-5.62
Addition	26.43	26.03	23.79
Closing equity	1373.58	1375.37	1373.12
Rate of Return	15.50%	15.50%	15.50%
RoE	**210.86**	**211.60**	**211.43**

4.16.4 The Commission approves RoE for Units 5,7 & Hydro as per Table 4.24 for FY 2019-20.

4.17 INCOME TAX (UNITS 5,7 & HYDRO)

TPC-G's submission

4.17.1 TPC-G submitted the income tax payable as per the provisions of MYT Regulations, 2015. TPC-G has claimed the income tax of Rs. 104.34 Crore.

Commission's Analysis and Ruling

4.17.2 Regulation 33 of the MYT Regulations, 2015 specifies as under:

"33.1 The Commission, in its MYT Order, shall provisionally approve Income Tax payable for each year of the Control Period based on the actual Income Tax paid by the Generating Company or Licensee or MSLDC, in case the Generating Company or Licensee or MSLDC has not engaged in any other regulated or unregulated Business or Other Business, as allowed by the Commission relating to the electricity Business regulated by the Commission, as per latest available Audited Accounts,

subject to prudence check :

Provided that in case the Generating Company or Licensee or MSLDC has engaged in any other regulated or unregulated Business or Other Business, and the actual Income Tax paid by the Generating Company or Licensee or MSLDC has to be allocated to the different Businesses, then the Income Tax shall be provisionally allowed based on the Income Tax on the regulatory Profit Before Tax, as allowed by the Commission relating to the electricity Business regulated by the Commission, subject to prudence check :

Provided further that no Income Tax shall be considered on the amount of income from Delayed Payment Charges or Interest on Delayed Payment or Income from Other Business, as well as on the income from any source that has not been considered for computing the Aggregate Revenue Requirement :

Provided also that no Income Tax shall be considered on the amount of efficiency gains and incentive approved by the Commission, irrespective of whether or not the amount of such efficiency gains and incentive are billed separately :

Provided also that the Income Tax shall be computed for the Generating Company as a whole, and not Unit-wise/Station-wise.

…

33.3 Variation between the Income Tax actually paid or Income Tax on regulatory Profit Before Tax of the regulated Business of Generating Company or Licensee or MSLDC, as applicable, and the Income Tax approved by the Commission for the respective Year after truing up, shall be allowed for recovery as part of the Aggregate Revenue Requirement at the time of Mid-term Review or Truing-up, subject to prudence check.

33.4 Income Tax on any income stream from sources other than the Business regulated by the Commission shall not constitute a pass-through component in Tariff, and Income Tax on such other income shall be borne by the Generating Company or Licensee or MSLDC, as the case may be."

4.17.3 As per the P&L statement submitted in the reconciliation report, the actual income tax for FY 2019-20 for the company as a whole is Rs. 18.61 Crore and the income tax for TPC-G is Rs. 112.00 Crore. As against the income tax of Rs. 112.00 Crore as per the reconciliation report, TPC-G has claimed the income tax of Rs. 105.17 Crore and Rs. 20.77 Crore for Units 5,7 & Hydro and Unit 8 respectively. Therefore, the total income tax claimed by TPC-G in true-up is Rs. 125.94 Crore, which is higher than the actual income tax.

4.17.4 Further, as per the Income Tax Return Acknowledgement of the company, submitted by TPC-D, for the Assessment Year 2020-21 viz., FY 2019-20, wherein the total tax payable is Rs. 5.83 Crore upon the Book Profit, under MAT, of Rs. 33.38 Crore; thereby the tax rate works out to 17.47%.

Therefore, the company as a whole, has paid the income tax at MAT rate. TPC-G has claimed the income tax considering the Corporate tax rate for Units 5,7 & Hydro and MAT rate for Unit 8. Incidentally, TPC-T has also claimed the income tax considering MAT rate.

4.17.5 From the above, the claim of TPC-G is imprudent on two counts viz., (i) TPC-G has considered different income tax rates for Units 5,7 & Hydro and Unit 8 and (ii) the income tax claimed is higher than the actual income tax for TPC-G. In accordance with the Regulations, income tax shall be computed for the company as a whole. Therefore, the Commission deems it prudent to allow income tax considering the MAT rate for Units 5,7 & Hydro.

4.17.6 The Commission has computed the Income Tax (**IT**) in accordance with Regulation 33.1 of MYT Regulations, 2015 and as per the Hon'ble ATE Judgment dated 2 December 2013 in Case No. 138 and 139 of 2012.

4.17.7 As specified in the Regulations and Hon'ble ATE Judgment, the Commission has arrived at IT payable based on Regulatory PBT, considering the normative cost allowed by the Commission. The tax liability is calculated on the regulatory income and cost within the MYT regime considering the applicable tax depreciation for computation of the IT. Accordingly, the calculation of IT provides the tax payable for the Regulatory business whereby all the items of ARR and Revenue are considered on normative basis for tariff purposes. Also, in line with the MYT Regulations, 2015, efficiency gains and incentive earned are excluded while computing Income Tax on PBT basis. Further, the MAT rate of 17.47% has been considered.

4.17.8 For computation of Income tax, the Commission has considered the total revenue of Rs. 2301.74 Crore including revenue from sale of power of Rs. 2291.38 Crore and Non-tariff Income of Rs. 10.35 Crore. Further, incentive allowed has been reduced from revenue considered.

4.17.9 The summary of IT is as shown in the Table below:

Table 4.25: Income tax for Units 5,7 & Hydro for FY 2019-20 (Rs. Crore)

Particulars	Approved
Total Revenue	2301.74
Total expenses	1922.15
PBT	**379.59**
Book profit	379.59
MAT Rate	17.47%
MAT	**66.31**

4.17.10 The Commission approves the income tax for Units 5,7 & Hydro as per Table

4.25 for FY 2019-20.

4.18 NON-TARIFF INCOME (NTI) (UNITS 5,7 & HYDRO)

TPC-G's submission

4.18.1 TPC-G has claimed NTI of Rs. 10.35 Crore.

Commission's Analysis and Ruling

4.18.2 The Commission notes that NTI towards recurring and non-recurring expense was approved in MYT Order as provisionally true up of Rs 30.86 Crore based on truing up and actual of FY 2018-19. The Commission has considered NTI of Rs. 10.35 Crore as claimed by TPC-G.

4.19 ANNUAL FIXED CHARGES (AFC) (UNITS 5,7 & HYDRO)

Commission's Analysis and Ruling

4.19.1 Based on the above, the AFC approved by the Commission in the final true-up, that is fully recoverable at Target Availability is as shown in the Table below:

Table 4.26: AFC for Units 5,7 & Hydro for FY 2019-20 (Rs. Crore)

Particulars	Approved in provisional true-up	Claimed	Approved
O&M expenses	437.19	384.22	441.45
Depreciation	128.71	121.41	121.30
Interest on loan and finance charges	27.76	28.36	28.06
Interest on working capital	31.65	32.55	27.85
Return on Equity	210.86	211.60	211.43
Income tax	126.49	105.17	66.31
Less: Allocation of Unit 8 for shared capacity	12.02	12.02	12.02
Less: Non-tariff income	30.86	10.35	10.35
Annual Fixed Charges	**919.78**	**860.94**	**874.03**

4.19.2 The Commission approves the AFC for Units 5,7 & Hydro as per Table 4.26 for FY 2019-20. The AFC approved by the Commission works out to be higher than that claimed by TPC-G on account of error in claim of O&M expenses by TPC-G.

4.20 INCENTIVE ON PLF AND CAPACITY INDEX (UNITS 5,7 & HYDRO)

TPC-G's submission

4.20.1 TPC-G submitted that, as per the Regulation 44.3 and 48.7 of MYT

Regulations, 2015, thermal generation in excess of ex-Bus energy corresponding to target PLF of 85% is eligible for PLF Incentive at a flat rate of 25 paise/kWh. TPC-G has not claimed any incentive for Unit 5 and Unit 7 as the actual PLF is lower than the target PLF of 85%.

4.20.2 TPC-G submitted the Incentive on Hydro Generation more than Design Energy and availability more than normative availability in line with the provisions of Regulation 48.7 of MYT Regulations, 2015. TPC-G has claimed the incentive of Rs. 13.05 Crore, Rs. 17.06 Crore and Rs. 19.73 Crore for Bhira, Bhivpuri and Khopoli respectively.

Table 4.27: Incentive for hydro stations for FY 2019-20 as claimed by TPC-G

Particulars	Units	Bhira	Bhivpuri	Khopoli	Total
Fixed Cost for Hydro	Rs. Crore	142.41	87.99	128.37	**358.77**
Normative Availability	%	90.00%	90.00%	90.00%	
Actual Availability	%	95.48%	97.55%	98.36%	
Normative Capacity Charge	Rs. Crore	75.54	47.69	70.15	193.38
Design Energy	MU	744.12	193.23	174.68	1112.03
Auxiliary Consumption	%	1.55%	1.55%	1.55%	
Net Design Energy	MU	732.59	190.23	171.97	1094.79
Energy Charge Rate	Rs./kWh	0.97	2.31	3.73	
Actual Net Generation	MU	829.34	338.74	324.93	1493.01
Energy Charge	Rs. Crore	79.91	57.36	77.95	215.22
Total incentive	**Rs. Crore**	**13.05**	**17.06**	**19.73**	**49.83**

Commission's Analysis and Ruling

4.20.3 As the actual PLF of Unit 5 and Unit 7 is lower than the target PLF of 85%, incentive is not allowable.

4.20.4 The Commission has computed the incentive for hydro generating stations as shown in the Table below:

Table 4.28: Incentive for hydro stations for FY 2019-20 approved by the Commission

Particulars	Units	Bhira	Bhivpuri	Khopoli	Total
Fixed Cost for Hydro	Rs. Crore	144.57	89.33	130.32	**364.22**
Normative Availability	%	90.00%	90.00%	90.00%	
Actual Availability	%	95.48%	97.55%	98.36%	
Normative Capacity Charge	Rs. Crore	76.69	48.41	71.21	**196.32**
Design Energy	MU	744.12	193.23	174.68	**1112.03**
Auxiliary Consumption	%	1.55%	1.55%	1.55%	
Net Design Energy	MU	732.59	190.23	171.97	**1094.79**
Energy Charge Rate	Rs./kWh	0.99	2.35	3.79	
Actual Net Generation	MU	829.34	338.74	324.93	**1493.01**

Particulars	Units	Bhira	Bhivpuri	Khopoli	Total
Energy Charge	Rs. Crore	80.99	58.03	78.93	
Total incentive	**Rs. Crore**	**13.11**	**17.11**	**19.82**	**50.04**

4.20.5 The Commission approves the incentive for hydro stations as per Table 4.28 for FY 2019-20. The incentive for hydro stations approved by the Commission works out to be higher than that claimed by TPC-G due to the variation in AFC on account of error in claim of O&M expenses by TPC-G.

4.21 SHARING OF GAINS AND LOSSES (UNITS 5,7 & HYDRO)

4.21.1 The Commission in its MYT Tariff Regulations, 2015 has provided the following methodology for treatment of sharing and gains and sharing of losses:

"11. Mechanism for sharing of gains or losses on account of controllable factors—
11.1 The approved ***aggregate gain to the Generating Company*** *or Licensee or MSLDC on account of controllable factors shall be dealt with in the following manner: —*
(a) Two-third of the amount of such gain shall be passed on as a rebate in Tariff over such period as may be stipulated in the Order of the Commission under Regulation 8.4;
(b) The balance amount of such gain shall be retained by the Generating Company or Licensee or MSLDC.
11.2 The approved ***aggregate loss to the Generating Company*** *or Licensee or MSLDC on account of controllable factors shall be dealt with in the following manner: —*
(a) One-third of the amount of such loss may be passed on as an additional charge in Tariff over such period as may be stipulated in the Order of the Commission under Regulation 8.4;
(b) The balance amount of such loss shall be absorbed by the Generating Company or Licensee or MSLDC."

4.21.2 TPC-G has submitted the actual expenditure under various heads. The gains and loss on account of controllable factors has been computed and the sharing between the beneficiaries and TPC-G has been worked out as under:

4.22 GAIN/(LOSS) ON ACCOUNT OF FUEL COST FOR UNITS 5,7

TPC-G's submission

4.22.1 As per the MYT Regulations 2015, the changes in fuel cost due to operational parameters of the generation units would be considered as controllable. Accordingly, Gains/Losses on account of fuel costs are worked out as below:

Table 4.29: Gain/(loss) due to variation in GSHR for Units 5,7 for FY 2019-20 as submitted by TPC-G

Particulars	Unit 5	Unit 7	Total Fuel Cost
Fuel Cost (Rs. Crores)	1062.03	290.73	1352.76
Actual GSHR	2545.56	2034.73	
Normative GSHR	2549.00	2037.74	
Fuel Cost applying Normative Heat Rate (Rs. Crore)	1063.46	291.16	1354.63
Net Gains/ (Loss)	1.43	0.43	1.86
Passed on to the distribution licensees			1.24

Commission's Analysis and Ruling

4.22.2 The Commission has computed the sharing efficiency gain or losses on account of variation in GSHR for FY 2019-20 as shown in the following Table:

Table 4.30: Gain/(loss) due to variation in GSHR for Units 5,7 for FY 2019-20 approved by the Commission

Particulars	Unit 5	Unit 7	Total Fuel Cost
Fuel Cost (Rs. Crores)	1062.03	290.73	1352.76
Actual GSHR	2545.56	2034.73	
Normative GSHR	2549.00	2037.74	
Fuel Cost applying Normative Heat Rate (Rs. Crore)	1063.46	291.16	1354.63
Net Gains/ (Loss) (Rs. Crore)	1.43	0.43	1.86
Passed on to the distribution licensees (Rs. Crore)			1.24

4.22.3 The Commission approves the gain/(loss) due to variation in GSHR for Units 5,7 as per Table 4.30 for FY 2019-20.

4.23 GAIN/(LOSS) ON ACCOUNT OF AEC FOR UNITS 5,7 & HYDRO

TPC-G's submission

4.23.1 TPC-G submitted the efficiency gains/(loss) due to variation in AEC for FY 2019-20 as shown in the Table below:

Table 4.31: Gain/(loss) due to variation in AEC for Units 5,7 & Hydro for FY 2019-20 as claimed by TPC-G

Particulars	Unit 5	Unit 7	Hydro	Total
Gross Generation (MU)	3140.47	1136.96	1518.68	5796.10
Actual AEC (%)	5.79%	3.11%	1.69%	
Normative AEC (%)	6.00%	2.99%	1.55%	
Difference in Net Generation (MU)	6.61	-1.35	-2.16	3.10
Energy Charge Rate (Rs./kWh)	3.60	2.64	1.44	
Gain / (loss) (Rs. Crore)	**2.38**	**-0.36**	**-0.31**	**1.71**

Particulars	Unit 5	Unit 7	Hydro	Total
Passed on to the distribution licensees (Rs. Crore)				**1.14**

Commission's Analysis and Ruling

4.23.2 The Commission has computed sharing of efficiency gain or losses on account of variation in AEC for FY 2019-20 as shown in the Table below:

Table 4.32: Gain/(loss) due to variation in AEC for Units 5,7 & Hydro for FY 2019-20 approved by the Commission

Particulars	Unit 5	Unit 7	Hydro	Total
Gross Generation (MU)	3140.47	1136.96	1518.68	5796.10
Actual AEC (%)	5.79%	3.11%	1.69%	
Normative AEC (%)	6.00%	2.99%	1.55%	
Difference in Net Generation (MU)	6.61	-1.35	-2.16	3.10
Energy Charge Rate (Rs./kWh)	3.60	2.64	1.44	
Gain / (loss) (Rs. Crore)	**2.38**	**-0.36**	**-0.31**	**1.71**
Passed on to the distribution licensees (Rs. Crore)				**1.14**

4.23.3 The Commission approves the gain/(loss) due to variation in AEC for Units 5,7 & Hydro as per Table 4.32 for FY 2019-20.

4.24 GAIN/(LOSS) ON ACCOUNT OF O&M EXPENSES FOR UNITS 5,7 & HYDRO

TPC-G's submission

4.24.1 TPC-G submitted the computation of efficiency gains/(loss) on account of O&M expenses as Rs. 11.66 Crore for FY 2019-20. Accordingly, net gain of Rs. 7.77 Crore is to be passed on to distribution licensees.

Commission's Analysis and Ruling

4.24.2 The Commission has computed the sharing of efficiency gain on account of variation in O&M expenses as shown in the Table below:

Table 4.33: Gain/(loss) due to variation in O&M expenses for Units 5,7 & Hydro for FY 2019-20 (Rs. Crore)

Particulars	Claimed	Approved
Normative O&M (excluding water charges) (A)	380.15	437.38
Actual O&M (excluding water charges) (B)	368.49	368.49
Gain/(loss) (C=A-B)	11.66	68.89
Passed on to distribution licensees (D)	7.77	45.93
Actual water charges (E)	4.07	4.07

Entitlement of TPC-G (A-D+E)	376.45	395.52

4.24.3 The Commission approves the gain/(loss) due to variation in O&M expenses for Units 5,7 & Hydro as per Table 4.33 for FY 2019-20.

4.25 GAIN/(LOSS) ON ACCOUNT OF IOWC FOR UNITS 5,7 & HYDRO

TPC-G's submission

4.25.1 TPC-G submitted the computation of efficiency gains/(loss) on account of IoWC as Rs. 9.72 Crore for FY 2019-20. Accordingly, net gain of Rs. 6.48 Crore is to be passed on to distribution licensees.

Commission's Analysis and Ruling

4.25.2 The Commission has computed the sharing of efficiency gain on account of variation in IoWC as shown in the Table below:

Table 4.34: Gain/(loss) due to variation in IoWC for Units 5,7 & Hydro for FY 2019-20 (Rs. Crore)

Particulars	Claimed	Allowed
Normative IoWC (A)	32.55	27.85
Actual IoWC (B)	22.83	22.83
Gain/(loss) (C=A-B)	9.72	5.02
Passed on to distribution licensees (D)	6.48	3.35
Entitlement of TPC-G (A-D)	26.07	24.51

4.25.3 The Commission approves the gain/(loss) due to variation in IoWC for Units 5,7 & Hydro as per Table 4.34 for FY 2019-20.

4.26 REVENUE FROM SALE OF POWER (UNITS 5,7 & HYDRO)

TPC-G's submission

4.26.1 TPC-G has claimed the actual revenue from sale of power of Rs. 2291.38 Crore comprising of revenue from fixed charges, and energy charges of Rs. 768.16 Crore and Rs. 1523.22 Crore respectively.

Commission's Analysis and Ruling

4.26.2 The Commission has considered the actual revenue from sale of power of Rs. 2291.38 Crore as claimed by TPC-G.

4.27 SUMMARY OF TRUE-UP (UNITS 5,7 & HYDRO)

Commission's Analysis and Ruling

4.27.1 Based on the above analysis, the summary of true-up of Units 5,7 & Hydro for FY 2019-20 approved by the Commission is as shown in the Table below:

Table 4.35: Summary of true-up of Units 5,7 & Hydro for FY 2019-20 approved by the Commission (Rs. Crore)

Particulars	Approved in provisional true-up	Claimed	Approved
Fixed Cost			
O&M expenses	437.19	384.22	441.45
Depreciation	128.71	121.41	121.30
Interest on loan and finance charges	27.76	28.36	28.06
Interest on working capital	31.65	32.55	27.85
Return on Equity	210.86	211.60	211.43
Income tax	126.49	105.17	66.31
Hydro incentive		49.83	50.04
Sharing of efficiency (gains) and losses-O&M		-7.77	-45.93
Sharing of efficiency (gains) and losses-IoWC		-6.48	-3.35
Less: Allocation of Unit 8 for shared capacity	12.02	12.02	12.02
Less: Non-tariff income	30.86	10.35	10.35
Sub-total	**919.78**	**896.52**	**874.80**
Fuel Cost			
Fuel Cost (Normative)	1399.03	1354.63	1354.63
PLF incentive		0.00	0.00
Sharing of efficiency (gains) and losses towards fuel cost		-1.24	-1.24
Auxiliary consumption benefit		0.57	0.57
Sub-total	**1399.03**	**1353.95**	**1353.95**
ARR	**2318.80**	**2250.48**	**2228.76**
Revenue from sale of power	**2347.01**	**2291.38**	**2291.38**
Revenue gap/(surplus)	**-28.20**	**-40.91**	**-62.63**
Revenue Gap/(Surplus) approved in provisional true-up		**-28.20**	**-28.20**
Net Revenue Gap/(Surplus) approved after final true-up		**-12.71**	**-34.43**

4.27.2 The Commission approves the revenue gap/(surplus) on final true-up of Units 5,7 & Hydro as per Table 4.35 for FY 2019-20.

4.28 PERFORMANCE OF UNIT 8

4.28.1 Unit 8 of TPC-G is coal fired and has an installed capacity of 250 MW and it was commissioned on March 29, 2009. The actual performance of Unit 8 has been compared with the values of approved parameters by the Commission in MYT Order. The truing up of performance of Unit 8 for FY 2019-20 is discussed in subsequent paragraphs of this Chapter.

4.29 NORMS OF OPERATION (UNIT 8)

TPC-G's submission

4.29.1 TPC-G submitted the norms of operation for Unit 8 as shown in the Table below:

Table 4.36: Performance parameters for Unit 8 for FY 2019-20 as submitted by TPC-G

Particulars	Units	Approved in provisional true-up	Actual
Availability	%	89%	86.31%
PLF	%	77.63%	73.67%
Gross Generation	MU	1700.00	1617.72
AEC	%	8.50%	6.33%
GSHR	kcal/kWh	2450.00	2337.91

4.29.2 The actual Availability is 86.31% as against the norm of 85%. In accordance with Regulation 44.1(a) of the MYT Regulations, 2015, Unit 8 is entitled for recovery of full AFC for FY 2019-20. TPC-G submitted the MSLDC certificate for the actual Availability.

4.29.3 The actual gross generation of 1617.72 MU is marginally lower than that approved in the MYT Order.

4.29.4 The actual GSHR is 2337.91 kcal/kWh as against the norm of 2450 kcal/kWh. The actual AEC is 6.33% as against the norm of 8.50%.

Commission's Analysis and Ruling

4.29.5 The Commission notes that, the actual Availability of Unit 8 as certified by MSLDC is higher than the norm of 85% as specified in Regulation 44.1(a) of the MYT Regulations, 2015. Accordingly, Unit is entitled for recovery of full AFC for FY 2019-20.

4.29.6 The Commission verified the actual gross generation from the MSLDC certificate and found it to be in order and considered it accordingly.

4.29.7 The actual GSHR and AEC are lower than the norms. The Commission hereby approves the normative parameters for the purpose of truing up and sharing of efficiency gains and losses on account of such achievement is considered in subsequent section of this Chapter.

Table 4.37: Performance parameters for Unit 8 for FY 2019-20 approved by the Commission

Particulars	Units	Approved in provisional true-up	Actual	Normative Approved
Availability	%	89%	86.31%	85%
PLF	%	77.63%	73.67%	85%
Gross Generation	MU	1700.00	1617.72	1617.72
AEC	%	8.50%	6.33%	8.50%
GSHR	kcal/kWh	2450.00	2337.91	2450.00

4.29.8 The Commission approves the performance parameters for Unit 8 as per Table 4.37 for FY 2019-20.

4.30 FUEL COST (UNIT 8)

TPC-G's submission

4.30.1 TPC-G submitted the details of fuel consumption, GCV of fuels and fuel prices as shown in the Table below:

Table 4.38: Fuel details for Unit 8 for FY 2019-20 as submitted by TPC-G

Particulars	Units	Actual
Fuel consumption		
Coal	MT	803290.17
LSHS	MT	307.76
Kerosene	KL	76.01
GCV (As fired)		
Coal	kCal/Kg	4703.44
LSHS	kCal/Kg	10340.00
Kerosene	Kcal/Litre	8913.65
Price		
Coal	Rs/MT	6290.37
LSHS	Rs/MT	55388.37
Kerosene	Rs/KL	59973.82
Total cost	**Rs. Crore**	**507.46**

Commission's Analysis and Ruling

4.30.2 The Commission sought the monthly fuel bills and monthly fuel receipts, calorific value and price of fuel for FY 2019-20. The Commission has gone through the details of monthly fuel receipts, calorific value and price. The variation in fuel price and calorific value has been considered as part of FAC and has already been passed through monthly under that mechanism.

4.30.3 As the actual heat rate is lower than the normative heat rate for FY 2019-20, the Commission has computed the normative fuel cost for the purpose of sharing between actual fuel costs and normative fuel costs.

Table 4.39: Fuel cost for Unit 8 for FY 2019-20 approved by the Commission (Rs. Crore)

Particulars	Approved
Actual fuel cost	507.46
Normative fuel cost	530.63

4.30.4 The Commission approves the fuel cost for Unit 8 as per Table 4.39 for FY 2019-20.

4.31 ADDITIONAL CAPITALISATION (UNIT 8)

TPC-G's submission

4.31.1 TPC-G has claimed the actual capitalisation of Rs. 2.21 Crore as against the approved capitalisation of Rs. 0.30 Crore for FY 2019-20. The claimed capitalisation of Rs. 2.21 Crore is entirely towards non-DPR schemes.

Table 4.40: Additional capitalisation for Unit 8 for FY 2019-20 as claimed by TPC-G (Rs. Crore)

Unit/Station	Approved in provisional true-up	Actual
DPR schemes	0.09	0.00
Non-DPR schemes	0.21	2.21
Total	**0.30**	**2.21**

4.31.2 The claimed capitalisation is towards the essential works undertaken during the year. TPC-G requested the Commission to approve the actual capitalisation of Rs. 2.21 Crore for FY 2019-20 exercising its power to remove difficulties as provided in Regulation 102 of MYT Regulations 2015 and under the proviso to the Regulation 23.6 of MYT Regulations, 2015.

Commission's Analysis and Ruling

4.31.3 Regulation 23.6 of MYT Regulations, 2015 specifies that amount of capitalisation towards non-DPR schemes for any year shall not exceed 20% of amount of capitalisation approved against the DPR Schemes for that respective year. The Commission notes that TPC-G has not claimed any DPR capitalisation.

4.31.4 The Commission has gone through the submissions of TPC-G. The Commission notes that the DPR capitalization for Unit 8 is nil for FY 2019-20 and non-DPR capitalization is Rs. 2.21 Cr. and hence the criteria of 20% ceiling for non-DPR capitalization is not met. As regards the non-DPR schemes, Hon'ble ATE in its Judgment in Appeal No. 160 of 2012 ruled as under:

*"110. **<u>We do not find infirmity in the State Commission restricting the capital expenditure on non-DPR schemes to 20% of the capitalisation approved for DPR Scheme</u>**. However, we feel that the DPR schemes which had not approved and were awaiting approval of the State Commission should be considered by the State Commission and allowed after prudence check…."*

4.31.5 Regulation 23.6 of MYT Regulations, 2015 provides that the amount of capitalisation against non-DPR schemes for any year shall not exceed 20% of the amount of capitalisation approved against DPR schemes for that year. However, the Commission may allow capitalisation against non-DPR schemes for any Year in excess of 20% on a request made by the generating company. Considering the fact that the DPR capitalization for Unit 8 for FY 2019-20 is nil and such non-DPR undertaken towards essential works mainly relating to office equipments such as laptops, printers ,ACs, new facility for meeting/training rooms, servers, vehicle for operation etc., the Commission deems it appropriate to invoke the discretionary power under proviso to Regulation 23.6 of MYT Regulations and allow the actual non-DPR capitalisation as claimed by TPC-G.

4.31.6 Based on the above, the additional capitalisation approved by the Commission is as shown in the Table below:

Table 4.41: Additional capitalisation for Unit 8 for FY 2019-20 approved by the Commission (Rs. Crore)

Unit/Station	Approved in provisional true-up	Actual	Approved
DPR schemes	0.09	0.00	0.00
Non-DPR schemes	0.21	2.21	2.21
Total	**0.30**	**2.21**	**2.21**

4.31.7 The Commission approves the additional capitalisation for Unit 8 as per Table 4.41 for FY 2019-20.

4.32 MEANS OF FINANCE OF ADDITIONAL CAPITALISATION (UNIT 8)

TPC-G's submission

4.32.1 The means of finance for the claimed additional capitalisation has been considered in the debt-equity ratio of 70:30.

Commission's Analysis and Ruling

4.32.2 In line with the true-up of previous years, the Commission has considered the means of finance of the approved additional capitalisation in the debt: equity ratio of 70:30.

4.33 ANNUAL FIXED CHARGES (AFC) (UNIT 8)

4.33.1 Regulation 40 of the MYT Regulations, 2015 specifies the components of AFC as follows:

a. Operation and Maintenance (O&M) expenses
b. Depreciation
c. Interest on Loan
d. Interest on Working Capital (IoWC)
e. Return on Equity (RoE)
f. Income Tax

Less:

g. Non-Tariff Income (NTI)

4.34 OPERATION AND MAINTENANCE (O&M) EXPENSES (UNIT 8)

TPC-G's submission

4.34.1 TPC-G has claimed the normative O&M expenses of Rs. 68.88 Crore. As against the same, the actual O&M expenses for FY 2019-20 is Rs. 77.68 Crore. The actual O&M expenses are higher than the normative expenses on account of R&M expenses towards biannual overhauling. TPC-G has not considered the amount of Rs. 0.03 Crore towards Brand Equity.

Commission's Analysis and Ruling

4.34.2 Regulation 45.2 of the MYT Regulations, 2015 specify the normative O&M expenses of Rs. 27.55 Lakh/MW for unit size of 250 MW. Accordingly, the normative O&M expenses works out to Rs. 68.88 Crore.

4.34.3 TPC-G has claimed the actual O&M expenses (excluding Brand Equity) of Rs. 77.68 Crore. TPC-G submitted the details of cost centres of LA Services and HOSS. The Commission directed TPC-G to submit the justification for allocation of the expenses of the following HO Services:

- Business Collab-Clea: Cost Centre 1900022010;
- Regulations – Delhi: Cost Centre 1900022013;
- Corp Sustainability: Cost Centre 1900022018;
- FCG: Cost Centre 1900022019;
- Corp CSR: Cost Centre 1900022029.

4.34.4 In reply, TPC-G submitted the justification for the allocation of expenses of the above HO services, as discussed in the earlier part of this Chapter. For the sake of brevity, the same are not repeated here.

4.34.5 On perusal of the head wise details of actual O&M expenses, the Commission directed TPC-G to submit the justification for the expenses claimed under the following heads of A&G expenses:

- Cost of service procured.
- Loss on sale/retirement of assets.

4.34.6 In reply, TPC-G submitted the break-up of the expenses claimed under the above heads as under:

Table 4.42: Item wise details of A&G expenses for Unit 8 as submitted by TPC-G (Rs. Crore)

Cost of services procured		Loss on sale/retirement of assets	
Item	**Amount**	**Item**	**Amount**
Security Guard Payment	0.43	Loss/gain on retirement/sale of fixed assets	0.03
Housekeeping services	0.07		
Allocation of HOSS	0.23		
Total	**0.73**		

4.34.7 As against the normative O&M expenses of Rs. 68.88 Crore, the actual O&M expenses (excluding Brand Equity) amounts to Rs. 77.68 Crore thereby, there is efficiency loss in O&M expenses. TPC-G submitted that the actual O&M expenses are higher than the normative expenses on account of R&M expenses towards biannual overhauling. From the perusal of actual R&M expenses for the previous years, the Commission finds merit in TPC-G's submissions. Therefore, the Commission has considered the actual O&M expenses of Rs. 77.68 Crore as claimed by TPC-G for the purpose of sharing.

4.34.8 The Commission has considered the O&M expenses as a controllable in accordance with the MYT Regulations, 2015. Hence, the difference between the actual O&M expenses and normative O&M expenses as approved by the Commission in this Order has been considered for computing the sharing of efficiency loss as per principles laid out in MYT Regulations, 2015.

4.35 DEPRECIATION (UNIT 8)

TPC-G's submission

4.35.1 TPC-G has computed the depreciation by applying the rates as specified in the depreciation schedule in the MYT Regulations, 2015. Based on the same, TPC-G requested the Commission to approve the depreciation of Rs. 59.34

Crore.

Commission's Analysis and Ruling

4.35.2 In the final true-up of FY 2018-19, the Commission had approved the closing GFA for FY 2018-19 as Rs. 1195.21 Crore. The Commission has considered the same as the opening GFA for FY 2019-20. The approved additional capitalisation has been considered as the GFA addition during the year. The deduction from GFA during the year has been considered the same as claimed by TPC-G. The depreciation rate has been considered the same as claimed by TPC-G.

4.35.3 The depreciation approved by the Commission for FY 2019-20 is as shown in the Table below:

Table 4.43: Depreciation for Unit 8 for FY 2019-20 (Rs. Crore)

Particulars	Approved in provisional true-up	Claimed	Approved
Opening GFA	1195.21	1196.21	1195.21
Addition	0.30	2.21	2.21
Retirement	0.00	-2.17	-2.17
Closing GFA	1195.51	1196.25	1195.25
Depreciation rate	5.15%	4.96%	4.96%
Depreciation	61.55	59.34	59.29

4.35.4 The Commission approves the depreciation for Unit 8 as per Table 4.43 for FY 2019-20.

4.36 INTEREST ON LOAN (UNIT 8)

TPC-G's submission

4.36.1 TPC-G has taken various long-term loans to finance the capital expenditure nature projects in line with the Debt: Equity structure of 70%:30%. Tata Power sources long term loans at a company level for its Generation, Transmission and Distribution businesses together to have negotiation advantage to avail better terms and conditions of loans.

4.36.2 In accordance with Regulation 29.5 of the MYT Regulations, 2015, based on the actual loan drawls, interest rates and the interest paid, the weighted average interest rate for FY 2019-20 works out to 8.41%. TPC-G has submitted the statements received from Banks certifying the Opening Balance, Closing Balance, Interest paid, and the applicable rate of interest.

4.36.3 TPC-G has claimed the interest charges of Rs. 25.85 Crore as against the interest charges of Rs. 26.40 Crore approved in the MTR. Further, TPC-G has claimed the finance charges of Rs. 0.08 Crore.

Commission's Analysis and Ruling

4.36.4 In the final true-up of FY 2018-19, the Commission had approved the closing loan balance for FY 2018-19 as Rs. 336.25 Crore. The Commission has considered the same as the opening loan balance for FY 2019-20, which is the same as considered by TPC-G. The debt portion of the approved additional capitalisation has been considered as the loan addition during the year. The approved depreciation has been considered as the repayment for the year. The actual weighted average rate of interest has been applied to the average loan for the year for computing the interest expenses.

