Before the

MAHARASHTRA ELECTRICITY REGULATORY COMMISSION

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CASE NO. 227 OF 2022

In the matter of

Petition of Maharashtra State Power Generation Company Limited for approval of final true-up for FY 2019-20, FY 2020-21 and FY 2021-22, provisional true-up for FY 2022-23, revised Tariff for FY 2023-24 and FY 2024-25 and provisional Tariff for Bhusawal Unit No. 6

Coram

Sanjay Kumar, Chairperson

I. M. Bohari, Member

Mukesh Khullar, Member

ORDER

Dated: 31 March, 2023

The Maharashtra State Power Generation Company Limited (MSPGCL) filed a Petition on 1 November, 2022 for approval of final true-up for FY 2019-20, FY 2020-21, and FY 2021-22, provisional true-up for FY 2022-23, revised tariff for FY 2023-24 and FY 2024-25 and provisional tariff for Bhusawal Unit No. 6. Subsequently, MSPGCL submitted the Revised Consolidated Petition on 20 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, revised tariff for FY 2023-24 and FY 2024-25 and provisional tariff for Bhusawal Unit No. 6.

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 MSPGCL, suggestions/objections received from public upon public consultation process, and upon considering all other relevant material, has approved the true-up for FY 2019-20, FY 2020-21 and FY 2021-22, provisional true-up for FY 2022- 23, revised tariff for FY 2023-24 and FY 2024-25 and provisional tariff for Bhusawal Unit No. 6.

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1 BACKGROUND AND BRIEF HISTORY

1.1 INTRODUCTION

1.1.1 MSPGCL is a Company formed under Government of Maharashtra (GoM) Resolution No. ELA- 003/P.K.8588/Bhag-2/Urja-5 dated 24 January, 2005 with effect from 6 June, 2005, in accordance with the provisions of Part XIII of the EA, 2003. MSPGCL is a Company registered under the Companies Act, 1956.

1.1.2 MSPGCL owns and operates seven coal-based thermal power generating stations and one gas-based thermal power generating station with total current installed capacity of 10,212 MW, situated in different parts of Maharashtra. MSPGCL also operates hydel power generating stations owned by the Water Resources Department, GoM on lease basis, with total current installed capacity of 2579 MW. The total current operating capacity of MSPGCL is 12791 MW, which is regulated capacity and the tariff is determined by the Commission under Section 62 of the EA, 2003.

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 and notified the first amendment on 10 February, 2023. These Regulations 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 MYT Order dated 30 March, 2020 in Case No. 296 of 2019, the Commission approved the Tariff for the 4th MYT Control Period from FY 2020-21 to FY 2024-25. In the said MYT 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 MSPGCL had filed a Petition on 2 September, 2020 seeking review of the Commission's MYT Order in Case No. 296 of 2019 on certain issues. Vide its Order dated 1 March, 2021 in Case No. 180 of 2020, the Commission disposed of the Review Petition partly allowing review on some of the issues and with certain directions to MSPGCL.

1.4.2 MSPGCL filed another Petition on 17 September, 2021 seeking review of the Commission's MYT Order in Case No. 296 of 2019 regarding separation of tariff for Koradi Unit No.6 and 7 for the balance control period from FY 2021-22 to FY 2024-25. Vide its Order dated 8 March, 2022 in Case No. 133 of 2021, the Commission disposed of the Review Petition partly allowing review with the separation of tariff for

Koradi Unit No.6 with effect from 1 April, 2022 and with certain directions to MSPGCL.

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 MSPGCL filed its MTR Petition for the 4th MYT Control Period on 1 November, 2022. MSPGCL also sought the approval of provisional tariff for its upcoming Bhusawal Unit No. 6 in its MTR Petition.

1.5.3 The Office of the Commission issued the deficiency note of the data gaps to MSPGCL on 14 November, 2022. MSPGCL submitted the replies to first set of data gaps on 25 November, 2022. The Technical Validation Session (TVS) was held on 13 December, 2022. The list of persons who attended the TVS is at Appendix-1.

1.5.4 During the TVS, MSPGCL 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. MSPGCL submitted its replies to the data gaps and filed its revised Petition on 20 December, 2022 with the following prayers:

"i. Admit this Petition;

ii. Grant an expeditious hearing of this Petition;

iii. Consider the submissions made in context of following issues in FY 2019-20 and approve the ARR & truing up for the year, along with following specific issues

a. Relaxation in target availability factor for Uran GTPS on account of Gas supply shortages,

b. Approval of additional O & M expenses, over and above the normative expenses, towards the impact due to increase in labour wage rates as per GoM notification.

iv. Consider the submissions made in context of following issues in FY 2020-21 and approve the ARR & truing up for the year, along with following specific issues

a. Relaxation in target availability factor for Uran GTPS on account of

Gas supply shortages,

b. *Approve the additional expenses incurred on ex-gratia salutation compensation to employees / labour deceased under the Covid-19 related unforeseen, uncontrollable, "force majeure" situation and additional interest paid on long term loans due to deferment of instalments under Covid-19 recovery difficulties*

v. *Consider the submission made in context of FY 2021-22 and approve the ARR and truing up for the year, along with following specific issues*

a. *Target availability for Uran GTPS on account of gas supply shortage,*

b. *Approve the additional expenses incurred on ex-gratia solatium compensation to employees / labour deceased under the Covid-19 related unforeseen, uncontrollable, "force majeure" situation and additional expenses incurred on installation of oxygen generation plants at Ambajogai, Parbhani, Paras, Khaperkheda.*

c. *Consider the submissions made in the context of retirement of assets after retirement of Koradi Unit # 7 and approval of relaxed auxiliary consumption norm for Koradi Unit # 6;*

vi. *Work out the Truing up/sharing of gains and losses for FY 2020-21 and FY 21-22 after excluding the impact of one time Covid related expenses*

vii. *Consider the submission made in context of revised projections for FY 2022-23 and approve the revised ARR and provisional truing up for the year, along with following specific issues*

a. *Target availability for Uran GTPS on account of gas supply shortage,*

b. *Consider the additional expenses incurred towards installation of oxygen generation plants at Ambejogai, Parbhani, Paras, Khaperkheda*

c. *Consider the submission regarding allowing capitalisation of spares due to "change in classification";*

viii. *Consider the revised Fuel Utilisation Plan for FY 2022-23 (Oct'22 to Mar'23) and FY 2023-24 to FY 2024-25 and approve the same;*

ix. *Consider the difficulties raised regarding achieving target availability factor of 85% at Khaperkheda Units # 1 & 2 and approve relaxed target availability of 80% for these units by applying powers available to Hon'ble Commission for "Removal of Difficulties" and "Power to relax";*

x. *Consider the submissions made in reference for keeping Nashik Unit # 5 and Bhusawal Unit # 3 after declaration of COD for Bhusawal Unit # 6 (1 X 660 MW) unit and approve the AFC for these units accordingly;*

xi. *Consider the difficulties raised by MSPGCL in reference to provisions in Regulation 50.6 of MYT Regulations, 2019 regarding consideration of "As billed GCV" for Energy Charge computation and provide necessary additional* *margin while computing the GCV (Moisture corrected "As Received Basis") from the GCV (Equilibrated moisture As billed basis) for calculation of energy charge, by applying powers available to Hon'ble Commission for "Removal of Difficulties" and "Power to relax";*

xii. *Consider the submissions made by MSPGCL in reference to the actual O & M expenses for the new units and inadequacy of the normative O & M costs approved by Hon'ble Commission and approve higher O & M norms for these units as proposed by MSPGCL, by applying powers available to Hon'ble Commission for "Removal of Difficulties" and "Power to relax";*

xiii. *Consider the submissions made in context of Revised Annual Revenue Requirements and revised projected tariff for the remaining years under 4th Control Period i.e. FY 2023-24 to FY 2024-25 and approve the same;*

xiv. *To allow MSPGCL to carry out the pending approved capital expenditure for the new units at Koradi, Chandrapur and Parli and complete capitalization before 31.03.2024;*

xv. *Consider submission made regarding compensation for additional oil consumption and loss of availability on account of unit forced outages due to transmission system problems;*

xvi. *Allow MSPGCL to recover the following true up amounts allowed under various previous orders issued by the Hon'ble Commission, wherein Hon'ble Commission had directed MSPGCL to raise the claims in Mid Term Review petitions*

   a. *Impact on capital cost approved for Bhusawal Units # 4&5 considering the actual LD recovery and approval of differential AFC accordingly,*
   b. *Impact of discharge of Undischarged liabilities on the capital cost approved for Koradi Units # 8 to 10, Chandrapur Units # 8,9 & Parli Unit # 8 and approval of differential AFC accordingly,*
   c. *Recovery of expenses incurred by MSPGCL on the Solar power plants under Chief Minister Agricultural Feeder Scheme,*
   d. *Pending recovery of "Change In Law" costs for Case IV Phase I contract with M/s DIL,*
   e. *Pending recovery of "Change In Law" costs for Case IV Phase II contract with M/s DIL,*
   f. *Recovery of the Service Tax and GST claims from M/S WRD on the Lease rent for the Hydro stations operated by MSPGCL,*

xvii. *Consider the submissions made in reference to Liquidated Damages finalised for Koradi Units # 8, 9,10 and approve the additional capital cost as on COD by reassessing the sharing of liquidated damages carried out in the order dated 14.12.2017 in Case No. 59 of 2017 and subsequently approve the differential*

AFC for the years since COD;

xviii. Issue necessary directions /guidelines, as it may deem fit, for regulatory submissions regarding procedure to be adopted for transportation of ash as per MoEF notification and MoP advisory;

xix. Issue necessary directives regarding consideration of parameters for usage of bio-mass pallets for co-firing in coal based power plants;

xx. Consider the submissions made in reference to the estimated capital cost for the Bhusawal Unit # 6 project and approve the provisional tariff for the unit on the basis of the submissions made in line with the provisions under MERC MYT Regulations, 2019;

xxi. Consider the submissions with respect to treatment of HO allocation in O&M charges and approve the charges as detailed separately under True-Up section.

xxii. Allow carrying cost as submitted on various issues for the different years;

xxiii. ………

xxiv. ………"

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 MSPGCL 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. MSPGCL issued a Public Notice inviting suggestions and objections from the public. The Public Notice was published in the daily newspapers Times of India, Free Press Journal, Indian Express, Lokmat, PunyaNagari, Loksatta on 29 December, 2022. The copies of the Petition and its summary were made available for inspection/purchase at MSPGCL's offices and on its website (www.mahagenco.in). 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 in writing by uploading it through 'E-Public Consultation' Tab on MERC Website (www.merc.gov.in/e-public-consultation).

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-2.

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 made in writing as well as during the e-Public Hearing, along with MSPGCL'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 as well as during the e-Public Hearing. These have been summarized issue-wise, followed by the response of MSPGCL 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 Fuel Utilisation Plan for FY 2023-24 and FY 2024-25.
- **Chapter 9** deals with the approval of revised Tariff for FY 2023-24 and FY 2024-25.
- **Chapter 10** deals with approval of provisional tariff for Bhusawal Unit No. 6
- **Chapter 11** deals with summary of approved tariff for FY 2023-24 and FY 2024-25
- **Chapter 12** summarises the Commission's directives.
- **Chapter 13** covers the applicability of the Order.

2 SUGGESTIONS/OBJECTIONS RECEIVED, RESPONSE OF MSPGCL AND COMMISSIONS VIEWS

2.1 PERFORMANCE PARAMETERS

Suggestions/Objections

2.1.1 Maharashtra Veej Grahak Sanghatana (MVGS) submitted that the actual PLF during FY 2019-20, FY 2020-21 and FY 2021-22 was lower than the projections. Prayas Energy Group (PEG) submitted that the average PLF of thermal power plants considered by MSPGCL for H2 of FY 2022-23, FY 2023-24 and FY 2024-25 is 85%, 79% and 79% respectively whereas, the actual average PLF was not more than 60% in the last 6 years. MSPGCL has projected the generation of 61702 MU, 70736 MU and 70736 MU at an annual growth of 29%, 15% and 0% for FY 2022-23, FY 2023-24, and FY 2024-25 respectively. However, the maximum annual growth in generation was 9% in FY 2021-22, since FY 2015-16 onwards. The inflated generation projections, which have not been substantiated with any analysis, leads to high coal requirement and aggregate revenue requirement (ARR). The Commission had been disallowing the higher Availability and PLF projections of MSPGCL as it would affect the power purchase planning of MSEDCL. Ms. Ashwini Chitnis submitted that with the increase in renewable capacity, the thermal generation in the overall generation mix ought to decrease. PEG and Ms. Ashwini Chitnis submitted that the Commission may disallow the Availability, PLF and generation projections of MSPGCL and direct it to adopt realistic projections based on analysis in its future submissions.

2.1.2 PEG submitted that as per the actual generation for the period from April-December, 2022, there is an increase in generation by 10% for FY 2022-23. While, the annual demand growth of MSEDCL has been below 6%. By considering the growth rate of 6%-10% in MSPGCL generation, the ARR of MSPGCL can be reduced to the tune of Rs. 18200-21300 Crore over the period from FY 2022-23 to FY 2024-25. Although the actual savings shall depend on factors such as demand supply situation, load shapes and merit order despatch, the resultant reduction could of the same magnitude.

2.1.3 Dr. Ashok Pendse submitted that the projected PLF for Chandrapur, Khaperkheda, Koradi, Khaperkheda Unit 5, Koradi Units 8-10, and Chandrapur Units 8&9 is on higher side in comparison to the actual PLF for FY 2020-21 and FY 2021-22. The reasons for not achieving the PLF of 85% are unclear. Further, owing to higher variable charges during FY 2020-21 and FY 2021-22, the projected PLFs are not achievable.

2.1.4 MVGS submitted that the actual power purchase cost from MSPGCL in FY 2021-22 was higher than the tariffs at which the power was available in the market. MVGS submitted that MSPGCL has projected the average per unit cost of generation of Rs. 5.07/kWh and Rs. 5.32/kWh for FY 2023-24 and FY 2024-25 respectively.

2.1.5 Dr. Ashok Pendse submitted that MSPGCL has been raising the issue of wet coal since the year 2000, on account of which the loss of generation is to the tune of 4-5%. The issue of wet coal does not deserve to be raised at all.

2.1.6 Ms. Ashwini Chitnis submitted that coal shortages have not been recognised as uncontrollable factor. MSPGCL has to take recourse to the contractual provisions regarding coal shortage. In the absence of details regarding the efforts taken by MSPGCL, the costs arising due to non-adherence to contractual conditions by the coal supplier cannot be passed on to the consumers. Further, due to unavailability of power from MSPGCL, MSEDCL had to resort to expensive short-term power leading to increase in power cost. Therefore, the Commission may not relax the target Availability on account of coal shortages.

2.1.7 Dr. Ashok Pendse submitted that the actual GSHR for FY 2021-22 for Koradi, Khaperkheda Unit 5 and Koradi Units 8-10 is higher than the normative GSHR for the respective stations. Further, if the relaxation sought by MSPGCL for Koradi is allowed, the variation will further increase.

2.1.8 MSEDCL submitted that after the renovation and modernisation of Koradi Unit 6 and retirement of Koradi Unit 7, the Auxiliary Energy Consumption (AEC) of Koradi Unit 6 has been approved as 9%. MSPGCL in the present Petition sought relaxation in the same considering the impact of common auxiliaries. Allowing the additional AEC of 1.5-2% in addition to the approved AEC of 9% would result in the AEC of Unit 6 higher than the AEC for the combined Units 6&7.

2.1.9 MSEDCL submitted that the MYT Regulations, 2019 specify the target Availability for Koradi Units 6&7 as 72%. After the retirement of Unit 7 and renovation and modernisation of Unit 6, the target Availability has to be increased to 80-85% as per Regulation 46.2 of the MYT Regulations, 2019.

2.1.10 MSEDCL submitted that the Commission may not allow the relaxation in the performance parameters sought by MSPGCL.

MSPGCL's replies

2.1.11 The overall coal requirement of MSPGCL based on normative Availability and GSHR is 53 MMT considering the as fired coal GCV of 3200-3300 kcal/kg. MSPGCL submitted that the Commission had held that it is the responsibility of the generator to arrange fuel. The coal availability for MSPGCL is regularly affected due to the following issues:

- **Coal supply issues**: Coal is predominately supplied by WCL. WCL coal has lower transport cost however, it has several adverse impacts on plant equipment through higher wear and tear. WCL coal is of poor quality due to typical geological reasons, high ash content, lower GCV, wet and muddy coal. Coal supply from other coal companies results in higher ECR due to higher transportation cost.

- **Lower normative O&M expenses**: Poor coal quality results in deterioration of equipment, hence need for higher repairs and maintenance due to more outages. The normative O&M expenses approved for new Units are on lower side. Lower O&M expenses leads to more outages and lower Availability and PLF. MSPGCL has been subject to AFC disallowance on account of lower Availability, which is affecting its financial position.
- **Absence of assurance of payments**: MSPGCL has to make advance payments to assure coal availability. MSPGCL is solely dependent on payments from MSEDCL to run its operations. However, MSPGCL is accorded lowest priority in payments by MSEDCL, due to which the outstanding dues have mounted to Rs. 25000 Crore. Due to the delay in receipt of payments from MSEDCL, MSPGCL has been facing issues such as, higher working capital requirements, deferment of payments to vendors, absence of quality vendors to supply services etc. which affects the timelines for maintenance leading to equipment problems. The late payment surcharge billed to MSEDCL has not been recovered till August, 2022. Further, the Commission had considered the late payment surcharge as non-tariff income and reduced the same from the ARR of MSPGCL.
- **Unregulated coal sector**: Coal is supplied only by Coal India Limited and its subsidiary coal companies, which is in turn non-regulated. The coal pricing and coal quality are uncontrollable; which have been repeatedly raised and resisted by MSPGCL at various levels. However, there is no significant improvement in coal quality. Further, the ceiling limit specified by the Commission on the variation between GCV as billed as GCV as received as accentuated the losses from FY 2020-21 onwards. MSPGCL has to incur additional cost of Rs. 1200-1500 Crore every year for achieving the improved GCV in order to comply with the Regulations.

2.1.12 The actual energy supplied by MSPGCL was 47654 MU and 51349 MU as against the approved power purchase quantum of 53715 MU and 52988 MU for FY 2020-21 and FY 2021-22. The wide variation during FY 2020-21 was due to COVID-19 however, the variation during FY 2021-22 was only 3%. Hence, when the variation in MSPGCL's energy is close to approved figures, the reasons for increase in power purchase cost of MSEDCL could be other than the performance of MSPGCL. MSPGCL submitted that the price of imported coal had increased from Rs. 7000/MT envisaged at the time of MYT Order to Rs. 18000/MT during FY 2022-23 leading to increase in cost of generation by Rs. 0.50-0.60/unit. MSPGCL had considered the blending of imported coal only to the extent of 8-10% due to high imported coal prices. Further, the peak power price has increased to Rs. 20/unit during FY 2022-23 which was subsequently limited to Rs. 12/unit. Inspite of usage of imported coal, the peak power price of

MSPGCL was to the tune of Rs. 6/unit. The impact of other Orders regarding Change in Law and payment of outstanding dues could have impacted the power purchase cost of MSEDCL. During FY 2022-23, the energy charges of all the stations have increased due to coal shortage. During the period from April-July, 2022, the average variable charge of MSPGCL in MOD is lower than the variable charge of similarly placed central sector generating stations and Independent Power Plants (IPPs).

2.1.13 MSPGCL submitted that during FY 2020-21, owing to demand reduction due to COVID-19, the power supply to MSEDCL was to the extent required by it. With the lifting of lockdown restrictions during FY 2021-22, there was sudden splurge in demand and accordingly, the generation from MSPGCL increased by 7.80%. MSPGCL has submitted the basis of generation projections for FY 2022-23, FY 2023-24 and FY 2024-25 in the Petition. During H1 of FY 2022-23, there were coal quality and supply related issues due to which the actual generation was on lower side. MSPGCL has considered the Availability for H2 of FY 2022-23 at normative level based on coal availability. As the demand restoration during FY 2021-22 was not to the full extent, the generation projections for FY 2022-23 would be higher in comparison to the actuals for FY 2021-22. The generation projections for FY 2023-24 and FY 2024-25 have been considered at optimum levels. MSPGCL submitted that the increase in variable charges is on account of increase in domestic coal prices and increase in imported coal prices impacting the total increase in variable charges by Rs. 0.95/kWh.

2.1.14 The computation of reduction in ARR of MSPGCL as submitted by the stakeholder is incorrect. The recovery of fixed cost component of ARR of MSPGCL is linked to the Availability.

2.1.15 MSPGCL submitted that the actual SHR of Koradi was higher on account of lower loading as the Units were under zero schedule or backing down during FY 2020-21 and FY 2021-22.

2.1.16 MSPGCL submitted that it had made submissions regarding the AEC of Koradi Unit 6 in the Petition.

2.1.17 MSPGCL submitted that under the repair and maintenance work carried out at Koradi Unit 6, major work has been carried out in Electro Static Precipitator (ESP), turbine and some main auxiliaries. MSPGCL submitted that the original structure is the same and the performance cannot be expected to be at par with a new Unit. Therefore, the achievement of Availability in the range of 80-85% for Koradi Unit 6 is not possible.

2.1.18 MSPGCL submitted that it has not sought relaxation of performance parameters. Only in specific cases MSPGCL has requested the Commission to exercise the powers to remove difficulties and power to relax.

Commission's views

2.1.19 The Commission has taken note of the stakeholders' submissions and MSPGCL's replies thereof. The lower Availability and lower PLF of MSPGCL stations is a matter of concern for last several years. However, the Commission while approving the tariff or carrying out the truing up reduces the AFC eligibility on pro-rata basis considering the full AFC recovery at target Availability in accordance with the Tariff Regulations. Further, the lower Availability or lower PLF does not affect the energy charges as energy charges are computed on the basis of normative performance parameters on per unit basis. The Commission has carried out prudence check of all the expenses claimed by MSPGCL in accordance with the provision of the MYT Regulations and the treatment of the same has been discussed in detail in subsequent chapters of the Order.

2.1.20 The issue of consequential relief on account of coal shortages sought by MSPGCL was settled vide the Commission's Order dated 19 June, 2018 in Case No. 151 of 2017 wherein the Commission disallowed Petitioner's request for considering the normative Availability same as the actual Availability for the purpose of recovery of AFC during the coal shortage period. This ruling was given since the responsibility of arranging coal supply squarely rests with the generating company and had directed MSPGCL to pursue the matter of coal shortage and the associated business losses with coal supplier as per the provisions of FSA. The Commission has continued with the same approach in this Order also.

2.1.21 The Commission is equally concerned about the lower PLF of MSPGCL plants since it adversely impacts MSEDCL when the replacement power procured is costlier than the power supplied by MSPGCL. The lower PLF is generally on account of the coal quality, coal quantity and the upkeep of the generating units.

2.1.22 Regarding projections of availability and PLF for ensuing years FY 2023-24 and FY 2024-25, the Commission as elaborated in Chapter 9 of the Order has not accepted the availability and PLF projections of MSPGCL. The Commission for these years has projected availability and PLF based on past trends with some improvement. Accordingly, the total annual fixed charges for these years have not been projected in the ARR and annual fixed charges have been projected on pro-rata basis considering the full AFC recovery at target availability as explained in detail in Chapter 9 of the Order.

2.2 FUEL UTILISATION PLAN (FUP)

Suggestions/Objections

2.2.1 PEG submitted that MSPGCL is entitled to the coal quantum as per the Annual Contracted Quantum (ACQ) under the FSAs. FSA coal being low in cost, MSPGCL shall have to strive to procure full ACQ to meet the generation requirement.

2.2.2 PEG submitted that MSPGCL has not considered e-auction coal in its FUP whereas, the imported coal has been considered despite costlier in comparison to e-auction coal. The price of e-auction coal is lower than imported coal by Rs. 10000/MT. Therefore, e-auction coal has to be preferred over imported coal.

2.2.3 PEG submitted that according to the data published by CEA, the growth in domestic coal production during the period from April-November, 2022 is 13% over the actual production during same period of the previous year. Further, as per MoC, the domestic coal production has increased by 16% during the period from April-December, 2022. MoC aims to increase the domestic coal production to more than 1 billion tonnes in FY 2023-24 and have a domestic coal stock of 118 MMT by March, 2023 to meet peak demand during the period April-May, 2023. The growth in coal production is more than the growth in thermal generation of MSPGCL. MSPGCL had minimal dependence on imported coal even during the period from April-September, 2022 when the coal supply could not meet the demand. Therefore, MSPGCL may not be required to import coal to meet realistic demand. The Commission may allow ECR without considering imported coal thereby, the ECR approved in the MYT Order would suffice or even reduced. The cost of imported coal, if procured, may not be passed through FAC, without the Commission’s prior approval. MSPGCL may be directed to seek approval of the Commission before undertaking coal imports.

2.2.4 PEG and Ms. Ashwini Chitnis submitted that as per Regulation 40.6 of the MYT Regulations, 2019, MSPGCL was required to publish the monthly data of actual fuel utilisation with justification for deviation from the approved FUP. MSPGCL has not complied with the same. Timely and transparent reporting would have made sector trends apparent and could have aided in pre-empting and planning for coal shortages during FY 2022-23.

2.2.5 Vidarbha Industries Association (VIA) submitted that the coal requirement projected by MSPGCL based on GCV of 3300 kcal/kg is incorrect. The raw coal supplied by WCL is mostly of the grades G6-G12 with the average GCV of 3800-4200 kcal/kg. The maximum coal quantum is of grades G9-G12 with average GCV of 3800-4200 kcal/kg which can be verified from lab test reports of CIMFR, WCL Nagpur, SECL Bilaspur and MCL Raigarh. The average GCV is being considered on ARB whereas the industry practice is to consider the GCV on ADB as coal is fed to boilers on ADB. With the blending of washed coal and imported coal to the extent of 30% and 10% respectively, the as fired GCV has to be more than 3300 kcal/kg.

2.2.6 VIA submitted that the coal supply from CIL has improved. VIA submitted that CIL Kolkata and WCL Nagpur have been releasing additional coal quantum for the requirement of MSPGCL on the directives of MoP. MSPGCL has not been lifting the total quantum allotted on subsidised rates.

2.2.7 PEG submitted that MSPGCL has not been able to achieve the ceiling limit of coal GCV variation between as billed and as received approved by the Commission. For some of the stations, the variation is to the tune of 900-1000 kcal/kg. MSPGCL has sought the relaxation for pass though of entire variation GCV variation between as billed and as received. The relaxation sought by MSPGCL is untenable. As per the model FSA of CIL, if MSPGCL is aggrieved by the coal quality at loading point, the FSA provides for dispute resolution mechanism. Further, although MSPGCL has submitted that the coal handling by MSPGCL does not start until the unloading has happened, as per the FSA, the coal becomes MSPGCL's property at the loading point and it is solely responsible for securing the coal quality between loading and unloading points. As MSPGCL has not taken recourse to the dispute resolution mechanism under the FSA, MSPGCL cannot seek relaxation in GCV variation between loading and unloading points. If the Commission restricts the GCV variation between loading and unloading points to 300 kcal/kg as specified in the MYT Regulations, 2019, the reduction in energy charges would be to the tune of Rs. 1800-2000 Crore over the remaining Control Period. Ms. Ashwini Chitnis submitted that it is MSPGCL's responsibility to ensure adequate quality and quantity of coal as per the contractual terms. PEG and Ms. Ashwini Chitnis submitted that the Commission may not relax the provisions of the MYT Regulations, 2019 any further. PEG submitted that the Commission may even consider reducing the GCV variation specified in the MYT Regulations, 2019 in light of the provisions of the FSAs.

2.2.8 PEG submitted that Gare Palma II is a coal mine allotted to MSPGCL with the objective of offering coal mines to captive users to reduce power tariffs and therefore, the price of such coal has to be lower than CIL notified prices for the equivalent grades of coal. MSPGCL submitted that only a miniscule coal quantum would be available from Gare Palma II in the current Control Period, due to various delays. Once the production from Gare Palma II ramps up, it has significant impact on the operations as such coal can be blended with other existing linkage coal. The Commission may direct MSPGCL to make available the Mine Developer and Operator (MDO) contract for public scrutiny and seek approval of the cost of Gare Palma II coal so that the price of such coal does not exceed the CIL notified prices for equivalent grades of coal.

2.2.9 Ms. Ashwini Chitnis submitted that the Gare Palma-II coal is allotted for Koradi Units 8-10, Chandrapur Units 8&9 and Parli Unit 8. These new Units have been consistently underperforming since commissioning due to high energy charge, water shortage, forced outages due to equipment failure etc. These new Units also have high fixed cost due to delays in commissioning. MSPGCL submitted that the coal from Gare Palma II would replace the current bridge linkages and hence no additional impact has been considered on account of replacement. However, these Units are remotely placed from the Gare Palma II coal mine which can increase the transportation cost significantly which has been ignored by MSPGCL. Increase in cost of generation would lead to frequent backing down. Therefore, the impact of coal from Gare Palma II coal mine on tariff has to be transparently illustrated.

2.2.10 Ms. Ashwini Chitnis submitted that in Case No. 59 of 2017, MSPGCL had submitted that Central Mine Planning & Design Institute Limited (CMPDIL) had raised concern regarding the ash content and grades of coal from Gare Palma II. Considering that the mine is located far off from the end use plants and MSPGCL itself had raised concern regarding the economic viability of coal mining from Gare Palma II, it is unclear as to how the fuel source is prudent. The Commission may seek the stance of MSEDCL regarding the utilisation of coal from Gare Palma II as the financial impact has to be borne by the end consumers.

2.2.11 PEG submitted that the Commission, in its Order in Case No. 296 of 2019, had directed MSPGCL to carry out proper cost benefit analysis of coal beneficiation after receiving tenders and before going ahead for placing the contracts for coal beneficiation. However, MSPGCL has not complied with the said directive. MSPGCL has to submit a detailed cost benefit analysis and validated improvements in GCV through coal beneficiation for the associated costs to be approved by the Commission. PEG and VIA submitted that if the coal quality improves by limiting the GCV loss between as billed and as received, washing of coal would not be required.

2.2.12 VIA submitted that MSPGCL has placed LoA on MSMC for beneficiation of coal, however, MSMC neither has any experience towards operations and beneficiation of coal nor operates any coal washeries but is paid 5% charges on the coal quantity being handled as nodal agency for supply of coal. MSMC has sublet the coal washing to washery operators, which were appointed by MSPGCL in the past and discontinued for reasons best known to MSPGCL. MSMC has also appointed monitoring agencies to monitor the lifting, quality, washing and dispatches of coal for which additional 5% charges are being paid to it as the nodal agency. The operations undertaken by the nodal agency can be handled by MSPGCL itself with its own experienced professionals. Therefore, the charges paid to the nodal agency may not be allowed. MSPGCL has to install its own washery at the power plant or mine pithead.

2.2.13 VIA submitted that the inspite of paying the charges for coal washing by MSPGCL, the washery rejects are retained by the washeries. The washery rejects to the tune of 20% as projected are significantly higher in comparison to the probable rejects to the tune of 2-5% considering the coal supplied by WCL/SECL/MCL. The washery charges projected by MSPGCL in the range of Rs. 868-1489/MT whereas the WCL and SECL charge Rs. 333/MT and Rs. 325/MT for coal washing respectively and the amount of

Rs. 120/MT is deducted from the said cost towards the rejects retained by the washeries. VIA submitted that the rejects are purchased by the washeries at Rs. 620/MT whereas the market price for the same is more than Rs. 2400/MT. The washery rejects have to be blended with imported coal and consumed in the nearby power plants.

2.2.14 VIA submitted that as per the notification of MoEF&CC dated 21 May, 2020, after analysing the issues from the perspective of washeries, coal mining, transportation, and consumption of coal at power plants, it has inter alia summed up that the use of washery rejects in the nearby industries generate more pollution as the pollution control in numerous smaller industries using washery rejects is more challenging than pollution control at power plant. Coal washing process involves increased water use, effluent generation, disposable of washery rejects has negative environmental impact as it has to handle and dispose huge quantity of low grade coal, liquid effluent streams, handling coal dust, run off and fugitive dust, coal washery also adversely impacts topography, water drainage pattern and water bodies surrounding air quality at large scale. Washing process increases the cost of power generation with no commensurate environmental advantages etc.

2.2.15 MSEDCL submitted that the actual utilisation of imported coal in most of the stations is more than 10%. MSEDCL submitted that vide its letter dated 24 November, 2022, it had requested MSPGCL to utilise the already imported/ordered coal in such a proportion so that the variation in variable charge is within the limit of 5%. But, MSPGCL has continued to blend imported coal in higher quantum resulting in higher variable charges. MSEDCL submitted that MSPGCL may be directed to comply with the MoP directive regarding the blending of imported coal.

2.2.16 Ms. Ashwini Chitnis submitted that various policies have been notified by MoC for rationalisation of coal linkages in order to minimise the transportation cost. The Commission may undertake a thorough analysis regarding the alternatives to the proposed fuel arrangement such as flexible coal utilisation policy, conversion of bridge linkages into FSAs etc. MSEDCL has to submit a detailed analysis on the proposed fuel arrangement and the potential impact on its power purchase planning.

2.2.17 MVGS submitted that the variable charge of Uran has increased from Rs. 2.38/kWh in FY 2021-22 to Rs. 6.77/kWh in December, 2022. MSEDCL submitted that although the present variable charge of Uran is very high, MSEDCL is compelled to purchase such costly power owing to take or pay clause in the gas supply agreement. MSEDCL requested that MSPGCL may be directed to renegotiate the take or pay clause in the gas supply agreement. MSEDCL further submitted that the actual Availability of Uran is lower than the target Availability and allowing full AFC at actual Availability would increase the burden on MSEDCL and the end consumers.

2.2.18 MSEDCL submitted that MSPGCL has considered the annual escalation of 5% in fuel prices for FY 2023-24 and FY 2024-25 without any justification. MSPGCL may submit the historical trend of fuel prices. The Commission may allow the fuel price escalation after prudence check.

MSPGCL's replies

2.2.19 MSPGCL submitted that it has been endeavouring for higher coal quantum materialisation but, it is beyond its control. The actual coal realisation is to the tune of 70-75% of ACQ.

2.2.20 MSPGCL submitted that it has considered imported coal over e-auction coal as imported coal has better grades of coal which aids in blending requirements. MSPGCL submitted that it has been procuring domestic coal under the FSAs with coal companies and imported coal through competitive bidding. MSPGCL submitted that coal imports would be required to mitigate the coal quality issues with domestic coal. In addition, MoP, from time to time, has mandated procurement of imported coal. In case of non-compliance with such directions of MoP, the domestic coal supply would be restricted. MSPGCL submitted that the imported coal utilisation would be done within the permissible limit approved by the Commission.

2.2.21 MSPGCL submitted that the MYT Order does not specify any approved FUP as against which the actuals can be published. MSPGCL has been regularly uploading the monthly details of FAC on its website, after complete coal data is made available. MSPGCL submitted that it shall publish the fuel cost on its website in compliance of the Commission's directions in the MTR Order.

2.2.22 MSPGCL submitted that there is no coal mine with WCL that can supply G6/G7 grade coal. MSPGCL submitted that the coal GCV declared by CIMFR has relevance only for billing purposes. Nearly 80-85% of the coal supply from WCL is of declared grades G11-G13 with the GCV range of 3401-4300 kcal/kg on equilibrated basis. Considering the grade slippage, moisture correction and stacking loss, the as fired GCV is in the range of 2980-3180 kcal/kg. MSPGCL submitted that the average GCV of 3300 kcal/kg has been considered with blending of washed coal and imported coal.

2.2.23 MSPGCL submitted that CIL/WCL offers additional coal quantum at cost plus rates and not subsidised rates. MSPGCL has availed the additional coal offered by WCL through MoU route.

2.2.24 MSPGCL submitted that it has been striving to control/minimise the GCV loss as submitted in the Petition. MSPGCL submitted that it has undertaken the following measures:

- MSPGCL has resorted to alternate dispute resolution mechanism regarding the results of sampling and analysis for FY 2015-16 however, the coal companies did not accept the same and the outcome of the resolution was in favour of the coal companies. The alternate dispute resolution mechanism has been substituted with Administrative Mechanism for Resolution of CPSE's Disputes.

- MSPGCL has taken up the issue of GCV variation with CIMFR and Apex Committee. The Apex Committee had asked CIMFR to conduct 10 days' joint sampling exercise at Umred so as to find out the reason for GCV loss but is yet to be done by CIMFR.
- MSPGCL has taken up the issue of coal sampling method prescribed in the FSA and demanded for sampling as per the BIS method by selection of 25% wagons in a rake as opposed to 10% wagons as per the FSA, for sampling. MSPGCL has also demanded to conduct sampling as per BIS standard through mechanical means viz., Augur machine.
- MSPGCL has deputed ~175 personnel to witness sampling procedure at loading end in order to enhance transparency and reduce GCV loss.
- MSPGCL has raised the claims to the tune of Rs. 3652 Crore, since the commencement of third party sampling, on account of grade slippages/quality deviations etc. on the basis of FSA provisions. Some of the claims have been received resulting in lower coal cost being passed on to the beneficiary.

2.2.25 MSPGCL submitted that despite the efforts of MSPGCL, the actual GCV loss is at an average of 800 kcal/kg. In view of the MSPGCL's efforts to minimise GCV loss, grade slippage may be allowed.

2.2.26 MSPGCL submitted that the landed price of Gare Palma II coal is expected to be in the range of the landed price currently envisaged for FY 2024-25. Therefore, MSPGCL does not envisage any adverse FAC impact due to coal from Gare Palma II. The Commission has initiated the process for amendment of MYT Regulations, 2019 wherein, it was proposed to mandate the generating companies developing captive mines to submit the landed cost details before 6 months of the COD of the captive mine. Accordingly, after the notification of the Amendment Regulations, MSPGCL shall have to file a separate Petition for the determination of final tariff along with all the details regarding coal availability and capital expenditure, before 6 months of the expected COD of the Gare Palm II coal mine. MSPGCL submitted that the availability of coal from Gare Palma II coal mine would enable MSPGCL to recover the AFC of its stations.

2.2.27 MSPGCL submitted that Koradi Units 8-10 are supercritical Units; they have to be operated in supercritical zone i.e., above 80% load for achieving better GSHR. As the actual GCV of coal is lower than the design GCV, super critical zone operation was not achievable most of the time resulting in higher actual GSHR. With the improvement in coal GCV at bunker end, MSPGCL was able to achieve Availability and PLF of Koradi

Units 8-10 above 80%. MSPGCL submitted that Chandrapur Units 8&9 have been achieving normative performance parameters. MSPGCL submitted that owing to higher ECR of Parli Unit 8, it is frequently subjected to backing down/zero schedule resulting in inferior performance parameters. MSPGCL submitted that the fixed cost claimed for Koradi Units 8-10, Chandrapur Units 8&9 and Parli Unit 8 is based on the approved capital cost for the respective Units wherein the Commission had disallowed the excess IDC due to delay in commissioning of those Units.

2.2.28 MSPGCL submitted that it has been using washed coal in Khaperkheda, Khaperkheda Unit 5, Koradi Units 8-10, and Chandrapur Units 8&9. The GCV as received for washed coal, raw coal and resultant heat content are being submitted through FAC submissions to the Commission. The price of washed coal in Rs./kcal terms is lower than the price of raw coal, which has been submitted in the FUP. MSPGCL submitted that for Chandrapur Units 8&9, the source of raw coal and washed coal is not the same and hence the prices of raw coal and washed coal cannot be compared in such case. MSPGCL submitted that only the raw coal at notified/mine specific prices is being used through washery circuit for Chandrapur Units 8&9 while the major share of raw coal is cost plus coal.

2.2.29 MSPGCL submitted that MSMC is a State Government agency having experience in minerals and mining. MSPGCL submitted that it has signed an agreement with MSMC as the nodal agency for supply of washed coal. MSPGCL submitted that it does not pay any charges to the monitoring agency appointed by MSMC. MSPGCL submitted that the installation of coal washeries shall be explored based on cost benefit analysis.

2.2.30 MSPGCL submitted that the washery charges have been discovered through transparent competitive bidding process. MSPGCL submitted that as per the report of The Energy and Resource Institute prepared in the year 2020 for NITI Ayog, the projected yield for coal having ash content of 43% to wash upto 34% ash content is 75% thereby, the rejects are to the extent of 25%. MSPGCL submitted that the charges for washing submitted by the stakeholder include the following cost components:

- Inland transportation of raw coal to washery;
- Washing charges;
- Outward transportation of washed coal to railway siding; and
- Rake loading charges for washed coal.

The transportation charges from railway siding to the power station are not included in the same whereas, the washing charges claimed by MSPGCL is inclusive of such transportation cost. MSPGCL submitted that it is not desirable to blend washery rejects with imported coal considering the design parameters.

2.2.31 MSPGCL submitted that it has taken the care of the issue of washery rejects by incorporating clauses to address various MoEF notifications regarding prevention of environmental pollution. Coal washing process itself is aimed at reducing the possible environmental damages by separating part of the ash content from the raw coal at an early stage. It also helps to reduce the transportation cost of the coal from which ash is removed. Moreover, the washery operators have to comply the guidelines and notifications issued by MoEF&CC / MPCB. The disposal of washery reject is being carried out as per guidelines of Coal Controller Organisation (CCO).

2.2.32 MSPGCL submitted that the MYT Regulations, 2019 provide for usage of alternate fuel in case of shortages and accordingly, it has blended imported coal in order to achieve improved Availability. MSPGCL submitted that it has considered the imported coal quantum of 3 MMT each in FY 2023-24 and FY 2024-25 in order to meet the heat requirement for normative generation. MSPGCL submitted that if the imported coal blending is limited to 6%, MSPGCL would not be able to achieve the target Availability. MSPGCL submitted that if the imported coal blending is limited to 6%, then the target Availability for recovery of full AFC may be reduced.

2.2.33 MSPGCL submitted that it has been implementing the flexible coal utilisation wherein it has been using the coal across its stations with the objective of reduction in cost of generation and reduction of variable charge under MOD.

2.2.34 MSPGCL submitted that the terms of the gas supply agreement are decided by GoI and the same cannot be resolved by issuing directions to MSPGCL. MSEDCL, on one side requests not to allow purchase of spot gas to meet the target Availability and on the other side MSEDCL is requesting not to allow the full AFC at actual Availability. The availability of gas is an uncontrollable factor and therefore, recovery of fixed charges has to be allowed to MSPGCL.

2.2.35 MSPGCL submitted that the Commission had considered the annual escalation of 3% in the MYT Order. However, the coal prices over the period from FY 2019-20 to H1 of FY 2022-23 has increased by CAGR of 7%. In view of the same, MSPGCL has considered the annual escalation of 5%.

Commission's views

2.2.36 The Commission has taken note of the stakeholders' submissions and MSPGCL's replies thereof. The detailed submissions of MSPGCL and the Commission's analysis on the FUP for the ensuing two years of the Control Period has been discussed in Chapter 8 of the Order. The Commission has considered the coal mix utilisation for each of the Stations while determining the tariff for FY 2023-24 and FY 2024-25. MSPGCL in its replies to stakeholders' submissions stated that if the imported coal blending is restricted to 6%, the target Availability cannot be achieved. The Commission finds that MSPGCL has proposed 6% imported coal blending on overall basis and projected the target Availability for its stations for FY 2023-24 and FY 2024-

25. Therefore, the Commission finds MSPGCL's reply to stakeholders' submission inconsistent to its own submissions in the Petition.

2.3 ADDITIONAL CAPITALISATION

Suggestions/Objections

2.3.1 Maharashtra State Electricity Distribution Company Limited (MSEDCL) submitted that MSPGCL has to undertake competitive bidding process for FGD installation after the approval of the Commission. The capital expenditure has to be approved after due prudence check. Further, the old Units close to retirement have to excluded from installation of FGD.

2.3.2 MSEDCL submitted that the actual additional capitalisation had always been lower than the approved additional capitalisation and therefore, the historical trend may be considered in the approval of additional capitalisation.

MSPGCL's replies

2.3.3 The in-principle approval for installation of FGD has been granted by the Commission for the new Units as wells as older Units of 500 MW. MSPGCL shall comply with the Commission's directions while according in-principle approval. For the 210 MW units, in-principle would be sought complying with the Commission's directions regarding RLA studies.

2.3.4 MSPGCL submitted that the claimed additional capitalisation for the balance Control Period is inclusive of the additional capitalisation towards FGD.

Commission's views

2.3.5 The additional capitalisation claimed by MSPGCL for FY 2023-24 and FY 2024-25 is inclusive of the additional capitalisation towards FGD schemes. The Commission had granted the in-principle approval of FGD schemes based on the DPRs submitted by MSPGCL and accordingly, the capitalisation towards the same have been considered in FY 2023-24 and FY 2024-25 based on the actual progress of works and the approved costs. As regards the other works claimed by MSPGCL, the Commission has considered the works for which the in-principal approval has been granted. The actual additional capitalisation shall be subject to true-up based on MSPGCL's compliance to the provisions of the Regulations.

2.4 ANNUAL FIXED CHARGES

Suggestions/Objections

2.4.1 MSEDCL submitted that the impact of pay revision may be allowed on actual basis in the respective years as against inclusion of the same in the projections of the normative O&M expenses. The Commission may allow the impact of labour wage revision after prudence check.

2.4.2 MSEDCL submitted that the normative O&M expenses for new Units have been specified in the MYT Regulations, 2019 after due consultation process and the same cannot be modified in the truing up exercise in light of the judgment of the Hon'ble Supreme Court dated 18 October, 2022 in CA No. 4324 of 2015. The Commission may approve the normative O&M expenses in accordance with the MYT Regulations, 2019.

MSPGCL's replies

2.4.3 MSPGCL submitted the base employee expenses will be increased on account of wage revision and accordingly, the same have been included in the claimed normative O&M expenses.

2.4.4 MSPGCL submitted that the actual O&M expenses of new Units are higher than the normative O&M expenses. MSPGCL submitted that MSPGCL's submissions for revision of normative O&M expenses at the time of framing of Regulations have not been accepted by the Commission. MSPGCL submitted that the salaries and wages paid by it are as per the standard grades prescribed by GoM; the R&M expenses and A&G expenses are mandatory expenses. MSPGCL submitted that the Commission may exercise the power to relax in order for MSPGCL to recover the actual O&M expenses subject to the ceiling limit of the normative O&M expenses specified by CERC for the similar size Units.

Commission's views

2.4.5 The Commission has approved the AFC (which includes the O & M costs) based on the prudence check of MSPGCL's submissions as detailed in the relevant Chapters of the Order.

2.5 LEASE RENT

Suggestions/Objections

2.5.1 MSEDCL submitted that from September, 2020 onwards, MSPGCL has withdrawn the claim of lease rent towards Surya RB hydel power station as the same has not been handed over to MSPGCL. MSPGCL has to confirm if the claimed lease rent is exclusive of the lease rent towards Surya RB hydel power station.

MSPGCL's replies

2.5.2 MSPGCL submitted that it has not claimed the lease rent of Surya RB hydel power station in the MTR Petition.

Commission's views

2.5.3 The Commission has taken note of the stakeholders' submissions and MSPGCL's replies thereof.

2.6 COMPLIANCE TO EMISSION NORMS

Suggestions/Objections

2.6.1 PEG submitted that MSPGCL's thermal generation capacity of 4160 MW fall under the category A, 2920 MW fall under the category B and 2640 MW fall under Category C as per the categorisation by CEA in accordance with the Environment (Protection) Amendment Rules, 2021 notified by MoEF&CC. The power plants under category A and category B are required to comply with the emission norms by December, 2024 and December, 2025 respectively. Nashik and Bhusawal, which fall under category A and category C respectively, were proposed to be retired but as per the updated position, they are not being considered for retirement and hence, shall have to comply with the emission norms. However, the status of FGD installation at these plants is unclear. The Commission may direct MSPGCL to publish quarterly updates regarding the status of compliance to the emission norms, on its website.

2.6.2 PEG and Ms. Ashwini Chitnis submitted that the capital expenditure towards compliance with emission norms may be allowed but the impact of delays in compliance with emission norms has to be disallowed.

MSPGCL's replies

2.6.3 The request of the stakeholder is under the purview of the Commission.

Commission's views

2.6.4 The Commission has granted in-principle approvals for the DPRs submitted by MSPGCL for implementation of FGD in its stations. MSPGCL shall comply with the Commission's directions in such approval of DPRs.

2.7 OUTSTANDING DUES

Suggestions/Objections

2.7.1 PEG submitted that the outstanding dues to MSPGCL from MSEDCL are to the tune of Rs. 27000 Crore, which is more than its ARR. Despite such immense outstanding dues, the Petition is silent on the same except reference to the reconciliation of late payment surcharge. Outstanding dues lead to higher working capital borrowings resulting in higher costs and inability to pay to coal companies resulting in inadequate coal supply. This issue is of grave concern considering the strict 48 month timeline provided in the Late Payment Surcharge Rules notified by MoP for liquidation of arrears. As per the Rules, MSPGCL may even lose its right to claim if it does not take action to recover the dues. MSPGCL has to provide an action plan for recovery of dues. The Commission has to ensure that the issue of late payment surcharge is addressed through a dedicated public process instead of bilateral process between MSEDCL and MSPGCL.

MSPGCL's replies

2.7.2 MSPGCL submitted that it has compared the normative IoWC vis-à-vis the actual IoWC as per the books of accounts. MSPGCL submitted that it has requested that till the completion of reconciliation of late payment surcharge with MSEDCL, the impact of late payment surcharge may not be considered as per the MYT Regulations. Certain amount of total outstanding amount (including late payment surcharge) has been accepted by MSPGCL and the remaining amount is under reconciliation. The provisions in the Rules are partially implemented and discussions are underway for the implementation of balance provisions. MSPGCL submitted that post the introduction of strict norms under the LPS rules, receipt of payment from MSEDCL has slightly improved. MSPGCL requested the Commission to direct MSEDCL appropriately, in this regard.

Commission's views

2.7.3 The issue raised by the stakeholders is a commercial matter under the purview of the PPA and shall be dealt with if any of the affected party approaches the Commission through appropriate proceedings. The Commission is equally concerned about the necessity of timely payments to MSPGCL as provisioned in the PPA. For the purpose of this Order, the Commission has considered the treatment of late payment surcharge in accordance with the provisions of the MYT Regulations, 2015 and MYT Regulations, 2019 for arriving at the actual IoWC as detailed in the final true-up of FY 2019-20, FY 2020-21 and FY 2021-22.