4.36.5 Based on the above, the interest on loan approved by the Commission is shown in the Table below:

Table 4.44: Interest on loan for Unit 8 for FY 2019-20 (Rs. Crore)

Particulars	Approved in provisional true-up	Claimed	Approved
Opening loan	336.25	336.25	336.25
Addition	0.21	1.55	1.55
Repayment	61.55	59.34	59.29
Closing loan	274.91	278.46	278.51
Rate of interest on loan	8.64%	8.41%	8.41%
Interest on loan	**26.40**	**25.85**	**25.85**
Finance charges	0.00	0.08	0.08
Interest on loan & finance charges	**26.40**	**25.93**	**25.93**

4.36.6 The Commission approves the interest on loan & finance charges for Unit 8 as per Table 4.44 for FY 2019-20.

4.37 INTEREST ON WORKING CAPITAL (UNIT 8)

TPC-G's submission

4.37.1 Interest on Working Capital (IoWC) has been computed based on Regulation 31.1 (a), (b) (c) and (d) of MYT Regulations, 2015. For the purpose of computing the interest on working capital, interest rate of 9.66% has been considered. TPC-G has claimed the interest on working capital of Rs. 10.87 Crore.

Commission's Analysis and Ruling

4.37.2 The Commission has computed IoWC in accordance with the MYT Regulations, 2015. In accordance with Regulation 31.1, the working capital comprising of the following components has been considered:

- Cost of coal towards stock, for thirty days, for generation corresponding to lower of actual generation or target Availability;
- Cost of coal, for thirty days, for generation corresponding to lower of actual generation or target Availability;
- Cost of secondary fuel oil, for two months, for generation corresponding to lower of actual generation or target Availability;
- Approved normative O&M expenses for one month;
- Maintenance spares at one percent of approved opening GFA;
- Receivables for sale of electricity to BEST equivalent to 45 days of the sum of the trued-up AFC and energy charges for Units 5&7 computed at lower of actual generation and target Availability;
- minus: payables for fuels to the extent of thirty days at lower of actual generation and target Availability.

4.37.3 The Commission observes that TPC-G has considered the working capital at target Availability which is not in accordance with the Regulations as the actual generation is less than that corresponding to target Availability.

4.37.4 The Commission has considered the rate of IoWC as 9.66% in accordance with the First Amendment to MYT Regulations, 2015, as follows:

Table 4.45: Interest on working capital for Unit 8 for FY 2019-20 (Rs. Crore)

Particulars	Approved in provisional true-up	Claimed	Approved
Working capital	115.67	112.55	99.48
Rate of interest	9.80%	9.66%	9.66%
IoWC	**11.33**	**10.87**	**9.61**

4.37.5 The Commission approves the normative IoWC for Unit 8 as per Table 4.45 for FY 2019-20.

4.37.6 TPC-G has claimed the actual interest on working capital of Rs. 7.62 Crore. In accordance with the proviso to Regulation 31.6 of the MYT Regulations, 2015, contribution of delay in receipt of payment to the actual interest on working capital shall have to be deducted from the actual interest on working capital before sharing of the efficiency gains or losses, as the case may be. In reply to a query in this regard, TPC-G submitted that it has not received any interest on delayed payment charges.

4.37.7 The Commission has considered IoWC as a controllable parameter in accordance with the MYT Regulations, 2015. Hence, the difference between the actual IoWC and normative IoWC as approved by the Commission in this Order has been considered for computing the sharing of efficiency gains as per principles laid out in MYT Regulations, 2015.

4.38 RETURN ON EQUITY (UNIT 8)

TPC-G's submission

4.38.1 TPC-G submitted RoE as per Regulation 28 of MYT Regulations, 2015 after considering the capitalised expenditure and normative Debt: Equity ratio of 70:30. TPC-G has claimed the RoE of Rs. 55.58 Crore.

Commission's Analysis and Ruling

4.38.2 In the final true-up of FY 2018-19, the Commission had approved the closing equity for FY 2018-19 as Rs. 358.57 Crore. The Commission has considered the same as the opening equity for FY 2019-20. The addition to equity has been considered as equivalent to the equity portion of the approved additional capitalisation for the year. The Commission has approved the RoE at the rate of return of 15.50% on the opening equity as well as on 50% of the addition during the year.

Table 4.46: RoE for Unit 8 for FY 2019-20 (Rs. Crore)

Particulars	Approved in provisional true-up	Claimed	Approved
Opening equity	358.57	358.57	358.57
Reduction of equity towards de-capitalised assets	0.00	-0.65	-0.65
Addition	0.09	0.66	0.66
Closing equity	358.66	358.58	358.58
Rate of Return	15.50%	15.50%	15.50%
RoE	**55.58**	**55.58**	**55.58**

4.38.3 The Commission approves RoE for Unit 8 as per Table 4.46 for FY 2019-20.

4.39 INCOME TAX (UNIT 8)

TPC-G's submission

4.39.1 TPC-G submitted the income tax payable as per the provisions of MYT Regulations, 2015. TPC-G has claimed the income tax of Rs. 20.54 Crore.

Commission's Analysis and Ruling

4.39.2 The issue of income tax for FY 2019-20 has been discussed in detail in the approval of income tax for Units 5,7 & Hydro in the preceding paragraphs of this Chapter. For the sake of brevity, the same is not repeated here.

4.39.3 The Commission has computed the Income Tax (IT) in accordance with Regulation 33.1 of MYT Regulations, 2015 and as per the Hon'ble ATE Judgment dated 2 December 2013 in Case No. 138 and 139 of 2012.

4.39.4 As specified in the Regulations and Hon'ble ATE Judgment, the Commission has arrived at IT payable based on Regulatory PBT, considering the normative cost allowed by the Commission. The tax liability is calculated on the regulatory income and cost within the MYT regime considering the applicable tax depreciation for computation of the IT. Accordingly, the calculation of IT provides the tax payable for the Regulatory business whereby all the items of ARR and Revenue are considered on normative basis for tariff purposes. Also, in line with the MYT Regulations, 2015, efficiency gains and incentive earned are excluded while computing Income Tax on PBT basis. Further, the MAT rate of 17.47% has been considered.

4.39.5 For computation of Income tax, the Commission has considered the total revenue of Rs. 796.81 Crore including revenue from sale of power of Rs. 791.69 Crore and Non-tariff Income of Rs. 5.12 Crore. Further, Incentive allowed has been reduced from revenue considered.

4.39.6 The summary of IT is as shown in the Table below:

Table 4.47: Income tax for Unit 8 for FY 2019-20 (Rs. Crore)

Particulars	Claimed	Approved
Total Revenue	796.81	796.81
Total expenses	677.96	672.80
PBT	**118.85**	**124.01**
Less:		
Deduction	-0.05	-0.05
Book profit	**118.90**	**124.06**
MAT Rate	17.47%	17.47%
MAT	**20.77**	**21.67**

4.39.7 The Commission approves income tax for Unit 8 as per Table 4.47 for FY 2019-20.

4.40 NON-TARIFF INCOME (NTI) (UNIT 8)

TPC-G's submission

4.40.1 TPC-G has claimed NTI of Rs. 5.12 Crore.

Commission's Analysis and Ruling

4.40.2 The Commission has considered NTI of Rs. 5.12 Crore as claimed by TPC-G.

4.41 ANNUAL FIXED CHARGES (AFC) (UNIT 8)

Commission's Analysis and Ruling

4.41.1 Based on the above, the AFC approved by the Commission in the final true-up, that is fully recoverable at Target Availability is as shown in the Table below:

Table 4.48: AFC for Unit 8 for FY 2019-20 (Rs. Crore)

Particulars	Approved in provisional true-up	Claimed	Approved
O&M expenses	68.88	68.88	68.88
Depreciation	61.55	59.34	59.29
Interest on loan and finance charges	26.40	25.93	25.93
Interest on working capital	11.33	10.87	9.61
Return on Equity	55.58	55.58	55.58
Income tax	17.88	20.77	21.67
Add: Allocation from shared capacity	12.02	12.02	12.02
Less: Non-tariff income	0.09	5.12	5.12
Annual Fixed Charges	**253.55**	**248.26**	**247.86**

4.41.2 The Commission approves AFC for Unit 8 as per Table 4.48 for FY 2019-20.

4.42 SHARING OF GAINS AND LOSSES (UNIT 8)

4.42.1 The Commission in its MYT Tariff Regulations, 2015 has provided the following methodology for treatment of sharing and gains and sharing of losses:

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

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

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

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

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

(a) One-third of the amount of such loss may be passed on as an additional charge in Tariff over such period as may be stipulated in the Order of the Commission under Regulation 8.4;

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

4.42.2 TPC-G has submitted the actual expenditure under various heads. The gains and loss on account of controllable factors has been computed and the sharing between the beneficiaries and TPC-G has been worked out as under:

4.43 GAIN/(LOSS) ON ACCOUNT OF FUEL COST FOR UNIT 8

TPC-G's submission

4.43.1 As per the MYT Regulations 2015, the changes in fuel cost due to operational parameters of the generation units would be considered as controllable. Accordingly, TPC-G has proposed to share the efficiency gain of Rs. 17.09 Crore with the distribution licensees.

Commission's Analysis and Ruling

4.43.2 The Commission has computed the sharing efficiency gain or losses on account of variation in GSHR for FY 2019-20 as shown in the following Table:

Table 4.49: Gain/(loss) due to variation in GSHR for Unit 8 for FY 2019-20 (Rs. Crore)

Particulars	Claimed	Approved
Actual Fuel Cost (A)	507.46	507.46
Fuel Cost applying Normative Heat Rate (B)	533.09	530.63
Net Gains/ (Loss) (C=B-A)	25.63	23.17
Passed on to the distribution licensees (D)	17.09	15.43
Entitlement of TPC-G (B-D)	516.00	515.20

4.43.3 The Commission approves the gain/(loss) due to variation in GSHR for Unit 8 as per Table 4.49 for FY 2019-20.

4.44 GAIN/(LOSS) ON ACCOUNT OF AEC FOR UNIT 8

TPC-G's submission

4.44.1 TPC-G has proposed to share the efficiency gain of Rs. 8.44 Crore with the distribution licensees.

Commission's Analysis and Ruling

4.44.2 The Commission has computed sharing of efficiency gain or losses on account of variation in AEC for FY 2019-20 as shown in the Table below:

Table 4.50: Gain/(loss) due to variation in AEC for Unit 8 for FY 2019-20

Particulars	Claimed	Approved
Gross Generation (MU)	1617.72	1617.72
Normative AEC (%)	8.50%	8.50%
Actual AEC (%)	6.33%	6.33%
Difference in Net Generation (MU)	35.17	35.17
Energy Charge Rate (Rs./kWh)	3.60	3.60
Gain / (loss) (Rs. Crore)	12.67	12.67
Passed on to the distribution licensees (Rs. Crore)	8.44	8.44
Entitlement of TPC-G (Rs. Crore)	4.23	4.23

4.44.3 The Commission approves the gain/(loss) due to variation in AEC for Unit 8 as per Table 4.50 for FY 2019-20.

4.45 GAIN/(LOSS) ON ACCOUNT OF O&M EXPENSES FOR UNIT 8

TPC-G's submission

4.45.1 TPC-G submitted the computation of efficiency gains/(loss) on account of O&M expenses as Rs. (8.80) Crore for FY 2019-20. Accordingly, net loss of Rs. 2.93 Crore is to be passed on to distribution licensees.

Commission's Analysis and Ruling

4.45.2 The Commission has computed the sharing of efficiency gain/(loss) on account of variation in O&M expenses as shown in the Table below:

Table 4.51: Gain/(loss) due to variation in O&M expenses for Unit 8 for FY 2019-20 (Rs. Crore)

Particulars	Claimed	Approved
Normative O&M (excluding water charges)	68.88	68.88
Actual O&M (excluding water charges)	77.68	77.68
Gain/(loss)	(8.80)	(8.80)
Passed on to distribution licensee	(2.93)	(2.93)
Actual water charges	-	-
Entitlement of TPC-G	71.81	71.81

4.45.3 The Commission approves the gain/(loss) due to variation in O&M expenses for Unit 8 as per Table 4.51 for FY 2019-20.

4.46 GAIN/(LOSS) ON ACCOUNT OF IOWC FOR UNIT 8

TPC-G's submission

4.46.1 TPC-G submitted the computation of efficiency gains/(loss) on account of IoWC as Rs. 2.16 Crore for FY 2019-20. Accordingly, net gain of Rs. 1.28 Crore is to be passed on to distribution licensees.

Commission's Analysis and Ruling

4.46.2 The Commission has computed the sharing of efficiency gain on account of variation in IoWC as shown in the Table below:

Table 4.52: Gain/(loss) due to variation in IoWC for Unit 8 for FY 2019-20 (Rs. Crore)

Particulars	Claimed	Approved
Normative IoWC	10.87	9.61
Actual IoWC	7.62	7.62
Gain/(loss)	3.25	1.99
Passed on to distribution licensees	2.16	1.32

4.46.3 The Commission approves the gain/(loss) due to variation in IoWC for Unit 8 as per Table 4.52 for FY 2019-20.

4.47 REVENUE FROM SALE OF POWER (UNIT 8)

TPC-G's submission

4.47.1 TPC-G has claimed the actual revenue from sale of power of Rs. 791.69 Crore comprising of revenue from fixed charges, and energy charges of Rs. 248.88 Crore and Rs. 542.81 Crore respectively.

Commission's Analysis and Ruling

4.47.2 The Commission has considered the actual revenue from sale of power of Rs. 791.69 Crore as claimed by TPC-G.

4.48 SUMMARY OF TRUE-UP (UNIT 8)

Commission's Analysis and Ruling

4.48.1 Based on the above analysis, the summary of true-up of Unit 8 for FY 2019-20 is as shown in the Table below:

Table 4.53: Summary of true-up of Unit 8 for FY 2019-20 approved by the Commission

(Rs. Crore)

Particulars	Approved in provisional true-up	Claimed	Approved
Fixed Cost			
O&M expenses	68.88	68.88	68.88
Depreciation	61.55	59.34	59.29
Interest on loan and finance charges	26.40	25.93	25.93
Interest on working capital	11.33	10.87	9.61
Return on Equity	55.58	55.58	55.58
Income tax	17.88	20.77	21.67
Sharing of efficiency (gains) and losses-O&M		2.93	2.93
Sharing of efficiency (gains) and losses-IoWC		-2.16	-1.32
Add: Allocation from shared capacity	12.02	12.02	12.02
Less: Non-tariff income	0.09	5.12	5.12
Sub-total	**253.55**	**249.04**	**249.47**
Fuel Cost			
Fuel Cost (Normative)	549.98	533.09	530.63
PLF incentive		0.00	0.00
Sharing of efficiency (gains) and losses towards fuel cost		-17.09	-15.43
Auxiliary consumption benefit		4.22	4.22
Sub-total	**549.98**	**520.23**	**519.42**
ARR	**803.53**	**769.26**	**768.89**
Revenue from sale of power	**833.37**	**791.69**	**791.69**
Revenue gap/(surplus)	**-29.84**	**-22.43**	**-22.80**
Revenue Gap/(Surplus) approved in provisional true-up		**-29.84**	**-29.84**
Net Revenue Gap/(Surplus) approved after final true-up		**7.41**	**7.04**

4.48.2 The Commission approves the revenue gap/(surplus) on final true-up for Unit 8 as per Table 4.53 for FY 2019-20.

4.48.3 The Commission has considered the revenue gap/(surplus) approved on final true-up for FY 2019-20 in the computation of cumulative revenue gap/(surplus) upto FY 2022-23 in Chapter 7 of the Order.

5 FINAL TRUE-UP FOR FY 2020-21 AND FY 2021-22

5.1 BACKGROUND

5.1.1 The Commission vide the MYT Order dated 30 March, 2020 in Case No. 300 of 2019 for 4th Control Period from FY 2019-20 to FY 2024-25 has approved the tariff for FY 2020-21 and FY 2021-22. TPC-G, in the present Petition has sought the final true-up for FY 2020-21 and FY 2021-22 based on the actual expenditure and revenue as per the Audited Accounts for the respective years under the MYT Regulations, 2019. TPC-G also submitted the auditor's report on the reconciliation between the total expenses, revenue, assets and liabilities of the company and the expenses, revenue, assets and liabilities separately for TPC-G for FY 2020-21 and FY 2021-22 in compliance to Regulation 2.1(1)(viii) of the MYT Regulations, 2019. The analysis of the true-up undertaken by the Commission is provided below.

5.2 GENERATION CAPACITY

5.2.1 TPC-G has the installed capacity of 1377 MW comprising of thermal capacity of 930 MW and hydel capacity of 447 MW, fully contracted with BEST and TPC-D.

Table 5.1: Generation capacity

Unit/Station	Type of fuel	Installed capacity	BEST Share		TPC-D Share	
		MW	MW	%	MW	%
Unit 5	Coal, Oil and Gas	500	256	51.20%	244	48.80%
Unit 7	Gas	180	92	51.11%	88	48.89%
Unit 8	Coal	250	100	40.00%	150	60.00%
Total Thermal (A)		**930**	**448**	**48.17%**	**482**	**51.83%**
Bhira	-	300	154	51.33%	146	48.67%
Bhivpuri	-	75	38	50.67%	37	49.33%
Khopoli	-	72	37	51.39%	35	48.61%
Total Hydro (B)		**447**	**229**	**51.23%**	**218**	**48.77%**
Grand Total (A+B)		**1377**	**677**	**49.16%**	**700**	**50.84%**

5.2.2 In line with the approach adopted in the earlier Order, the Commission has carried out the detailed analysis of the true-up of Units 5,7 & Hydro and Unit 8 separately as discussed in the following paragraphs.

5.3 PERFORMANCE OF UNITS 5,7 & HYDRO

5.3.1 The Commission has approved the norms of operation for FY 2020-21 and FY 2021-22 based on the norms specified in the MYT Regulations, 2019 and considering other aspects as detailed out in the MYT Order. TPC-G has submitted the actual performance in FY 2020-21 and FY 2021-22, which is in variation of the norms approved by the Commission. TPC-G's submissions on the actual performance in FY 2020-21 and FY 2021-22 and the Commission's analysis is detailed hereunder.

5.4 AVAILABILITY & PLANT LOAD FACTOR (PLF) (UNITS 5,7 & HYDRO)

TPC-G's submission

5.4.1 The Availability and PLF for FY 2020-21 and FY 2021-22 is as shown in the Table below:

Table 5.2: Availability and PLF for Units 5,7 & Hydro for FY 2020-21 and FY 2021-22

Unit/Station	Target Availability	Availability for FY 2020-21		PLF for FY 2020-21		Availability for FY 2021-22		PLF for FY 2021-22	
		Approved in MYT	Actual	Approved in MYT	Actual	Approved in MYT	Actual	Approved in MYT	Actual
Thermal									
Unit 5	85.00%	91.78%	87.23%	72.21%	62.49%	97.26%	93.90%	77.29%	69.87%
Unit 7	85.00%	98.08%	98.77%	80.92%	87.62%	98.08%	91.73%	80.92%	57.73%
Hydro									
Bhira	90.00%	98.58%	99.38%	-	-	99.05%	98.17%	-	-
Bhivpuri	90.00%	97.39%	94.39%	-	-	97.39%	100.00%	-	-
Khopoli	90.00%	96.59%	100.00%	-	-	97.94%	100.00%	-	-

5.4.2 TPC-G submitted the MSLDC certificate for the actual Availability and PLF.

Commission's Analysis and Ruling

5.4.3 As per the MYT Regulations, 2019, recovery of full AFC is allowable at target Availability. Regulation 50.1 of the MYT Regulations, 2019 specify the mechanism of recovery of fixed charges for thermal generating station during high demand season and low demand season.

5.4.4 The actual Availability during high demand season and low demand season as certified by MSLDC is higher than the target Availability for Units 5,7. The actual Availability of hydro stations as certified by MSLDC is higher than the target Availability for the respective station. Therefore, the Commission has approved the recovery of full trued-up AFC for FY 2020-21 and FY 2021-22.

5.4.5 MYT Regulations, 2019 specify the target PLF of 85% for thermal generating stations, to be eligible for the incentive for actual generation in excess of ex-bus energy corresponding to target PLF. The actual PLF of Unit 7 is higher than the target PLF for incentive for FY 2020-21. The actual PLF of Unit 7 is lower than the target PLF for incentive for FY 2021-22. Accordingly, the Commission has approved the PLF incentive for Unit 7 for FY 2020-21 and no incentive for FY2021-22, as discussed in the subsequent section of this

Chapter.

5.5 GROSS GENERATION (UNITS 5,7 & HYDRO)

TPC-G's submission

5.5.1 The gross generation for FY 2020-21 and FY 2021-22 as shown in the Table below:

Table 5.3: Gross generation for Units 5,7 & Hydro for FY 2020-21 and FY 2021-22 as claimed by TPC-G (MU)

Unit/Station	FY 2020-21		FY 2021-22	
	Approved in MYT	Actual	Approved in MYT	Actual
Thermal				
Unit 5	3162.83	2736.95	3385.50	3087.24
Unit 7	1275.91	1381.60	1275.91	911.48
Total Thermal	**4438.74**	**4118.55**	**4661.41**	**3998.72**
Hydro				
Bhira	896.00	944.83	896.00	1024.31
Bhivpuri	292.00	306.17	292.00	278.72
Khopoli	282.00	274.74	282.00	292.56
Total Hydro	**1470.00**	**1525.73**	**1470.00**	**1595.59**
Total	**5908.74**	**5644.29**	**6131.41**	**5594.31**

Commission's Analysis and Ruling

5.5.2 In reply to a query, TPC-G submitted that the generation claimed for true-up is excluding Virtual State Entity (VSE) generation scheduled by MSLDC.

5.5.3 The Commission has considered the actual gross generation as submitted by TPC-G.

Table 5.4: Gross generation for Units 5,7 & Hydro for FY 2020-21 and FY 2021-22 approved by the Commission (MU)

Unit/Station	FY 2020-21			FY 2021-22		
	Approved in MYT	Actual	Approved	Approved in MYT	Actual	Approved
Thermal						
Unit 5	3162.83	2736.95	2736.95	3385.50	3087.24	3087.24
Unit 7	1275.91	1381.60	1381.60	1275.91	911.48	911.48
Total Thermal	**4438.74**	**4118.55**	**4118.55**	**4661.41**	**3998.72**	**3998.72**
Hydro						
Bhira	896.00	944.83	944.83	896.00	1024.31	1024.31
Bhivpuri	292.00	306.17	306.17	292.00	278.72	278.72
Khopoli	282.00	274.74	274.74	282.00	292.56	292.56
Total Hydro	**1470.00**	**1525.73**	**1525.73**	**1470.00**	**1595.59**	**1595.59**
Total	**5908.74**	**5644.29**	**5644.29**	**6131.41**	**5594.31**	**5594.31**

5.5.4 The Commission approves the gross generation for Units 5,7 & Hydro as per Table 5.4 for FY 2020-21 and FY 2021-22.

5.6 AUXILIARY ENERGY CONSUMPTION (AEC) (UNITS 5,7 & HYDRO)

TPC-G's submission

5.6.1 The AEC for FY 2020-21 and FY 2021-22 is as shown in the Table below:

Table 5.5: AEC for Units 5,7 & Hydro for FY 2020-21 and FY 2021-22 as claimed by TPC-G (MU)

Unit/Station	Approved in MYT	Actual for FY 2020-21	Actual for FY 2021-22
Thermal			
Unit 5	6.00%	5.92%	5.78%
Unit 7	2.75%	3.00%	3.50%
Hydro			
Bhira	1.00%	1.32%	1.32%
Bhivpuri	1.20%	1.46%	1.58%
Khopoli	1.20%	3.04%	3.17%

5.6.2 The actual AEC for Unit 5 for FY 2020-21 and FY 2021-22 is lower than the norm. The actual AEC for Unit 7 for FY 2021-22 is higher than the norm due to zero schedule from distribution licensees.

5.6.3 For hydel stations, the break-up of the actual AEC is as shown in the Table below:

Table 5.6: Actual AEC for hydro stations for FY 2020-21 and FY 2021-22 as claimed by TPC-G

Particulars	FY 2020-21			FY 2021-22		
	Bhira	Bhivpuri	Khopoli	Bhira	Bhivpuri	Khopoli
Auxiliary consumption including static excitation	0.59%	0.71%	0.57%	0.53%	0.72%	0.53%
Energy for Nallah Diversion	0.25%	0.00%	0.71%	0.23%	0.00%	0.97%
GT losses	0.36%	0.68%	1.35%	0.43%	0.78%	1.23%
Total losses	**1.21%**	**1.39%**	**2.63%**	**1.19%**	**1.50%**	**2.73%**
Head works consumption	0.11%	0.07%	0.40%	0.12%	0.08%	0.42%
Condenser mode operation	0.01%	0.00%	0.00%	0.00%	0.00%	0.02%
Total auxiliary consumption	**1.32%**	**1.46%**	**3.03%**	**1.32%**	**1.58%**	**3.16%**

5.6.4 TPC-G requested the Commission to approve the additional AEC for Nallah diversion and head works in addition to the normative AEC approved by the Commission. TPC-G submitted that such additional AEC has not been considered for calculation of gain/loss due to variation in AEC.

Commission's Analysis and Ruling

5.6.5 The actual AEC of Unit 5 is less than the norm whereas, the actual AEC of Unit 7 is higher than the norm.

5.6.6 As regards the AEC of Unit 5, the Commission, in the MYT Order ruled as under:

"7.7.10 ***In view of the above, the Commission decides to approve the normative Auxiliary Consumption of 6.00% for Unit 5 and 8.50% for Unit 8 as per MYT Regulations, 2019 without consumption for FGD. The actual auxiliary consumption of FGD shall be considered at time of truing up based on actuals subject to ceiling of additional auxiliary consumption norm towards FGD as specified in MYT Regulations, 2019. Further, the Commission directs that all necessary metering arrangements shall be undertaken by TPC-G for measurement of Auxiliary consumption for FGDs of Unit 5 and Unit 8****."*

5.6.7 In compliance to the above directive, TPC-G submitted that it has installed energy meters with all necessary metering arrangement of auxiliary consumption of FGD installed at Unit 5. TPC-G submitted that the FGD is available and is taken in service based on requirement to comply with environmental norms. In reply to a query, TPC-G submitted the running hours of FGD as zero during FY 2020-21 and FY 2021-22.

5.6.8 As regards AEC of Unit 7, the Commission, in the MYT Order, ruled as under:

"7.7.13 The Commission notes the submission of TPC-G. It is also noted that additional capitalisation has been allowed to TPC-G from time to time for improvement of performance of Generating units. The CERC (Terms and Conditions of Tariff) Regulations, 2019 also provide the identical norms for Gas based /CCGT Generating stations. ***Hence, the Commission is not inclined to relax the norms towards Auxiliary consumption of Unit 7 and approves Auxiliary consumption of 2.75% for Unit 7 for 4th Control Period. However, considering the historical actual auxiliary consumption of Unit 7 and considering the dispensation mentioned in the Statement of Reasons for the CERC (Terms and Conditions of Tariff) Regulations, 2019 for coastal plants as pointed out by TPC-G, the Commission may consider to allow the actual auxiliary consumption, if it is higher than normative value of 2.75%, at the time of truing up, subject to ceiling of auxiliary consumption of 3%, if TPC-G proves the impact of sea water cooling system on the Unit 7 Auxiliary consumption with necessary details at the time of truing up****."*

5.6.9 The actual AEC of Unit 7 is higher than the normative AEC. TPC-G has not submitted any justification to prove that the higher AEC is due to impact of sea water cooling system. Regulation 46.16 of the MYT Regulations, 2019 specify the normative AEC of 2.75% and 1.00% for closed cycle and open cycle respectively. Hence, the Commission has considered the normative AEC of 2.74%, based on the actual generation in closed cycle and open cycle, for truing up.

5.6.10 As regards AEC of hydro stations, the Commission, in the MYT Order ruled as under:

"7.7.14 Regarding the Hydro Generating Stations, the Commission notes that norms for Auxiliary consumption are specified in Regulation 48.3 of MYT Regulations, 2019. ***Accordingly, the Commission approves the normative Auxiliary Consumption of 1.20% for Khopoli & Bhivpuri Hydro Generating Stations and 1% for Bhira Hydro Generating Station****.*

7.7.15 … the Commission deems ***it appropriate to consider the auxiliary consumption towards Headworks Consumption and Pumped Energy for Nallah diversion Schemes based on actuals at the time of truing up subject to ceiling of 0.18% for headworks consumption and 0.34% towards Pumped Energy for Nallah diversion****…"*

5.6.11 As regards Nallah diversion schemes, in response to Commission's query, TPC-G submitted the benefits derived from Nallah diversion schemes as under:

Table 5.7: Benefits derived from Nallah diversion schemes, for FY 2020-21 and FY 2021-22 as submitted by TPC-G

Particulars		FY 2020-21				FY 2021-22			
	Units	Bhira	Bhivpuri	Khopoli	Total	Bhira	Bhivpuri	Khopoli	Total
Nallah diversion	MCM	31.51	3.23	43.63	**78.37**	35.59	4.45	59.55	**99.59**
Pumping energy for Nallah diversion	MU	2.39	0.00	1.95	**4.34**	2.39	0.00	2.83	**5.22**
Generation from diverted water	MU	36.52	3.99	51.23	**91.74**	41.26	5.50	69.93	**116.69**

5.6.12 From the above Table, it is observed that, additional energy has been generated from the pumped water due to Nallah diversion during FY 2020-21 and FY 2021-22.

5.6.13 In line with the MYT Order, the Commission has approved the normative AEC of 1.20% for Khopoli & Bhivpuri Hydro Generating Stations and 1% for Bhira Hydro Generating Station. In addition, the Commission has approved the AEC towards Headworks Consumption and Pumped Energy for Nallah diversion Schemes subject to ceiling of 0.18% and 0.34% respectively.

Table 5.8: AEC for hydro stations for FY 2020-21 approved by the Commission

Particulars	Bhira		Bhivpuri		Khopoli	
	Claimed	Allowable	Claimed	Allowable	Claimed	Allowable
Auxiliary consumption including static excitation	0.59%	1.00%	0.71%	1.20%	0.57%	1.20%
Energy for Nallah Diversion	0.25%	0.25%	0.00%	0.00%	0.71%	0.34%
GT losses	0.36%	-	0.68%	-	1.35%	-
Total losses	**1.21%**	**1.25%**	**1.39%**	**1.20%**	**2.63%**	**1.54%**
Head works consumption	0.11%	0.11%	0.07%	0.07%	0.40%	0.18%
Condenser mode operation	0.01%	-	0.00%	-	0.00%	-
Total auxiliary consumption	**1.32%**	**1.36%**	**1.46%**	**1.27%**	**3.03%**	**1.72%**

Table 5.9: AEC for hydro stations for FY 2021-22 approved by the Commission

Particulars	Bhira		Bhivpuri		Khopoli	
	Claimed	Allowable	Claimed	Allowable	Claimed	Allowable
Auxiliary consumption including static excitation	0.53%	1.00%	0.72%	1.20%	0.53%	1.20%
Energy for Nallah Diversion	0.23%	0.23%	0.00%	0.00%	0.97%	0.34%
GT losses	0.43%	-	0.78%	-	1.23%	-
Total losses	**1.19%**	**1.23%**	**1.50%**	**1.20%**	**2.73%**	**1.54%**
Head works consumption	0.12%	0.12%	0.08%	0.08%	0.42%	0.18%
Condenser mode operation	0.00%	-	0.00%	-	0.02%	-
Total auxiliary consumption	**1.32%**	**1.36%**	**1.58%**	**1.28%**	**3.16%**	**1.72%**

5.6.14 Based on the above, the AEC approved by the Commission is as shown in the Table below:

Table 5.10: AEC for Units 5,7 & Hydro for FY 2020-21 and FY 2021-22 approved by the Commission

Unit/Station	Approved in MYT	FY 2020-21		FY 2021-22	
		Actual	Normative Approved	Actual	Normative Approved
Thermal					
Unit 5	6.00%	5.92%	6.00%	5.78%	6.00%
Unit 7	2.75%	3.00%	2.74%	3.50%	2.74%
Hydro					
Bhira	1.00%	1.32%	1.36%	1.32%	1.36%
Bhivpuri	1.20%	1.46%	1.27%	1.58%	1.28%
Khopoli	1.20%	3.04%	1.72%	3.17%	1.72%

5.6.15 The Commission approves the AEC for Units 5,7 & Hydro as per Table 5.10 for FY 2020-21 and FY 2021-22.

5.6.16 The Commission has considered the Auxiliary Consumption as a controllable parameter in accordance with the MYT Regulations, 2019. Hence, the difference between the actual Auxiliary Consumption as submitted by TPC-G and normative Auxiliary Consumption as approved by the Commission in this Order has been considered for computing the sharing of efficiency gains as per principles laid out in MYT Regulations, 2019.

5.7 GROSS STATION HEAT RATE (GSHR) (UNITS 5,7)

TPC-G's submission

5.7.1 The GSHR for FY 2020-21 and FY 2021-22 is as shown in the Table below:

Table 5.11: GSHR for Units 5,7 for FY 2020-21 and FY 2021-22 as claimed by TPC-G (kcal/kWh)

Unit/Station	Approved in MYT	Actual for FY 2020-21	Actual for FY 2021-22
Unit 5	2549.00	2594.85	2557.90
Unit 7	2035.00	2003.74	2083.12

5.7.2 The actual GSHR for Unit 5 is higher than the norm. TPC-G submitted that during FY 2020-21, Unit 5 has maintained its Availability more than 85% but PLF was on lower side which has resulted in adverse impact on the GSHR. Considering the COVID situation and lockdown across the country, which resulted in low demand for electricity in the system during FY 2020-21, TPC-G requested the Commission to consider the actual GSHR for FY 2020-21 as normative GSHR for the year. TPC-G submitted that Regulation 46.10 of the MYT Regulations, 2019 and Regulation 34 of the State Grid Code deal with such a scenario. Further, TPC-G submitted that the decreasing trend of PLFs of thermal power plant has a direct impact on GSHR of the plant and this trend is on account of increasing share of low cost renewable power which is an uncontrollable factor for TPC-G. In light of the same, TPC-G requested the Commission to approve the actual GSHR for Unit 5 for FY 2021-22.

5.7.3 For Unit 7, the Commission has approved normative GSHR of 2035 kcal/kWh for closed cycle operation and 2900 kcal/kWh for open cycle operation. Accordingly, based on the actual generation during closed cycle and open cycle modes of operation of 1376.96 MU and 4.64 MU respectively, the revised normative GSHR for FY 2020-21 works out to 2037.90 kcal/kWh. Further, based on the actual generation during closed cycle and open cycle modes of operation of 903.10 MU and 7.26 MU respectively, the revised normative GSHR for FY 2021-22 works out to 2041.90 kcal/kWh. The actual GSHR for Unit 7 for FY 2020-21 and FY 2021-22 is lower and higher respectively than the norm. Due to the increasing prices of RLNG and restricted availability of APM gas, the PLF of Unit 7 has got substantially affected, which has a direct impact on the GSHR. TPC-G requested the Commission to consider the actual GSHR for Unit 7 as normative GSHR while calculating the efficiency gains/losses.