2.8 RETIREMENT OF OLD UNITS

Suggestions/Objections

2.8.1 MSEDCL submitted that Bhusawal Unit 6 was planned against retirement of Bhusawal Units 2&3 and Nashik Unit 3 considering the power surplus scenario. Bhusawal Unit 2 was retired and considering the efficiency of Nashik Unit 3, Nashik Unit 5 has been planned to be retired. The Commission may take appropriate decision in the matter.

2.8.2 PEG submitted that MSPGCL had planned to retire some of its old thermal generating units during the current Control Period. In the present Petition, MSPGCL submitted that it has decided to continue operations by carrying out necessary Residual Life Assessment (RLA) and necessary renovation and modernisation. PEG submitted that MSPGCL's decision to reconsider the retirement of old Units is a step in the right direction as early age-based retirement can prove counter productive given the dynamic demand and supply trends in the sector. RLA and renovation and modernisation expenditure should not be considered as a routine capital expenditure and must be carried out after comprehensive analysis at the State/distribution utility level and must be subject to a detailed scrutiny and approval process. MSPGCL may be directed to file a separate Petition for the same for approval through public consultation process.

MSPGCL's replies

2.8.3 MSPGCL submitted that it had considered installation of Bhusawal Unit 6 (1x660 MW) as replacement project against the 210 MW Units Bhusawal Units 2&3 and Nashik Unit 3 considering the vintage of these old Units. Accordingly, it was planned at that time that after COD of Bhusawal Unit 6, these 3 old Units would be declared retired. Bhusawal Unit 2 was accordingly retired in line with this approach. Further, considering the actual plant conditions, MSPGCL had selected Nashik Unit 5 for retirement instead of Nashik Unit 3, after COD of Bhusawal Unit 6.

2.8.4 The request of the stakeholder is under the purview of the Commission.

Commission's views

2.8.5 The Commission takes note that the generating companies in the Country have been issued certain directions by MoP regarding the deferment of the retirement of old Units considering the demand supply scenario. MSPGCL shall have to comply with such directions from time to time.

2.9 PROVISIONAL TARIFF OF BHUSAWAL UNIT 6

Suggestions/Objections

2.9.1 MSEDCL submitted that MSPGCL has projected the COD of Bhusawal Unit 6 in FY 2023-24. However, there has been significant delays and MSPGCL has not submitted the justification for the same. MSPGCL has projected the ECR of Rs. 4.51/kWh and Rs. 4.73/kWh for Bhusawal for FY 2023-24 and FY 2024-25. Whereas, MSPGCL has projected the ECR of Rs. 2.66/kWh and Rs. 2.79/kWh for Bhusawal Unit 6 for FY 2023-24 and FY 2024-25 respectively. MSPGCL may submit the reasons for such variation in ECR. The Commission may approve ECR for Bhusawal Unit 6 prudently so that there is differential cost loading in FAC.

MSPGCL's replies

2.9.2 MSPGCL submitted that it has claimed the provisional tariff for Bhusawal Unit 6 with underlying assumptions. MSPGCL submitted that the ECR of Bhusawal Unit 6 is lower on account of the following reasons:

- Lower GSHR.
- Usage of WCL coal on the basis of linkage granted under the SHAKTI policy.
- No usage of imported or washed coal envisaged at this stage.

Commission's views

2.9.3 The Commission has not approved the provisional tariff for Bhusawal Unit 6 in this Order as detailed in Chapter 10 of the Order.

2.10 OTHERS

Suggestions/Objections

2.10.1 VIA submitted that although there had been variation in as billed GCV and as received GCV since the past 3 years, MSPGCL has not taken concrete steps to address the issue. The third party agency appointed for GCV measurement shall have to be penalised for the losses incurred on account of GCV variation. MSPGCL may have considered appointment of another agency as the impact of the acts of omission by CIMFR is being loaded on to the end consumers. As per IS: 1350 (Part 1) 1984 Indian Standards Methods of Test for Coal and Coke (Proximate Analysis), coals especially those of low rank, are hygroscopic to various degrees, and absorb or lose moisture according to the humidity and temperature to which they are exposed. Coke is not so hygroscopic as coals, but it absorbs moisture during grinding. Hence, in principle, any moisture determination which is carried out without reference to a standard humidity and temperature is, to a degree, unsatisfactory. The moisture content of air-dried coal varies and depends upon the temperature and relative humidity of the air to which it is exposed. As such it is necessary to determine moisture content of different samples of coal under standard conditions. For this purpose, coal is ground to pass 212-micron IS sieve and equilibrated in an atmosphere of 60 percent relative humidity and 40°C temperature. The moisture determined under these conditions shall be taken as reference moisture for all purposes.

2.10.2 VIA submitted that in order to scientifically ascertain the GCV on Equilibrated basis. Tripartite Agreements were executed by coal companies (first parties) with MSPGCL (second party) and CIMFR (third party) for carrying out loading end analysis. Simultaneously MSPGCL entered into bilateral agreement with CIMFR for carrying out unloading end analysis. Further, loading-end coal sampling exercise is always conducted only in the presence of MSPGCL's authorized representatives, while the colliery representatives do not participate at the unloading-end analysis bilaterally carried out by MSPGCL & CIMFR. VIA submitted that the coal quality issue has to be taken up with the highest authorities for resolution of the same. VIA also submitted that MSPGCL may explore the possibility of having a third-party independent committee for addressing and resolution of the coal quality related issues.

2.10.3 MSEDCL submitted that AEC during full shutdown of MSPGCL's stations is being adjusted at the approved ECR in monthly energy bill, without considering the effect of FAC. MSEDCL requested the Commission to issue appropriate directives to have clarity on the rate to be considered for such adjustments.

2.10.4 Ms. Ashwini Chitnis submitted that MSPGCL had sought the approval for coal tolling arrangements. MSPGCL has filed some cases regarding Change in Law claims related to coal tolling arrangements. The objective of coal tolling arrangement is reduction in cost and hence, no cost is allowable on this account. The Commission may allow coal tolling arrangements after regulatory scrutiny and through a public consultation process. MSPGCL has to pass on the benefits realised to the consumers and any cost has to be borne by itself.

2.10.5 MSEDCL submitted that it has disallowed the fixed charges and lease rent of Rs. 44.12 Crore and 137.36 Crore for Ghatghar pumped storage project owing to prolonged forced outage of its Units during the period from August, 2019 to September, 2020. MSEDCL submitted that the MSPGCL's claim of fixed cost and lease rent may be allowed after prudence check.

2.10.6 PEG submitted that MSPGCL's generation capacity is dominated by coal based thermal generating stations. With the penetration of renewable capacity, MSPGCL has to consider revisiting its business model to foray into cleaner technologies such as renewables and storage. Despite being the stage generation company and one of the largest in the country, MSPGCL has not made any submissions regarding its long term plans in this regard.

2.10.7 PEG submitted that as per the tariff format Form F15, MSPGCL was required to submit the station wise FUP in accordance with Regulation 40.3 of the MYT Regulations, 2019. MSPGCL has not complied with the said requirement. Further, certain computational errors have been noticed in the tariff formats submitted by MSPGCL. Such discrepancies could have been rectified during the Technical Validation Session (TVS) had the stakeholders been provided the opportunity to take part in the TVS. The Commission may consider providing the opportunity to wide spectrum of stakeholders to take part in TVS for tariff proceedings.

2.10.8 Ms. Ashwini Chitnis submitted that the public hearing has to be primarily through in-person hearing and e-hearing facility may be extended to those unable to attend in-person hearing.

MSPGCL's replies

2.10.9 MSPGCL submitted that there is considerable loss in GCV due to surface moisture and non-representative sampling methods adopted by coal companies in FSA. Therefore, for variable charge calculation, ARB GCV at unloading end should be considered instead of 'As billed/Equilibrated' GCV basis with allowed margin as per MYT order. Hence MSPGCL requested the Commission for the same. MSPGCL submitted that it always requests the Coal Company representatives to visit and witness coal sampling at unloading end. MSPGCL submitted that Coal company representatives had not witnessed sampling procedure at unloading end even after insistence from MSPGCL.

2.10.10 MSPGCL submitted the it has been the practice that the adjustment of AEC during full shutdown is being done considering the approved ECR as there is no fuel consumption during the shutdown period.

2.10.11 MSPGCL submitted that the benefits of coal tolling arrangement have been submitted in its submissions in Case Nos. 127 and 128 of 2021. MSPGCL submitted that the Commission in its Orders in Case Nos. 127 and 128 of 2021 had approved the Change in Law claims after due prudence check.

2.10.12 MSPGCL submitted that MSEDCL has unilaterally deducted the O&M expenses of Rs. 44.12 Crore and lease rent of Rs. 137.36 Crore for Ghatghar pumped storage project. Such unilateral deduction by MSEDCL is in contravention to the provisions of the PPA dated 12 May, 2014. MSPGCL has informed MSEDCL about the reasons for such outages vide letter dated 12 March, 2021. MSPGCL submitted that the Commission may issue directions to MSEDCL to refrain from such actions in contravention to the provisions of the PPA.

2.10.13 MSPGCL submitted that it has installed solar capacity of 207 MW for sale to MSEDCL. The formation of Joint Venture (JV) with NTPC Ltd. for development of 2500 MW Ultra Mega Renewable Energy Power Parks (UMREPP) is under discussion. MSPGCL submitted that it aspires to increase the renewable capacity to more than 5300 MW by FY 2029-30.

2.10.14 MSPGCL submitted that Form F15 was submitted separately in replies to datagaps. MSPGCL submitted that the Petition is voluminous with numerous inter-linking among various formats. The complexity of the submissions could hamper the detailed understanding. MSPGCL can provide clarity on any of the issues as sought.

Commission's views

2.10.15 The Commission has taken note of the stakeholders' submissions and MSPGCL's replies thereof.

2.10.16 As regards the coal quality issues and loss in GCV, the Commission directs the MSPGCL to take note on VIA's suggestions and take appropriate measures to improve the quality of coal. The Commission as discussed in Chapters 5 and 6 of the Order has not allowed the entire GCV loss from 'As Billed basis' to 'As Received basis' and limited the GCV loss for FY 2020-21 to FY 2022-23 to the approved target in the MYT Order. For FY 2023-24 and FY 2024-25, the Commission has approved the GCV loss as discussed in Chapter 9 of the Order.

2.10.17 As regards the adjustment of AEC during shutdown period, Article 4.3.3 of the PPA states that the energy supplied by MSEDCL for auxiliary back-up shall be netted off from the energy supplied by MSPGCL from its generating stations and MSPGCL shall raise the monthly bill for the net energy supplied from MSPGCL's stations. Both MSEDCL and MSPGCL shall adhere to the same.

2.10.18 As regards the deduction of AFC and lease rent for Ghatghar pumped storage project by MSEDCL, the same pertains to billing issue between MSEDCL and MSPGCL and cannot be decided in the present proceedings.

2.10.19 The Commission has held the TVS and e-public hearing in accordance with the provisions of the Regulations.

3 IMPACT OF OTHER ORDERS

3.1 ORDER IN CASE NO. 296 OF 2019

Background

3.1.1 Bhusawal Units 4&5 achieved COD on 3 January, 2014. The Commission, vide its Order dated 20 April, 2015 in Case No. 201 of 2014 approved the capital cost of Bhusawal Units 4&5. The Commission, in the said Order, directed MSPGCL to submit a report regarding the actual amount of Liquidated Damages (LD) levied and recovered from the contractors upon finalisation of the contracts, so that it can be considered while approving the final capital cost thereafter. The Commission, vide its Order dated 30 March, 2020 in Case No. 296 of 2019 directed MSPGCL to submit the details of LD recovered from the contractors for Bhusawal Units 4&5.

MSPGCL's Submission

3.1.2 MSPGCL had levied LD of Rs. 250.29 Crore on the Boiler Turbine Generator (BTG) contractor Bharat Heavy Electricals Limited (BHEL) which remains uncontested as on the date of submission of this MTR Petition. Further, MSPGCL had levied LD of Rs. 189 Crore on the Balance of Plant (BoP) contractor Tata Projects Limited (TPL). However, TPL had gone into arbitration on the levy of LD and as per the Arbitrator Award dated 30 August, 2022, no LD is leviable on TPL. Therefore, as against the total estimated LD amount of Rs. 339.54 Crore considered by the Commission in Case No. 201 of 2014, the actual LD amount is Rs. 250.54 Crore.

3.1.3 The Commission, in its Order in Case No. 201 of 2014, had deducted 50% of the estimated liquidated damages of Rs. 339.54 Crore viz., Rs. 169.77 Crore from the capital cost. In view of the revision of the LD amount, the deducted amount of Rs. 169.77 Crore stands revised to Rs. 125.77 Crore and accordingly, the incremental capital cost to be allowed as on COD works out to Rs. 44.50 Crore. In addition, MSPGCL had to incur the additional expenses amounting to Rs. 20.76 Crore towards the following items:

- Additional work – Rs. 9.15 Crore
- Arbitration expenses – Rs. 3.01 Crore
- Prolongation works – Rs. 4.80 Crore
- Cost of maintaining Bank Guarantee – Rs. 3.80 Crore

3.1.4 MSPGCL submitted that the same has been considered to be capitalised in FY 2022-23.

3.1.5 MSPGCL has claimed the impact of the incremental capital cost on Annual Fixed Charges (AFC) from FY 2013-14 up-to FY 2018-19. Thereafter, the incremental capital cost has been added to the opening GFA for FY 2019-20 for which the final true-up has been claimed in the present Petition. MSPGCL has claimed the total amount of Rs. 81.37 Crore including carrying cost on this account.

Commission's Analysis and Ruling

3.1.6 The Commission, in its Order in Case No. 201 of 2014 had considered the estimated LD amount for BTG package and BoP package as Rs. 150.54 Crore and Rs. 189.00 Crore respectively. As against the same, MSPGCL has claimed the final LD amount of Rs. 250.25 Crore and Rs. 0 Crore respectively.

3.1.7 The Commission sought the supporting documents to substantiate the LD amount of Rs. 250.25 Crore for BTG package. In reply, MSPGCL submitted the amendments to the contract agreements regarding the final time limit extension and LD amounts along with the Journal Voucher (JV) for the total LD amount of Rs. 250.25 Crore.

3.1.8 The Commission sought the copy of Arbitrator Award dated 30 August, 2022 in case of BoP contractor. From the Arbitration Award submitted by MSPGCL, it has been observed that the Arbitral Tribunal ruled that the delays are attributable on part of MSPGCL and thereby allowed extension of time without levy of LD. In addition, MSPGCL has also submitted the actual LD amount recovered pertaining to other miscellaneous packages as Rs. 0.29 Crore.

3.1.9 The Commission has considered finalised LD amount as submitted by MSPGCL and has accordingly considered the impact of the incremental capital cost on AFC from FY 2014-15 up-to FY 2018-19. The Commission observes that although MSPGCL has claimed the incremental capital cost as on COD as Rs. 44.50 Crore, the incremental capital cost considered in its computations is Rs. 65.26 Crore. MSPGCL has included the additional claim of Rs. 20.76 Crore, submitted as proposed to be capitalised in FY 2022-23, in the incremental capital cost as on COD. The Commission has not considered the said amount of Rs 20.76 Crore as on COD. The Commission has carried out the provisional true-up of FY 2022-23 in this Order. The Commission directs MSPGCL to include the said amount in its claim of final true-up for FY 2022-23 along with all the supporting documents for prudence check by the Commission.

3.1.10 The Commission has computed the incremental AFC, that is fully recoverable at target Availability, for the period from FY 2013-14 to FY 2018-19 on account of the incremental capital cost as on COD approved in this Order. Further, the incremental AFC recoverable at target Availability has been allowed on pro-rata basis for the years during which the actual Availability is lower than the target Availability.

3.1.11 The impact of revision of capital cost of Bhusawal Units 4&5 as on COD is as shown in the Table below:

Table 3.1: Impact of revision of capital cost of Bhusawal Units 4&5 (Rs. Crore)

Particulars	Claimed	Approved
Incremental AFC		
FY 2013-14	2.02	1.38
FY 2014-15	11.52	7.85
FY 2015-16	11.27	7.69
FY 2016-17	9.00	6.14
FY 2017-18	8.22	5.60
FY 2018-19	9.03	6.16
Total	**51.05**	**34.81**

3.1.12 The Commission has considered the above approved amount in computing the cumulative revenue gap/(surplus) up-to FY 2022-23 as detailed in Chapter 7 of the Order.

3.2 ORDER IN CASE NO. 180 OF 2020

Background

3.2.1 MSPGCL had filed the Review Petition in Case No. 180 of 2020 against the Commission's MYT Order dated 30 March, 2020 in Case No. 296 of 2019 seeking review on the following issues:

- **Issue no. 1**: Non-consideration of impact of revised LD on approved capital cost for Khaperkheda Unit 5 for the period from FY 2017-18 onwards.
- **Issue no. 2**: Non-clarity in the basis of escalation factors considered for FY 2018-19 & FY 2019-20.
- **Issue no. 3**: Computational error in approved Operation and Maintenance (O&M) expenses for Uran.
- **Issue no. 4**: Computational error in O&M expenses for Bhusawal and Koradi for full operating capacity.
- **Issue no. 5**: Impact of GST as Change in Law.
- **Issue no. 6**: Approval of reserve shutdown charges (RSD) for Parli lower than projected.
- **Issue no. 7**: Non-consideration of undischarged liabilities (UDL) for Koradi Units 8-10, Chandrapur Units 8&9 and Parli Unit 8.
- **Issue no. 8**: Error in computation of depreciation in hydro assets (other capital expenses group no. 11)
- **Issue no. 9**: Consideration in repayment of interest on loan
- **Issue no. 10**: Additional auxiliary energy consumption (AEC) for Paras Units 3&4 and Parli Units 6&7.
- **Issue no. 11**: Impact of interest on working capital (IoWC).
- **Issue no. 12**: Approval of other charges for hydro for FY 2017-18.
- **Issue no. 13**: Basis for approval of Energy Charges.
- **Issue no. 14**: Direction regarding approaching Commission separately for

approval of Change in Law (CIL) claims for coal tolling arrangements.

- **Issue no. 15**: Non-tariff income for Bhusawal.
- **Issue no. 16**: O&M expenses for Koradi Units 8-10.
- **Issue no. 17**: Extension of cut-off date for Koradi Units 8-10, Chandrapur Units 8&9 and Parli Unit 8.

3.2.2 The Commission, vide its Review Order dated 1 March, 2021 partly allowed the review on the some of the issues raised by MSPGCL and ruled as under:

"…

2. The Commission has allowed the review on five issues (Issue 1, Issue 3, Issue 4, Issue 12 and Issue 17)

3. The Commission has allowed MSPGCL to make its detailed submission on five issues as part of next MTR Petition (Issue 6, 7, 8, 9 and 11)

4. The Commission has allowed a relaxation on the issue No. 13 under the powers of Commission to relax under Regulation 105 of the MYT Regulations, 2019.

5. The Commission has rejected review on five issues (Issue 5, 10, 14, 15 and 16) and Issue 2 was withdrawn by the Petitioner."

3.2.3 The submissions of MSPGCL on the issues admitted for review and the Commission's analysis and ruling thereof is detailed as under.

3.2.4 The issues allowed in the Review Order pertain to the period from FY 2017-18 onwards. As the present Petition covers the true-up from FY 2019-20 onwards, MSPGCL has worked out the claim and corresponding carrying cost from FY 2017-18 and FY 2018-19 separately. The impact of Review Order from FY 2019-20 onwards has been considered in the true-up of respective year considering the opening balance of financial parameters for FY 2019-20 based on the closing balance of FY 2018-19 as approved in the Review Order.

3.3 IMPACT OF REVISED LD OF KHAPERKHEDA UNIT 5

MSPGCL's Submission

3.3.1 The Commission, in the Review Order, approved the opening GFA for FY 2017-18 as Rs. 3435.14 Crore and accordingly, the impact computed by MSPGCL. MSPGCL has claimed the impact for FY 2017-18 and FY 2018-19 towards incremental return on equity (RoE), interest on loan, depreciation and interest on working capital (IoWC) for the respective years.

Commission's Analysis and Ruling

3.3.2 The Commission, in its Order dated 1 September, 2018 in Case No. 196 of 2017 directed as under:

"…. MSPGCL is directed to submit details of the amount of LD determined and recovered from the Contractors for Khaperkheda Unit 5 in its next Tariff Petition, failing which the Commission will consider the maximum LD amount that can be levied as per the Contracts for this project and finalise the Capital Cost accordingly."

3.3.3 Pursuant to the Commission's direction, MSPGCL made the submissions in the MYT Petition and requested the Commission to include the differential amount in capital cost, i.e., Rs. 39.66 Crore in the opening GFA of 2017-18 so that the tariff can be calculated on the same.

3.3.4 Accordingly, the Commission in Case no. 296 of 2019 has approved the same amount of the liquidated damage as under:

"……………In compliance of the above direction, the Petitioner has submitted the finalised LD for Khaperkheda Unit 5. The Commission has considered the finalised LD amount as submitted by MSPGCL and has accordingly considered the impact of the same in the Capital Cost of Khaperkheda Unit 5. The Commission has verified the impact of change in Capital Cost on AFC till FY 2016-17 and found the same to be in order. Accordingly, the Commission has considered the impact as submitted by MSPGCL………"

3.3.5 The Commission has mentioned that Rs. 40.82 Crore (i.e. impact till 2016-17 on incremental capital cost of Rs. 39.66 Crore) has been considered as per Petitioner's submission, however the Commission has not included the incremental capital cost of Rs. 39.66 Crore in the opening GFA of 2017-18. The opening GFA as per Petitioner's tariff format for Khaperkheda Unit 5 was Rs. 3435.14 Crore and as per Commission the opening GFA was Rs. 3395.47 Crore. Therefore, MSPGCL requested the Commission to consider Rs. 39.66 Crore (Rs. 3435.14 Crore – Rs. 3395.47 Crore) in Opening GFA of FY 2017-18.

3.3.6 The Commission, in the Review Order, ruled as under:

"16.7 It is observed that the opening GFA as per MSPGCL's submission in the tariff format for Khaperkheda Unit-5 was Rs. 3435.14 Crore. Therefore, as the Commission accepted the submission of MSPGCL it has to be included in the Opening GFA of the FY 2017- 18 while computing the GFA. However, inadvertently the Commission has considered the opening GFA for FY 2017-18 as Rs. 3395.47 Crore. Therefore, the Commission accepts the submission of MSPGCL for the correction in the GFA on account of error on face of the Record. The Commission restates the Opening GFA as Rs. 3435.14 Crores for FY 2017-18 considering the impact of Rs. 39.66 Crore.

16.8 MSPGCL is eligible for all the consequential benefits on RoE, Interest on Loan and Depreciation by considering the funding ratio of 77.11%: 22.89%.

16.9 MSPGCL has submitted the total impact as under:

Particulars	***FY 2017-18***	***FY 2018-19***	**…**
Impact in Rs. Crores	*5.05*	*6.06*	

16.10 The Commission in-principle allows the revision in opening GFA for Khaparkheda Unit 5 for FY 2017-18. However, as the impact of this revision in opening GFA on total entitlement of MSPGCL for the year is very marginal (Impact of around Rs. 5 Crore on total entitlement of Rs. 17884 Crore for FY 2017-18 i.e. 0.028%), the Commission will allow the recovery of same as part of next Mid Term Review."

3.3.7 The Commission has computed the impact of the incremental capital cost of Rs. 39.66 Crore for Khaperkheda Unit 5 for FY 2017-18 and FY 2018-19 as under:

Table 3.2: Impact of revised LD of Khaperkheda Unit 5 (Rs. Crore)

Particulars	**FY 2017-18**		**FY 2018-19**	
	Claimed	**Approved**	**Claimed**	**Approved**
Incremental AFC	4.69	4.34	6.13	5.30

3.3.8 The variation in claimed and approved amounts is that MSPGCL's claim is at target Availability whereas, the approved amounts are after prorating for lower actual Availability.

3.3.9 The Commission has considered the above approved amount in computing the cumulative revenue gap/(surplus) up to FY 2022-23 as detailed in Chapter 7 of the Order.

3.4 COMPUTATIONAL ERROR IN APPROVED O&M EXPENSES OF URAN

MSPGCL's Submission

3.4.1 The Commission, in the Review Order, admitted the incremental O&M expenses, on account of computational error, of Rs. 2.13 Crore and Rs. 2.19 Crore for FY 2017-18 and FY 2018-19 respectively. MSPGCL has claimed the incremental O&M expenses of Rs. 2.13 Crore and Rs. 2.19 Crore for FY 2017-18 and FY 2018-19 respectively. In addition, MSPGCL has claimed the incremental IoWC for the respective years on account of incremental O&M expenses.

Commission's Analysis and Ruling

3.4.2 The Commission, in the Review Order, ruled as under:

"18.10 The corrected O&M expenses would be Rs. 71.77 Crores for FY 2017-18. This would also have an impact on subsequent years as the base figure would get changed. The revised O&M Expenses from FY 2017-18 to FY 2024-25 for Uran Power Station is as under:

Parameters	***True-Up***		***…***
	FY 18	***FY 19***	***…***
Revised Working by correcting the Escalation Factor	*71.77*	*73.57*	*…*
Approved in Order in Case No. 296 of 2019	*69.64*	*71.38*	*…*
Impact	***2.13***	***2.19***	*…*

18.11 The Commission approves the revised O&M expenses for Uran Power Station from FY 2017-18 to FY 2024-25 as mentioned in above Table. However, as the impact of this revision in O&M expenses on around Rs 2 Crore to the entitlement of Rs 19375 Crore for FY 2018-19 i.e. 0.010 %), the Commission will allow the recovery of same as part of next Mid Term Review Petition."

3.4.3 Accordingly, the Commission has approved the incremental O&M expenses of Rs. 2.13 Crore and Rs. 2.19 Crore for FY 2017-18 and FY 2018-19. In addition, the Commission has approved the incremental IoWC of Rs. 0.03 Crore and Rs. 0.03 Crore for FY 2017-18 and FY 2018-19 on account of the incremental O&M expenses.

Table 3.3: Impact of revised O&M expenses for Uran (Rs. Crore)

Particulars	**FY 2017-18**		**FY 2018-19**	
	Claimed	**Approved**	**Claimed**	**Approved**
Incremental AFC	2.16	2.16	2.21	2.21

3.4.4 The Commission has considered the above approved amount in computing the cumulative revenue gap/(surplus) up to FY 2022-23 as detailed in Chapter 7 of the Order.

3.5 COMPUTATIONAL ERROR IN APPROVED O&M EXPENSES OF BHUSAWAL AND KORADI

MSPGCL's Submission

3.5.1 MSPGCL has claimed the incremental O&M expenses of Rs. 5.47 Crore and Rs. 5.61 Crore for FY 2017-18 and FY 2018-19 respectively. In addition, MSPGCL has claimed the incremental IoWC for the respective years on account of incremental O&M expenses.

Commission's Analysis and Ruling

3.5.2 The Commission, in the Review Order, ruled as under:

"19.8 Therefore, this issue qualifies for review. The impact of this revision of O&M expenses for Bhusawal and Koradi stations is as given below:

Particulars	***Station***	***FY 18***	***FY 19***	**…**
Impact (Rs. Crore)	*Bhusawal*	*5.16*	*5.29*	…
	Koradi	*0.14*	*0.15*	

19.9 The Commission approves the revised O&M expenses for Bhusawal and Koradi Power Stations from FY 2017-18 to FY 2024-25 as mentioned in above Table. However, as the impact of this revision in O&M expenses on total entitlement of MSPGCL for the year is very marginal (Impact of around Rs 5.44 Crore on total entitlement of Rs 19375 Crore for FY 2018-19 i.e., 0.028%), the Commission will allow the recovery of same as part of next Mid Term Review Petition."

3.5.3 Accordingly, the Commission has approved the incremental O&M expenses for FY 2017-18 and FY 2018-19. In addition, the Commission has approved the incremental IoWC on account of the incremental O&M expenses.

Table 3.4: Impact of revised O&M expenses for Bhusawal and Koradi (Rs. Crore)

Particulars	**FY 2017-18**		**FY 2018-19**	
	Claimed	**Approved**	**Claimed**	**Approved**
Bhusawal	5.27	3.67	5.40	3.51
Koradi	0.27	0.03	0.28	0.03
Total	**5.54**	**3.70**	**5.67**	**3.54**

3.5.4 The variation in claimed and approved amounts is that MSPGCL's claim is at target Availability whereas, the approved amounts are after prorating for lower actual Availability.

3.5.5 The Commission has considered the above approved amount in computing the cumulative revenue gap/(surplus) up to FY 2022-23 as detailed in Chapter 7 of the Order.

3.6 RSD CHARGES FOR PARLI

MSPGCL's Submission

3.6.1 MSPGCL submitted Parli Units had been retired from 30 November, 2019. The Commission, in the MYT Order approved the RSD charges in line with the principles adopted in previous Orders. The Commission has approved the revised RSD charges comprising of (i) 10% of employee expenses, (ii) interest on loan, (iii) depreciation and

(iv) IoWC (working capital pertaining to proposed components of AFC).

3.6.2 MSPGCL sought review seeking the revised amount considering the depreciation spread across balance useful life of the assets in line with relevant Regulations. Accordingly, MSPGCL has claimed the impact of Rs. 16.93 Crore and Rs. 14.30 Crore for FY 2017-18 and FY 2018-19 respectively.

Commission's Analysis and Ruling

3.6.3 The Commission, in the Review Order ruled as under:

"21.12 The Commission notes that MSPGCL had submitted in its MYT Petition that the Parli Units has been retired from 30 November, 2019. Accordingly, the balance depreciation of assets was proposed to spread across the useful life of assets from 01 April, 2017 to 30 November, 2019 in accordance with the Regulation 27.1(b) of the Tariff Regulations, 2015.

21.13 The Commission, in its MTR Order dated 12 September, 2018 in Case No. 196 of 2017 had approved the revised RSD charges of Parli for FY 2019-20. Accordingly, the RSD charges have been allowed in line with the principles adopted in previous Orders. The Commission has approved the revised RSD charges comprising of (i) 10% of employee expenses, (ii) interest on loan, (iii) depreciation and (iv) IoWC (working capital pertaining to proposed components of AFC).

21.14 The Commission in MYT Order in Case No. 296 of 2019 has only carried out provisional truing up for FY 2019-20 and final truing up will be done at the time of MTR. Accordingly, the Commission is of the view that this issue can be considered at the time of final truing up for FY 2019-210. MSPGCL should submit the complete details of retired units including GFA, Accumulated Depreciation, Revenue from sale of scrap etc, at the time of truing up for FY 2019-20 and the Commission will examine this issue at the time of truing up for FY 2019-20 based on details submitted by MSPGCL."

3.6.4 In reply to the above directive of the Commission, MSPGCL submitted that the details regarding changes in GFA, accumulated depreciation, NTI have been provided in the respective tariff formats of Parli for FY 2019-20.

3.6.5 The Commission has perused the submissions of MSPGCL regarding the differential claim for FY 2017-18 and FY 2019-20. Accordingly, the Commission approves the claim of MSPGCL of Rs. 16.93 Crore and Rs. 14.30 Crore for FY 2017-18 and FY 2018-19 respectively.

3.6.6 The Commission has considered the above approved amount in computing the cumulative revenue gap/(surplus) up to FY 2022-23 as detailed in Chapter 7 of the

Order.

3.7 REVISION OF CAPITAL COST OF KORADI UNITS 8-10

MSPGCL's Submission

3.7.1 Koradi Units 8-10 achieved COD on 17 January, 2017. The Commission, in its Order dated 14 December, 2017 in Case No. 59 of 2017, had considered the estimated LD amount as Rs. 1093.02 Crore. As against the same, MSPGCL has sought the revision of LD amount to Rs. 102.49 Crore:

- MSPGCL has submitted the final LD amount for BTG package as Rs. 102.49 Crore as against the estimated amount of Rs. 824.99 Crore considered by the Commission.
- MSPGCL has submitted the revised LD amount for BoP package as Nil as against the estimated amount of Rs. 268.53 Crore considered by the Commission. MSPGCL submitted that the BoP contractor viz., Lanco Infratech Limited has gone into insolvency proceedings and it had lodged claims with the Insolvency Resolution Professional (IRP) for various balance and pending works. MSPGCL submitted that priority is given to operational and financial creditors and therefore, it could be paid in that manner of priority subject to submission of all proper documentation to liquidator.

3.7.2 MSPGCL submitted that the Commission had deducted 50% of the LD amount from the approved capital cost. In line with the same and based on the revised LD amount, MSPGCL has claimed the revised capital cost as on COD of Rs. 12192.11 Crore as against the approved capital cost of Rs. 11696.85 Crore, thereby, the claimed increase in capital cost as on COD is Rs. 495.26 Crore.

3.7.3 The Commission, in its Order dated 14 December, 2017 in Case No. 59 of 2017 had approved the hard cost of Koradi Units 8-10 and allowed the discharge of liabilities as on COD, as additional capitalisation. The Commission in the MYT Order had considered the opening GFA and additional capitalisation for FY 2017-18 as Rs. 11696.85 Crore and Rs. 39.38 Crore respectively. However, the approved additional capitalisation is exclusive of the discharge of liabilities claimed by MSPGCL during the year.

3.7.4 The Commission, in the Review Order, directed MSPGCL to submit the details of the discharge of undischarged liabilities. MSPGCL submitted the amount of liabilities discharged as Rs. 183.47 Crore, Rs. 12.23 Crore, Rs. 80.23 Crore, Rs. 19.02 Crore and Rs. 19.51 Crore for FY 2017-18, FY 2019-20, FY 2020-21, FY 2021-22 and FY 2022-23 respectively. MSPGCL submitted that the said amounts have been considered as additional capitalisation for the respective years.

3.7.5 Considering the above, MSPGCL has claimed the incremental AFC of Rs. 8.38 Crore, Rs. 47.99 Crore and Rs. 56.31 Crore for FY 2016-17, FY 2017-18, and FY 2018-19 respectively. MSPGCL submitted that the closing balances for FY 2018-19 have been carried forward to FY 2019-20 for which the final true-up has been claimed in the present Petition.

Commission's Analysis and Ruling

3.7.6 The Commission, in the Review Order, ruled as under:

"22.15 The Commission is of the view that MSPGCL had not submitted the correct and complete information and is changing its stand now which will have to be examined in greater detail by MSPGCL. As this is an error on part of the Petitioner in its Petition, therefore, MSPGCL may submit the complete details of Undischarged Liabilities, Status of Liquidated Damages and its impact on computations of Annual Fixed Charges in the upcoming MTR Petition and the Commission may consider the same subject to prudence check."

3.7.7 The Commission sought the justification for the wide variation in the LD amount considered by the Commission in its Order in Case No. 59 of 2017 and the revised LD amount submitted by MSPGCL. In reply, MSPGCL submitted that at the time of approval of capital cost, it had submitted that there is a retained payment of Rs 641.28 Crore towards undischarged liabilities and that the amount of LD will be finalized at the time of contract closure. However, based on the analysis and ruling, the Commission had considered the maximum leviable LD of Rs 1093.02 crore based on the financial audit report subject to finalisation of LD amount.

3.7.8 MSPGCL further submitted that for completion of the project, there is interdependency among BTG and the BoP contractors. Clauses 6.4 and 6.5 of the Special Conditions of Contract of BTG package reads as under:

"6.4 The time stipulated in the 'Project Completion Schedule' for the completion of the 'Trial Operation' shall be deemed to be the essence of the 'Contract'. In the event, the Contractor fails to complete the Trial Operation of the Main Plant within the time period specified in it, he shall pay to the Owner as and by way of liquidated damages as per the provisions of Clause 6.5.

6.5 If ***the Contractor fails to achieve trial operation of the unit within the time period*** *specified in the Project Completion Schedule* ***due to reasons attributable to him*** *then the Owner shall levy Liquidated damages on the Contractor @ 1/2 % of the contract price along with applicable price variation per week of delay or part thereof subject to the maximum 10% of the contract price along with applicable price variation."* **(Emphasis provided)**.

3.7.9 MSPGCL submitted that in light of the legal interpretation of the relevant clauses of the BTG contract, it was considered if MSPGCL can impose LD for not carrying out intermittent activities as per schedule committed by BTG contractor or whether only delay in completion of trial operation is to be considered for imposition of LD. Although the maximum LD leviable on BTG contractor is Rs 824.49 Crore, based on the legal considerations and detailed examination of the terms of the contract, the actual LD that could be levied is only for delays that were exclusive on their part for completion of successful Trial Operation. The legal considerations that prevail in deciding the LD amount in case of BTG contractor are in line with the Delay and Disruption Protocol, published by Society of Construction Law, UK regarding construction projects which states that, "*Where Contractor Delay to Completion occurs or has an effect concurrently with Employer Delay to Completion, the Contractor's concurrent delay should not reduce any Extension of Time due*". In line with the same, MSPGCL has levied LD on BTG contractor for the exclusive delay on their part for completion of successful Trial Operation.

3.7.10 MSPGCL submitted that the BoP contract was programmed in such a way that various activities are completed by the contractor, so as to match with the Project Completion Schedule of Main Plant BTG Package for the Project. As per BoP contract, the Unit-wise completion schedule of BoP facilities with last inputs, is well before completion schedule of BTG contract. However, BoP contractor was running behind the work completion schedule as per contract and there was considerable delay in completion of executed facilities. Further to this, BoP contractor has failed to execute/complete some of the BoP facilities due to their insolvency. Presently, BoP contractor is under liquidation process. Accordingly, MSPGCL had terminated the BoP contract in February 2018, forfeited the Bank Guarantees and subsequently lodged comprehensive claims against BoP contract, to their Liquidator.

3.7.11 MSPGCL submitted that there, being a concurrent delay, it was constrained not to levy the LD on the BTG contractor. For the BoP contract, in line with the relevant clauses of the contract, MSPGCL has levied maximum LD applicable to the tune of 20% of the contract price. Accordingly, the amount of LD levied on BoP contractor is Rs. 267.87 Crore. Since BoP contractor is facing liquidation process, claim against LD amount of Rs. 267.87 Crore is included in comprehensive claim lodged towards Liquidator, against BoP contract. However, till date, no amount has been received from liquidator, against recoverable amount.

3.7.12 The Commission has perused the submissions of MSPGCL regarding the LD amount. As the final LD amount of BTG package has revised, the Commission deems it prudent to consider the same. As regards the LD amount for BoP package, the Commission does not find it prudent to consider the same as Nil when MSPGCL has lodged a claim of Rs. 267.87 Crore towards LD. The claim has been lodged by MSPGCL after it is convinced about it and it can be fairly expected that they would strongly pursue their claim. As submitted by MSPGCL, priority is given over to operational creditors over financial creditors. The Commission is of the view that revising the LD amount of BoP package to Nil at this stage would not be in the best interest of the stakeholders as MSPGCL would not be incited to pursue the matter diligently. Accordingly, the Commission has considered the LD amount of BoP package as Rs. 267.87 Crore. The Commission shall consider the revision of the LD amount of BoP package after finalisation of the matter before the liquidator.

3.7.13 The Commission in the approval of capital cost had deducted 50% of the LD amount (i.e., 50% of Rs. 1093.02 Crore) from the approved capital cost. In line with the same and based on the revised LD amount, the Commission has approved the revised capital cost of Rs. 12058.18 Crore as against the approved capital cost of Rs. 11696.85 Crore, thereby, the approved increase in capital cost as on COD is Rs. 361.33 Crore as against the claim of Rs. 495.26 Crore.

Table 3.5: Capital cost as on COD of Koradi Units 8-10 (Rs. Crore)

Particulars	Approved in Case No. 59 of 2017	Claimed	Approved
Capital cost including IDC (as on COD) (A)	12243.36	12243.36	12243.36
LD amount	1093.02	102.50	370.36
50% of LD (B)	546.51	51.25	185.18
Net capital cost (A-B)	11696.85	12192.11	12058.18
Incremental capital cost as on COD		495.26	361.33

3.7.14 As regards the discharge of liabilities claimed by MSPGCL, the Commission sought the following information:

- package wise details of liabilities discharged during each year;
- supporting documents to substantiate the discharge of liabilities clearly segregating the same package wise and year wise;
- justification for claiming the discharge of liabilities after the cut-off date of 31 March, 2022 in accordance with the provisions of Regulation 25.2(iv) of the MYT Regulations, 2019;
- details of pending liabilities as on 31 March 2023 and the likely date of discharge of such liabilities.

3.7.15 In reply, MSPGCL submitted the details of discharge of liabilities as under:

Table 3.6: Discharge of liabilities for Koradi Units 8-10 as submitted by MSPGCL (Rs.

Crore)

Particulars	BTG	BoP	Total
Retention amount as on COD (A)	414.73	226.55	641.28
Release of retention amount			
FY 2017-18	171.91	11.56	183.47
FY 2018-19	0.00	0.00	0.00
FY 2019-20	12.23	0.00	12.23
FY 2020-21	80.23	0.00	80.23
FY 2021-22	19.02	0.00	19.02
FY 2022-23	19.51	0.00	19.51
Total (B)	302.90	11.56	314.45
Balance amount (C=A-B)	111.84	214.99	326.83
LD (D)	102.49	-	102.49
Final release (C-D)	9.35	-	9.35

3.7.16 MSPGCL submitted the documentary evidence in support of the discharge of liabilities claimed.

3.7.17 As regards the justification for claiming the discharge of liabilities post cut-off date, MSPGCL submitted that the discharge of liabilities got deferred on account of nationwide lockdown due to COVID-19 pandemic. During the COVID period starting from March, 2020, the availability of manpower and resources have been critically hampered which affected the overall timelines for the execution of said works. MSPGCL submitted that despite its efforts to expedite the works, the same are likely to spill over beyond the cut-off date. Regulation 25.2 allows liabilities for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments. MSPGCL requested the Commission to allow the said capitalisation post cut-off date of the project.

3.7.18 As regards the likely date of discharge of pending liabilities of BTG package, MSPGCL submitted that the contract closure for the BTG contract is in final stage and is expected to get completed by end of March 2023 and the balance liabilities would be cleared by March, 2023. In case of BoP package, the contractor is under liquidation; the matter is before National Company Law Tribunal (NCLT) and thus, the decision on release of undischarged liabilities can be taken only after the resolution of NCLT matter.

3.7.19 The Commission has perused the submissions of MSPGCL regarding the discharge of liabilities. Based on the same, the Commission deems it prudent to approve the discharge of liabilities upto the extended cut-off date i.e., 31 March, 2022. As regards the liabilities discharged post the extended cut-off date, viz., from FY 2022-23 onwards, the Commission shall take the final decision on the same at the time of true-up of the respective years, based on the prudence check of MSPGCL's submissions.

3.7.20 Based on the above, the revised capital cost as on COD and discharge of liabilities approved by the Commission for Koradi Units 8-10 is as shown in the Table below:

Table 3.7: Incremental capital cost of Koradi Units 8-10 (Rs. Crore)

Particulars	Approved in Case No. 59 of 2017	Revised claim	Approved
Incremental capital cost as on COD	-	495.26	361.33
Discharge of liabilities post COD			
FY 2016-17	-	0.00	0.00
FY 2017-18	-	183.47	183.47
FY 2018-19	-	0.00	0.00
FY 2019-20	-	12.23	12.23
FY 2020-21	-	80.23	80.23
FY 2021-22	-	19.02	19.02
FY 2022-23	-	19.51	0.00
Sub-total	**-**	**314.46**	**294.95**
Incremental capital cost	**-**	**809.72**	**656.28**

3.7.21 The Commission has approved the impact of incremental capital cost upto FY 2018-19 in this Chapter. The Commission has computed the incremental AFC, that is fully recoverable at target Availability, for the period from FY 2016-17 to FY 2018-19 on account of the incremental capital cost approved in this Order. Further, the incremental AFC recoverable at target Availability has been allowed on pro-rata basis for the years during which the actual Availability is lower than the target Availability.

3.7.22 The discharge of liabilities approved from FY 2019-20 onwards have been considered the additional capitalisation for the respective years in the true-up of the respective years discussed in following Chapters of the Order.

3.7.23 The revision of capital cost necessitates the incremental AFC for period from FY 2016-17 to FY 2018-19 as shown in the Table below:

Table 3.8: Incremental AFC for Koradi Units 8-10 approved by the Commission (Rs. Crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19
Incremental AFC			
Depreciation	1.93	23.92	28.77
RoE	0.82	10.19	25.33
Interest on loan	5.94	25.54	16.01
IoWC	0.16	1.03	1.12
Total	**8.86**	**60.69**	**71.12**
Actual Availability	56.63%	53.98%	46.67%
Target Availability	85.00%	85.00%	85.00%
Incremental AFC to be recovered	**6.11**	**38.54**	**39.11**

3.7.24 Accordingly, the Commission has approved the impact of revision of capital cost of

Koradi Units 8-10 as under:

Table 3.9: Impact of revision of capital cost of Koradi Units 8-10 (Rs. Crore)

Particulars	Claimed	Approved
Incremental AFC		
FY 2016-17	8.38	6.11
FY 2017-18	47.99	38.54
FY 2018-19	56.31	39.11

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

3.8 REVISION OF CAPITAL COST OF CHANDRAPUR UNITS 8&9

MSPGCL's Submission

3.8.1 MSPGCL submitted that in addition to approved additional capitalisation the discharge of liabilities amounting to Rs. 49.09 Crore, Rs. 183.64 Crore and Rs. 13.69 Crore have to be approved for FY 2016-17, FY 2017-18 and FY 2018-19 respectively. Considering the above, MSPGCL has claimed the incremental AFC of Rs. 2.17 Crore, Rs. 23.36 Crore and Rs. 30.05 Crore for FY 2016-17, FY 2017-18 and FY 2018-19 respectively. MSPGCL submitted that the closing balances for FY 2018-19 have been carried forward to FY 2019-20 for which the final true-up has been claimed in the present Petition.

Commission's Analysis and Ruling

3.8.2 The Commission, in the Review Order, ruled as under:

"22.15 The Commission is of the view that MSPGCL had not submitted the correct and complete information and is changing its stand now which will have to be examined in greater detail by MSPGCL. As this is an error on part of the Petitioner in its Petition, therefore, MSPGCL may submit the complete details of Undischarged Liabilities, Status of Liquidated Damages and its impact on computations of Annual Fixed Charges in the upcoming MTR Petition and the Commission may consider the same subject to prudence check."

3.8.3 As regards the discharge of liabilities claimed by MSPGCL, the Commission sought the following information:

- package wise details of liabilities discharged during each year;
- supporting documents to substantiate the discharge of liabilities clearly segregating the same package wise and year wise;
- details of pending liabilities as on 31 March 2019 and the likely date of discharge of such liabilities.

3.8.4 In reply, MSPGCL submitted the details of discharge of liabilities as under:

Table 3.10: Discharge of liabilities for Chandrapur Units 8&9 as submitted by MSPGCL (Rs. Crore)

Particulars	Project	Civil	Total
Retention amount as on COD (A)	291.54	77.98	369.51
Release of retention amount			
FY 2016-17	34.07	15.02	49.09
FY 2017-18	148.05	35.59	183.64
FY 2018-19	4.05	9.64	13.69
FY 2019-20	0.27	1.92	2.19
FY 2020-21	0.50	2.08	2.58
FY 2021-22	0.02	0.06	0.08
Total (B)	186.96	64.31	251.27
Balance amount (C=A-B)	104.58	13.67	118.25

3.8.5 MSPGCL submitted the documentary evidence in support of the discharge of liabilities claimed.

3.8.6 The package wise details of discharge of liabilities submitted by MSPGCL is as shown in the Table below:

Table 3.11: Package wise details of discharge of liabilities for Chandrapur Units 8&9 as submitted by MSPGCL (Rs. Crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	Total
Project							
BTG	10.88	106.16	0.05	0.06	0.00	0.00	
BoP	22.90	41.62	2.67	0.00	0.00	0.00	
Others	0.29	0.27	1.33	0.21	0.50	0.02	
Sub-total	**34.07**	**148.05**	**4.05**	**0.27**	**0.50**	**0.02**	**186.96**
Civil							
BoP	13.51	30.53	1.49	0.00	0.02	0.00	
Others	1.51	5.06	8.15	1.92	2.06	0.06	
Sub-total	**15.02**	**35.59**	**9.64**	**1.92**	**2.08**	**0.06**	**64.31**
Total	**49.09**	**183.64**	**13.69**	**2.19**	**2.58**	**0.08**	**251.27**

3.8.7 As regards the likely date of discharge of pending liabilities, MSPGCL submitted that for assessment of the delays and finalisation of LD and other claims based on such analysis, it has sought 'Third Party Delay Assessment report' for both BTG and as BoP contracts. However, it has not yet finalised and accepted by MSPGCL. The process of finalisation of the same is in advanced stages and is expected to get completed by end of FY 2022-23. Subsequently the finalisation of LD claims will be done and will be communicated to the relevant vendors. Once the claims are accepted by the vendors, decision on release of undischarged liabilities will be taken. As per MSPGCL's assessment this is expected to get completed in FY 2023-24.

3.8.8 The Commission has perused the submissions of MSPGCL regarding the discharge of liabilities. The Commission finds that the discharge of liabilities claimed by MSPGCL upto cut-off date is within the retention amount as on COD. Based on the same, the Commission deems it prudent to approve the discharge of liabilities upto the extended cut-off date i.e., 31 March, 2022. As regards the liabilities discharged post the extended cut-off date, viz., from FY 2022-23 onwards, if any, the Commission shall take the final decision on the same at the time of true-up of the respective years, based on the prudence check of MSPGCL's submissions.

3.8.9 Based on the above, the discharge of liabilities approved by the Commission for Chandrapur Units 8&9 is as shown in the Table below:

Table 3.12: Incremental capital cost of Chandrapur Units 8&9 (Rs. Crore)

Particulars	Claimed	Approved
Discharge of liabilities post COD		
FY 2016-17	49.09	49.09
FY 2017-18	183.64	183.64
FY 2018-19	13.69	13.69
FY 2019-20	2.19	2.19
FY 2020-21	2.58	2.58
FY 2021-22	0.08	0.08
Total	**251.27**	**251.27**

3.8.10 The Commission has approved the impact of discharge of liabilities upto FY 2018-19 in this Chapter. The Commission has computed the incremental AFC, that is fully recoverable at target Availability, for the period from FY 2016-17 to FY 2018-19 on account of the incremental capital cost as on COD approved in this Order. Further, the incremental AFC recoverable at target Availability has been allowed on pro-rata basis for the years during which the actual Availability is lower than the target Availability.

3.8.11 The discharge of liabilities approved from FY 2019-20 onwards have been considered the additional capitalisation for the respective years in the true-up of the respective years discussed in following Chapters of the Order.