5.7.4 TPC-G submitted that GSHR for Units 5,7 during FY 2021-22 is affected due to uncontrollable factors such as contribution from renewable energy and availability of gas. Due to infirm nature of renewable power, it is also important to keep the thermal power plant running. TPC-G submitted that in accordance with Regulation 9 of the MYT Regulations, 2019 the variation in GSHR due to variation in sales has to be considered as uncontrollable factor. TPC-G requested the Commission to invoke power to relax under Regulation 105 of the MYT Regulations, 2019 and treat the actual GSHR as the normative GSHR while calculating the efficiency gains/losses. TPC-G submitted that Regulation 46.10 of the MYT Regulations, 2019 and Regulation 34 of the State Grid Code deal with such a scenario. TPC-G requested the Commission to compensate the degradation of GSHR suitably.

Commission's Analysis and Ruling

5.7.5 Regulation 46.10 of the MYT Regulations, 2019 specifies as under:

"In case a Generating Station or Unit is directed by MSLDC to operate below normative loading but at or above technical minimum schedule on account of grid security or due to the lower schedule given by the Beneficiaries, increase in Gross Station Heat Rate may be considered by the Commission on case to case basis at time of truing up, subject to prudence check."

5.7.6 The Commission has perused the actual PLF and GSHR for the previous years. The Commission finds that TPC-G's contention that lower loading led to higher GSHR does not hold good because such a logic fails in case of Unit 8 wherein inspite of lower PLF of 38.78% and 68.05% for FY 2020-21 and FY 2021-22 respectively, the actual GSHR for those years is comfortably below the norm. Hence, achievement of normative GSHR even at lower loading is not an improbability. Therefore, the Commission does not find merit in TPC-G's request to allow the actual GSHR for Units 5,7 as normative GSHR.

5.7.7 TPC-G has placed reliance on Regulation 9.1(d) viz., variation in sales and submitted that GSHR affected due to variation in sales has to be treated as uncontrollable factor. Neither the MYT Regulations, 2019 nor the MYT Order speak about approval of sales of a generating company, TPC-G in the present case. Even if the generation projections considered by the Commission are treated at par with sales for a moment, it is pertinent to mention that TPC-G has not sought similar dispensation for FY 2019-20 during which the actual GSHR is lower than normative GSHR even though such a provision is available in the MYT Regulations, 2015 also. Therefore, the Commission does not find merit in the reliance placed by TPC-G on Regulation 9 of the MYT Regulations, 2019.

5.7.8 Regulation 34.3 of the State Electricity Grid Code provides compensation for degradation of GSHR for unit loading below 75% upto 55%. The mechanism for compensation for low unit loading provided in the Grid Code is separate from the truing-up carried out in accordance with the MYT Regulations. Therefore, the Commission does not find merit in the reliance placed by TPC-G on Regulation 34 of the State Electricity Grid Code.

5.7.9 The actual GSHR of Unit 5 for FY 2020-21 and FY 2021-22 is higher than the norm. For Unit 7, the Commission had approved the normative GSHR of 2035 kcal/kWh and 2900 kcal/kWh for closed cycle and open cycle modes of operation respectively. The Commission has perused the normative GSHR for Unit 7, based on the actual generation in closed cycle and open cycle, as claimed by TPC-G and finds the same in order.

5.7.10 The Commission has considered the GSHR as a controllable parameter in accordance with the MYT Regulations, 2019. Hence, the difference between the actual GSHR as submitted by TPC-G and normative GSHR as approved by the Commission in this Order has been considered for computing the sharing of efficiency gains as per principles laid out in MYT Regulations, 2019.

Table 5.12: Normative GSHR for Units 5,7 for FY 2020-21 and FY 2021-22 approved by the Commission (kcal/kWh)

Unit/Station	Approved in MYT	FY 2020-21		FY 2021-22	
		Actual	Normative Approved	Actual	Normative Approved
Unit 5	2549.00	2594.85	2549.00	2557.90	2549.00
Unit 7	2035.00	2003.74	2037.91	2083.12	2041.89

5.7.11 The Commission approves the GSHR for Units 5,7 as per Table 5.12 for FY 2020-21 and FY 2021-22.

5.8 FUEL COST (UNITS 5,7)

TPC-G's submission

5.8.1 TPC-G has claimed the actual fuel cost of Rs. 1111.89 Crore and Rs. 1776.20 Crore for FY 2020-21 and FY 2021-22 respectively. The details of fuel related parameters for FY 2020-21 and FY 2021-22 is as shown in the Table below:

Table 5.13: Fuel consumption and cost for Units 5,7 for FY 2020-21 and FY 2021-22 as claimed by TPC-G

Particulars	Units	FY 2020-21		FY 2021-22	
		Unit 5	Unit 7	Unit 5	Unit 7
Fuel consumption					
APM Gas	MT	90822.20	210123.29	37113.38	139844.15
RLNG	MT	437.26	1100.09	110.10	4355.14
Coal	MT	1255277.41	NA	1567314.59	NA
LSHS	MT	324.05	NA	824.09	NA
Kerosene	KL	102.44	NA	69.54	NA
HSD	KL	3.88	NA	6.59	NA
GCV (As fired)					
APM Gas	kCal/Kg	13106.53	13106.48	13135.42	13150.77
RLNG	kCal/Kg	13051.95	13087.06	13154.11	13164.33
Coal	kCal/Kg	4701.42	NA	4676.41	NA
LSHS	kCal/Kg	10445.00	NA	10355.95	NA
Kerosene	Kcal/Litre	8910.39	NA	8888.58	NA
HSD	Kcal/Litre	9216.21	NA	9216.21	NA
Price					
APM Gas	Rs/MT	12339.58	12077.57	12887.63	12980.06
RLNG	Rs/MT	43765.72	40704.96	46545.81	120085.93
Coal	Rs/MT	5872.34	NA	9499.28	NA
LSHS	Rs/MT	55531.04	NA	55378.80	NA
Kerosene	Rs/KL	66691.27	NA	83209.75	NA
HSD	Rs/KL	70542.50	NA	93593.73	NA
Total cost	**Rs. Crore**	**853.64**	**258.26**	**1542.38**	**233.82**

Commission's Analysis and Ruling

5.8.2 The Commission sought the monthly fuel bills and monthly Unit wise fuel receipts, calorific value and price of fuel for FY 2020-21 and FY 2021-22. The Commission has gone through the details of monthly fuel receipts, calorific value and price. The variation in fuel price and calorific value has been considered as part of FAC and has already been passed through monthly under that mechanism.

5.8.3 In reply to a Commission's query, TPC-G submitted the reconciliation of fuel cost claimed for true-up with the actual fuel cost as per the audited accounts as under:

Table 5.14: Reconciliation of actual fuel cost for FY 2020-21 and FY 2021-22 as submitted by TPC-G (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22
Actual fuel cost as per the financial statements	1367.43	2503.87
Less: Forex gain/(loss)	0.61	-20.24
Add: VSE fuel cost	-	33.48
Less: DSM fuel cost	-	67.35
Net fuel cost	**1366.82**	**2490.24**
Actual fuel cost claimed for Units 5,7	1111.89	1776.20
Actual fuel cost claimed for Unit 8	254.93	714.04
Total	**1366.82**	**2490.24**

5.8.4 As regards the forex gain/loss claimed by TPC-G, the Commission finds that such forex variation is pass through in bills as per the contractual agreement for imported coal. Hence, the Commission has considered the forex gain/loss in actual fuel cost.

5.8.5 The Commission has approved the fuel cost for FY 2020-21, same as claimed by TPC-G.

5.8.6 Regulation 6(B)(iv) of DSM Regulations, 2019 specify as under:

"During real time operation, in case the grid parameters including frequency, voltage parameters and transmission line loading and substation loading conditions deviate beyond permissible operating range, SLDC shall take suitable measures in the interest of reliable and safe grid operations or to ensure compliance of RLDC instructions in conformity with the provisions of the DSM Regulations of Central Commission and the amendments thereof. Accordingly, SLDC shall issue necessary despatch or curtailment instructions in accordance with Centralised MoD principles for the state as whole, so as to maintain the load- generation balance and comply with conditions stipulated under IEGC and State Grid Code."

5.8.7 In accordance with the above, MSLDC provides VSE schedule to TPC-G. The energy generated by TPC-G under VSE is for maintaining the grid security for the whole of Maharashtra and are not confined to beneficiaries of TPC-G alone. As per Regulation 6(B)(vi) of DSM Regulations, 2019, the time block wise settlement of such power exchange on account of such actions initiated by MSLDC shall be settled at the applicable Deviation rate including Additional Deviation Charges, if any, for the State at the State periphery for the respective time block. However, vide Order dated 2 August, 2022, in the matter of Commercial implementation of the MERC (Deviation Settlement Mechanism and related matters) Regulations, 2019, post expiry of stabilization period, the Commission has changed the rate of settlement as the variable cost plus FAC of respective generators.

5.8.8 In reply to a query, TPC-G submitted that the fuel cost corresponding to VSE operations has not been considered in its true-up claim. The Commission observed that TPC-G has claimed the fuel cost corresponding to the scheduled generation in true-up for FY 2021-22 (for the period post implementation of the DSM Regulations) and has not included the cost of VSE operations.

5.8.9 In view of the above, the Commission has approved the actual fuel cost as claimed by TPC-G for FY 2020-21 and FY 2021-22 based on scheduled generation as shown in the Table below:

Table 5.15: Fuel cost for FY 2020-21 and FY 2021-22 approved by the Commission (Rs. Crore)

Unit	FY 2020-21	FY 2021-22
Normative fuel cost	1101.21	1784.98
Actual fuel cost	1111.89	1795.04

5.9 ADDITIONAL CAPITALISATION (UNITS 5,7 & HYDRO)

TPC-G's submission

5.9.1 TPC-G has claimed the actual capitalisation of Rs. 37.41 Crore and Rs. 48.71 Crore as against the approved capitalisation of Rs. 52.39 Crore and Rs. 37.72 Crore for FY 2020-21 and FY 2021-22 respectively.

Table 5.16: Additional capitalisation for Units 5,7 & Hydro for FY 2020-21 and FY 2021-22 as claimed by TPC-G (Rs. Crore)

Particulars	FY 2020-21		FY 2021-22	
	Approved in MYT	Actual	Approved in MYT	Actual
DPR capitalisation	50.22	27.31	34.05	36.84
Non-DPR capitalisation	2.17	10.10	3.67	11.88
Total	**52.39**	**37.41**	**37.72**	**48.71**
Non-DPR capitalisation as % of DPR capitalisation	*4.32%*	*36.98%*	*10.78%*	*32.25%*

5.9.2 The capitalisation towards non-DPR schemes is higher as it involves small schemes which cannot be clubbed to form a merged DPR. Further, the DPR capitalisation of Trombay Units has significantly reduced as the Units are completing their useful life and hence, only minimum required capex of non-DPR nature is being executed to ensure safe and reliable operation of the power plant.

5.9.3 TPC-G requested the Commission to exercise the Power to relax as provided in Regulation 105 of MYT Regulations, 2019 and also under the proviso to the

Regulation 24.7 of the MYT Regulations, 2019 to approve the Non DPR capitalisation beyond 20%. TPC-G requested the Commission to approve the actual capitalisation of Rs. Rs. 37.41 Crore and Rs. 48.71 Crore for FY 2020-21 and FY 2021-22 respectively.

Commission's Analysis and Ruling

5.9.4 Regulation 24.7 of MYT Regulations, 2019 specifies that amount of capitalisation towards non-DPR schemes for any year shall not exceed 20% of amount of capitalisation approved against the DPR Schemes for that respective year. The Commission notes that non-DPR capitalisation claimed by TPC-G is higher than 20% of DPR capitalisation. In reply to a query in this regard, TPC-G submitted that since the capitalisation of DPR schemes is very low, the ratio of Non-DPR to DPR capitalisation is higher than the ceiling limit. Further, the total capitalisation is very low as compared to GFA. Hence, TPC-G requested the Commission to exercise its power to remove difficulties as provided in Regulation 105 of MYT Regulations 2019 and to approve the non-DPR capitalisation beyond the ceiling limit as an exception subject to a limit of 1% of the GFA of the Unit.

5.9.5 Regarding the DPR capitalisation, the Commission has gone through details of capitalisation undertaken by TPC-G towards each DPR scheme. Further, the Commission verified on least cost approach adopted by TPC-G while undertaking the DPR schemes. In reply to a query in this regard, TPC-G submitted as under:

- The company follows a very detailed, systematic procurement process that ensures transparency and competition resulting in procurement of material and services at Competitive Prices. All the activities related to procurement of materials as well as services right from budget availability till preparation of purchase order has been configured through workflow in SAP ERP.
- For major procurement of material and services sealed bids are invited from various registered vendors in SAP and the same has been evaluated by applicable technical and financial expertise. The vendors are finalised based on the best technical and commercial offer.
- Further the company ensures that adequate vendor base is available for equipment and for registering a new vendor in SAP, a systematic process has been institutionalised.

5.9.6 The Commission also directed TPC-G to submit the cost benefit analysis for each scheme along with the documentary evidence for all the assets put to use during FY 2020-21 and FY 2021-22. In reply, TPC-G submitted the project completion reports alongwith cost benefits.

5.9.7 The claimed DPR capitalization during FY 2020-21 and FY 2020-21 is mainly towards various Hydro DPR schemes such as strengthening of cooling water system, replacement of generator transformers and headworks transformers at Bhivpuri, Bhira and Khopoli Generating stations. Based on the project competition reports, the DPR capitalization has been considered for approval.

5.9.8 The Commission has gone through the submissions of TPC-G. The claimed actual capitalisation towards non-DPR schemes is higher than the ceiling limit. As regards the non-DPR schemes, Hon'ble ATE in its Judgment in Appeal No. 160 of 2012 ruled as under:

*"110. **<u>We do not find infirmity in the State Commission restricting the capital expenditure on non-DPR schemes to 20% of the capitalisation approved for DPR Scheme</u>**. However, we feel that the DPR schemes which had not approved and were awaiting approval of the State Commission should be considered by the State Commission and allowed after prudence check…."*

5.9.9 Regulation 24.7 of MYT Regulations, 2019 provides that the amount of capitalisation against non-DPR schemes for any year shall not exceed 20% of the amount of capitalisation approved against DPR schemes for that year. However, the Commission may allow capitalisation against non-DPR schemes for any Year in excess of 20% on a request made by the generating company. In line with the stand taken by the Commission in truing up for FY 2019-20 in earlier part of the Order, the Commission has restricted the non-DPR capitalization to 20% of the approved DPR capitalization for FY 2020-21.

5.9.10 As regards to non-DPR capitalization for FY 2021-22, the Commission notes that TPC-G had submitted following two DPRs for in principle approval of the Commission:

a. Merged DPR for replacement of electrical equipments at Hydro (Rs. 31.27 Crore).
b. Replacement of Control and Relay Panels of 110 kV switch yard and 3.3kV/ 415 V auxiliary supply system at Trombay station A (Rs. 37.12 Crore).

5.9.11 While scrutiny of the aforesaid DPRs, the Commission observed that important criteria to treat the expenditure capital expenditure was that such expenditure shall increase the transformation capacity / augment the capacity / increase revenue from the assets/efficiency of the system / life of assets etc. However, the schemes proposed in the aforesaid DPRs did not fulfil the said criteria. The scope of work proposed by TPC-G was of R&M nature. The Commission also observed that the execution of the O&M schemes as capital expenditure would increase financial burden on the consumers. Hence, vide letter dated 19 April 2021, the above two DPRs were referred back and TPC-G was directed not to submit/claim the O&M nature scope of work under Capex expenditure (DPR and NDPR) in future.

5.9.12 The Commission, while investigating the Non-DPR schemes submitted under the present MTR Petition, has come across following schemes which are having R&M related nature:

Non-DPR scheme	Capitalization (Rs. Cr.)
Replacement of HW and Camp transformers	0.61
IT Infra replacement at Hydros	0.02
Replacement of Unit 7, 8 & 9 S5 PLC	1.33
Replacement of Lonavala and Walwhan Sluice	0.98
Replacement of 4 MVA transformer	0.9
Replacement of ACs	0.15
IT Infra replacement at Hydros	0.11
Renovation works in colonies	0.15
Renovation works in GH &HH	0.2
Renovation works in offices	0.08
Renovation works in GH &HH (Hydro & Mumbai)	0.65
Renovation works in offices	0.09
Renovation works in GH &HH (Hydro & Mumbai	0.33
Total	**5.60**

5.9.13 The Commission notes that the non-DPR capitalisation amounting to Rs. 5.60 Crore for FY 2021-22 towards the aforesaid schemes are of the nature of repair and maintenance expenses. Therefore, the Commission does not find it prudent to approve such expenses under the additional capitalisation. The Commission has excluded the same from the additional capitalisation and considered in addition to the actual O&M expenses claimed by TPC-G for FY 2021-22.

5.9.14 Based on the above, the additional capitalisation approved by the Commission is as shown in the Table below:

Table 5.17: Additional capitalisation for Units 5,7 & Hydro for FY 2020-21 and FY 2021-22 approved by the Commission (Rs. Crore)

Particulars	FY 2020-21			FY 2021-22		
	Approved in MYT	Actual	Approved	Approved in MYT	Actual	Approved
DPR capitalisation	50.22	27.31	27.31	34.05	36.84	36.84
Non-DPR capitalisation	2.17	10.10	5.46	3.67	11.88	6.28
Total	**52.39**	**37.41**	**32.77**	**37.72**	**48.71**	**43.12**

5.9.15 The Commission approves the additional capitalisation for Units 5,7 & Hydro as per Table 5.17 for FY 2020-21 and FY 2021-22.

5.10 MEANS OF FINANCE OF ADDITIONAL CAPITALISATION (UNITS 5,7 & HYDRO)

TPC-G's submission

5.10.1 The means of finance for the claimed additional capitalisation has been considered in the debt-equity ratio of 70:30.

Commission's Analysis and Ruling

5.10.2 In line with the true-up of previous years, the Commission has considered the means of finance of the approved additional capitalisation in the debt: equity ratio of 70:30.

5.11 ANNUAL FIXED CHARGES (AFC) (UNITS 5,7 & HYDRO)

5.11.1 Regulation 42 of the MYT Regulations, 2019 specifies the components of AFC as follows:

a. Operation and Maintenance (O&M) expenses
b. Depreciation
c. Interest on Loan
d. Interest on Working Capital (IoWC)
e. Return on Equity (RoE)
f. Income Tax

Less:

g. Non-Tariff Income (NTI)

5.12 OPERATION AND MAINTENANCE (O&M) EXPENSES (UNITS 5,7 & HYDRO)

TPC-G's submission

5.12.1 Regulation 47.1 of the MYT Regulations, 2019 specifies the methodology for computation of normative O&M expenses. In line with the same, the normative O&M expenses for FY 2020-21 and FY 2021-22 have been claimed. TPC-G has claimed the normative O&M expenses of Rs. 412.16 Crore and Rs. 427.47 Crore for FY 2020-21 and FY 2021-22 respectively. As against the same, the actual O&M expenses are Rs. 370.74 Crore and Rs. 405.94 Crore for FY 2020-21 and FY 2021-22 respectively. In addition, TPC-G has claimed the actual water charges of Rs. 6.42 Crore and Rs. 3.13 Crore for FY 2020-21 and FY 2021-22 respectively.

Commission's Analysis and Ruling

5.12.2 The last proviso to Regulation 47.1(b) of the MYT Regulations, 2019 specifies as under:

"Provided also that at the time of true-up for each Year of this Control Period, the Operation and Maintenance expenses, excluding water charges and including insurance, shall be derived on the basis of the Final Trued-up Operation and Maintenance expenses after adding/deducting the sharing of efficiency gains/losses, for the base year ending March 31, 2020, excluding abnormal expenses, if any, subject to prudence check by the Commission, and shall be considered as the Base Year Operation and Maintenance expenses."

5.12.3 From the computations of normative O&M expenses submitted by TPC-G, the Commission observed that TPC-G has computed the normative O&M expenses by considering the average of actual O&M expenses for FY 2017-18, FY 2018-19 and FY 2019-20 and not in line with the regulatory provision reproduced above. Further, TPC-G has erred in considering the escalation rate for the previous year viz., for FY 2020-21, the escalation rate of FY 2019-20 was considered. In reply to queries in this regard, TPC-G submitted the revised computations of normative O&M expenses. Accordingly, TPC-G has revised the claim of normative O&M expenses to Rs. 386.21 Crore and Rs. 405.27 Crore.

5.12.4 In accordance with the regulatory provision reproduced above, the Commission has computed the Base Year O&M expenses as Rs. 372.38 Crore, as shown in the Table below:

Table 5.18: Base Year O&M expenses approved by the Commission (Rs. Crore)

Particulars	Amount
Normative O&M expenses for FY 2019-20	437.38
Actual O&M expenses for FY 2019-20	368.49
Efficiency (gain)/loss	-68.89
Share of efficiency (gain)/loss	-22.96
Adjusted O&M after adding/deducting efficiency (gain)/loss	391.46
Base Year O&M expenses	391.46

5.12.5 Further, the 2nd and 3rd proviso to Regulation 47.1(c) of the MYT Regulations, 2019 specifies as under:

"Provided that, in the Truing-up of the O&M expenses for any particular year of the Control Period, an inflation factor with 50% weightage to the average yearly inflation derived based on the monthly Wholesale Price Index of the respective past

five financial years (including the year of Truing-up) and 50% weightage to the average yearly inflation derived based on the monthly Consumer Price Index for Industrial Workers (all-India) of the respective past five financial years (including the year of Truing-up), as reduced by an efficiency factor of 1% or as may be stipulated by the Commission from time to time, shall be applied to arrive at the permissible Operation and Maintenance Expenses for that year:

Provided further that the efficiency factor shall be considered as zero, in case the Availability Factor of all Generating Units/Stations of the Generating Company is higher than NAPAF, or there is an improvement in the Availability Factor of all Generating Units/Stations of the Generating Company of at least 2 percent annually over the last 3 years, in case the Availability Factor of all Generating Units/Stations of the Generating Company is lower than NAPAF."

5.12.6 In accordance with the above, the Commission has computed the escalation factor of 3.71% and 4.94% for FY 2020-21 and FY 2021-22 respectively. The Commission has considered the efficiency factor as zero as the Availability of all the Generating Units/Stations of TPC-G is higher than NAPAF.

5.12.7 TPC-G has claimed the actual water charges of Rs. 6.42 Crore and Rs. 3.13 Crore for FY 2020-21 and FY 2021-22 respectively. In reply to a query in this regard, TPC-G submitted the details of invoices.

5.12.8 The revised normative O&M expenses for FY 2020-21 have been arrived at by escalating the Base Year expenses by the escalation factor of 3.71%. The revised normative O&M expenses for FY 2021-22 have been arrived at by escalating the normative O&M expenses for FY 2020-21 by the escalation factor of 4.94%. In addition to the normative O&M expenses, the Commission has considered the actual water charges.

Table 5.19: O&M expenses for Units 5,7 & Hydro for FY 2020-21 and FY 2021-22 (Rs. Crore)

Particulars	FY 2020-21			FY 2021-22		
	Approved in MYT	**Claimed**	**Approved**	**Approved in MYT**	**Claimed**	**Approved**
Normative O&M expenses for previous year	403.59	372.38	391.46	416.17	386.21	405.98
Escalation factor	3.12%	3.71%	3.71%	3.12%	4.94%	4.94%
Normative O&M expenses (A)	416.17	386.21	405.98	429.14	405.27	426.03
Water charges (B)	5.00	6.42	6.42	5.00	3.13	3.13
Total (A+B)	**421.17**	**392.63**	**412.40**	**434.14**	**408.40**	**429.16**

5.12.9 The Commission approves the normative O&M expenses for Units 5,7 & Hydro as per Table 5.19 for FY 2020-21 and FY 2021-22. The O&M expenses approved by the Commission works out to be higher than that claimed by TPC-G due to the variation in base O&M expenses.

5.12.10 TPC-G has claimed the actual O&M expenses of Rs. 377.16 Crore and Rs. 409.07 Crore for FY 2020-21 and FY 2021-22 respectively. The claimed actual O&M expenses are exclusive of Brand Equity.

5.12.11 TPC-G submitted the details of cost centres of LA Services and HOSS. The Commission directed TPC-G to submit the justification for allocation of the expenses of the following HO Services:

- Business Collab-Clea: Cost Centre 1900022010;
- Regulations – Delhi: Cost Centre 1900022013;
- Corp Sustainability: Cost Centre 1900022018;
- FCG: Cost Centre 1900022019;
- Corp CSR: Cost Centre 1900022029.

5.12.12 In reply, TPC-G submitted the justification for the allocation of expenses of the above HO services detailed in Chapter 4. For the sake of brevity, the same are not repeated here.

5.12.13 TPC-G submitted the allocation of the expenses under the above heads to TPC-G as under:

Table 5.20: Allocation of expenses of shared services as submitted by TPC-G (Rs. Crore)

Cost centre	Allocation to TPC-G
Business collaboration	0.48
Regulations-Delhi	0.46
Corp-Sustainability	0.44
FCG	0.30
Corp CSR	0.51
Total	**2.19**

5.12.14 On perusal of the head wise details of actual O&M expenses, the Commission directed TPC-G to submit the justification for the expenses claimed under the following heads of A&G expenses:

- Cost of service procured.
- Loss on sale/retirement of assets.
- Others – A&G

5.12.15 In reply, TPC-G submitted the break-up of the expenses claimed under the above heads as under:

Table 5.21: Item wise details of A&G expenses for Units 5,7 & Hydro for FY 2020-21 as submitted by TPC-G (Rs. Crore)

Cost of services procured		Others-A&G		Loss on sale/retirement of assets	
Item	**Amount**	**Item**	**Amount**	**Item**	**Amount**
RCM Reliability related minor services	2.22	Other Fees- Consent Fees, MPCB , Consent Fees, Leasing Fees	1.51	Loss/gain on retirement/sale of fixed assets	1.37
Security Guard Payment	10.26	Guest House Expenses	0.68		
Housekeeping services	3.85	Lease Agreement Fees	0.12		
Generator Overhaul related minor services	0.86	Canteen Expenses	0.12		
Ambient Air Monitoring	1.00	Ash Disposal Exp	0.06		
Operation and Maintenance related minor services	0.90	Quality Management System	0.05		
Others	3.43	Others	0.04		
Allocation of HOSS	3.51	Total Secondary Expense	1.35		
Total	**26.04**	**Total**	**3.93**		

Table 5.22: Item wise details of A&G expenses for Units 5,7 & Hydro for FY 2021-22 as submitted by TPC-G (Rs. Crore)

Cost of services procured		Others-A&G		Loss on sale/retirement of assets	
Item	**Amount**	**Item**	**Amount**	**Item**	**Amount**
Security Guard Payment	12.53	Other Fees- Consent Fees, MPCB , Consent Fees, Leasing Fees	1.55	Loss/gain on retirement/sale of fixed assets	0.22
Housekeeping services	3.40	Guest House Expenses	0.52		
Generator Overhaul related minor services	0.29	Canteen Expenses	0.06		
Ambient Air Monitoring	1.02	Ash Disposal Exp	0.02		
Operation and Maintenance related minor services	2.20	Quality Management System	0.06		
Consultancy	0.42	Others	0.07		
Others	3.85	Total Secondary Expense	1.46		
Allocation of HOSS	5.06	**Total**	**3.74**		
Total	**28.77**				

5.12.16 As the actual O&M expenses are lower than the normative O&M expenses, The Commission has considered the same for the purpose of sharing.

5.12.17 As against the normative O&M expenses of Rs. 412.40 Crore and Rs. 429.16 Crore, the actual O&M expenses (including water charges) amounts to Rs. 377.16 Crore and Rs. 409.07 Crore for FY 2020-21 and FY 2021-22 respectively. Further, as discussed in the preceding section, the Commission has deducted the amount of Rs. 5.60 Crore from the additional capitalisation for FY 2021-22 treating the same as repairs and maintenance expenses. Accordingly, the actual O&M expenses for FY 2020-21 and FY 2021-22 works out to Rs. 370.74 Crore and Rs. 414.67 Crore (including water charges) thereby, there is efficiency gain and loss in O&M expenses for FY 2020-21 and FY 2021-22 respectively. The Commission has considered the O&M expenses as a controllable in accordance with the MYT Regulations, 2019. Hence, the difference between the actual O&M expenses and normative O&M expenses as approved by the Commission in this Order has been considered for computing the sharing of efficiency gains/losses as per principles laid out in MYT Regulations, 2019.

5.13 DEPRECIATION (UNITS 5,7 & HYDRO)

TPC-G's submission

5.13.1 TPC-G has computed the depreciation by applying the rates as specified in the depreciation schedule in Annexure 1 of the MYT Regulations, 2019 and Regulation 28 of the MYT Regulations, 2019. Based on the same, TPC-G requested the Commission to approve the depreciation of Rs. 130.52 Crore and Rs. 126.20 Crore for FY 2020-21 and FY 2021-22 respectively.

5.13.2 The Commission, in its Order dated 11 March, 2021 in Case No. 249 of 2019 in the matter of 2nd Amendment of Transmission Licence of TPC-T has approved the transfer of assets from TPC-G to TPC-G. Since the transfer of assets was effective from 11 March, 2021 i.e., 20 days from the closure of the FY 2020-21, in order to keep the computation of impact in the truing-up years simple, TPC-G has carried out the transfer with effect from 1 April, 2021. TPC-G requested the Commission to consider the same.

5.13.3 TPC-G has completed the transfer of the Assets to the Transmission Business. As a result, the closing levels of GFA, Regulatory Equity and Loan of FY 2020-21 as worked out in the section above, have been revised to arrive at revised Opening levels of GFA, Regulatory Equity and Loan of FY 2021-22 to include the impact of Transfer of Assets. Further, as the O&M expenses for the Generating Station is being approved to TPC-G on an overall basis, the normative O&M expenses for TPC-G have been reduced in proportion to the GFA transferred.

Commission's Analysis and Ruling

5.13.4 In the final true-up of FY 2019-20, the Commission had approved the closing GFA for FY 2019-20 as Rs. 3874.10 Crore. The Commission has considered the same as the opening GFA for FY 2020-21. The approved additional capitalisation for FY 2020-21 has been considered as the GFA addition during the year.

5.13.5 The Commission has perused the submissions of TPC-G regarding the transfer of assets from TPC-G to TPC-T. As the actual deduction has been accounted for from 1 April 2021 onwards, the Commission considers the same. The closing GFA for FY 2020-21, after adjustment for transfer of assets to TPC-T has been considered as the opening GFA for FY 2021-22. The approved additional capitalisation for FY 2021-22 has been considered as the GFA addition during the year. The deduction from GFA during FY 2020-21 and FY 2021-22 has been considered the same as claimed by TPC-G. The depreciation rates for FY 2020-21 and FY 2021-22 have been considered the same as claimed by TPC-G.

5.13.6 The depreciation approved by the Commission for FY 2020-21 and FY 2021-22 is as shown in the Table below:

Table 5.23: Depreciation for Units 5,7 & Hydro for FY 2020-21 and FY 2021-22 (Rs. Crore)

Particulars	FY 2020-21			FY 2021-22		
	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved
Opening GFA	3875.63	3881.58	3874.10	3928.02	3853.02	3840.90
Addition	52.39	37.41	32.77	37.72	48.73	43.12
Retirement	0.00	-18.88	-18.88	0.00	-3.72	-3.72
Closing GFA	3928.02	3900.10	3887.99	3965.74	3898.03	3880.30
Depreciation rate	3.36%	3.35%	3.35%	3.36%	3.26%	3.26%
Depreciation	131.07	130.52	130.19	132.58	126.20	125.72

5.13.7 The Commission approves the depreciation for Units 5,7 & Hydro as per Table 5.23 for FY 2020-21 and FY 2021-22.

5.14 INTEREST ON LOAN (UNITS 5,7 & HYDRO)

TPC-G's submission

5.14.1 TPC-G has taken various long-term loans to finance the capital expenditure nature projects in line with the Debt: Equity structure of 70%:30%. Tata Power sources long term loans at a company level for its Generation, Transmission and Distribution businesses together to have negotiation advantage to avail better terms and conditions of loans.

5.14.2 In accordance with Regulation 30.5 of the MYT Regulations, 2019, based on the actual loan drawls, interest rates and the interest paid, the weighted average interest rate for FY 2020-21 and FY 2021-22 works out to 7.80% and

7.43% respectively. TPC-G has submitted the statements received from Banks certifying the Opening Balance, Closing Balance, Interest paid, and the applicable rate of interest.

5.14.3 TPC-G has claimed the interest charges of Rs. 18.88 Crore and Rs. 9.71 Crore for FY 2020-21 and FY 2021-22 respectively. Further, TPC-G has claimed the other finance charges of Rs. 0.34 Crore and Rs. 0.76 Crore for FY 2020-21 and FY 2021-22 respectively.

Commission's Analysis and Ruling

5.14.4 In the final true-up of FY 2019-20, the Commission had approved the closing loan balance for FY 2019-20 as Rs. 289.06 Crore. The Commission has considered the same as the opening loan balance for FY 2020-21, which is the same as considered by TPC-G. The debt portion of the approved additional capitalisation for FY 2020-21 has been considered as the loan addition during the year. The approved depreciation for FY 2020-21 has been considered as the repayment for the year. The closing loan balance for FY 2020-21, after adjustment for transfer of assets to TPC-T has been considered as the opening loan balance for FY 2021-22. The debt portion of the approved additional capitalisation for FY 2021-22 has been considered as the loan addition during the year. The approved depreciation for FY 2021-22 has been considered as the repayment for the year. The actual weighted average rates of interest for FY 2020-21 and FY 2021-22 have been applied to the average loan for the respective year for computing the interest expenses. Accordingly, the Commission has approved the interest expenses of Rs. 18.36 Crore and Rs. 8.98 Crore for FY 2020-21 and FY 2021-22 respectively.

5.14.5 In reply to a query regarding the other finance charges, TPC-G submitted that such charges are towards bank charges and related services. The Commission approves the other finance charges as claimed by TPC-G.

5.14.6 Based on the above, the interest on loan and finance charges approved by the Commission is shown in the Table below:

Table 5.24: Interest on loan for Units 5,7 & Hydro for FY 2020-21 and FY 2021-22 (Rs. Crore)

Particulars	FY 2020-21			FY 2021-22		
	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved
Opening loan	287.82	294.18	289.06	193.42	176.70	168.67
Addition	36.67	26.18	22.94	26.40	34.11	30.18
Repayment	131.07	130.52	130.19	132.58	126.20	125.72
Closing loan	193.42	189.84	181.81	87.24	84.61	73.14

Particulars	FY 2020-21			FY 2021-22		
	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved
Rate of interest on loan	8.64%	7.80%	7.80%	8.64%	7.43%	7.43%
Interest on loan	**20.79**	**18.88**	**18.36**	**12.12**	**9.71**	**8.98**
Finance charges	0.00	0.34	0.34	0.00	0.76	0.76
Interest on loan & finance charges	**20.79**	**19.22**	**18.70**	**12.12**	**10.47**	**9.74**

5.14.7 The Commission approves the interest on loan & finance charges for Units 5,7 & Hydro as per Table 5.24 for FY 2020-21 and FY 2021-22.

5.15 INTEREST ON WORKING CAPITAL (UNITS 5,7 & HYDRO)

TPC-G's submission

5.15.1 Interest on Working Capital (IoWC) has been computed based on Regulation 32.1 of the MYT Regulations, 2019. For the purpose of computing the interest on working capital, interest rates of 8.57% and 8.50% for FY 2020-21 and FY 2021-22 respectively have been considered. TPC-G has claimed the interest on working capital of Rs. 26.03 Crore and Rs. 31.36 Crore for FY 2020-21 and FY 2021-22 respectively. The Commission pointed out the errors in TPC-G computations and asked TPC-G to clarity the same. In response, TPC-G corrected the errors revised the claim to Rs. 28.57 Crore and Rs. 33.91 Crore for FY 2020-21 and FY 2021-22 respectively.

5.15.2 TPC-G submitted that the capacity declaration to MSLDC is done on the basis of the coal stock which is maintained for generation at 85% Availability. Hence, irrespective of the schedule, coal stock has to be maintained for declaring Availability as per the Regulations of the Commission. Further, scheduling of generation is an uncontrollable factor for TPC-G. It is dependent on the demand of the beneficiaries and availability of other sources of power for them. Further, the information related to the scheduled generation is made available only on a day-ahead basis. It is not possible to rearrange the stock level on the basis of scheduled generation. Further, inspite of a schedule being available, in actual, the generation may be quite different from the schedule, like during transmission system constraint the generator is directed to pick up by MSLDC on a real time basis. Accordingly, the generator has to be prepared to generate upto its declared capacity irrespective of its schedule. Based on this operational issue, TPC-G has maintained coal stock for the generation at 85% Availability. TPC-G accordingly, requested the Commission to consider the same for calculating the normative coal stock instead of calculation based on scheduled generation.

Commission's Analysis and Ruling

5.15.3 The Commission has computed IoWC in accordance with the MYT Regulations, 2019. In accordance with Regulation 32.1, the working capital comprising of the following components has been considered:

- Cost of coal towards stock, for thirty days, for Unit 5, for generation corresponding to lower of actual generation or target Availability;
- Cost of coal, for thirty days, for Unit 5, for generation corresponding to lower of actual generation or target Availability;
- Cost of APM gas, for thirty days, for Unit 7, for generation corresponding to lower of actual generation or target Availability;
- Approved normative O&M expenses of Units 5,7 & Hydro for one month;
- Maintenance spares at one percent of approved opening GFA for Units 5,7 & Hydro;
- Receivables for sale of electricity to BEST/TPC-D equivalent to 45 days of the actual revenue from sale of electricity;
- minus: payables for fuels to the extent of thirty days of the cost of coal for Unit 5 and APM gas for Unit 7 at lower of actual generation and target Availability.

5.15.4 The Commission observes that TPC-G has considered the working capital at target Availability which is not in accordance with the Regulations as the actual generation from Units 5&7 is less than that corresponding to target Availability.

5.15.5 The rate of IoWC has been considered as 8.57% and 8.50% for FY 2020-21 and FY 2021-22 respectively in accordance with the MYT Regulations, 2019.

Table 5.25: Interest on working capital for Units 5,7 & Hydro for FY 2020-21 and FY 2021-22 (Rs. Crore)

Particulars	FY 2020-21			FY 2021-22		
	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved
Working capital	351.60	333.31	255.45	355.05	398.94	364.02
Rate of interest	9.55%	8.57%	8.57%	9.55%	8.50%	8.50%
IoWC	**33.58**	**28.57**	**21.89**	**33.91**	**33.91**	**30.94**

5.15.6 The Commission approves the normative IoWC for Units 5,7 & Hydro as per Table 5.25 for FY 2020-21 and FY 2021-22.

5.15.7 TPC-G has claimed the actual interest on working capital of Rs. 16.31 Crore and Rs. 14.37 Crore for FY 2020-21 and FY 2021-22 respectively. In reply to a query, TPC-G submitted the actual delayed payment surcharge for FY 2020-21 and FY 2021-22 as Rs. 20.54 Crore and Rs. 8.78 Crore respectively. In accordance with the proviso to Regulation 32.6 of the MYT Regulations, 2019, delayed payment surcharge and interest on delayed payment surcharge shall have to be deducted from the actual interest on working capital before sharing of the efficiency gains or losses, as the case may be.

5.15.8 The Commission has considered IoWC as a controllable parameter in accordance with the MYT Regulations, 2019. Hence, the difference between the actual IoWC less the delayed payment surcharge and normative IoWC as approved by the Commission in this Order has been considered for computing the sharing of efficiency gains as per principles laid out in MYT Regulations, 2019.

5.16 RETURN ON EQUITY & INCOME TAX (UNITS 5,7 & HYDRO)

TPC-G's submission

5.16.1 RoE has been claimed in accordance with Regulation 29 of the MYT Regulations, 2019. TPC-G has considered the Base Rate of RoE of 14%, additional rate of 0.19% for incremental ramp rate and additional rate of 1% for performance related to Mean Time Between Failure (MTBF). Accordingly, the total rate of RoE has been claimed as 15.19% for Units 5,7. TPC-G has not yet received certificate related to the performance with respect to the ramping rate for FY 2020-21 and FY 2021-22. For hydro stations, TPC-G has considered the rate of RoE of 15.5%.

5.16.2 With respect to the applicable rate of income tax, TPC-G submitted that Section 115BAA was introduced by Taxation Laws (Amendment) Act 2019 w.e.f. 1 April, 2020. As per this newly inserted provision, a choice was given to a domestic company to shift to new simplified tax regime with effect from FY 2019-20. Under the new tax regime benefits of MAT credit and other exemption are not allowed. It has been observed that it would be beneficial to shift to new tax regime where the business is not eligible for deduction under Section 80IA and MAT credit is not available. Accordingly, in the interest of consumers, TPC-G, for Units 5,7 & Hydro, has opted for the new regime of tax as MAT credit is not available, as this will result in lower tax outgo for the business and ultimately beneficial for the consumers. Further, as per the MYT Regulations 2019, it is required that generating company would calculate the effective tax rate without considering the impact of the actual tax paid on income from any other regulated or unregulated business or other business of the entity. Hence, it is necessary to compute the effective tax rate for TPC-G strictly on a standalone basis considering TPC-G and other businesses of Tata Power as an independent legal entity.

5.16.3 TPC-G has claimed RoE of Rs. 290.66 Crore and Rs. 291.00 Crore for FY

2020-21 and FY 2021-22 respectively.

Commission's Analysis and Ruling

5.16.4 In the final true-up of FY 2019-20, the Commission had approved the closing equity for FY 2019-20 as Rs. 1373.12 Crore. The Commission has considered the same as the opening equity for FY 2020-21, which is the same as considered by TPC-G. The equity portion of the approved additional capitalisation for FY 2020-21 has been considered as the equity addition during the year. The closing equity for FY 2020-21, after adjustment for transfer of assets to TPC-T has been considered as the opening equity for FY 2021-22. The equity portion of the approved additional capitalisation for FY 2021-22 has been considered as the equity addition during the year.

5.16.5 Regulation 29.2 of the MYT Regulations, 2019 specifies the Base Rate of RoE of 14%. In accordance with Regulation 29.6(a), the additional rate of RoE, subject to the ceiling of 0.5%, shall be allowable for incremental ramp rate. Further, in accordance with Regulation 29.6(b), the additional rate of RoE, subject to maximum of 1% shall be allowable for achievement of MTBF as specified in the Regulation.

5.16.6 The Base Rate of RoE has been considered as 14% in accordance with Regulation 29.2., MSLDC vide email dated 2 March, 2023 submitted that in accordance with the guidelines of CERC for ramp rate certification, Unit 5 and Unit 7 of TPC-G shall not be eligible for additional RoE towards incremental ramp rate for FY 2020-21 and FY 2021-22. However, vide its email dated 23 March 2023, TPC-G submitted a letter stating that it has received the ramp rate certificate for Unit 5 and Unit 8 from MSLDC for FY 2020-21 and FY 2021-22 on 21 March 2023. After perusal of the MSLDC certificate, it is observed that MSLDC in its certificate has mentioned that as per ramp performance evaluation of TPC-G's Unit 5 and Unit 8, "there is no change in RoE". Accordingly, the Commission has not considered the additional RoE towards incremental ramp rate as specified in Regulation 29.6(a) of MYT Regulations 2019. TPC-G has submitted the SLDC certificate for actual MTBF for Units 5,7 for FY 2020-21 and FY 2021-22. The actual MTBF for Unit 5 and Unit 7 is 180.13 days and 121.01 days respectively for FY 2020-21. The actual MTBF for Unit 5 and Unit 7 is 181.30 days and 364.90 days respectively for FY 2021-22. Accordingly, the Commission has considered the additional rate of 1% for achievement of MTBF of above 120 days for Units 5,7 for FY 2020-21 and FY 2021-22. Accordingly, the Commission has considered the rate of RoE of 15.00% for Units 5,7 for FY 2020-21 and FY 2021-22. TPC-G has considered the rate of RoE of 15.5% for hydro stations, which is not in accordance with the Regulation. The additional rate of RoE is allowable only for thermal Units and therefore, the Commission has considered the rate of RoE of 14% for hydro stations for FY 2020-21 and FY 2021-22. Based on the above, the Commission has computed the weighted average rate of RoE of 14.62% and 14.61% for FY 2020-21 and FY 2021-22 by applying the weights of approved RoE in the MYT Order for the respective thermal and hydro generating stations.

5.16.7 Regulation 34 of the MYT Regulation, 2019 specifies as under:

"34.1 The Income Tax for the Generating Company or Licensee or MSLDC for the regulated business shall be allowed on Return on Equity, including Additional Return on Equity through the Tariff charged to the Beneficiary/ies, subject to the conditions stipulated in Regulations 34.2 to 34.6:
Provided that no Income Tax shall be considered on the amount of efficiency gains and incentive approved by the Commission, irrespective of whether or not the amount of such efficiency gains and incentive are billed separately:
Provided further that no Income Tax shall be considered on the amount of income from Delayed Payment Charges or Interest on Delayed Payment or Income from Other Business, as well as on the income from any source that has not been considered for computing the Aggregate Revenue Requirement:
Provided also that the Income Tax shall be computed for the Generating Company as a whole, and not Unit-wise/Station-wise (emphasis added):
Provided also that the deferred tax liability only before March 31, 2020 shall be allowed by the Commission, whenever they get materialised, after prudence check.

34.2 The rate of Return on Equity, including additional rate of Return on Equity as allowed by the Commission under Regulation 29 of these Regulations shall be grossed up with the effective tax rate of respective financial year.
…
34.4 The effective tax rate shall be considered on the basis of actual tax paid in respect of financial year in line with the provisions of the relevant Finance Acts by the concerned Generating Company or Licensee or MSLDC, as the case may be:
Provided that, in case of the Generating Company or Licensee or MSLDC has engaged in any other regulated or unregulated Business or Other Business, the actual tax paid on income from any other regulated or unregulated Business or Other Business shall be excluded for the calculation of effective tax rate:
Provided further that effective tax rate shall be estimated for future year based on actual tax paid as per latest available Audited accounts, subject to prudence check…

34.6 Variation between the Income Tax estimated by the Commission for future year *during MYT Order and Mid Term Review Order and the Income Tax approved by the Commission for the respective Year after truing up for respective year, shall be allowed for recovery as part of the Aggregate Revenue Requirement at the time of Mid-term Review or Truing-up, subject to prudence check:*

Income Tax on any income stream from sources other than the Business regulated by the Commission shall not constitute a pass-through component in Tariff, and Income Tax on such other income shall be borne by the Generating Company or Licensee or MSLDC, as the case may be."

5.16.8 The Commission during the public hearing directed TPC-G to make its detailed submission on Income Tax considered for FY 2020-21 and FY 2021-22. TPC-G in its submission dated February 7, 2023 submitted that it has considered the effective tax rate as per the provisions of MYT Regulations, 2019 for working out the PBT for computation of effective tax rate for TPC-G. TPC-G further submitted that it has considered the regulated business as water tight compartment for the purpose of income tax assessment as it is necessary that the consumers of regulated business are fully insulated and protected from the Income Tax payable from other businesses. TPC-G further submitted that this principle of considering the regulated business as a standalone business for income tax assessment has been settled by Hon'ble ATE in its judgment dated April 4, 2007 in Appeal No. 251 of 2006 and in the judgment dated May 12, 2008 in Appeal No. 60 of 2007.

5.16.9 As per the P&L statement submitted in the reconciliation report, the actual income tax for FY 2020-21 and FY 2021-22 for the company as a whole is Rs. 205.31 Crore and Rs. (105.11) Crore and the income tax for TPC-G is Rs. 96.21 Crore and Rs. 98.79 Crore, respectively. Further, as per the Income Tax Return Acknowledgement of the company, submitted by TPC-D, for the Assessment Years 2021-22 and 2022-23 viz., FY 2020-21 and FY 2021-22, the actual income tax payable by TPC is shown as zero. Though as per ITR, TPC-G has paid the tax but has claimed the refund amount for the entire tax amount paid. Therefore, for the company as a whole, the tax liability of TPC for entire company is zero for FY 2020-21 and FY 2021-22. TPC-G has claimed the income tax considering the Corporate tax rate for Units 5,7 & Hydro and MAT rate for Unit 8. Incidentally, TPC-T has also claimed the income tax considering MAT rate.

5.16.10 In accordance with the Regulations, income tax shall be computed for the company as a whole and differential tax rates cannot be considered for different Units.

5.16.11 The APTEL judgment in Case no. 251 of 2006 that the income tax assessment of Regulated business has to be made on standalone basis for the regulated business was relevant when the income tax was allowed separately based on the actual income tax paid by the Company. As per the provision of MYT Regulations, 2019, the effective tax rate is to be considered on the basis of actual tax paid by the Generating and while computing the effective tax rate, the actual tax paid on income from any other regulated or unregulated Business or Other Business is to be excluded for the calculation of effective tax rate. When the actual tax payable for Company as a whole works out to zero, the question of computing effective tax rate excluding the actual tax paid on income from any other regulated or unregulated Business or Other Business does not arise at all. Further, the MYT Regulations, 2019 does not provide for computing the effective tax rate for regulated business on stand alone basis based on regulatory profit before tax.

5.16.12 Hence, as the actual tax payable by TPC (company as a whole) is zero, the effective rate as per the provisions of Regulations works out to 0. Therefore, the Commission deems it prudent to consider effective tax rate of 0% for FY 2020-21 and FY 2021-22.

5.16.13 Accordingly, the RoE approved by the Commission for FY 2020-21 and FY 2021-22 is given in Table below:

Table 5.26: RoE for Units 5,7 & Hydro for FY 2020-21 and FY 2021-22 (Rs. Crore)

Particulars	FY 2020-21			FY 2021-22		
	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved
Opening equity	1373.58	1375.37	1373.12	1389.30	1366.45	1362.81
Reduction of equity towards de-capitalised assets	0.00	-5.66	-5.66	0.00	-1.12	-1.12
Addition	15.72	11.22	9.83	11.32	14.62	12.94
Closing equity	1389.30	1380.93	1377.29	1400.61	1379.95	1374.63
Rate of Return	18.709%	21.093%	14.619%	18.709%	21.185%	14.610%
RoE	**258.45**	**290.69**	**201.05**	**260.98**	**290.92**	**199.97**

5.16.14 The Commission approves RoE for Units 5,7 & Hydro as per Table 5.26 for FY 2020-21 and FY 2021-22.

5.17 NON-TARIFF INCOME (NTI) (UNITS 5,7 & HYDRO)

TPC-G's submission

5.17.1 TPC-G has claimed NTI of Rs. 14.55 Crore for FY 2020-21 and Rs. 12.87 Crore for FY 2021-22.

Commission's Analysis and Ruling

5.17.2 The Commission has considered NTI of Rs. 14.55 Crore for FY 2020-21 and Rs. 12.87 Crore for FY 2021-22 as claimed by TPC-G.

5.18 ANNUAL FIXED CHARGES (AFC) (UNITS 5,7 & HYDRO)

Commission's Analysis and Ruling

5.18.1 Based on the above, the AFC approved by the Commission in the final true-up, that is fully recoverable at Target Availability is as shown in the Table below:

Table 5.27: AFC for Units 5,7 & Hydro for FY 2020-21 and FY 2021-22 (Rs. Crore)

Particulars	FY 2020-21			FY 2021-22		
	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved
O&M expenses	421.17	392.63	412.40	434.14	408.40	429.16
Depreciation	131.07	130.52	130.19	132.58	126.20	125.72
Interest on loan and finance charges	20.79	19.22	18.70	12.12	10.47	9.74
Interest on working capital	31.43	28.57	21.89	31.69	33.91	30.94
Return on Equity	258.45	290.69	201.05	260.98	290.99	199.97
Income tax	-	-	-	-	-	-
Less: Allocation of Unit 8 for shared capacity	11.69	11.69	11.69	11.35	11.35	11.35
Less: Non-tariff income	30.86	14.55	14.55	30.86	12.87	12.87
Annual Fixed Charges	**820.37**	**835.39**	**758.00**	**829.31**	**845.75**	**771.31**

5.18.2 The Commission approves the AFC for Units 5,7 & Hydro as per Table 5.27 for FY 2020-21 and FY 2021-22.

5.19 INCENTIVE ON PLF AND CAPACITY INDEX (UNITS 5,7 & HYDRO)

TPC-G's submission

5.19.1 TPC-G submitted that, as per the Regulation 50.8 of the MYT Regulations, 2019, thermal generation in excess of ex-Bus energy corresponding to target PLF during peak hours and off-peak hours is eligible for PLF Incentive at a flat rate of 50 paise/kWh and 25 paise/kWh respectively on cumulative basis within each season (High Demand or Low Demand, as the case may be) as specified in Regulation 46.3 of the MYT Regulations, 2019. TPC-G has claimed the PLF incentive of Rs. 1.19 Crore for Unit 7 for FY 2020-21.

5.19.2 TPC-G submitted the Incentive on Hydro Generation more than Design Energy and availability more than normative availability in line with the provisions of Regulation 51 of MYT Regulations, 2019. TPC-G has claimed the incentive (as per revised submission) of Rs. 52.19 Crore and Rs. 59.51

Crore for FY 2020-21 and FY 2021-22 respectively.

Commission's Analysis and Ruling

5.19.3 The Commission has perused the PLF incentive claimed by TPC-G and finds the same to be in order.

5.19.4 The Commission has computed the incentive for hydro generating stations as shown in the Table below:

Table 5.28: Incentive for hydro stations for FY 2020-21 approved by the Commission

Particulars	Units	Bhira	Bhivpuri	Khopoli	Total
Fixed Cost for Hydro	Rs. Crore	97.29	65.67	98.80	**261.75**
Normative Availability	%	90.00%	90.00%	90.00%	
Actual Availability	%	99.38%	94.39%	100.00%	
Normative Capacity Charge	Rs. Crore	53.72	34.43	54.89	**143.04**
Design Energy	MU	744.12	193.23	174.68	**1112.03**
Auxiliary Consumption	%	1.00%	1.20%	1.20%	
Net Design Energy	MU	736.68	190.91	172.58	**1100.17**
Energy Charge Rate	Rs./kWh	0.66	1.72	2.86	
Actual Net Generation	MU	932.33	301.70	266.39	**1500.42**
Energy Charge	Rs. Crore	61.56	46.13	60.66	
Total incentive	**Rs. Crore**	**17.99**	**14.90**	**16.75**	**49.63**

Table 5.29: Incentive for hydro stations for FY 2021-22 approved by the Commission

Particulars	Units	Bhira	Bhivpuri	Khopoli	Total
Fixed Cost for Hydro	Rs. Crore	102.04	67.11	102.14	**271.30**
Normative Availability	%	90.00%	90.00%	90.00%	
Actual Availability	%	98.17%	100.00%	100.00%	
Normative Capacity Charge	Rs. Crore	55.65	37.28	56.75	**149.68**
Design Energy	MU	744.12	193.23	174.68	**1112.03**
Auxiliary Consumption	%	1.00%	1.20%	1.20%	
Net Design Energy	MU	736.68	190.91	172.58	**1100.17**
Energy Charge Rate	Rs./kWh	0.69	1.76	2.96	
Actual Net Generation	MU	1010.83	274.32	283.29	**1568.44**
Energy Charge	Rs. Crore	70.01	43.57	64.36	
Total incentive	**Rs. Crore**	**23.62**	**13.74**	**18.96**	**56.32**

5.19.5 The Commission approves the incentive for hydro stations as per Table 5.28, and Table 5.29 for FY 2020-21 and FY 2021-22 respectively.

5.20 SHARING OF GAINS AND LOSSES (UNITS 5,7 & HYDRO)

5.20.1 The Commission in its MYT Tariff Regulations, 2019 has provided the following methodology for treatment of sharing and gains and sharing of losses:

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

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

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

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

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

(a) One-third of the amount of such loss may be passed on as an additional charge in Tariff over such period as may be stipulated in the Order of the Commission under Regulation 8.4;

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

5.20.2 TPC-G has submitted the actual expenditure under various heads. The gains and loss on account of controllable factors has been computed and the sharing between the beneficiaries and TPC-G has been worked out as under:

5.21 GAIN/(LOSS) ON ACCOUNT OF FUEL COST FOR UNITS 5,7

TPC-G's submission

5.21.1 As per the MYT Regulations 2019, the changes in fuel cost due to operational parameters of the generation units would be considered as controllable. Accordingly, Gains/Losses on account of fuel costs are worked out as below:

Table 5.30: Gain/(loss) due to variation in GSHR for Units 5,7 for FY 2020-21 and FY 2021-22 as submitted by TPC-G

Particulars	FY 2020-21			FY 2021-22		
	Unit 5	Unit 7	Total Fuel Cost	Unit 5	Unit 7	Total Fuel Cost
Fuel Cost (Rs. Crore)	853.64	258.26	1111.89	1560.76	234.28	1795.04
Actual GSHR	2594.85	2004		2557.90	2083	
Normative GSHR	2549.00	2038		2549.00	2042	
Fuel Cost applying Normative Heat Rate (Rs. Crore)	838.55	262.66	1101.21	1555.33	229.64	1784.98
Net Gains/ (Loss)	-15.08	4.40	-10.68	-5.43	-4.64	-10.07

Particulars	FY 2020-21			FY 2021-22		
	Unit 5	Unit 7	Total Fuel Cost	Unit 5	Unit 7	Total Fuel Cost
Passed on to the distribution licensees			-3.56			-3.36

Commission's Analysis and Ruling

5.21.2 The Commission has computed the sharing efficiency gain or losses on account of variation in GSHR for FY 2020-21 and FY 2021-22 as shown in the following Table:

Table 5.31: Gain/(loss) due to variation in GSHR for Units 5,7 for FY 2020-21 and FY 2021-22 approved by the Commission

Particulars	FY 2020-21			FY 2021-22		
	Unit 5	Unit 7	Total Fuel Cost	Unit 5	Unit 7	Total Fuel Cost
Fuel Cost (Rs. Crore)	853.64	258.26	1111.89	1560.76	234.28	1795.04
Actual GSHR	2594.85	2004		2557.90	2083	
Normative GSHR	2549.00	2038		2549.00	2042	
Fuel Cost applying Normative Heat Rate (Rs. Crore)	838.55	262.66	1101.21	1555.33	229.64	1784.98
Net Gains/ (Loss)	-15.08	4.40	-10.68	-5.43	-4.64	-10.07
Passed on to the distribution licensees			-3.56			-3.36

5.21.3 The Commission approves the gain/(loss) due to variation in GSHR for Units 5,7 as per Table 5.31 for FY 2020-21 and FY 2021-22.

5.22 GAIN/(LOSS) ON ACCOUNT OF AEC FOR UNITS 5,7 & HYDRO

TPC-G's submission

5.22.1 TPC-G submitted the efficiency gains/(loss) due to variation in AEC for FY 2020-21 and FY 2021-22 as shown in the Table below:

Table 5.32: Gain/(loss) due to variation in AEC for Units 5,7 & Hydro for FY 2020-21 as claimed by TPC-G

Particulars	Unit 5	Unit 7	Hydro	Total
Gross Generation (MU)	2736.95	1381.60	1525.73	5644.29
Actual AEC (%)	5.92%	3.00%		
Normative AEC (%)	6.00%	3.00%		
Difference in Net Generation (MU)	2.20	-0.01	-2.18	0.01
Energy Charge Rate (Rs./kWh)	3.26	1.96		
Gain / (loss) (Rs. Crore)	**0.72**	**0.00**	**-0.71**	**0.01**
Passed on to the distribution licensees (Rs. Crore)				**0.01**

Table 5.33: Gain/(loss) due to variation in AEC for Units 5,7 & Hydro for FY 2021-22 as claimed by TPC-G

Particulars	Unit 5	Unit 7	Hydro	Total
Gross Generation (MU)	3087.24	911.48	1595.59	5594.31
Actual AEC (%)	5.77%	3.50%		
Normative AEC (%)	6.00%	3.00%		
Difference in Net Generation (MU)	7.05	-4.53	0.00	2.52
Energy Charge Rate (Rs./kWh)	5.34	2.60		
Gain / (loss) (Rs. Crore)	**3.77**	**-1.17**	**-0.68**	**1.91**
Passed on to the distribution licensees (Rs. Crore)				**1.27**

Commission's Analysis and Ruling

5.22.2 The Commission has computed sharing of efficiency gain or losses on account of variation in AEC for FY 2020-21 and FY 2021-22 as shown in the Table below:

Table 5.34: Gain/(loss) due to variation in AEC for Units 5,7 & Hydro for FY 2020-21 approved by the Commission

Particulars	Unit 5	Unit 7	Hydro	Total
Gross Generation (MU)	2736.95	1381.60	1525.73	5644.29
Actual AEC (%)	5.92%	3.00%		
Normative AEC (%)	6.00%	2.74%		
Difference in Net Generation (MU)	2.20	-3.54	-2.18	0.01
Energy Charge Rate (Rs./kWh)	3.26	1.96		
Gain / (loss) (Rs. Crore)	**0.72**	**-0.69**	**-0.71**	**-0.68**
Passed on to the distribution licensees (Rs. Crore)				**-0.23**

Table 5.35: Gain/(loss) due to variation in AEC for Units 5,7 & Hydro for FY 2021-22 approved by the Commission

Particulars	Unit 5	Unit 7	Hydro	Total
Gross Generation (MU)	3087.24	911.48	1595.59	5594.31
Actual AEC (%)	5.77%	3.50%		
Normative AEC (%)	6.00%	2.74%		
Difference in Net Generation (MU)	7.05	-6.93	0.00	2.52
Energy Charge Rate (Rs./kWh)	5.34	2.60		
Gain / (loss) (Rs. Crore)	**3.77**	**-1.80**	**-0.68**	**1.29**
Passed on to the distribution licensees (Rs. Crore)				**0.86**

5.22.3 The Commission approves the gain/(loss) due to variation in AEC for Units 5,7 & Hydro as per Table 5.34 and Table 5.35 for FY 2020-21 and FY 2021-22 respectively.

5.23 GAIN/(LOSS) ON ACCOUNT OF O&M EXPENSES FOR UNITS 5,7 & HYDRO

TPC-G's submission

5.23.1 TPC-G submitted the computation of efficiency gains/(loss) on account of O&M expenses as Rs. 41.42 Crore and Rs. 21.53 Crore for FY 2020-21 and FY 2021-22 respectively. Accordingly, net gain of Rs. 27.62 Crore and Rs. 24.19 Crore is to be passed on to distribution licensees.

Commission's Analysis and Ruling

5.23.2 The Commission has computed the sharing of efficiency gain on account of variation in O&M expenses as shown in the Table below:

Table 5.36: Gain/(loss) due to variation in O&M expenses for Units 5,7 & Hydro for FY 2020-21 and FY 2021-22 (Rs. Crore)

Particulars	FY 2020-21		FY 2021-22	
	Claimed	Approved	Claimed	Approved
Normative O&M (excluding water charges) (A)	386.21	405.98	405.27	426.03
Actual O&M (excluding water charges) (B)	370.74	370.74	405.94	411.54
Gain/(loss) (C=A-B)	15.47	35.24	-0.67	14.49
Passed on to distribution licensees (D)	10.31	23.49	-0.22	9.66
Actual water charges (E)	6.42	6.42	3.13	3.13
Entitlement of TPC-G (A-D+E)	382.32	388.91	408.62	419.50

5.23.3 The Commission approves the gain/(loss) due to variation in O&M expenses for Units 5,7 & Hydro as per Table 5.36 for FY 2020-21 and FY 2021-22.

5.24 GAIN/(LOSS) ON ACCOUNT OF IOWC FOR UNITS 5,7 & HYDRO

TPC-G's submission

5.24.1 TPC-G submitted the computation of efficiency gains/(loss) on account of IoWC as Rs. 26.03 Crore and Rs. 25.48 Crore for FY 2020-21 and FY 2021-22 respectively. Accordingly, net gain of Rs. 17.35 Crore and Rs. 16.99 Crore is to be passed on to distribution licensees.

Commission's Analysis and Ruling

5.24.2 The Commission has computed the sharing of efficiency gain on account of variation in IoWC as shown in the Table below:

Table 5.37: Gain/(loss) due to variation in IoWC for Units 5,7 & Hydro for FY 2020-21 and FY 2021-22 (Rs. Crore)

Particulars	FY 2020-21		FY 2021-22	
	Claimed	Allowable	Claimed	Allowable
Normative IoWC (A)	28.57	21.89	33.91	30.94
Actual IoWC (B)	16.31	16.31	14.37	14.37
DPS received (C)	20.54	20.54	8.78	8.78
Net actual IoWC (D=maximum of (B-C), 0)	0.00	0.00	5.59	5.59
Gain/(loss) (E=A-D)	28.57	21.89	28.32	25.35
Passed on to distribution licensee (F)	19.05	14.59	18.88	16.90
Entitlement of TPC-G (A-F)	9.52	7.30	15.03	14.04

5.24.3 The Commission approves the gain/(loss) due to variation in IoWC for Units 5,7 & Hydro as per Table 5.37 for FY 2020-21 and FY 2021-22.

5.25 REVENUE FROM SALE OF POWER (UNITS 5,7 & HYDRO)

TPC-G's submission

5.25.1 TPC-G has claimed the actual revenue from sale of power of Rs. 1963.12 Crore for FY 2020-21 comprising of revenue from fixed charges, incentive and energy charges of Rs. 672.67 Crore, Rs. 15.98 Crore and Rs. 1274.47 Crore respectively. TPC-G has claimed the actual revenue from sale of power of Rs. 2668.44 Crore for FY 2021-22 comprising of revenue from fixed charges, incentive and energy charges of Rs. 680.56 Crore, Rs. 15.73 Crore and Rs. 1972.15 Crore respectively.

Commission's Analysis and Ruling

5.25.2 The Commission has considered the actual revenue from sale of power of Rs. 1963.12 Crore and Rs. 2668.44 Crore for FY 2020-21 and FY 2021-22 respectively as claimed by TPC-G.

5.26 SUMMARY OF TRUE-UP (UNITS 5,7 & HYDRO)

Commission's Analysis and Ruling

5.26.1 Based on the above analysis, the summary of true-up of Units 5,7 & Hydro for FY 2020-21 and FY 2021-22 is as shown in the Table below:

Table 5.38: Summary of true-up for FY 2020-21 and FY 2021-22 (Rs. Crore)

Particulars	FY 2020-21			FY 2021-22		
	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved
Fixed Cost						

Particulars	FY 2020-21			FY 2021-22		
	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved
O&M expenses	421.17	392.63	412.40	434.14	408.40	429.16
Depreciation	131.07	130.52	130.19	132.58	126.20	125.72
Interest on loan and finance charges	20.79	19.22	18.70	12.12	10.47	9.74
Interest on working capital	31.43	28.57	21.89	31.69	33.91	30.94
Return on Equity	258.45	290.69	201.05	260.98	290.99	199.97
Income tax	-	-	-	-	-	-
Hydro incentive		52.19	49.63		59.50	56.32
Sharing of efficiency (gains) and losses-O&M		-10.31	-23.49		0.22	-9.66
Sharing of efficiency (gains) and losses-IoWC		-19.05	-14.59		-18.88	-16.90
Less: Allocation of Unit 8 for shared capacity	11.69	11.69	11.69	11.35	11.35	11.35
Less: Non-tariff income	30.86	14.55	14.55	30.86	12.87	12.87
Sub-total	**820.37**	**858.23**	**769.55**	**829.31**	**886.60**	**801.07**
Fuel Cost						
Fuel Cost (Normative)		1101.21	1101.21		1784.98	1784.98
PLF incentive		1.19	1.19		0.00	0.00
Sharing of efficiency (gains) and losses towards fuel cost		3.56	3.56		3.36	3.36
Auxiliary consumption benefit		0.00	0.23		0.64	0.43
Sub-total		**1105.96**	**1106.19**		**1788.97**	**1788.76**
ARR		**1964.19**	**1875.73**		**2675.57**	**2589.83**
Revenue from sale of power		**1963.12**	**1963.12**		**2668.44**	**2668.44**
Revenue gap/(surplus)		**1.07**	**-87.38**		**7.13**	**-78.61**

5.26.2 The Commission approves the summary of true-up for Units 5,7 & Hydro as per Table 5.38 for FY 2020-21 and FY 2021-22.

5.27 PERFORMANCE OF UNIT 8

5.27.1 Unit 8 of TPC-G is coal fired and has an installed capacity of 250 MW and it was commissioned on March 29, 2009. The actual performance of Unit 8 has been compared with the values of approved parameters by the Commission in MYT Order. The truing up of performance of Unit 8 for FY 2020-21 and FY

2021-22 is discussed in subsequent paragraphs of this Chapter.

5.28 NORMS OF OPERATION (UNIT 8)

TPC-G's submission

5.28.1 TPC-G submitted the norms of operation for Unit 8 as shown in the Table below:

Table 5.39: Performance parameters for Unit 8 for FY 2020-21 and FY 2021-22 as submitted by TPC-G

		FY 2020-21		FY 2021-22	
Particulars	**Units**	**Approved in MYT**	**Actual**	**Approved in MYT**	**Actual**
Availability	%	98.08%	97.75%	93.15%	88.80%
PLF	%	85.85%	38.78%	80.99%	68.05%
Gross Generation	MU	1880.04	849.34	1773.75	1512.81
AEC	%	8.50%	7.17%	8.50%	6.65%
GSHR	kcal/kWh	2430.00	2350.93	2430.00	2340.40

5.28.2 The actual Availability is 97.75% and 88.80% for FY 2020-21 and FY 2021-22 respectively as against the norm of 85%. In accordance with Regulation 46 of the MYT Regulations, 2019, Unit 8 is entitled for recovery of full AFC for FY 2020-21 and FY 2021-22. TPC-G submitted the MSLDC certificate for the actual Availability.