3.8.12 Accordingly, the Commission has approved the impact of discharge of liabilities of Chandrapur Units 8&9 as under:

Table 3.13: Impact of discharge of liabilities of Chandrapur Units 8&9 (Rs. Crore)

Particulars	Claimed	Approved
Incremental AFC		
FY 2016-17	2.17	2.17
FY 2017-18	23.36	23.36

Particulars	Claimed	Approved
FY 2018-19	30.05	30.05

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

3.9 REVISION OF CAPITAL COST OF PARLI UNIT 8

MSPGCL's Submission

3.9.1 MSPGCL submitted that in addition to approved additional capitalisation the discharge of liabilities amounting to Rs. 5.17 Crore and Rs. 36.22 Crore have to be approved for FY 2017-18 and FY 2018-19 respectively. Considering the above, MSPGCL has claimed the incremental AFC of Rs. 0.39 Crore and Rs. 4.96 Crore for FY 2017-18 and FY 2018-19 respectively. MSPGCL submitted that the closing balances for FY 2018-19 have been carried forward to FY 2019-20 for which the final true-up has been claimed in the present Petition.

Commission's Analysis and Ruling

3.9.2 The Commission, in the Review Order, ruled as under:

"22.15 The Commission is of the view that MSPGCL had not submitted the correct and complete information and is changing its stand now which will have to be examined in greater detail by MSPGCL. As this is an error on part of the Petitioner in its Petition, therefore, MSPGCL may submit the complete details of Undischarged Liabilities, Status of Liquidated Damages and its impact on computations of Annual Fixed Charges in the upcoming MTR Petition and the Commission may consider the same subject to prudence check."

3.9.3 As regards the discharge of liabilities claimed by MSPGCL, the Commission sought the following information:

- package wise details of liabilities discharged during each year;
- supporting documents to substantiate the discharge of liabilities clearly segregating the same package wise and year wise;
- details of pending liabilities as on 31 March 2019 and the likely date of discharge of such liabilities.

3.9.4 In reply, MSPGCL submitted the details of discharge of liabilities as under:

Table 3.14: Discharge of liabilities for Parli Unit 8 as submitted by MSPGCL (Rs. Crore)

Particulars	Project	Civil	Total
Retention amount as on COD (A)	104.64	23.64	128.28
Release of retention amount			

Particulars	Project	Civil	Total
FY 2017-18	4.49	0.68	5.17
FY 2018-19	35.01	1.21	36.22
FY 2019-20	0.87	0.21	1.08
FY 2020-21	0.00	0.26	0.26
FY 2021-22	0.00	0.00	0.00
Total (B)	40.37	1.29	41.66
Balance amount (C=A-B)	64.27	22.35	86.62

3.9.5 MSPGCL submitted the documentary evidence in support of the discharge of liabilities claimed.

3.9.6 The item wise details of discharge of liabilities submitted by MSPGCL is as shown in the Table below:

Table 3.15: Package wise details of discharge of liabilities for Parli Unit 8 as submitted by MSPGCL (Rs. Crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	Total
Project							
BTG	0.00	3.51	32.45	0.00	0.00	0.00	
BoP	0.00	0.98	1.20	0.87	0.00	0.00	
Others	0.00	0.00	1.36	0.00	0.00	0.00	
Sub-total	**0.00**	**4.49**	**35.01**	**0.87**	**0.00**	**0.00**	**40.37**
Civil							
BoP	0.00	0.00	0.00	0.17	0.00	0.00	
Others	1.08	0.68	1.21	0.04	0.26		
Sub-total	**1.08**	**0.68**	**1.21**	**0.21**	**0.26**	**0.00**	**1.29**
Total	**1.08**	**5.17**	**36.22**	**1.08**	**0.26**	**0.00**	**41.66**

3.9.7 As regards the likely date of discharge of pending liabilities of BTG package, MSPGCL submitted that the contract closure for the BTG contract is in final stage and is expected to get completed by end of March 2023 and the balance liabilities would be cleared by March, 2023. In case of BoP package, the contractor has filed an Arbitration Case against the LD and other penalties levied by MSPGCL and thus, the decision on release of undischarged liabilities can be taken only after the resolution of the matter before the Arbitrator.

3.9.8 The Commission has perused the submissions of MSPGCL regarding the discharge of liabilities. Based on the same, the Commission deems it prudent to approve the discharge of liabilities upto the extended cut-off date i.e., 31 March, 2022. As regards the liabilities discharged post the extended cut-off date, viz., from FY 2022-23 onwards, if any, the Commission shall take the final decision on the same at the time of true-up of the respective years, based on the prudence check of MSPGCL's submissions.

3.9.9 Based on the above, the discharge of liabilities approved by the Commission for Parli Unit 8 is as shown in the Table below:

Table 3.16: Incremental capital cost of Parli Unit 8 (Rs. Crore)

Particulars	Claimed	Approved
Discharge of liabilities post COD		
FY 2017-18	5.17	5.17
FY 2018-19	36.22	36.22
FY 2019-20	1.08	1.08
FY 2020-21	0.26	0.26
FY 2021-22	0.00	0.00
Total	**41.66**	**41.66**

3.9.10 The Commission has approved the impact of discharge of liabilities upto FY 2018-19 in this Chapter. The Commission has computed the incremental AFC, that is fully recoverable at target Availability, for the period from FY 2017-18 and FY 2018-19 on account of the incremental capital cost as on COD approved in this Order. Further, the incremental AFC recoverable at target Availability has been allowed on pro-rata basis for the years during which the actual Availability is lower than the target Availability.

3.9.11 The discharge of liabilities approved from FY 2019-20 onwards have been considered the additional capitalisation for the respective years in the true-up of the respective years discussed in following Chapters of the Order.

3.9.12 Accordingly, the Commission has approved the impact of discharge of liabilities of Parli Unit 8 as under:

Table 3.17: Impact of discharge of liabilities of Parli Unit 8 (Rs. Crore)

Particulars	Claimed	Approved
Incremental AFC		
FY 2017-18	0.39	0.39
FY 2018-19	4.96	4.96

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

3.10 ERROR IN COMPUTATION OF HYDRO DEPRECIATION

MSPGCL's Submission

3.10.1 MSPGCL submitted that in the computation of depreciation on hydro assets there was a line item 'Other Capital Expenses Group no.11' for the depreciation rate was inadvertently considered as 0% by MSPGCL in its tariff formats in Case No. 296 of 2019. The Commission, in the Review Order, had allowed the review on the said issue. Accordingly, MSPGCL has claimed the amount of Rs. 4.62 Crore and Rs. 3.21 Crore for FY 2017-18 and FY 2018-19 respectively.

Commission's Analysis and Ruling

3.10.2 The Commission, in the Review Order, ruled as under:

"23.7 The Commission notes the submission of MSPGCL that it had mistakenly considered 0% rate for other capital expenses group elements, which led to lesser claimed depreciation. The Commission had correctly computed the depreciation, however, as the claimed amount was less than the computed amount, the minimum of the two has been approved.

23.8 The Commission is of the view that as the variation in depreciation amount approved by the Commission is primarily due to error in MSPGCL's submissions, MSPGCL should submit the correct details for all the years in its MTR Petition and the Commission will consider the same subject to prudence check."

3.10.3 Accordingly, the Commission accepts the submission of the MSPGCL and has approved the claim of MSPGCL amounting to Rs. 4.62 Crore and Rs. 3.21 Crore for FY 2017-18 and FY 2018-19 respectively. The Commission has considered the said approved amount in computing the cumulative revenue gap/(surplus) upto FY 2022-23 as detailed in Chapter 7 of the Order.

3.11 TRUE UP OF A&G EXPENSES FOR SOLAR AG FEEDER

MSPGCL's Submission

3.11.1 MSPGCL filed a Petition (Case 172 of 2017) in the matter of removal of difficulties in the implementation of "Mukhya Mantri Solar Agricultural Feeder Scheme", approval of draft Power Purchase Agreement (PPA) & draft Power Sale Agreement (PSA) being executed by MSPGCL with the developer and Maharashtra State Electricity Distribution Co. Ltd., respectively for Agriculture (AG) Feeder Solar Power Projects in Maharashtra. In this matter, MSPGCL requested the Commission for approval of additional A&G expenses to be recovered in the form of trading margin on a per unit basis.

3.11.2 While disposing of the Petition vide Order dated 16 October, 2018, the Commission had ruled the following for recovery of such additional A&G expenses:

"Moreover, MSEDCL in its submission dated June 2, 2018 on this issue of MSPGCL's Administrative charge, has stated that; the administrative expenses incurred by MSPGCL towards implementation of the scheme as an intermediary procurer may be claimed by MSPGCL in their Aggregate Revenue Requirement (ARR) and no administrative charges be added to the PPA tariff. MSEDCL further stated that the Commission may review and decide the administrative charges proposed by MSPGCL in transparent manner as such charges shall has long term impact. In light of above

submissions and circumstances the Commission rejects MSPGCL's prayers regarding approval of the administrative charges (Trading margin) of 5 Paise per unit. Until the trading margin is duly determined, MSPGCL can claim prudent administrative expenses as an intermediary procurer as part of its ARR."

3.11.3 MSPGCL further submitted that even though in the GoM GR dated 14 June, 2017 and 17 March, 2018 it was envisaged that the Government land will be made available at nominal lease rent of Rs. 1 per year, during the initial phase of implementation of the scheme, there were some more expenses that were incurred by MSPGCL for land acquisition and land development. The issue of reimbursement of these expenses was raised by MSPGCL before the CMAG Scheme Implementation Committee headed by the Principal Secretary (Energy), GoM. In the meeting dated 5 April, 2019, the Committee had resolved to approach GoM for reimbursement of these expenses. Accordingly, MSPGCL had approached Energy Department, GoM for reimbursement of such expenses to MSPGCL. However as of now GoM has not made any reimbursement of such land acquisition expenses incurred by MSPGCL. Therefore, MSPGCL requested the Commission to consider these expenses for reimbursement through ARR as directed in the Order dated 16 October, 2018 in Case No. 172 of 2017.

3.11.4 In view of the above, MSPGCL has claimed the expenses incurred by it on development of solar projects under the CMAG Solar Scheme. MSPGCL has claimed the amounts of Rs. 11.56 Crore, Rs. 1.07 Crore and Rs. 1.11 Crore for FY 2019-20, FY 2020-21 and FY 2021-22 respectively.

Commission's Analysis and Ruling

3.11.5 The Commission directed MSPGCL to substantiate the claimed amounts in terms of Rs. /kWh in similar terms of trading margin. In reply, MSPGCL submitted that being implementation agency for CMAG scheme, the land parcels are to be made available to MSPGCL by GoM on nominal lease rent. MSPGCL is required to develop the solar projects on these land parcels through Public Private Partnership (PPP) mode where the selected PPP Solar Power Developer (SPD) carries out installation, commissioning and O&M for the project. The selection of the SPD is to be done through competitive bidding process as per MoEF / MoP guidelines. However, the responsibility of carrying out preliminary land development and related activities is on MSPGCL. So, at some places there was need to carry out activities like land development, fencing etc. Thus, in initial period for the scheme, especially during FY 2018-19 and FY 2019-20, when the land parcels were being developed for further tenderization process, MSPGCL has incurred expenses on these land development activities. Also, during such initial period, there is incurrence of essential administrative expenses like movement of manpower for assessment and surveying land parcels, establishment of office infrastructure at district level offices etc. These expenses are onetime expenses and are not necessarily directly connected to the actual capacity installed during the period.

3.11.6 MSPGCL submitted that it has envisaged to bring approximately 400 MW solar PV capacity through PPP route. Based on such land availability, during the period FY 2018-19 and FY 2019-20, MSPGCL was carrying out tenderization for solar capacity addition of 200 MW under CMAG scheme. Therefore, the expenses incurred are relevant to such envisaged capacity. However, actual capacity installed during the period was only 4 MW. Apparently during this period, the actual generation was only meagre 10 MU. However, when all such 200 MW envisaged capacity is installed, the expected generation will be more than 300 MU. MSPGCL submitted that it will not be appropriate to assess the 'per unit' impact of MSPGCL costs on simplistic 'costs claimed in a year /generation in the year' manner.

3.11.7 MSPGCL submitted that in order check the real impact, the spread of such expenses over the life of the projects and possible generation when all envisaged capacity is available has to be considered. The normal administration costs claimed are around Rs. 1 Crore per year during FY 2017-18 to FY 2021-22. With generation expected in the range of 300 MU from the total envisaged capacity and expenses per year after factoring the spread of land development and initial costs along with regular administrative expenses remaining in the range of Rs. 2-3 Crore per year, therefore, MSPGCL's claim per unit could be in the range of 6 to 9 paise per unit.

3.11.8 The Commission has perused the submissions of MSPGCL and has admitted administrative expenses for FY 2019-20 to FY 2021-22 as claimed by MSPGCL in accordance with the Commission's ruling in its Order in Case No. 172 of 2017. **The Commission directs MSPGCL to pass through the expenses reimbursed by GoM to MSEDCL and submit the status of the same in the MYT Petition for the next Control Period**. The Commission has considered the said approved amount in computing the cumulative revenue gap/(surplus) upto FY 2022-23 as detailed in Chapter 7 of the Order.

3.12 ORDER IN CASE NO. 127 OF 2021(TRANSACTIONS PERTAINING TO CASE-IV BIDDING)

MSPGCL's Submission

3.12.1 MSPGCL had floated a tender on 4 August 2017 under Case -IV bidding guidelines, for purchase of 400 MW power on short term basis for the period of 8 months beginning from 1 April, 2018 from Independent Power Plants (IPPs) considering the use of WCL coal. Accordingly, the bids were submitted on 8 September 2017. After following E-tendering process, MSPGCL issued Letter of Award (LoA) to Dhariwal Infrastructure Ltd. (DIL) for 185 MW against one Unit of Nashik Thermal Power Plant and M/s Ideal Energy Projects Ltd. (IEPL) for 215 MW against Bhusawal Unit 3, on 20 December, 2017 and Detail Procedure Agreement (DPA) and Tripartite agreement (TPA) was signed on 14 March 2018.

3.12.2 As per Case IV guidelines, for floating a tender, ceiling tariff was set as lowest of the variable cost of the generating stations whose power is to be replaced by generation from IPP. Hence the benefit envisaged is on account of reduction in transportation cost and operational efficiency of the generating station of IPP. This implies that the operational efficiency of the IPP needs to be better than the MSPGCL's generation station whose power is required to be replaced so as to result in reduction in cost.

3.12.3 As per Article 8 of DPA signed between MSPGCL and IPP, the coal reconciliation is required to be undertaken with respect to coal consumed and supply of electricity to MSEDCL with respect to quality and quantity of coal at loading end considering the efficient operational parameter. Any excess/shortfall quantity of coal transferred to the Seller shall be adjusted in the next quarter and to be adjusted accordingly. Accordingly, based on the coal quantum delivered to IPP at loading end, electricity generation during the said period and actual GCV (on Equilibrated basis) of coal at loading end, shortfall / surplus of heat after considering the operational parameter is calculated. The reconciliation of the coal quantity takes into consideration, the quantum of coal, Efficient Operational norm (SHR and Auxiliary Consumption as per Bid) and GCV_{EQB}.

3.12.4 The final reconciliation of transactions under Phase I of the Case IV arrangement (i.e., 13 April 2018 to 13 January 2019) to DIL stands completed. Based on the coal quantum issued to DIL and related GCV_{EQB}, a reconciliation was carried out resulting in a surplus coal quantity available equivalent to 57.04 MU. Against this surplus quantity, DIL has supplied additional energy commencing from 12 May 2020.

3.12.5 After the Bid submission date i.e., 8 September 2017, there were following changes in relation to price of Coal:

- Increase in Surface Transportation Cost (STC) by Rs. 34/MT w.e.f. 21 November, 2017
- Levy of Evacuation Facilitation Charges of Rs. 50/MT w.e.f. 19 December, 2017
- Increase Basic Rate by Rs. 48/MT w.e.f. 8 January, 2018
- Increase in Surface Transportation Cost (STC) by Rs. 9/MT w.e.f. 26 December, 2018.

3.12.6 Since the date of event of notification of such applicability of charges is post submission of the bid date, accordingly as per clause 8.2 (viii) of the MoP policy and clause 10.2.1 of the PPA, the variation in the coal price post bidding date can be claimed by Seller and to be recovered under FAC mechanism by MSPGCL from MSEDCL. MSPGCL submitted that such applicability of charges was on the coal procured by MSPGCL also resulting in higher landed prices which was pass through under FAC mechanism as per the MYT Regulations 2015.

3.12.7 Accordingly, MSPGCL submitted that the total claim due to impact of change in prices of coal due to multiple events occurring during the contract period and the net impact of Debit / Credit Notes is Rs. 7.821 Crore. In compliance with the direction of the Commission in Case No. 127 of 2021, the same has been claimed in the present Petition.

Commission's Analysis and Ruling

3.12.8 The Commission, in the Order dated 21 July, 2022 in Case No. 127 of 2021 ruled as under:

*"**ORDER***

1. The Case No. 127 of 2021 is partly allowed.

2. The Commission allows the amount of Rs. 7.821 crore as a Change in Law claim to MSPGCL for DIL Case IV Phase -I coal tolling arrangement.

***3. MSPGCL may claim this amount in its upcoming MTR Petition.**"*

3.12.9 Accordingly, the Commission has considered the amount of Rs. 7.821 Crore as claimed by MSPGCL. The Commission has considered the said approved amount in computing the cumulative revenue gap/(surplus) upto FY 2022-23 as detailed in Chapter 7 of the Order.

3.13 ORDER IN CASE NO. 128 OF 2021(TRANSACTIONS PERTAINING TO CASE-IV PHASE II BIDDING)

MSPGCL's Submission

3.13.1 MSPGCL floated tender for implementation of Case IV Phase II, on 10 June 2019, on DEEP portal considering ceiling tariff of Rs. 2.890/kWh for purchase of 380 MW power on short term basis for a period of 12 months on Round the Clock (RTC) basis from IPPs considering the use of WCL coal. Accordingly, the bids were submitted on 10 July 2019. After following E-tendering process, MSPGCL issued LoA to DIL for 185 MW against one Unit of Nashik Thermal Power Plant and IEPL for 195 MW against Bhusawal Unit 3, on 13 September 2019. The DPA and Tripartite agreement was signed with DIL on 18 October 2019 for the contract period starting from 01 November, 2019 to 31 October, 2020. Post the completion date of the Contract i.e., 31 October 2020, the contract was further extended multiple times till 31 March 2022. As IEPL has not fulfilled the conditions as specified in LOA, the agreement was not executed with IEPL.

3.13.2 As per Article 8 of DPA signed between MSPGCL and IPP, the coal reconciliation is required to be undertaken with respect to coal consumed and supply of electricity to MSEDCL with respect to quality and quantity of coal at loading end considering the efficient operational parameter. Any excess/shortfall quantity of coal transferred to the Seller shall be adjusted in the next quarter and to be adjusted accordingly. The reconciliation of the coal quantity takes into consideration, the quantum of coal, Efficient Operational norm (SHR and Auxiliary Consumption as per Bid) and GCV_{ARB} (as per amendment dated 25th October 2018). The final reconciliation of heat energy is carried out, on the basis of which the coal quantum is determined.

3.13.3 The final heat reconciliation of transactions under Phase II of the Case IV arrangement (i.e., 1 November 2019 to 31 March 2022) to DIL is completed and only the impact of debit notes / (credit) notes to be shared between MSPGCL and DIL which is pending as the same is awaited from Coal India Limited (CIL) / WCL. Based on the coal quantum issued to DIL and related GCV_{ARB}, a reconciliation was carried out resulting in a deficit coal quantity which means that to generate the power, DIL has utilised additional coal from alternate source and hence there was no surplus coal of MSPGCL available with DIL.

3.13.4 After the Bid submission date i.e., 10 July 2019, there were following changes in relation to price of Coal:

- Increase in price of mine specific coal by Rs. 559.82/MT.
- Increase in Surface Transportation Cost (STC) w.e.f. 24 December, 2019
- Increase in basic price of coal by Rs. 10/MT across all grades w.e.f. 1 December, 2020.
- Increase in evacuation charges by Rs. 10.50/MT w.e.f. 1 August, 2021.
- Increase in STC w.e.f. 25 December, 2021

3.13.5 Since the date of event of notification of such applicability of charges is post submission of the bid date, accordingly as per clause 8.2 (viii) of the MoP policy and clause 10.2.1 of the PPA, the variation in the coal price post bidding date can be claimed by Seller and to be recovered under FAC mechanism by MSPGL from MSEDCL. MSPGCL submitted that such applicability of charges is also on the coal procured by it resulting in higher landed charges and is pass-through under FAC mechanism as per MYT Regulations 2019.

3.13.6 Based on the above said notification / Circular of WCL / CIL, the change in law claim has been calculated for each event considering the coal procured from CIL and despatch to DIL and accordingly, the total amount works out to Rs. 69.74 Crore.

3.13.7 The Commission, in its Order dated 14 September, 2022 in Case No. 128 of 2021 admitted the submission of MSPGCL that the change in the cost of coal on account of MSP, basic price of coal cost, evacuation facility charges and the surface transportation charges were after the submission of the Bids by the Bidders. The actual impact of change in price of coal is Rs. 69.74 Crores based on the reconciliation of coal supplied under Case IV Phase II. The Commission in its Order in Case No. 128 of 2021 allowed the total claim of Rs 69.74 Crores provisionally due to impact of change in prices of coal due to multiple events occurring during the contract period as Change in Law as per sub-clause 'e' of "Change in Law" definition under MYT Regulations, 2019, subject to prudence check during MTR Proceedings.

3.13.8 As regards the carrying cost, the Commission had not admitted the carrying cost due to two events viz., (i) increase in basic price of coal w.e.f. 1 December, 2020 and (ii) increase in evacuation charges w.e.f. 1 August, 2021 and ruled that the same will be dealt with in the MTR proceedings.

3.13.9 In this regard, MSPGCL submitted as under:

- Post the FY 2020, there was a global havoc of COVID-19 pandemic which was at the peak till November, 2020. Post that again a second wave of COVID-19 pandemic was widespread from February-June 2021 which has also affected the operations of the employees of MSPGCL resulting in more than 100 casualties.
- MSPGCL submitted that there was an exemption from Limitation Act vide the Order dated 23 March, 2020 passed by Hon'ble the Supreme Court in Suo Motu Petition No. 3/2020 wherein limitation period of all proceedings, before all judicial/ quasi-judicial got extended till 28 February 2022.
- MSPGCL submitted that considering the widespread of COVID-19 during the said period and exemption from Limitation Act, there was no specific delay in filing the Petition in Case No. 128 of 2021. Post the control of COVID-19 second wave in July 2021, MSPGCL had submitted the Petition in September 2021. Also, the massive data related to coal quantity and its reconciliation was undertaken with the coal office which is situated in Nagpur, resulting in large time period in collation the data and preparation of the Petition. Therefore, MSPGCL requested the Commission to condone the delay in filing the Petition in Case No. 128 of 2021 and allow the carrying cost for the Change in Law Event occurred on 01 December 2020 related to change in price of coal.
- With respect to Change in Law event dated 1 August 2021 regarding the increase in evacuation charges, the delay in filing the Petition is only 17 days which was again due to compilation of huge data and to claim the impact of the change in law in the single petition to avoid any multiple proceedings.
- Accordingly, MSPGCL requested the Commission to allow the Change in Law claim on all the events based on the above submissions.

Table 3.18: Impact of change in law approved in Case No. 128 of 2021 as submitted by MSPGCL

S. No.	Particulars	Unit	02.11.2019 to 31.12.2020	01.01.2021 to 31.05.2021	01.06.2021 to 31.03.2022	Total
	Coal Quantity	MT	12,38,349.80	4,40,527.85	7,82,142.24	24,61,019.89
	Mine Specific Coal	MT	2,71,330.69	1,53,788.33	7,21,175.92	11,46,294.94
	% of Mine Specific Coal	MT	21.91%	34.91%	92.21%	46.58%
1	Impact due to Mine Specific	Rs. Crore	15.19	8.61	40.37	64.17

S. No.	Particulars	Unit	02.11.2019 to 31.12.2020	01.01.2021 to 31.05.2021	01.06.2021 to 31.03.2022	Total
2	Impact due to STC	Rs. Crore	1.32	0.51	1.41	3.24
3	Impact due to Evacuation Charges	Rs. Crore	-	-	0.68	0.68
4	Impact due to Revision in Coal Prices	Rs. Crore	0.12	0.55	0.97	1.64
5	**Total claim**	Rs. Crore	**16.63**	**9.67**	**43.44**	**69.74**
6	Carrying cost	Rs. Crore				7.83
	Grand Total	Rs. Crore				**76.57**

Commission's Analysis and Ruling

3.13.10 The Commission, in the Order dated 14 September, 2022 in Case No. 128 of 2021 has ruled as under:

*"**ORDER***

1. The Case No. 128 of 2021 is partly allowed.

2. The Case no. 48 of 2022 is disposed of in terms of the reliefs granted in para-No. 34 of the Order.

3. The Commission provisionally allows the amount of Rs. 69.74 crore as a Change in Law claim to MSPGCL from MSEDCL in Case IV Phase -II coal tolling arrangement subject to prudence check during the upcoming MTR proceedings.

4. The Commission allows the claim of DIL for carrying cost (as approved in Para 34).

***5. MSPGCL shall submit the final reconciled data pertaining to this claim in its upcoming MTR Petition.**"*

3.13.11 The Commission has perused the submissions of MSPGCL. In line with the Commission's Order in Case No. 128 of 2021, the Commission approves the principal amount as claimed by MSPGCL.

3.13.12 As regards the carrying cost, the Commission, in its Order in Case No. 128 of 2021 ruled as under:

*"34. **Issue (g): What are the modalities for carrying cost**:*

34.1 It is well settled principle that compensation on account of Change in Law provisions has to be granted along with carrying cost so as to restore the affected party to same economic position as if such Change in Law event has not occurred.

34.2 The Commission notes that DIL has claimed carrying cost at the rate of 1.25% per month in terms of Clause 10.4.2 and 10.5.2 of the DPA dated 18 October, 2019.

34.3 The Commission notes the submission of MSPGCL that the clause 10.4.2 refers *to payment of interest in case of any amount which is payable upon adjudication of dispute. Further, the clause 10.5.2 in in respect of late payment surcharge is in view of nonpayment by MSPGCL. There is no delay whatsoever from MSPGCL in making any payment nor has DIL has raised any such demand for late payment surcharge, and it has for the first made claim of carrying cost by relying on certain clauses of DPA as mentioned herein above which nowhere specify the levy of carrying cost as claimed by DIL.*

34.4 The Commission finds that in its earlier Order dated 31 December 2021 in Case No. 25 of 2020 (TPREL vs MSEDCL- Implementation of the Appellate Tribunal for Electricity (ATE)'s Judgment dated 20 September 2021 in Appeal No. 215 of 2021), it has provided the carrying cost.

34.5 The Commission notes that there is no provision of the carrying cost in the DPA. The rate of LPS as sought by DIL which is 1.5% per month is a penal charge for the delayed payment of the Invoices and thus cannot be considered for carrying cost.

34.6 The MYT Regulations on the requirement of the working capital has specified that the rate of interest on working capital shall be on normative basis and shall be equal to the one year Marginal Cost of funds based Lending Rate (MCLR) declared by SBI from time to time plus 150 basis points.

34.7 In absence of any specific provision in the DPA, the Commission is inclined to rely on the provisions of the MYT Regulations, 2019.

34.8 The Commission also notes that there were five events of the Change in Law as under:

- *a) Mine Specific Coal Charges (w.e.f. 01.11.2019),*
- *b) Surface Transportation Charges (w.e.f. 24.12.2019),*
- *c) Change in Basic price of coal (w.e.f. 1.12.2020)*
- *d) Evacuation facility charges (w.e.f. 01.08.2021),*
- *e) Change in Surface Transportation Charges (w.e.f. 25.12.2021).*

34.9 It is pertinent to note that first two events (1 November, 2019 & 24 December, 2019) were prior to Notification of the Grid Code Regulations, 2020 which were notified on 2 September, 2020. Therefore, these two events are out of the ambit of the Grid Code Regulations, 2020.

34.10 The third event of the Change in Basic price of the Coal has occurred on 1

December, 2020. However, the Petition was filed by MSPGCL on 17 September, 2021 after a delay of almost nine months. Even if the claim of Change in Law is allowed on account of the condonation of delay on account of the Order dated 23 March, 2020 passed by Hon'ble the Supreme Court, the Commission is of the view that passing the carrying cost for these nine months to consumers is not justified. The same will be dealt accordingly in the MTR proceedings.

34.11 Regarding fourth Change in Law Events (dated 1 August, 2021) the Commission notes that there is delay of 17 days. The reasons and the decision stated at para 34.10 will be applicable in this case also.

34.12 The Commission notes that the fifth Event of the Change in Law claim (25 December, 2021) occurred after filing this Petition on 17 September, 2021.

34.13 Accordingly, the Commission allows claim of carrying cost at the rate of one year Marginal Cost of funds based Lending Rate (MCLR) declared by SBI from time to time plus 150 basis points on above compensation amount from the date of actual payment till date of this Order excluding the carrying cost for two events for periods as specified in paragraph 34.10 & 34.11 above."

3.13.13 The Commission has considered the said approved amount in computing the cumulative revenue gap/(surplus) upto FY 2022-23 as detailed in Chapter 7 of the Order. Based on the submissions of MSPGCL in the present Petition, the Commission has allowed the carrying cost as claimed by MSPGCL.

3.14 ORDERS IN CASE NOS. 168 OF 2020 AND 132 OF 2021 (SERVICE TAX MATTERS)

MSPGCL's Submission

3.14.1 MSPGCL had filed the Petition in Case No. 168 of 2020 seeking removal of difficulties with regard to payment of Rs. 130.46 Crore against demand of Service Tax liability claimed by Water Resource Department (WRD), GoM for the period from FY 2009-10 to FY 2014-15. The Commission vide the Order dated 24 November, 2020 allowed recovery of Rs 130.46 Crore as compensation under change in law and directed MSPGCL to claim the said amount in MTR petition.

3.14.2 MSPGCL had also filed the Petition in Case No. 132 of 2021 seeking removal of difficulties with regard to payment of Service Tax and Goods and service Tax (GST) on lease rent for its hydro stations claimed by WRD, GoM. Vide the Order dated 10 March, 2022, the Commission allowed the principal amount towards Service Tax excluding interest and penalty for the Service Tax claim for the period FY 2015-16 to first quarter of FY 2017-18 for 27 hydro stations and for the period from FY 2012-13 to first quarter of FY 2017-18 for Ghatghar PSS, and Service Tax liability for the period July, 2017 to December, 2017 for these Stations.

3.14.3 Accordingly, MSPGCL has claimed the total amount of Rs. 376.09 Crore.

Commission's Analysis and Ruling

3.14.4 The Commission, in the Order dated 24 November, 2020 in Case No. 168 of 2020 ruled as under:

*"**ORDER***

…

2. The amount of Rs 130.46 Crores qualifies for compensation under Change in Law provisions.

***3. MSPGCL may claim the amount of Rs. 130.46 crore in its upcoming MTR Petition.**"*

3.14.5 Accordingly, the Commission has considered the amount of Rs. 130.46 Crore as approved in Case No. 180 of 2020. The Commission has considered the said approved amount in computing the cumulative revenue gap/(surplus) upto FY 2022-23 as detailed in Chapter 7 of the Order.

3.14.6 The Commission, in the Order dated 10 March, 2022 in Case No. 132 of 2021 ruled as under:

*"**ORDER***

1. The Case No. 132 of 2021 is partly allowed.

2. The Commission allows the principal amount towards Service Tax excluding interest and penalty for the Service Tax claim for the period FY 2015-16 to first quarter of FY 2017-18 for 27 HEP's and for the period FY 2012-13 to first quarter of FY 2017-18 for Ghatghar PSS, and Service Tax liability for the period July, 2017 to December, 2017 for these Stations.

***3. MSPGCL may claim only the Principal amount of the Service Tax in its upcoming MTR Petition.**"*

3.14.7 The Commission has perused the claim of MSPGCL in this regard. Accordingly, the Commission approves the amount of Rs. 245.63 Crore claimed by MSPGCL. The Commission has considered the said approved amount in computing the cumulative revenue gap/(surplus) upto FY 2022-23 as detailed in Chapter 7 of the Order.

4 FINAL TRUE-UP FOR FY 2019-20

4.1 BACKGROUND:

4.1.1 The Commission vide the MYT Order for 3rd Control Period from FY 2016-17 to FY 2019-20 dated 30 August, 2016 in Case No. 46 of 2016 approved the tariff for FY 2019-20. The new Units 8-10 at Koradi, Units 8&9 at Chandrapur and Unit 8 at Parli, were not covered in the Commission's Order dated 30 August, 2016 in Case No. 46 of 2016. Vide its Order dated 14 December, 2017 in Case No. 59 of 2017 the Commission had approved the final capital cost and tariff for Koradi Units 8-10, Chandrapur Units 8&9 and Parli Unit 8 from COD of the respective Units up to FY 2019-20 (i.e., end of the 3rd MYT Control Period). The Commission vide the MTR Order for 3rd Control Period from FY 2016-17 to FY 2019-20 dated 1 September, 2018 in Case No. 196 of 2017 approved the revised tariff for FY 2019-20.

4.1.2 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. 296 of 2019 approved the provisional true-up for FY 2019-20. MSPGCL, 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. 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 certain lapses on the part of MSPGCL in the present tariff proceedings. Several discrepancies were observed in the Original Petition as well as Revised Consolidated Petition filed by MSPGCL, which were subsequently rectified by MSPGCL after the Commission sought clarifications. The Commission directs MSPGCL to take adequate caution in its submissions made before the Commission.

4.2 NORMS OF OPERATION

4.2.1 The norms of operation specified under the MYT Regulations, 2015 for thermal generating stations are as follows:

(i) Availability
(ii) Plant Load Factor (PLF)
(iii) Auxiliary Energy Consumption (AEC)
(iv) Gross Station Heat Rate (GSHR)
(v) Secondary fuel oil consumption (SFOC).
(vi) Transit and handling loss

4.2.2 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. MSPGCL has submitted the actual performance in FY 2019-20, which is in variation of the norms approved by the Commission. The performance was better than the norms in some of the cases and inferior in some of the cases. MSPGCL submitted the reasons for the actual performance that is inferior to the norms. MSPGCL's submissions on the actual performance in FY 2019-20 and the Commission's analysis is detailed hereunder.

4.3 AVAILABILITY

MSPGCL's Submission

4.3.1 MSPGCL submitted that the availability of Bhusawal, Nasik, Paras, Khaperkheda and Chandrapur have been more than 80%. The actual Availability achieved for FY 2019-20 is shown in the following Table below:

Table 4.1: Actual Availability submitted by MSPGCL for FY 2019-20

Station/unit	Normative	Actual
Bhusawal	80.00%	96.54%
Chandrapur	80.00%	61.76%
Khaperkheda	85.00%	73.38%
Koradi	72.00%	67.32%
Nashik	80.00%	81.14%
Uran	85.00%	44.92%
Paras Units 3&4	85.00%	81.87%
Parli Units 6&7	85.00%	78.59%
Khaperkheda Unit 5	85.00%	81.87%
Bhusawal Units 4&5	85.00%	83.72%
Koradi Units 8-10	85.00%	53.76%
Chandrapur Units 8&9	85.00%	82.09%
Parli Unit 8	85.00%	67.48%

4.3.2 MSPGCL submitted the Maharashtra State Load Dispatch Centre (MSLDC) Certificate for actual Availability during FY 2019-20. MSPGCL further submitted that the following factors have adversely affected the Availability of its Stations in FY 2019-20.

4.3.3 **Low System demand:** Approximately 12% of the gross generation during the year could not materialise due to lower system demand for which zero or no schedule was given to the generating stations (more than 90% in case of Bhusawal).

4.3.4 **Coal related Issues:** The overall materialisation of coal during the year was around 70% which led to an overall generation loss of around 4% to 5%. Besides, the poor quality of coal and problems related to wet coal during monsoon also played significant impact during the monsoon months.

4.3.5 **Lower Availability of gas:** As against an overall requirement of 3 MMSCMD of gas, the supply was barely around 45% of the overall requirement. Accordingly, the availability of the station (corresponding to fuel availability) was lower, even though the machines were available for more than 90%.

4.3.6 MSPGCL submitted that it had filed the Petition in Case No. 151 of 2017 for removal of difficulties in the matter of coal shortage and its adverse impact on its Stations under Section 102 of the MYT Regulations, 2015. However, the Commission had disposed of the matter without providing any relief to MSPGCL. Aggrieved by the Commission's Order, MSPGCL has filed Appeal No. 303 of 2018 before Hon'ble the Appellate Tribunal of Electricity (ATE) and the matter is sub-judice. Subject to the outcome of the said Appeal, MSPGCL has carried out the pro-rata reduction in AFC for non-achievement of target Availability, except for Uran. For Uran, MSPGCL requested the Commission to allow full AFC at actual Availability considering that the gas shortage as beyond its control.

Commission's Analysis and Ruling

4.3.7 The Commission sought the generation loss for each station on account of each reason for lower Availability. In reply, MSPGCL submitted the generation loss for each station due to the following reasons:

- Annual overhaul
- Tolling of coal to IPP
- Backing down
- Zero schedule/RSD
- Water shortage
- Supercritical coal stock
- Poor coal quality
- Wet coal problem
- System problem
- O&M factors

4.3.8 The Commission observed that the total expected generation was 85644 MU out of which the loss is of 40014 MU amounting to 47% of the probable generation. Major reasons for generation loss are zero schedule/RSD and O&M factors amounting to 28% and 29% of the total generation loss. The Commission finds that significant improvement in generation availability is possible with improvement in O&M practices. The loss of generation due to shortfall in its O&M processes not only impacts MSPGCL, but it also impacts MSEDCL since they are required to procure this power through alternate sources, which could be costlier than the power from MSPGCL stations. **The Commission directs MSPGCL to submit a plan within three months to ensure the improvement in its O&M practices for reduction in generation loss due to O&M factors**.

4.3.9 As regards coal shortage, the Commission sought the following details from MSPGCL:

- Reasons for coal shortage (lower supply by CIL/ non-availability of rakes/ lower offtake by MSPGCL etc.).
- Offers from CIL to import coal for meeting the coal shortage under the Fuel Supply Agreements (FSAs).
- Options explored for procuring coal from alternate sources (e-Auction/imported etc.).

4.3.10 In reply, MSPGCL submitted that Order Booking Program given by MSPGCL (requisition quantity) was based on the FSA/Bridge Linkage/MoU quantum available with the stations and as agreed with the Coal companies. The shortfall is on account of lower realization against such requisition which is partly on account of lower coal available with the coal companies and partly on account of rake shortages. As regards imported coal, MSPGCL submitted that there was no proposal to purchase imported coal from CIL. As regards alternate options of coal procurement, MSPGCL submitted the price of coal under e-auction route is offered at a premium as compared to the declared price or the mine specific price. Not only does the proposition become costly, non-availability of rail connectivity/higher transportation cost through road mode makes the landed cost even higher. Besides, there are always issue of lower GCV of coal received from domestic sources and the effective price in Rs/kcal terms for such coal becomes unviable from merit order perspective. MSPGCL has therefore not considered any purchase through e-auction route. The Commission opines that such simplistic approach of handling of coal shortage is improper and the management needs to carry out a scientific study on the alternative of procurement of coal and the financial impact of the same. **MSPGCL shall submit its detailed action plan for long term solution while filing the MYT petition for the next control period.**

4.3.11 The Commission has sought the supporting documents to substantiate the actual gas receipt in FY 2019-20. In reply, MSPGCL submitted that since gas is supplied through a pipeline, entire quantum of gas supplied during the period was converted into electrical energy. MSPGCL submitted the details of actual gas receipts for FY 2019-20. The Commission had allowed the recovery of full AFC for Uran GTPS in the final true-up for FY 2012-13 to FY 2018-19 considering the shortage of gas as uncontrollable. In line with that approach, the recovery of full AFC, as trued-up in this Order has been allowed for Uran at actual Availability for FY 2019-20.

4.3.12 The recovery of full AFC is allowable at target Availability. The matter of pro-rata reduction in AFC for non-achievement of target Availability due to coal shortages is sub-judice before Hon'ble the ATE. As the actual Availability is lower than the target Availability for some of the Stations, the Commission has approved the recovery of trued-up AFC for FY 2019-20 on pro-rata basis, for these Stations (except for Uran). For Uran, the Commission has approved the recovery of full trued-up AFC for FY

2019-20 at actual Availability considering the shortage of gas as uncontrollable factor.

4.4 PLANT LOAD FACTOR (PLF)

MSPGCL's Submission

4.4.1 MSPGCL submitted the actual PLF for FY 2019-20 as shown in the Table below:

Table 4.2: PLF submitted by MSPGCL for FY 2019-20

Station/Unit	Approved in provisional true-up	Actual
Bhusawal	42.27%	2.46%
Chandrapur	68.47%	54.91%
Khaperkheda	69.90%	53.05%
Koradi	49.34%	13.34%
Nashik	68.83%	42.35%
Uran	50.71%	44.10%
Paras Units 3&4	78.39%	61.77%
Parli Units 6&7	51.37%	34.77%
Khaperkheda Unit 5	77.21%	75.33%
Bhusawal Units 4&5	70.63%	59.80%
Koradi Units 8-10	62.40%	50.32%
Chandrapur Units 8&9	77.54%	76.10%
Parli Unit 8	51.37%	38.82%

4.4.2 MSPGCL submitted the Maharashtra State Load Dispatch Centre (MSLDC) Certificate for actual PLF during FY 2019-20.

Commission's Analysis and Ruling

4.4.3 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 PLF of all the stations is lower than the target PLF for incentive and hence MSPGCL is not entitled for PLF incentive during FY 2019-20.

4.5 AUXILIARY ENERGY CONSUMPTION (AEC)

MSPGCL's Submission

4.5.1 The actual AEC achieved for FY 2019-20 is as shown in the Table below:

Table 4.3: Actual AEC submitted by MSPGCL for FY 2019-20

Station/Unit	Normative	Actual
Bhusawal	10.96%	43.91%
Chandrapur	8.67%	9.25%
Khaperkheda	9.70%	10.68%
Koradi	9.91%	15.65%

Station/Unit	Normative	Actual
Nashik	11.00%	11.61%
Uran	3.00%	2.82%
Paras Unit 3&4	8.50%	10.50%
Parli Unit 6&7	8.50%	10.98%
Khaperkheda Unit 5	6.00%	5.86%
Bhusawal Unit 4&5	6.00%	6.28%
Koradi Units 8-10	6.00%	8.11%
Chandrapur Units 8&9	6.00%	6.34%
Parli Unit 8	8.50%	10.43%

Commission Analysis and Ruling

4.5.2 The actual AEC is higher than normative for all stations except Uran and Khaperkheda Unit 5. The Commission has considered the Auxiliary Consumption as a controllable parameter in accordance with the MYT Regulations, 2015. Hence, the difference between the actual AEC and normative AEC has been considered for computing the sharing of efficiency gains and losses as per principles laid out in MYT Regulations, 2015.

4.6 NET GENERATION

MSPGCL's Submission

4.6.1 The actual net generation during FY 2019-20 is as shown in the Table below:

Table 4.4: Net Generation submitted by MSPGCL for FY 2019-20 (MU)

Station/Unit	Approved in MYT	Actual	@ Normative AEC
Bhusawal	703.72	29.44	46.73
Chandrapur	10586.39	8457.73	8511.81
Khaperkheda	4690.56	3534.49	3573.11
Koradi	1659.34	433.23	462.73
Nashik	3395.01	2085.71	2100.13
Uran	2901.06	2525.01	2520.38
Paras Units 3&4	3184.84	2482.82	2538.17
Parli Units 6&7	1991.53	1393.83	1432.69
Khaperkheda Unit 5	3191.57	3110.11	3105.38
Bhusawal Units 4&5	6434.13	4933.98	4948.88
Koradi Units 8-10	10315.81	8226.25	8415.46
Chandrapur Units 8&9	6431.94	6283.58	6306.44
Parli Unit 8	1011.34	777.33	794.06
Total	**56497.24**	**44273.49**	**44755.96**

Commission's Analysis and Ruling

4.6.2 The Commission had observed certain deviations in actual net generation as claimed by MSPGCL and as per SLDC certificate. In reply to a query in this regard, MSPGCL submitted that actual net generation as submitted by it is total net sent out after considering the net sent out to MSEDCL as well as net sent to power station colonies, Grid Control Room, Ash Lifting agencies etc. MSPGCL requested the Commission to consider the actual net energy as claimed by MSPGCL which had been considered for billing to the MSEDCL.

4.6.3 The Commission has considered the actual gross generation as submitted by MSPGCL and the net generation based on normative AEC. Accordingly, the gross generation and net generation approved by the Commission is as shown in the Table below:

Table 4.5: Gross generation and net generation for FY 2019-20 (MU)

Station/Unit	Gross generation			Net generation		
	Approved in MYT	Actual	Approved	Approved in MYT	Actual	Approved
Bhusawal	790.34	52.48	52.48	703.72	29.44	46.73
Chandrapur	11591.37	9319.84	9319.84	10586.39	8457.73	8511.81
Khaperkheda	5194.42	3956.94	3956.94	4690.56	3534.49	3573.11
Koradi	1841.77	513.63	513.63	1659.34	433.23	462.75
Nashik	3814.61	2359.70	2359.70	3395.01	2085.71	2100.13
Uran	2990.78	2598.33	2598.33	2901.06	2525.01	2520.38
Paras Units 3&4	3480.70	2773.95	2773.95	3184.84	2482.82	2538.17
Parli Units 6&7	2176.54	1565.78	1565.78	1991.53	1393.83	1432.69
Khaperkheda Unit 5	3395.28	3303.59	3303.59	3191.57	3110.11	3105.38
Bhusawal Units 4&5	6844.82	5264.77	5264.77	6434.13	4933.98	4948.88
Koradi Units 8-10	10974.27	8952.62	8952.62	10315.81	8226.25	8415.46
Chandrapur Units 8&9	6842.49	6708.98	6708.98	6431.94	6283.58	6306.44
Parli Unit 8	1105.29	867.83	867.83	1011.34	777.33	794.06
Total	**61042.68**	**48238.42**	**48238.42**	**56497.24**	**44273.49**	**44755.98**

4.7 GROSS STATION HEAT RATE (GSHR)

MSPGCL's Submission

4.7.1 The actual GSHR achieved in FY 2019-20 is shown in the Table below:

Table 4.6: Actual GSHR submitted by MSPGCL for FY 2019-20 (kcal/kWh)

Station/Unit	Normative	Actual
Bhusawal	2787.00	2757.25
Chandrapur	2688.00	2659.24
Khaperkheda	2630.00	2624.15
Koradi	2621.50	2653.19
Nashik	2754.00	2723.45

Station/Unit	Normative	Actual
Uran	2035.00	2091.88
Paras Units 3&4	2450.00	2461.38
Parli Units 6&7	2450.00	2466.29
Khaperkheda Unit 5	2375.00	2370.02
Bhusawal Units 4&5	2375.00	2374.62
Koradi Units 8-10	2222.13	2291.50
Chandrapur Units 8&9	2318.58	2318.80
Parli Unit 8	2352.83	2380.11

4.7.2 MSPGCL submitted that the actual GSHR of most of the Stations is lower than the normative. In case of Uran, the GSHR is higher than the normative due to open cycle operations which needs to be considered by the Commission.

Commission's Analysis and Ruling

4.7.3 The Commission observes that MSPGCL could achieve the actual GSHR close to the norm for most of its Stations. As regards the GSHR for Uran, MYT Regulations, 2015 specify composite GSHR and not the separate GSHR for open cycle and combined cycle. MSPGCL operated the Uran Power Station in open cycle during FY 2019-20 due to operational reasons. Hence, the Commission has considered the normative GSHR in the final true-up of FY 2019-20. As GSHR is a controllable performance parameter, the Commission has computed the sharing of gains/losses as per the MYT Regulations, 2015. **The Commission directs MSPGCL to optimally utilise the gas available and operate the Uran Power Station in combined cycle mode to the maximum extent possible. The Commission also directs MSPGCL to submit the complete details and justification in case Uran Power Station is operated in open cycle mode for a certain period of the year at the time of true-up.**

4.8 SECONDARY FUEL OIL CONSUMPTION (SFOC)

MSPGCL's Submission

4.8.1 The actual SFOC achieved for FY 2019-20 is shown in the Table below:

Table 4.7: Actual SFOC submitted by MSPGCL for FY 2019-20 (ml/kWh)

Station/Unit	Normative	Actual
Bhusawal	2.00	8.75
Chandrapur	2.00	2.03
Khaperkheda	2.00	1.78
Koradi	2.81	11.85
Nashik	1.50	4.15
Paras Units 3&4	0.50	1.43

Station/Unit	Normative	Actual
Parli Units 6&7	0.50	2.29
Khaperkheda Unit 5	0.50	0.45
Bhusawal Units 4&5	0.50	0.63
Koradi Units 8-10	0.50	2.67
Chandrapur Units 8&9	0.50	2.55
Parli Unit 8	0.50	1.42

4.8.2 MSPGCL submitted that due to lower PLF of the Units, the oil consumption was on a higher side in order to keep the boiler flame stable. Further, fluctuations in power requirement leads to increase in oil consumption. MSPGCL submitted that the Central Generating Stations are given additional compensation in case the PLF of the Units falls below the normative threshold on account of lower system demand or in case of such higher ramping up or down operations.

4.8.3 MSPGCL submitted that during the year FY 2019-20, there were some incidences of forced outages of the Units due to transmission system problems. Such tripping of Units have resulted in loss of availability as well as need for additional secondary oil consumption during unit restart process. As the events of such tripping were result of grid interruption, these are "uncontrollable" in nature for MSPGCL.

4.8.4 The claims raised by MSPGCL are in the basis of actual oil consumption records maintained at its stations. As there are no provisions for claiming such uncontrollable fuel costs in regular billing. MSPGCL is raising the claim against energy bills and FAC bills. MSPGCL submitted that the actual oil consumption costs are inclusive of the additional fuel consumption. Thus, the gains or losses are without considering the impact of such additionally allowable fuel costs.

4.8.5 MSPGCL requested the Commission to consider the above claims as "forced majeure" or "uncontrollable" expenses and allow it as pass-through at actuals over and above the fuel cost entitlement against normative fuel costs along with carrying cost. MSPGCL has claimed the amount of Rs. 3.18 Crore in this regard.