5.28.3 The actual gross generation of 849.34 MU for FY 2020-21 as the Unit was under reserve shutdown.

5.28.4 The actual GSHR is 2350.93 kcal/kWh and 2340 kcal/kWh for FY 2020-21 and FY 2021-22 respectively as against the norm of 2450 kcal/kWh. The actual AEC is 7.17% and 6.65% for FY 2020-21 and FY 2021-22 respectively as against the norm of 8.50%.

Commission's Analysis and Ruling

5.28.5 The Commission notes that, the actual Availability of Unit 8 as certified by MSLDC is higher than the norm of 85% as specified in Regulation 46 of the MYT Regulations, 2019. Accordingly, Unit is entitled for recovery of full AFC for FY 2020-21 and FY 2021-22.

5.28.6 The Commission verified the actual gross generation from the MSLDC certificate and found it to be in order, and considered it accordingly.

5.28.7 The actual GSHR and AEC are lower than the norms. The Commission hereby approves the normative parameters for the purpose of truing up and sharing of efficiency gains and losses on account of such achievement is considered in subsequent section of this Chapter.

Table 5.40: Performance parameters for Unit 8 for FY 2020-21 and FY 2021-22 approved by the Commission

Particulars	Units	FY 2020-21			FY 2021-22		
		Approved in MYT	Actual	Normative Approved	Approved in MYT	Actual	Normative Approved
Availability	%	98.08%	97.75%	85%	93.15%	88.80%	85%
PLF	%	85.85%	38.78%	38.78%	80.99%	68.05%	68.05%
Gross Generation	MU	1880.04	849.34	849.34	1773.75	1512.81	1512.81
AEC	%	8.50%	7.17%	8.50%	8.50%	6.65%	8.50%
GSHR	kcal/kWh	2430.00	2350.93	2430.00	2430.00	2340.40	2430.00

5.28.8 The Commission approves the performance parameters for Unit 8 as per Table 5.40 for FY 2020-21 and FY 2021-22

5.29 FUEL COST (UNIT 8)

TPC-G's submission

5.29.1 TPC-G submitted the details of fuel consumption, GCV of fuels and fuel prices as shown in the Table below:

Table 5.41: Fuel cost for Unit 8 for FY 2020-21 and FY 2021-22 as submitted by TPC-G

Particulars	Units	FY 2020-21	FY 2021-22
Fuel consumption			
Coal	MT	420015.69	741721.22
LSHS	MT	213.95	375.26
Kerosene	KL	122.52	172.85
GCV (As fired)			
Coal	kCal/Kg	4746.07	4695.45
LSHS	kCal/Kg	10340.00	10340.00
Kerosene	Kcal/Litre	8910.15	8891.79
Price			
Coal	Rs/MT	6021.91	9579.60
LSHS	Rs/MT	55392.96	55367.67
Kerosene	Rs/KL	66308.02	82410.18
Total cost	**Rs. Crore**	**254.93**	**727.75**

Commission's Analysis and Ruling

5.29.2 The Commission sought the monthly fuel bills and monthly fuel receipts, calorific value and price of fuel for FY 2020-21 and FY 2021-22. The Commission has gone through the such details of monthly fuel receipts, calorific value and price. The variation in fuel price and calorific value has been considered as part of FAC and has already been passed through monthly under that mechanism.

Table 5.42: Fuel cost for Unit 8 for FY 2020-21 and FY 2021-22 approved by the Commission (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22
Normative fuel cost	263.69	753.17
Actual fuel cost	254.93	727.75

5.29.3 The Commission approves the fuel cost for Unit 8 as per Table 5.42 for FY 2020-21 and FY 2021-22. As discussed above, the actual fuel cost does not include the VSE fuel cost and fuel cost allowed is towards scheduled generation.

5.30 ADDITIONAL CAPITALISATION (UNIT 8)

TPC-G's submission

5.30.1 TPC-G has claimed the actual capitalisation of Rs. 0.66 Crore and Rs. 0.94 Crore as against the approved capitalisation of Rs. 3.70 Crore and Rs. 16.74 Crore for FY 2020-21 and FY 2021-22 respectively. The claimed capitalisation is entirely towards non-DPR schemes.

Table 5.43: Additional capitalisation for Unit 8 for FY 2020-21 and FY 2021-22 as claimed by TPC-G (Rs. Crore)

Unit/Station	Approved in MYT	Actual	Approved in MYT	Actual
DPR schemes	3.70	0.00	16.74	0.00
Non-DPR schemes	0.00	0.66	0.00	0.94
Total	**3.70**	**0.66**	**16.74**	**0.94**

5.30.2 TPC-G requested the Commission to approve the claimed actual capitalisation in accordance with the proviso to Regulation 24.7 and Regulation 105 of the MYT Regulations 2019.

Commission's Analysis and Ruling

5.30.3 Regulation 24.6 of MYT Regulations, 2019 specifies that amount of capitalisation towards non-DPR schemes for any year shall not exceed 20% of amount of capitalisation approved against the DPR Schemes for that respective year. The Commission notes that TPC-G has not claimed any DPR capitalisation.

5.30.4 The Commission also directed TPC-G to submit the cost benefit analysis for each scheme along with the documentary evidence for all the assets put to use during FY 2020-21 and FY 2021-22. In reply, TPC-G submitted the project completion reports.

5.30.5 The Commission has gone through the submissions of TPC-G. The claimed actual capitalisation is entirely towards non-DPR schemes. As regards the non-DPR schemes, Hon'ble ATE in its Judgment in Appeal No. 160 of 2012 ruled as under:

"110. ***We do not find infirmity in the State Commission restricting the capital expenditure on non-DPR schemes to 20% of the capitalisation approved for DPR Scheme****. However, we feel that the DPR schemes which had not approved and were awaiting approval of the State Commission should be considered by the State Commission and allowed after prudence check…."*

5.30.6 Regulation 24.6 of MYT Regulations, 2019 provides that the amount of capitalisation against non-DPR schemes for any year shall not exceed 20% of the amount of capitalisation approved against DPR schemes for that year. However, the Commission may allow capitalisation against non-DPR schemes for any Year in excess of 20% on a request made by the generating company. Considering the fact that the DPR capitalization for Unit 8 for FY 2020-21 and FY 2021-22 is nil, the Commission deems it appropriate to invoke the discretionary power under proviso to Regulation 24.6 of MYT Regulations and allow the actual non-DPR capitalisation as claimed by TPC-G.

5.30.7 Based on the above, the additional capitalisation approved by the Commission is as shown in the Table below:

Table 5.44: Additional capitalisation for Unit 8 for FY 2020-21 and FY 2021-22 approved by the Commission (Rs. Crore)

Unit/Station	FY 2020-21			FY 2021-22		
	Approved in MYT	Actual	Approved	Approved in MYT	Actual	Approved
DPR schemes	3.70	0.00	0.00	16.74	0.00	0.00
Non-DPR schemes	0.00	0.66	0.66	0.00	0.94	0.94
Total	**3.70**	**0.66**	**0.66**	**16.74**	**0.94**	**0.94**

5.30.8 The Commission approves the additional capitalisation for Unit 8 as per Table 5.44 for FY 2020-21 and FY 2021-22.

5.31 MEANS OF FINANCE OF ADDITIONAL CAPITALISATION (UNIT 8)

TPC-G's submission

5.31.1 The means of finance for the claimed additional capitalisation has been considered in the debt-equity ratio of 70:30.

Commission's Analysis and Ruling

5.31.2 In line with the true-up of previous years, the Commission has considered the means of finance of the approved additional capitalisation in the debt: equity ratio of 70:30.

5.32 ANNUAL FIXED CHARGES (AFC) (UNIT 8)

5.32.1 Regulation 42 of the MYT Regulations, 2019 specifies the components of AFC as follows:

a. Operation and Maintenance (O&M) expenses
b. Depreciation
c. Interest on Loan
d. Interest on Working Capital (IoWC)
e. Return on Equity (RoE)
f. Income Tax

Less:

g. Non-Tariff Income (NTI)

5.33 OPERATION AND MAINTENANCE (O&M) EXPENSES (UNIT 8)

TPC-G's submission

5.33.1 TPC-G has claimed the normative O&M expenses of Rs. 69.73 Crore and Rs. 72.73 Crore for FY 2020-21 and FY 2021-22 respectively. As against the same, the actual O&M expenses for FY 2020-21 and FY 2021-22 is Rs. 57.76 Crore and Rs. 79.72 Crore respectively. The actual O&M expenses for FY 2020-21 are lower than the normative expenses. The actual O&M expenses for FY 2021-22 are higher than the normative expenses on account of biannual major overhaul. TPC-G has not considered the amount of Rs. 0.45 Crore and Rs. 0.97 Crore towards Brand Equity for FY 2020-21 and FY 2021-22 respectively.

Commission's Analysis and Ruling

5.33.2 Regulation 47.2 of the MYT Regulations, 2019 specify the normative O&M expenses of Rs. 27.89 Lakh/MW and Rs. 28.89 Lakh/MW for FY 2020-21 and FY 2021-22 respectively for unit size of 250 MW. Accordingly, the normative O&M expenses works out to Rs. 69.73 Crore and Rs. 72.23 Crore for FY 2020-21 and FY 2021-22 respectively.

5.33.3 TPC-G has claimed the actual O&M expenses (excluding Brand Equity) of Rs.

57.76 Crore and Rs. 79.72 Crore for FY 2020-21 and FY 2021-22 respectively. TPC-G submitted the details of cost centres of LA Services and HOSS. The Commission directed TPC-G to submit the justification for allocation of the expenses of the following HO Services:

- Business Collab-Clea: Cost Centre 1900022010;
- Regulations – Delhi: Cost Centre 1900022013;
- Corp Sustainability: Cost Centre 1900022018;
- FCG: Cost Centre 1900022019;
- Corp CSR: Cost Centre 1900022029.

5.33.4 In reply, TPC-G submitted the justification for the allocation of expenses of the above HO services, as discussed in Chapter 4. For the sake of brevity, the same are not repeated here.

5.33.5 For FY 2020-21, as against the normative O&M expenses of Rs. 69.73 Crore, the actual O&M expenses (excluding Brand Equity) amounts to Rs. 57.76 Crore thereby, there is efficiency gain in O&M expenses. For FY 2021-22, as against the normative O&M expenses of Rs. 72.23 Crore, the actual O&M expenses (excluding Brand Equity) amounts to Rs. 79.72 Crore thereby, there is efficiency loss in O&M expenses. TPC-G submitted that the actual O&M expenses are higher than the normative expenses on account of biannual major overhauling. From the perusal of actual R&M expenses for the previous years, the Commission finds merit in TPC-G's submissions. Therefore, the Commission approves the actual O&M expenses of Rs. 79.72 Crore as claimed by TPC-G.

5.33.6 The Commission has considered the O&M expenses as a controllable in accordance with the MYT Regulations, 2019. Hence, the difference between the actual O&M expenses and normative O&M expenses as approved by the Commission in this Order has been considered for computing the sharing of efficiency loss as per principles laid out in MYT Regulations, 2019.

5.34 DEPRECIATION (UNIT 8)

TPC-G's submission

5.34.1 TPC-G has computed the depreciation by applying the rates as specified in the depreciation schedule in Annexure 1 of the MYT Regulations, 2019 and Regulation 28 of the MYT Regulations, 2019. Based on the same, TPC-G requested the Commission to approve the depreciation of Rs. 59.95 Crore and Rs. 59.40 Crore for FY 2020-21 and FY 2021-22 respectively.

Commission's Analysis and Ruling

5.34.2 In the final true-up of FY 2019-20, the Commission had approved the closing GFA for FY 2019-20 as Rs. 1195.25 Crore. The Commission has considered the same as the opening GFA for FY 2020-21. The approved additional capitalisation has been considered as the GFA addition during the year. The deduction from GFA during the year has been considered the same as claimed by TPC-G. The closing GFA for FY 2020-21 has been considered as the opening GFA for FY 2021-22. The approved additional capitalisation has been considered as the GFA addition during the year. The deduction from GFA during the year has been considered the same as claimed by TPC-G. The depreciation rate has been considered the same as claimed by TPC-G.

5.34.3 The depreciation approved by the Commission for FY 2020-21 and FY 2021-22 is as shown in the Table below:

Table 5.45: Depreciation for Unit 8 for FY 2020-21 and FY 2021-22 (Rs. Crore)

Particulars	FY 2020-21			FY 2021-22		
	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved
Opening GFA	1195.51	1196.25	1195.25	1199.21	1196.57	1195.57
Addition	3.70	0.66	0.66	16.74	0.94	0.94
Retirement	0.00	-0.34	-0.34	0.00	-0.50	-0.50
Closing GFA	1199.21	1196.57	1195.57	1215.95	1197.01	1196.01
Depreciation rate	5.15%	4.98%	4.98%	5.15%	4.96%	4.96%
Depreciation	61.65	59.55	59.50	62.18	59.40	59.35

5.34.4 The Commission approves depreciation for Unit 8 as per Table 5.45 for FY 2020-21 and FY 2021-22.

5.35 INTEREST ON LOAN (UNIT 8)

TPC-G's submission

5.35.1 TPC-G has taken various long-term loans to finance the capital expenditure nature projects in line with the Debt: Equity structure of 70%:30%. Tata Power sources long term loans at a company level for its Generation, Transmission and Distribution businesses together to have negotiation advantage to avail better terms and conditions of loans.

5.35.2 In accordance with Regulation 30.5 of the MYT Regulations, 2019, based on the actual loan drawls, interest rates and the interest paid, the weighted average interest rate for FY 2020-21 and FY 2021-22 works out to 7.80% and 7.43% respectively. TPC-G has submitted the statements received from Banks certifying the Opening Balance, Closing Balance, Interest paid, and the applicable rate of interest.

5.35.3 TPC-G has claimed the interest expenses of Rs. 19.27 Crore and Rs. 14.03 Crore for FY 2020-21 and FY 2021-22 respectively.

Commission's Analysis and Ruling

5.35.4 In the final true-up of FY 2019-20, the Commission had approved the closing loan balance for FY 2019-20 as Rs. 278.51 Crore. The Commission has considered the same as the opening loan balance for FY 2020-21. The debt portion of the approved additional capitalisation FY 2020-21 has been considered as the loan addition during the year. The approved depreciation for FY 2020-21 has been considered as the repayment for the year. The closing loan balance for FY 2020-21 has been considered as the opening loan balance for FY 2021-22. The debt portion of the approved additional capitalisation FY 2020-21 has been considered as the loan addition during the year. The approved depreciation for FY 2020-21 has been considered as the repayment for the year. The actual weighted average rates of interest for FY 2020-21 and FY 2021-22 has been applied to the average loan for the relevant year for computing the interest expenses for corresponding year.

5.35.5 Based on the above, the interest on loan approved by the Commission is shown in the Table below:

Table 5.46: Interest on loan for Unit 8 for FY 2020-21 and FY 2021-22 (Rs. Crore)

Particulars	FY 2020-21			FY 2021-22		
	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved
Opening loan	274.91	274.91*	278.51	215.85	215.82	219.47
Addition	2.59	0.46	0.46	11.72	0.65	0.65
Repayment	61.65	59.55	59.50	62.18	59.40	59.35
Closing loan	215.85	215.82	219.47	165.39	157.08	160.78
Rate of interest on loan	8.64%	7.80%	7.80%	8.64%	7.43%	7.43%
Interest on loan	**21.20**	**19.14**	**19.42**	**16.47**	**13.85**	**14.13**
Finance charges	0.00	0.13	0.13	0.00	0.18	0.18
Interest on loan & finance charges	**21.20**	**19.27**	**19.55**	**16.47**	**14.03**	**14.31**

**linkage error by TPC-G*

5.35.6 The Commission approves the interest on loan & finance charges for Unit 8 as per Table 5.46 for FY 2020-21 and FY 2021-22.

5.36 INTEREST ON WORKING CAPITAL (UNIT 8)

TPC-G's submission

5.36.1 Interest on Working Capital (IoWC) has been computed based on Regulation

32 of MYT Regulations, 2019. For the purpose of computing the interest on working capital, interest rate of 8.57% and 8.50% has been considered for FY 2020-21 and FY 2021-22 respectively. TPC-G has claimed the interest on working capital of Rs. 8.69 Crore and Rs. 10.97 Crore for FY 2020-21 and FY 2021-22 respectively.

5.36.2 TPC-G submitted that the capacity declaration to MSLDC is done on the basis of the coal stock which is maintained for generation at 85% Availability. Hence, irrespective of the schedule, coal stock has to be maintained for declaring Availability as per the Regulations of the Commission. Further, scheduling of generation is an uncontrollable factor for TPC-G. It is dependent on the demand of the beneficiaries and availability of other sources of power for them. Further, the information related to the scheduled generation is made available only on a day-ahead basis. It is not possible to rearrange the stock level on the basis of scheduled generation. Further, inspite of a schedule being available, in actual, the generation may be quite different from the schedule, like during transmission system constraint the generator is directed to pick up by MSLDC on a real time basis. Accordingly, the generator has to be prepared to generate upto its declared capacity irrespective of its schedule. Based on this operational issue, TPC-G has maintained coal stock for the generation at 85% Availability. TPC-G accordingly, requested the Commission to consider the same for calculating the normative coal stock instead of calculation based on scheduled generation.

Commission's Analysis and Ruling

5.36.3 The Commission has computed IoWC in accordance with the MYT Regulations, 2019. In accordance with Regulation 32.1, the working capital comprising of the following components has been considered:

- Cost of coal towards stock, for thirty days, for generation corresponding to lower of actual generation or target Availability;
- Cost of coal, for thirty days, for generation corresponding to lower of actual generation or target Availability;
- Cost of secondary fuel oil, for two months, for generation corresponding to lower of actual generation or target Availability;
- Approved normative O&M expenses for one month;
- Maintenance spares at one percent of approved opening GFA;
- Receivables for sale of electricity to BEST equivalent to 45 days of the actual revenue from sale of electricity;
- minus: payables for fuels to the extent of thirty days at lower of actual generation and target Availability.

5.36.4 The Commission observes that TPC-G has considered the working capital at target Availability which is not in accordance with the Regulations as the actual generation is less than that corresponding to target Availability.

5.36.5 The rate of IoWC has been considered as 8.57% and 8.50% for FY 2020-21 and FY 2021-22 respectively in accordance with the MYT Regulations, 2019.

Table 5.47: Interest on working capital for Unit 8 for FY 2020-21 and FY 2021-22 (Rs. Crore)

Particulars	FY 2020-21			FY 2021-22		
	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved
Working capital	102.46	113.10	64.25	102.78	150.26	129.08
Rate of interest	9.55%	8.57%	8.57%	9.55%	8.50%	8.50%
IoWC	**9.79**	**9.70**	**5.51**	**9.82**	**12.77**	**10.97**

5.36.6 The Commission approves the normative IoWC for Unit 8 as per Table 5.47 for FY 2020-21 and FY 2021-22.

5.36.7 TPC-G has claimed the actual interest on working capital of Rs. 5.53 Crore and Rs. 5.41 Crore for FY 2020-21 and FY 2021-22 respectively. In reply to a query, TPC-G submitted the actual delayed payment surcharge for FY 2020-21 and FY 2021-22 as Rs. 6.04 Crore and Rs. 3.34 Crore respectively. In accordance with the proviso to Regulation 32.6 of the MYT Regulations, 2019, delayed payment surcharge and interest on delayed payment surcharge shall have to be deducted from the actual interest on working capital before sharing of the efficiency gains or losses, as the case may be.

5.36.8 The Commission has considered IoWC as a controllable parameter in accordance with the MYT Regulations, 2019. Hence, the difference between the actual IoWC less the delayed payment surcharge and normative IoWC as approved by the Commission in this Order has been considered for computing the sharing of efficiency gains as per principles laid out in MYT Regulations, 2019.

5.37 RETURN ON EQUITY & INCOME TAX (UNIT 8)

TPC-G's submission

5.37.1 RoE has been claimed in accordance with Regulation 29 of the MYT Regulations, 2019. TPC-G has considered the Base Rate of RoE of 14%, additional rate of 0% for incremental ramp rate and additional rate of 1% for performance related to Mean Time Between Failure (MTBF). Accordingly, the total rate of RoE has been claimed as 15.00% for Unit 8. TPC-G has not yet received certificate related to the performance with respect to the ramping rate for FY 2020-21 and FY 2021-22.

5.37.2 With respect to the applicable rate of income tax, TPC-G submitted that Section 115BAA was introduced by Taxation Laws (Amendment) Act 2019 w.e.f. 1 April, 2020. As per this newly inserted provision, a choice was given to a domestic company to shift to new simplified tax regime with effect from FY 2019-20. Under the new tax regime benefits of MAT credit and other exemption are not allowed. It has been observed that it would be beneficial to shift to new tax regime where the business is not eligible for deduction under Section 80IA and MAT credit is not available. Accordingly, in the interest of consumers, TPC-G, for Unit 8, it has been decided to continue under old regime of tax as MAT credit is available which will result in lower tax outgo for the business and ultimately beneficial for the consumers. Further, as per the MYT Regulations 2019, it is required that generating company would calculate the effective tax rate without considering the impact of the actual tax paid on income from any other regulated or unregulated business or other business of the entity. Hence, it is necessary to compute the effective tax rate for TPC-G strictly on a standalone basis considering TPC-G and other businesses of Tata Power as an independent legal entity.

5.37.3 TPC-G has claimed RoE of Rs. 65.18 Crore and Rs. 64.12 Crore for FY 2020-21 and FY 2021-22 respectively.

Commission's Analysis and Ruling

5.37.4 In the final true-up of FY 2019-20, the Commission had approved the closing equity for FY 2019-20 as Rs. 358.58 Crore. The Commission has considered the same as the opening equity for FY 2020-21, which is the same as considered by TPC-G. The equity portion of the approved additional capitalisation for FY 2020-21 has been considered as the equity addition during the year. The closing equity for FY 2020-21, as the opening equity for FY 2021-22. The equity portion of the approved additional capitalisation for FY 2021-22 has been considered as the equity addition during the year.

5.37.5 Regulation 29.2 of the MYT Regulations, 2019 specifies the Base Rate of RoE of 14%. In accordance with Regulation 29.6(a), the additional rate of RoE, subject to the ceiling of 0.5%, shall be allowable for incremental ramp rate. Further, in accordance with Regulation 29.6(b), the additional rate of RoE, subject to maximum of 1% shall be allowable for achievement of MTBF as specified in the Regulation.

5.37.6 The Base Rate of RoE has been considered as 14% in accordance with Regulation 29.2. TPC-G has not submitted the SLDC certificate for incremental ramp rate claimed. However, MSLDC vide email dated 2 March, 2023 submitted that in accordance with the guidelines of CERC for ramp rate certification, Unit 8 of TPC-G shall not be eligible for additional RoE towards incremental ramp rate for FY 2020-21 and FY 2021-22. Accordingly, the Commission has not considered the additional RoE towards incremental ramp rate as specified in Regulation 29.6(a). TPC-G has submitted the SLDC certificate for actual MTBF for Unit 8 for FY 2020-21 and FY 2021-22. The actual MTBF for Unit 8 is 179.47 days and 118.80 days for FY 2020-21 and FY 2021-22 respectively. Accordingly, the Commission has considered the additional rate of 1% for achievement of MTBF of above 120 days for FY 2020-21 and 0.75% for achievement of MTBF of above 90 days FY 2021-22. Accordingly, the Commission has considered the rate of RoE of 15.00% for FY 2020-21 and 14.75% for FY 2021-22.

5.37.7 The issue of income tax for FY 2020-21 and FY 2021-22 has been discussed in detail in the approval of income tax for Units 5,7 & Hydro in the preceding paragraphs of this Chapter. For the sake of brevity, the same is not repeated here. In line with the same, the Commission has considered the effective tax rate of 0%.

5.37.8 Regulation 34.2 of the MYT Regulations, 2019 specify that the rate of RoE including additional rate of RoE shall be grossed up with the effective tax rate of respective financial year.

Table 5.48: RoE for Unit 8 for FY 2020-21 and FY 2021-22 (Rs. Crore)

Particulars	FY 2020-21			FY 2021-22		
	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved
Opening equity	358.66	358.58	358.58	359.77	358.68	358.67
Reduction of equity towards de-capitalised assets	0.00	-0.10	-0.10	0.00	-0.15	-0.15
Addition	1.11	0.20	0.20	5.02	0.28	0.28
Closing equity	359.77	358.68	358.67	364.79	358.81	358.81
Rate of Return	16.964%	18.175%	15.000%	16.964%	17.872%	14.750%
RoE	**60.93**	**65.18**	**53.79**	**61.46**	**64.12**	**52.91**

5.37.9 The Commission approves RoE for Unit 8 as per Table 5.48 for FY 2020-21 and FY 2021-22.

5.38 NON-TARIFF INCOME (NTI) (UNIT 8)

TPC-G's submission

5.38.1 TPC-G has claimed NTI of Rs. 0.12 Crore and Rs. 3.42 Crore for FY 2020-21 and FY 2021-22 respectively.

Commission's Analysis and Ruling

5.38.2 The Commission has considered NTI of Rs. 0.12 Crore and Rs. 3.42 Crore for FY 2020-21 and FY 2021-22 respectively as claimed by TPC-G.

5.39 ANNUAL FIXED CHARGES (AFC) (UNIT 8)

Commission's Analysis and Ruling

5.39.1 Based on the above, the AFC approved by the Commission in the final true-up, that is fully recoverable at Target Availability is as shown in the Table below:

Table 5.49: AFC for Unit 8 for FY 2020-21 and FY 2021-22 (Rs. Crore)

Particulars	FY 2020-21			FY 2021-22		
	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved
O&M expenses	69.73	69.73	69.73	72.23	72.23	72.23
Depreciation	61.65	59.55	59.50	62.18	59.40	59.35
Interest on loan and finance charges	21.20	19.27	19.55	16.47	14.03	14.31
Interest on working capital	9.79	9.70	5.51	9.82	12.77	10.97
Return on Equity	60.93	65.18	53.79	61.46	64.12	52.91
Income tax	-	-	-	-	-	-
Add: Allocation from shared capacity	11.69	11.69	11.69	11.35	11.35	11.35
Less: Non-tariff income	0.09	0.12	0.12	0.09	3.42	3.42
Annual Fixed Charges	**234.89**	**234.98**	**219.64**	**233.41**	**230.48**	**217.70**

5.39.2 The Commission approves AFC for Unit 8 as per Table 5.49 for FY 2020-21 and FY 2021-22.

5.40 SHARING OF GAINS AND LOSSES (UNIT 8)

5.40.1 The Commission in its MYT Tariff Regulations, 2019 has provided the following methodology for treatment of sharing and gains and sharing of losses:

"11. Mechanism for sharing of gains or losses on account of controllable factors—
11.1 The approved aggregate gain to the Generating Company or Licensee or MSLDC on account of controllable factors shall be dealt with in the following manner: —
(a) Two-third of the amount of such gain shall be passed on as a rebate in Tariff over such period as may be stipulated in the Order of the Commission under

Regulation 8.4;

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

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

(a) One-third of the amount of such loss may be passed on as an additional charge in Tariff over such period as may be stipulated in the Order of the Commission under Regulation 8.4;

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

5.40.2 TPC-G has submitted the actual expenditure under various heads. The gains and loss on account of controllable factors has been computed and the sharing between the beneficiaries and TPC-G has been worked out as under:

5.41 GAIN/(LOSS) ON ACCOUNT OF FUEL COST FOR UNIT 8

TPC-G's submission

5.41.1 As per the MYT Regulations 2019, the changes in fuel cost due to operational parameters of the generation units would be considered as controllable. Accordingly, Gains/Losses on account of fuel costs are worked out as below:

Table 5.50: Gain/(loss) due to variation in GSHR for Unit 8 for FY 2020-21 and FY 2021-22 as submitted by TPC-G

Particulars	FY 2020-21	FY 2021-22
Fuel Cost (Rs. Crore)	254.93	727.75
Cost of generation (normative)	3.10	4.97
Gross generation	849.34	1512.81
Fuel Cost applying Normative Heat Rate (Rs. Crore)	263.49	752.33
Net Gains/ (Loss)	8.56	24.59
Passed on to the distribution licensees	5.71	16.39

Commission's Analysis and Ruling

5.41.2 The Commission has computed the sharing efficiency gain or losses on account of variation in GSHR for FY 2020-21 and FY 2021-22 as shown in the following Table:

Table 5.51: Gain/(loss) due to variation in GSHR for Unit 8 for FY 2020-21 and FY 2021-22 approved by the Commission

Particulars	FY 2020-21	FY 2021-22
Fuel Cost (Rs. Crore) (A)	254.94	724.80
Cost of generation (normative)	3.10	4.98

Particulars	FY 2020-21	FY 2021-22
Gross generation	849.34	1512.81
Fuel Cost applying Normative Heat Rate (Rs. Crore) (B)	263.69	753.17
Net Gains/ (Loss) (C=B-A)	8.75	28.37
Passed on to the distribution licensees (D)	5.83	18.91
Entitlement of TPC-G (B-D)	257.86	734.26

5.41.3 The Commission approves the gain/(loss) due to variation in GSHR for Unit 8 as per Table 5.51 for FY 2020-21 and FY 2021-22.

5.42 GAIN/(LOSS) ON ACCOUNT OF AEC FOR UNIT 8

TPC-G's submission

5.42.1 TPC-G submitted the efficiency gains/(loss) due to variation in AEC for FY 2020-21 and FY 2021-22 as shown in the Table below:

Table 5.52: Gain/(loss) due to variation in AEC for Unit 8 for FY 2020-21 and FY 2021-22 as claimed by TPC-G

Particulars	FY 2020-21	FY 2021-22
Gross Generation (MU)	849.34	1512.81
Normative AEC (%)	8.50%	8.50%
Actual AEC (%)	7.16%	6.64%
Difference in Net Generation (MU)	11.40	28.09
Energy Charge Rate (Rs./kWh)	3.42	5.48
Gain / (loss) (Rs. Crore)	3.90	15.39
Passed on to the distribution licensees (Rs. Crore)	2.60	10.26

Commission's Analysis and Ruling

5.42.2 The Commission has computed sharing of efficiency gain or losses on account of variation in AEC for FY 2020-21 and FY 2021-22 as shown in the Table below:

Table 5.53: Gain/(loss) due to variation in AEC for Unit 8 for FY 2020-21 approved by the Commission

Particulars	FY 2020-21	FY 2021-22
Gross Generation (MU)	849.34	1512.81
Normative AEC (%)	8.50%	8.50%
Actual AEC (%)	7.16%	6.64%
Difference in Net Generation (MU)	11.40	28.09
Energy Charge Rate (Rs./kWh)	3.42	5.48
Gain / (loss) (Rs. Crore)	3.90	15.39
Passed on to the distribution licensees (Rs. Crore)	2.60	10.26
Entitlement of TPC-G (Rs. Crore)	1.29	5.09

5.42.3 The Commission approves gain/(loss) due to variation in AEC for Unit 8 as per Table 5.53 for FY 2020-21 and FY 2021-22.

5.43 GAIN/(LOSS) ON ACCOUNT OF O&M EXPENSES FOR UNIT 8

TPC-G's submission

5.43.1 TPC-G submitted the computation of efficiency gains/(loss) on account of O&M expenses as Rs. 11.97 Crore and Rs. (7.49) Crore for FY 2020-21 and FY 2021-22 respectively. Accordingly, net gain/(loss) of Rs. 7.98 Crore and Rs. (2.50) Crore is to be passed on to distribution licensees.

Commission's Analysis and Ruling

5.43.2 The Commission has computed the sharing of efficiency gain on account of variation in O&M expenses as shown in the Table below:

Table 5.54: Gain/(loss) due to variation in O&M expenses for Unit 8 for FY 2020-21 and FY 2021-22 (Rs. Crore)

Particulars	FY 2020-21		FY 2021-22	
	Claimed	Allowable	Claimed	Allowable
Normative O&M (excluding water charges) (A)	69.73	69.73	72.23	72.23
Actual O&M (excluding water charges) (B)	57.76	57.76	79.72	79.72
Gain/(loss) (C=A-B)	11.97	11.97	(7.49)	(7.49)
Passed on to distribution licensee (D)	7.98	7.98	(2.50)	(2.50)
Actual water charges (E)	-	-	-	-
Entitlement of TPC-G (A-D+E)	61.75	61.75	74.72	74.72

5.43.3 The Commission approves the gain/(loss) due to variation in O&M expenses for Unit 8 as per Table 5.54 for FY 2020-21 and FY 2021-22.

5.44 GAIN/(LOSS) ON ACCOUNT OF IOWC FOR UNIT 8

TPC-G's submission

5.44.1 TPC-G submitted the computation of efficiency gains/(loss) on account of IoWC as Rs. 8.69 Crore and Rs. 9.18 Crore for FY 2020-21 and FY 2021-22 respectively. Accordingly, net gain of Rs. 5.79 Crore and Rs. 6.12 Crore is to be passed on to distribution licensees.

Commission's Analysis and Ruling

5.44.2 The Commission has computed the sharing of efficiency gain on account of variation in IoWC as shown in the Table below:

Table 5.55: Gain/(loss) due to variation in IoWC for Unit 8 for FY 2020-21 and FY 2021-22 (Rs. Crore)

Particulars	FY 2020-21		FY 2021-22	
	Claimed	Approved	Claimed	Approved
Normative IoWC (A)	9.70	5.51	12.77	10.97
Actual IoWC (B)	5.53	5.53	5.41	5.41
DPS received (C)	6.04	6.04	3.34	3.34
Net actual IoWC (D=maximum of (B-C), 0)	0.00	0.00	2.07	2.07
Gain/(loss) (E=A-D)	9.70	5.51	10.70	8.90
Passed on to distribution licensee (F)	6.46	3.67	7.13	5.93
Entitlement of TPC-G (A-F)	3.23	1.84	5.64	5.04

5.44.3 The Commission approves the gain/(loss) due to variation in IoWC for Unit 8 as per Table 5.55 for FY 2020-21 and FY 2021-22.

5.45 REVENUE FROM SALE OF POWER (UNIT 8)

TPC-G's submission

5.45.1 For FY 2020-21, TPC-G has claimed the actual revenue from sale of power of Rs. 503.13 Crore comprising of revenue from fixed charges, and energy charges of Rs. 234.89 Crore and Rs. 268.24 Crore respectively. For FY 2021-22, TPC-G has claimed the actual revenue from sale of power of Rs. 1005.12 Crore comprising of revenue from fixed charges, and energy charges of Rs. 470.89 Crore and Rs. 534.23 Crore respectively.

Commission's Analysis and Ruling

5.45.2 The Commission has considered the actual revenue from sale of power of Rs. 503.13 Crore and Rs. 1005.12 Crore for FY 2020-21 and FY 2021-22 respectively as claimed by TPC-G.

5.46 SUMMARY OF TRUE-UP (UNIT 8)

Commission's Analysis and Ruling

5.46.1 Based on the above analysis, the summary of final true-up of Unit 8 for FY 2020-21 and FY 2021-22 is as shown in the Table below:

Table 5.56: Summary of final true-up of Unit 8 for FY 2020-21 and FY 2021-22 approved by the Commission (Rs. Crore)

Particulars	FY 2020-21			FY 2021-22		
	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved
Fixed Cost						
O&M expenses	69.73	69.73	69.73	72.23	72.23	72.23
Depreciation	61.65	59.55	59.50	62.18	59.40	59.35

Particulars	FY 2020-21			FY 2021-22		
	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved
Interest on loan and finance charges	21.20	19.27	19.55	16.47	14.03	14.31
Interest on working capital	9.79	9.70	5.51	9.82	12.77	10.97
Return on Equity	60.93	65.18	53.79	61.46	64.12	52.91
Income tax						
Sharing of efficiency (gains) and losses-O&M		-7.98	-7.98		2.50	2.50
Sharing of efficiency (gains) and losses-IoWC		-6.46	-3.67		-7.13	-5.93
Add: Allocation from shared capacity	11.69	11.69	11.69	11.35	11.35	11.35
Less: Non-tariff income	0.09	0.12	0.12	0.09	3.42	3.42
Sub-total	**234.89**	**220.54**	**207.99**	**233.41**	**225.84**	**214.26**
Fuel Cost						
Fuel Cost (Normative)		263.49	263.69		752.33	753.17
PLF incentive		0.00	0.00		0.00	0.00
Sharing of efficiency (gains) and losses towards fuel cost		-5.71	-5.83		-16.39	-18.91
Auxiliary consumption benefit		1.29	1.29		5.09	5.09
Sub-total		**259.07**	**259.14**		**741.03**	**739.35**
ARR		**479.61**	**467.13**		**966.87**	**953.61**
Revenue from sale of power		**503.13**	**503.13**		**1005.12**	**1005.12**
Revenue gap/(surplus)		**-23.52**	**-35.99**		**-38.24**	**-51.51**

5.46.2 The Commission approves the final true-up of Unit 8 as per Table 5.56 for FY 2020-21 and FY 2021-22.

5.46.3 The Commission has considered the revenue gap/(surplus) on account of final true-up of FY 2020-21 and FY 2021-22 has been considered in computing the cumulative revenue gap/(surplus) upto FY 2022-23 in Chapter 7 of the Order.

6 PROVISIONAL TRUE-UP FOR FY 2022-23

6.1 BACKGROUND

6.1.1 The Commission vide the MYT Order for 4th Control Period from FY 2019-20 to FY 2024-25 dated 30 March, 2020 in Case No. 300 of 2019 approved the tariff for FY 2022-23. TPC-G, in the present Petition has sought the provisional true-up for FY 2022-23 based on the actual performance for H1 of FY 2022-23. The analysis of the true-up undertaken by the Commission is provided below.

6.2 GENERATION CAPACITY

6.2.1 TPC-G has the installed capacity of 1377 MW comprising of thermal capacity of 930 MW and hydel capacity of 447 MW, fully contracted with BEST and TPC-D.

Table 6.1: Generation capacity

Unit/Station	Type of fuel	Installed capacity	BEST Share		TPC-D Share	
		MW	MW	%	MW	%
Unit 5	Coal, Oil and Gas	500	256	51.20%	244	48.80%
Unit 7	Gas	180	92	51.11%	88	48.89%
Unit 8	Coal	250	100	40.00%	150	60.00%
Total Thermal (A)		**930**	**448**	**48.17%**	**482**	**51.83%**
Bhira	-	300	154	51.33%	146	48.67%
Bhivpuri	-	75	38	50.67%	37	49.33%
Khopoli	-	72	37	51.39%	35	48.61%
Total Hydro (B)		**447**	**229**	**51.23%**	**218**	**48.77%**
Grand Total (A+B)		**1377**	**677**	**49.16%**	**700**	**50.84%**

6.3 NORMS OF OPERATION

6.3.1 The Commission has approved the norms of operation for FY 2022-23 based on the norms specified in the MYT Regulations, 2019 and considering other aspects as detailed out in the MYT Order. TPC-G has submitted the actual performance for H1 of FY 2022-23 and estimates for H2 of FY 2022-23. TPC-G's submissions on the performance for FY 2022-23 and the Commission's analysis is detailed hereunder.

6.4 AVAILABILITY

TPC-G's submission

6.4.1 The Availability for FY 2022-23 is as shown in the Table below:

Table 6.2: Availability for FY 2022-23 as submitted by TPC-G

Unit/Station	Target Availability	Approved in MYT	Actual for H1	Estimates for H2	Total Estimates
Thermal					
Unit 5	85.00%	91.78%	95%	82%	88.40%
Unit 7	85.00%	98.08%	100%	96%	97.82%
Unit 8	85.00%	98.08%	99.93%	80.91%	90.45%
Hydro					
Bhira	90.00%	98.76%	100%	96%	97.93%
Bhivpuri	90.00%	99.58%	100%	96%	97.93%
Khopoli	90.00%	99.58%	98%	99%	98.28%

Commission's Analysis and Ruling

6.4.2 The Commission notes that the estimated Availability of all thermal generating Units and hydro generating stations are greater than the normative Availability as specified in the MYT Regulations, 2019. For the purpose of provisional true-up, the Commission has considered the Availability as submitted by TPC-G. Since the Commission has considered Availability higher than the target Availability, TPC-G will be entitled to recover the full fixed charges at target Availability of 85% and 90% for Thermal and Hydro Generating Units, respectively, as stipulated in the MYT Regulations, 2019.

6.5 GROSS GENERATION

TPC-G's submission

6.5.1 The schedule gross generation for FY 2022-23 is as shown in the Table below:

Table 6.3: Gross generation for FY 2022-23 as claimed by TPC-G (MU)

Unit/Station	Approved in MYT	Actual for H1	Estimates for H2	Total Estimates
Thermal				
Unit 5	3154.24	1576.30	1093.82	2670.12
Unit 7	1275.91	291.30	482.34	773.64
Unit 8	1839.16	833.43	617.92	1451.35
Total Thermal	**6269.32**	**2701.03**	**2194.08**	**4895.11**
Hydro				
Bhira	896.00	568.52	455.00	1023.52
Bhivpuri	292.00	143.97	145.00	288.97
Khopoli	282.00	185.23	102.50	287.73
Total Hydro	**1470.00**	**897.71**	**702.50**	**1600.21**
Total	**7739.32**	**3598.74**	**2896.58**	**6495.32**

6.5.2 TPC-G submitted that the lower generation for Unit 8 during H2 is on account of planned outage for annual overhaul.

Commission's Analysis and Ruling

6.5.3 The Commission sought the justification for the estimated generation for Units 5&7 for FY 2022-23 as against the approved generation for the respective Units. In reply, TPC-G submitted that the generation from Units 5&7 has been estimated as per the schedule provided by the distribution licensees and based on past trends. **The Commission also sought the actual scheduled generation for the period from April 2022 to February 2023. TPC-G submitted the actual scheduled generation to the distribution licensees from Unit 5, Unit 7 and Unit 8 as 2373.45 MU, 532.99 MU and 1297.31 MU respectively. Based on the actual scheduled generation for the period from April, 2022-February, 2023, the Commission deems it appropriate to consider the estimated gross generation as submitted by TPC-G**.

6.6 AUXILIARY ENERGY CONSUMPTION

TPC-G's submission

6.6.1 The AEC for FY 2022-23 is as shown in the Table below:

Table 6.4: AEC for FY 2022-23 as claimed by TPC-G

Unit/Station	Approved in MYT	Actual for H1	Estimates for H2	Total Estimates
Thermal				
Unit 5	6.00%	5.98%	6.85%	6.28%
Unit 7	2.75%	4.38%	3.80%	4.02%
Unit 8	8.50%	6.78%	7.20%	6.96%
Hydro				
Bhira	1.00%	1.41%	1.82%	1.26%
Bhivpuri	1.20%	1.31%	1.19%	1.62%
Khopoli	1.20%	3.46%	2.92%	3.26%

Commission's Analysis and Ruling

6.6.2 As regards the AEC of Unit 5, the Commission, in the MYT Order ruled as under:

*"7.7.10 **In view of the above, the Commission decides to approve the normative Auxiliary Consumption of 6.00% for Unit 5 and 8.50% for Unit 8 as per MYT Regulations, 2019 without consumption for FGD. The actual auxiliary consumption of FGD shall be considered at time of truing up based on actuals subject to ceiling of additional auxiliary consumption norm towards FGD as specified in MYT Regulations, 2019. Further, the Commission directs that all necessary metering arrangements shall be undertaken by TPC-G for measurement of Auxiliary consumption for FGDs of Unit 5 and Unit 8**."*

6.6.3 As regards AEC of Unit 7, the Commission, in the MYT Order, ruled as under:

"7.7.13 The Commission notes the submission of TPC-G. It is also noted that additional capitalisation has been allowed to TPC-G from time to time for improvement of performance of Generating units. The CERC (Terms and Conditions of Tariff) Regulations, 2019 also provide the identical norms for Gas based /CCGT Generating stations. Hence, the Commission is not inclined to relax the norms towards Auxiliary consumption of Unit 7 and approves Auxiliary consumption of 2.75% for Unit 7 for 4th Control Period. However, considering the historical actual auxiliary consumption of Unit 7 and considering the dispensation mentioned in the Statement of Reasons for the CERC (Terms and Conditions of Tariff) Regulations, 2019 for coastal plants as pointed out by TPC-G, the Commission may consider to allow the actual auxiliary consumption, if it is higher than normative value of 2.75%, at the time of truing up, subject to ceiling of auxiliary consumption of 3%, if TPC-G proves the impact of sea water cooling system on the Unit 7 Auxiliary consumption with necessary details at the time of truing up."

6.6.4 As regards AEC of hydro stations, the Commission, in the MYT Order ruled as under:

"7.7.14 Regarding the Hydro Generating Stations, the Commission notes that norms for Auxiliary consumption are specified in Regulation 48.3 of MYT Regulations, 2019. ***Accordingly, the Commission approves the normative Auxiliary Consumption of 1.20% for Khopoli & Bhivpuri Hydro Generating Stations and 1% for Bhira Hydro Generating Station****.*

7.7.15 ... the Commission deems it appropriate to consider the auxiliary consumption towards Headworks Consumption and Pumped Energy for Nallah diversion Schemes based on actuals at the time of truing up subject to ceiling of 0.18% for headworks consumption and 0.34% towards Pumped Energy for Nallah diversion…"

6.6.5 For the purpose of provisional true-up, the Commission has considered the normative AEC as approved in the MYT Order. However, as mentioned in the MYT Order, if the actual AEC is higher than the normative AEC, the Commission shall take a view on the allowable AEC at the time of final true-up.

Table 6.5: AEC for FY 2022-23 approved by the Commission

Unit/Station	Approved	FY 2022-23

	in MYT	Estimates	Normative Approved
Thermal			
Unit 5	6.00%	6.28%	6.00%
Unit 7	2.75%	4.02%	2.75%
Unit 8	8.50%	6.96%	8.50%
Hydro			
Bhira	1.00%	1.26%	1.00%
Bhivpuri	1.20%	1.62%	1.20%
Khopoli	1.20%	3.26%	1.20%

6.6.6 The Commission approves AEC as per Table 6.5 for FY 2022-23.

6.7 GROSS STATION HEAT RATE (GSHR)

TPC-G's submission

6.7.1 The GSHR for FY 2022-23 is as shown in the Table below:

Table 6.6: GSHR for FY 2022-23 as claimed by TPC-G (kcal/kWh)

Unit/Station	Approved in MYT	Actual for H1	Estimates for H2	Total Estimates
Unit 5	2549.00	2556	2613	2579.29
Unit 7	2035.00	2207	2120	2152.97
Unit 8	2450.00	2325	2384	2350.13

Commission's Analysis and Ruling

6.7.2 For the purpose of provisional true-up, the Commission has considered the normative GSHR as approved in the MYT Order.

Table 6.7: GSHR for FY 2022-23 approved by the Commission (kcal/kWh)

Unit/Station	Approved in MYT	FY 2022-23	
		Estimates	Normative Approved
Unit 5	2549.00	2579.29	2549.00
Unit 7	2035.00	2152.97	2035.00
Unit 8	2450.00	2350.13	2450.00

6.7.3 The Commission approves GSHR as per Table 6.7 for FY 2022-23.

6.8 FUEL COST

TPC-G's submission

6.8.1 TPC-G submitted the estimated Unit wise fuel cost for FY 2022-23 as shown in the Table below:

Table 6.8: Fuel cost for FY 2022-23 as claimed by TPC-G (Rs. Crore)

Unit/Station	Actual for H1	Estimates for H2	Total Estimates
Unit 5	1459.31	923.43	2382.74
Unit 7	143.88	219.06	362.94
Unit 8	711.20	503.17	1214.37
Total	**2314.39**	**1645.66**	**3960.05**

6.8.2 TPC-G submitted that it would continue to use the fuels as have been using in the past i.e., imported coal, domestic Natural Gas (under APM mechanism), Oil (LSHS) and imported RLNG. TPC-G has considered the actual fuel cost of H1 FY 2022-23 based on scheduled generation. For estimating the fuel prices for H2 of FY 2019-20, weighted average of the fuel prices of the months of July-September 2022 have been considered.

Commission's Analysis and Ruling

6.8.3 In reply to a query, TPC-G submitted the actual fuel details for the period from April 2022 to January 2023.

6.8.4 The Commission has gone through the details of fuel receipts as submitted by TPC-G and accordingly, has considered actual landed fuel price and calorific value of fuels for the period from April 2022 to January 2023 for the purpose of provisional true-up.

Table 6.9: Fuel cost for FY 2022-23 approved by the Commission (Rs. Crore)

Unit/Station	Claimed	Approved
Unit 5	2382.74	2245.09
Unit 7	362.94	415.62
Unit 8	1214.37	1206.97
Total	**3960.05**	**3867.69**

6.8.5 The Commission approves the fuel cost as per Table 6.9 for FY 2022-23.

6.8.6 The fuel cost approved by the Commission works out to be higher on account of variation in fuel prices considered by the Commission and that considered by TPC-G.

6.9 ADDITIONAL CAPITALISATION

TPC-G's submission

6.9.1 TPC-G has claimed the capitalisation of Rs. 54.19 Crore for Units 5,7 & Hydro as against the approved capitalisation of Rs. 22.38 Crore. TPC-G has not claimed any capitalisation for Unit 8.

Table 6.10: Additional capitalisation for FY 2022-23 as claimed by TPC-G (Rs. Crore)

Particulars	Units 5,7 & Hydro		Unit 8	
	Approved in MYT	Claimed in MTR	Approved in MYT	Claimed in MTR
DPR capitalisation	21.22	49.37	0.24	0.00
Non-DPR capitalisation	1.16	4.82	0.00	0.00
Total	**22.38**	**54.19**	**0.24**	**0.00**
Non-DPR capitalisation as % of DPR capitalisation	*5.47%*	*9.76%*	*0.00%*	-

Commission's Analysis and Ruling

6.9.2 The Commission has analysed the detail scheme wise break up of estimated capitalisation provided by TPC-G. The DPRs schemes which have been in principle approved by the Commission have been considered for approval. The Commission notes that the approved cost of DPR for " Strengthening of Shirwata Dam" is Rs. 49.27 Crore. The Cumulative capitalization claimed by TPC-G for this DPR is Rs. 74.18 Crore till FY 2023-24 and hence same is restricted upto the approved capitalization for the purpose of provisional truing up of FY 2022-23 which shall be subjected to truing up in next Tariff proceeding. Accordingly, Rs. 2.41 Crore towards this scheme for FY 2022-23 is not considered for provisional truing up.

6.9.3 Regulation 24.7 of MYT Regulations, 2019 specifies that amount of capitalisation towards non-DPR schemes for any year shall not exceed 20% of amount of capitalisation approved against the DPR Schemes for that respective year. The Commission notes that non-DPR capitalisation claimed by TPC-G is lower than 20% of DPR capitalisation.

6.9.4 The Commission has observed that the claimed additional capitalisation towards following non-DPR schemes amounting to Rs. 2.10 Crore for Units 5,7 & Hydro are in the nature of repairs and maintenance expenses:-

Non-DPR scheme	Capitalization (Rs. Cr.)
Replacement of 400 NB /50 strainer with panels _BPSU	0.4
VH - 3 Servomoter replacement	0.8
Replacement of 220 KV CVTs	0.3
Replacement of Generator& Turbine Bearing Pads	0.6
Total	**2.1**

6.9.5 Therefore, in line with the approach adopted for FY 2021-22, the Commission has excluded the said amount from the additional capitalisation. However, this amount is presently not considered in O&M expenses as O&M expenses for

FY 2022-23 are being approved on normative basis.

6.9.6 Based on the above, the additional capitalisation approved by the Commission is as shown in the Table below:

Table 6.11: Additional capitalisation for FY 2022-23 approved by the Commission (Rs. Crore)

Particulars	Units 5,7 & Hydro			Unit 8		
	Approved in MYT	Claimed in MTR	Approved	Approved in MYT	Claimed in MTR	Approved
DPR capitalisation	21.22	49.37	46.96	0.24	0.00	0.00
Non-DPR capitalisation	1.16	4.82	2.72	0.00	0.00	0.00
Total	**22.38**	**54.19**	**49.68**	**0.24**	**0.00**	**0.00**

6.10 MEANS OF FINANCE OF ADDITIONAL CAPITALISATION

TPC-G's submission

6.10.1 The means of finance for the claimed additional capitalisation has been considered in the debt-equity ratio of 70:30.

Commission's Analysis and Ruling

6.10.2 In line with the true-up of previous years, the Commission has considered the means of finance of the approved additional capitalisation in the debt: equity ratio of 70:30.

6.11 ANNUAL FIXED CHARGES (AFC)

6.11.1 Regulation 42 of the MYT Regulations, 2019 specifies the components of AFC as follows:

a. Operation and Maintenance (O&M) expenses
b. Depreciation
c. Interest on Loan
d. Interest on Working Capital (IoWC)
e. Return on Equity (RoE)
f. Income Tax

Less:

g. Non-Tariff Income (NTI)

6.12 OPERATION AND MAINTENANCE (O&M) EXPENSES

TPC-G's submission

6.12.1 The O&M expenses for Units 5,7 & Hydro have been claimed in accordance with Regulation 47 of the MYT Regulations, 2019. The O&M expenses for Unit 8 have been claimed considering the normative O&M expenses of Rs. 29.93 Lakh/MW. In addition to the normative O&M expenses, the water charges have been estimated based on the actual water charges for H1 of FY 2022-23.

Commission's Analysis and Ruling

6.12.2 As discussed in Chapter 5, TPC-G has erred in computations of revised normative O&M expenses for the 4th Control Period from FY 2020-21 to FY 2024-25. Subsequently, TPC-G submitted the revised claim of normative O&M expenses.

6.12.3 The Commission has perused the computations of O&M expenses submitted by TPC-G. The Commission finds that for projecting the normative O&M expenses for Units 5,7 & Hydro, TPC-G has not deducted the impact of assets transferred from Generation to Transmission in proportion of the assets transferred to the total assets. The Commission has considered the impact of assets transferred from Generation to Transmission in proportion of the assets transferred to the total GFA and deducted the same from the base O&M expenses for FY 2022-23.

6.12.4 The revised normative O&M expenses for Units 5,7 & Hydro for FY 2022-23 have been arrived at by escalating the normative O&M expenses for FY 2021-22, adjusted for the assets transferred from Generation to Transmission by the escalation factor of 3.94%. In addition to the normative O&M expenses, the Commission has considered the water charges, the same as actual for FY 2021-22.

Table 6.12: O&M expenses for Units 5,7 & Hydro for FY 2022-23 (Rs. Crore)

Particulars	Approved in MYT	Claimed	Approved
Normative O&M expenses for previous year	429.14	405.27	420.86
Escalation factor	3.12%	4.94%	3.94%
Normative O&M expenses (A)	442.51	425.28	437.43
Water charges (B)	5.00	4.07	3.13
Total (A+B)	**447.51**	**429.34**	**440.56**

6.12.5 The normative O&M expenses for Unit 8 have been approved as Rs. 74.83 Crore, the same as approved in the MYT Order.

6.13 DEPRECIATION

TPC-G's submission

6.13.1 TPC-G has computed the depreciation by considering the depreciation rate worked out as per the Regulations and the average of opening and closing GFA. TPC-G has claimed the depreciation of Rs. 131.99 Crore and Rs. 59.42 Crore for Units 5,7 & Hydro and Unit 8 respectively.

Commission's Analysis and Ruling

6.13.2 In the final true-up of FY 2021-22, the Commission had approved the closing GFA for FY 2021-22 as Rs. 3880.30 Crore and Rs. 1196.01 Crore for Units 5,7 & Hydro and Unit 8 respectively. The Commission has considered the same as the opening GFA for FY 2022-23. The approved additional capitalisation for FY 2022-23 has been considered as the GFA addition during the year. The actual weighted average depreciation rates for FY 2021-22 have been considered for the purpose of provisional true-up.

6.13.3 The depreciation approved by the Commission for FY 2022-23 is as shown in the Table below:

Table 6.13: Depreciation for FY 2022-23 (Rs. Crore)

Particulars	Units 5,7 & Hydro			Unit 8		
	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved
Opening GFA	3965.74	3898.03	3880.30	1215.95	1197.01	1196.01
Addition	22.38	54.19	49.68	0.24	0.00	0.00
Retirement	0.00	0.00	0.00	0.00	0.00	0.00
Closing GFA	3988.12	3952.22	3929.98	1216.19	1197.01	1196.01
Depreciation rate	3.36%	3.36%	3.26%	5.15%	4.96%	4.96%
Depreciation	133.59	131.99	127.17	62.61	59.42	59.36

6.13.4 The Commission approves the depreciation as per Table 6.13 for FY 2022-23.

6.14 INTEREST ON LOAN

TPC-G's submission

6.14.1 The interest on loan has been claimed considering the closing loan balances for FY 2021-22, claimed additional capitalisation for FY 2022-23, loan repayment equal to depreciation and actual interest rate for FY 2021-22. TPC-G has claimed the interest expenses of Rs. 3.14 Crore and Rs. 9.46 Crore for Units 5,7 & Hydro and Unit 8 respectively. Further, TPC-G has not claimed finance charges.

Commission's Analysis and Ruling

6.14.2 In the final true-up of FY 2021-22, the Commission had approved the closing loan balance for FY 2021-22 as Rs. 73.14 Crore and Rs. 160.78 Crore for Units 5,7 & Hydro and Unit 8 respectively. The Commission has considered the same as the opening loan balances for FY 2022-23. The debt portion of the approved additional capitalisation has been considered as the loan addition during the year. The approved depreciation has been considered as the repayment for the year. The actual weighted average rates of interest for FY 2021-22 have been applied to the average loan for the respective year for computing the interest expenses.

6.14.3 Based on the above, the interest on loan and finance charges approved by the Commission is shown in the Table below:

Table 6.14: Interest on loan for FY 2022-23 (Rs. Crore)

Particulars	Units 5,7 & Hydro			Unit 8		
	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved
Opening loan	87.24	84.61	73.14	165.39	157.08	160.78
Addition	15.67	37.93	34.78	0.17	0.00	0.00
Repayment	102.90	122.54	107.91	62.61	59.42	59.36
Closing loan	0.00	0.00	0.00	102.95	97.66	101.42
Rate of interest on loan	8.64%	7.43%	7.43%	8.64%	7.43%	7.43%
Interest on loan	**3.77**	**3.14**	**2.72**	**11.59**	**9.46**	**9.74**
Finance charges	0.00	0.00	0.00	0.00	0.00	0.00
Interest on loan & finance charges	**3.77**	**3.14**	**2.72**	**11.59**	**9.46**	**9.74**

6.14.4 The Commission approves the interest on loan & finance charges as per Table 6.14 for FY 2022-23.

6.15 INTEREST ON WORKING CAPITAL

TPC-G's submission

6.15.1 Interest on Working Capital (IoWC) has been computed based on Regulation 32.1 of the MYT Regulations, 2019. For the purpose of computing the interest on working capital, interest rate of 9.45%. TPC-G has claimed the interest on working capital of Rs. 55.15 Crore and Rs. 15.95 Crore for Units 5,7 & Hydro and Unit 8 respectively.

Commission's Analysis and Ruling

6.15.2 The Commission has computed IoWC in accordance with the MYT Regulations, 2019. In accordance with Regulation 32.1, the working capital comprising of the following components has been considered:

- Cost of coal towards stock, for thirty days, for Unit 5 and Unit 8, for generation corresponding to lower of estimated generation or target Availability;
- Cost of coal, for thirty days, for Unit 5 and Unit 8, for generation corresponding to lower of estimated generation or target Availability;
- Cost of APM gas, for thirty days, for Unit 7, for generation corresponding to lower of estimated generation or target Availability;
- Cost of secondary fuel oil, for two months, for Unit 8, for generation corresponding to lower of estimated generation or target Availability;
- Approved normative O&M expenses of Units 5,7 & Hydro and Unit 8 for one month;
- Maintenance spares at one percent of approved opening GFA for Units 5,7 & Hydro and Unit 8;
- Receivables for sale of electricity to BEST equivalent to 45 days of the sum of the provisionally trued-up AFC for Units 5,7 & Hydro and Unit 8 and energy charges for Units 5&7 and Unit 8 computed at lower of estimated generation and target Availability;
- minus: payables for fuels to the extent of thirty days of the cost of coal for Unit 5, coal and secondary fuel oil for Unit 8 and APM gas for Unit 7 at lower of projected generation and target Availability.

6.15.3 The rate of IoWC has been considered as 9.45%.

Table 6.15: Interest on working capital for FY 2022-23 (Rs. Crore)

Particulars	Units 5,7 & Hydro			Unit 8		
	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved
Working capital	358.37	583.65	475.83	103.20	168.78	187.75
Rate of interest	9.55%	9.45%	9.45%	9.55%	9.45%	9.45%
IoWC	**34.22**	**55.15**	**44.97**	**9.86**	**15.95**	**17.74**

6.15.4 The Commission approves normative IoWC as per Table 6.15 for FY 2022-23.

6.15.5 The IoWC approved by the Commission for Unit 8 works out to be higher due to computational error in TPC-G's claim of receivables for working capital.

6.16 RETURN ON EQUITY & INCOME TAX

TPC-G's submission

6.16.1 RoE has been claimed in accordance with Regulation 29 of the MYT Regulations, 2019. TPC-G has considered the Base Rate of RoE of 14%. The actual income tax rate for FY 2021-22 has been considered for the purpose of provisional true-up of FY 2022-23.

6.16.2 TPC-G has claimed RoE of Rs. 272.49 Crore and Rs. 60.87 Crore for Units 5,7 & Hydro and Unit 8 respectively.

Commission's Analysis and Ruling

6.16.3 In the final true-up of FY 2021-22, the Commission had approved the closing equity for FY 2021-22 as Rs. 1374.63 Crore and Rs. 358.81 Crore for Units 5,7 & Hydro and Unit 8 respectively. The Commission has considered the same as the opening equity for FY 2022-23. The equity portion of the approved additional capitalisation for FY 2022-23 has been considered as the equity addition during the year.

6.16.4 Regulation 29.2 of the MYT Regulations, 2019 specifies the Base Rate of RoE of 14%. In accordance with Regulation 29.6(a), the additional rate of RoE, subject to the ceiling of 0.5%, shall be allowable for incremental ramp rate. Further, in accordance with Regulation 29.6(b), the additional rate of RoE, subject to maximum of 1% shall be allowable for achievement of MTBF as specified in the Regulation. The additional RoE shall be admissible at the time of final true-up and hence, has not been considered in provisional true-up of FY 2022-23.

6.16.5 The Base Rate of RoE has been considered as 14% in accordance with Regulation 29.2. Regulation 34.2 of the MYT Regulations, 2019 specify that the rate of RoE including additional rate of RoE shall be grossed up with the effective tax rate of respective financial year. The Commission has considered the effective tax rate of 0% for Units 5,7 & Hydro and Unit 8, the same as actual for FY 2021-22.

Table 6.16: RoE for FY 2022-23 (Rs. Crore)

Particulars	Units 5,7 & Hydro			Unit 8		
	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved
Opening equity	1400.61	1380.30	1374.63	364.79	358.81	358.81
Reduction of equity towards de-capitalised assets	0.00	0.00	0.00	0.00	0.00	0.00
Addition	6.71	16.26	14.90	0.07	0.00	0.00
Closing equity	1407.33	1396.56	1389.54	364.86	358.81	358.81
Rate of Return	18.709%	19.626%	14.00%	16.964%	16.964%	14.00%
RoE	262.67	272.49	193.49	61.89	60.87	50.23

6.16.6 The Commission approves RoE as per Table 6.16 for FY 2022-23.

6.17 NON-TARIFF INCOME (NTI)

TPC-G's submission

6.17.1 TPC-G has claimed NTI of Rs. 12.87 Crore and Rs. 3.42 Crore for Units 5,7 & Hydro and Unit 8.

Commission's Analysis and Ruling

6.17.2 The Commission has considered NTI as claimed by TPC-G.

6.18 ANNUAL FIXED CHARGES (AFC)

Commission's Analysis and Ruling

6.18.1 Based on the above, the AFC approved by the Commission in the provisional true-up, that is fully recoverable at Target Availability is as shown in the Table below:

Table 6.17: AFC for Units 5,7 & Hydro for FY 2022-23 (Rs. Crore)

Particulars	Approved in MYT	Claimed	Approved
O&M expenses	447.51	429.34	440.56
Depreciation	133.59	131.99	127.17
Interest on loan and finance charges	3.77	3.14	2.72
Interest on working capital	31.95	55.15	44.97
Return on Equity	262.67	272.42	193.49
Income tax	-	-	-
Less: Allocation of Unit 8 for shared capacity	11.02	11.02	11.02
Less: Non-tariff income	30.86	12.87	12.87
Annual Fixed Charges	**837.61**	**868.23**	**785.01**

6.18.2 The Commission approves the AFC for Units 5,7 & Hydro as per Table 6.17 for FY 2022-23.

Table 6.18: AFC for Unit 8 for FY 2022-23 (Rs. Crore)

Particulars	Approved in MYT	Claimed	Approved
O&M expenses	74.83	74.83	74.83
Depreciation	62.61	59.42	59.36
Interest on loan and finance charges	11.59	9.46	9.74
Interest on working capital	9.86	15.95	17.74
Return on Equity	61.89	60.87	50.23
Income tax	-	-	-
Add: Allocation from shared capacity	11.02	11.02	11.02
Less: Non-tariff income	0.09	3.42	3.42
Annual Fixed Charges	**231.71**	**228.13**	**219.50**

6.18.3 The Commission approves AFC for Unit 8 as per Table 6.18 for FY 2022-23.

6.19 REVENUE FROM SALE OF POWER

TPC-G's submission

6.19.1 TPC-G has claimed the estimated revenue from sale of power of Rs. 3629.01 Crore for Units 5,7 & Hydro comprising of revenue from fixed charges, incentive and energy charges of Rs. 705.80 Crore, Rs. 8.17 Crore and Rs. 2915.04 Crore respectively. TPC-G has claimed the estimated revenue from sale of power of Rs. 1489.92 Crore for Unit 8 comprising of revenue from fixed charges, incentive and energy charges of Rs. 231.71 Crore, Rs. 0.19 Crore and Rs. 1258.01 Crore respectively.

Commission's Analysis and Ruling

6.19.2 The Commission has considered the estimated revenue from sale of power of Rs. 3498.33 Crore and Rs. 1438.68 Crore for Units 5,7 & Hydro and Unit 8 respectively based on the AFC approved in the MYT Order and revised fuel cost approved in this Order.

6.20 SUMMARY OF TRUE-UP

Commission's Analysis and Ruling

6.20.1 Based on the above analysis, the summary of provisional true-up for FY 2022-23 is as shown in the Tables below:

Table 6.19: Summary of provisional true-up for FY 2022-23 for Unit 5 to 7 and Hydro (Rs. Crore)

Particulars	Approved in MYT	Claimed	Approved
Fixed Cost			
O&M expenses	447.51	432.47	440.56
Depreciation	133.59	131.99	127.17
Interest on loan and finance charges	3.77	3.14	2.72
Interest on working capital	31.95	55.15	44.97
Return on Equity	262.67	272.42	193.49
Less: Allocation of Unit 8 for shared capacity	11.02	11.02	11.02
Less: Non-tariff income	30.86	12.87	12.87
Sub-total	**837.61**	**871.29**	**785.01**
Fuel Cost			
Fuel Cost (Normative)		2745.67	2660.71
Sub-total		**2745.67**	**2660.71**
ARR		**3616.97**	**3445.73**

Particulars	Approved in MYT	Claimed	Approved
Revenue from sale of power		**3629.01**	**3498.33**
Revenue gap/(surplus)		**-12.04**	**-52.60**

6.20.2 The Commission approves the provisional true-up for Units 5,7 & Hydro as per Table 6.19 for FY 2022-23.

Table 6.20: Summary of provisional true-up for FY 2022-23 for Unit 8 (Rs. Crore)

Particulars	Approved in MYT	Claimed	Approved
Fixed Cost			
O&M expenses	74.83	74.83	74.83
Depreciation	62.61	59.42	59.36
Interest on loan and finance charges	11.59	9.46	9.74
Interest on working capital	9.86	15.95	17.74
Return on Equity	61.89	60.87	50.23
Add: Allocation from shared capacity	11.02	11.02	11.02
Less: Non-tariff income	0.09	3.42	3.42
Sub-total	**231.71**	**228.13**	**219.50**
Fuel Cost			
Fuel Cost (Normative)		1214.37	1206.97
Sub-total		**1214.37**	**1206.97**
ARR		**1442.50**	**1426.48**
Revenue from sale of power		**1489.92**	**1438.68**
Revenue gap/(surplus)		**-47.42**	**-12.21**

6.20.3 The Commission approves the provisional true-up for Unit 8 as per Table 6.20 for FY 2022-23.

6.20.4 The revenue surplus approved by the Commission for Unit 8 works out to be lower than that claimed by TPC-G on account of the variation in fuel prices and revenue considered by the Commission and claimed by TPC-G.

6.20.5 The Commission has considered the revenue gap/(surplus) approved on provisional true-up for FY 2022-23 in the computation of cumulative revenue gap/(surplus) upto FY 2022-23 in Chapter 7 of the Order.