Commission's Analysis and Ruling

4.8.6 The Commission sought justification from MSPGCL for the relief sought in accordance with the relevant provisions of the MYT Regulations, 2015. In reply, MSPGCL submitted that during FY 2019-20, there have been frequent trippings (forced outages) on account of grid disturbances such as, evacuation line tripping, bursting of CT/PT in switchyard etc., Under such events, during unit restart process, there is inevitable need for consumption of secondary oil. As per MSPGCL's assessment, the trippings have resulted in additional consumption of oil. The cost of such additional oil consumption is Rs. 3.185 Crores as claimed by MSPGCL.

4.8.7 MSPGCL submitted that the relief sought with respect to additional secondary fuel oil consumption is on account of uncontrollable factors due to force majeure event, which includes shutdown or interruption of the grid.

4.8.8 Regulation 2.1(37) of the MYT Regulations, 2015 define force majeure event as any event or circumstance, or combination of events or circumstances, which is not within the reasonable control of, and is not due to an act of omission or commission of that party and which, by the exercise of reasonable care and diligence, could not have been prevented; and, without limiting the generality of the foregoing, shall include the following events or circumstances :—

(a) acts of God, including but not limited to lightning, storm, action of the elements, earthquakes, flood, torrential rains, drought and natural disaster;

(b) strikes and industrial disturbances having a State-wide or extensive impact in the area of supply of a Licensee, but excluding strikes and industrial disturbances in the Licensee’s own organisation;

(c) acts of war, invasion, armed conflict or act of foreign enemy, insurrections, riots, revolution, terrorist, or military action;

(d) unavoidable accident, including but not limited to fire, explosion, radioactive contamination, and toxic chemical contamination;

(e) any shutdown or interruption of the grid, which is required or directed by the concerned Load Despatch Centre.

4.8.9 As submitted by MSPGCL, the grid interruptions cited by MSPGCL are not resultant of the directions of the Load Despatch Centre and therefore, cannot be treated as force majeure events. Therefore, the relief sought by MSPGCL is not admissible.

4.8.10 In the true-up of previous years, the Commission had not accepted the coal-related problems, partial loading, and frequent outages as cogent reasons for relaxing the norms of operation. The same approach has been adopted for the final true-up for FY 2019-20. The Commission has considered the normative SFOC in the final true-up of FY 2019-20. As SFOC is a controllable performance parameter, the Commission has computed the sharing of gains/losses as per the MYT Regulations, 2015.

4.9 TRANSIT AND HANDLING LOSS

MSPGCL’s Submission

4.9.1 The actual transit and handling loss achieved in FY 2019-20 is as shown in the Table below:

Table 4.8: Actual transit and handling loss submitted by MSPGCL for FY 2019-20

Station/Unit	Normative	Actual
Bhusawal	0.80%	0.78%

Station/Unit	Normative	Actual
Chandrapur	0.80%	0.33%
Khaperkheda	0.80%	0.90%
Koradi	0.80%	0.64%
Nashik	0.80%	0.73%
Paras Units 3&4	0.80%	0.80%
Parli Units 6&7	0.80%	0.64%
Khaperkheda Unit 5	0.80%	1.08%
Bhusawal Units 4&5	0.80%	0.78%
Koradi Units 8-10	0.80%	0.68%
Chandrapur Units 8&9	0.80%	1.46%
Paril Unit 8	0.80%	0.64%

Commission's Analysis and Ruling

4.9.2 The MYT Regulations, 2015 specify the normative transit and handling loss of 0.80% for non-pit head generating stations for domestic coal. The Commission has considered the normative transit and handling loss in the final true-up of FY 2019-20. As transit and handling loss is a controllable performance parameter, the Commission has computed the sharing of gains/losses as per the MYT Regulations, 2015.

4.10 GROSS CALORIFIC VALUE (GCV) OF FUELS

MSPGCL's Submission

4.10.1 The actual GCV of fuels for FY 2019-20 is as shown in the Table below:

Table 4.9: Actual GCV of fuels submitted by MSPGCL for FY 2019-20

Station/Unit	As fired Coal (kcal/kg)	Secondary Fuel Oil (kcal/L)	Gas (kcal/SCM)
Bhusawal	3143.69	9320.80	-
Chandrapur	3111.00	9418.34	-
Khaperkheda	2965.69	9516.43	-
Koradi	2833.60	9618.81	-
Nashik	3305.00	9479.97	-
Uran	-	-	8377.87
Paras Units 3&4	3253.35	9464.60	-
Parli Units 6&7	3100.15	9479.50	-
Khaperkheda Unit 5	2928.00	9534.23	-
Bhusawal Units 4&5	3095.60	9350.54	-
Koradi Units 8-10	3061.28	9471.31	-
Chandrapur Units 8&9	3259.28	9475.01	-
Parli Unit 8	3120.22	9194.33	-

Commission's Analysis and Ruling

4.10.2 The Commission has considered the actual GCV of secondary fuel oil as submitted by MSPGCL. The Commission has considered the actual GCV of gas as submitted by MSPGCL. The MYT Regulations, 2015 specify that the GCV of coal should be considered for tariff "as received" at unloading point less actual stacking loss subject to the maximum stacking loss of 150 kcal/kg. In line with the same, the Commission has considered the lower of actual stacking loss and 150 kcal/kWh and subtracted the same from the actual "as received" GCV of coal as submitted by MSPGCL.

4.10.3 Accordingly, the Commission has considered the GCV of fuels as shown in the Table below:

Table 4.10: GCV of fuels considered by Commission for FY 2019-20

Station/Unit	Coal (kcal/kg)		Secondary Fuel Oil (kcal/L)		Gas (kcal/SCM)	
	Approved in MYT	Approved in final true-up	Approved in MYT	Approved in final true-up	Approved in MYT	Approved in final true-up
Bhusawal	3066.81	3202.00	8786.40	9320.80	-	-
Chandrapur	3166.12	3111.00	9439.83	9418.34	-	-
Khaperkheda	2912.37	2965.69	9545.43	9516.43	-	-
Koradi	2877.14	2833.60	9368.71	9618.81	-	-
Nashik	3342.81	3305.00	9527.14	9479.97	-	-
Uran	-	-	-	-	8446.18	8377.87
Paras Units 3&4	3163.85	3253.35	9552.56	9464.60	-	-
Parli Units 6&7	3205.44	3100.15	9465.20	9479.50	-	-
Khaperkheda Unit 5	3063.13	2928.00	9560.64	9534.23	-	-
Bhusawal Units 4&5	3185.49	3356.82	8767.29	9350.54	-	-
Koradi Units 8-10	3285.44	3163.41	9582.60	9471.31	-	-
Chandrapur Units 8&9	3419.36	3259.28	9467.26	9475.01	-	-
Parli Unit 8	3488.29	3120.22	9452.28	9194.33	-	-

4.11 LANDED PRICE OF FUELS

MSPGCL's Submission

4.11.1 The actual prices of fuels submitted by MSPGCL is as shown in the Table below:

Table 4.11: Actual prices of fuels submitted by MSPGCL for FY 2019-20

Station/Unit	Coal (Rs./MT)	Secondary Fuel Oil (Rs./kL)	Gas (Rs./'000 SCM)
Bhusawal	3510.42	38490.15	-
Chandrapur	2984.98	41646.70	-
Khaperkheda	2989.56	42833.25	-
Koradi	3722.11	41229.21	-
Nashik	3926.90	39479.92	-
Uran	-	-	9463.18

Station/Unit	Coal (Rs./MT)	Secondary Fuel Oil (Rs./kL)	Gas (Rs./'000 SCM)
Paras Units 3&4	3462.00	39194.68	-
Parli Units 6&7	4113.59	39574.17	-
Khaperkheda Unit 5	2996.69	42854.21	-
Bhusawal Units 4&5	3782.46	35843.86	-
Koradi Units 8-10	4043.57	42748.37	-
Chandrapur Units 8&9	4152.64	40535.60	-
Parli Unit 8	4111.54	42080.03	-

Commission's Analysis and Ruling

4.11.2 The actual station-wise landed price of coal as submitted by MSPGCL is after considering the actual transit and handling loss for the respective station. The Commission has re-computed the station-wise landed price of coal considering the approved normative transit and handling loss. The Commission has considered the actual prices of secondary fuel oil and gas as submitted by MSPGCL.

Table 4.12: Fuel prices considered by the Commission for FY 2019-20

Station/Unit	Coal (Rs./MT)		Secondary Fuel Oil (Rs./kL)		Gas (Rs./'000 SCM)	
	Approved in MYT	Approved in final true-up	Approved in MYT	Approved in final true-up	Approved in MYT	Approved in final true-up
Bhusawal	3905.89	3510.95	36846.68	38490.15	-	-
Chandrapur	3220.24	2997.98	41332.27	41646.70	-	-
Khaperkheda	2794.93	2986.98	42274.98	42833.25	-	-
Koradi	3391.22	3727.49	42708.10	41229.21	-	-
Nashik	3712.40	3929.66	39636.47	39479.92	-	-
Uran	-	-	-	-	10074.68	9463.18
Paras Units 3&4	3655.12	3462.00	37132.98	39194.68	-	-
Parli Units 6&7	3976.49	4120.16	38566.95	39574.17	-	-
Khaperkheda Unit 5	3229.01	2989.67	42706.30	42854.21	-	-
Bhusawal Units 4&5	3890.63	3782.93	35589.53	35843.86	-	-
Koradi Units 8-10	3719.40	4047.07	43739.21	42748.37	-	-
Chandrapur Units 8&9	3747.61	4132.26	41289.95	40535.60	-	-
Parli Unit 8	5118.35	4118.12	38723.96	42080.03	-	-

4.12 ENERGY CHARGES

MSPGCL's Submission

4.12.1 As against the approved energy charges of Rs. 16782.25 Crore, MSPGCL has claimed the actual energy charges of Rs. 13819.06 Crore as per the audited accounts. Further, MSPGCL has computed revised normative energy charges of Rs. 13394.61 Crore considering the actual gross generation and normative performance parameters.

Table 4.13: Energy charges for FY 2019-20 as submitted by MSPGCL (Rs. Crore)

Station/Unit	Approved in MYT	Revised Normative	Actual
Bhusawal	284.59	16.33	17.45
Chandrapur	3242.59	2474.55	2439.42
Khaperkheda	1345.45	1074.51	1070.15
Koradi	585.48	181.25	196.42
Nashik	1183.32	782.65	791.14
Uran	725.97	597.26	613.95
Paras Units 3&4	989.73	727.24	738.14
Parli Units 6&7	664.44	511.95	522.09
Khaperkheda Unit 5	855.59	806.61	806.21
Bhusawal Units 4&5	1994.01	1415.69	1535.70
Koradi Units 8-10	2778.78	2556.00	2781.89
Chandrapur Units 8&9	1749.36	1979.86	2030.85
Parli Unit 8	382.95	270.70	275.64
Total	**16782.25**	**13394.61**	**13819.06**

4.12.2 The variance in the approved and actual fuel expenses is on account of variation in gross generation, price, GCV of fuels and actual technical performance.

4.12.3 MSPGCL requested the Commission to allow fuel expenses on actual basis. The variation between actual and "to be approved cost" regarding fuel expenses has to be shared with the consumers in accordance with the MYT Regulations, 2015.

Commission's Analysis and Ruling

4.12.4 The Commission has computed the energy charges for each station considering the approved generation, performance parameters, GCV of fuels and landed price of fuels.

Table 4.14: Energy charges for FY 2019-20 (Rs. Crore)

Station/Unit	Actual as claimed by MSPGCL	Normative as considered by MSPGCL	Normative approved by the Commission
Bhusawal	17.45	16.33	16.33
Chandrapur	2439.42	2474.55	2474.87
Khaperkheda	1070.15	1074.51	1074.46
Koradi	196.42	181.25	181.25

Station/Unit	Actual as claimed by MSPGCL	Normative as considered by MSPGCL	Normative approved by the Commission
Nashik	791.14	782.65	782.67
Uran	613.95	597.26	597.26
Paras Units 3&4	738.14	727.24	727.24
Parli Units 6&7	522.09	511.95	511.95
Khaperkheda Unit 5	806.21	806.61	806.60
Bhusawal Units 4&5	1535.70	1415.69	1415.77
Koradi Units 8-10	2781.89	2556.00	2558.82
Chandrapur Units 8&9	2030.85	1979.86	1981.74
Parli Unit 8	275.64	270.70	270.79
Total	**13819.06**	**13394.61**	**13399.73**

4.12.5 As the normative Energy Charges approved by the Commission at target norms of operation viz., GSHR, SFOC and transit and handling loss and the norms of operation are controllable factors, the Commission has undertaken the sharing of gains and losses in energy charges on account of variation in norms of operation in accordance with the MYT Regulations, 2015.

4.13 ADDITIONAL CAPITALISATION

MSPGCL's Submission

4.13.1 MSPGCL has claimed actual additional capitalisation of Rs. 590.52 Crore against the approved capitalization Rs. 1544.75 Crore for FY 2019-20. MSPGCL has submitted that the progress of capitalisation has been close to the approved limits in Bhusawal, Nasik, Parli and Hydro stations.

4.13.2 MSPGCL submitted that the claimed actual additional capitalisation is lower than approved additional capitalisation on account of lead time in preparation of design, bid process management, due diligence on the quoted prices by the bidders, due to which the implementation process may deviate from the initially envisaged schedule. As a result of this, the capitalization would increase in the subsequent years once such approved schemes get capitalised. MSPGCL endeavours to ensure that capitalisation of schemes falls within the envisaged timelines going forward.

4.13.3 MSPGCL submitted the station/unit wise details of approved and actual capitalization during the year as shown in the Table below:

Table 4.15: Additional capitalisation submitted by MSPGCL for FY 2019-20 (Rs. Crore)

Station/Unit	Approved in MYT	Actual claimed
Bhusawal	1.59	3.71
Chandrapur	166.57	54.12

Station/Unit	Approved in MYT	Actual claimed
Khaperkheda	65.70	12.01
Koradi	257.99	41.25
Nashik	48.75	34.47
Uran	0.00	0.87
Paras Units 3&4	94.75	10.77
Parli Units 6&7	55.80	53.64
Khaperkheda Unit 5	78.51	5.55
Bhusawal Units 4&5	121.35	131.03
Koradi Units 8-10	411.05	214.99
Chandrapur Units 8&9	182.00	7.17
Parli Unit 8	37.53	8.19
Hydro	22.15	12.75
Total	**1544.75**	**590.52**

4.13.4 MSPGCL requested the Commission to approve the claimed additional capitalisation.

Commission's Analysis and Ruling

4.13.5 In accordance with Regulation 22.5 of the MYT Regulations, 2015, MSPGCL was asked to make detailed submission on each of the following points:

- Least cost approach adopted while undertaking the DPR schemes.
- Mechanism put in place for monitoring the physical progress of projects with respect to their original schedule.
- Optimum drawal of loans in accordance with the physical progress of the capital expenditure schemes, and efficient utilisation of such loans.
- Detailed justification for the schemes that have not commenced during FY 2019-20 but approved for the year.

4.13.6 In reply, MSPGCL submitted that the implementation of schemes is undertaken through vendors/contractors/agencies selected through competitive bidding process so as to ensure that the prices are discovered in a transparent and objective manner. Further, for proprietary items, Original Equipment Manufacturers (OEMs) become the preferred choice wherein detailed due-diligence is performed based on the latest order placed on the OEM for supply of such items. The internal approval process for the proposed appointment of the vendors further ensures that detailed prudence is undertaken towards cost competitiveness of the offer price.

4.13.7 MSPGCL submitted that in order to monitor the physical progress of the projects with respect to their original schedule following mechanisms are followed:

- Video conferencing (VC) is carried out between the Chief Engineer Works and the Deputy Chief Engineer & Head of Maintenance planning division (MPD) of individual power stations on monthly basis. In VC physical status of the schemes are discussed and constraints, if any, regarding its implementation are resolved.

- Monthly Capex implementation status is sent by every station which includes the physical and the financial status of each and every scheme of various DPRs.
- For Civil related schemes, C.E. Civil-III is the nodal officer , who is responsible for monitoring the physical and financial status of civil related schemes and sending the consolidated detailed report to C.E Works on monthly basis.
- For the completed schemes, Station sends the work completion and scheme completion with all the capitalization details.

4.13.8 MSPGCL submitted that in order to monitor the financial progress of the projects with respect to their original schedule following mechanisms are followed:

- Capex Budget is allocated to the respective station / executing authority for effective implementation of the approved scheme in the respective year.
- Monthly Budget Utilisation of various schemes is prepared by the Finance section of MSPGCL which contains the consolidated expenditure status of various schemes of various power stations.
- In addition to above, VC is carried out between the Chief Engineer Works and the Deputy Chief Engineer & Head of MPD of individual power stations on monthly basis. In VC financial status & progress of the schemes are discussed and constraints, if any, regarding its implementation are resolved.
- Monthly Capex implementation status is sent by every station which includes the physical and the financial status of each and every scheme of various DPRs.
- For the completed schemes, Station sends the work completion and scheme completion with complete capitalization details.

4.13.9 MSPGCL submits that the capital expenditure incurred by it is classified as DPR and Non-DPR schemes. The capital expenditure incurred under DPR schemes is initiated pursuant to approval of the schemes by the Commission. However, complexities arise during the actual implementation of approved capital expenditure schemes such as lead time required for finalisation of design specifications, tender documents and supply conditions, time extensions for changes requested by the bidders, time required for evaluation of bids and establishment of reasonability of prices quoted by the bidders, retendering in case of lower participation by the bidders or price unreasonability, if any, lead time for supply of items, actual implementation of schemes pursuant to supply of materials. Given the complex nature of the schemes, the implementation may require shutdown or have to be undertaken at the time of annual overhauls. Any delay in supply of equipment may defer the implementation to subsequent event of unit shutdown/forced outage. A combination of aforesaid factors therefore may lead to slippages in implementation of the schemes to the subsequent financial year. MSPGCL further submitted that the entire nation had underwent lockdown since March 2020 on account of COVID-19 pandemic and accordingly, the schemes envisaged to be implemented during the years got deferred. MSPGCL submitted that it would be implementing the approved schemes in the ensuing years since the same are required to be implemented for reliable operations of the generating stations. The revised capitalisation proposed by MSPGCL for ensuing years takes into consideration such spill over impacts as well.

4.13.10 The Commission sought the station wise documentary evidence of all the assets put to use during FY 2019-20. In reply, MSPGCL has submitted the work completion reports and final bills of the capitalised works during FY 2019-20.

4.13.11 The Commission has examined the actual additional capitalisation claimed by MSPGCL as against the schemes accorded in-principle approval. The Commission's approach for approving the additional capitalisation in final true-up of FY 2019-20 is as follows:

- DPR schemes (above Rs. 10 Crore each): Entire capitalisation is approved for all DPR schemes capitalised in the year in respect of which in-principle approval has been accorded. In case of cost over-run without appropriate justification, the capital cost is capped at approved capital cost as per in-principle approval. However, in case of the schemes executed through competitive bidding, the cost overrun with respect to approved cost has been allowed.
- Non-DPR schemes (less than Rs. 10 Crore each): The capitalisation of the non-DPR schemes has been considered upto 20% of the cost of the capitalised DPR schemes.

4.13.12 Accordingly, the additional capitalisation approved by the Commission in the final true-up of FY 2019-20 is as shown in the Table below:

Table 4.16: Additional capitalisation for FY 2019-20 (Rs. Crore)

Station/Unit	Approved in MYT	Actual claimed	Approved
Bhusawal	1.59	3.71	3.71
Chandrapur	166.57	54.12	54.12
Khaperkheda	65.70	12.01	12.01
Koradi	257.99	41.25	40.62
Nashik	48.75	34.47	34.47
Uran	0.00	0.87	0.87
Paras Units 3&4	94.75	10.77	9.52
Parli Units 6&7	55.80	53.64	53.64
Khaperkheda Unit 5	78.51	5.55	5.55
Bhusawal Units 4&5	121.35	131.03	131.01

Station/Unit	Approved in MYT	Actual claimed	Approved
Koradi Units 8-10	411.05	214.99	214.99
Chandrapur Units 8&9	182.00	7.17	7.16
Parli Unit 8	37.53	8.19	8.14
Hydro	22.15	12.75	12.73
Total	**1544.75**	**590.52**	**588.55**

4.14 MEANS OF FINANCE OF ADDITIONAL CAPITALISATION

MSPGCL's Submission

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

Commission's Analysis and Ruling

4.14.2 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.

4.15 ANNUAL FIXED CHARGES (AFC)

4.15.1 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)

4.16 OPERATIONS AND MAINTENANCE (O&M) EXPENSES

MSPGCL's Submission

4.16.1 The Commission vide its MYT Order had approved O&M expenses for FY 2019-20 for old Stations by considering historical average escalation factor in accordance with MYT Regulations, 2019. MSPGCL submitted that for the units commissioned after 2005, the Commission had approved the O&M expenses considering the normative level in Rs. Lakh/MW specified in the Regulations.

4.16.2 As against the approved normative O&M expenses of Rs. 3394.30 Crore, MSPGCL has claimed the actual O&M expenses of Rs. 3785.25 Crore and normative O&M expenses of Rs. 3397.35 Crore.

Table 4.17: O&M expenses for FY 2019-20 as claimed by MSPGCL (Rs. Crore)

Particulars	Approved in MYT	Actual	Normative claimed
O&M expenses	2605.35	3183.54	2795.64
Pay revision	244.93	181.14	181.14
Pay revision arrears	-	89.84	89.84
Water charges	183.28	128.30	128.30
Other charges	360.74	202.43	202.43
Total	**3394.30**	**3785.25**	**3397.35**

4.16.3 MSPGCL submitted that the reasons for the variation between actual and approved O&M expenses are as follows:

a. The escalation factor has been revised based on the norms provided in the MYT Regulations for the latest years (CPI/WPI indices).

b. Actual pay revision impact of Rs 181.14 Crore for FY 2019-20 as against the approved amount of Rs 244.93 Crore. The same has been claimed based on the pay-out for FY 2018-19 worked out as under:

- In the provisional true-up, MSPGCL had submitted that the pay revision had been made effective from 1 April, 2018. However, there had been no pay out in FY 2018-19 on account of pay revision.
- The arrears for the period of eighteen (18) months from 1 April, 2018 to 30 September, 2019 had been paid in three (3) instalments during the period from FY 2019-20 to FY 2021-22. The arrears for the rise in basic salary along with associated dearness allowance (DA) were paid for eighteen (18) months, arrears for house rent allowance (HRA) were paid only for nine (9) months period from January-September, 2019.
- Accordingly, the total pay-out for FY 2018-19 is Rs. 171.35 Crore. The arrears towards HRA for the three (3) months period from January-March, 2019 is Rs. 1.74 Crore. Therefore, the pay-out for FY 2018-19 without three (3) months HRA is Rs. 169.61 Crore. The pay-out of HRA for FY 2018-19 has been worked out by prorating the actual impact for three (3) months for full year which works out to Rs. 6.96 Crore. Based on the above, the total impact of pay revision for FY 2018-19 works out Rs. 176.57 Crore. The impact of pay revision for FY 2018-19 has been escalated by annual escalation of 2.59% to arrive at the impact for FY 2019-20 as Rs. 181.14 Crore.
- In addition to the impact of pay revision for FY 2019-20, MSPGCL has claimed the amount of Rs. 89.84 Crore towards one instalment of arrears for FY 2018-19 paid in FY 2019-20.

c. MSPGCL has claimed the increase in Labour Rates and submitted as under:

i. GoM had issued directives for payment of minimum wages to the employees employed in the scheduled employment (Employment in any factory), vide notification No. MWA-1015/266/CR-120/LAB-7 Industries, Energy and Labour Department. As per the notification the revised minimum wages are applicable from 30 August, 2019.

ii. Accordingly, MSPGCL had decided to revise the minimum wages with effect from 1 September, 2019 for the contract labour working in power stations. Apart from the above, in the meeting held on 13 September, 2019 regarding minimum wages being paid to labourers working in MSPGCL, GoM had directed to give 20% additional rise with effect from 1 January, 2020 to the labour working in technical departments in power station premises.

iii. During the proceedings in Case No. 296 of 2019, MSPGCL had apprised Commission regarding the said developments, through additional submission dated 4 January, 2020. However, as the admittance of the MYT petition was already done by that time, vide e-mail dated 8 January, 2020, MSPGCL was directed to submit the claim in the MTR Petition for prudence check.

iv. Accordingly, MSPGCL has submitted the details regarding actual amount booked in accounts towards the labour wage revision impact for FY 2019-20. For the revisions effective from 1 September, 2019 and 1 January, 2020 respectively i.e., one revision is applicable for 7 months under FY 2019-20 whereas the other revision is applicable for 3 months under FY 2019-20.

v. Due to COVID-19 situation, the claims for such revisions were raised by the related agencies at later stage i.e., even up to FY 2021-22, the actual amount booked in accounts for the labour wage revision arrears for FY 2019-20 is booked in the years of settlement of the claims or acceptance of claims by the executing department.

vi. MSPGCL submitted that the services of the labourers are required on continuous basis throughout the year similar to the regular employees and thus the labour wage revision has continual impact on the O&M expenses. The normative O&M expenses approved by the Commission were on the basis of historical expenses. Though the impact of regular Dearness Allowance increase is factored through the escalations allowed, the steep rise in impact of the labour wage revision is not factored in the escalations to the normative expenses approved by the Commission.

vii. MSPGCL submitted that it has arrived at the annualised labour wage revision burden for FY 2019-20 considering the following:

- The actual claim towards labour wage revision for FY 2019-20 has been computed, irrespective of the actual booking period from FY 2019-20 to FY 2022-23.

- The differential claim for 7 months applicable w.e.f. 1 September, 2019 and differential claim for 3 months applicable w.e.f. 1 January, 2020 have been segregated.
- The total of 7 months' claims and 3 months' claim has been extrapolated for 12 months to get the annualised burden for FY 2019-20.
- From FY 2020-21 onwards, the annualised burden for FY 2019-20 has been claimed with year-wise escalations.

viii. MSPGCL requested the Commission to approve the annualised impact of the labour wage revision as additional expenses over and above the normative expenses from FY 2020-21 onwards.

4.16.4 MSPGCL submitted the normative O&M expenses for new Units have been considered based on the norms specified in the MYT Regulations. MSPGCL submitted the normative O&M expenses approved by the Commission are lower than the norms specified in the CERC Tariff Regulations, 2019. MSPGCL requested the Commission to revise the norms for new Units and approve the same in line with CERC Tariff Regulations, 2019.

4.16.5 MSPGCL has submitted that the O&M expenses for FY 2019-20 also includes the O&M expense towards Head Office related expenses. MSPGCL requested the Commission to allow such expenses separately and to consider normative O&M expenses excluding HO related expenses in the computation of sharing of gain/losses.

4.16.6 MSPGCL submitted that it had submitted the following in provisional true-up of FY 2019-20 in Case No. 296 of 2019:

"During the monsoon season in 2019-20, there have been severe flooding incidences in Western Maharashtra and Nashik District. As a result of such flooding, there are severe damages to TG set and generating unit equipment as well as civil structures including road and colony buildings at Vaitarana, Bhatghar and Tillari Hydro Power Stations.

....

As the works are needed to be done due to "force majeure" flooding event, it is requested to approve the envisaged expenses in the provisional truing up process as a one-time expense. MSPGCL will submit the final expenditure at the time of final true-up for 2019-20."

4.16.7 In the provisional true-up of FY 2019-20, the Commission had not considered any amount, as MSPGCL had submitted only the estimated amounts. Post completion of most of the restoration works, MSPGCL has submitted the actual costs of approximately Rs. 22.63 Crore incurred on restoration of these hydro stations and requested the Commission to approve these expenses under "forced majeure" flooding situation, at actual as "uncontrollable" expenses over and above the normative expenses. Accordingly, MSPGCL has claimed the following expenses towards restoration works:

Table 4.18: Cost of restoration works claimed by MSPGCL (Rs. Crore)

Station	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23
Vaitarna	6.02	8.88	1.20	0.87
Bhatghar	0.84	2.07	1.94	-
Tillari	-	0.34	0.47	-
Total	**6.86**	**11.29**	**3.61**	**0.87**

4.16.8 MSPGCL submitted that the above expenses are included in the claim of actual expenses for the respective years. MSPGCL requested the Commission to allow the above expenses at actuals and to not consider the same against normative expenses while computing the sharing of gains/losses for the respective year.

Commission's Analysis and Ruling

4.16.9 The Commission has perused the normative O&M expenses claimed by MSPGCL. The Commission finds that MSPGCL has considered the impact of pay revision of Rs. 181.14 Crore twice viz., once in the claim of normative O&M expenses of Rs. 2795.64 Crore and again as a separate line item. Due to this double accounting, the normative O&M expenses of Rs. 2795.64 Crore has been overstated by the amount of Rs. 181.14 Crore.

4.16.10 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."

4.16.11 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.

4.16.12 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. Further, the normative O&M expenses for Paras Units 3&4, Parli Units 6&7, Khaperkheda Unit 5, Bhusawal Units 4&5, Koradi Units 8-10, Chandrapur Units 8&9 and Parli Unit 8 for final true up of FY 2019-20 have been considered same as approved in provisional true up of FY 2019-20.

4.16.13 Further, MSGPCL has compared the O&M expenses norms as specified in MYT Regulations, 2015 and O&M expenses norms specified in CERC Tariff Regulations, 2019 and requested to consider the norms approved by CERC and relax the O&M norms for new stations. The Commission is of the view that the MYT Regulations, 2015 were framed after considering all the aspects related to actual O&M expenses and stakeholder consultation process and hence it would not be appropriate to deviate from MYT Regulations, 2015 and relax the norms for the purpose of truing up.

4.16.14 As regards the impact of pay revision, the Commission, in the MYT Order in Case No. 296 of 2019, ruled as under:

"3.18.20 As observed from the above submission of the MSPGCL, no payment was made on account of pay revision in FY 2017-18 and FY 2018-19. Accordingly, the impact of pay revision has been dealt in FY 2019-20 onwards."

"4.17.8 The Commission has considered the impact of regular wage revision from October 2019 onwards while approving the O&M expenses for FY 2019-20. As regards the arrears, the Petitioner has made only one instalment till September 2019 and it appears that it would not be possible for the Petitioner to pay the entire amount in FY 2019-20 itself. Accordingly, the Commission has considered payment of 1/3rd of arrears to be made in FY 2019-20, whereas the payment of remaining 2/3rd of arrears are considered in FY 2020-21."

4.16.15 As against the pay revision impact of Rs. 244.93 Crore approved by the Commission, MSPGCL has claimed the actual impact of Rs. 270.98 Crore. Accordingly, the Commission has considered the actual impact of pay revision as claimed by MSPGCL.

4.16.16 MSPGCL has claimed the actual water charges of Rs. 128.30 Crore. In reply to a query in this regard, MSPGCL submitted the copies of invoices. The Commission has considered the actual water charges as claimed by MSPGCL.

4.16.17 The actual other charges claimed by MSPGCL include the expenses towards the coal handling charges. The Commission has considered the actual other charges as claimed by MSPGCL.

4.16.18 The revised normative O&M expenses approved by the Commission for FY 2019-20 is as shown in the Table below:

Table 4.19: Normative O&M expenses for FY 2019-20 approved by the Commission (Rs. Crore)

Station/Unit	Normative O&M expenses	Pay Revision	Pay Revision arrears	Water charges	Other charges	Total O&M expenses
Bhusawal	79.17	6.86	3.60	6.63	0.38	**96.64**
Chandrapur	498.63	28.86	13.99	14.50	53.89	**609.88**
Khaperkheda	243.92	15.02	7.38	7.35	16.18	**289.85**
Koradi	173.74	10.89	5.99	2.89	12.14	**205.66**
Nashik	264.16	16.72	8.56	23.90	15.43	**328.77**
Uran	75.48	6.01	3.02	1.35	0.01	**85.87**
Paras Units 3&4	137.75	9.22	4.53	3.03	4.68	**159.21**
Parli Units 6&7	137.75	11.24	6.14	17.28	7.21	**179.62**
Khaperkheda Unit 5	90.25	5.63	2.80	3.38	6.06	**108.13**
Bhusawal Units 4&5	180.50	14.15	6.98	7.30	30.77	**239.70**
Koradi Units 8-10	310.83	19.43	9.16	32.47	21.82	**393.71**
Chandrapur Units 8&9	180.50	10.87	5.19	1.46	26.63	**224.65**
Parli Unit 8	68.88	4.76	2.09	6.76	6.97	**89.45**
Hydro	172.96	21.48	10.40	0.00	0.26	**205.10**
Total	**2614.51**	**181.14**	**89.84**	**128.30**	**202.43**	**3216.22**

4.16.19 MSPGCL has claimed the actual O&M expenses of Rs. 3785.25 Crore. The actual O&M expenses are inclusive of the labour wage revision and the cost of restoration works towards hydro stations. MSPGCL requested the Commission to consider the cost of restoration works separately outside the sharing mechanism. In reply to a query regarding the cost of restoration works, MSPGCL submitted the list of activities along with corresponding cost and the documentary evidence in support of the claimed expenses. The Commission does not find it prudent to consider the request of MSPGCL to consider the cost of restoration works separately outside the sharing mechanism.

4.16.20 The Commission has considered the actual O&M expenses of Rs. 3785.25 Crore for the purpose of computing of sharing of loss in O&M expenses in accordance with the MYT Regulations, 2015.

4.17 DEPRECIATION

MSPGCL's Submission

4.17.1 MSPGCL has considered the closing GFA for FY 2018-19 as the opening GFA for FY 2019-20, with due adjustments for the impact of Review Order in Case No. 180 of 2020. Considering the same as the opening GFA and the actual additional capitalisation, the depreciation has been worked out as per the depreciation rates specified in the MYT Regulations, 2015.

4.17.2 MSPGCL further submitted that it has apportioned the actual Head Office (HO) depreciation based on the operating capacity during the year.

Table 4.20: Depreciation for FY 2019-20 as submitted by MSPGCL (Rs. Crore)

Station/Unit	Approved in MYT	Claimed
Bhusawal	10.60	9.82
Chandrapur	29.56	28.73
Khaperkheda	22.25	20.99
Koradi	56.13	63.37
Nashik	24.64	15.32
Uran	2.41	3.38
Paras Units 3 & 4	161.63	161.70
Parli Units 6 & 7	151.42	153.42
Khaperkheda Unit 5	176.99	177.50
Bhusawal Units 4 & 5	333.27	342.11
Koradi Units 8, 9 & 10	625.76	669.31
Chandrapur Units 8 & 9	306.62	321.19
Parli Unit 8	90.80	93.48
Hydro	8.27	31.27
Total	**2000.34**	**2091.58**

Commission's Analysis and Ruling

4.17.3 The Commission has computed the depreciation for FY 2019-20 in accordance with the MYT Regulations, 2015. The closing GFA and accumulated depreciation approved for FY 2018-19 has been considered as the opening GFA and accumulated depreciation for FY 2019-20. If the accumulated depreciation for a particular asset class has reached 70% of the allowable depreciation, the remaining depreciable value has been spread over the remaining useful life of the station, as submitted by MSPGCL. Else, the depreciation on opening GFA and additional capitalisation has been computed at the depreciation rates specified in the Regulations. Further, the Commission observed that MSPGCL has not furnished the dates of commissioning of additional capitalisation for many of the works claimed. The Commission has computed the depreciation on opening GFA for full year and depreciation on additional capitalisation has been computed for half year. The Commission has considered HO depreciation, the same as claimed by MSPGCL.

Table 4.21: Depreciation for FY 2019-20 (Rs. Crore)

Station/Unit	Approved in MYT	Claimed	Approved
Bhusawal	10.60	9.82	9.82
Chandrapur	29.56	28.73	28.72
Khaperkheda	22.25	20.99	20.99
Koradi	56.13	63.37	63.37
Nashik	24.64	15.32	15.32
Uran	2.41	3.38	3.38
Paras Units 3 & 4	161.63	161.70	161.67
Parli Units 6 & 7	151.42	153.42	153.42
Khaperkheda Unit 5	176.99	177.50	176.86
Bhusawal Units 4 & 5	333.27	342.11	339.89
Koradi Units 8, 9 & 10	625.76	669.31	662.24
Chandrapur Units 8 & 9	306.62	321.19	321.19
Parli Unit 8	90.80	93.48	93.48
Hydro	8.27	31.27	31.27
Total	**2000.34**	**2091.58**	**2081.60**

4.18 INTEREST ON LONG TERM LOANS AND OTHER FINANCE CHARGES

MSPGCL's Submission

4.18.1 The Commission had approved expenses of Rs. 1829.38 Crore as interest and finance charges for FY 2019-20. As against the same, MSPGCL has claimed interest and finance charges of Rs. 1891.93 Crore in the final true-up for FY 2019-20.

4.18.2 MSPGCL has considered the closing loan balances approved for FY 2018-19 as the opening loan balances for FY 2019-20. Further, the additional capitalization has been considered to be funded in the normative debt-equity ratio of 70:30. The allowable depreciation has been considered as the repayment for the year. MSPGCL considered the weighted average interest for FY 2019-20 in accordance with Regulation 29.5 of the MYT Regulations, 2015.

4.18.3 MSPGCL has claimed the Finance Charges comprising of Guarantee Fee payable to GoM, Service Fees, and other bank charges such as bank remittance charges, bank commission, stamp duty towards working capital limit enhancement, etc. on actuals.

4.18.4 MSPGCL has submitted the summary of interest and finance charges claimed for the year as shown in the Table below:

Table 4.22: Interest and finance charges submitted by MSPGCL for FY 2019-20 (Rs.

Crore)

Station/Unit	Approved in MYT			Claimed		
	Interest expenses	Finance charges	Total	Interest expenses	Finance charges	Total
Bhusawal	0.88	0.43	**1.31**	1.32	0.50	**1.82**
Chandrapur	37.85	2.42	**40.27**	36.91	3.18	**40.09**
Khaperkheda	8.36	0.87	**9.23**	6.63	1.81	**8.44**
Koradi	14.45	0.64	**15.09**	16.72	1.40	**18.12**
Nashik	1.51	0.66	**2.17**	4.25	0.64	**4.89**
Uran	8.33	0.70	**9.02**	9.06	0.58	**9.64**
Paras Units 3&4	65.64	0.11	**65.75**	65.02	0.91	**65.94**
Parli Units 6&7	39.85	0.01	**39.86**	41.24	0.55	**41.79**
Khaperkheda Unit 5	120.67	0.15	**120.82**	116.10	0.52	**116.62**
Bhusawal Units 4&5	289.74	0.17	**289.91**	295.50	0.64	**296.14**
Koradi Units 8-10	722.11	0.05	**722.16**	763.30	2.13	**765.44**
Chandrapur Units 8&9	389.84	0.03	**389.87**	385.12	1.20	**386.31**
Parli Unit 8	119.15	0.00	**119.15**	123.43	0.24	**123.67**
Hydro	4.76	0.00	**4.76**	3.85	0.02	**3.87**
Total	**1823.14**	**6.24**	**1829.38**	**1868.47**	**14.32**	**1882.78**

Commission's Analysis and Ruling

4.18.5 The Commission sought the supporting documents to substantiate the actual rate of interest on long term loan claimed for each station. MSPGCL has submitted the loan sanction letters including reconciliation statement of interest charges.

4.18.6 The Commission has considered the approved closing loan balance for FY 2018-19 as the opening loan balance 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. In addition to the normative interest expenses, the Commission has considered the actual finance charges for FY 2019-20 as claimed by MSPGCL in accordance with the provisions of the Regulations.

Table 4.23: Interest and finance charges for FY 2019-20 (Rs. Crore)

Station/Unit	Claimed			Approved		
	Interest expenses	Finance charges	Total	Interest expenses	Finance charges	Total
Bhusawal	1.32	0.50	**1.82**	1.32	0.50	**1.82**
Chandrapur	36.91	3.18	**40.09**	36.91	3.18	**40.09**
Khaperkheda	6.63	1.81	**8.44**	6.63	1.81	**8.44**
Koradi	16.72	1.40	**18.12**	16.71	1.40	**18.11**
Nashik	4.25	0.64	**4.89**	4.25	0.64	**4.89**
Uran	9.06	0.58	**9.64**	9.06	0.58	**9.64**
Paras Units 3&4	65.02	0.91	**65.94**	64.98	0.91	**65.89**
Parli Units 6&7	41.24	0.55	**41.79**	41.24	0.55	**41.79**

Station/Unit	Claimed			Approved		
	Interest expenses	Finance charges	Total	Interest expenses	Finance charges	Total
Khaperkheda Unit 5	116.10	0.52	**116.62**	116.13	0.52	**116.65**
Bhusawal Units 4&5	295.50	0.64	**296.14**	294.93	0.64	**295.57**
Koradi Units 8-10	763.30	2.13	**765.44**	755.85	2.13	**757.98**
Chandrapur Units 8&9	385.12	1.20	**386.31**	385.12	1.20	**386.31**
Parli Unit 8	123.43	0.24	**123.67**	123.43	0.24	**123.67**
Hydro	3.85	0.02	**3.87**	3.85	0.02	**3.86**
Total	**1868.47**	**14.32**	**1882.78**	**1860.41**	**14.32**	**1874.72**

4.19 INTEREST ON WORKING CAPITAL (IOWC)

MSPGCL's Submission

4.19.1 Regulation 31.1 of the MYT Regulations, 2015 provides the norms for computation of the working capital for generating companies. The IoWC has been computed as per the norms. Further, as per the First Amendment to the MYT Regulations, 2015, base rate has been specified as one-year marginal cost of funds-based lending rate. Considering the same, the interest rate has been considered as 9.66%.

4.19.2 MSPGCL submitted that the actual interest on working capital as per the books of accounts is Rs. 723.87 Crore and the same have been considered for the purpose of true-up.

4.19.3 MSPGCL submitted that the Commission in its Order dated June 26, 2015 in Case No. 15 of 2015 considered the late payment surcharge billed by MSPGCL to MSEDCL as non-tariff income. MSPGCL has preferred an appeal against this treatment of the late payment surcharge. The Judgment on the said Appeal No. 199 of 2015 was pronounced on 18 April, 2017. As Hon'ble the ATE has upheld the treatment given by the Commission, MSPGCL has filed Civil Appeal before Hon'ble the Supreme Court (Civil Appeal 9408 of 2017) against Hon'ble the ATE's Order. The matter is still sub-judice before Hon'ble the Supreme Court.

4.19.4 MSPGCL submitted that as per the provisions under PPA dated 1 April. 2009 between MSPGCL and MSEDCL and in accordance with MYT Regulations, 2015, MSPGCL is allowed to raise Late Payment Surcharge bills on MSEDCL for the delays in receipt of payment for energy bills raised by MSPGCL. Under the methodology adopted by MSPGCL for computing the Late Payment Surcharge bills till FY 2020-21, the payment receipts from MSEDCL are firstly adjusted against the Surcharge amount, due till the payment receipt date and the balance of the amount received is then adjusted against the principal overdue amount till that day. In FY 2019-20, MSEDCL has raised queries on this methodology. As per MSEDCL, any payment should be initially adjusted against the principal outstanding amount and balance if any to be adjusted against the LPS dues. At present, an exercise is being undertaken by MSPGCL as well as MSEDCL for reconciliation and finalization of the principal and late payment surcharge outstanding amount since PPA date i.e., since FY 2009-10. While the billing reconciliation process between the two Companies is in advance stages, MSEDCL has commenced payment towards liquidation of outstanding dues, as per LPS Rules, 2022, on the basis of outstanding dues as per MSEDCL's assessment.

4.19.5 MSPGCL requested the Commission not to carry out any adjustment of actual IoWC against the presently raised Late payment surcharge bills. MSPGCL sought the permission of the Commission to submit the revised late payment surcharge data during the proceedings of the present MTR Petition along with incidental impact, provided such methodology and revised late payment surcharge workings since FY 2009-10 till FY 2021-22 are approved by its Board.

Table 4.24: IoWC for FY 2019-20 as submitted by MSPGCL (Rs. Crore)

Station/Unit	Approved in MYT	Claimed
Bhusawal	10.42	3.32
Chandrapur	109.35	87.83
Khaperkheda	48.58	40.38
Koradi	22.69	11.29
Nashik	41.91	29.13
Uran	18.39	21.04
Paras Units 3 & 4	38.71	31.56
Parli Units 6 & 7	28.92	25.05
Khaperkheda Unit 5	35.18	33.60
Bhusawal Units 4 & 5	76.96	61.46
Koradi Units 8, 9 & 10	122.49	115.46
Chandrapur Units 8 & 9	71.29	77.03
Parli Unit 8	17.63	14.93
Hydro	11.28	12.89
Total	**653.81**	**564.98**

Commission's Analysis and Ruling

4.19.6 Regulation 31.1 of the MYT Regulations, 2015 specifies the normative working capital requirements (cost of coal, cost of oil and receivables) to be computed based on the actual generation or target Availability, whichever is lower, in true-up.

4.19.7 The Commission has computed IoWC in accordance with the MYT Regulations, 2015. The rate of IoWC has been considered as 9.66% in accordance with the First Amendment to MYT Regulations, 2015.

Table 4.25: Normative IoWC for FY 2019-20 (Rs. Crore)

Station/Unit	Approved in MYT	Claimed	Approved
Bhusawal	10.42	3.32	3.13
Chandrapur	109.35	87.83	90.70

Station/Unit	Approved in MYT	Claimed	Approved
Khaperkheda	48.58	40.38	39.23
Koradi	22.69	11.29	11.34
Nashik	41.91	29.13	29.82
Uran	18.39	21.04	20.53
Paras Units 3 & 4	38.71	31.56	31.44
Parli Units 6 & 7	28.92	25.05	23.76
Khaperkheda Unit 5	35.18	33.60	33.59
Bhusawal Units 4 & 5	76.96	61.46	62.39
Koradi Units 8, 9 & 10	122.49	115.46	100.07
Chandrapur Units 8 & 9	71.29	77.03	71.73
Parli Unit 8	17.63	14.93	13.52
Hydro	11.28	12.89	11.29
Total	**653.81**	**564.98**	**542.53**

4.19.8 The proviso to Regulation 31.6 of the MYT Regulations, 2015 specifies as under:

"Provided that the contribution of delay in receipt of payment to the actual interest on working capital shall be deducted from the actual interest on working capital, before sharing of the efficiency gain or efficiency loss, as the case may be."

4.19.9 The Commission sought the contribution of delay in receipt of payment to the actual interest on working capital for FY 2019-20. In reply, MSPGCL submitted that it has been contesting the approach adopted by the Commission wherein no cognizance is given to the current requirements of working capital. The overall fuel cost comprises of ~80% of the ARR wherein the cost of coal has to be paid upfront to the coal companies. Arrangement of such funds especially under cash flow constraints essentially requires drawing working capital loans to sustain the operations. However, no cognizance is given to such practical aspects in the provisions of the Regulations. Given the late payment surcharge reconciliation is underway and that the matter being sub-judice before the Supreme Court, MSPGCL requested to consider the actual IoWC as per books of accounts.

4.19.10 As the matter is sub-judice, the Commission, for considering the actual IoWC has followed the same approach as followed in truing up for FY 2018-19. The actual IoWC is Rs. 723.87 Crore. As per the proviso to Regulation 31.6, the contribution of delay in receipt of payment to the actual IoWC is to be deducted from the actual interest on working capital. The exact details of contribution of delay in receipt of payment to actual IoWC is not available. As per the audited accounts, the Delayed Payment Surcharge (DPS) in accounts for FY 2019-20 is Rs. 2545.45 Crore. The extent of DPS for FY 2019-20 clearly indicates that there has been delay in receipt of payment. In the absence of actual impact of delay in receipt of payment to interest on working capital, the Commission has worked out the impact of delay in receipt of payment to interest on working capital based on the DPS for FY 2019-20. However, as the rate of DPS is higher than the working capital interest rate, the Commission has worked out the impact of delay in receipt of payment to interest on working capital on proportionate basis considering the working capital interest rate and DPS rate. Accordingly, the actual IoWC considered by the Commission in the final true-up for FY 2019-20 in accordance with Regulation 31.6 is as shown in the Table below:

Table 4.26: Actual IoWC considered by the Commission for FY 2019-20

Particulars	Units	Legend	Value
Actual IoWC as per the audited accounts	Rs. Crore	A	723.87
Actual LPS as per the audited accounts	Rs. Crore	B	2545.45
(Annual) Rate of LPS as per the PPA	%	C	15.00%
Rate of IoWC as per the MYT Regulations, 2015	%	D	9.66%
LPS to be considered for true-up	Rs. Crore	E=(B÷C)xD	1639.27
Actual IoWC for true-up in accordance with Regulation 31.6	**Rs. Crore**	**F=A-E, subject to maximum of Zero**	**0.00**

4.19.11 As IoWC is a controllable factor under the MYT Regulations, 2015, the Commission has carried out the sharing of variation in normative IoWC and actual IoWC in accordance with the MYT Regulations, 2015.

4.20 RETURN ON EQUITY (ROE)

MSPGCL's Submission

4.20.1 MSPGCL considered the closing balance of equity for FY 2018-19 as the opening balance for FY 2019-20. The equity addition for FY 2019-20 has been considered as equivalent to 30% of capitalization for the year. Rate of Return on Equity has been considered as 15.50% for FY 2019-20 as per MYT Regulations, 2015.

Table 4.27: RoE submitted by MSPGCL for FY 2019-20 (Rs Crore)

Station/Unit	Approved in MYT	Claimed
Bhusawal	14.47	14.46
Chandrapur	121.42	120.35
Khaperkheda	152.26	151.01
Koradi	40.40	37.76
Nashik	37.92	37.42
Uran	45.71	45.72

Station/Unit	Approved in MYT	Claimed
Paras Units 3&4	144.90	142.87
Parli Units 6&7	139.45	139.34
Khaperkheda Unit 5	111.67	109.98
Bhusawal Units 4&5	194.99	198.33
Koradi Units 8-10	415.27	446.09
Chandrapur Units 8&9	170.64	179.72
Parli Unit 8	57.30	58.54
Hydro	4.21	3.96
Total	**1650.60**	**1685.55**

Commission's Analysis and Ruling

4.20.2 The Commission has considered the approved closing equity for FY 2018-19 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 15.50% for FY 2019-20, on the opening equity as well as on 50% of the addition during the year.

Table 4.28: RoE for FY 2019-20 (Rs. Crore)

Station/Unit	Approved in MYT	Claimed	Approved
Bhusawal	14.47	14.46	14.46
Chandrapur	121.42	120.35	120.35
Khaperkheda	152.26	151.01	151.01
Koradi	40.40	37.76	37.74
Nashik	37.92	37.42	37.42
Uran	45.71	45.72	45.72
Paras Units 3&4	144.90	142.87	142.84
Parli Units 6&7	139.45	139.34	139.34
Khaperkheda Unit 5	111.67	109.98	109.98
Bhusawal Units 4&5	194.99	198.33	197.67
Koradi Units 8-10	415.27	446.09	439.87
Chandrapur Units 8&9	170.64	179.72	179.72
Parli Unit 8	57.30	58.54	58.54
Hydro	4.21	3.96	3.96
Total	**1650.60**	**1685.55**	**1678.62**

4.21 INCOME TAX

MSPGCL's Submission

4.21.1 MSPGCL has not claimed any income tax for FY 2019-20.

Commission's Analysis and Ruling

4.21.2 The Commission has not considered any income tax for FY 2019-20 as the actual income tax is zero.

4.22 NON-TARIFF INCOME (NTI)

MSPGCL's Submission

4.22.1 MSPGCL submitted that it has considered certain deductions in the actual NTI (on account of implementation of Ind-AS/ IFRS) reflected in the books of accounts. MSPGCL claimed the Non-Tariff Income approved and the amount being claimed as shown in the Table below:

Table 4.29: Non-Tariff Income submitted by MSPGCL for FY 2019-20 (Rs. Crore)

Station/Unit	Approved in MYT	Claimed
Bhusawal	2.73	2.33
Chandrapur	19.60	7.30
Khaperkheda	5.16	9.06
Koradi	1.60	7.85
Nashik	12.54	14.18
Uran	2.38	3.54
Paras Units 3&4	3.94	4.69
Parli Units 6&7	3.95	2.65
Khaperkheda Unit 5	4.10	5.39
Bhusawal Units 4&5	14.87	8.31
Koradi Units 8-10	7.27	10.40
Chandrapur Units 8&9	15.14	3.80
Parli Unit 8	1.08	0.33
Hydro	4.76	3.88
Total	**99.12**	**83.71**

Commission's Analysis and Ruling

4.22.2 The Commission has considered the actual NTI as claimed by MSPGCL.

4.23 ANNUAL FIXED CHARGES

Commission's Analysis and Ruling

4.23.1 Based on the above analysis, the AFC approved by the Commission in the final true-up of FY 2019-20, that is fully recoverable at target Availability, is as shown in the Table below:

Table 4.30: AFC claimed by MSPGCL and approved by the Commission recoverable at target Availability (Rs. Crore)

Station/Unit	Return on Equity			Interest on loan			Depreciation			O&M expenses			IoWC			Less:NTI			AFC		
	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved
Bhusawal	14.47	14.46	14.46	1.31	1.82	1.82	10.60	9.82	9.82	88.36	103.49	96.64	10.42	3.32	3.13	2.73	2.33	2.33	**122.45**	**130.58**	**123.53**
Chandrapur	121.42	120.35	120.35	40.27	40.09	40.09	29.56	28.73	28.72	639.31	638.75	609.88	109.35	87.83	90.70	19.60	7.30	7.30	**920.31**	**908.46**	**882.45**
Khaperkheda	152.26	151.01	151.01	9.23	8.44	8.44	22.25	20.99	20.99	304.12	304.87	289.85	48.58	40.38	39.23	5.16	9.06	9.06	**531.27**	**516.63**	**500.46**
Koradi	40.40	37.76	37.74	15.09	18.12	18.11	56.13	63.37	63.37	195.76	216.55	205.66	22.69	11.29	11.34	1.60	7.85	7.85	**328.47**	**339.24**	**328.37**
Nashik	37.92	37.42	37.42	2.17	4.89	4.89	24.64	15.32	15.32	370.69	345.48	328.77	41.91	29.13	29.82	12.54	14.18	14.18	**464.79**	**418.06**	**402.04**
Uran	45.71	45.72	45.72	9.02	9.64	9.64	2.41	3.38	3.38	80.45	91.88	85.87	18.39	21.04	20.53	2.38	3.54	3.54	**153.60**	**168.12**	**161.59**
Paras Units 3&4	144.90	142.87	142.84	65.75	65.94	65.89	161.63	161.70	161.67	176.77	168.42	159.21	38.71	31.56	31.44	3.94	4.69	4.69	**583.82**	**565.80**	**556.35**
Parli Units 6&7	139.45	139.34	139.34	39.86	41.79	41.79	151.42	153.42	153.42	180.70	190.85	179.62	28.92	25.05	23.76	3.95	2.65	2.65	**536.41**	**547.81**	**535.28**
Khaperkheda Unit 5	111.67	109.98	109.98	120.82	116.62	116.65	176.99	177.50	176.86	126.43	113.76	108.13	35.18	33.60	33.59	4.10	5.39	5.39	**566.98**	**546.06**	**539.81**
Bhusawal Units 4&5	194.99	198.33	197.67	289.91	296.14	295.57	333.27	342.11	339.89	266.03	253.85	239.70	76.96	61.46	62.39	14.87	8.31	8.31	**1146.29**	**1143.59**	**1126.91**
Koradi Units 8-10	415.27	446.09	439.87	722.16	765.44	757.98	625.76	669.31	662.24	431.24	413.13	393.71	122.49	115.46	100.07	7.27	10.40	10.40	**2309.65**	**2399.04**	**2343.46**
Chandrapur Units 8&9	170.64	179.72	179.72	389.87	386.31	386.31	306.62	321.19	321.19	234.68	235.52	224.65	71.29	77.03	71.73	15.14	3.80	3.80	**1157.95**	**1195.96**	**1179.80**
Parli Unit 8	57.30	58.54	58.54	119.15	123.67	123.67	90.80	93.48	93.48	101.27	94.20	89.45	17.63	14.93	13.52	1.08	0.33	0.33	**385.07**	**384.49**	**378.32**
Hydro	4.21	3.96	3.96	4.76	3.87	3.86	8.27	31.27	31.27	198.49	226.59	205.10	11.28	12.89	11.29	4.76	3.88	3.88	**222.25**	**274.70**	**251.62**
Total	**1650.60**	**1685.55**	**1678.62**	**1829.38**	**1882.78**	**1874.72**	**2000.34**	**2091.58**	**2081.60**	**3394.30**	**3397.35**	**3216.22**	**653.81**	**564.98**	**542.53**	**99.12**	**83.71**	**83.71**	**9429.31**	**9538.53**	**9309.98**

4.24 HYDRO LEASE RENTAL

MSPGCL's Submission

4.24.1 MSPGCL has claimed the lease rent of Rs. 580.71 Crore for FY 2019-20.

Commission's Analysis and Ruling

4.24.2 The Commission has approved the lease rent of Rs. 580.71 Crore for FY 2019-20, the same being in line with the approved lease rent.

4.25 REVENUE GAIN/ (LOSS) DUE TO LOWER/ HIGHER AUXILIARY CONSUMPTION

MSPGCL's Submission

4.25.1 MSPGCL submitted that the difference between actual auxiliary consumption and normative auxiliary consumption is the lesser/ additional sales units, due to higher/ lower actual auxiliary consumption, than the normative auxiliary consumption. MSPGCL has computed the station-wise lesser/ additional sales units and used the station-wise energy charge approved by the Commission in the MYT Order to arrive at the revenue loss/ gain due to higher/ lower auxiliary consumption. This revenue loss/ gain is then shared with the consumers as per the provisions of the Regulations.

Table 4.31: Revenue Loss/(Gain) due to higher/lower AEC for FY 2019-20 as submitted by MSPGCL (Rs. Crore)

Station/Unit	Claimed
Bhusawal	6.04
Chandrapur	15.72
Khaperkheda	11.61
Koradi	11.55
Nashik	5.38
Uran	-1.10
Paras Units 3 & 4	15.86
Parli Units 6 & 7	13.89
Khaperkheda Unit 5	-1.23
Bhusawal Units 4 & 5	4.26
Koradi Units 8, 9 & 10	57.47
Chandrapur Units 8 & 9	7.18
Parli Unit 8	5.70
Total	**152.34**

Commission's Analysis

4.25.2 The Commission has computed the revenue loss/(gain) on account of variation in normative and actual AEC for FY 2019-20 as shown in the Table below:

Table 4.32: Revenue loss/(gain) on account of variation in AEC approved by the Commission.

Station/Unit	Actual Gross Generation	Normative AEC	Actual AEC	Lesser/ (Additional) sale	Rate of Energy Charge	Revenue Loss
	MU	%	%	MU	Rs. / kWh	Rs. Crore
Bhusawal	52.48	10.96%	43.91%	17.29	3.50	6.04
Chandrapur	9319.84	8.67%	9.25%	54.08	2.91	15.72
Khaperkheda	3956.94	9.70%	10.68%	38.62	3.01	11.61
Koradi	513.63	9.91%	15.65%	29.53	3.92	11.56
Nashik	2359.70	11.00%	11.61%	14.43	3.73	5.38
Uran	2598.33	3.00%	2.82%	-4.63	2.37	-1.10
Paras Units 3&4	2773.95	8.50%	10.50%	55.35	2.87	15.86
Parli Units 6&7	1565.78	8.50%	10.98%	38.86	3.57	13.89
Khaperkheda Unit 5	3303.59	6.00%	5.86%	-4.74	2.60	-1.23
Bhusawal Units 4&5	5264.77	6.00%	6.28%	14.90	2.86	4.26
Koradi Units 8-10	8952.62	6.00%	8.11%	189.21	3.04	57.53
Chandrapur Units 8&9	6708.98	6.00%	6.34%	22.86	3.14	7.18
Parli Unit 8	867.83	8.50%	10.43%	16.73	3.41	5.71
Total	**48238.42**			**482.49**		**152.42**

4.26 RESERVE SHUT DOWN (RSD) CHARGES

MSPGCL's Submission

4.26.1 MSPGCL submitted that Parli Units 4&5 have been under RSD. As per MYT order, the Commission had approved employee expenses, interest expenses, depreciation and non-tariff income for these Units. As against the same, the actual expenses and NTI during 2019-20 are as shown in the Table below:

Table 4.33: RSD charges submitted by MSPGCL for FY 2019-20 (Rs. Crore)

Particulars	Approved	Actual
Employee Expenses	5.51	5.51
Depreciation	7.15	25.62*
Interest Expenses	6.84	3.47
Interest on Working Capital	1.15	1.65
Less: NTI	-	-
Total	**20.65**	**36.26**

**higher due to residual depreciable value claim*

Commission's Analysis and Ruling

4.26.2 The Commission has approved the RSD charges for Parli comprising of (i) 10% of employee cost, (ii) interest on loan, (iii) depreciation and (iv) IoWC (working capital pertaining to proposed components of AFC). The Commission has perused the submissions of MSPGCL and accordingly approves the RSD charges of Rs. 36.26 Crore same as claimed by MSPGCL.

4.27 REDUCTION IN AFC DUE TO SHORTFALL AGAINST TARGET AVAILABILITY

MSPGCL's Submission

4.27.1 The reduction in AFC due to shortfall in target Availability is Rs. 1544.40 Crore for FY 2019-20.

Commission's Analysis and Ruling

4.27.2 As the actual Availability of some of the stations was lower than the target Availability approved for recovery of full AFC, the Commission has approved the recovery of trued-up AFC for such stations on pro-rata basis, except for Uran. For Uran, the Commission has approved the recovery of full trued-up AFC, at actual Availability.

4.27.3 The computation of AFC disallowance for FY 2019-20 is as shown in the Table below:

Table 4.34: AFC disallowance for FY 2019-20 approved by the Commission.

Station/Unit	Target Availability	Actual Availability	Total AFC	Less: water charges	Total AFC minus water charges	AFC Reduction	Reduced AFC	Reduced AFC plus water charges
	%	%	Rs. Crore	Rs. Crore	Rs. Crore	Rs. Crore	Rs. Crore	Rs. Crore
Bhusawal	80.00%	96.54%	123.53	6.63	116.90	0.00	116.90	123.53
Chandrapur	80.00%	61.76%	882.45	14.50	867.95	197.89	670.06	684.56
Khaperkheda	85.00%	73.38%	500.46	7.35	493.10	67.41	425.69	433.05
Koradi	72.00%	67.32%	328.37	2.89	325.47	21.16	304.32	307.21
Nashik	80.00%	81.14%	402.04	23.90	378.14	0.00	378.14	402.04
Uran	44.92%	44.92%	161.59	1.35	160.24	0.00	160.24	161.59
Paras Units 3&4	85.00%	81.87%	556.35	3.03	553.32	20.38	532.95	535.97
Parli Units 6&7	85.00%	78.59%	535.28	17.28	518.01	39.06	478.94	496.22
Khaperkheda Unit 5	85.00%	81.87%	539.81	3.38	536.43	19.75	516.68	520.06
Bhusawal Units 4&5	85.00%	83.72%	1126.91	7.30	1119.61	16.86	1102.75	1110.05
Koradi Units 8-10	85.00%	53.76%	2343.46	32.47	2310.99	849.36	1461.63	1494.10
Chandrapur Units 8&9	85.00%	82.09%	1179.80	1.46	1178.34	40.34	1138.00	1139.46
Parli Unit 8	85.00%	67.48%	378.32	6.76	371.56	76.58	294.97	301.73
Total			**9058.36**	**128.30**	**8930.06**	**1348.79**	**7581.27**	**7709.57**

4.28 REVENUE FROM SALE OF POWER

MSPGCL's Submission

4.28.1 MSPGCL has considered the revenue from sale of power of Rs. 21935.03 Crore in the final true-up for FY 2019-20.

Commission's Analysis and Ruling

4.28.2 The Commission observes that MSPGCL has adjusted the revenue surplus of Rs. 81.70 Crore approved in the provisional true-up of FY 2019-20, in the actual revenue from sale of power. Accordingly, the actual revenue from sale of power, before adjustment of the provisional true-up amount, is Rs. 22016.50 Crore. The Commission has considered the same for the purpose of true-up.

4.29 SUMMARY OF TRUE UP OF FY 2019-20

MSPGCL's Submission

4.29.1 The summary of true-up of FY 2019-20 claimed by MSPGCL is as shown in the Table below:

Table 4.35: Summary of true-up for FY 2019-20 claimed by MSPGCL (Rs. Crore)

Particulars	Revised Normative	Actual	Efficiency (Gain)/Loss	Sharing of efficiency (Gain)/Loss	Net entitlement
Expenses side summary					
Return on Equity	1685.55				1685.55
Interest on Loan	1882.78				1882.78
Depreciation	2091.58				2091.58
O&M expenses	2801.15	3183.54	382.39	127.46	2928.61
Pay revision arrears (Pay out of FY 18-19 1st instalment)		89.84			89.84
Pay revision		181.14			181.14
Water Charges		128.30			128.30
Other Charges		202.43			202.43
Interest on Working Capital	565.02	723.87	158.85	52.95	617.97
Less: Non-Tariff Income		83.71			83.71
Annual Fixed Charges			**0.00**		**9724.49**
Income Tax		0.00	0.00		0.00
Idle Capacity Charges (RSD)	36.26				36.26
Hydro Lease Rent	580.71				580.71

Particulars	Revised Normative	Actual	Efficiency (Gain)/Loss	Sharing of efficiency (Gain)/Loss	Net entitlement
Fuel Cost	13394.61	13819.06	424.45	141.48	13536.09
Aggregate Revenue Requirement			0.00		**23877.55**
AFC Reduction					1544.40
Net Revenue Requirement					**22333.15**
Revenue from sale of power		21935.03			21935.03
Revenue loss/(gain) due to higher/lower auxiliary consumption			152.34	50.00	50.00
Revenue for true-up					**21985.04**
Revenue Gap/(Surplus)					**348.11**

Commission's Analysis and Ruling

4.29.2 In accordance with the MYT Regulations, 2015, the Commission has allowed the expenses for FY 2019-20 based on the norms of operation approved in this Order, and carried out the sharing of gains and losses under the following heads:

i. Sharing of losses in O&M expenses.
ii. Sharing of losses in fuel expenses.
iii. Sharing of gains towards IoWC.
iv. Sharing of normative revenue loss due to higher AEC.

4.29.3 In accordance with the MYT Regulations, 2015, 2/3rd of efficiency gains and 1/3rd of efficiency loss on account of variation in controllable factors is to be passed on to the beneficiary.

Table 4.36: Summary of true-up for FY 2019-20 approved by the Commission (Rs. Crore)

Particulars	Approved in MYT	Normative	Actual	Efficiency (Gain)/Loss	Sharing of efficiency (Gain)/Loss	Net entitlement
		A	B	C=B-A	D=2/3rd of (Gain); 1/3rd of Loss	E=A+D
Expenses side summary						
Return on Equity	1650.60	1678.62				1678.62
Interest on Loan	1829.38	1874.72				1874.72
Depreciation	2000.34	2081.60				2081.60

Particulars	Approved in MYT	Normative	Actual	Efficiency (Gain)/Loss	Sharing of efficiency (Gain)/Loss	Net entitlement
		A	B	C=B-A	D=2/3rd of (Gain); 1/3rd of Loss	E=A+D
O&M expenses	3394.30	3216.22	3785.25	569.03	189.68	3405.90
Interest on Working Capital	653.81	542.53	0.00	-542.53	-361.69	180.84
Less: Non-Tariff Income	99.12		83.71			83.71
Annual Fixed Charges	**9429.31**					**9137.97**
Income Tax	0.00	0.00				0.00
RSD Charges	19.73	36.26				36.26
Hydro Lease Rent	580.71		580.71			580.71
Energy Charges	16782.25	13399.73	13819.06	419.32	139.77	13539.51
Aggregate Revenue Requirement	**26812.00**					**23294.44**
AFC Reduction	1085.59	1348.79				1348.79
Net Revenue Requirement	**25726.11**					**21945.65**
Revenue from sale of power	25807.58		22016.50			22016.50
Revenue loss due to higher auxiliary consumption				152.42	50.81	50.81
Revenue for true-up	**25807.58**					**22067.31**
Revenue Gap/(Surplus)	**-81.47**					**-121.66**
Revenue Gap/(Surplus) approved in provisional true-up						**-81.47**
Net Revenue Gap/(Surplus) approved after final true-up						**-40.19**

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

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

5.1 BACKGROUND

5.1.1 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. 296 of 2019 approved the tariff for FY 2020-21 and FY 2021-22. MSPGCL, 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. The analysis of the true-up undertaken by the Commission is provided below.

5.2 NORMS OF OPERATION

5.2.1 The norms of operation specified under the MYT Regulations, 2019 for thermal generating stations are as follows:

(i) Availability
(ii) PLF
(iii) AEC
(iv) GSHR
(v) SFOC
(vi) Transit and handling loss

5.2.2 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 respective Orders. MSPGCL has submitted the actual performance in FY 2020-21 and FY 2021-22, which is in variation of the norms approved by the Commission. The performance was better than the norms in some of the cases and inferior in some of the cases. MSPGCL submitted the reasons for the actual performance that is inferior to the norms. MSPGCL's submissions on the actual performance in FY 2020-21 and FY 2021-22 and the Commission's analysis is detailed hereunder.

5.3 AVAILABILITY

MSPGCL's Submission

5.3.1 The actual Availability achieved for FY 2020-21 and FY 2021-22 is as shown in the Table below:

Table 5.1: Actual Availability submitted by MSPGCL for FY 2020-21 and FY 2021-22

Station/unit	Normative	Actual for FY 2020-21	Actual for FY 2021-22
Bhusawal	80.00%	97.11%	64.69%
Chandrapur	80.00%	65.64%	53.51%
Khaperkheda	85.00%	75.79%	61.00%
Koradi	72.00%	76.73%	72.52%

Station/unit	Normative	Actual for FY 2020-21	Actual for FY 2021-22
Nashik	80.00%	95.02%	84.43%
Uran	85.00%	34.39%	35.33%
Paras Units 3&4	85.00%	82.96%	75.00%
Parli Units 6&7	85.00%	97.17%	77.58%
Khaperkheda Unit 5	85.00%	74.08%	82.85%
Bhusawal Units 4&5	85.00%	92.51%	77.81%
Koradi Units 8-10	85.00%	65.78%	63.00%
Chandrapur Units 8&9	85.00%	84.26%	74.80%
Parli Unit 8	85.00%	97.06%	80.32%

5.3.2 MSPGCL submitted the MSLDC Certificate for actual Availability. MSPGCL submitted that following factors have adversely affected the Availability of its Stations in FY 2020-21 and FY 2021-22.

5.3.3 **Low system demand:** With the rising penetration of renewables, the generation schedule given to the thermal stations during the daytime keeps on fluctuating very drastically. The generating stations of MSPGCL such as, Bhusawal, Paras, Parli and Nasik are located far off from the mines and therefore fall in the ranking based on variable cost under the merit order. MSPGCL submitted that higher variable cost together with low system demand leads to zero scheduling of the stations which has a very negative impact on the overall performance of the station. The overall loss in Availability on account of these reasons was around 10% for thermal stations.

5.3.4 **Coal related issues:** The overall materialisation of coal during the year was around 70-73% which led to an overall generation loss of around 3-4%. Besides, the poor quality of coal and problems related to wet coal during monsoon also played significant impact of around 4-5% in generation loss. The impact was largely noticed during the monsoon months.

5.3.5 **Lower availability of gas:** As against the overall requirement of 3 MMSCMD of gas, the supply was barely around 1.34 MMSCMD in FY 2020-21 and 1.6 MMSCMD in FY 2021-22. Accordingly, the Availability of Uran was lower, even though the machines were available for more than 90%.

Commission's Analysis and Ruling

5.3.6 The Commission sought the generation loss for each station on account of each reason for lower Availability. In reply, MSPGCL submitted the generation loss for each station due to the following reasons:

- Annual overhaul
- Tolling of coal to IPP

- Backing down
- Zero schedule/RSD
- Water shortage
- Supercritical coal stock
- Poor coal quality
- Wet coal problem
- System problem
- O&M factors

5.3.7 The Commission has observed that out of the total generation loss of 41556 MU and 36552 MU amounting to 49% and 43% of the probable generation for FY 2020-21 and FY 2021-22 respectively, major reasons for generation loss are zero schedule/RSD and O&M factors amounting. The generation loss due to O&M factors is significantly high at 26% and 35% for FY 2020-21 and FY 2021-22 respectively. The Commission finds that significant improvement in generation availability is possible with improvement in O&M practices. The loss of generation due to shortfall in its O&M processes not only impacts MSPGCL, but it also impacts MSEDCL since they are required to procure this power through alternate sources, which could be costlier than the power from MSPGCL stations. **The Commission directs MSPGCL to submit a plan within three months to ensure the improvement in its O&M practices for reduction in generation loss due to O&M factors.**

5.3.8 The Commission has sought the supporting documents to substantiate the actual gas receipt in FY 2020-21 and FY 2021-22. In reply, submitted the details of actual gas receipts for FY 2020-21 and FY 2021-22. The Commission had allowed the recovery of full AFC for Uran GTPS in the final true-up for FY 2012-13 to FY 2019-20 considering the shortage of gas as uncontrollable. In line with that approach, the recovery of full AFC, as trued-up in this Order has been allowed for Uran at actual Availability for FY 2020-21 and FY 2021-22.

5.3.9 The recovery of full AFC is allowable at target Availability. As the actual Availability is lower than the target Availability for some of the Stations, the Commission has approved the recovery of trued-up AFC for FY 2020-21 and FY 2021-22, for these Stations (except for Uran). For Uran, the Commission has approved the recovery of full trued-up AFC for FY 2020-21 and FY 2021-22 at actual Availability considering shortage of gas as uncontrollable factor.

5.4 PLF

MSPGCL's Submission

5.4.1 The actual PLF submitted by MSPGCL for FY 2020-21 and FY 2021-22 is as shown in the Table below:

Table 5.2: Actual PLF submitted by MSPGCL for FY 2020-21 and FY 2021-22

Station/unit	FY 2020-21	FY 2021-22
Bhusawal	12.03%	28.69%
Chandrapur	54.38%	50.39%
Khaperkheda	69.00%	50.18%
Koradi	12.94%	59.43%
Nashik	0.00%	59.24%
Uran	34.40%	35.34%
Paras Units 3&4	77.29%	59.24%
Parli Units 6&7	31.60%	34.98%
Khaperkheda Unit 5	69.00%	78.93%
Bhusawal Units 4&5	53.52%	64.18%
Koradi Units 8-10	46.45%	0.00%
Chandrapur Units 8&9	81.09%	74.59%
Parli Unit 8	44.63%	50.07%

5.4.2 MSPGCL submitted the Maharashtra State Load Dispatch Centre (MSLDC) Certificate for actual PLF for FY 2020-21 and FY 2021-22. MSPGCL submitted that on account of reasons like the low system demand, less materialisation of coal, poor quality of coal, wet coal during monsoon and lower availability of gas, the actual PLF achieved during FY 2020-21 and FY 2021-22 is low compared to target.

Commission's Analysis and Ruling

5.4.3 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 all the stations is lower than the target PLF for incentive and hence MSPGCL is not entitled for any PLF incentive during FY 2020-21 and FY 2021-22.

5.5 AUXILIARY ENERGY CONSUMPTION (AEC)

MSPGCL's Submission

5.5.1 The actual AEC achieved for FY 2020-21 and FY 2021-22 is shown in the Table below:

Table 5.3: Actual AEC submitted by MSPGCL for FY 2020-21 and FY 2021-22

Station/unit	Normative	Actual for FY 2020-21	Actual for FY 2021-22
Bhusawal	10.96%	17.46%	14.47%
Chandrapur	7.80%	9.11%	10.32%
Khaperkheda	9.70%	9.94%	11.31%
Koradi	10.81%	14.44%	12.80%

Station/unit	Normative	Actual for FY 2020-21	Actual for FY 2021-22
Nashik	10.75%	12.90%	11.35%
Uran	3.10%	2.85%	2.75%
Paras Units 3&4	9.30%	10.53%	11.35%
Parli Units 6&7	9.30%	11.67%	12.26%
Khaperkheda Unit 5	6.00%	5.99%	5.75%
Bhusawal Units 4&5	6.00%	5.99%	6.45%
Koradi Units 8-10	6.00%	8.10%	7.53%
Chandrapur Units 8&9	6.00%	5.49%	5.50%
Parli Unit 8	8.50%	10.26%	11.16%

5.5.2 MSPGCL submitted that one of the reasons for higher AEC is lower PLF. As AEC is inversely proportional to PLF, AEC increases due to reduction in PLF. There was low system demand during 10-12% of time during the year which led to increase in AEC.

5.5.3 **Koradi Unit 6:** The normative AEC approved for Koradi was 10.81% for the combined Units 6&7. After the retirement of Unit 7 w.e.f. 3 August, 2021, there is no loading of auxiliaries specific to Unit 7. However, there are some common systems/auxiliaries like Water Treatment Plant (WTP), Coal Handling Plant (CHP), Oil Handling Plant (OHP) and Service building etc., which are essential to be kept in service with loading of the same on Unit 6. Even though the expected AEC for Unit 6 on standalone basis after renovation and modernisation works was at 9%, it does not include the burden of common auxiliaries. As per MSPGCL's assessment the burden of such common auxiliaries is around 1.5% to 2%. In view of above, MSPGCL requested the Commission relax the normative AEC for Unit 6. MSPGCL has already undertaken an exercise for carrying out Electrical System Energy audit for Unit 6 for the purpose of assessment of exact impact of common auxiliaries and for assessment of achievable AEC for Unit 6. MSPGCL sought permission to submit the report during the proceedings in the MTR petition and accordingly requested the Commission to approve the revised normative AEC for Koradi.

Commission Analysis and Ruling

5.5.4 The Commission, in the Review Order dated 8 March, 2022, ruled as under:

"24. In view of the above, and after considering the submissions and the data provided by MSPGCL, the Commission is of the opinion that there is a genuine difficulty faced by MSPGCL to give effect to the better performance norms of the Koradi Unit No. 6 after retirement of the Unit No. 7. The Commission further notes that the Regulation 105 of the MYT Regulations, 2019 empowers the Commission to relax any of the provisions of these Regulations on its own motion or on an application made before it by an interested person by general or special Order, for reasons to be recorded in

writing, and after giving an opportunity of hearing to the parties likely to be affected by grant of relaxation. The Commission further notes that the Regulation 106 of the MERC (MYT) Regulations, 2019 empowers the Commission under the provisions of 'Removal of difficulties' in giving effect to the provisions of these Regulations.

25. In the instant Case, MSPGCL has raised the issue of revised normative parameters for Unit 6 on account of retirement of Unit No. 7 under the provisions of review jurisdiction. The Commission is of the view that the submission of MSPGCL on the issue of revised normative parameters for Unit 6 on account of retirement of Unit No. 7 satisfies the requirement of filing the application as per the provisions of Regulations 105 and 106 of the MYT Regulations, 2019. Further, the Commission has already heard MSPGCL and MSEDCL which are the parties likely to be affected by consideration of such revised norms. Therefore, even if the issue is not qualified on the ground of the review, to avoid one more petition (i.e. filing a separate petition requesting consideration under Regulation 105 and 106 of the MYT Regulations), the Commission is inclined to accept the factual submission of MSPGCL and treat these submissions as an application for a revision of the norms under power to relax under Regulations 105 and 106 of the MYT Regulations for removal of difficulty, 2019 and allow the revised normative parameters for Koradi Unit 6 on account of retirement of Koradi Unit No. 7 for the balance period of the fourth control period starting from 1 April, 2022. (i.e. FY 2022-23 to FY 2024-25). However, these will be subject to detailed scrutiny during the upcoming MTR.

26. The Commission thus allows the revised norms for Koradi Unit No. 6 as proposed by MSPGCL for billing and MoD purpose as under:

Parameters:	*Koradi Unit No. 6*
GSHR	*2350*
Aux Consumption (%)	*9.00%*
SFOC (ml/kWh)	*2.81*
Transit Loss	*0.80%*

"

5.5.5 MSPGCL has not submitted any Electrical System Energy audit report regarding the assessment of AEC of Unit 6. The Commission, in the Review Order, has approved the normative AEC of Unit 6 as 9.00%. MSPGCL, in the present Petition, has submitted that the normative AEC ought to the higher than 9.00% on account of loading of common auxiliaries with Unit 7, required for operation of Unit 6. Based on the same, the Commission deems it fit to approve the normative AEC of 10.81% for Unit 6 on standalone basis.

Table 5.4: AEC for FY 2020-21 and FY 2021-22

Station/unit	Actual for FY 2020-21	Actual for FY 2021-22	Normative approved by the Commission for FY 2020-21 and FY 2021-22
Bhusawal	17.46%	14.47%	10.96%
Chandrapur	9.11%	10.32%	7.80%
Khaperkheda	9.94%	11.31%	9.70%
Koradi	14.44%	12.80%	10.81%
Nashik	12.90%	11.35%	10.75%
Uran	2.85%	2.75%	3.10%
Paras Units 3&4	10.53%	11.35%	9.30%
Parli Units 6&7	11.67%	12.26%	9.30%
Khaperkheda Unit 5	5.99%	5.75%	6.00%
Bhusawal Units 4&5	5.99%	6.45%	6.00%
Koradi Units 8-10	8.10%	7.53%	6.00%
Chandrapur Units 8&9	5.49%	5.50%	6.00%
Parli Unit 8	10.26%	11.16%	8.50%

5.5.6 The Commission has considered the Auxiliary Consumption as a controllable parameter in accordance with the MYT Regulations, 2019. Hence, the difference between the actual AEC and normative AEC has been considered for computing the sharing of efficiency gains as per principles laid out in MYT Regulations, 2019.

5.6 NET GENERATION

Commission's Analysis and Ruling

5.6.1 The Commission has considered the actual gross generation as submitted by MSPGCL and the net generation based on the normative AEC. Accordingly, the net generation approved by the Commission is as shown in the Tables below:

Table 5.5: Net generation for FY 2020-21 and FY 2021-22

Station/Unit	FY 2020-21			FY 2021-22		
	Actual	@ Normative AEC claimed by MSPGCL	Approved	Actual	@ Normative AEC claimed by MSPGCL	Approved
Bhusawal	188.84	203.70	203.70	458.42	477.25	477.25
Chandrapur	8245.00	8285.05	8363.98	7763.90	7981.71	7981.71
Khaperkheda	4421.17	4432.80	4432.80	3274.64	3333.98	3333.98
Koradi	398.43	419.54	415.35	784.41	810.14	802.00
Nashik	641.98	656.02	657.87	1787.54	1797.49	1797.49
Uran	1950.77	1945.73	1945.73	2014.06	2006.72	2006.72
Paras Units 3&4	3014.13	3055.51	3055.51	2327.24	2381.03	2381.03
Parli Units 6&7	1246.90	1280.36	1280.36	1596.78	1650.62	1650.62
Khaperkheda Unit 5	2840.89	2840.56	2840.56	3249.87	3241.36	3241.36

Station/Unit	FY 2020-21			FY 2021-22		
	Actual	@ Normative AEC claimed by MSPGCL	Approved	Actual	@ Normative AEC claimed by MSPGCL	Approved
Bhusawal Units 4&5	4397.22	4396.72	4396.72	5259.22	5284.68	5284.68
Koradi Units 8-10	7319.78	7486.79	7486.79	10030.99	10196.74	10196.74
Chandrapur Units 8&9	6641.43	6605.47	6605.47	5986.89	5955.04	5955.04
Parli Unit 8	894.37	911.92	911.92	1003.88	1033.99	1033.99
Total	**42200.92**	**42520.19**	**42596.76**	**45537.83**	**46150.78**	**46142.64**

5.7 GROSS STATION HEAT RATE (GSHR)

MSPGCL's Submission

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

Table 5.6: Actual GSHR submitted by MSPGCL for FY 2020-21 and FY 2021-22 (kcal/kWh)

Station/unit	Normative	Actual for FY 2020-21	Actual for FY 2021-22
Bhusawal	2787.00	2782.50	2883.25
Chandrapur	2688.00	2632.03	2613.74
Khaperkheda	2630.00	2643.78	2688.68
Koradi	2622.00	2964.02	2577.49
Nashik	2754.00	2838.56	2694.42
Uran	2035.00	2088.30	2241.11
Paras Units 3&4	2430.00	2451.01	2761.25
Parli Units 6&7	2430.00	2395.15	2485.01
Khaperkheda Unit 5	2375.00	2376.19	2537.34
Bhusawal Units 4&5	2375.00	2373.71	2537.01
Koradi Units 8-10	2230.00	2370.64	2582.05
Chandrapur Units 8&9	2375.00	2300.32	2419.45
Parli Unit 8	2430.00	2393.63	2448.02

5.7.2 **Koradi Unit 6**: The guaranteed GSHR for Unit 6 is 2350 kcal/kWh which has been approved by the Commission. MSPGCL submitted that for the new generating stations, an allowance of 4.5% from the design SHR is allowed in order to factor local operating conditions and deviations in overall quality of coal and associated parameters. Hence, it is requested to revise the normative SHR upto (2350*1.045) 2456 kcal/kWh.

5.7.3 **Uran:** GSHR mainly depends on the mode of operation i.e., open cycle operations and the lower availability of gas impacts the GSHR. Uran has total capacity 672 MW comprising of 4 x 108 MW (GT-5, GT-6, GT7 & GT-8) units and 2 x 120 MW (A0 & B0). While the GTs can be operated individually in open cycle, to achieve optimal generation at optimal efficiency, the entire plant have to normally runs on combined cycle operations i.e., A0 block along with GT-5 & GT-6 and B0 block along with GT-7 & GT-8. In absence of a GT amongst the combination, one GT can be operated with the Waste Heat Recovery Unit (WHR), however this results in partial load operation which has its obvious effects on plant efficiency. To run all units of Uran, the gas requirement is 3.5 MMSCMD. However, since last few years the gas availability is less than 2 MMSCMD. Since June, 2022, it is only around 1 MMSCMD.

5.7.4 The actual GSHR of Uran was 2091.88 kcal/kWh, 2088.30 kcal/kWh, 2241.11 kcal/kWh for FY 2019-20, FY 2020-21 and FY 2021-22 respectively, which was achieved during a mix of operational combinations of the GTs and WHR units. The deviations in SHR are mainly on account of partial load operations. When Waste Heat recovery unit is not available, the corresponding GTs are running in open cycle, which has higher SHR but lower AEC. When one of GT is not available from the combination of 2 GTs and 1 WHR, the partial loading results in higher GSHR and AEC. During last few years, GT-7 was under shutdown due to failure of turbine blades. Due to non-availability of GT-7, the WHR B0 block is continuously running with half load along with GT-8 unit. This partial load operation results in higher GSHR and higher AEC. Also, while WHR A0 unit is out of operation from 10 September, 2021 due to catastrophic failure of Last stage LPT blade. However, the GT-5 and GT-6 units were kept running with open cycle to fulfil the demand. Such open cycle operation has resulted in higher GSHR and lower AEC. In light of the same, MSPGCL requested the Commission to relax the normative GSHR to actual level and allow the fuel cost accordingly.

Commission's Analysis and Ruling

5.7.5 The Commission, in the Review Order dated 8 March, 2022 approved the normative GSHR of 2350 kcal/kWh for Unit 6, same as proposed by MSPGCL. Whereas, in the present Petition, MSPGCL has claimed the GSHR of 2456 kcal/kWh. In reply to clarification sought in this regard, MSPGCL submitted that it was inadvertently stated in the Petition, and it has considered the normative GSHR as approved in the Review Order, from FY 2022-23 onwards.

5.7.6 The Commission, in the previous years, had not accepted partial loading as a cogent reason for relaxation of normative performance parameters. Therefore, the Commission does not accept MSPGCL's request to relax the normative GSHR for Uran. MSPGCL, in its computations, has claimed the normative GSHR of 2035 kcal/kWh for Uran and accordingly, the Commission has considered the same.

Table 5.7: GSHR for FY 2020-21 and FY 2021-22 (kcal/kWh)

Station/unit	Actual for FY 2020-21	Actual for FY 2021-22	Normative approved by the Commission for FY 2020-21 and FY 2021-22
Bhusawal	2782.50	2883.25	2787.00
Chandrapur	2632.03	2613.74	2688.00
Khaperkheda	2643.78	2688.68	2630.00
Koradi	2964.02	2577.49	2622.00
Nashik	2838.56	2694.42	2754.00
Uran	2088.30	2241.11	2035.00
Paras Units 3&4	2451.01	2761.25	2430.00
Parli Units 6&7	2395.15	2485.01	2430.00
Khaperkheda Unit 5	2376.19	2537.34	2375.00
Bhusawal Units 4&5	2373.71	2537.01	2375.00
Koradi Units 8-10	2370.64	2582.05	2230.00
Chandrapur Units 8&9	2300.32	2419.45	2375.00
Parli Unit 8	2393.63	2448.02	2430.00

5.7.7 The Commission has considered the normative GSHR in the final true-up of FY 2020-21 and FY 2021-22. As GSHR is a controllable performance parameter, the Commission has computed the sharing of gains/losses as per the MYT Regulations, 2019.

5.8 SFOC

MSPGCL's Submission

5.8.1 The actual SFOC achieved for FY 2020-21 and FY 2021-22 is shown in the Table below:

Table 5.8: Actual SFOC submitted by MSPGCL for FY 2020-21 and FY 2021-22 (ml/kWh)

Station/unit	Normative	Actual for FY 2020-21	Actual for FY 2021-22
Bhusawal	1.40	2.04	9.57
Chandrapur	1.00	0.97	3.14
Khaperkheda	1.20	2.14	1.20
Koradi	2.81	9.08	14.08
Nashik	1.00	1.06	1.00
Uran	-	-	-
Paras Units 3&4	0.50	1.31	0.50
Parli Units 6&7	0.50	1.72	0.50
Khaperkheda Unit 5	0.50	0.47	0.50
Bhusawal Units 4&5	0.50	0.48	0.50
Koradi Units 8-10	0.50	1.67	0.50
Chandrapur Units 8&9	0.50	0.33	0.50

Station/unit	Normative	Actual for FY 2020-21	Actual for FY 2021-22
Parli Unit 8	0.50	0.79	0.50

5.8.2 MSPGCL submitted that on account of lower PLF of the Units, the oil consumption was on a higher side in order to keep the boiler flame stable. Further, fluctuations in power requirement led to increase in oil consumption. The Central Generating Stations are given additional compensation in case the PLF of the units falls below the normative threshold on account of lower system demand or in case of such higher ramping up/down operations. Therefore, MSPGCL has raised compensation invoices for excess consumption from April 2021 onwards.

5.8.3 As per MERC State Grid Code Regulations 2020, the generators are allowed to claim additional fuel cost through relaxations in GSHR and AEC norms. The compensation for additional fuel consumption is required due to deterioration in GSHR and AEC during the period when the units are scheduled below 85% till technical minimum level in low demand situations.

5.8.4 MSPGCL submitted that MERC (State Grid Code) Regulations, 2020 provides for claiming compensation from buyer on monthly basis in the Fuel Surcharge Adjustment claims. However, MSPGCL has not raised the bills for the same due to non-availability of scheduling data at the time of regular billing. Hence, MSPGCL has included the claim in the present MTR petition. MSPGCL further submitted that the gains/(losses) presently submitted are without considering the impact of such additionally allowable normative fuel costs. MSPGCL requested the Commission to include the above said allowable fuel costs with the normative fuel costs while computing sharing of gains/(losses) for finalizing entitlement. MSPGCL has claimed the amounts of Rs. 0.74 Crore and Rs. 4.64 Crore for FY 2020-21 and FY 2021-22 respectively.

Commission's Analysis and Ruling

5.8.5 The MERC (State Grid Code) Regulations, 2020 specifies as under:

"34.3 InSGS whose tariff is either determined or adopted by the Commission, will be directed by SLDC to operate below normative plant availability factor but, at or above technical minimum, such InSGS may be compensated depending on the Average Unit Loading (AUL) duly taking into account the forced outages, planned outages, PLF, generation at generator terminal, energy sent out ex-bus, number of start-stop, secondary fuel oil consumption and auxiliary energy consumption, in due consideration of actual and normative operating parameters of station heat rate, auxiliary energy consumption and secondary fuel oil consumption etc. on monthly basis duly supported by relevant data verified by SLDC.

…

Provided further that

…

e) Compensation for the Station Heat Rate and Auxiliary Energy Consumption shall be worked out in terms of energy charges.

…

34.6 The mechanism for compensation for SHR and AEC for low unit loading on monthly basis in terms of energy charges and compensation for secondary fuel oil consumption over and above the norm of 0.5 ml/kWh for additional start-ups in excess of seven start-ups, is enclosed as Annexure-4 with these Regulations."

5.8.6 In accordance with the MERC (State Grid Code) Regulations, 2020, compensation for GSHR and AEC shall have to be worked out in terms of energy charges. MSPGCL has rightly mentioned that MERC (State Grid Code) Regulations, 2020 provides for claiming compensation from buyer on monthly basis in the Fuel Surcharge Adjustment claims. The MERC (State Grid Code) Regulations, 2020 does not specify the approval of the Commission for seeking compensation in accordance with the provisions of the Regulations. Therefore, the Commission does not find it prudent to approve the additional cost claimed by MSPGCL. The Commission directs MSPGCL to take recourse to the provisions of the MERC (State Grid Code) Regulations, 2020 and the claim compensation accordingly from the Buyer.

5.9 TRANSIT AND HANDLING LOSS

MSPGCL's Submission

5.9.1 The actual transit and handling loss achieved in FY 2020-21 and FY 2021-22 is as shown in the Table below:

Table 5.9: Actual transit and handling loss submitted by MSPGCL for FY 2020-21 and FY 2021-22

Station/Unit	Normative	Actual for FY 2020-21	Actual for FY 2021-22
Bhusawal	0.80%	0.77%	0.80%
Chandrapur	0.80%	0.44%	0.37%
Khaperkheda	0.80%	1.12%	1.49%
Koradi	0.80%	0.75%	0.95%
Nashik	0.80%	0.76%	0.78%
Paras Units 3&4	0.80%	0.78%	0.78%
Parli Units 6&7	0.80%	0.55%	0.53%
Khaperkheda Unit 5	0.80%	1.12%	1.49%
Bhusawal Units 4&5	0.80%	0.77%	0.80%
Koradi Units 8-10	0.80%	0.75%	0.80%
Chandrapur Units 8&9	0.80%	0.47%	0.56%
Paril Unit 8	0.80%	0.55%	0.53%

Commission's Analysis and Ruling

5.9.2 The MYT Regulations, 2019 specify the normative transit and handling loss of 0.80% for non-pit head generating stations for domestic coal. The Commission has considered the normative transit and handling loss in the final true-up of FY 2020-21 and FY 2021-22. As transit and handling loss is a controllable performance parameter, the Commission has computed the sharing of gains/losses as per the MYT Regulations, 2019.

5.10 GROSS CALORIFIC VALUE (GCV) OF FUELS

MSPGCL's Submission

5.10.1 The actual GCV of fuels for FY 2020-21 and FY 2021-22 are as shown in the Table below:

Table 5.10: Actual GCV of fuels submitted by MSPGCL for FY 2020-21 and FY 2021-22

Station/Unit	FY 2020-21			FY 2021-22		
	As fired Coal (kcal/kg)	Secondary Fuel Oil (kcal/L)	Gas (kcal/SCM)	As fired Coal (kcal/kg)	Secondary Fuel Oil (kcal/L)	Gas (kcal/SCM)
Bhusawal	3274.93	9279.50	-	3045.53	9674.09	-
Chandrapur	3094.00	9517.01	-	3106.37	9613.37	-
Khaperkheda	2919.89	9670.42	-	2897.83	9447.53	-
Koradi	2926.93	9516.40	-	2828.52	9598.66	-
Nashik	3239.57	9710.38	-	3221.31	9775.42	-
Uran	-	-	8556.02	-	-	8384.85
Paras Units 3&4	3127.00	9371.11	-	3198.26	9454.37	-
Parli Units 6&7	3214.00	9473.92	-	3229.87	9595.58	-
Khaperkheda Unit 5	2919.89	9473.15	-	2895.70	9440.15	-
Bhusawal Units 4&5	3127.04	9383.49	-	3137.60	9616.81	-
Koradi Units 8-10	2996.51	9470.35	-	3253.26	9551.35	-
Chandrapur Units 8&9	3215.00	9426.12	-	3306.24	9531.66	-
Parli Unit 8	3207.00	9426.62	-	3232.38	9502.50	-

Commission's Analysis and Ruling

5.10.2 The Commission has considered the actual GCV of secondary fuel oil as submitted by MSPGCL. The Commission has considered the actual GCV of gas as submitted by MSPGCL.

5.10.3 As regards the GCV of coal, the Commission, in the MYT Order ruled as under:

"7.11.14 The Commission is of the view that if entire GCV loss is allowed, then there will be no incentive for MSPGCL to control the GCV loss. Hence, the Commission

allows the relaxation of 225 kCal/kWh in loss of GCV in addition to 300 kCal/kg as per MERC MYT Regulations, 2019, for FY 2020-21. Further, the Commission feels that MSGPCL should gradually try to reduce the GCV loss and accordingly approves the relaxation for subsequent years with some improvement in GCV as follows:

- ***FY 2021-22**: Relaxation of 200 kcal/kg in loss of GCV in addition to 300 kCal/kg as per MYT Regulations, 2019.*
- ***FY 2022-23**: Relaxation of 175 kcal/kg in loss of GCV in addition to 300 kCal/kg as per MYT Regulations, 2019.*
- ***FY 2023-24**: Relaxation of 150 kcal/kg in loss of GCV in addition to 300 kCal/kg as per MYT Regulations, 2019.*
- ***FY 2024-25**: Relaxation of 125 kcal/kg in loss of GCV in addition to 300 kCal/kg as per MYT Regulations, 2019.*

7.11.5 The above relaxation would be applicable to only raw coal including the case IV generators (if any) which have lower GCV on account of Grade Slippage between Loading and Unloading end, and moisture effect. In case of washed due to removal of ash content and impurities, GCV of coal improves which nullifies the effect of grade slippage seen in raw coal. Expenses on coal washeries is pass through in fuel costs. Hence, effect of grade slippage between loading and unloading load is already taken care. The effect of moisture is around 300 kCal in GCV which is well within permissible range of MYT Regulations. Hence, no relaxation is required to be given for washed coal."

5.10.4 Subsequently, the Commission in the Review Order dated 1 March, 2021 ruled as under:

"28.40 In the instant Case, MSPGCL has raised the issue of GCV as a part of review Petition. The Commission is of the view that the submission of MSPGCL on the issue of GCV satisfies the requirement of filing the application as per the condition of Regulations 105 of the MYT Regulations, 2019. Further, the Commission has already heard MSPGCL and MSEDCL which are the parties likely to be affected by grant of the relaxation. Therefore, even if the issue is not qualified on the ground of the review, to avoid one more petition (i.e. a separate petition requesting consideration under Regulation 105 of the MYT Regulations), the Commission is inclined to accept the factual submission of MSPGCL and treating these submissions as an application for a relaxation of the norms under power to relax under Regulations 105 of the MYT Regulations, 2019 and allowing the additional grade slippage of 125 kCal/kg over and above the approved norms in the MYT Order for the period FY 2020-21 to FY 2022-23…"

5.10.5 Accordingly, the ceiling limit of GCV loss between as billed and as received is 650 kcal/kg and 625 kcal/kg for FY 2020-21 and FY 2021-22 respectively. As against the same, the actual GCV loss for FY 2020-21 and FY 2021-22 is more than the ceiling limit for most of the stations. MSPGCL requested the Commission to consider the actual GCV loss. The Commission, in the MYT Order ruled as under:

"6.8.2 As discussed in truing up chapters of this Order, it is observed that the Petitioner has been facing shortage of coal in the previous years on account of low coal materialisation from the linkage coal and the lower GCV received against the contracted grade of coal. The Commission has been considering the arrangement of sufficient coal to meet the normative availability as a business risk and not allowing any relaxation in availability norms for recovery of full fixed charges due to shortage of coal. Accordingly, the Commission, in principally approves the various measures proposed by MSPGCL including coal beneficiation and procurement of imported coal in order to meet the requirement of coal for maintaining normative availability.

6.8.3 MSPGCL has submitted that the beneficiation of coal will commence from FY 2020-21. The Commission through the data gaps asked MSPGCL about the current status of tendering process for coal washing. MSPGCL in its reply submitted that MSPGCL has appointed M/s MSMC as Nodal Agency for supply of Washed coal and the supply of washed coal is expected to be commenced from April 2020. MSPGCL has submitted that the coal beneficiation is likely to achieve the improvement in GCV by 500-600 kcal/kg. As the tendering process is in progress, MSPGCL could not submit the cost benefit analysis of coal beneficiation except mentioning about improvement in GCV by 500-600 kcal/kg…"

5.10.6 As against the submissions that coal beneficiation would commence from April, 2020, the actual scenario is completely different wherein, the actual washed coal procured was lower than that envisaged in the MYT Petition. The Fuel Utilisation Plan was submitted by MSPGCL with due consideration to a multitude of factors. The acts of omission on the part of MSPGCL cannot be a cogent reason for allowing the entire GCV loss between loading end and receiving end more so, when the Commission had relaxed the GCV loss twice. Therefore, the Commission has considered the ceiling limit of GCV loss between loading end and receiving end as 650 kcal/kg and 625 kcal/kg for FY 2020-21 and FY 2021-22 respectively. Accordingly, the Commission has considered the GCV of raw coal as lower of actual received or ceiling limit for the respective year.