7 CUMULATIVE REVENUE GAP/(SURPLUS)

7.1 CUMULATIVE REVENUE GAP/(SURPLUS) UPTO FY 2022-23

TPC-G's submission

7.1.1 The cumulative revenue gap/(surplus) claimed by TPC-G for Units 5,7 & Hydro is as shown in the Table below:

Table 7.1: Cumulative revenue gap/(surplus) for Units 5,7 & Hydro claimed by TPC-G (Rs. Crore)

Particulars	Legend	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23
Carrying Cost Rate	**A**	10.18%	9.89%	9.66%	8.57%	8.50%	9.45%
Opening Balance	B		1.60	-7.12	-13.32	-12.28	-5.07
Addition during the year	C			-12.71	1.03	7.21	-11.97
Unit 6 common assets				6.51			
Review of Order in Case No. 94 of 2020		1.60	-8.72				
Closing Balance	E=(B+C-D)	1.60	-7.12	-13.32	-12.28	-5.07	**-17.04**
Average Balance	F= Average (A,E)	0.76	-2.76	-10.22	-12.80	-8.68	-11.06
Holding Cost	**G=A*F**	0.08	-0.27	-0.99	-1.10	-0.74	-1.04
Total Carrying Cost	**H**						**-4.06**

Table 7.2: Cumulative revenue gap/(surplus) for Unit 8 claimed by TPC-G (Rs. Crore)

Particulars	Legend	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23
Carrying Cost Rate	**A**	10.18%	9.89%	9.66%	8.57%	8.50%	9.45%
Opening Balance	B		-1.38	-1.38	6.04	-17.48	-55.72
Addition during the year	C			7.42	-23.52	-38.24	-47.42
Review of Order in Case No. 94 of 2020	**D**	**-1.38**	**0.00**				
Closing Balance	**E=(B+C+D)**	-1.38	-1.38	6.04	-17.48	-55.72	-103.14
Average Balance	F= Average (A,E)	-1.38	-1.38	2.33	-5.72	-36.60	**-79.43**
Holding Cost	G=A*F	-0.14	-0.14	0.22	-0.49	-3.11	-7.51
Total Carrying Cost	**H**						**-11.16**

7.1.2 The cumulative revenue gap/(surplus) claimed by TPC-G is as under:

Table 7.3: Cumulative revenue gap/(surplus) claimed by TPC-G (Rs. Crore)

Particulars	Principal amount	Carrying/(holding) cost	Total
Units 5,7 & Hydro	-17.04	-4.06	**-21.10**
Unit 8	-103.14	-11.16	**-114.30**
Total	**-120.18**	**-15.22**	**-135.40**

7.1.3 Out of the total revenue surplus of Rs. 135.40 Crore, the entitlement of BEST and TPC-D is Rs. 56.52 Crore and Rs. 78.89 Crore respectively.

Commission's Analysis and Ruling

7.1.4 The Commission has computed the cumulative revenue gap/(surplus) upto FY 2022-23 as shown in the Tables below:

Table 7.4: Cumulative revenue gap/(surplus) for Units 5,7 & Hydro approved by the Commission (Rs. Crore)

Particulars		Principal amount	Principal amount to be carried forward	Carrying/(holding) cost							Total including carrying/ (holding) cost
				FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	
		Rs. Crore	Rs. Crore	10.18%	9.89%	9.66%	8.57%	8.50%	9.45%	9.45%	
		(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	Sum (ii) to (ix)
FY 2017-18	**Impact of Review Order in Case No. 94 of 2020**										
	IoWC for FY 2017-18	0.04	0.04								**0.04**
	Sharing of gains/losses on Auxiliary Consumption	-2.40	-2.40	-0.12	-0.24	-0.23	-0.21	-0.20	-0.23	-0.11	**-3.74**
	Hydro Incentives for FY 2017-18	3.96	3.96	0.20	0.39	0.38	0.34	0.34	0.37	0.19	**6.17**
FY 2018-19	**Impact of Review Order in Case No. 94 of 2020**										
	Hydro Incentives for FY 2018-19	4.52	4.52		0.22	0.44	0.39	0.38	0.43	0.21	**6.59**
	Revised Income Tax	-13.24	-13.24		-0.65	-1.28	-1.13	-1.13	-1.25	-0.63	**-19.31**
	Impact of adding back of common assets of Unit 6	6.51	6.51		0.32	0.63	0.56	0.55	0.62	0.31	**9.49**
FY 2019-20	Total Revenue Gap/ (Surplus) approved on final true-up	-62.63									
	Total Revenue Gap/ (Surplus) approved on	-28.20									

Particulars		Principal amount	Principal amount to be carried forward	Carrying/(holding) cost							Total including carrying/ (holding) cost
				FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	
		Rs. Crore	Rs. Crore	10.18%	9.89%	9.66%	8.57%	8.50%	9.45%	9.45%	
		(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	Sum (ii) to (ix)
	provisional true-up										
	Incremental Revenue Gap/ (Surplus) approved on final true-up	-34.43	-34.43			-1.66	-2.95	-2.93	-3.25	-1.63	**-46.85**
FY 2020-21	Revenue Gap/ (Surplus) approved on final true-up	-87.38	-87.38				-3.74	-7.43	-8.26	-4.13	**-110.94**
FY 2021-22	Revenue Gap/ (Surplus) approved on final true-up	-78.61	-78.61					-3.34	-7.43	-3.71	**-93.09**
FY 2022-23	Revenue Gap/ (Surplus) approved on provisional true-up	-52.60	-52.60								**-52.60**
Total			**-253.63**	**0.08**	**0.04**	**-1.73**	**-6.75**	**-13.75**	**-19.00**	**-9.50**	**-304.24**

7.1.5 The Commission approves the cumulative revenue gap/(surplus) for Units 5,7 & Hydro as per Table 7.4.

Table 7.5: Cumulative revenue gap/(surplus) for Unit 8 approved by the Commission (Rs. Crore)

Particulars		Principal amount	Principal amount to be carried forward	Carrying/(holding) cost							Total including carrying/ (holding) cost
				FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	
		Rs. Crore	Rs. Crore	10.18%	9.89 %	8.57%	8.50%	9.45%	9.45%	9.45%	
		(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	Sum (ii) to (ix)
FY 2018-19	**Impact of Review Order in Case No. 94 of 2020**										
	Sharing of gains/losses on Auxiliary Consumption	-1.38	-1.38		-0.07	-0.12	-0.12	-0.13	-0.13	-0.07	**-2.01**
FY 2019-20	Total Revenue Gap/ (Surplus) approved on final true-up	-22.80									
	Total Revenue Gap/ (Surplus) approved on provisional true-up	-29.84									
	Incremental Revenue Gap/ (Surplus) approved on final true-up	7.04	7.04			0.30	0.60	0.67	0.67	0.33	**9.61**
FY 2020-21	Revenue Gap/ (Surplus) approved on final true-up	-35.99	-35.99				-1.53	-3.40	-3.40	-1.70	**-46.03**
FY 2021-22	Revenue Gap/ (Surplus) approved on final true-up	-51.51	-51.51					-2.43	-4.87	-2.43	**-61.24**
FY 2022-23	Revenue Gap/ (Surplus) approved on provisional true-up	-12.21	-12.21								**-12.21**

Particulars	Principal amount	Principal amount to be carried forward	Carrying/(holding) cost							Total including carrying/ (holding) cost
			FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	
	Rs. Crore	Rs. Crore	10.18%	9.89 %	8.57%	8.50%	9.45%	9.45%	9.45%	
	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	Sum (ii) to (ix)
Total		**-94.04**	**0.00**	**-0.07**	**0.18**	**-1.05**	**-5.30**	**-7.73**	**-3.87**	**-111.88**

7.1.6 The Commission approves the cumulative revenue gap/(surplus) for Unit 8 as per Table 7.5.

7.1.7 Further, the Commission has approved the recovery/refund of the approved revenue gap/(surplus) to the distribution licensees in proportion to the energy sold during the respective year as shown in the Table below:

Year	Particulars	Units 5,7 & Hydro			Unit 8		
		BEST	TPC-D	Total	BEST	TPC-D	Total
FY 2017-18	Impact of Review Order in Case No. 94 of 2020	1.26	1.21	**2.47**	0.00	0.00	**0.00**
FY 2018-19	Impact of Review Order in Case No. 94 of 2020	-6.51	-6.21	**-12.72**	-0.91	-1.10	**-2.01**
	Impact of adding back of common assets of Unit 6	4.86	4.64	**9.49**	0.00	0.00	**0.00**
FY 2019-20	Incremental Revenue Gap/ (Surplus) approved on final true-up	-23.97	-22.88	**-46.85**	3.84	5.76	**9.61**
FY 2020-21	Revenue Gap/ (Surplus) approved on final true-up	-56.77	-54.17	**-110.94**	-18.41	-27.62	**-46.03**
FY 2021-22	Revenue Gap/ (Surplus) approved on final true-up	-47.40	-45.69	**-93.09**	-24.32	-36.93	**-61.24**
FY 2022-23	Revenue Gap/ (Surplus) approved on provisional true-up	-27.20	-25.40	**-52.60**	-4.99	-7.21	**-12.21**
Total		**-155.72**	**-148.51**	**-304.24**	**-44.78**	**-67.10**	**-111.88**

7.1.8 The Commission has considered the said amounts in the tariff determination of BEST and TPC-D for FY 2023-24 as discussed in the respective MTR Orders.

8 REVISED TARIFF FOR FY 2023-24 AND FY 2024-25

8.1 BACKGROUND

8.1.1 The Commission vide the MYT Order for 4th Control Period from FY 2020-21 to FY 2024-25 dated 30 March, 2020 in Case No. 300 of 2019 approved the tariff for FY 2023-24 and FY 2024-25. The Commission in this Order has carried out the final true-up of FY 2019-20 in accordance with the MYT Regulations, 2015, final true-up of FY 2020-21 and FY 2021-22 along with provisional true-up of FY 2022-23 in accordance with the MYT Regulations, 2015. Based on the same, the Commission has approved the revised tariff for FY 2023-24 and FY 2024-25 as detailed in the subsequent part of this Chapter.

8.2 GENERATION CAPACITY

8.2.1 TPC-G has the installed capacity of 1377 MW comprising of thermal capacity of 930 MW and hydel capacity of 447 MW, fully contracted with BEST and TPC-D upto 31 March, 2024.

Table 8.1: Generation capacity

Unit/Station	Type of fuel	Installed capacity	BEST Share		TPC-D Share	
		MW	MW	%	MW	%
Unit 5	Coal, Oil and Gas	500	256	51.20%	244	48.80%
Unit 7	Gas	180	92	51.11%	88	48.89%
Unit 8	Coal	250	100	40.00%	150	60.00%
Total Thermal (A)		**930**	**448**	**48.17%**	**482**	**51.83%**
Bhira	-	300	154	51.33%	146	48.67%
Bhivpuri	-	75	38	50.67%	37	49.33%
Khopoli	-	72	37	51.39%	35	48.61%
Total Hydro (B)		**447**	**229**	**51.23%**	**218**	**48.77%**
Grand Total (A+B)		**1377**	**677**	**49.16%**	**700**	**50.84%**

8.2.2 The Commission sought the details of power sale options being explored post expiry of PPAs with BEST and TPC-D. In reply, TPC-G submitted that variation options are under consideration including extension of the current PPAs. TPC-G submitted that further details would be submitted after crystallisation of the same. TPC-G has proposed the tariff for FY 2024-25 with the same tied-up capacity.

8.2.3 Considering TPC-G's submissions regarding determination of tariff for FY 2024-25 after the expiry of the current PPAs, the Commission has determined the revised tariff for FY 2024-25 in this Order. It is relevant to note that vide its Order dated 15 March 2022 in Case No. 240 of 2022 (Petition of BEST for approval of Power Procurement plan for 7 years period from FY 2023-24 to

FY 2029-30), the Commission has directed BEST to extend existing PPA with TPC-G (Thermal + Hydro) by one more year i.e. till March 2025 and accordingly, the Tariff determined for FY 2024-25 through present Order would be applicable for the extended PPA period. Similarly, TPC-D is also required to extend its existing PPA between TPC-G and TPC-D till March 2025 and hence, TPC-D will be billed at the aforesaid Tariff for FY 2024-25. Further, vide its Order dated 3 November 2022 in Case No. 29 of 2022 (Petition of TPC-G seeking approval of the proposed operational modalities of its Pumped Storage Unit at Bhira Hydro Generating Station), the Commission has directed that the billing methodology approved in that Order shall be incorporated by TPC-G in the supplementary PPAs, wherever same will be entered into with the Distribution Licensees. Accordingly, it is directed that TPC-G shall incorporate the billing methodology approved in Case No. 29 of 2022 in the extended PPAs. However, in case there is any other change in the terms and conditions of the PPA, approval of the Commission would be required for the same.

8.3 NORMS OF OPERATION

8.3.1 The Commission has approved the norms of operation for FY 2023-24 and FY 2024-25 based on the norms specified in the MYT Regulations, 2019 and considering other aspects as detailed out in the MYT Order. TPC-G's submissions on the performance parameters for FY 2023-24 and FY 2024-25 and the Commission's analysis is detailed hereunder.

8.4 AVAILABILITY

TPC-G's submission

8.4.1 The Availability for FY 2023-24 and FY 2024-25 is as shown in the Table below:

Table 8.2: Availability for FY 2023-24 and FY 2024-25 as submitted by TPC-G

Unit/Station	Target Availability	FY 2023-24		FY 2024-25	
		Approved in MYT	Claimed	Approved in MYT	Claimed
Thermal					
Unit 5	85.00%	96.99%	94.08%	91.78%	92.95%
Unit 7	85.00%	97.81%	97.09%	91.78%	97.08%
Unit 8	85.00%	92.90%	90.89%	98.08%	96.58%
Hydro					
Bhira	90.00%	92.90%	90.87%	99.22%	94.49%
Bhivpuri	90.00%	99.85%	99.59%	99.59%	99.59%
Khopoli	90.00%	99.85%	99.59%	99.59%	99.51%

Commission's Analysis and Ruling

8.4.2 The Commission notes that the projected Availability of all thermal generating Units and hydro generating stations are greater than the normative Availability as specified in the MYT Regulations, 2019. The Commission sought the details of Fuel Supply Agreements (FSAs) in place for achieving the projected Availability for thermal Units. In reply, TPC-G submitted that the current coal supply agreement is valid upto 31 July, 2026 and the current gas supply agreement is valid upto 31 July, 2026. TPC-G further, submitted that the new agreements would be executed subject to the outcome of the finalisation of new PPAs.

8.4.3 The Commission sought the details of measures for fulfilling the shortfall in fuel quantum, if any, from the current FSAs. In reply, TPC-G submitted that the current contracts are adequate for meeting the projected Availability of its thermal Units. TPC-G submitted that alternate arrangements have been made based on the type of fuel in case of any non-availability under current contracts due to uncontrollable factors from the existing supplier side. Coal would be arranged through the short-term spot contracts/sourcing distress shipments as and when available on competitive basis from Open Market on need basis. Gas would be arranged through the purchase of RLNG under auction purchase/spot contract, if required. TPC-G submitted that the alternate arrangements would be pursued after due consultation with the beneficiaries as per the prevailing Regulations.

8.4.4 It is the primary responsibility of generating companies to ensure supply of fuel for operation of the plant. In accordance with the MYT Regulations, 2019, full recovery of AFC is allowed only if the actual Availability is equal to or higher than the target Availability.

8.5 GROSS GENERATION

TPC-G's submission

8.5.1 The gross generation for FY 2023-24 and FY 2024-25 is as shown in the Table below:

Table 8.3: Gross generation for FY 2023-24 and FY 2024-25 as claimed by TPC-G (MU)

Unit/Station	FY 2023-24		FY 2024-25	
	Approved in MYT	Claimed	Approved in MYT	Claimed
Thermal				
Unit 5	3325.00	3325.00	3359.00	3359.00
Unit 7	1279.00	1279.00	1198.00	1198.00
Unit 8	1720.00	1720.00	1906.00	1906.00

Unit/Station	FY 2023-24		FY 2024-25	
	Approved in MYT	Claimed	Approved in MYT	Claimed
Total Thermal	**6324.00**	**6324.00**	**6463.00**	**6463.00**
Hydro				
Bhira	896.00	896.00	896.00	910.00
Bhivpuri	292.00	292.00	292.00	292.00
Khopoli	282.00	282.00	282.00	282.00
Total Hydro	**1470.00**	**1470.00**	**1470.00**	**1484.00**
Total	**7794.00**	**7794.00**	**7933.00**	**7947.00**

Commission's Analysis and Ruling

8.5.2 TPC-G has projected the gross generation for FY 2023-24 in line with that approved in the MYT Order. The gross generation projected for FY 2024-25 is slightly higher than that approved in the MYT Order. The Commission has considered the projections of gross generations as projected by TPC-G.

8.6 AUXILIARY ENERGY CONSUMPTION

TPC-G's submission

8.6.1 The AEC for FY 2023-24 and FY 2024-25 is as shown in the Table below:

Table 8.4: AEC for FY 2023-24 and FY 2024-25 as claimed by TPC-G

Unit/Station	FY 2023-24		FY 2024-25	
	Approved in MYT	Projection	Approved in MYT	Projection
Thermal				
Unit 5	6.00%	5.29%	6.00%	5.26%
Unit 7	2.75%	2.96%	2.75%	3.06%
Unit 8	8.50%	6.41%	8.50%	6.40%
Hydro				
Bhira	1.00%	1.40%	1.00%	1.40%
Bhivpuri	1.20%	1.30%	1.20%	1.30%
Khopoli	1.20%	2.30%	1.20%	2.30%

8.6.2 The claimed AEC for hydro stations is inclusive of additional AEC towards GT losses, head works, colony consumption and nallah diversion.

Commission's Analysis and Ruling

8.6.3 As regards the AEC of Unit 5, the Commission, in the MYT Order ruled as under:

"7.7.10 ***In view of the above, the Commission decides to approve the normative***

***Auxiliary Consumption of 6.00% for Unit 5 and 8.50% for Unit 8 as per MYT Regulations, 2019 without consumption for FGD. The actual auxiliary consumption of FGD shall be considered at time of truing up based on actuals subject to ceiling of additional auxiliary consumption norm towards FGD as specified in MYT Regulations, 2019. Further, the Commission directs that all necessary metering arrangements shall be undertaken by TPC-G for measurement of Auxiliary consumption for FGDs of Unit 5 and Unit 8**."*

8.6.4 Accordingly, the Commission has considered the normative AEC of 6.00% for Unit 5 for the purpose of this Order.

8.6.5 As regards AEC of Unit 7, the Commission, in the MYT Order, ruled as under:

"7.7.13 The Commission notes the submission of TPC-G. It is also noted that additional capitalisation has been allowed to TPC-G from time to time for improvement of performance of Generating units. The CERC (Terms and Conditions of Tariff) Regulations, 2019 also provide the identical norms for Gas based /CCGT Generating stations. Hence, the Commission is not inclined to relax the norms towards Auxiliary consumption of Unit 7 and approves Auxiliary consumption of 2.75% for Unit 7 for 4th Control Period. However, considering the historical actual auxiliary consumption of Unit 7 and considering the dispensation mentioned in the Statement of Reasons for the CERC (Terms and Conditions of Tariff) Regulations, 2019 for coastal plants as pointed out by TPC-G, the Commission may consider to allow the actual auxiliary consumption, if it is higher than normative value of 2.75%, at the time of truing up, subject to ceiling of auxiliary consumption of 3%, if TPC-G proves the impact of sea water cooling system on the Unit 7 Auxiliary consumption with necessary details at the time of truing up."

8.6.6 Accordingly, the Commission has considered the normative AEC of 2.75% for Unit 7 for the purpose of this Order.

8.6.7 As regards AEC of hydro stations, the Commission, in the MYT Order ruled as under:

*"7.7.14 Regarding the Hydro Generating Stations, the Commission notes that norms for Auxiliary consumption are specified in Regulation 48.3 of MYT Regulations, 2019. **Accordingly, the Commission approves the normative Auxiliary Consumption of 1.20% for Khopoli & Bhivpuri Hydro Generating Stations and 1% for Bhira Hydro Generating Station**.*

7.7.15 … the Commission deems it appropriate to consider the auxiliary consumption towards Headworks Consumption and Pumped Energy for Nallah diversion Schemes based on actuals at the time of truing up subject to ceiling of

0.18% for headworks consumption and 0.34% towards Pumped Energy for Nallah diversion…"

8.6.8 Accordingly, the Commission has considered the normative AEC of 1.00%, 1.20% and 1.20% for Bhira, Bhivpuri and Khopoli respectively for the purpose of this Order.

8.6.9 However, as mentioned in the MYT Order, if the actual AEC is higher or lower than the normative AEC, the Commission shall take a view on the same at the time of final true-up.

Table 8.5: AEC for FY 2023-24 and FY 2024-25 approved by the Commission

Unit/Station	Approved in MYT	FY 2023-24		FY 2024-25	
		Projection	Normative Approved	Projection	Normative Approved
Thermal					
Unit 5	6.00%	5.29%	6.00%	5.26%	6.00%
Unit 7	2.75%	2.96%	2.75%	3.06%	2.75%
Unit 8	8.50%	6.41%	8.50%	6.40%	8.50%
Hydro					
Bhira	1.00%	1.00%	1.00%	1.00%	1.00%
Bhivpuri	1.20%	1.20%	1.20%	1.20%	1.20%
Khopoli	1.20%	1.20%	1.20%	1.20%	1.20%

8.6.10 The Commission approves AEC as per Table 8.5 for FY 2023-24 and FY 2024-25.

8.7 GROSS STATION HEAT RATE (GSHR)

TPC-G's submission

8.7.1 The GSHR for FY 2023-24 and FY 2024-25 is as shown in the Table below:

Table 8.6: GSHR for FY 2023-24 and FY 2024-25 as claimed by TPC-G (kcal/kWh)

Unit/Station	Normative Approved in MYT	Projection for FY 2023-24	Projection for FY 2024-25
Unit 5	2549.00	2522.68	2510.70
Unit 7	2035.00	2034.11	2072.00
Unit 8	2430.00	2312.14	2316.00

Commission's Analysis and Ruling

8.7.2 For the purpose of this Order, the Commission has considered the normative GSHR as approved in the MYT Order.

Table 8.7: GSHR for FY 2023-24 and FY 2024-25 approved by the Commission (kcal/kWh)

Unit/Station	Approved in MYT	FY 2023-24		FY 2024-25	
		Projection	Normative Approved	Projection	Normative Approved
Unit 5	2549.00	2522.68	2549.00	2510.70	2549.00
Unit 7	2035.00	2034.11	2035.00	2072.00	2035.00
Unit 8	2430.00	2312.14	2430.00	2316.00	2430.00

8.7.3 The Commission approves GSHR as per Table 8.7 for FY 2023-24 and FY 2024-25.

8.8 ENERGY CHARGE

TPC-G's submission

8.8.1 TPC-G submitted that it uses the fuels imported coal, domestic Natural Gas (under APM mechanism), Oil (LSHS) and imported RLNG. The fuel prices have to be considered in accordance with Regulation 50.6 of the MYT Regulations, 2019. Accordingly, the actual fuel parameters for the period from July-September 2022 are as under:

Table 8.8: Actual fuel parameters for July-September 2022 as submitted by TPC-G

Fuel	Landed price (Rs./MT)	GCV (kcal/kg)
APM Gas	29583	13113
RLNG	201613	13070
Coal	17560	4338
LSHS	55362	10330

8.8.2 TPC-G submitted that the current prices of fuels are significantly high on account of the current geopolitical situation in the world. This situation is an aberration and not likely to be sustainable for a long period i.e., for the entire period of 2 years of the remaining Control Period. Hence, determining tariff on the basis of current prices for a period of two years may not be beneficial to the beneficiaries.

8.8.3 TPC-G submitted that the current contracts for Indonesian coal prices are based on HBA index which are influenced by other international coal indices. The HBA index was maintaining a level of 70 to 100 during the period from the years 2009 to 2019 and has suddenly increased beyond normal band of operation of last ten years The average HBA index for the preceding ten or more years has constantly been at USD 80/MT. With this index approximate cost of generation of Unit 5 and Unit 8 would be Rs. 4.5/kWh (with current FOREX and all overheads). However, due to geopolitical conditions, HBA index has gone over USD 300/MT abruptly. Considering the above, the determination of tariff based on this aberration may not be in the interest of consumers.

8.8.4 TPC-G submitted that it has initiated various measures to reduce the cost of generation as under:

- TPC-G is exploring ICI index which has currently 30% less value than HBA index. Two types of ICI index coal is fired viz ICI-3 (GCV 4800 GAR) and ICI-4 (GCV 4200 GAR). Comparatively ICI-4 has lesser heat value (Rs/Mkcal) but since it has low GCV the proportion, firing is kept in the ratio 70:30. Though this coal will be different from the sulphur point of view but as Unit 5 and Unit 8 are already equipped FGDs, it is possible to utilise this coal while remaining within environmental limits. TPC-G has already taken trials for this coal and would utilize this option to reduce the energy charges from Unit 5 and Unit 8.

8.8.5 Accordingly, TPC-G has proposed the following fuel prices and GCV for tariff determination for FY 2023-24 and FY 2024-25.

Table 8.9: Fuel parameters for FY 2023-24 and FY 2024-25 considered by TPC-G

Fuel	FY 2023-24		FY 2024-25	
	Landed price (Rs./MT)	GCV (kcal/kg)	Landed price (Rs./MT)	GCV (kcal/kg)
APM Gas	29583	13113	29583	13113
RLNG	201613	13070	201613	13070
Coal	10938	4650	8700	4720
LSHS	55362	10330	55362	10330

8.8.6 Accordingly, TPC-G has proposed the following Energy Charge Rate (ECR) for FY 2023-24 and FY 2024-25:

Table 8.10: ECR proposed by TPC-G for FY 2023-24 and FY 2024-25 (Rs./kWh)

Unit	Fuel	FY 2023-24		FY 2024-25	
		Approved in MYT	Claimed	Approved in MYT	Claimed
Unit 5	APM	3.863	6.117	3.979	6.117
	Oil	16.895	14.533	17.402	14.533
	Coal	4.063	6.548	4.185	5.129
	RLNG	10.133	41.830	10.437	41.830
Unit 7	APM	2.981	4.721	3.070	4.721
	RLNG	7.820	32.279	8.054	32.279
Unit 8	Coal	4.013	6.400	4.133	5.013

Commission's Analysis and Ruling

8.8.7 The Commission, in the MYT Order, ruled as under:

"7.17.2 In view of the above, the Commission sought the details of latest prices of Fuels. The Commission has considered the fuel prices based on actual fuel prices for the period April to September 2019…
7.17.3 Further, GCV of Fuel has been considered same for each year of the Control Period. The Commission has considered the escalation of 3% per annum in landed prices of fuel from FY 2020-21 onwards for approving the Tariff for Control Period based on past trends of variations in fuel prices. Accordingly, the landed price of fuel considered for projection of Energy Charges is shown in the following Table:

Table 129 Landed Price of Fuel for Control Period as considered by the Commission

Fuel	*Landed Price of Fuel (Rs./MT or SCM or kL)*		
	…	*FY 24*	*FY 25*
Coal	…	*7327.73*	*7547.56*
APM Gas	…	*18728.86*	*19290.73*
RLNG	…	*48945.03*	*50413.38*
Oil	…	*63009.73*	*64900.02*

8.8.8 There has been significant increase in the fuel prices in comparison to that considered by the Commission in the MYT Order. TPC-G has considered the fuel parameters for the period July-September 2022 for all the fuels except coal. For coal, TPC-G has proposed reduction in price alongwith increase in GCV.

8.8.9 The Commission sought the current status of imported coal supply agreement for FY 2023-24 and FY 2024-25. The Commission also sought the basis and detailed rationale for reduction in imported coal prices for FY 2023-24 and FY 2024-25 along with supporting documents. In reply, TPC-G submitted that the coal contracts for the period beyond July, 2024, if required, would be executed through tendering process depending on the market scenario. TPC-G submitted that it has procured coal shipments for Q1 of FY 2023-24 on ICI-3/ICI-4 linked prices. TPC-G submitted the copies of coal contracts.

8.8.10 TPC-G further submitted that it has planned to procure coal at the most optimum market price to optimise the cost of generation. TPC-G is closely monitoring the indices on day-to-day basis for procuring the most economic sourcing of coal. Further, the trend of ICI-3/ICI-4 during the period from November 2022 to February 2023 shows a downward trend.

8.8.11 The fuel cost projection for determining the tariff for ensuing years is governed by MYT Regulations, 2019. In this regard, the proviso to Regulation 50.6 of the MYT Regulations, 2019 specifies as under:

"Provided that the landed cost of primary fuel and secondary fuel for tariff determination shall be based on actual weighted average cost of primary fuel and secondary fuel of the ***three preceding months*** *, and in the absence of landed costs for the three preceding months, latest procurement price of primary fuel and secondary fuel for the generating Station, preceding the first month for which the Tariff is to be determined for existing stations, and immediately preceding three months in case of new generating stations shall be taken into account:"*

8.8.12 It is observed that TPC-G has not considered the coal prices in accordance with the provisions of the MYT Regulations, 2019 and has estimated the imported coal prices (Rs. 10938/MT) by assuming substantial reduction in coal prices during the last 3 months. The stakeholders have also strongly objected to this approach taken by TPC-G. In a regulated environment, TPC-G is not expected to be inconsistent with the Regulations and complete transparency is expected. The least that was expected from TPC-G was to submit all the data as per the Regulations and thereafter make its submissions and justify about the possible reduction in coal prices.

8.8.13 In reply to a query, TPC-G submitted the actual fuel details for the period from October 2022-January, 2023. Hence, as per the provisions of Regulations, the fuel cost and GCV data for the latest 3 months from November 2022 to January 2023 is available and the same can be considered for determining the energy charges for FY 2023-24 and FY 2024-25. Accordingly, the Commission has considered the actual fuel price and GCV of latest 3 months from November 2022 to January 2023 for all other fuels. However, for imported coal, considering the movement in coal prices in recent past, the Commission has further analysed the issue of imported coal price to be considered for determining energy charges in detail.

8.8.14 Based on the actual imported coal price details submitted by TPC-G for the months of October 2022 to January 2023, the Commission finds that the price of imported coal for the said period is lower than that for July-September, 2022. Further, the Commission observes that TPC-G is endeavouring to procure more imported coal at lower prices based on ICI index. Therefore, the Commission has examined the actual coal price for ICI linked procurement during the months of November, 2022 to January, 2023. The actual procurement price of imported coal for the period from November, 2022 to January, 2023 is as shown in the Table below:

Table 8.11: Price of imported coal for the period from November, 2022-January, 2023

Particulars	Imported coal price (mix of HBA and ICI)	Imported coal price (ICI only)
Price (Rs./MT)	14466	14072
GCV as received (kcal/kg)	4643	4676
Price (Rs./Mkcal)	3116	3009

8.8.15 The Commission is aware that in FY 2021-22 and FY 2022-23 there has been a very large volatility in the prices of imported coal. The volatility and the increase in the price directly affect the end tariff of the consumers. The Imported coal needs to be procured based on international index. The Commission has analysed the month wise ICI-3 and ICI-4 index imported coal price for FY 2022-23 i.e., from April 2022 to March 2023. Based on the analysis and the data available in the Public Domain there looks to be a possibility of softening of imported coal prices. The same is indicated by the imported ICI index as ICI 4 imported coal price for the month of March 2023 has reduced to 72.82 $/T in March 2023 from 91.39 $/T in December 2022. (Source www.argusmedia.com). Further, the imported coal price is linked to GCV of coal and hence the imported coal pricing cannot be taken in isolation to GCV of imported coal.

8.8.16 As discussed earlier, the average imported coal price for the latest three months from December 2022 to January 2023 as per the provisions of MYT Regulations, 2019 works out to be around Rs 14072/MT. However, based on the analysis of the ICI 4 index for the past 9 months, the extreme volatility in the imported coal market and in the interest of the consumers, the Commission by exercising its Power to Remove Difficulties under Regulation 106 of MYT Regulations, 2019 has considered the imported coal price of Rs 12500/MT for approving the energy charges for FY 2023-24 and FY 2024-25. This approach of considering imported coal price in deviation to approach as per MYT Regulations, 2019 is in very specific/isolated condition due to volatility of imported coal prices and hence cannot be taken as precedence.

8.8.17 The Commission in MYT Order has considered escalation of 3% in fuel prices for approving the Energy Charges for ensuing years. In case of TPC-G, the major fuel source is imported coal and as submitted by TPC-G the imported coal prices. As discussed earlier, based on analysis of ICI.4 imported coal prices for the period April 2022 to March 2023, there appears to be a possibility of softening of coal prices. Hence, the Commission, for the purpose of this Order, has not considered any escalation in fuel prices for FY 2023-24 and FY 2024-25. Accordingly, the Commission has considered the following fuel parameters for tariff determination for FY 2023-24 and FY 2024-25:

Table 8.12 8: Fuel prices considered by the Commission for FY 2023-24 and FY 2024-25

Fuel	Landed price (Rs./MT)	As received GCV (kcal/kg)
APM Gas	41279	13052
RLNG	136812	13053
Coal	12500	4676
LSHS	55350	10353

8.8.18 Based on the above fuel parameters, the Commission has determined the ECR for FY 2023-24 and FY 2024-25 as under:

Table 8.13: ECR approved by the Commission for FY 2023-24 and FY 2024-25

Unit	Fuel	FY 2023-24			FY 2024-25		
		Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved
Unit 5	APM	3.863	6.117	8.576	3.979	6.117	8.576
	Oil	16.895	14.533	14.498	17.402	14.533	14.498
	Coal	4.063	6.548	7.440	4.185	5.129	7.440
	RLNG	10.133	41.830	28.422	10.437	41.830	28.422
Unit 7	APM	2.981	4.721	6.618	3.070	4.721	6.618
	RLNG	7.820	32.279	21.933	8.054	32.279	21.933
Unit 8	Coal (including secondary fuel oil)	4.013	6.400	7.301	4.133	5.013	7.301

8.8.19 The Commission approves ECR as per Table 8.13 for FY 2023-24 and FY 2024-25.

8.8.20 The Commission notes that Unit 5 is multi fuel fired unit. It is desired that Unit 5 shall run on primary fuel i.e., Coal. The use of RLNG and Oil shall be made minimal. Similarly, Energy Charges for Unit 7 for APM are much lesser than for RLNG. Hence, use of RLNG shall also be made minimal in Unit 7. In view of the above, the Commission views that the use of RLNG shall be done after duly considering the economic despatch. Hence, the use of RLNG in Unit 5 and Unit 7 shall be done only in consultation with MSLDC.

8.9 ADDITIONAL CAPITALISATION

TPC-G's submission

8.9.1 TPC-G has claimed the capitalisation of Rs. 89.11 Crore and Rs. 94.57 Crore for Units 5,7 & Hydro for FY 2023-24 and FY 2024-25 respectively. TPC-G has claimed the capitalisation of Rs. 10.69 Crore for Unit 8 for FY 2024-25.

Table 8.14: Additional capitalisation for FY 2023-24 and FY 2024-25 as claimed by TPC-G (Rs. Crore)

Particulars	FY 2023-24				FY 2024-25			
	Units 5,7 & Hydro		Unit 8		Units 5,7 & Hydro		Unit 8	
	Approved in MYT	Claimed	Approved in MYT	Claimed	Approved in MYT	Claimed	Approved in MYT	Claimed
DPR capitalisation	0.00	85.01	0.24	0.00	0.00	94.07	0.24	0.00
Non-DPR capitalisation	0.00	4.10	0.00	0.00	0.00	0.50	0.00	10.69
Total	**0.00**	**89.11**	**0.00**	**0.00**	**0.00**	**94.57**	**0.00**	**10.69**

8.9.2 TPC-G submitted that the above claimed capitalisation is exclusive of HOSS capitalisation, which shall be submitted at the time of true-up of the respective year.