5.10.7 The MYT Regulations, 2019 specify that the GCV of coal should be considered for tariff "as received " at unloading point less actual stacking loss subject to the maximum stacking loss of 120 kcal/kg. In line with the same, the Commission has considered the lower of actual stacking loss and 120 kcal/kWh and subtracted the same from the "as received" GCV of coal.

5.10.8 Accordingly, the Commission has considered the GCV of fuels as shown in the Table below:

Table 5.11: GCV of fuels considered by Commission for FY 2020-21 and FY 2021-22

Station/Unit	FY 2020-21			FY 2021-22		
	Coal (kcal/kg)	Secondary Fuel Oil (kcal/L)	Gas (kcal/SCM)	Coal (kcal/kg)	Secondary Fuel Oil (kcal/L)	Gas (kcal/SCM)
Bhusawal	3457.39	9279.50	-	3365.01	9674.09	-
Chandrapur	3242.00	9517.01	-	3282.25	9613.37	-
Khaperkheda	2947.17	9670.42	-	3118.83	9447.53	-
Koradi	3212.00	9516.40	-	3021.55	9598.66	-
Nashik	3386.00	9710.38	-	3333.63	9775.42	-
Uran	-	-	8556.02	-	-	8384.85
Paras Units 3&4	3170.00	9371.11	-	3316.54	9454.37	-
Parli Units 6&7	3214.00	9473.92	-	3288.34	9595.58	-
Khaperkheda Unit 5	2954.41	9473.15	-	3115.32	9440.15	-
Bhusawal Units 4&5	3234.29	9383.49	-	3439.72	9616.81	-
Koradi Units 8-10	3154.00	9470.35	-	3253.26	9551.35	-
Chandrapur Units 8&9	3361.25	9426.12	-	3378.90	9531.66	-
Parli Unit 8	3207.00	9426.62	-	3281.32	9502.50	-

5.11 LANDED PRICE OF FUELS

MSPGCL's Submission

5.11.1 The actual prices of fuels submitted by MSPGCL is as shown in the Table below:

Table 5.12: Actual prices of fuels submitted by MSPGCL for FY 2020-21 and FY 2021-22

Station/Unit	FY 2020-21			FY 2021-22		
	Coal (Rs./MT)	Secondary Fuel Oil (Rs./kL)	Gas (Rs./'000 SCM)	Coal (Rs./MT)	Secondary Fuel Oil (Rs./kL)	Gas (Rs./'000 SCM)
Bhusawal	3754.77	40201.32	-	4018.03	45232.81	-
Chandrapur	3262.12	34759.99	-	3379.79	44782.36	-
Khaperkheda	3005.45	40915.91	-	3223.08	44652.83	-
Koradi	3294.48	35323.11	-	3626.46	43134.92	-
Nashik	4040.17	42245.68	-	4359.24	43516.18	-
Uran	-	-	6177.91	-	-	6813.54
Paras Units 3&4	3565.93	34269.02	-	3980.91	41045.37	-
Parli Units 6&7	4147.87	46371.28	-	4719.71	38246.13	-
Khaperkheda Unit 5	2995.24	43326.70	-	3195.40	44106.02	-
Bhusawal Units 4&5	3754.97	36766.65	-	3986.39	40713.87	-

Station/Unit	FY 2020-21			FY 2021-22		
	Coal (Rs./MT)	Secondary Fuel Oil (Rs./kL)	Gas (Rs./'000 SCM)	Coal (Rs./MT)	Secondary Fuel Oil (Rs./kL)	Gas (Rs./'000 SCM)
Koradi Units 8-10	3465.02	36065.30	-	3685.53	43595.83	-
Chandrapur Units 8&9	3350.65	35612.48	-	3690.65	44613.73	-
Parli Unit 8	4142.96	46754.47	-	4725.59	39526.30	-

Commission's Analysis and Ruling

5.11.2 The actual station-wise landed price of coal as submitted by MSPGCL is after considering the actual transit and handling loss for the respective station. The Commission has re-computed the station-wise landed price of coal considering the approved normative transit and handling loss. The Commission has considered the actual prices of secondary fuel oil and gas as submitted by MSPGCL.

Table 5.13: Fuel prices considered by the Commission for FY 2020-21 and FY 2021-22

Station/Unit	FY 2020-21			FY 2021-22		
	Coal (Rs./MT)	Secondary Fuel Oil (Rs./kL)	Gas (Rs./'000 SCM)	Coal (Rs./MT)	Secondary Fuel Oil (Rs./kL)	Gas (Rs./'000 SCM)
Bhusawal	3755.74	40201.32	-	4017.80	45232.81	-
Chandrapur	3273.89	34759.99	-	3394.23	44782.36	-
Khaperkheda	2995.85	40915.91	-	3201.03	44652.83	-
Koradi	3296.04	35323.11	-	3621.14	43134.92	-
Nashik	4041.80	42245.68	-	4364.32	43516.18	-
Uran	-	-	6177.91	-	-	6813.54
Paras Units 3&4	3566.64	34269.02	-	3981.70	41045.37	-
Parli Units 6&7	4158.27	46371.28	-	4732.45	38246.13	-
Khaperkheda Unit 5	2985.65	43326.70	-	3173.50	44106.02	-
Bhusawal Units 4&5	3755.94	36766.65	-	3986.60	40713.87	-
Koradi Units 8-10	3466.75	36065.30	-	3685.53	43595.83	-
Chandrapur Units 8&9	3361.66	35612.48	-	3699.37	44613.73	-
Parli Unit 8	4153.36	46754.47	-	4738.34	39526.30	-

5.12 ENERGY CHARGES

MSPGCL's submission

5.12.1 MSPGCL submitted the energy charges for FY 2020-21 and FY 2021-22 as shown in the Table below:

Table 5.14: Total Fuel cost submitted by MSPGCL for FY 2020-21 and FY 2021-22 (Rs.

crore)

Station/Unit	FY 2020-21			FY 2021-22		
	Approved in MYT	Revised Normative	Actual	Approved in MYT	Revised Normative	Actual
Bhusawal	449.87	70.23	74.36	460.45	177.01	207.51
Chandrapur	2659.64	2487.01	2540.80	2721.02	2387.75	2556.35
Khaperkheda	1254.57	1330.70	1355.90	1284.73	996.39	1151.90
Koradi	366.50	128.64	165.77	376.92	257.89	337.83
Nashik	1337.49	244.58	263.28	1371.43	729.87	741.01
Uran	777.68	295.05	302.78	801.01	340.41	377.14
Paras Units 3 & 4	948.73	925.04	951.99	973.27	766.86	811.02
Parli Units 6 & 7	1251.27	446.22	444.64	1288.29	615.63	593.63
Khaperkheda Unit 5	824.00	730.38	741.32	844.76	827.27	943.22
Bhusawal Units 4 & 5	2286.43	1296.09	1338.97	2344.54	1557.05	1706.48
Koradi Units 8, 9 & 10	2234.53	1959.62	2217.10	2289.70	2516.88	3009.79
Chandrapur Units 8 & 9	1678.95	1673.66	1690.64	1719.57	1614.36	1619.83
Parli Unit 8	565.78	315.37	310.92	582.49	383.27	364.25
Total	**16635.44**	**11902.58**	**12398.46**	**17058.19**	**13170.63**	**14419.97**

Commission's Analysis and Ruling

5.12.2 The Commission has computed the energy charges for each station considering the approved generation, performance parameters, GCV of fuels and landed price of fuels.

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

Station/Unit	FY 2020-21			FY 2021-22		
	Actual as claimed by MSPGCL	Normative as claimed by MSPGCL	Normative approved by the Commission	Actual as claimed by MSPGCL	Normative as claimed by MSPGCL	Normative approved by the Commission
Bhusawal	74.36	70.23	70.23	207.51	177.01	177.01
Chandrapur	2540.80	2487.01	2485.24	2556.35	2387.75	2387.75
Khaperkheda	1355.90	1330.70	1330.70	1151.90	996.39	996.39
Koradi	165.77	128.64	128.64	337.83	257.89	257.89
Nashik	263.28	244.58	244.58	741.01	729.87	729.87
Uran	302.78	295.05	295.05	377.14	340.41	340.41
Paras Units 3&4	951.99	925.04	925.04	811.02	766.86	766.86
Parli Units 6&7	444.64	446.22	446.22	593.63	615.63	615.63
Khaperkheda Unit 5	741.32	730.38	730.38	943.22	827.27	827.27
Bhusawal Units 4&5	1338.97	1296.09	1296.09	1706.48	1557.05	1555.83
Koradi Units 8-10	2217.10	1959.62	1962.46	3009.79	2516.88	2516.88
Chandrapur Units 8&9	1690.64	1673.66	1678.34	1619.83	1614.36	1614.36
Parli Unit 8	310.92	315.37	315.37	364.25	383.27	383.27
Total	**12398.46**	**11902.58**	**11908.34**	**14419.97**	**13170.63**	**13169.40**

5.12.3 As the normative Energy Charges approved by the Commission at target norms of operation viz., GSHR, SFOC and transit and handling loss and the norms of operation are controllable factors, the Commission has undertaken the sharing of gains and losses in energy charges on account of variation in norms of operation in accordance with the MYT Regulations, 2019.

5.13 ADDITIONAL CAPITALISATION

MSPGCL's Submission

5.13.1 MSPGCL has achieved actual additional capitalisation of Rs. 577.73 Crore and Rs 1160.68 Crore as against the approved additional capitalisation of Rs. 1257.83 Crore and Rs. 945.81 Crore for FY 2020-21 and FY 2021-22, respectively.

5.13.2 MSPGCL submitted that the claimed actual additional capitalisation is lower than approved additional capitalisation for FY 2020-21, whereas actual additional capitalisation is marginally higher than the approved additional capitalisation for FY 2021-22. MSPGCL submitted that the claimed actual additional capitalisation for FY 2020-21 is lower than approved additional capitalisation on account of lead time in preparation of design, bid process management, due diligence on the quoted price by the bidders, due to which the implementation process may deviate from the initially envisaged schedule. As a result of this, the capitalisation would increase in the subsequent years once such approved schemes get capitalised. MSPGCL endeavours to ensure that capitalisation of schemes falls within the envisaged timelines going forward.

Table 5.16: Additional capitalisation for FY 2020-21 and FY 2021-22 claimed by MSPGCL (Rs. Crore)

Station/Unit	FY 2020-21		FY 2021-22	
	Approved in MYT	Claimed	Approved in MYT	Claimed
Bhusawal	11.00	6.17	5.50	1.80
Chandrapur	145.70	59.89	169.86	397.58
Khaperkheda	188.22	13.96	99.31	33.24
Koradi	65.31	112.31	84.25	8.67
Nashik	32.76	5.25	28.98	10.04
Uran	66.07	8.18	51.35	0.15
Paras Units 3&4	30.05	11.78	24.52	26.95
Parli Units 6&7	93.62	26.41	46.81	63.39
Khaperkheda Unit 5	112.72	23.13	29.34	75.51
Bhusawal Units 4&5	46.69	2.67	47.62	38.21
Koradi Units 8-10	159.96	209.07	122.20	245.19
Chandrapur Units 8&9	187.13	70.74	83.18	226.02
Parli Unit 8	64.57	13.80	32.28	25.45
Hydro	54.05	14.36	120.53	8.47
Total	**1257.83**	**577.73**	**945.73**	**1160.68**

Commission's Analysis and Ruling

5.13.3 In accordance with Regulation 23.5 of the MYT Regulations, 2019, MSPGCL was asked to make detailed submission on each of the following points:

- Least cost approach adopted while undertaking the DPR schemes.
- Mechanism put in place for monitoring the physical progress of projects with respect to their original schedule.
- Optimum drawal of loans in accordance with the physical progress of the capital expenditure schemes, and efficient utilisation of such loans.
- Detailed justification for the schemes that have not commenced during FY 2019-20 but approved for the year.

5.13.4 In reply, MSPGCL submitted that the implementation of schemes is undertaken through vendors/contractors/agencies selected through competitive bidding process so as to ensure that the prices are discovered in a transparent and objective manner. Further, for proprietary items, Original Equipment Manufacturers (OEMs) become the preferred choice wherein detailed due diligence is performed based on the latest order placed on the OEM for supply of such items. The internal approval process for the proposed appointment of the vendors further ensures that detailed prudence is undertaken towards cost competitiveness of the offer price.

5.13.5 MSPGCL submitted that in order to monitor the physical progress of the projects with respect to their original schedule following mechanisms are followed:

- Video conferencing (VC) is carried out between the Chief Engineer Works and the Deputy Chief Engineer & Head of Maintenance planning division (MPD) of individual power stations on monthly basis. In VC physical status of the schemes are discussed and constraints, if any, regarding its implementation are resolved.
- Monthly Capex implementation status is sent by every station which includes the physical and the financial status of each and every scheme of various DPRs.
- For Civil related schemes, C.E. Civil-III is the nodal officer, who is responsible for monitoring the physical and financial status of civil related schemes and sending the consolidated detailed report to C.E Works on monthly basis.
- For the completed schemes, Station sends the work completion and scheme completion with all the capitalization details.

5.13.6 MSPGCL submitted that in order to monitor the financial progress of the projects with respect to their original schedule following mechanisms are followed:

- Capex Budget is allocated to the respective station / executing authority for effective implementation of the approved scheme in the respective year.
- Monthly Budget Utilisation of various schemes is prepared by the Finance section of MSPGCL which contains the consolidated expenditure status of various

schemes of various power stations.

- In addition to above, VC is carried out between the Chief Engineer Works and the Deputy Chief Engineer & Head of MPD of individual power stations on monthly basis. In VC financial status & progress of the schemes are discussed and constraints, if any, regarding its implementation are resolved.
- Monthly Capex implementation status is sent by every station which includes the physical and the financial status of each and every scheme of various DPRs.
- For the completed schemes, Station sends the work completion and scheme completion with complete capitalization details.

5.13.7 MSPGCL submits that the capital expenditure incurred by it is classified as DPR and Non-DPR schemes. The capital expenditure incurred under DPR schemes is initiated pursuant to approval of the schemes by the Commission. However, complexities arise during the actual implementation of approved capital expenditure schemes such as lead time required for finalisation of design specifications, tender documents and supply conditions, time extensions for changes requested by the bidders, time required for evaluation of bids and establishment of reasonability of prices quoted by the bidders, retendering in case of lower participation by the bidders or price un-reasonability, if any, lead time for supply of items, actual implementation of schemes pursuant to supply of materials. Given the complex nature of the schemes, the implementation may require shutdown or have to be undertaken at the time of annual overhauls. Any delay in supply of equipment may defer the implementation to subsequent event of unit shutdown/forced outage. A combination of aforesaid factors therefore may lead to slippages in implementation of the schemes to the subsequent financial year. MSPGCL further submitted that the entire nation had underwent lockdown since March 2020 on account of COVID-19 pandemic and accordingly, the schemes envisaged to be implemented during the years got deferred. MSPGCL submitted that it would be implementing the approved schemes in the ensuing years since the same are required to be implemented for reliable operations of the generating stations. The revised capitalisation proposed by MSPGCL for ensuing years takes into consideration such spill over impacts as well.

5.13.8 The Commission sought the station wise documentary evidence of all the assets put to use during FY 2020-21 and FY 2021-22. In reply, MSPGCL has submitted the work completion reports and final bills of the capitalised works during FY 2020-21 and FY 2021-22.

5.13.9 The Commission has examined the actual additional capitalisation claimed by MSPGCL as against the schemes accorded in-principle approval. The Commission's approach for approving the additional capitalisation in final true-up of FY 2020-21 and FY 2021-22 is as follows:

- DPR schemes (above Rs. 10 Crore each): Entire capitalisation is approved for all DPR schemes capitalised in the year in respect of which in-principle approval has been accorded. In case of cost over-run without appropriate justification, the capital cost is capped at approved capital cost as per in-principle approval. However, in case of the schemes executed through competitive bidding, the cost overrun with respect to approved cost has been allowed.
- Non-DPR schemes (less than Rs. 10 Crore each): The capitalisation of the non-DPR schemes has been considered up to 20% of the cost of the capitalised DPR schemes.

5.13.10 Accordingly, the additional capitalisation approved by the Commission in the final true-up of FY 2020-21 and FY 2021-22 is as shown in the Table below:

Table 5.17: Additional capitalisation for FY 2020-21 and FY 2021-22 (Rs. Crore)

Station/Unit	FY 2020-21		FY 2021-22	
	Claimed	Approved	Claimed	Approved
Bhusawal	6.17	6.17	1.80	1.80
Chandrapur	59.89	59.89	397.58	364.80
Khaperkheda	13.96	13.77	33.24	33.24
Koradi	112.31	107.83	8.67	8.67
Nashik	5.25	3.76	10.04	10.04
Uran	8.18	8.18	0.15	0.15
Paras Units 3&4	11.78	9.94	26.95	22.71
Parli Units 6&7	26.41	26.37	63.39	59.54
Khaperkheda Unit 5	23.13	23.13	75.51	75.50
Bhusawal Units 4&5	2.67	2.66	38.21	38.21
Koradi Units 8-10	209.07	209.07	245.19	245.18
Chandrapur Units 8&9	70.74	70.74	226.02	226.02
Parli Unit 8	13.80	13.80	25.45	25.45
Hydro	14.36	14.33	8.47	8.46
Total	**577.73**	**569.66**	**1160.68**	**1119.77**

5.14 MEANS OF FINANCE OF ADDITIONAL CAPITALISATION

MSPGCL's Submission

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

Commission's Analysis and Ruling

5.14.2 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.

5.15 AFC

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

a. O&M expenses
b. Depreciation
c. Interest on Loan
d. IoWC
e. RoE
f. Income Tax

Less:

g. NTI

5.16 O&M EXPENSES

MSPGCL's Submission

5.16.1 MSPGCL submitted that it has considered the normative O&M expenses for FY 2019-20 and had escalated them with the escalation factor for the applicable years as specified in the Regulations.

i. **Impact of Pay revision in O&M expenses**: The amount of pay revision worked out for FY 2019-20 has been escalated to arrive at the pay revision impact for FY 2020-21 and FY 2021-22. The same has been lower as compared to the approved pay revision amount for the said years.

ii. **Water Charges:** The actual water charges for FY 2020-21 and FY 2021-22 was Rs 262.11 Crore and Rs. 288.61 Crore respectively.

iii. **Change in Law Claims for increase in Labour rates:** As submitted in the true-up for FY 2019-20, the increase in labour rates is on account of Government directives and is uncontrollable in nature. Accordingly, the base year expenses in FY 2020-21 towards such increase in rates has to be considered separately for FY 2020-21 and FY 2021-22.

iv. **O&M expenses for New Stations**: MSPGCL submitted that the normative O&M expenses for new supercritical units are lower than norms prescribed by CERC for similar Units. As per the Tariff Policy, the State Electricity Regulatory Commissions may take guidance from the norms prescribed by the Central Commission. It is unlikely that the expenses incurred by the State can be so lower than that incurred by the Central Utilities. MSPGCL requested the Commission to relax the norms for such units considering the practical difficulties of MSPGCL.

5.16.2 As against the approved O&M expenses of Rs. 3738.68 Crore and Rs. 3584.58 Crore, MSPGCL has claimed the actual O&M expenses of Rs. 3374.09 Crore and Rs. 3951.90 Crore and normative O&M expenses of Rs. 3409.76 Crore and Rs. 3501.68 Crore for

FY 2020-21 and FY 2021-22 respectively.

Table 5.18: O&M expenses for FY 2020-21 and FY 2021-22 as claimed by MSPGCL (Rs. Crore)

Particulars	FY 2020-21			FY 2021-22		
	Approved in MYT	Actual	Normative claimed	Approved in MYT	Actual	Normative claimed
O&M expenses	2714.31	2605.55	2641.22	2788.14	3191.75	2741.52
Pay revision	495.10	186.05	186.05	267.18	193.37	193.37
Pay revision arrears	-	81.50	81.50	-	-	-
Water charges	183.28	262.11	262.11	183.28	288.61	288.61
Other charges	345.99	238.89	238.89	345.99	278.17	278.17
Total	**3738.68**	**3374.09**	**3409.76**	**3584.58**	**3951.90**	**3501.68**

5.16.3 MSPGCL submitted that the Commission had considered the approved O&M expenses after sharing of gains/losses to work out the base year expenses which were subsequently escalated to derive the expenses for the ensuing years. This exercise was done primarily for the old stations wherein the normative O&M expenses have not been specified as Rs. Lakh/MW in the Regulations. The said expenses were inclusive of HO allocation which is spread over all the generating Units based on the installed capacity of the station. On account of the same, the allocation of HO expenses for the old stations is getting factored although partly since actual expenses have always been higher than norms and therefore complete pass through of HO expenses is not provided. Further, there is no allocation of HO expenses being considered in the new stations wherein the norms are specified in Rs. Lakh/MW terms. Accordingly, the entire HO allocation on such units gets factored under sharing mechanism (being higher than the normative limit). The O&M expenses of HO are fixed in nature and are actually not linked to the performance of the stations. MSPGCL submitted that the current consideration of HO allocation to the stations is detrimental to the recovery of legitimate expenses and the revised approach will align the approach of the Commission to other utilities wherein such HO allocation is treated separately as under.

- For old stations, the currently approved base year expenses (that have marginal portion of HO expenses after sharing of gains/losses) may be segregated into O&M expenses for the station and HO expenses. The O&M expenses for the station may be given the treatment as per Regulations. MSPGCL has worked out the segregation of the approved base year expenses by apportioning the same into O&M expenses for the station and HO expenses based on the actual proportion of HO allocation (3-year average) to the 3-year average O&M expenses of the station. The allowable O & M expenses of the station have then been escalated at the approved escalation rates to derive the allowable expenses.

- For new stations, the O&M expenses may be allowed on Rs. Lakhs/MW subject to sharing of gains/losses.
- The HO expenses may be considered as a separate line item and be allowed to be recovered based on the prevailing escalation rates. The sharing of gains/losses for the same be considered in the same manner as for the other stations.
- MSPGCL requested the Commission to consider the norms approved by the Central Commission and relax the normative O & M expenses for new Stations.

Commission's Analysis and Ruling

5.16.4 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."

5.16.5 The normative O&M expenses computed by MSPGCL for old stations is not in line with the above provision.

5.16.6 Regulation 47.2 of the MYT Regulations, 2019 specify the normative O&M expenses for new Units depending on Unit size.

5.16.7 Further, the 2^{nd} and 3^{rd} 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."

5.16.8 In accordance with the above, the Commission has computed the escalation factor of 2.71% and 3.94% for FY 2020-21 and FY 2021-22 respectively.

5.16.9 For old stations, 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 2.71%. 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 3.94%. For new Units, the Commission has considered the normative O&M expenses as approved in the MYT Order.

5.16.10The MYT Regulations, 2019 provide for composite O&M expenses and therefore, the variation in actual and normative O&M expenses will be due to a multitude of factors. The Commission does not find merit in MSPGCL's request to allow the HO O&M expenses separately.

5.16.11Further, MSGPCL has compared the O&M expenses norms as specified in MYT Regulations, 2019 and O&M expenses norms specified in CERC Tariff Regulations, 2019 and requested to consider the norms approved by CERC and relax the O&M norms for new stations. The Commission is of the view that the MYT Regulations, 2019 were framed after considering all the aspects related to actual O&M expenses and stakeholder consultation process and hence it would not be appropriate to deviate from MYT Regulations, 2015 and relax the norms for the purpose of truing up.

5.16.12As regards the impact of pay revision, the Commission, in the MYT Order in Case No. 296 of 2019, ruled as under:

"7.17.3 As regards the impact of wage revision, the Commission as discussed in Section on provisional truing up has considered one-third of arrears in FY 2019-20 and two-third of arrears in FY 2020-21. Further, the regular impact of wage revision during each year of the Control Period has been considered separately by escalating the amount applicable for FY 2019-20 for full year."

5.16.13As against the pay revision impact of Rs. 495.10 Crore and Rs. 267.18 Crore approved by the Commission, MSPGCL has claimed the actual impact of Rs. 267.54 Crore and Rs. 193.37 Crore for FY 2020-21 and FY 2021-22 respectively. Accordingly, the Commission has considered the actual impact of pay revision as claimed by MSPGCL.

5.16.14MSPGCL has claimed the actual water charges of Rs. 262.11 Crore and Rs. 288.61 Crore for FY 2020-21 and FY 2021-22 respectively. In reply to a query in this regard, MSPGCL submitted the copies of invoices. The Commission has considered the actual water charges as claimed by MSPGCL.

5.16.15 The actual other charges claimed by MSPGCL include the expenses towards the coal handling charges. The Commission has considered the actual other charges as claimed by MSPGCL.

Table 5.19: Normative O&M expenses for FY 2020-21 and FY 2021-22 approved by the Commission (Rs. Crore)

Particulars	FY 2020-21			FY 2021-22		
	Actual	Normative claimed	Normative Approved	Actual	Normative claimed	Normative Approved
O&M expenses	2605.55	2641.22	2708.85	3191.75	2741.52	2811.79
Pay revision	186.05	186.05	186.05	193.37	193.37	193.37
Pay revision arrears	81.50	81.50	81.50	-	-	-
Water charges	262.11	262.11	262.11	288.61	288.61	288.61
Other charges	238.89	238.89	238.89	278.17	278.17	278.17
Total	**3374.09**	**3409.76**	**3477.39**	**3951.90**	**3501.68**	**3571.95**

5.16.16 The normative O&M expenses approved by the Commission works out to be higher than that claimed by MSPGCL on account of variations in base year expenses. MSPGCL, in its submissions in final true-up of FY 2019-20, requested the Commission to allow the additional labour wage impact as additional O&M expenses over and above the normative O&M expenses from FY 2020-21 onwards. However, MSPGCL has not submitted the impact of the same included in its claim of actual O&M expenses in FY 2020-21 and FY 2021-22. Further, Regulation 47.1(e) of the MYT Regulations, 2019 specify as under:

"The impact of Wage Revision, if any, may be considered at the time of true-up for any Year, based on documentary evidence and justification to be submitted by the Petitioner:

Provided that if actual employee expenses are higher than normative expenses on this account, then no sharing of efficiency losses shall be done to that extent:

Provided further that efficiency gains shall not be allowed by deducting the impact of Wage Revision and comparison of such reduced value with normative value."

5.16.17 In light of the above provisions of the MYT Regulations, 2019, the Commission does not accept the request of MSPGCL to allow the additional impact of wage revision in addition to normative O&M expenses. As O&M expenses are controllable, the Commission has carried out the sharing of gains/losses in accordance with the provisions of MYT Regulations, 2019.

5.17 DEPRECIATION

MSPGCL's Submission

5.17.1 MSPGCL has considered the closing GFA for FY 2019-20 as the opening GFA for FY 2020-21. The depreciation for FY 2020-21 and FY 2021-22 has been worked out after considering the additional capitalisation and the applicable depreciation rate as per MYT Regulations, 2019. MSPGCL further submitted that it has apportioned the Head Office (HO) depreciation as per audited accounts for FY 2020-21 and FY 2021-22. The allocation has been done as per operating capacity during the year.

5.17.2 MSPGCL requested the Commission to consider the retirement of Koradi Unit 7 with effect from 3 August, 2021 and remove the asset from the total GFA and Depreciation. MSPGCL has submitted the Auditors certificates in this regard.

Table 5.20: Depreciation for FY 2020-21 and FY 2021-22 as claimed by MSPGCL (Rs. Crore)

Station/Unit	FY 2020-21		FY 2021-22	
	Approved in MYT	Claimed	Approved in MYT	Claimed
Bhusawal	14.44	10.92	8.59	11.09
Chandrapur	38.55	33.88	53.39	70.97
Khaperkheda	33.59	21.83	39.81	23.79
Koradi	68.42	67.87	72.20	34.92
Nashik	15.49	16.07	22.75	17.27
Uran	17.96	4.21	25.20	4.15
Paras Units 3&4	164.88	161.86	166.37	82.75
Parli Units 6&7	155.36	156.23	159.07	77.20
Khaperkheda Unit 5	182.03	180.02	185.78	182.12
Bhusawal Units 4&5	336.42	344.68	338.91	346.09
Koradi Units 8-10	636.50	678.94	643.95	690.12
Chandrapur Units 8&9	314.45	322.74	321.58	330.34
Parli Unit 8	93.50	93.88	96.06	94.83
Hydro	15.64	33.60	19.75	34.04
Total	**2087.24**	**2126.74**	**2153.40**	**1999.68**

Commission's Analysis

5.17.3 The Commission has considered the station wise closing GFA approved for FY 2019-20 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. The closing GFA for FY 2020-21, after adjustment for retirement, 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.

5.17.4 The Commission has computed the depreciation for FY 2020-21 and FY 2021-22 in accordance with the MYT Regulations, 2019. If the accumulated depreciation for a particular asset class has reached 70% of the allowable depreciation, the remaining depreciable value has been spread over the remaining useful life of the station, as submitted by MSPGCL. Else, the depreciation on opening GFA and additional capitalisation has been computed at the depreciation rates specified in the Regulations. Further, the Commission observed that MSPGCL has not furnished the dates of commissioning of additional capitalisation for many of the works claimed. The Commission has computed the depreciation on opening GFA for full year and depreciation on additional capitalisation has been computed for half year. The Commission has considered HO depreciation, the same as claimed by MSPGCL. The Commission has considered the retirement of Koradi Unit 7 with effect from 3 August, 2021 and removed the asset from the total GFA and Depreciation.

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

Table 5.21: Depreciation for FY 2020-21 and FY 2021-22 (Rs. Crore)

Station/Unit	FY 2020-21		FY 2021-22	
	Claimed	Approved	Claimed	Approved
Bhusawal	10.92	8.93	11.09	9.10
Chandrapur	33.88	33.86	70.97	67.87
Khaperkheda	21.83	21.82	23.79	23.65
Koradi	67.87	66.85	34.92	34.54
Nashik	16.07	7.77	17.27	8.75
Uran	4.21	5.21	4.15	5.20
Paras Units 3&4	161.86	161.76	82.75	82.42
Parli Units 6&7	156.23	156.22	77.20	77.00
Khaperkheda Unit 5	180.02	177.78	182.12	179.88
Bhusawal Units 4&5	344.68	342.05	346.09	343.46
Koradi Units 8-10	678.94	671.87	690.12	683.05
Chandrapur Units 8&9	322.74	322.74	330.34	330.34
Parli Unit 8	93.88	93.88	94.83	94.83
Hydro	33.60	35.10	34.04	36.75
Total	**2126.74**	**2105.85**	**1999.68**	**1976.84**

5.18 INTEREST ON LONG TERM LOANS AND OTHER FINANCE CHARGES

MSPGCL's Submission

5.18.1 MSPGCL has considered the closing loan balances approved for FY 2019-20 as the opening loan balances for FY 2020-21 and closing loan balances approved for FY 2020-21 as the opening loan balances for FY 2021-22. Further, the additional capitalization has been considered to be funded in the normative debt-equity ratio of 70:30. The allowable depreciation has been considered as the repayment for the year. MSPGCL considered the weighted average interest for FY 2020-21 and FY 2021-22 in accordance with Regulation 30.5 of the MYT Regulations, 2019.

5.18.2 MSPGCL has claimed the Finance Charges comprising of Guarantee Fee payable to GoM, Service Fees, and other bank charges such as bank remittance charges, bank commission, stamp duty towards working capital limit enhancement, etc. on actuals.

Table 5.22: Interest on loan for FY 2020-21 and FY 2021-22 as claimed by MSPGCL (Rs. Crore)

Station/Unit	FY 2020-21		FY 2021-22	
	Approved in MYT	Claimed	Approved in MYT	Claimed
Bhusawal	0.52	1.27	0.43	0.41
Chandrapur	45.70	39.56	52.44	49.44
Khaperkheda	15.67	6.65	22.43	5.39
Koradi	15.51	13.66	14.86	18.69
Nashik	1.05	5.40	1.32	3.92
Uran	10.28	9.80	12.28	10.19
Paras Units 3&4	53.64	50.33	38.80	34.47
Parli Units 6&7	29.57	29.82	18.56	17.51
Khaperkheda Unit 5	109.97	98.88	97.05	74.51
Bhusawal Units 4&5	259.37	267.56	227.61	231.27
Koradi Units 8-10	674.04	759.70	620.74	669.20
Chandrapur Units 8&9	368.60	389.68	345.62	346.74
Parli Unit 8	113.42	123.28	107.24	109.88
Hydro	6.02	2.28	10.57	1.86
Total	**1703.36**	**1797.89**	**1569.95**	**1573.47**

Commission's Analysis and Ruling

5.18.3 The Commission has considered the station wise closing loan balances approved in the final true-up of FY 2019-20 as the opening loan balances for FY 2020-21. 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, 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.

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

Table 5.23: Interest on loan and finance charges for FY 2020-21 and FY 2021-22 (Rs. Crore)

Station/Unit	FY 2020-21		FY 2021-22	
	Claimed	Approved	Claimed	Approved
Bhusawal	1.27	1.37	0.41	0.52
Chandrapur	39.56	39.57	49.44	48.44
Khaperkheda	6.65	6.65	5.39	5.40
Koradi	13.66	13.62	18.69	19.48
Nashik	5.40	5.76	3.92	5.12
Uran	9.80	9.75	10.19	10.02
Paras Units 3&4	50.33	50.18	34.47	34.16
Parli Units 6&7	29.82	29.82	17.51	17.39
Khaperkheda Unit 5	98.88	99.12	74.51	75.02
Bhusawal Units 4&5	267.56	267.24	231.27	231.30
Koradi Units 8-10	759.70	752.53	669.20	663.09
Chandrapur Units 8&9	389.68	370.16	346.74	346.74
Parli Unit 8	123.28	123.28	109.88	109.88
Hydro	2.28	2.17	1.86	1.03
Total	**1797.89**	**1771.20**	**1573.47**	**1567.59**

5.19 IOWC

MSPGCL's submission

5.19.1 The normative IoWC has been computed as per the provisions of Regulation 32.1 of the MYT Regulations, 2019.

Table 5.24: IoWC for FY 2020-21 and FY 2021-22 as claimed by MSPGCL (Rs. Crore)

Station/Unit	FY 2020-21		FY 2021-22	
	Approved in MYT	Claimed	Approved in MYT	Claimed
Bhusawal	15.67	4.65	15.62	7.03
Chandrapur	93.80	87.53	94.59	76.73
Khaperkheda	46.10	49.03	46.75	35.35
Koradi	17.55	10.08	17.65	10.73
Nashik	46.17	13.29	46.53	24.30
Uran	25.95	12.23	26.45	14.06
Paras Units 3&4	37.51	36.77	37.62	27.91
Parli Units 6&7	45.22	22.73	45.71	23.85
Khaperkheda Unit 5	33.74	31.53	34.00	30.43

Station/Unit	FY 2020-21		FY 2021-22	
	Approved in MYT	**Claimed**	**Approved in MYT**	**Claimed**
Bhusawal Units 4&5	84.61	57.42	85.05	57.35
Koradi Units 8-10	102.31	99.22	102.65	102.28
Chandrapur Units 8&9	67.22	67.22	67.75	67.75
Parli Unit 8	22.73	15.87	22.97	15.56
Hydro	12.14	11.29	11.80	10.83
Total	**650.70**	**518.87**	**655.13**	**504.15**

5.19.2 MSPGCL has claimed the actual IoWC of Rs. 923.73 Crore and Rs. 1184.86 Crore for FY 2020-21 and FY 2021-22 respectively.

5.19.3 MSPGCL submitted that the Commission in its Order dated 26 June, 2015 in Case No. 15 of 2015 considered the late payment surcharge billed by MSPGCL to MSEDCL as non-tariff income. MSPGCL has preferred an appeal against this treatment of the late payment surcharge. The Judgment on the said Appeal No. 199 of 2015 was pronounced on 18 April, 2017 by APTEL which has upheld the treatment given by the Commission. MSPGCL has filed an Appeal against the APTEL Orders in Hon'ble the Supreme Court of India (Civil Appeal 9408 of 2017). The matter is still sub-judice before Hon'ble the Supreme Court.

5.19.4 MSPGCL submitted that as per the provisions under PPA dated 01 April, 2009 between MSPGCL and MSEDCL and in accordance with MYT Regulations, 2015 & 2019, MSPGCL is allowed to raise Late Payment Surcharge bills on MSEDCL for the delays in receipt of payment for energy bills raised by MSPGCL. Under the methodology adopted by MSPGCL for computing the Late Payment Surcharge bills till FY 2020-21, the payment receipts from the buyer (MSEDCL) are firstly adjusted against the Surcharge amount, due till the payment receipt date and the balance of the amount received is then adjusted against the principal overdue amount till that day. In FY 2019-20, MSEDCL has raised queries on this methodology. As per MSEDCL any payment should be initially adjusted against the principal outstanding amount and balance if any to be adjusted against the LPS dues. At present, an exercise is being undertaken by MSPGCL as well as MSEDCL for reconciliation and finalization of the principal and late payment surcharge outstanding amount since PPA date i.e., since FY 2009-10. While the billing reconciliation process between the two Companies is in advance stages, MSEDCL has commenced payment towards liquidation of outstanding dues, as per LPS Rules, 2022, on the basis of outstanding dues as per MSEDCL's assessment.

5.19.5 MSPGCL requested the Commission not to carry out any adjustment of actual Interest on Working capital against the presently raised Late payment surcharge (LPS) bills. MSPGCL also requested Commission to allow it to submit the revised LPS billing data during the proceedings of Mid Term Review petition along with any incidental impact, provided such methodology and revised LPS workings since FY 2009-10 till FY 2021-22 are approved by MSPGCL Board.

5.19.6 MSPGCL submitted that during the first COVID-19 lockdown period from March, 2020 to September, 2020, the energy billing recoveries from common consumers were severely hampered for MSEDCL and this has in turn affected the billing recoveries for MSPGCL from MSEDCL. Under such distress conditions, MSPGCL was forced to postpone repayment instalments of some of the long-term loans. This has resulted in increase in interest pay-out burden for FY 2020-21. As per assessment made by MSPGCL, the impact of the aforesaid is ~Rs 23 crore.

5.19.7 Due to difficulties in billing recoveries faced by MSEDCL during COVID-19 period and overall slow-down of business activities, there was shortfall of around Rs. 4500 Crore in billing recoveries to MSPGCL from MSEDCL. This has led to need for drawal of additional working capital to the tune of Rs. 4600 Crore during FY 2020-21. It has resulted in increase in IoWC by approximately Rs. 200 Crore per annum.

5.19.8 As the said postponement of repayment instalment and its subsequent impact on additional interest payment was due to unforeseen, uncontrollable "forced majeure" situation, the Commission may allow this additional interest amount at actual, over and above the interest on long-term loans allowed as per Regulations. However, pending this consideration by the Commission, MSPGCL has currently compared the normative IoWC with the actual IoWC as per audited accounts and has accordingly considered the sharing of gains/losses.

Commission's Analysis

5.19.9 The Commission has computed normative IoWC in accordance with the provisions of Regulation 32.1 of the MYT Regulations, 2019. 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: IoWC for FY 2020-21 and FY 2021-22 (Rs. Crore)

Station/Unit	FY 2020-21		FY 2021-22	
	Claimed	Approved	Claimed	Approved
Bhusawal	4.65	4.48	7.03	6.70
Chandrapur	87.53	73.03	76.73	71.82
Khaperkheda	49.03	40.94	35.35	33.47
Koradi	10.08	9.84	10.73	11.56
Nashik	13.29	13.92	24.30	25.32
Uran	12.23	10.76	14.06	11.88
Paras Units 3&4	36.77	31.49	27.91	27.73

Station/Unit	FY 2020-21		FY 2021-22	
	Claimed	Approved	Claimed	Approved
Parli Units 6&7	22.73	19.97	23.85	23.43
Khaperkheda Unit 5	31.53	26.78	30.43	30.35
Bhusawal Units 4&5	57.42	50.28	57.35	55.65
Koradi Units 8-10	99.22	79.32	102.28	92.22
Chandrapur Units 8&9	67.22	59.36	67.75	56.07
Parli Unit 8	15.87	14.07	15.56	14.89
Hydro	11.29	10.82	10.83	10.65
Total	**518.87**	**445.06**	**504.15**	**471.71**

5.19.10 The proviso to Regulation 32.6 of the MYT Regulations, 2019 specifies as under:

"Provided that the Delayed Payment Surcharge and Interest on Delayed Payment as per the books of accounts of the Generating Company or Licensee or MSLDC shall be deducted from the actual interest on working capital, before sharing of the efficiency gain or efficiency loss, as the case may be."

5.19.11 The actual late payment surcharge as per the audited accounts for FY 2020-21 and FY 2021-22 is Rs. 2511.51 Crore and Rs. 1108.16 Crore. The same has to be deducted from the actual IoWC as per the audited accounts before sharing of the efficiency gain or efficiency loss. Accordingly, the actual IoWC for sharing purposes has been worked out as Rs. 0.00 Crore and Rs. 76.70 Crore for FY 2020-21 and FY 2021-22 respectively.

5.19.12 As IoWC is a controllable factor under the MYT Regulations, 2019, the Commission has carried out the sharing of variation in normative IoWC and actual IoWC in accordance with the MYT Regulations, 2019.

5.20 ROE & INCOME TAX

MSPGCL's submission

5.20.1 MSPGCL has considered the closing balance of equity capital for FY 2019-20 as the opening balance for FY 2020-21. The equity addition for FY 2020-21 and FY 2021-22 has been considered as equivalent to 30% of claimed additional capitalisation for the years. MSPGCL has computed RoE at a rate of 14% on the opening balance of the equity portion of the capitalised assets and 50% of the equity portion of the capitalized assets added during each year of the Control Period in accordance with Regulations 29 of the MYT Regulations, 2019. Additional RoE is computed on the basis of Ramp up rate and Mean Time Between Failure (MTBF) for the respective years.

5.20.2 MSPGCL submitted that no income tax liability has been considered for FY 2020-21 and FY 2021-22.

Table 5.26: RoE for FY 2020-21 and FY 2021-22 as claimed by MSPGCL (Rs. Crore)

Station/Unit	FY 2020-21		FY 2021-22	
	Approved in MYT	Claimed	Approved in MYT	Claimed
Bhusawal	13.34	14.38	13.68	13.61
Chandrapur	114.82	114.11	121.45	122.81
Khaperkheda	142.86	141.73	148.90	141.65
Koradi	41.11	39.66	44.25	38.73
Nashik	35.96	37.57	37.25	37.51
Uran	42.67	42.21	45.14	42.39
Paras Units 3&4	133.50	131.75	134.65	132.58
Parli Units 6&7	129.10	136.59	132.05	133.98
Khaperkheda Unit 5	104.88	101.65	107.87	103.61
Bhusawal Units 4&5	178.63	191.62	180.61	185.94
Koradi Units 8-10	383.62	419.18	389.54	428.89
Chandrapur Units 8&9	160.34	169.82	166.02	176.28
Parli Unit 8	53.90	56.19	55.93	55.13
Hydro	5.42	4.15	9.09	4.63
Total	**1540.15**	**1600.62**	**1586.43**	**1617.73**

Commission's Analysis

5.20.3 The Commission has considered the station wise closing equity approved in the final true-up of FY 2019-20 as the opening equity for FY 2020-21. 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 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.

5.20.4 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 Regulations.

5.20.5 The Base Rate of RoE has been considered as 14% in accordance with Regulation 29.2. MSPGCL has not submitted the SLDC certificate for incremental ramp rate claimed. SLDC, vide its correspondence dated 2 March, 2023 stated that the ramp rate certification for MSPGCL's stations could not be processed in the absence of Unit wise data. Accordingly, the Commission has not considered the additional RoE towards incremental ramp rate as specified in Regulation 29.6(a).

5.20.6 MSPGCL has submitted the SLDC certificate for actual MTBF for FY 2020-21 and FY

2021-22. Regulation 29.6(b) of the MYT Regulations, 2019 specify as under:

"an additional rate of Return on Equity shall be allowed as per the following schedule:

i. 0.50% for Unit that achieves Mean Time Between Failure (MTBF) of at least 45 days.

ii. 0.75% for Unit that achieves Mean Time Between Failure (MTBF) of at least 90 days.

iii. 1.00% for Unit that achieves Mean Time Between Failure (MTBF) of at least 90 days.

Provided that the Mean Time Between Failure (MTBF) shall be computed as provided in ***Annexure-III*** *to the Regulations…"*

5.20.7 Accordingly, the Commission has considered the additional rate of RoE for achievement of MTBF in accordance with the provisions of the Regulations for FY 2020-21 and FY 2021-22.

Table 5.27: Additional rate of RoE for achievement of MTBF

Station/Unit	FY 2020-21			FY 2021-22		
	Mean Time Between Failure	Additional rate of RoE for MTBF		Mean Time Between Failure	Additional rate of RoE for MTBF	
		Claimed	Approved		Claimed	Approved
Bhusawal	121.08	1.00%	1.00%	27.46	0.00%	0.00%
Chandrapur	29.61	0.13%	0.00%	27.77	0.00%	0.00%
Khaperkheda	38.48	0.25%	0.00%	27.93	0.19%	0.00%
Koradi	65.43	0.63%	0.50%	18.37	0.00%	0.00%
Nashik	217.36	1.00%	1.00%	92.16	0.83%	0.75%
Uran	44.25	0.25%	0.00%	47.71	0.25%	0.50%
Paras Units 3&4	14.20	0.00%	0.00%	22.44	0.00%	0.00%
Parli Units 6&7	102.61	0.75%	0.75%	34.48	0.25%	0.00%
Khaperkheda Unit 5	34.13	0.00%	0.00%	38.57	0.00%	0.00%
Bhusawal Units 4&5	78.22	0.50%	0.50%	29.63	0.00%	0.00%
Koradi Units 8-10	33.42	0.00%	0.00%	29.85	0.00%	0.00%
Chandrapur Units 8&9	50.27	0.25%	0.50%	46.18	0.25%	0.50%
Parli Unit 8	71.54	0.50%	0.50%	39.48	0.00%	0.00%

5.20.8 MSPGCL has considered the additional rate of RoE for achievement of MTBF on pro-rata basis for some of the stations, which is not in accordance with the Regulations. 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.

5.20.9 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:

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.”

5.20.10 The tax liability of MSPGCL for entire company is zero for FY 2020-21 and FY 2021-22. As the actual tax payable by MSPGCL 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.

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

Table 5.28: RoE for FY 2020-21 and FY 2021-22 (Rs. Crore)

Station/Unit	FY 2020-21		FY 2021-22	
	Claimed	Approved	Claimed	Approved
Bhusawal	14.38	14.15	13.61	13.37
Chandrapur	114.11	111.10	122.81	119.96
Khaperkheda	141.73	136.84	141.65	137.35
Koradi	39.66	38.53	38.73	37.84
Nashik	37.57	36.92	37.51	36.61
Uran	42.21	41.47	42.39	43.14
Paras Units 3&4	131.75	129.35	132.58	130.03
Parli Units 6&7	136.59	134.32	133.98	129.27
Khaperkheda Unit 5	101.65	99.86	103.61	101.79
Bhusawal Units 4&5	191.62	187.75	185.94	182.09
Koradi Units 8-10	419.18	406.20	428.89	415.74
Chandrapur Units 8&9	169.82	169.82	176.28	176.28
Parli Unit 8	56.19	55.24	55.13	54.16
Hydro	4.15	4.15	4.63	4.62
Total	**1600.62**	**1565.70**	**1617.73**	**1582.26**

5.21 NTI

MSPGCL's submission

5.21.1 As against the approved NTI of Rs. 99.12 Crore for each year, MSPGCL has claimed the actual NTI of Rs. 52.15 Crore and Rs. 133.07 Crore for FY 2020-21 and FY 2021-22 respectively.

Commission's Analysis

5.21.2 The Commission has considered the actual NTI for FY 2020-21 and FY 2021-22 as claimed by MSPGCL.

5.22 AFC

Commission's Analysis and Ruling

5.22.1 Based on the above analysis, the AFC approved by the Commission in the final true-up of FY 2020-21 and FY 2021-22, that is fully recoverable at target Availability, is as shown in the Tables below:

Table 5.29: AFC claimed by MSPGCL and approved by the Commission for FY 2020-21 (Rs. Crore)

Station/Unit	Return on Equity			Interest on loan			Depreciation			O&M expenses			IoWC			Less:NTI			AFC		
	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved
Bhusawal	13.34	14.38	14.15	0.52	1.27	1.37	14.44	10.92	8.93	123.11	101.43	109.54	15.67	4.65	4.48	2.73	1.27	1.27	**164.34**	**131.38**	**137.20**
Chandrapur	114.82	114.11	111.10	45.70	39.56	39.57	38.55	33.88	33.86	718.28	636.36	663.35	93.80	87.53	73.03	19.60	12.88	12.88	**991.55**	**898.57**	**908.02**
Khaperkheda	142.86	141.73	136.84	15.67	6.65	6.65	33.59	21.83	21.82	331.46	352.21	367.58	46.10	49.03	40.94	5.16	3.27	3.27	**564.53**	**568.18**	**570.55**
Koradi	41.11	39.66	38.53	15.51	13.66	13.62	68.42	67.87	66.85	232.32	229.25	216.75	17.55	10.08	9.84	1.60	1.53	1.53	**373.31**	**358.99**	**344.06**
Nashik	35.96	37.57	36.92	1.05	5.40	5.76	15.49	16.07	7.77	393.20	313.24	309.63	46.17	13.29	13.92	12.54	1.59	1.59	**479.32**	**383.99**	**372.42**
Uran	42.67	42.21	41.47	10.28	9.80	9.75	17.96	4.21	5.21	93.88	85.98	94.54	25.95	12.23	10.76	2.38	0.66	0.66	**188.37**	**153.78**	**161.07**
Paras Units 3&4	133.50	131.75	129.35	53.64	50.33	50.18	164.88	161.86	161.76	192.16	169.27	169.27	37.51	36.77	31.49	3.94	2.88	2.88	**577.75**	**547.10**	**539.17**
Parli Units 6&7	129.10	136.59	134.32	29.57	29.82	29.82	155.36	156.23	156.22	195.27	172.47	172.47	45.22	22.73	19.97	3.95	1.37	1.37	**550.57**	**516.47**	**511.43**
Khaperkheda Unit 5	104.88	101.65	99.86	109.97	98.88	99.12	182.03	180.02	177.78	137.65	137.42	137.42	33.74	31.53	26.78	4.10	1.95	1.95	**564.17**	**547.54**	**539.01**
Bhusawal Units 4&5	178.63	191.62	187.75	259.37	267.56	267.24	336.42	344.68	342.05	287.26	241.00	241.00	84.61	57.42	50.28	14.87	6.54	6.54	**1131.42**	**1095.74**	**1081.77**
Koradi Units 8-10	383.62	419.18	406.20	674.04	759.70	752.53	636.50	678.94	671.87	427.84	415.38	425.27	102.31	99.22	79.32	7.27	6.94	6.94	**2217.03**	**2365.47**	**2328.24**
Chandrapur Units 8&9	160.34	169.82	169.82	368.60	389.68	370.16	314.45	322.74	322.74	255.45	246.47	246.47	67.22	67.22	59.36	15.14	6.72	6.72	**1150.92**	**1189.22**	**1161.84**
Parli Unit 8	53.90	56.19	55.24	113.42	123.28	123.28	93.50	93.88	93.88	108.63	90.03	90.03	22.73	15.87	14.07	1.08	0.77	0.77	**391.09**	**378.48**	**375.72**
Hydro	5.42	4.15	4.15	6.02	2.28	2.17	15.64	33.60	35.10	242.18	219.26	234.08	12.14	11.29	10.82	4.76	3.78	3.78	**276.64**	**266.81**	**282.54**
Total	**1540.15**	**1600.62**	**1565.70**	**1703.36**	**1797.89**	**1771.20**	**2087.24**	**2126.74**	**2105.85**	**3738.68**	**3409.76**	**3477.39**	**650.70**	**518.87**	**445.06**	**99.12**	**52.15**	**52.15**	**9621.01**	**9401.72**	**9313.05**

Table 5.30: AFC claimed by MSPGCL and approved by the Commission for FY 2021-22 (Rs. Crore)

Station/Unit	Return on Equity			Interest on loan			Depreciation			O&M expenses			IoWC			Less:NTI			AFC		
	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved
Bhusawal	13.68	13.61	13.37	0.43	0.41	0.52	8.59	11.09	9.10	115.28	106.92	115.34	15.62	7.03	6.70	2.73	1.78	1.78	**150.88**	**137.27**	**143.26**
Chandrapur	121.45	122.81	119.96	52.44	49.44	48.44	53.39	70.97	67.87	685.49	632.70	660.75	94.59	76.73	71.82	19.60	6.38	6.38	**987.76**	**946.26**	**962.46**
Khaperkheda	148.90	141.65	137.35	22.43	5.39	5.40	39.81	23.79	23.65	319.64	356.79	372.77	46.75	35.35	33.47	5.16	13.27	13.27	**572.37**	**549.70**	**559.36**
Koradi	44.25	38.73	37.84	14.86	18.69	19.48	72.20	34.92	34.54	222.48	246.28	233.29	17.65	10.73	11.56	1.60	63.01	63.01	**369.83**	**286.35**	**273.70**
Nashik	37.25	37.51	36.61	1.32	3.92	5.12	22.75	17.27	8.75	377.61	326.46	322.72	46.53	24.30	25.32	12.54	4.74	4.74	**472.92**	**404.71**	**393.78**
Uran	45.14	42.39	43.14	12.28	10.19	10.02	25.20	4.15	5.20	90.37	86.58	95.48	26.45	14.06	11.88	2.38	1.14	1.14	**197.07**	**156.24**	**164.58**
Paras Units 3&4	134.65	132.58	130.03	38.80	34.47	34.16	166.37	82.75	82.42	184.13	176.01	176.01	37.62	27.91	27.73	3.94	4.10	4.10	**557.62**	**449.62**	**446.24**
Parli Units 6&7	132.05	133.98	129.27	18.56	17.51	17.39	159.07	77.20	77.00	188.44	179.04	179.04	45.71	23.85	23.43	3.95	3.91	3.91	**539.87**	**427.65**	**422.22**
Khaperkheda Unit 5	107.87	103.61	101.79	97.05	74.51	75.02	185.78	182.12	179.88	132.66	147.11	147.11	34.00	30.43	30.35	4.10	8.14	8.14	**553.25**	**529.64**	**526.02**
Bhusawal Units 4&5	180.61	185.94	182.09	227.61	231.27	231.30	338.91	346.09	343.46	276.98	241.80	241.80	85.05	57.35	55.65	14.87	7.78	7.78	**1094.29**	**1054.67**	**1046.51**
Koradi Units 8-10	389.54	428.89	415.74	620.74	669.20	663.09	643.95	690.12	683.05	417.02	429.51	439.76	102.65	102.28	92.22	7.27	10.92	10.92	**2166.62**	**2309.09**	**2282.95**
Chandrapur Units 8&9	166.02	176.28	176.28	345.62	346.74	346.74	321.58	330.34	330.34	246.48	263.25	263.25	67.75	67.75	56.07	15.14	2.36	2.36	**1132.31**	**1181.99**	**1170.31**
Parli Unit 8	55.93	55.13	54.16	107.24	109.88	109.88	96.06	94.83	94.83	105.53	91.65	91.65	22.97	15.56	14.89	1.08	2.14	2.14	**386.64**	**364.91**	**363.26**
Hydro	9.09	4.63	4.62	10.57	1.86	1.03	19.75	34.04	36.75	222.47	217.58	232.99	11.80	10.83	10.65	4.76	3.39	3.39	**268.92**	**265.55**	**282.65**
Total	**1586.43**	**1617.73**	**1582.26**	**1569.95**	**1573.47**	**1567.59**	**2153.40**	**1999.68**	**1976.84**	**3584.58**	**3501.68**	**3571.95**	**655.13**	**504.15**	**471.71**	**99.12**	**133.07**	**133.07**	**9450.37**	**9063.64**	**9037.28**

5.23 HYDRO LEASE RENTAL

MSPGCL's submission

5.23.1 MSPGCL has claimed the lease rent of Rs. 566.05 Crore and Rs. 553.70 Crore for FY 2020-21 and FY 2021-22 respectively.

Commission's Analysis and Ruling

5.23.2 The Commission has approved the lease rent of Rs. 566.05 Crore and Rs. 553.70 Crore for FY 2020-21 and FY 2021-22 respectively, the same being in line with the approved lease rent.

5.24 REVENUE GAIN/ (LOSS) DUE TO LOWER/ HIGHER AUXILIARY CONSUMPTION

MSPGCL's Submission

5.24.1 MSPGCL has claimed the revenue loss/(gain) due to higher/lower AEC for FY 2020-21 and FY 2021-22 as shown in the Table below:

Table 5.31: Revenue Loss/(Gain) due to higher/lower AEC for FY 2020-21 and FY 2021-22 as submitted by MSPGCL (Rs. Crore)

Station/Unit	FY 2020-21	FY 2021-22
Bhusawal	5.12	6.99
Chandrapur	12.03	65.16
Khaperkheda	3.49	17.73
Koradi	6.47	8.27
Nashik	5.23	4.90
Uran	-0.76	-1.24
Paras Units 3&4	12.53	17.33
Parli Units 6&7	11.66	20.08
Khaperkheda Unit 5	-0.08	-2.17
Bhusawal Units 4&5	-0.15	7.50
Koradi Units 8-10	43.71	40.91
Chandrapur Units 8&9	-9.11	-8.63
Parli Unit 8	6.07	11.14
Total	**96.21**	**187.96**

Commission's Analysis

5.24.2 The Commission has computed the revenue loss/(gain) on account of variation in normative and actual AEC for FY 2020-21 and FY 2021-22 as shown in the Table below:

Table 5.32: Revenue loss/(gain) on account of variation in AEC for FY 2020-21 approved by the Commission.

Station/Unit	Actual Gross Generation	Normative AEC	Actual AEC	Lesser/ (Additional) sale	Rate of Energy Charge	Revenue Loss
	MU	%	%	MU	Rs./kWh	Rs. Crore
Bhusawal	228.78	10.96%	17.46%	14.86	3.45	5.12
Chandrapur	9071.56	7.80%	9.11%	118.98	2.97	35.35
Khaperkheda	4908.97	9.70%	9.94%	11.62	3.00	3.49
Koradi	465.69	10.81%	14.44%	16.92	3.10	5.24
Nashik	737.11	10.75%	12.90%	15.88	3.72	5.90
Uran	2007.98	3.10%	2.85%	-5.04	1.52	-0.76
Paras Units 3&4	3368.81	9.30%	10.53%	41.37	3.03	12.53
Parli Units 6&7	1411.65	9.30%	11.67%	33.46	3.49	11.66
Khaperkheda Unit 5	3021.88	6.00%	5.99%	-0.33	2.57	-0.08
Bhusawal Units 4&5	4677.36	6.00%	5.99%	-0.50	2.95	-0.15
Koradi Units 8-10	7964.67	6.00%	8.10%	167.01	2.62	43.78
Chandrapur Units 8&9	7027.10	6.00%	5.49%	-35.96	2.54	-9.14
Parli Unit 8	996.64	8.50%	10.26%	17.56	3.46	6.07
Total	**45888.17**			**395.84**		**119.01**

Table 5.33: Revenue loss/(gain) on account of variation in AEC for FY 2021-22 approved by the Commission.

Station/Unit	Actual Gross Generation	Normative AEC	Actual AEC	Lesser/ (Additional) sale	Rate of Energy Charge	Revenue Loss
	MU	%	%	MU	Rs./kWh	Rs. Crore
Bhusawal	536.00	10.96%	14.47%	18.84	3.79	7.14
Chandrapur	8656.96	7.80%	10.32%	217.81	3.05	66.49
Khaperkheda	3692.11	9.70%	11.31%	59.33	3.04	18.01
Koradi	899.20	10.81%	12.80%	17.85	3.62	6.47
Nashik	2014.00	10.75%	11.35%	12.07	4.07	4.92
Uran	2070.92	3.10%	2.75%	-7.34	1.71	-1.25
Paras Units 3&4	2625.17	9.30%	11.35%	53.79	3.23	17.39
Parli Units 6&7	1819.87	9.30%	12.26%	53.84	3.87	20.83
Khaperkheda Unit 5	3448.26	6.00%	5.75%	-8.51	2.59	-2.21
Bhusawal Units 4&5	5622.01	6.00%	6.45%	25.47	2.94	7.50
Koradi Units 8-10	10847.60	6.00%	7.53%	165.72	2.70	44.83
Chandrapur Units 8&9	6335.15	6.00%	5.50%	-31.85	2.78	-8.87
Parli Unit 8	1130.05	8.50%	11.16%	30.06	3.85	11.57
Total	**49697.30**			**607.09**		**192.82**

5.25 REDUCTION IN AFC DUE TO SHORTFALL AGAINST TARGET AVAILABILITY

MSPGCL's submission

5.25.1 The reduction in AFC due to shortfall in target Availability is Rs. 951.40 Crore and Rs. 1694.45 Crore for FY 2020-21 and FY 2021-22 respectively.

Commission's Analysis and Ruling

5.25.2 As the actual Availability of some of the stations was lower than the target Availability approved for recovery of full AFC, the Commission has approved the recovery of trued-up AFC for such stations in accordance with Regulation 50, except for Uran. For Uran, the Commission has approved the recovery of full trued-up AFC, at actual Availability.

5.25.3 The computation of AFC disallowance for FY 2020-21 and FY 2021-22 are as shown in the Tables below:

Table 5.34: AFC disallowance for FY 2020-21 approved by the Commission

Station/Unit	Target Availability	Actual Availability	Total AFC	Less: water charges	Total AFC minus water charges	AFC Reduction	Reduced AFC	Reduced AFC plus water charges
	%	%	Rs. Crore	Rs. Crore	Rs. Crore	Rs. Crore	Rs. Crore	Rs. Crore
Bhusawal	80.00%	97.11%	137.20	8.50	128.70	0.00	128.70	137.20
Chandrapur	80.00%	65.64%	908.02	11.09	896.93	161.03	735.90	746.99
Khaperkheda	85.00%	75.79%	570.55	55.75	514.80	56.94	457.86	513.61
Koradi	72.00%	76.73%	344.06	29.67	314.39	0.00	314.39	344.06
Nashik	80.00%	95.02%	372.42	20.01	352.41	0.00	352.41	372.42
Uran	34.39%	34.39%	161.07	1.19	159.88	0.00	159.88	161.07
Paras Units 3&4	85.00%	82.96%	539.17	5.33	533.84	15.08	518.75	524.08
Parli Units 6&7	85.00%	97.17%	511.43	9.31	502.12	0.00	502.12	511.43
Khaperkheda Unit 5	85.00%	74.08%	539.01	23.15	515.86	66.04	449.82	472.97
Bhusawal Units 4&5	85.00%	92.51%	1081.77	5.22	1076.55	0.00	1076.55	1081.77
Koradi Units 8-10	85.00%	65.78%	2328.24	81.80	2246.44	507.71	1738.73	1820.53
Chandrapur Units 8&9	85.00%	84.26%	1161.84	5.79	1156.05	17.75	1138.30	1144.09
Parli Unit 8	85.00%	97.06%	375.72	5.30	370.42	0.00	370.42	375.72
Total			**9030.51**	**262.11**	**8768.40**	**824.55**	**7943.85**	**8205.96**

Table 5.35: AFC disallowance for FY 2021-22 approved by the Commission.

Station/Unit	Target Availability	Actual Availability	Total AFC	Less: water charges	Total AFC minus water charges	AFC Reduction	Reduced AFC	Reduced AFC plus water charges
	%	%	Rs. Crore	Rs. Crore	Rs. Crore	Rs. Crore	Rs. Crore	Rs. Crore
Bhusawal	80.00%	64.69%	143.06	11.26	131.80	25.23	106.57	117.83

Station/Unit	Target Availability	Actual Availability	Total AFC	Less: water charges	Total AFC minus water charges	AFC Reduction	Reduced AFC	Reduced AFC plus water charges
	%	%	Rs. Crore	Rs. Crore	Rs. Crore	Rs. Crore	Rs. Crore	Rs. Crore
Chandrapur	80.00%	53.51%	143.26	11.26	132.00	25.27	106.73	117.99
Khaperkheda	85.00%	61.00%	962.46	10.97	951.49	315.19	636.30	647.27
Koradi	72.00%	72.52%	559.36	60.09	499.27	141.02	358.24	418.33
Nashik	80.00%	84.43%	273.70	38.73	234.97	4.76	230.21	268.94
Uran	35.33%	35.33%	393.78	13.58	380.20	0.00	380.20	393.78
Paras Units 3&4	85.00%	75.00%	164.58	1.12	163.46	0.00	163.46	164.58
Parli Units 6&7	85.00%	77.58%	446.24	4.28	441.96	52.43	389.53	393.81
Khaperkheda Unit 5	85.00%	82.85%	422.22	13.62	408.60	35.62	372.98	386.60
Bhusawal Units 4&5	85.00%	77.81%	526.02	35.86	490.16	12.25	477.92	513.78
Koradi Units 8-10	85.00%	63.00%	1046.51	3.14	1043.37	88.18	955.19	958.33
Chandrapur Units 8&9	85.00%	74.80%	2282.95	81.80	2201.15	569.57	1631.58	1713.38
Parli Unit 8	85.00%	80.32%	1170.31	5.71	1164.60	139.57	1025.03	1030.74
Total			363.26	8.45	354.81	19.65	335.16	343.61

5.26 REVENUE FROM SALE OF POWER

MSPGCL's submission

5.26.1 MSPGCL has considered the revenue from sale of power of Rs. 20093.40 Crore and Rs. 21128.34 in the final true-up for FY 2020-21 and FY 2021-22 respectively.

Commission's Analysis and Ruling

5.26.2 The Commission has considered the revenue from sale of power of Rs. 20093.40 Crore and Rs. 21128.34 in the final true-up for FY 2020-21 and FY 2021-22 respectively as claimed by MSPGCL.

5.27 SUMMARY OF TRUE UP OF FY 2020-21 AND FY 2021-22

MSPGCL's Submission

5.27.1 The summary of true-up of FY 2020-21 and FY 2021-22 claimed by MSPGCL is as shown in the Tables below:

Table 5.36: Summary of true-up of FY 2020-21 claimed by MSPGCL (Rs. Crore)

Particulars	Revised Normative	Actual	Efficiency (Gain)/Loss	Sharing of efficiency (Gain)/Loss	Net entitlement
Expenses side summary					
Return on Equity	1600.62				1600.62
Interest on Loan	1797.89				1797.89

Particulars	Revised Normative	Actual	Efficiency (Gain)/Loss	Sharing of efficiency (Gain)/Loss	Net entitlement
Depreciation	2126.74				2126.74
O&M expenses	2641.22	2605.55	-35.67	-23.78	2617.44
Pay revision arrears (Pay out of FY 18-19 2nd installement)		81.50			81.50
Pay revision		186.05			186.05
Water Charges		262.11			262.11
Other Charges		238.89			238.89
Interest on Working Capital	518.98	923.73	404.75	134.92	653.90
Less: Non-Tariff Income		52.15			52.15
Annual Fixed Charges					**9512.97**
Income Tax		0.00			0.00
Idle Capacity Charges (RSD)					0.00
Hydro Lease Rent	566.05				566.05
Fuel Cost	11902.58	12398.46	495.88	165.29	12067.87
Aggregate Revenue Requirement					**22146.89**
AFC Reduction					951.40
Net Revenue Requirement					**21195.49**
Revenue from sale of power		20093.40			20093.40
Revenue loss due to higher auxiliary consumption			96.21	28.70	28.70
Revenue for true-up					**20122.10**
Revenue Gap/(Surplus)					**1073.38**

Table 5.37: Summary of true-up of FY 2021-22 claimed by MSPGCL (Rs. Crore)

Particulars	Revised Normative	Actual	Efficiency (Gain)/Loss	Sharing of efficiency (Gain)/Loss	Net entitlement
Expenses side summary					
Return on Equity	1617.73				1617.73
Interest on Loan	1573.47				1573.47
Depreciation	1999.68				1999.68
O&M expenses	2741.52	3191.75	450.22	150.07	2891.60
Pay revision		193.37			193.37
Water Charges		288.61			288.61
Other Charges		278.17			278.17
Interest on Working Capital	505.23	1184.86	679.63	226.54	731.77
Less: Non-Tariff Income		133.07			133.07
Annual Fixed Charges			0.00		9441.46
Income Tax		0.00	0.00		0.00
Idle Capacity Charges (RSD)		0.00			0.00
Hydro Lease Rent	553.70				553.70
Fuel Cost	13170.63	14419.97	1249.34	416.45	13587.07
Aggregate Revenue Requirement					**23582.24**
AFC Reduction					1694.45
Net Revenue Requirement					**21887.79**
Revenue from sale of power		21128.33			21128.33

Particulars	Revised Normative	Actual	Efficiency (Gain)/Loss	Sharing of efficiency (Gain)/Loss	Net entitlement
Revenue loss due to higher auxiliary consumption			187.96	58.64	58.64
Revenue for true-up					**21186.97**
Revenue Gap/(Surplus)					**700.82**

Commission's Analysis and Ruling

5.27.2 Based on the analysis of the norms of operation and fuel parameters, the Commission has approved the energy charges for as detailed in Table 5.15. Based on the analysis of the individual components of AFC, the Commission has approved the AFC that is recoverable at target Availability as detailed in Table 5.29 and Table 5.30. Further, the Commission has approved the AFC disallowance on account of projected Availability lower than target Availability as detailed in Table 5.34 and Table 5.35.

5.27.3 In accordance with the MYT Regulations, 2019, the Commission has allowed the expenses for FY 2020-21 and FY 2021-22 based on the norms of operation approved in this Order, and carried out the sharing of gains and losses under the following heads:

i. Sharing of losses in O&M expenses.
ii. Sharing of losses in fuel expenses.
iii. Sharing of gains towards IoWC.
iv. Sharing of normative revenue loss due to higher AEC.

5.27.4 In accordance with the MYT Regulations, 2019, 2/3rd of efficiency gains and 1/3rd of efficiency loss on account of variation in controllable factors is to be passed on to the beneficiary.

Table 5.38: Summary of true-up for FY 2020-21 approved by the Commission (Rs. Crore)

Particulars	Approved in MYT	Normative	Actual	Efficiency (Gain)/Loss	Sharing of efficiency (Gain)/Loss	Net entitlement
		A	B	C=B-A	D=2/3rd of (Gain); 1/3rd of Loss	E=A+D
Expenses side summary						
Return on Equity	1540.15	1565.70				1565.70
Interest on Loan	1703.36	1771.20				1771.20
Depreciation	2087.24	2105.85				2105.85
O&M expenses	3738.68	3477.39	3374.09	-103.31	-68.87	3408.52
Interest on Working Capital	650.70	445.06	0.00	-445.06	-296.71	148.35
Less: Non-Tariff Income	99.12		52.15			52.15
Annual Fixed Charges	**9621.01**					**8947.47**

Particulars	Approved in MYT	Normative	Actual	Efficiency (Gain)/Loss	Sharing of efficiency (Gain)/Loss	Net entitlement
		A	B	C=B-A	D=2/3rd of (Gain); 1/3rd of Loss	E=A+D
Hydro Lease Rent	566.05		566.05			566.05
Energy Charges		11908.34	12398.46	490.12	163.37	12071.71
Aggregate Revenue Requirement						**21585.24**
AFC Reduction						824.55
Net Revenue Requirement						**20760.69**
Revenue from sale of power						20093.40
Revenue loss due to higher auxiliary consumption				119.01	39.67	39.67
Revenue for true-up						**20133.07**
Revenue Gap/(Surplus)						**627.62**

Table 5.39: Summary of true-up for FY 2021-22 approved by the Commission (Rs. Crore)

Particulars	Approved in MYT	Normative	Actual	Efficiency (Gain)/Loss	Sharing of efficiency (Gain)/Loss	Net entitlement
		A	B	C=B-A	D=2/3rd of (Gain); 1/3rd of Loss	E=A+D
Expenses side summary						
Return on Equity	1586.43	1582.26				1582.26
Interest on Loan	1569.95	1567.59				1567.59
Depreciation	2153.40	1976.84				1976.84
O&M expenses	3584.58	3571.95	3951.90	379.96	126.65	3698.60
Interest on Working Capital	655.13	471.71	76.70	-395.01	-263.34	208.37
Less: Non-Tariff Income	99.12		133.07			133.07
Annual Fixed Charges	**9450.37**					**8900.59**
Hydro Lease Rent	553.70		553.70			553.70
Energy Charges		13169.40	14419.97	1250.57	416.86	13586.25
Aggregate Revenue Requirement						**23040.55**
AFC Reduction						1403.50
Net Revenue Requirement						**21637.05**
Revenue from sale of power						21128.34
Revenue loss due to higher auxiliary consumption				192.82	64.27	64.27
Revenue for true-up						**21192.61**
Revenue Gap/(Surplus)						**444.43**

5.27.5 The Commission has considered the above approved amounts in computing the cumulative revenue gap/(surplus) up-to FY 2022-23 as detailed 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 2020-21 to FY 2024-25 dated 30 March, 2020 in Case No. 296 of 2019 approved the tariff for FY 2022-23. MSPGCL, 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 NORMS OF OPERATION

6.2.1 The norms of operation specified under the MYT Regulations, 2019 for thermal generating stations are as follows:

(i) Availability
(ii) Plant Load Factor (PLF)
(iii) Auxiliary Energy Consumption (AEC)
(iv) Gross Station Heat Rate (GSHR)
(v) Secondary fuel oil consumption (SFOC).
(vi) Transit and handling loss

6.2.2 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 respective Orders. MSPGCL has submitted the actual performance for H1 of FY 2022-23 and estimated performance for H2 of FY 2022-23. MSPGCL's submissions on the estimated performance for FY 2022-23 and the Commission's analysis is detailed hereunder.

6.3 AVAILABILITY

MSPGCL's Submission

6.3.1 The estimated Availability for FY 2022-23 is shown in the following Table below:

Table 6.1: Availability submitted by MSPGCL for FY 2022-23

Station/unit	Normative	Estimated
Bhusawal	80.00%	62.46%
Chandrapur	80.00%	69.67%
Khaperkheda	85.00%	72.10%
Koradi	72.00%	72.44%
Nashik	80.00%	67.13%
Uran	85.00%	29.60%
Paras Units 3&4	85.00%	78.15%
Parli Units 6&7	85.00%	78.86%
Khaperkheda Unit 5	85.00%	86.42%
Bhusawal Units 4&5	85.00%	74.84%
Koradi Units 8-10	85.00%	71.28%

Station/unit	Normative	Estimated
Chandrapur Units 8&9	85.00%	81.13%
Parli Unit 8	85.00%	65.56%

6.3.2 MSPGCL submitted that the actual coal realisation during H1 of FY 2022-23 was lower at pan India level resulting in lower Availability. With the improving situation, the Availability is expected to improve.

Commission's Analysis and Ruling

6.3.3 The recovery of full AFC is allowable at target Availability. As the estimated Availability is lower than the target Availability for some of the Stations, the Commission has approved the recovery of provisionally trued-up AFC for FY 2022-23 on pro-rata basis, for these Stations (except for Uran). For Uran, the Commission has approved the recovery of full AFC for FY 2022-23 at estimated Availability considering shortage of gas as uncontrollable factor.

6.4 PLANT LOAD FACTOR (PLF)

MSPGCL's Submission

6.4.1 MSPGCL submitted the estimated PLF for FY 2022-23 as shown in the Table below:

Table 6.2: PLF submitted by MSPGCL for FY 2022-23

Station/Unit	Approved in MYT	Estimated
Bhusawal	70.15%	60.66%
Chandrapur	67.54%	69.01%
Khaperkheda	67.23%	71.00%
Koradi	35.62%	71.93%
Nashik	80.00%	64.89%
Uran	50.81%	28.06%
Paras Units 3&4	79.89%	76.71%
Parli Units 6&7	78.75%	75.14%
Khaperkheda Unit 5	81.42%	84.37%
Bhusawal Units 4&5	85.00%	73.38%
Koradi Units 8-10	60.02%	70.95%
Chandrapur Units 8&9	83.13%	79.94%
Parli Unit 8	73.71%	63.50%

Commission's Analysis and Ruling

6.4.2 The Commission has considered the estimated PLF for FY 2022-23 as submitted by MSPGCL.

6.5 AEC

MSPGCL's Submission

6.5.1 The estimated AEC for FY 2022-23 is as shown in the Table below:

Table 6.3: Estimated AEC submitted by MSPGCL for FY 2022-23

Station/Unit	Normative	Actual
Bhusawal	10.96%	12.31%
Chandrapur	7.80%	9.09%
Khaperkheda	9.70%	10.38%
Koradi	10.81%	10.56%
Nashik	10.75%	11.44%
Uran	3.10%	3.00%
Paras Unit 3&4	9.30%	10.26%
Parli Unit 6&7	9.30%	10.30%
Khaperkheda Unit 5	6.00%	5.87%
Bhusawal Unit 4&5	6.00%	6.30%
Koradi Units 8-10	6.00%	6.13%
Chandrapur Units 8&9	6.00%	5.83%
Parli Unit 8	8.50%	10.49%

Commission Analysis and Ruling

6.5.2 The estimated AEC is higher than normative for all stations except Uran, Khaperkheda Unit 5 and Chandrapur Units 8&9. In the true-up of previous years, the Commission had not accepted the coal-related problems, partial loading and frequent outages as cogent reasons for relaxing the norms of operation. The same approach has been adopted for the provisional true-up of FY 2022-23. The Commission has considered the normative AEC in the provisional true-up of FY 2022-23.

6.6 NET GENERATION

MSPGCL's Submission

6.6.1 The estimated net generation for FY 2022-23 is as shown in the Table below:

Table 6.4: Net Generation submitted by MSPGCL for FY 2022-23 (MU)

Station/Unit	Approved in MYT	Estimated
Bhusawal	1149.03	983.15
Chandrapur	10473.40	10728.34
Khaperkheda	4467.19	4720.69
Koradi	1168.80	1200.80
Nashik	3940.42	3167.93
Uran	2898.42	1514.04
Paras Units 3&4	3173.79	3037.32
Parli Units 6&7	3128.32	2990.56

Station/Unit	Approved in MYT	Estimated
Khaperkheda Unit 5	3352.35	3478.11
Bhusawal Units 4&5	6999.24	6040.94
Koradi Units 8-10	9785.17	12470.30
Chandrapur Units 8&9	6844.89	6615.09
Parli Unit 8	1477.12	1274.07
Total	**58858.15**	**58221.36**

Commission's Analysis and Ruling

6.6.2 The Commission has considered the estimated gross generation as submitted by MSPGCL and the net generation based on normative AEC. Accordingly, the gross generation and net generation approved by the Commission is as shown in the Table below:

Table 6.5: Gross generation and net generation for FY 2022-23 (MU)

Station/Unit	Gross generation			Net generation		
	Approved in MYT	Estimated	Approved	Approved in MYT	Estimated	Approved
Bhusawal	1290.47	1145.70	1145.70	1149.03	1020.13	1020.13
Chandrapur	11359.44	11587.31	11587.31	10473.40	10683.50	10683.50
Khaperkheda	4947.06	5249.54	5249.54	4467.19	4740.34	4740.34
Koradi	1310.46	1368.94	1368.94	1168.80	1220.96	1220.96
Nashik	4415.04	3668.57	3668.57	3940.42	3274.20	3274.20
Uran	2991.14	1564.98	1564.98	2898.42	1516.47	1516.47
Paras Units 3&4	3499.22	3336.67	3336.67	3173.79	3026.36	3026.36
Parli Units 6&7	3449.09	3505.41	3505.41	3128.32	3179.40	3179.40
Khaperkheda Unit 5	3566.33	3506.90	3506.90	3352.35	3296.48	3296.48
Bhusawal Units 4&5	7446.00	6325.21	6325.21	6999.24	5945.70	5945.70
Koradi Units 8-10	10409.76	12127.37	12127.37	9785.17	11399.73	11399.73
Chandrapur Units 8&9	7281.79	6918.77	6918.77	6844.89	6503.65	6503.65
Parli Unit 8	1614.34	1479.23	1479.23	1477.12	1353.49	1353.49
Total	**63580.14**	**61784.60**	**61784.60**	**58858.15**	**57160.40**	**57160.40**

6.7 GSHR

MSPGCL's Submission

6.7.1 The estimated GSHR for FY 2022-23 is shown in the Table below:

Table 6.6: Estimated GSHR submitted by MSPGCL for FY 2022-23 (kcal/kWh)

Station/Unit	Normative	Actual
Bhusawal	2787.00	2935.99
Chandrapur	2688.00	2717.35

Station/Unit	Normative	Actual
Khaperkheda	2630.00	2680.77
Koradi	2350.00	2483.34
Nashik	2754.00	2779.04
Uran	2035.00	2348.48
Paras Units 3&4	2430.00	2316.31
Parli Units 6&7	2430.00	2479.26
Khaperkheda Unit 5	2375.00	2403.66
Bhusawal Units 4&5	2375.00	2408.99
Koradi Units 8-10	2230.00	2177.19
Chandrapur Units 8&9	2375.00	2395.54
Parli Unit 8	2430.00	2473.69

Commission's Analysis and Ruling

6.7.2 In the true-up of previous years, the Commission had not accepted the coal-related problems, partial loading and frequent outages as cogent reasons for relaxing the norms of operation. The same approach has been adopted for the provisional true-up of FY 2022-23. The Commission has considered the normative GSHR in the provisional true-up of FY 2022-23.

6.8 SFOC

MSPGCL's Submission

6.8.1 The estimated SFOC achieved for FY 2022-23 is shown in the Table below:

Table 6.7: Estimated SFOC submitted by MSPGCL for FY 2022-23 (ml/kWh)

Station/Unit	Normative	Actual
Bhusawal	1.40	3.53
Chandrapur	1.00	3.19
Khaperkheda	1.20	3.14
Koradi	2.81	6.06
Nashik	1.00	3.10
Paras Units 3&4	0.50	1.21
Parli Units 6&7	0.50	1.92
Khaperkheda Unit 5	0.50	0.48
Bhusawal Units 4&5	0.50	1.80
Koradi Units 8-10	0.50	0.66
Chandrapur Units 8&9	0.50	0.40
Parli Unit 8	0.50	1.52

Commission's Analysis and Ruling

6.8.2 In the true-up of previous years, the Commission had not accepted the coal-related problems, partial loading and frequent outages as cogent reasons for relaxing the norms of operation. The same approach has been adopted for the provisional true-up of FY 2022-23. The Commission has considered the normative SFOC in the final true-up of FY 2022-23.

6.9 GCV OF FUELS

Commission's Analysis and Ruling

6.9.1 The Commission has considered the estimated GCV of secondary fuel oil as submitted by MSPGCL. The Commission observed computational error in the GCV of gas considered by MSPGCL and corrected the same.

6.9.2 As regards the GCV of coal, the Commission, in the MYT Order ruled as under:

"7.11.14 The Commission is of the view that if entire GCV loss is allowed, then there will be no incentive for MSPGCL to control the GCV loss. Hence, the Commission allows the relaxation of 225 kCal/kWh in loss of GCV in addition to 300 kCal/kg as per MERC MYT Regulations, 2019, for FY 2020-21. Further, the Commission feels that MSGPCL should gradually try to reduce the GCV loss and accordingly approves the relaxation for subsequent years with some improvement in GCV as follows:

- ***FY 2021-22**: Relaxation of 200 kcal/kg in loss of GCV in addition to 300 kCal/kg as per MYT Regulations, 2019.*
- ***FY 2022-23**: Relaxation of 175 kcal/kg in loss of GCV in addition to 300 kCal/kg as per MYT Regulations, 2019.*
- ***FY 2023-24**: Relaxation of 150 kcal/kg in loss of GCV in addition to 300 kCal/kg as per MYT Regulations, 2019.*
- ***FY 2024-25**: Relaxation of 125 kcal/kg in loss of GCV in addition to 300 kCal/kg as per MYT Regulations, 2019.*

7.11.5 The above relaxation would be applicable to only raw coal including the case IV generators (if any) which have lower GCV on account of Grade Slippage between Loading and Unloading end, and moisture effect. In case of washed due to removal of ash content and impurities, GCV of coal improves which nullifies the effect of grade slippage seen in raw coal. Expenses on coal washeries is pass through in fuel costs. Hence, effect of grade slippage between loading and unloading load is already taken care. The effect of moisture is around 300 kCal in GCV which is well within permissible range of MYT Regulations. Hence, no relaxation is required to be given for washed coal."

6.9.3 Subsequently, the Commission in the Review Order dated 1 March, 2021 in Case No. 180 of 2020 ruled as under:

"28.40 In the instant Case, MSPGCL has raised the issue of GCV as a part of review Petition. The Commission is of the view that the submission of MSPGCL on the issue of GCV satisfies the requirement of filing the application as per the condition of

Regulations 105 of the MYT Regulations, 2019. Further, the Commission has already heard MSPGCL and MSEDCL which are the parties likely to be affected by grant of the relaxation. Therefore, even if the issue is not qualified on the ground of the review, to avoid one more petition (i.e. a separate petition requesting consideration under Regulation 105 of the MYT Regulations), the Commission is inclined to accept the factual submission of MSPGCL and treating these submissions as an application for a relaxation of the norms under power to relax under Regulations 105 of the MYT Regulations, 2019 and allowing the additional grade slippage of 125 kCal/kg over and above the approved norms in the MYT Order for the period FY 2020-21 to FY 2022-23…"

6.9.4 Accordingly, the ceiling limit of GCV loss between as billed and as received is 600 kcal/kg for FY 2022-23. Therefore, the Commission has considered the ceiling limit of GCV loss between loading end and receiving end as 600 kcal/kg in the provisional true-up of FY 2022-23.

6.9.5 The MYT Regulations, 2019 specify that the GCV of coal should be considered for tariff "as received" at unloading point less actual stacking loss subject to the maximum stacking loss of 120 kcal/kg. In line with the same, the Commission has considered the lower of actual stacking loss and 120 kcal/kWh and subtracted the same from the "as received" GCV of coal.

6.9.6 Accordingly, the Commission has considered the GCV of fuels as shown in the Table below:

Table 6.8: GCV of fuels considered by Commission for FY 2022-23

Station/Unit	Coal (kcal/kg)		Secondary Fuel Oil (kcal/L)		Gas (kcal/SCM)	
	Approved in MYT	Approved in provisional true-up	Approved in MYT	Approved in provisional true-up	Approved in MYT	Approved in provisional true-up
Bhusawal	3939.93	3785.45	9830.54	9549.22	-	-
Chandrapur	3674.16	3462.46	10333.75	9641.82	-	-
Khaperkheda	3535.26	3435.52	10475.93	9644.36	-	-
Koradi	3720.32	3671.90	10328.10	9320.86	-	-
Nashik	3963.74	3471.36	10446.38	9421.71	-	-
Uran	-	-	-	-	8365.74	8345.00
Paras Units 3&4	3478.42	3602.94	10446.38	9511.01	-	-
Parli Units 6&7	3195.16	3416.19	10346.00	9467.07	-	-
Khaperkheda Unit 5	3594.79	3674.51	10500.37	9690.40	-	-
Bhusawal Units 4&5	3700.42	3845.42	9844.07	9878.94	-	-
Koradi Units 8-10	3531.28	3884.21	10520.50	9282.52	-	-
Chandrapur Units 8&9	3791.37	3636.09	10354.86	9664.17	-	-
Parli Unit 8	3272.02	3411.81	10346.00	9427.79	-	-

6.10 LANDED PRICE OF FUELS

Commission's Analysis and Ruling

6.10.1 The Commission has considered the station-wise estimated landed price of coal as submitted by MSPGCL. The Commission has considered the estimated prices of secondary fuel oil and gas as submitted by MSPGCL.

Table 6.9: Fuel prices considered by the Commission for FY 2022-23

Station/Unit	Coal (Rs./MT)		Secondary Fuel Oil (Rs./kL)		Gas (Rs./'000 SCM)	
	Approved in MYT	Approved in provisional true-up	Approved in MYT	Approved in provisional true-up	Approved in MYT	Approved in provisional true-up
Bhusawal	5105.06	5483.30	42027.20	57356.54	-	-
Chandrapur	3298.18	4779.94	47115.32	59796.29	-	-
Khaperkheda	3513.86	4484.70	48249.09	64212.52	-	-
Koradi	4037.25	4326.18	49431.49	58886.85	-	-
Nashik	4536.02	5527.97	45491.25	61105.28	-	-
Uran	-	-	-	-	11339.14	23165.40
Paras Units 3&4	4062.49	4210.32	42927.84	63070.59	-	-
Parli Units 6&7	5038.42	5608.17	44051.79	55785.51	-	-
Khaperkheda Unit 5	3647.17	5632.99	48305.19	50240.56	-	-
Bhusawal Units 4&5	5010.29	5834.65	42006.46	53355.50	-	-
Koradi Units 8-10	3538.29	5130.86	49559.04	62624.41	-	-
Chandrapur Units 8&9	3831.64	5321.57	47404.47	56645.23	-	-
Parli Unit 8	4983.02	5526.29	44055.39	53763.33	-	-

6.11 ENERGY CHARGES

Commission's Analysis and Ruling

6.11.1 The Commission has computed the energy charges for each station considering the approved generation, performance parameters, GCV of fuels and landed price of fuels.

Table 6.10: Energy charges for FY 2022-23 (Rs. Crore)

Station/Unit	Claimed	Approved
Bhusawal	474.64	469.50
Chandrapur	4380.54	4353.68
Khaperkheda	1856.89	1834.78
Koradi	399.60	397.45

Station/Unit	Claimed	Approved
Nashik	1637.76	1625.81
Uran	446.04*	884.07
Paras Units 3&4	956.16	956.16
Parli Units 6&7	1405.43	1405.43
Khaperkheda Unit 5	1293.86	1283.02
Bhusawal Units 4&5	2310.72	2291.47
Koradi Units 8-10	3612.45	3602.93
Chandrapur Units 8&9	2436.09	2419.61
Parli Unit 8	585.07	585.07
Total	**21795.26**	**22108.99**

**MSPGCL has erred in considering the GCV of gas as 16690 kcal/unit as against the correct value of 8345 kcal/unit*

6.11.2 The variation in Energy Charges claimed by MSPGCL and approved by the Commission for some of the stations is on account of variation in as fired GCV of coal considered by MSPGCL and that considered by the Commission. As the normative Energy Charges approved by the Commission at target norms of operation viz., GSHR, SFOC and transit and handling loss and the norms of operation are controllable factors, the Commission shall undertake the sharing of gains and losses in energy charges on account of variation in norms of operation in accordance with the MYT Regulations, 2019 in the final true-up of FY 2022-23.

6.12 ADDITIONAL CAPITALISATION

MSPGCL's Submission

6.12.1 MSPGCL has claimed estimated additional capitalisation of Rs. 1169.38 Crore against the approved capitalisation Rs. 678.51 Crore for FY 2022-23. MSPGCL submitted that the variation in estimated and approved additional capitalisation for some of the stations is on account of the DPRs approved subsequent to the issue of the MYT Order.

Table 6.11: Additional capitalisation submitted by MSPGCL for FY 2022-23 (Rs. Crore)

Station/Unit	Approved in MYT	Estimated
Bhusawal	5.50	0.00
Chandrapur	69.74	211.89
Khaperkheda	47.05	45.77
Koradi	84.25	49.47
Nashik	21.55	6.19
Uran	33.04	34.55
Paras Units 3&4	24.52	82.64
Parli Units 6&7	46.81	38.15
Khaperkheda Unit 5	29.34	22.53

Station/Unit	Approved in MYT	Estimated
Bhusawal Units 4&5	47.62	18.87
Koradi Units 8-10	122.20	330.50
Chandrapur Units 8&9	83.18	158.42
Parli Unit 8	32.28	103.68
Hydro	31.35	66.72
Total	**678.51**	**1169.38**

Commission's Analysis and Ruling

6.12.2 The Commission has examined the estimated additional capitalisation claimed by MSPGCL as against the schemes accorded in-principle approval. The Commission's approach for approving the additional capitalisation in provisional true-up of FY 2022-23 is as follows:

- DPR schemes (above Rs. 10 Crore each): Entire capitalisation is approved for all DPR schemes capitalised in the year in respect of which in-principle approval has been accorded. In case of cost over-run without appropriate justification, the capital cost is capped at approved capital cost as per in-principle approval. However, in case of the schemes executed through competitive bidding, the cost overrun with respect to approved cost has been allowed.
- Non-DPR schemes (less than Rs. 10 Crore each): The capitalisation of the non-DPR schemes has been considered up to 20% of the cost of the capitalised DPR schemes.

6.12.3 Accordingly, the additional capitalisation approved by the Commission in the provisional true-up of FY 2022-23 is as shown in the Table below:

Table 6.12: Additional capitalisation for FY 2022-23 (Rs. Crore)

Station/Unit	Approved in MYT	Actual claimed	Approved
Bhusawal	5.50	0.00	0.00
Chandrapur	69.74	211.89	199.17
Khaperkheda	47.05	45.77	45.77
Koradi	84.25	49.47	48.27
Nashik	21.55	6.19	6.19
Uran	33.04	34.55	34.55
Paras Units 3&4	24.52	82.64	82.56
Parli Units 6&7	46.81	38.15	37.57
Khaperkheda Unit 5	29.34	22.53	22.10
Bhusawal Units 4&5	47.62	18.87	18.87
Koradi Units 8-10	122.20	330.50	306.92
Chandrapur Units 8&9	83.18	158.42	158.42

Station/Unit	Approved in MYT	Actual claimed	Approved
Parli Unit 8	32.28	103.68	103.66
Hydro	31.35	66.72	54.65
Total	**678.51**	**1169.38**	**1118.70**

6.13 MEANS OF FINANCE OF ADDITIONAL CAPITALISATION

MSPGCL's Submission

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

Commission's Analysis and Ruling

6.13.2 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.

6.14 AFC

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

a. O&M expenses
b. Depreciation
c. Interest on Loan
d. IoWC
e. RoE
f. Income Tax

Less:

g. NTI

6.15 O&M EXPENSES

MSPGCL's submission

6.15.1 The O&M expenses have been claimed based on the actuals for the period from April-September, 2022 and estimates for the remaining six months. In addition, the water charges have been considered in accordance with the Regulations.

Table 6.13: O&M expenses for FY 2022-23 as claimed by MSPGCL (Rs. Crore)

Particulars	Approved in MYT	Estimated
O&M expenses	2864.08	3453.44
Pay revision	272.84	
Water charges	183.28	297.27
Other charges	345.99	278.17
Total	**3666.19**	**4028.88**

Commission's Analysis and Ruling

6.15.2 The normative O&M expenses claimed by MSPGCL for new stations viz., Paras Units 3&4, Parli Units 6&7, Khaperkheda Unit 5, Bhusawal Units 4&5, Koradi Units 8-10, Chandrapur Units 8&9 and Parli Unit 8 is not in line with the normative O&M expenses specified in Rs. Lakh/MW in the MYT Regulations, 2019. MSPGCL has projected the normative O&M expenses for these stations by escalating the actual O&M expenses for FY 2019-20.

6.15.3 For old stations, the revised normative O&M expenses for FY 2022-23 have been arrived at by escalating the normative O&M expenses approved in final true-up of FY 2021-22 by the escalation factor of 3.94%. For new stations, the Commission has considered the normative O&M expenses as approved in the MYT Order. In addition to the normative O&M expenses, the Commission has considered the water charges and other charges as claimed by MSPGCL.

6.15.4 The revised normative O&M expenses approved by the Commission for FY 2022-23 is as shown in the Table below:

Table 6.14: Normative O&M expenses for FY 2022-23 approved by the Commission (Rs. Crore)

Station/Unit	Normative O&M expenses	Pay Revision	Water charges	Other charges	Total O&M expenses
Bhusawal	96.69	7.61	11.26	3.74	**119.30**
Chandrapur	595.00	32.03	10.97	46.50	**684.50**
Khaperkheda	278.26	16.66	60.09	28.92	**383.94**
Koradi	176.21	12.09	38.73	13.40	**240.42**
Nashik	272.98	18.55	13.58	28.66	**333.76**
Uran	91.26	6.67	1.12	0.14	**99.19**
Paras Units 3&4	149.65	10.23	4.28	17.44	**181.59**
Parli Units 6&7	149.65	12.47	13.62	8.97	**184.71**
Khaperkheda Unit 5	99.50	6.25	35.86	9.18	**150.79**
Bhusawal Units 4&5	199.00	15.70	3.14	31.45	**249.30**
Koradi Units 8-10	318.58	21.56	81.80	29.73	**451.67**
Chandrapur Units 8&9	199.00	12.06	5.71	53.84	**270.61**
Parli Unit 8	74.83	5.28	8.45	5.89	**94.45**
Hydro	218.00	23.84	0.00	0.31	**242.15**
Total	**2918.61**	**200.98**	**288.61**	**278.17**	**3686.38**

6.16 DEPRECIATION

MSPGCL's submission

6.16.1 MSPGCL submitted that the depreciation has been claimed in accordance with Regulation 27 of the MYT Regulations, 2019.

Table 6.15: Depreciation for FY 2022-23 as submitted by MSPGCL (Rs. Crore)

Station/Unit	Approved in MYT	Claimed
Bhusawal	12.07	11.25
Chandrapur	67.38	93.96
Khaperkheda	43.09	26.94
Koradi	76.64	35.82
Nashik	29.09	29.84
Uran	35.11	9.01
Paras Units 3 & 4	82.72	88.96
Parli Units 6 & 7	76.85	80.75
Khaperkheda Unit 5	186.88	180.72
Bhusawal Units 4 & 5	340.97	347.25
Koradi Units 8, 9 & 10	650.40	705.72
Chandrapur Units 8 & 9	325.97	340.45
Parli Unit 8	97.76	98.23
Hydro	25.82	10.53
Total	**2050.75**	**2059.43**

Commission's Analysis and Ruling

6.16.2 The Commission has computed the depreciation for FY 2022-23 in accordance with the MYT Regulations, 2019. The closing GFA and accumulated depreciation approved in final true-up of FY 2021-22 has been considered as the opening GFA and accumulated depreciation for FY 2022-23. If the accumulated depreciation for a particular asset class has reached 70% of the allowable depreciation, the remaining depreciable value has been spread over the remaining useful life of the station, as submitted by MSPGCL. Else, the depreciation on opening GFA and additional capitalisation has been computed at the depreciation rates specified in the Regulations. Further, the Commission observed that MSPGCL has not furnished the dates of commissioning of additional capitalisation for many of the works claimed. The Commission has computed the depreciation on opening GFA for full year and depreciation on additional capitalisation has been computed for half year. The Commission has considered HO depreciation, the same as claimed by MSPGCL.

Table 6.16: Depreciation for FY 2022-23 (Rs. Crore)

Station/Unit	Approved in MYT	Claimed	Approved
Bhusawal	12.07	11.25	9.21

Station/Unit	Approved in MYT	Claimed	Approved
Chandrapur	67.38	93.96	89.11
Khaperkheda	43.09	26.94	25.93
Koradi	76.64	35.82	28.02
Nashik	29.09	29.84	20.77
Uran	35.11	9.01	15.56
Paras Units 3 & 4	82.72	88.96	88.62
Parli Units 6 & 7	76.85	80.75	80.42
Khaperkheda Unit 5	186.88	180.72	178.32
Bhusawal Units 4 & 5	340.97	347.25	344.63
Koradi Units 8, 9 & 10	650.40	705.72	697.51
Chandrapur Units 8 & 9	325.97	340.45	340.45
Parli Unit 8	97.76	98.23	98.23
Hydro	25.82	10.53	11.71
Total	**2050.75**	**2059.43**	**2028.50**

6.17 INTEREST ON LONG TERM LOANS AND OTHER FINANCE CHARGES

MSPGCL's submission

6.17.1 MSPGCL has considered the closing loan balances approved for FY 2021-22 as the opening loan balances for FY 2022-23. Further, the additional capitalization has been considered to be funded in the normative debt-equity ratio of 70:30. The allowable depreciation has been considered as the repayment for the year. MSPGCL considered the weighted average interest for FY 2022-23 in accordance with Regulation 29.5 of the MYT Regulations, 2019. The actual finance charges have been provisionally considered for FY 2022-23.