Commission's Analysis and Ruling

8.9.3 The Commission has analysed the detailed scheme wise break up of estimated capitalisation provided by TPC-G.

8.9.4 In line with the capitalization approval for FY 2022-23, the capitalization projected by TPC-G for the DPR scheme for "Strengthening of Shirwata dam" has been restricted to the approved DPR cost. Hence, the excess capitalization of Rs. 22.50 Cr. projected by TPC-G towards this scheme for FY 2023-24 has not been considered by the Commission. Further, none of the DPR for which TPC-G has projected the capitalization for FY 2024-25 has been approved by the Commission. Also, no such DPR has been submitted by TPC-G for approval of the Commission. Thus, if only approved DPRs are considered for approving capitalization for FY 2024-25, there would be nil capitalization approval for FY 2024-25. **Hence, in line with the approach adopted by the Commission in MYT Order, capitalization equivalent to five years average of the DPR capitalization has been considered for approval for FY 2024-25**. As the claimed capitalisation towards non-DPR schemes is less than 20% of the DPR capitalisation, the Commission has considered the non-

DPR capitalisation claimed by TPC-G.

8.9.5 The Commission further observed that the additional capitalisation claimed towards non-DPR scheme for Replacement of 220 KV CVTs amounting to Rs. 0.30 Crore which is of the nature of repairs and maintenance expenses. Therefore, in line with the approach adopted for capitalization approval for FY 2021-22 and FY 2022-23, the Commission has deducted the said amount from the additional capitalisation.

8.9.6 TPC-G has proposed the non-DPR capitalisation of Rs. 10.69 Crore for Unit 8 for FY 2024-25. After perusing the scheme wise details submitted by TPC-G, the Commission finds it prudent to approve the non-DPR capitalisation of Rs. 6.33 Crore. The Commission further observed that the additional capitalisation claimed towards non-DPR schemes amounting to Rs. 4.36 Crore which is of the nature of repairs and maintenance expenses. Therefore, the Commission has deducted the said amount from the additional capitalisation.

8.9.7 Accordingly, the additional capitalisation approved by the Commission is as shown in the Table below:

Table 8.15: Additional capitalisation for FY 2023-24 and FY 2024-25 approved by the Commission (Rs. Crore)

Particulars	FY 2023-24				FY 2024-25			
	Units 5,7 & Hydro		Unit 8		Units 5,7 & Hydro		Unit 8	
	Claimed	Approved	Claimed	Approved	Claimed	Approved	Claimed	Approved
DPR capitalisation	85.01	62.51	0.00	0.00	94.07	44.05	0.00	0.00
Non-DPR capitalisation	4.10	3.8	0.00	0.00	0.50	0.50	10.69	6.33
Total	**89.11**	**66.31**	**0.00**	**0.00**	**94.57**	**44.55**	**10.69**	**6.33**

8.9.8 The Commission approves the additional capitalisation as per Table 8.15 for FY 2023-24 and FY 2024-25.

8.10 MEANS OF FINANCE OF ADDITIONAL CAPITALISATION

TPC-G's submission

8.10.1 The means of finance for the claimed additional capitalisation has been considered in the debt-equity ratio of 70:30.

Commission's Analysis and Ruling

8.10.2 In line with the true-up of previous years, the Commission has considered the means of finance of the approved additional capitalisation in the debt: equity ratio of 70:30.

8.11 ANNUAL FIXED CHARGES (AFC)

8.11.1 Regulation 42 of the MYT Regulations, 2019 specifies the components of AFC as follows:

a. Operation and Maintenance (O&M) expenses
b. Depreciation
c. Interest on Loan
d. Interest on Working Capital (IoWC)
e. Return on Equity (RoE)
f. Income Tax

Less:

g. Non-Tariff Income (NTI)

8.12 OPERATION AND MAINTENANCE (O&M) EXPENSES

TPC-G's submission

8.12.1 The O&M expenses for Units 5,7 & Hydro have been claimed in accordance with Regulation 47 of the MYT Regulations, 2019. The O&M expenses for Unit 8 have been claimed considering the normative O&M expenses of Rs. 31.01 Lakh/MW and Rs. 32.13 Lakh/MW for FY 2023-24 and FY 2024-25. In addition to the normative O&M expenses, the water charges have been claimed as Rs. 8.13 Crore.

Commission's Analysis and Ruling

8.12.2 As discussed in Chapter 5, TPC-G has erred in computations of revised normative O&M expenses for the 4th Control Period from FY 2020-21 to FY 2024-25. Subsequently, TPC-G submitted the revised claim of normative O&M expenses.

8.12.3 The revised normative O&M expenses for Units 5,7 & Hydro for FY 2023-24 and FY 2024-25 have been arrived at by escalating the normative O&M expenses for FY 2022-23 and FY 2023-24 respectively by the escalation factor of 3.94%. In addition to the normative O&M expenses, the Commission has considered the water charges, the same as actual for FY 2021-22.

Table 8.16: O&M expenses for Units 5,7 & Hydro for FY 2023-24 and FY 2024-25 (Rs. Crore)

Particulars	FY 2023-24			FY 2024-25		
	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved
Normative O&M expenses for previous year	442.51	425.28	437.43	456.30	446.27	454.65

Particulars	FY 2023-24			FY 2024-25		
	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved
Escalation factor	3.12%	4.94%	3.94%	3.12%	4.94%	3.94%
Normative O&M expenses (A)	456.30	446.27	454.65	470.52	468.30	472.55
Water charges (B)	5.00	8.13	3.13	5.00	8.13	3.13
Total (A+B)	**461.30**	**454.40**	**457.78**	**475.52**	**476.43**	**475.68**

8.12.4 The normative O&M expenses for Unit 8 have been approved as Rs. 77.53 Crore and Rs. 80.33 Crore for FY 2023-24 and FY 2024-25, the same as approved in the MYT Order.

8.13 DEPRECIATION

TPC-G's submission

8.13.1 The closing GFA of FY 2022-23 has been considered as the opening GFA for FY 2023-24. The asset addition during the year has been considered equal to the capitalisation proposed for FY 2023-24. The closing GFA of FY 2023-24 has been considered as the opening GFA for FY 2024-25. The asset addition during the year has been considered equal to the capitalisation proposed for FY 2024-25. The weighted average rate of depreciation arrived at for truing up of FY 2021-22 has been considered for applying on average GFA during the respective year. TPC-G has claimed the depreciation of Rs. 129.45 Crore and Rs. 132.47 Crore for Units 5,7 & Hydro for FY 2023-24 and FY 2024-25 respectively. TPC-G has claimed the depreciation of Rs. 59.42 Crore and Rs. 59.77 Crore for Unit 8 for FY 2023-24 and FY 2024-25 respectively.

Commission's Analysis and Ruling

8.13.2 In the provisional true-up of FY 2022-23, the Commission had approved the closing GFA for FY 2022-23 as Rs. 3929.98 Crore and Rs. 1196.01 Crore for Units 5,7 & Hydro and Unit 8 respectively. The Commission has considered the same as the opening GFAs for FY 2023-24. The approved additional capitalisation for FY 2023-24 and FY 2024-15 has been considered as the GFA addition during the respective year. The actual weighted average depreciation rates for FY 2021-22 have been considered for the purpose of computing depreciation for FY 2023-24 and FY 2024-25 in this Order.

8.13.3 The depreciation approved by the Commission for FY 2023-24 and FY 2024-15 is as shown in the Table below:

Table 8.17: Depreciation for FY 2023-24 and FY 2024-25 (Rs. Crore)

Particulars	FY 2023-24				FY 2024-25			
	Units 5,7 & Hydro		Unit 8		Units 5,7 & Hydro		Unit 8	
	Claimed	Approved	Claimed	Approved	Claimed	Approved	Claimed	Approved
Opening GFA	3952.22	3929.98	1197.01	1196.01	4041.33	3996.29	1197.01	1196.01
Addition	89.11	66.31	0.00	0.00	94.57	44.55	10.08	6.33
Retirement	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Closing GFA	4041.33	3996.29	1197.01	1196.01	4135.90	4040.84	1207.09	1202.34
Depreciation rate	3.24%	3.26%	4.96%	4.96%	3.24%	3.26%	4.97%	4.96%
Depreciation	**129.45**	**129.06**	**59.42**	**59.36**	**132.37**	**130.86**	**59.77**	**59.52**

8.14 INTEREST ON LOAN

TPC-G's submission

8.14.1 The closing loan balance of FY 2022-23 has been considered as the opening GFA for FY 2023-24. The load addition during the year has been considered equal to the debt portion of the capitalisation proposed for FY 2023-24. The closing GFA of FY 2023-24 has been considered as the opening GFA for FY 2024-25. The loan addition during the year has been considered equal to the debt portion of capitalisation proposed for FY 2024-25. The rate of interest considered for FY 2022-23 has been considered for applying on average loan balance during the respective year. TPC-G has claimed the interest on loan of Rs. 0.00 Crore and Rs. 2.46 Crore for Units 5,7 & Hydro for FY 2023-24 and FY 2024-25 respectively. TPC-G has claimed the interest on loan of Rs. 5.04 Crore and Rs. 3.09 Crore for Unit 8 for FY 2023-24 and FY 2024-25 respectively. Further, TPC-G has not claimed any finance charges for FY 2023-24 and FY 2024-25.

Commission's Analysis and Ruling

8.14.2 In the provisional true-up of FY 2022-23, the Commission had approved the closing loan balance for FY 2022-23 as Rs. 0.00 Crore and Rs. 101.42 Crore for Units 5,7 & Hydro and Unit 8 respectively. The Commission has considered the same as the opening loan balances for FY 2023-24. The debt portion of the approved additional capitalisation has been considered as the loan addition during the year. The approved depreciation has been considered as the repayment for the year. The actual weighted average rates of interest for FY 2021-22 have been applied to the average loan for the respective year for computing the interest expenses.

8.14.3 Based on the above, the interest on loan and finance charges approved by the Commission is shown in the Table below:

Table 8.18: Interest on loan for FY 2023-24 and FY 2024-25 (Rs. Crore)

Particulars	FY 2023-24				FY 2024-25			
	Units 5,7 & Hydro		Unit 8		Units 5,7 & Hydro		Unit 8	
	Claimed	Approved	Claimed	Approved	Claimed	Approved	Claimed	Approved
Opening loan	0.00	0.00	97.66	101.42	0.00	0.00	37.89	42.06
Addition	62.38	46.42	0.00	0.00	66.20	31.19	7.49	4.43
Repayment	62.38	46.42	59.77	59.36	0.00*	31.19	0.00	46.49
Closing loan	0.00	0.00	37.89	42.06	66.20	0.00	45.37	0.00
Rate of interest on loan	7.43%	7.43%	7.43%	7.43%	7.43%	7.43%	7.43%	7.43%
Interest on loan	0.00	0.00	5.04	5.33	2.46	0.00	3.09	1.56
Finance charges	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on loan & finance charges	0.00	0.00	5.04	5.33	2.46	0.00	3.09	1.56

**computational error by TPC-G*

8.14.4 The Commission approves the interest on loan and finance charges as per Table 8.18 for FY 2023-24 and FY 2024-25.

8.15 INTEREST ON WORKING CAPITAL

TPC-G's submission

8.15.1 Interest on Working Capital (IoWC) has been computed based on Regulation 32.1 of the MYT Regulations, 2019. For the purpose of computing the interest on working capital, interest rate of 9.45%. TPC-G has claimed the interest on working capital of Rs. 36.65 Crore and Rs. 31.70 Crore for Units 5,7 & Hydro for FY 2023-24 and FY 2024-25 respectively. TPC-G has claimed the interest on working capital of Rs. 4.36 Crore and Rs. 4.39 Crore for Unit 8 for FY 2023-24 and FY 2024-25 respectively.

Commission's Analysis and Ruling

8.15.2 The Commission has computed IoWC in accordance with the MYT Regulations, 2019. In accordance with Regulation 32.1, the working capital comprising of the following components has been considered:

- Cost of coal towards stock, for thirty days, for Unit 5 and Unit 8, for generation corresponding to target Availability;
- Cost of coal, for thirty days, for Unit 5 and Unit 8, for generation corresponding to target Availability;
- Cost of APM gas, for thirty days, for Unit 7, for generation corresponding to target Availability;
- Cost of secondary fuel oil, for two months, for Unit 8, for generation

corresponding to target Availability;

- Approved normative O&M expenses of Units 5,7 & Hydro and Unit 8 for one month;
- Maintenance spares at one percent of approved opening GFA for Units 5,7 & Hydro and Unit 8;
- Receivables for sale of electricity to BEST equivalent to 45 days of the sum of the approved AFC for Units 5,7 & Hydro and Unit 8 and energy charges for Units 5&7 and Unit 8 computed at target Availability;
- minus: payables for fuels to the extent of thirty days of the cost of coal for Unit 5, coal and secondary fuel oil for Unit 8 and APM gas for Unit 7 at target Availability.

8.15.3 The rate of IoWC has been considered as 9.45%.

Table 8.19: Interest on working capital for FY 2023-24 and FY 2024-25 (Rs. Crore)

Particulars	FY 2023-24				FY 2024-25			
	Units 5,7 & Hydro		Unit 8		Units 5,7 & Hydro		Unit 8	
	Claimed	Approved	Claimed	Approved	Claimed	Approved	Claimed	Approved
Working capital	405.47	562.10	154.08	193.15	351.05	565.67	143.94	192.88
Interest rate	9.45%	9.45%	9.45%	9.45%	9.45%	9.45%	9.45%	9.45%
IoWC	**38.32**	**53.12**	**14.56**	**18.25**	**33.17**	**53.46**	**13.60**	**18.23**

8.15.4 The Commission approves IoWC as per Table 8.19 for FY 2023-24 and FY 2024-25.

8.15.5 The IoWC approved by the Commission works out to be higher than that claimed by TPC-G due to computational errors in computations of TPC-G in cost of gas considered for working capital and on account of variation in fuel prices considered by the Commission and TPC-G, as discussed in the preceding paragraphs of this Chapter.

8.16 RETURN ON EQUITY & INCOME TAX

TPC-G's submission

8.16.1 RoE has been claimed in accordance with Regulation 29 of the MYT Regulations, 2019. TPC-G has considered the Base Rate of RoE of 14%. The Base Rate of RoE has been grossed up with the income tax rate. TPC-G has claimed the RoE of Rs. 276.27 Crore and Rs. 281.70 Crore for Units 5,7 & Hydro for FY 2023-24 and FY 2024-25 respectively. TPC-G has claimed the RoE of Rs. 60.87 Crore and Rs. 61.14 Crore for Unit 8 for FY 2023-24 and FY 2024-25 respectively.

Commission's Analysis and Ruling

8.16.2 In the provisional true-up of FY 2022-23, the Commission had approved the closing equity for FY 2022-23 as Rs. 1389.54 Crore and Rs. 358.81 Crore for Units 5,7 & Hydro and Unit 8 respectively. The Commission has considered the same as the opening equity for FY 2023-24. The equity portion of the approved additional capitalisation for FY 2023-24 has been considered as the equity addition during the year. The closing equity for FY 2023-24 has been considered as the opening equity for FY 2024-25. The equity portion of the approved additional capitalisation for FY 2024-25 has been considered as the equity addition during the year.

8.16.3 Regulation 29.2 of the MYT Regulations, 2019 specifies the Base Rate of RoE of 14%. In accordance with Regulation 29.6(a), the additional rate of RoE, subject to the ceiling of 0.5%, shall be allowable for incremental ramp rate. Further, in accordance with Regulation 29.6(b), the additional rate of RoE, subject to maximum of 1% shall be allowable for achievement of MTBF as specified in the Regulation. The additional RoE shall be admissible at the time of final true-up and hence, has not been considered in tariff determination for FY 2023-24 and FY 2024-25 in this Order.

8.16.4 The Base Rate of RoE has been considered as 14% in accordance with Regulation 29.2. Regulation 34.2 of the MYT Regulations, 2019 specify that the rate of RoE including additional rate of RoE shall be grossed up with the effective tax rate of respective financial year. The Commission has considered the effective tax rate of 0% for Units 5,7 & Hydro and Unit 8, the same as actual for FY 2021-22.

Table 8.20: RoE for FY 2023-24 and FY 2024-25 (Rs. Crore)

Particulars	FY 2023-24				FY 2024-25			
	Units 5,7 & Hydro		Unit 8		Units 5,7 & Hydro		Unit 8	
	Claimed	Approved	Claimed	Approved	Claimed	Approved	Claimed	Approved
Opening equity	1396.56	1389.54	358.81	358.81	1423.29	1409.43	358.81	358.81
Reduction of equity towards de-capitalised assets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Addition	26.73	19.89	0.00	0.00	28.37	13.37	3.21	1.90
Closing equity	1423.29	1409.43	358.81	358.81	1451.66	1422.80	362.02	360.70
Rate of Return	19.594%	14.00%	16.964%	14.00%	19.597%	14.00%	16.964%	14.00%
Return on Equity	276.27	195.93	60.87	50.23	281.70	198.26	61.14	50.37

8.16.5 The Commission approves RoE as per Table 8.20 for FY 2023-24 and FY

2024-25.

8.17 NON-TARIFF INCOME (NTI)

TPC-G's submission

8.17.1 TPC-G has claimed NTI of Rs. 12.87 Crore and Rs. 3.42 Crore for Units 5,7 & Hydro and Unit 8.

Commission's Analysis and Ruling

8.17.2 The Commission has considered NTI as claimed by TPC-G.

8.18 ANNUAL FIXED CHARGES (AFC)

Commission's Analysis and Ruling

8.18.1 Based on the above, the AFC approved by the Commission in the provisional true-up, that is fully recoverable at Target Availability is as shown in the Table below:

Table 8.21: AFC for Units 5,7 & Hydro for FY 2023-24 and FY 2024-25 (Rs. Crore)

Particulars	FY 2023-24			FY 2024-25		
	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved
O&M expenses	461.30	454.40	457.78	475.52	476.43	475.68
Depreciation	133.97	129.45	129.06	133.97	132.37	130.86
Interest on loan and finance charges	0.00	0.00	0.00	0.00	2.46	0.00
Interest on working capital	32.17	38.32	53.12	32.40	33.17	53.46
Return on Equity	263.30	276.27	195.93	263.30	281.70	198.26
Income tax	-	-	-	-	-	-
Less: Allocation of Unit 8 for shared capacity	10.69	10.69	10.69	10.36	10.36	10.36
Less: Non-tariff income	30.86	12.87	12.87	30.86	12.87	12.87
Annual Fixed Charges	**849.20**	**874.88**	**812.33**	**863.97**	**902.91**	**835.03**

8.18.2 The Commission approves the AFC for Units 5,7 & Hydro as per Table 8.21 for FY 2023-24 and FY 2024-25.

Table 8.22: AFC for Unit 8 for FY 2023-24 and FY 2024-25 (Rs. Crore)

Particulars	FY 2023-24			FY 2024-25		
	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved
O&M expenses	77.53	77.53	77.53	80.33	80.33	80.33
Depreciation	62.63	59.42	59.36	62.64	59.77	59.52
Interest on loan and finance	6.20	5.04	5.33	1.75	3.09	1.56

Particulars	FY 2023-24			FY 2024-25		
	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved
charges						
Interest on working capital	9.86	14.56	18.25	9.87	13.60	18.23
Return on Equity	61.90	60.87	50.23	61.91	61.14	50.37
Income tax	-	-	-	-	-	-
Add: Allocation from shared capacity	10.69	10.69	10.69	10.36	10.36	10.36
Less: Non-tariff income	0.09	3.42	3.42	0.09	3.42	3.42
Annual Fixed Charges	**228.71**	**224.68**	**217.97**	**226.77**	**224.87**	**216.94**

8.18.3 The Commission approves AFC for Unit 8 as per Table 8.22 for FY 2023-24 and FY 2024-25.

8.19 UNIT/STATION WISE AFC

Commission's Analysis and Ruling

8.19.1 Based on the methodology adopted in the MYT Order, the Commission has allocated the AFC to thermal Units and hydro stations as shown in the Table below:

Table 8.23: Unit/Station wise AFC for FY 2023-24 and FY 2024-25 (Rs. Crore)

Particulars	FY 2023-24			FY 2024-25		
	Approved in MTR	Claimed	Approved	Approved in MTR	Claimed	Approved
Thermal						
Unit 5	394.98	324.62	305.31	403.23	350.91	330.76
Unit 7	148.42	193.34	162.52	150.56	204.17	150.89
Unit 8	228.71	224.68	217.97	226.77	224.87	216.94
Total Thermal	**772.11**	**742.64**	**685.80**	**780.56**	**779.95**	**698.59**
Hydro						
Bhira	112.87	145.90	134.87	114.32	150.89	138.29
Bhivpuri	75.77	88.30	82.25	76.88	91.35	84.39
Khopoli	117.15	136.63	127.38	118.98	141.35	130.69
Total Hydro	**305.79**	**370.84**	**344.50**	**310.18**	**383.59**	**353.38**
Grand Total	**1077.90**	**1113.48**	**1030.30**	**1090.74**	**1163.54**	**1051.97**

8.19.2 The Commission approves Unit/Station wise AFC as per Table 8.23 for FY 2023-24 and FY 2024-25.

8.20 CAPACITY CHARGE AND ENERGY CHARGE FOR HYDRO STATIONS

TPC-G's submission

8.20.1 TPC-G submitted that the Capacity Charge and Energy Charge for hydro stations have been claimed in accordance with Regulation 51 of the MYT Regulations, 2019. TPC-G has claimed the Capacity Charge of Rs. 73.66 Crore, Rs. 48.86 Crore and Rs. 75.60 Crore and Energy Charge Rate of Rs. 0.992/kWh, Rs. 2.313/kWh and Rs. 3.958/kWh for Bhira, Bhivpuri and Khopoli respectively for FY 2023-24. TPC-G has claimed the Capacity Charge of Rs. 79.21 Crore, Rs. 50.54 Crore and Rs. 78.15 Crore and Energy Charge Rate of Rs. 1.026/kWh, Rs. 2.392/kWh and Rs. 4.095/kWh for Bhira, Bhivpuri and Khopoli respectively for FY 2024-25.

Commission's Analysis and Ruling

8.20.2 The Commission, in the MYT Order had approved the net Design Energy of 736.68 MU, 190.91 MU and 172.58 MU for Bhira, Bhivpuri and Khopoli respectively. The Commission has considered the same for FY 2023-24 and FY 2024-25.

8.20.3 Further, the Commission notes that TPC-G has determined the Capacity Charges including incentive based on the projected Availability. The Commission notes that Regulation 51.3 of MYT Regulations, 2019 specifies that Capacity Charge (inclusive of incentive) shall be payable to Hydro Stations for calendar month based on Plant Availability Factor achieved in that month. TPC-G has projected the Annual Plant Availability Factor for each Hydro Generating Stations, which would not be same during each month. Hence, determination of Capacity Charges based on projected availability would not be appropriate. In view of the above, while determining the Capacity Charges for Control Period, the Commission has not considered Incentive and the same shall be recovered as per the provisions of MYT Regulations, 2019.

8.20.4 The Capacity Charge and Energy Charge for hydro stations approved by the Commission for FY 2023-24 and FY 2024-25 is as shown in the Table below:

Table 8.24: Capacity Charge and Energy Charge for hydro stations approved for FY 2023-24 and FY 2024-25

Particulars	Units	FY 2023-24			FY 2024-25		
		Approved in MTR	Claimed	Approved	Approved in MTR	Claimed	Approved
Bhira							
AFC	Rs. Crore	112.87	145.90	134.87	114.32	150.89	138.29
Capacity Charge	Rs. Crore	56.44	73.66	67.43	57.16	79.21	69.15
Net Design Energy	MU	736.68	735	736.68	736.68	735	736.68
Energy Charge	Rs./kWh	0.766	0.992	0.915	0.776	1.026	0.939

Particulars	Units	FY 2023-24			FY 2024-25		
		Approved in MTR	Claimed	Approved	Approved in MTR	Claimed	Approved
Bhivpuri							
AFC	Rs. Crore	75.77	88.30	82.25	76.88	91.35	84.39
Capacity Charge	Rs. Crore	37.89	48.86	41.13	38.44	50.54	42.19
Net Design Energy	MU	190.91	191	190.91	190.91	191	190.91
Energy Charge	Rs./kWh	1.984	2.313	2.154	2.014	2.392	2.210
Khopoli							
AFC	Rs. Crore	117.15	136.63	127.38	118.98	141.35	130.69
Capacity Charge	Rs. Crore	58.58	75.60	63.69	59.49	78.15	65.35
Net Design Energy	MU	172.58	173	172.58	172.58	173	172.58
Energy Charge	Rs./kWh	3.394	3.958	3.690	3.447	4.095	3.786

8.20.5 The Commission approves Capacity and Energy Charge for hydro stations as per Table 8.24 for FY 2023-24 and FY 2024-25.

9 SUMMARY OF APPROVED TARIFF

9.1 TARIFF FOR THERMAL GENERATING UNITS

Commission's Analysis and Ruling

9.1.1 The approved tariff for thermal generating units of TPC-G for FY 2023-24 and FY 2024-25 is as shown in the Table below:

Table 9.1: Approved tariff for thermal generating units

Particulars	Units	FY 2023-24			FY 2024-25		
		Unit 5	Unit 7	Unit 8	Unit 5	Unit 7	Unit 8
AFC	**Rs. Crore**	**305.31**	**162.52**	**217.97**	**330.76**	**150.89**	**216.94**
ECR							
APM	Rs./kWh	8.576	6.618	-	8.576	6.618	-
Oil	Rs./kWh	14.498	-	-	14.498	-	-
Coal	Rs./kWh	7.440	-	7.301	7.440	-	7.301
RLNG	Rs./kWh	28.422	21.933	-	28.422	21.933	-

9.1.2 The Commission views that use of RLNG shall be done after due considering the economic despatch and only in consultation with MSLDC.

9.1.3 As regards the recovery of Annual Fixed Cost, Regulation 50 (A) of MYT Regulations, 2019, stipulates as follows:

"The fixed cost of a thermal generating station shall be computed on annual basis based on the norms specified under these Regulations and recovered on monthly basis under Capacity Charge. The total Capacity Charge payable for a generating station shall be shared by its beneficiaries as per their respective percentage share or allocation in the capacity of the generating station. The Capacity Charge shall be recovered under two segments of the year, i.e., High Demand Season (period of three months) and Low Demand Season (period of remaining nine months), and within each season in two parts, viz., Capacity Charge for Peak Hours of the month and Capacity Charge for Off-Peak Hours of the month"

9.1.4 The billing of Capacity Charges for thermal stations shall be done as per Regulation 50 (A) of MYT Regulations, 2019, wherein Capacity Charges shall be recovered under two segments of year viz. High demand season and Low Demand Season as declared by MSLDC, and within each season in two parts i.e., Capacity Charges for Peak hours of the month and Off-peak hours of the month as per the Peak and Off-Peak hours declared by SLDC.

9.1.5 As per Regulation 50.8 of the MYT Regulations, 2019, TPC-G shall be eligible for Incentive at a flat rate of 50.0 paise/kWh for actual energy generation in excess of ex-bus energy corresponding to target Plant Load Factor during peak hours and at a flat rate of 25.0 paise/kWh for actual energy generation in excess of ex-bus energy corresponding to target Plant Load Factor during peak and off-peak hours, on a cumulative basis within each Season (High Demand Season or Low Demand Season).

9.2 TARIFF FOR HYDRO STATIONS

Commission's Analysis and Ruling

9.2.1 The approved tariff for hydro stations of TPC-G for FY 2023-24 and FY 2024-25 is as shown in the Table below:

Table 9.2: Approved tariff for hydro stations

Particulars	Units	FY 2023-24			FY 2024-25		
		Bhira	Bhivpuri	Khopoli	Bhira	Bhivpuri	Khopoli
Capacity Charge	Rs. Crore	67.43	41.13	63.69	69.15	42.19	65.35
ECR	Rs./kWh	0.915	2.154	3.690	0.939	2.210	3.786

9.2.2 Any variation in Actual generation vis-à-vis Net Design Energy shall be incentivised/disincentivised as per Regulation 51 of MYT Regulations, 2019.

9.2.3 The Commission directs TPC-G that Billing shall be done for each hydro stations separately, clearly indicating the capacity charges, energy charges and incentive, if any.

10 DIRECTIVES

The Commission's directives, the compliance thereof submitted by TPC-G in the present Petition and Commission's rulings on the same are discussed as under:

10.1 FIXED COST BIFURCATION AND DOCUMENTARY EVIDENCE

Directive

10.1.1 The Commission directed TPC-G to submit the detailed computation, methodology and linked excel sheet for bifurcation of unit and plant wise fixed cost within 6 months of the date of MYT Order.

TPC-G's Response

10.1.2 TPC-G submitted that it had submitted the detailed computation, methodology and linked excel sheet for bifurcation of unit and plant wise fixed cost along with certification from a Chartered Accountant for FY 2018-19. TPC-G also submitted that on the basis of the same, the statements related to the allocation of fixed cost for FY 2019-20, FY 2020-21 and FY 2021-22 have also been provided with the present Petition.

Commission's View

10.1.3 TPC-G, vide its letter dated 8 February, 2022 submitted its report in compliance to the Commission's direction. Based on the scrutiny of TPC-G's submissions additional information requirement was sought from TPC-G. TPC-G submitted the replies vide its submissions dated 1 June, 2022, 27 August, 2022 and 27 October, 2022. TPC-G is yet to submit the auditor certificates sought in the additional information.

10.1.4 The Consultant appointed by the Commission has submitted a report with recommendations, after analysing the submissions of TPC-G. The said report was circulated to TPC-G for its comments on the recommendations. The Commission after considering the material available on record issues the following directions regarding the allocation methodology adopted by TPC-G for certain parameters, detailed as under:

Allocation of O&M expenses

10.1.5 TPC-G has adopted the differential approach for allocating the O&M Expenses at three different levels as follows:

Level 1 : Allocation of HOSS O&M Costs to Mumbai License Area

- Based on Revenue

Level 2 : Allocation of Mumbai License Area O&M Costs to TPC-G, TPC-T and TPC-D

- Employee cost – based on no. of employees of each business unit;
- R&M expenses – based on GFA of each business unit;
- A&G expenses – based on direct expenses of each business unit.

Level 3 : Allocation of TPC-G O&M Costs to thermal units and Hydro

- Employee cost – based on direct cost of each unit;
- R&M expenses – based on GFA of each business unit;
- A&G expenses – based on direct expenses of each business unit.

10.1.6 TPC-G could not justify adopting differential approach for allocating O&M Costs. The approach adopted by TPC-G for level 2 allocation i.e., Allocation of Mumbai License Area O&M Costs to TPC-G, TPC-T and TPC-D appears to be more appropriate as this allocation methodology adopts the principles on which the each component of cost will depend upon.

10.1.7 Therefore TPC-G is directed to allocate O&M expenses of HOSS (common to TPC) to Mumbai Licence Area based on the following criteria:

- **Employee cost – based on no. of employees of each business unit;**
- **R&M expenses – based on GFA of each business unit;**
- **A&G expenses – based on direct expenses of each business unit.**

10.1.8 For allocating Employee Expenses of TPC-G to Units, TPC-G has allocated the cost based on direct cost of each unit. In order to ensure common approach allocation amongst Units should also be done on the basis of number of employees of each Unit. TPC-G is directed to allocate employee expenses of TPC-G to Units and Hydro in proportion to number of employees.

Allocation of other finance charges

10.1.9 TPC-G submitted that the other finance charges have been allocated on the basis of the opening GFA. Allocation of other finance charges based on outstanding loan balance is more appropriate rather than based on opening GFA. TPC-G is directed to allocate the Other Finance Charges on the basis of outstanding loans.

Allocation of depreciation

10.1.10 Based on the submissions of TPC-G, the following are the findings:

- Allocation of common assets at Trombay is based on capacity.
- Allocation of HOSS assets is based on GFA of individual Unit/Station.

10.1.11 TPC-G has adopted differential approach for allocation of common assets at

Trombay and allocation of HOSS Assets. Allocation of depreciation expenses based on GFA is more appropriate rather than capacity. TPC-G is directed to allocate the common assets at Trombay amongst Units based on GFA of each Unit rather than capacity.

Others

10.1.12 The allocation methodology adopted for interest on loan and non-tariff income is appropriate.

10.1.13 Based on the above observations, the Commission directs TPC-G to submit the bifurcated fixed cost for each Unit/Station for the period from FY 2023-24 onwards alongwith the true-up for the respective year in the next Tariff Petition.

10.2 DIRECTIVES ISSUED IN THIS ORDER

10.2.1 The Commission would like to highlight a serious lapse on the part of TPC-G in the present tariff proceedings. It was observed that the original Petition comprised several discrepancies for which, the clarifications were sought from TPC-G. TPC-G admitted the discrepancies and submitted that the same will be rectified in the Revised Consolidated Petition. Even in duly filled public notice submitted by TPC-G, there were several errors in the numbers as the number as per the MYT Order were simply required to be reproduced from MYT Order without any computations, however, TPC-G made several errors in its public notice which required correction before finalization . During the detailed analysis of Revised Consolidated Petition, several discrepancies were again observed for which, the clarifications were sought from TPC-G. TPC-G admitted the discrepancies and submitted the revised claims. The Commission takes a serious note in this regard. The Commission directs TPC-G to take adequate precautions while filing the Petitions before the Commission to avoid such errors and discrepancies.

11 APPLICABILITY OF ORDER

This Order shall come into effect from 1 April, 2023.

The Petition of Tata Power Company Limited-Generation in Case No. 221 of 2022 stands disposed of accordingly.

Sd/-	**Sd/-**	**Sd/-**
(Mukesh Khullar)	**I. M. Bohari**	**(Sanjay Kumar)**
Member	**Member**	**Chairperson**

(Abhijit Deshpande)
Secretary

Appendix – I

List of persons who attended the TVS on 13 December, 2022

Sr. No.	Name of the Participant	Organization
1	Ms Swati Mehendale	Tata Power Company Ltd.-Generation
2	Mr. Girish Pednekar	Tata Power Company Ltd.-Generation
3	Mr. Deepak Mall	Tata Power Company Ltd.-Generation
4	Mr. Suresh Gehani	ABPS Infra Ltd.
5	Mr. Krishna Mohan Choudhary Namala	ABPS Infra Ltd.

Appendix – II

List of persons who attended the E-Public Hearing on 31 January, 2023

Sr. No.	Name of the Participant	Organization
1	Ms Swati Mehendale	Tata Power Company Ltd.-Generation
2	Mr. Girish Pednekar	Tata Power Company Ltd.-Generation
3	Mr. Deepak Mall	Tata Power Company Ltd.-Generation
4	Mr. Suresh Gehani	ABPS Infra Ltd.
5	Mr. Krishna Mohan Choudhary Namala	ABPS Infra Ltd.