6.17.2 MSPGCL has submitted the summary of interest and finance charges claimed for the year as shown in the Table below:

Table 6.17: Interest and finance charges submitted by MSPGCL for FY 2022-23 (Rs. Crore)

Station/Unit	Approved in MYT			Claimed		
	Interest expenses	Finance charges	Total	Interest expenses	Finance charges	Total
Bhusawal	0.00	0.43	**0.43**	0.00	0.29	**0.29**
Chandrapur	52.47	2.42	**54.89**	61.79	1.31	**63.11**
Khaperkheda	22.60	0.87	**23.47**	5.21	0.57	**5.79**
Koradi	13.65	0.64	**14.30**	16.68	0.29	**16.97**
Nashik	0.26	0.66	**0.92**	1.21	0.99	**2.20**
Uran	11.52	0.70	**12.22**	9.94	0.99	**10.94**
Paras Units 3&4	27.81	0.11	**27.92**	29.45	0.78	**30.23**
Parli Units 6&7	9.87	0.01	**9.89**	13.09	0.63	**13.72**

Station/Unit	Approved in MYT			Claimed		
	Interest expenses	Finance charges	Total	Interest expenses	Finance charges	Total
Khaperkheda Unit 5	80.93	0.15	**81.08**	62.04	0.75	**62.79**
Bhusawal Units 4&5	195.47	0.17	**195.65**	196.80	0.78	**197.57**
Koradi Units 8-10	565.40	0.05	**565.45**	617.91	3.32	**621.23**
Chandrapur Units 8&9	318.29	0.03	**318.32**	325.19	1.57	**326.76**
Parli Unit 8	99.69	0.00	**99.69**	104.11	0.43	**104.53**
Hydro	13.75	0.00	**13.75**	3.68	0.02	**3.70**
Total	**1411.72**	**6.24**	**1417.96**	**1447.11**	**12.70**	**1459.81**

Commission's Analysis and Ruling

6.17.3 The Commission has considered the approved closing loan balance for FY 2021-22 as the opening loan balance 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 rate of interest has been applied to the average loan for the year for computing the interest expenses. In addition to the normative interest expenses, the Commission has considered the finance charges as claimed by MSPGCL in accordance with the provisions of the Regulations.

Table 6.18: Interest and finance charges for FY 2022-23 (Rs. Crore)

Station/Unit	Claimed			Approved		
	Interest expenses	Finance charges	Total	Interest expenses	Finance charges	Total
Bhusawal	0.00	0.29	**0.29**	0.00	0.29	**0.29**
Chandrapur	61.79	1.31	**63.11**	59.59	1.31	**60.90**
Khaperkheda	5.21	0.57	**5.79**	5.30	0.57	**5.87**
Koradi	16.68	0.29	**16.97**	18.60	0.29	**18.89**
Nashik	1.21	0.99	**2.20**	3.24	0.99	**4.23**
Uran	9.94	0.99	**10.94**	9.35	0.99	**10.34**
Paras Units 3&4	29.45	0.78	**30.23**	29.03	0.78	**29.81**
Parli Units 6&7	13.09	0.63	**13.72**	12.86	0.63	**13.49**
Khaperkheda Unit 5	62.04	0.75	**62.79**	62.78	0.75	**63.53**
Bhusawal Units 4&5	196.80	0.78	**197.57**	197.17	0.78	**197.95**
Koradi Units 8-10	617.91	3.32	**621.23**	611.07	3.32	**614.38**
Chandrapur Units 8&9	325.19	1.57	**326.76**	325.19	1.57	**326.76**
Parli Unit 8	104.11	0.43	**104.53**	104.10	0.43	**104.53**
Hydro	3.68	0.02	**3.70**	1.80	0.02	**1.81**
Total	**1447.11**	**12.70**	**1459.81**	**1440.07**	**12.70**	**1452.77**

6.18 IOWC

MSPGCL's submission

6.18.1 Regulation 32.1 of the MYT Regulations, 2019 provides the norms for computation of the working capital for generating companies. The IoWC has been computed as per the norms.

Table 6.19: IoWC for FY 2022-23 as submitted by MSPGCL (Rs. Crore)

Station/Unit	Approved in MYT	Claimed
Bhusawal	15.89	14.99
Chandrapur	96.25	133.33
Khaperkheda	47.54	58.57
Koradi	18.07	16.08
Nashik	47.31	48.91
Uran	27.06	15.51
Paras Units 3 & 4	37.04	33.68
Parli Units 6 & 7	45.41	45.51
Khaperkheda Unit 5	34.27	43.60
Bhusawal Units 4 & 5	85.87	78.59
Koradi Units 8, 9 & 10	103.36	144.84
Chandrapur Units 8 & 9	68.40	84.66
Parli Unit 8	23.28	21.46
Hydro	12.16	11.91
Total	**661.90**	**751.65**

Commission's Analysis and Ruling

6.18.2 Regulation 32.1 of the MYT Regulations, 2019 specifies the normative working capital requirements (cost of coal, cost of oil and receivables) to be computed based on the estimated generation or target Availability, whichever is lower, in provisional true-up.

6.18.3 The Commission has computed IoWC in accordance with the MYT Regulations, 2019. MSPGCL has considered the rate of IoWC as 8.95% for FY 2022-23 based on actual MCLR for first seven months during FY 2022-23. The Commission while carrying out the provisional true up for FY 2022-23 has considered the he rate of IoWC as 9.45% in accordance with the MYT Regulations, 2019. The Commission will consider the revised rate of IoWC for FY 2022-23 in accordance with MYT Regulations, 2019 at the time of final true up. Further, as IoWC is a controllable factor under the MYT Regulations, 2019, the Commission will carry out the sharing of variation in normative IoWC and actual IoWC in accordance with the MYT Regulations, 2019 as part of final true up for FY 2022-23.

Table 6.20: Normative IoWC for FY 2022-23 (Rs. Crore)

Station/Unit	Approved in MYT	Claimed	Approved
Bhusawal	15.89	14.99	15.88
Chandrapur	96.25	133.33	139.81
Khaperkheda	47.54	58.57	61.96
Koradi	18.07	16.08	17.59
Nashik	47.31	48.91	52.55
Uran	27.06	15.51	28.71
Paras Units 3 & 4	37.04	33.68	35.80
Parli Units 6 & 7	45.41	45.51	47.81

Station/Unit	Approved in MYT	Claimed	Approved
Khaperkheda Unit 5	34.27	43.60	45.46
Bhusawal Units 4 & 5	85.87	78.59	82.57
Koradi Units 8, 9 & 10	103.36	144.84	139.54
Chandrapur Units 8 & 9	68.40	84.66	87.60
Parli Unit 8	23.28	21.46	22.76
Hydro	12.16	11.91	11.64
Total	**661.90**	**751.65**	**789.66**

6.18.4 The normative IoWC approved by the Commission works out to be higher than claimed for most of the stations on account of variation in interest rate wherein the Commission has considered the interest rate of 9.45% in accordance with the provisions of MYT Regulations, 2019 as against MSPGCL's claim of 8.95%.

6.19 ROE

MSPGCL's submission

6.19.1 MSPGCL considered the closing balance of equity for FY 2021-22 as the opening balance for FY 2022-23. The equity addition for FY 2022-23 has been considered as equivalent to 30% of capitalization for the year. Rate of Return on Equity has been considered as 14% for FY 2022-23 as per MYT Regulations, 2019.

Table 6.21: RoE submitted by MSPGCL for FY 2022-23 (Rs Crore)

Station/Unit	Approved in MYT	Claimed
Bhusawal	13.92	13.40
Chandrapur	126.48	133.40
Khaperkheda	151.97	138.63
Koradi	47.79	37.47
Nashik	38.32	35.15
Uran	46.91	42.38
Paras Units 3&4	135.68	132.55
Parli Units 6&7	134.01	131.47
Khaperkheda Unit 5	109.10	103.78
Bhusawal Units 4&5	182.61	183.82
Koradi Units 8-10	394.68	433.87
Chandrapur Units 8&9	169.52	178.27
Parli Unit 8	57.29	56.87
Hydro	12.28	6.20
Total	**1620.54**	**1627.28**

Commission's Analysis and Ruling

6.19.2 The Commission has considered the approved closing equity for FY 2021-22 as the opening equity for FY 2022-23. 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 14% for FY 2022-23, on the opening equity as well as on 50% of the addition during the year.

Table 6.22: RoE for FY 2022-23 (Rs. Crore)

Station/Unit	Approved in MYT	Claimed	Approved
Bhusawal	13.92	13.40	13.40
Chandrapur	126.48	133.40	131.76
Khaperkheda	151.97	138.63	138.62
Koradi	47.79	37.47	37.23
Nashik	38.32	35.15	35.09
Uran	46.91	42.38	42.38
Paras Units 3&4	135.68	132.55	132.24
Parli Units 6&7	134.01	131.47	131.30
Khaperkheda Unit 5	109.10	103.78	103.77
Bhusawal Units 4&5	182.61	183.82	183.23
Koradi Units 8-10	394.68	433.87	427.34
Chandrapur Units 8&9	169.52	178.27	178.27
Parli Unit 8	57.29	56.87	56.87
Hydro	12.28	6.20	5.95
Total	**1620.54**	**1627.28**	**1617.45**

6.20 NTI

MSPGCL's submission

6.20.1 MSPGCL has claimed the NTI of Rs. 260.27 Crore as against Rs. 99.12 Crore approved in the MYT Order.

Commission's Analysis and Ruling

6.20.2 The Commission has considered the estimated NTI as claimed by MSPGCL.

6.21 AFC

Commission's Analysis and Ruling

6.21.1 Based on the above analysis, the AFC approved by the Commission in the provisional true-up of FY 2022-23, that is fully recoverable at target Availability is as shown in the Table below:

Table 6.23: AFC claimed by MSPGCL and approved by the Commission for FY 2022-23 (Rs. Crore)

Station/Unit	Return on Equity			Interest on loan			Depreciation			O&M expenses			IoWC			Less:NTI			AFC		
	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved
Bhusawal	13.92	13.40	13.40	0.43	0.29	0.29	12.07	11.25	9.21	117.65	116.20	119.30	15.89	14.99	15.88	2.73	3.99	3.99	**157.22**	**152.14**	**154.09**
Chandrapur	126.48	133.40	131.76	54.89	63.11	60.90	67.38	93.96	89.11	698.08	781.46	684.50	96.25	133.33	139.81	19.60	30.89	30.89	**1023.48**	**1174.37**	**1075.19**
Khaperkheda	151.97	138.63	138.62	23.47	5.79	5.87	43.09	26.94	25.93	325.56	370.08	383.94	47.54	58.57	61.96	5.16	28.94	28.94	**586.46**	**571.08**	**587.39**
Koradi	47.79	37.47	37.23	14.30	16.97	18.89	76.64	35.82	28.02	227.05	216.05	240.42	18.07	16.08	17.59	1.60	15.09	15.09	**382.24**	**307.29**	**327.06**
Nashik	38.32	35.15	35.09	0.92	2.20	4.23	29.09	29.84	20.77	383.85	256.70	333.76	47.31	48.91	52.55	12.54	7.94	7.94	**486.95**	**364.87**	**438.45**
Uran	46.91	42.38	42.38	12.22	10.94	10.34	35.11	9.01	15.56	92.27	93.64	99.19	27.06	15.51	28.71	2.38	0.47	0.47	**211.19**	**170.99**	**195.71**
Paras Units 3&4	135.68	132.55	132.24	27.92	30.23	29.81	82.72	88.96	88.62	189.66	182.71	181.59	37.04	33.68	35.80	3.94	7.49	7.49	**469.08**	**460.64**	**460.57**
Parli Units 6&7	134.01	131.47	131.30	9.89	13.72	13.49	76.85	80.75	80.42	193.94	222.64	184.71	45.41	45.51	47.80	3.95	2.12	2.12	**456.15**	**491.98**	**455.61**
Khaperkheda Unit 5	109.10	103.78	103.77	81.08	62.79	63.53	186.88	180.72	178.32	136.33	182.01	150.79	34.27	43.60	45.46	4.10	17.22	17.22	**543.56**	**555.68**	**524.65**
Bhusawal Units 4&5	182.61	183.82	183.23	195.65	197.57	197.95	340.97	347.25	344.63	284.30	271.40	249.30	85.87	78.59	82.57	14.87	19.00	19.00	**1074.51**	**1059.64**	**1038.68**
Koradi Units 8-10	394.68	433.87	427.34	565.45	621.23	614.38	650.40	705.72	697.51	428.25	514.60	451.67	103.36	144.84	139.54	7.27	105.93	105.93	**2134.87**	**2314.33**	**2224.51**
Chandrapur Units 8&9	169.52	178.27	178.27	318.32	326.76	326.76	325.97	340.45	340.45	253.77	436.63	270.61	68.40	84.66	87.60	15.14	16.09	16.09	**1120.83**	**1350.68**	**1187.60**
Parli Unit 8	57.29	56.87	56.87	99.69	104.53	104.53	97.76	98.23	98.23	108.30	94.76	94.45	23.28	21.46	22.76	1.08	1.63	1.63	**385.23**	**374.22**	**375.20**
Hydro	12.28	6.20	5.95	13.75	3.70	1.81	25.82	10.53	11.71	227.18	289.99	242.15	12.16	11.91	11.64	4.76	3.47	3.47	**286.43**	**318.87**	**269.79**
Total	**1620.54**	**1627.28**	**1617.45**	**1417.96**	**1459.81**	**1452.77**	**2050.75**	**2059.43**	**2028.50**	**3666.19**	**4028.88**	**3686.38**	**661.90**	**751.65**	**789.66**	**99.12**	**260.27**	**260.27**	**9318.22**	**9666.78**	**9314.49**

6.22 HYDRO LEASE RENTAL

MSPGCL's submission

6.22.1 MSPGCL has claimed the lease rent of Rs. 541.19 Crore for FY 2022-23.

Commission's Analysis and Ruling

6.22.2 The Commission has approved the lease rent of Rs. 541.19 Crore for FY 2022-23, the same being in line with the approved lease rent.

6.23 REDUCTION IN AFC DUE TO SHORTFALL AGAINST TARGET AVAILABILITY

MSPGCL's submission

6.23.1 The reduction in AFC due to shortfall in target Availability is Rs. 1127.79 Crore for FY 2022-23.

Commission's Analysis and Ruling

6.23.2 As the estimated Availability of some of the stations was lower than the target Availability approved for recovery of full AFC, the Commission has approved the recovery of trued-up AFC for such stations on pro-rata basis, except for Uran. For Uran, the Commission has approved the recovery of full trued-up AFC, at actual Availability.

6.23.3 The computation of AFC disallowance for FY 2022-23 is as shown in the Table below:

Table 6.24: AFC disallowance for FY 2022-23 approved by the Commission

Station/Unit	Target Availability	Actual Availability	Total AFC	Less: water charges	Total AFC minus water charges	AFC Reduction	Reduced AFC	Reduced AFC plus water charges
	%	%	Rs. Crore	Rs. Crore	Rs. Crore	Rs. Crore	Rs. Crore	Rs. Crore
Bhusawal	80.00%	62.46%	154.09	11.26	142.83	31.31	111.52	122.78
Chandrapur	80.00%	69.67%	1075.19	10.97	1064.22	137.44	926.79	937.76
Khaperkheda	85.00%	72.10%	587.39	60.09	527.30	80.01	447.30	507.39
Koradi	72.00%	72.44%	327.06	38.73	288.33	0.01	288.33	327.06
Nashik	80.00%	67.13%	438.45	13.58	424.87	68.34	356.53	370.11
Uran	29.60%	29.60%	195.71	1.12	194.59	0.00	194.59	195.71
Paras Units 3&4	85.00%	78.15%	460.57	4.28	456.29	36.78	419.52	423.80
Parli Units 6&7	85.00%	78.86%	455.61	13.62	441.99	31.92	410.09	423.71
Khaperkheda Unit 5	85.00%	86.42%	524.65	35.86	488.79	0.02	488.79	524.65
Bhusawal Units 4&5	85.00%	74.84%	1038.68	3.14	1035.54	123.75	911.82	914.96
Koradi Units 8-10	85.00%	71.28%	2224.51	81.80	2142.71	346.04	1796.73	1878.53
Chandrapur Units 8&9	85.00%	81.13%	1187.60	5.71	1181.89	53.86	1128.05	1133.76

Station/Unit	Target Availability	Actual Availability	Total AFC	Less: water charges	Total AFC minus water charges	AFC Reduction	Reduced AFC	Reduced AFC plus water charges
	%	%	Rs. Crore	Rs. Crore	Rs. Crore	Rs. Crore	Rs. Crore	Rs. Crore
Parli Unit 8	85.00%	65.56%	375.20	8.45	366.75	83.89	282.87	291.32
Total			**9044.70**	**288.61**	**8756.09**	**993.37**	**7762.93**	**8051.54**

6.24 REVENUE FROM SALE OF POWER

MSPGCL's Submission

6.24.1 MSPGCL has considered the revenue from sale of power of Rs. 32003.23 Crore in the provisional true-up of FY 2022-23.

Commission's Analysis and Ruling

6.24.2 The Commission has considered the revenue from sale of power of Rs. 32003.23 Crore, same as claimed by MSPGCL.

6.25 SUMMARY OF TRUE UP OF FY 2022-23

MSPGCL's Submission

6.25.1 The summary of provisional true-up of FY 2022-23 claimed by MSPGCL is as shown in the Table below:

Table 6.25: Summary of true-up for FY 2022-23 claimed by MSPGCL (Rs. Crore)

Particulars	Revised Normative	Estimated	Net entitlement
Expenses side summary			
Return on Equity	1627.28		1627.28
Interest on Loan	1459.81		1459.81
Depreciation	2059.43		2059.43
O&M expenses	3453.44		3453.44
Water Charges		297.27	297.27
Other Charges		278.17	278.17
Interest on Working Capital	751.65		751.65
Less: Non-Tariff Income		260.27	260.27
Annual Fixed Charges			**9666.78**
Income Tax			
Idle Capacity Charges (RSD)			
Hydro Lease Rent		541.19	541.19
Fuel Cost	21795.26		21795.26

Particulars	Revised Normative	Estimated	Net entitlement
Aggregate Revenue Requirement			**32003.23**
AFC Reduction			1127.79
Net Revenue Requirement			**30875.44**
Revenue from sale of power		32003.23	32003.23
Revenue loss/(gain) due to higher/lower auxiliary consumption			
Revenue for true-up			**32003.23**
Revenue Gap/(Surplus)			**-1127.79**

Commission's Analysis and Ruling

6.25.2 Based on the analysis of the norms of operation and fuel parameters, the Commission has approved the energy charges for FY 2022-23 as detailed in Table 6.10. based on the analysis of the individual components of AFC, the Commission has approved the AFC that is recoverable at target Availability as detailed in Table 6.23. Further, the Commission has approved the AFC disallowance on account of projected Availability lower than target Availability as detailed in Table 6.24. Accordingly, the Commission has approved the net revenue requirement for FY 2022-23.

6.25.3 The summary of provisional true-up of FY 2022-23 approved by the Commission is as shown in the Table below:

Table 6.26: Summary of provisional true-up of FY 2022-23 approved by the Commission (Rs. Crore)

Particulars	Approved in MYT	Provisional true-up
Expenses side summary		
Return on Equity	1620.54	1617.45
Interest on Loan	1417.96	1452.77
Depreciation	2050.75	2028.50
O&M expenses	3666.19	3686.38
Interest on Working Capital	661.90	789.66
Less: Non-Tariff Income	99.12	260.27
Annual Fixed Charges	**9318.22**	**9314.49**
Hydro Lease Rent	541.19	541.19
Energy Charges		22108.99
Aggregate Revenue Requirement		**31964.67**
AFC Reduction		993.16

Particulars	Approved in MYT	Provisional true-up
Net Revenue Requirement		**30971.51**
Revenue from sale of power		**32003.23**
Revenue Gap/(Surplus)		**-1031.72**

6.25.4 The Commission has considered the above approved amount in computing the cumulative revenue gap/(surplus) up to FY 2022-23 as detailed in Chapter 7 of the Order.

7 CUMULATIVE REVENUE GAP/(SURPLUS)

7.1 CUMULATIVE REVENUE GAP/(SURPLUS) UPTO FY 2022-23

MSPGCL's Submission

7.1.1 MSPGCL has claimed the cumulative revenue gap/(surplus) of Rs. 2217.99 Crore including carrying cost upto FY 2022-23.

Commission's Analysis and Ruling

7.1.2 Based on the above analysis, the Commission has approved the cumulative revenue gap/(surplus) upto FY 2022-23 as shown in the Table below:

Table 7.1: Cumulative revenue gap/(surplus) upto FY 2022-23 (Rs. Crore)

Particulars	Claimed			Allowable		
	Principal amount	Carrying cost	Total	Principal amount	Carrying cost	Total
Revision of capital cost of Bhusawal Units 4&5	51.05	30.32	**81.37**	34.81	26.44	**61.25**
Revision of capital cost of Koradi Units 8-10	112.67	46.65*	**159.32**	83.76	46.94	**130.70**
Revision of capital cost of Chandrapur Units 8&9	55.58	22.60*	**78.18**	53.41	30.82	**84.23**
Revision of capital cost of Parli Unit 8	5.34	1.95*	**7.29**	5.34	2.74	**8.09**
Final true-up for FY 2019-20	348.11	92.80	**440.91**	-40.19	-10.83	**-51.02**
Final true-up for FY 2020-21	1073.38	192.11	**1265.50**	627.62	169.21	**796.82**
Final true-up for FY 2021-22	683.62	61.18	**744.80**	444.43	81.89	**526.32**
Provisional true-up for FY 2022-23	-1125.08		**-1125.08**	-1031.72	0.00	**-1031.72**
A&G expenses for Solar AG feeder for FY 2019-20 to FY 2021-22	13.74	3.42	**17.16**	13.74	3.42	**17.16**
Impact of Review of MYT Order on true-up for FY 2017-18 and FY 2018-19	65.45	26.73	**92.19**	65.45	26.73	**92.19**
Service Tax liability claimed by GoMWRD for the period from FY 2009-10 to FY 2014-15	130.46	23.35	**153.81**	130.46	23.35	**153.81**
Service Tax and GST on lease rent claimed by GoMWRD	199.32	17.84	**217.16**	199.32	17.84	**217.16**
Change in Law claims related to Coal Tolling arrangement	7.82	0.00	**7.82**	7.82	0.00	**7.82**
Change in Law claims related to Coal Tolling arrangement	69.74	7.83	**77.57**	69.74	7.83	**77.57**
Total	**1691.22**	**526.77**	**2217.99**	**664.00**	**426.37**	**1090.37**

**Computational error by MSPGCL*

7.1.3 The Commission has considered the above approved cumulative revenue gap/(surplus) upto FY 2022-23 in the approval of ARR for MSEDCL for FY 2023-24 as detailed in the respective MTR Order.

8 REVISED FUEL UTILISATION PLAN FOR FY 2023-24 AND FY 2024-25

8.1 BACKGROUND

8.1.1 MSPGCL had submitted the FUP or the 4th Control Period from FY 2020-21 to FY 2024-25 in its MYT Petition. MSPGCL submitted that there had been significant changes in the availability and prices of coal besides directives of Government of India (GoI) prohibiting usage of imported coal in FY 2020-21 which was reversed intermittently during H1 of FY 2022-23. MSPGCL submitted that Regulations 40.7, 40.8 and 40.9 of the MYT Regulations, 2019 allow the changes in FUP. MSPGCL's submissions regarding the actual coal utilisation during FY 2020-21, FY 2021-22 and H1 of FY 2022-23 and the proposed coal utilisation during H2 of FY 2022-23, FY 2023-24 and FY 2024-25 are detailed hereunder.

8.2 ACTUAL COAL UTILISATION DURING FY 2020-21 AND FY 2021-22

8.2.1 The annual coal requirement of MSPGCL for generating at target Availability considering normative GSHR and as fired coal GCV of 3300 kcal/kg works out to 53 MMT. As against the same, the Annual Contracted Quantum (ACQ) under the FSAs and bridge linkages with coal companies was 44.94 MMT and 53.76 MMT for FY 2020-21 and FY 2021-22 respectively. The FSAs with Western Coalfields Limited (WCL), Mahanadi Coalfields Limited (MCL), South Eastern Coalfields Limited (SECL) and Singareni Collieries Company Limited (SCCL) provides for supply of coal grades of G8-10, G10-G13, G10-G12, and G10-G13 respectively. Out of the total contracted FSA/linkage quantum, 70% of the supply is from WCL. The actual coal realisation against the ACQ during FY 2020-21 and FY 2021-22 is as shown in the Table below:

Table 8.1: Actual coal realisation for FY 2020-21 and FY 2021-22 (MMT)

Coal supplier	FY 2020-21			FY 2021-22		
	ACQ	Actual realisation		ACQ	Actual realisation	
WCL	31.12	23.91	77%	37.85	27.94	74%
MCL	4.62	4.52	98%	4.62	3.07	66%
SECL	7.04	1.54	22%	6.29	4.72	75%
SCCL	2.17	3.05	141%	5.00	2.99	60%
Total	**44.94**	**33.02**	**73%**	**53.76**	**38.72**	**72%**

8.2.2 MSPGCL had undertaken the following measures for improvement in coal supply:

- **Usage of washed coal**: MSPGCL had envisaged beneficiation of coal for around 17 MMT of coal from WCL, MCL and SECL. Almost the entire quantum of coal from MCL and SECL was proposed for beneficiation so that the effective materialisation of coal improves significantly from such companies. MSPGCL had appointed and placed LoA on M/s Maharashtra State Mining Corporation (MSMC), as Nodal Agency for supply of washed coal. MSMC had floated the tender and the charges for washing was to include the following elements:

- Inward transportation of ROM Coal from Coal Mines to Washery (with RCM);
- Coal Beneficiation /Washing Charges;
- Outward washed coal road transportation from washery to railway siding (with RCM);
- Loading of washed coal into Rail Wagon Charges.

- MSPGCL had placed the following contracts for washed coal:

Table 8.2: Details of contracts placed for coal washing.

Contract Agreement	Station	Cost of washing and transportation charges (Rs./MT)		
		WCL	SECL	MCL
Contract agreement dated 10 December, 2020 for 17.58 MMT (80% quantity) WCL- 8 MMT SECL- 5.6 MMT MCL- 3.98 MT	Koradi	868.52	1353.90	1438.74
	Khaperkheda	993.74	1353.90	1438.74
	Chandrapur	586.31		
	Paras	1105.03		
	Nashik	1641.87		
	Bhusawal	1219.99		
	Parli	1489.52		
Contract agreements dated 21 June, 2021 (WCL- 2 MMT) dated 7 June, 2021 (SECL- 1.218 MT) dated 1 February, .2022 (MCL- 1.00 MMT)	Koradi	867.33	1353.23	1414.19
	Khaperkheda		1353.23	1414.19
	Chandrapur	585.13		
	Paras	1103.85		
	Bhusawal	1218.80		

- The materialisation of washed coal largely commenced from FY 2021-22 onwards and the total washed coal quantum of 7.55 MMT was consumed in FY 2021-22. The utilisation of washed coal has improved the realization of coal and the GCV of coal on "As received" basis is comparatively better than that of raw coal received at the station. In case of raw coal, the drop in GCV EQ Vs ARB has been in the rage of 600-900 kcal/kg, wherein case of washed coal, the overall GCV ARB is higher than the GCV EQ basis (which does not include the impact of surface moisture). The envisaged yield of washed coal in WCL, MCL, and SECL is around 80%, 72% and 85% respectively of raw coal. The improvement of GCV in case of washed coal is based on the input parameters of raw coal (with respect to ash and moisture). The corresponding values in washed coal are monitored at the unloading points in the stations and accordingly, the variations, if any, are settled with the contractors as per provisions of the agreement.

- **Usage of imported coal**: In order to mitigate potential shortfall in supply of domestic coal, MSPGCL had considered usage of 3 MMT of imported coal in some of it stations. The quantum was envisaged to be used in the months of Apr to June and Oct – March. Accordingly, in FY 2020-21, MSPGCL had published the tender for supply of 2.0 MMT non-coking steam coal of foreign origin to Koradi, Khaperkheda, Chandrapur, Bhusawal and Nashik. While the techno-commercial scrutiny of bids by working level committee and apex committee was complete, however, in the backdrop of import reduction policy of GoI and assurance from CIL and MoC for supply of domestic coal for substitution of imported coal, MSPGCL had to cancel the said tender.
- Considering the coal shortage scenario, MOP has issued advisory dated 7 December, 2021 to all domestic coal-based power plants to import coal to meet the requirement by blending the imported coal to the extent of 4%. Further, MoP issued revised advisory on 28 April, 2022 for importing coal for blending purpose to meet the requirement at 10% of the total requirement by 31 October, 2022 in lieu of the prevailing shortages in supply of domestic coal. In the said revised advisory, State-wise and generating company wise targets were fixed and it was urged to ensure delivery of coal for blending purposes before the onset of monsoon season as domestic coal supply gets affected during the rainy season. Accordingly, MoP computed the imported coal requirement of MSPGCL as 3.46 MMT. As per the revised advisory, the said imported coal was to be procured in a manner that 50% quantity is received by 30 June, 2022, 40% by 31 August, 2022 and 10% by 31 October, 2022. It was also specified that the procurement of imported coal must be done in a transparent manner to obtain competitive prices.
- Subsequently, vide notification dated 13 May, 2022, MoP had stated that due to shortage of domestic coal supplies, the State Government and State Commissions are to ensure that all generating companies need to take immediate action for import of coal for blending as per order of MoP so that resource adequacy is ensured and 24x7 supply to consumers is provided. Further, MoP vide its notification dated 18 May, 2022 has issued direction u/s 107 of the Electricity Act, 2003 regarding blending of imported coal with domestic coal to mitigate the domestic coal shortage. As per the notifications, the CERC was directed to immediately allow higher amount of blending of upto 30% with imported coal in compliance with decision of MoP, subject to technical feasibility, without beneficiaries' consultation for the period upto 31 March 2023, to maintain resource adequacy and 24x7 supply to consumers. In addition, MoP issued an additional direction to all generating companies for timely import of coal for blending purposes. The following directions were issued in the same:

  - As per the said direction, it was decided that if the orders for imported coal for blending is not placed by generating companies by 31 May, 2022 and is not arrived at power plants by 15 June, 2022, then the defaulter generating companies would have to import coal for purpose to the extent of 15% in the remaining period upto 31 October, 2022.
  - Also, the power plants who have not yet started blending of imported coal to ensure that they blend coal @15% upto October, 2022 and thereafter @10% from November 2022 to March 2023.
  - Also, from 1 June, 2022, the domestic coal will be allocated proportionately to all generating companies based on likely availability.
  - It was also cautioned in the said letter that if blending of imported coal is not started by 15 June, 2022, then the domestic coal allocation of the concerned defaulter will be further reduced by 5%.
  - Also, any additional domestic coal supply post June 2022 will be allocated for stock building to those generating companies which prove commendable level of blending of coal in the month of June 2022. Based on the same, the revised allocation of coal in July 2022 onwards will be conveyed.
  - As per the said notification, the total target for imported coal for FY 2022-23 for MSPGCL was 3.464 MMT of which 0.289 MMT was to be procured in June 2022.
- In continuation with earlier letters, MoP vide its letter dated 1 June, 2022 further stated that generating companies who either do not place indents with CIL by 3 June, 2022 or have not initiated tender process for purchase of imported coal, will be allocated only 70% of domestic coal quantum from 7 June, 2022 and allocation will be further reduced to 60% from 15 June, 2022. Domestic coal thus saved shall be allocated to those generating companies who have already commenced blending.
- MSPGCL submitted that based on the various directions of MoP for blending of imported coal and risk of being lower allocation of domestic coal due to non-adherences of the MoP direction, MSPGCL was mandated to buy the costly imported coal for blending purpose. The imported coal procurement has been finalized and orders had been placed on various bidders selected through competitive bidding for the total quantum of 2.20 MMT for the period from May-September, 2022.
- **Mine specific coal**: WCL offered mine specific coal to MSPGCL and also published notices in the year 2018 offering minimum annual quantum as 0.25 MMT from mine specific sources for desirous customers from 13 mines. MSPGCL requested WCL to furnish breakup of add-on price with detailed

modalities of implementation of add-on charges along with allocation of quantity and quality of coal from 13 mines mentioned in notices. In reply, WCL conveyed add-on charges reduced to Rs. 450/tonne and informed that the quantity and quality of coal to be supplied to MSPGCL can only be intimated after allocation is made to all interested consumers, who would apply for allocation from such sources. MSPGCL denied this offer as it adds to financial burden towards increased coal cost. Further in February, 2019, MSPGCL requested MoC to issue directives to CIL to reduce basic coal cost of WCL at par with its other subsidiaries viz., MCL & SECL.

- WCL unilaterally issued Coal Rate notice on dated 1 November, 2019 for 11 specified mines as mine specific source, and made applicable to MSPGCL w.e.f. 2 November, 2019. MSPGCL enquired about the details of the mine specific policy of CIL and also requested WCL to furnish detail program of supply showing increase of supply to MSPGCL from November, 2019 onwards. However, no specific reply was received from WCL. MSPGCL insisted and repeatedly requested WCL to furnish the aforesaid details while WCL continued pushing costly Cost-Plus coal and mine specific supplies instead of enhancing FSA coal. Therefore, in consideration to the above, MSPGCL denied any acceptance to take coal at mine specific prices and requested WCL for correction of invoice bills from 2 November, 2019. WCL reiterated the revised Policy wherein all the basics of mine specific policy have been relaxed favouring supplier company and mentioned the add-on charges as ‘New notified’ charges.
- In August 2020, MSPGCL resolved to take firm stand not to pay add-on rate of mine specific coal to WCL as it will further increase power generation costs in Maharashtra. MSPGCL further wrote letters to the competent authorities for correction of invoices to WCL in later few months. However, WCL did not consider the say of MSPGCL in this regard.
- On 8 December, 2020, in view of depleting coal stock of MSPGCL, a meeting was called to augment supplies to MSPGCL wherein WCL proposed to supply 21.80 MMT mine specific coal, 9.0 MMT notified coal and 9.20 MMT from cost plus sources. Accordingly, MSPGCL put up the proposal for approval for accepting coal from mine specific sources of WCL at add-on price of Rs. 450 per tonne in line with Meeting dated 8 December, 2020 and 8 March, 2021. Considering the requirement to improve the supply of coal, in June 2021, MSPGCL finally had to accept coal supply from mine specific sources of WCL at add-on price of Rs. 450/MT w.e.f. 1 January, 2021. It was further decided to consider the settlement of outstanding dues on account of coal supply of mine specific prices for period 2 November, 2019 to 31 December, 2020 with adjustment against MSPGCL’s claims viz. short delivery, Grade slippage, Surface Moisture, stone claims etc. and

to pay differential amount (if any) by MSPGCL.

- On 25 January, 2021, WCL declared 5 mines as mine specific sources and later on 24 November, 2021 added 3 more mines to mine specific sources list. Hence, WCL declared 19 mines as mine specific sources as on date for which add-on price of Rs. 450/MT will be applicable over notified coal price.
- Since the agreement of accepting the mine specific price, the commitment to augment coal supplies to MSPGCL has improved marginally. On the contrary, the materialization from cost plus sources are almost 100%. MSPGCL is constantly striving to pursue the matter with WCL to ensure that the desired supplies are made to the stations.

8.3 PROPOSED COAL UTILISATION FOR H2 OF FY 2022-23, FY 2023-24 AND FY 2024-25

8.3.1 MSPGCL has tied up coal quantum of 50.01 MMT for FY 2022-23 and beyond; inclusive of 11.01 MMT of bridge linkages from WCL and SCCL for Koradi Units 8-10, Chandrapur Units 8&9 and Parli Unit 8. The probable PLFs based on optimistic scenario of 100% coal realisation and pessimistic scenario of 75% coal realisation are as under:

Table 8.3: Probable PLFs based on coal realisation.

Station/Unit	Optimistic scenario	Pessimistic scenario
Bhusawal	80.85%	62.27%
Chandrapur	84.90%	65.07%
Khaperkheda	85.41%	63.34%
Koradi	85.41%	63.88%
Nashik	80.19%	62.58%
Paras Units 3&4	84.71%	63.74%
Parli Units 6&7	84.96%	66.95%
Khaperkheda Unit 5	85.23%	65.40%
Bhusawal Units 4&5	84.96%	65.67%
Koradi Units 8-10	84.97%	65.84%
Chandrapur Units 8&9	85.36%	67.97%
Parli Unit 8	85.27%	67.85%
Total Net Generation (MU)	**65379**	**50455**

8.3.2 In order to improve the supply required at normative levels, MSPGCL has been considering the following:

Additional supplies from WCL/cost considerations expressed by MSPGCL:

8.3.3 WCL proposed to supply additional cost-plus coal from Dhupatala Open Cast (OC) Mine as a part of FSA ACQ Linkage. MSPGCL had signed Coal Supply Agreement

(CSA) with WCL to accept this coal against FSA Linkage on basis of transfer from SECL to WCL permanently considering the lower landed cost of WCL coal as compared to the landed cost of SECL coal.

8.3.4 WCL proposed to supply additional cost-plus coal from Bhatadi expansion OC mine as a part of FSA ACQ Linkage. MSPGCL had signed CSA with WCL to accept this coal against old cost-plus linkage (Junad & Waghoda mines linkage).

8.3.5 WCL proposed to supply additional cost-plus coal from New Majri Expansion OC mine as a part of FSA ACQ Linkage. MSPGCL had signed CSA with WCL to accept this coal as over and above linkage over FSA ACQ. Otherwise, this adds to cost plus linkage burden of MSPGCL without addition of coal quantity (1.87 MMTPA additional coal will be supplied to Chandrapur). The said supply has been considered while making the projections for the ensuing years.

Additional supplies from SCCL:

8.3.6 MSPGCL has signed MoU for supply of coal to the quantum of 6 MMTPA (inclusive of bridge linkage quantum) for the period from 1 April, 2022 to 31 March, 2025 at a price higher than notified price by 20%.

Flexibility in imported coal procurement:

8.3.7 Currently, the imported coal tenders are being floated for supply of 2.4 MMT of coal. However, a flexibility has been inbuilt into the tenders to increase the supply by additional 1.2 MMT in case a situation warrants MSPGCL to exercise such options. At the same time, MSPGCL is also mindful of the significant increase in cost of imported coal considering the present geopolitical situation. The estimated landed cost of imported coal is almost 3 times than that was approved by the Commission in the MYT Order. The imported coal prices are projected at the same rate as prevalent in the months of July-September 2022.

Availability of coal from Gare Palma II:

8.3.8 The annual raw coal production schedule from Gare Palma II is 0.27 MMT, 2.27 MMT, 2.27 MMT, 7.66 MMT, 7.66 MMT, 23.21 MMT, 23.21 MMT starting from 1st year to 7th year. The commencement of production is envisaged as October 2023. The current status is as under:

- Mine Plan & Mine Closure Plan were submitted to MoC on 29 February, 2016 and was approved on 12 August, 2016.
- MoC, vide letter dtd. 20 February, 2018 issued Previous Approval for grant of Mining Lease to the Govt. of Chhattisgarh.
- MoEF&CC vide letter dtd. 11 July, 2022 granted the Environmental Clearance

(EC).

- MoEFCC vide letter dtd. 2 June, 2022 granted Forest Clearance Stage-I (FC-I) (Total Forest Area – 214.869 Ha). Currently FC-II approval process in progress.
- Previous Approval, EC & FC are essential for execution of Mining Lease Agreement (2583.487 Ha.). After execution of Mining Lease Agreement land acquisition can be started.

8.3.9 The key reasons for delay in timelines are as under:

- Due to revision of boundary co-ordinates MSPGCL was required to submit the revised application for Previous Approval, and Forest Clearance. Further, Gram sabhas (in 14 nos. of villages) were required to be conducted again.
- Public hearing required for EC was postponed twice due to local unrest and finally it was conducted on 27 July, 2019.
- Nationwide lockdown due to COVID-19 pandemic from March 2020 and again from March 2021.
- Forest diversion proposal required for FC-I was pending at Forest Dept. Govt. of Chhattisgarh for around seven months which resulted in delay of FC-I approval & EC and further in FC-II.

8.3.10 MSPGCL submitted that it is proactively pursuing the development activities of the mine and expects an expeditious grant of necessary clearances for expeditious development of the mine.

8.3.11 The expected annual washed coal production from Gare Palma II is 0.16 MMT, 1.31 MMT, 1.31 MMT, 4.42 MMT, 4.42 MMT, 13.40 MMT, 13.40 MMT starting from 1st year to 7th year. From the perspective of availability of coal, the same will not result in materialization difference as there will be a commensurate reduction in bridge linkages as and when the supply from Gare Palma II mine will commence. The price of coal from Gare Palma II is determined as per the formula in the Coal Mining Agreement.

8.3.12 As submitted in Case No. 231 of 2019, the Board of MSPGCL had approved utilization of coal from Gare Palma II in Koradi. However, in case required, coal from Gare Palma II can also be blended with existing linkages in other stations based on fitment of such energy charges in the merit order dispatch of the stations. Since the quantum of coal envisaged in the initial years is miniscule, MSPGCL will submit the details regarding actual production schedule and expected prices in the FAC submission.

Extension of bridge linkages:

8.3.13 As per Policy guidelines for grant of 'Bridge Linkage' to specified end –use plants which have been allocated coal mines/blocks, the GoI has provided a provision of allowing "Bridge Linkage". The said linkage acts like a short-term linkage to bridge the gap between requirement of coal of a specified end use plant and the start of production from the linked allotted coal mine/block.

8.3.14 WCL has already informed about the extension of bridge linkages. However, they have unanimously indicated a 40% price hike for bridge linkage coal. The same has been factored in the fuel prices submitted from H2 of FY 2022-23 onwards. MSPGCL through the Hon'ble Dy. Chief Minister, Maharashtra State is requesting Hon'ble Minister of Coal, Mines & Parliamentary Affairs to look into the matter of sudden 40% price hike in coal rate under bridge linkage coal supplies to MSPGCL to restrict additional burden on electricity consumers of Maharashtra.

8.3.15 Regarding, SCCL bridge linkages, the MoU for supply 6 MMT of coal is inclusive of supply under the bridge linkage. Accordingly, the fuel arrangement will continue seamlessly till the commencement of production of coal from Gare Palma II.

Procurement through e-Auction:

8.3.16 While this situation is not envisaged, however in a worst-case scenario, in case there is no extension of bridge linkages, MSPGCL may consider usage of MoU coal or higher imports to keep the plants available for its end consumers. The coal prices under e-auction route in the recent past are generally higher than the mine specific, MoU coal available with MSPGCL. Hence this option has not been considered.

Use of Biomass Pellets:

8.3.17 MSPGCL also has a mandate for usage of biomass pellets in the stations based on the directives from the GoI. Although, MSPGCL has invited interest from the parties for supply of such pellets, the materialisation, rates for the same will be shared as part of the FAC submissions subsequently. The tentative GCV and landed cost of biomass pellets is provided in the table below:

Table 8.4: GCV and landed price of biomass pellets submitted by MSPGCL

Station/Unit	Expected quantum (MMT)	GCV (kcal/kg)	Landed price (Rs./MT)
Bhusawal	0.08	3300	7500
Chandrapur	0.60	3300	8500
Khaperkheda	0.36	3300	8500
Koradi	0.08	3300	8500
Nashik	0.08	3300	7500
Paras Units 3&4	-	-	-
Parli Units 6&7	-	-	-
Khaperkheda Unit 5	0.19	3300	8500
Bhusawal Units 4&5	0.35	3300	7500
Koradi Units 8-10	0.74	3300	8500
Chandrapur Units 8&9	0.37	3300	8500
Parli Unit 8	0.10	3300	6500

8.3.18 MSPGCL requested the Commission to issue necessary directives regarding consideration of parameters for usage of biomass pellets for co-firing in coal based power plants.

Allocation of coal to various stations

8.3.19 Considering the constraints in availability of railway rakes, reduction in availability of WCL coal at notified prices from 18-19 MMT to 1-2 MMT, supply of mine specific coal to the tune to 13-14 MMT and larger realisation of cost-plus coal to the tune of 8 MMT, the following approach has been adopted for optimisation of the cost of generation:

- Cost plus coal is preferred for allocation to Chandrapur, Koradi and Khaperkheda where the distance of supply is very less (Freight charges=Rs. 200-500/MT).
- Cheaper coal as compared to mine specific coal is allocated in larger amounts to far off stations viz., Bhusawal, Paras, Parli and Nasik (Freight charges=Rs. 1000/MT).
- Usage of SECL linkage coal (100% washed) is restricted to Koradi units since it will be prudent to use improved quality coal in efficient supercritical units.
- Usage of MCL coal is considered only for Khaperkheda units being in the proximity of the mines and the overall efficiency of the units.
- Usage of SCCL is considered for Chandrapur Units 8&9 and Parli units considering the logistic problems of Railways.
- MSPGCL submitted that WCL is supplying coal to all the stations and therefore it is flexible to shift the coal from WCL to stations having least cost of generation. The stations viz., Chandrapur, Khaperkheda and Koradi are closer to WCL mines supplying coal to these stations. Accordingly, MSPGCL has considered allocation of cost plus coal to such stations.
- Imported coal has been considered in all the stations except Paras. Besides, MSPGCL is contemplating usage of imported coal in Parli.

Key constraints in proposed coal utilisation

8.3.20 MSPGCL submitted that coal is supplied from multiple collieries of the coal companies having varying grades of GCV. Typically, MSPGCL shares its requisition from such collieries on a monthly basis. However, the actual supply of coal is based on availability of coal in the colliery and commensurate availability of railway rakes. The supply is currently through various modes viz. rail, road and ropeways.

- Impact of coal available from any source on the variable cost of its stations.
- Merit order position of the plant.

- Efficiency of operations.
- Transportation cost of coal.
- Suitability of particular coal source based on boiler design.

Based on the above considerations, the allocation of available coal and its utilisation would be prioritised to its stations in the order of their merit order position prevailing during the period.

Strategy to meet coal shortfall in real time

8.3.21 With the higher proportion of renewable energy into the grid, the overall PLF of thermal generating stations has been declining. The overall annual PLFs of the stations is therefore in the rage of 50-60% only. Accordingly, under business as usual scenario, the current level of realisation of coal may also be able to suffice the schedule. However, in unforeseen circumstances as observed during H1 of FY 2022-23, there may be a requirement of additional coal in the interim. In order to meet such requirements, the balance requirement of coal will be met through procurement of additional coal under MoU basis besides requesting suppliers to supply additional imported coal (50% extension in MMT as a last resort of imported coal). For this reason, MSPGCL will keep flexibility in its procurement plan and will tie up any balance MoU coal based on the requirements of MSEDCL.

Additional coal supply for Bhusawal Unit 6

8.3.22 MSPGCL submitted that MoC granted coal linkage under Para B(i) of SHAKTI Policy from CIL for Bhusawal Unit 6 vide MoM dtd. 13 December, 2019. Accordingly, MSPGCL is pursuing the matter with CIL to expedite the allocation of the required coal quantum of 3.18 MMTPA. CIL was further requested to issue directives to concerned subsidiaries for further processing of signing of LoA/FSA. MSPGCL endeavours to apprise the Commission on the developments in this regard.

8.4 GAS SUPPLY FOR URAN

8.4.1 The annual gas requirement of Uran is 3.5 MMSCMD. Due to less production levels of APM gas, the present allocation of APM gas from M/s GAIL is considerably lower. The supply of natural gas supplied by M/s GAIL is fluctuating based on upstream gas availability from M/s ONGC. The average gas receipt for Uran for last few years is as below:

Table 8.5: Actual gas availability for Uran

Financial Year	Average gas receipt (MMSCMD)		
	APM gas	Non - APM gas	Total gas
2014-15	1.55	0.73	2.28

Financial Year	Average gas receipt (MMSCMD)		
	APM gas	Non - APM gas	Total gas
2015-16	1.53	0.44	1.97
2016-17	1.80	0.40	2.20
2017-18	2.15	0.0021	2.156
2018-19	1.75	0.0	1.75
2019-20	1.77	0.0	1.77
2020-21	1.34	0.0	1.34
2021-22	1.559	0.0	1.559

8.4.2 Unless there is any improvement in gas supplies, the shortfall of gas is expected to be 1 MMSCMD for 3 GT operation and about 2 MMSCMD for 4 GT operation. In case permitted, MSPGCL can explore possibility of running the machines by procurement of spot gas from open market in case the impact of high spot gas prices is allowed to be recovered in the subsequent months without any capping.

8.5 COMMISSION'S ANALYSIS ON REVISED FUEL UTILISATION PLAN FOR FY 2023-24 AND FY 2024-25

8.5.1 The Commission has taken note of the submissions made by MSPGCL for ensuring the availability of coal for its Stations to operate at normative availability of the generating station in cost effective manner. The Commission notes that MSPGCL has proposed various measures to improve the overall coal supply position during the ensuing years of the Control Period for achieving the normative availability of its various thermal stations.

8.5.2 MSPGCL has proposed the following coal mix by quantum for FY 2023-24 and FY 2024-25:

Table 8.6: Proposed coal mix by MSPGCL for FY 2023-24 and FY 2024-25

Station	Raw coal	Imported Coal	Washed Coal	Total
Bhusawal	10%	6%	85%	100%
Chandrapur	96%	4%	0%	100%
Khaperkheda	52%	6%	42%	100%
Koradi	0%	0%	100%	100%
Nashik	92%	8%	0%	100%
Paras Units 3&4	100%	0%	0%	100%
Parli Units 6&7	100%	0%	0%	100%
Khaperkheda Unit 5	49%	12%	39%	100%
Bhusawal Units 4&5	16%	8%	76%	100%
Koradi Units 8-10	0%	8%	92%	100%
Chandrapur Units 8&9	77%	11%	13%	100%

Station	Raw coal	Imported Coal	Washed Coal	Total
Parli Unit 8	96%	4%	0%	100%
Total	**59%***	**6%***	**34%***	**100%**

**Decimals not considered*

8.5.3 The Commission observes that MSPGCL has proposed the imported coal consumption of 6% on overall basis.

8.5.4 The Commission observes that MSPGCL has proposed the increase in washed coal quantum from 26% in FY 2022-23 to 34% in FY 2023-24 and FY 2024-25. In this regard, the Commission sought the impact of increase in washed coal quantum on station wise Availability, PLF, ECR and compliance to emission norms. In reply, MSPGCL submitted as under:

- The actual realisation of washed coal in FY 2021-22 was 7.55 MMT. The actual consumption of washed coal in FY 2022-23 upto January, 2023 is 8.95 MMT which is to the tune of 26%.
- The usage of washed coal has resulted in increase in Availability during fair season of FY 2022-23 as under:

Station/Unit	Actual Availability for H1 of FY 2022-23	Actual Availability for October 2022 to January 2023	Actual Availability for April 2022 to January 2023
Bhusawal	44.13%	64.57%	52.35%
Chandrapur	50.13%	53.51%	51.49%
Khaperkheda	57.72%	69.49%	62.45%
Koradi	58.45%	82.57%	68.15%
Khaperkheda Unit 5	82.88%	84.16%	83.40%
Bhusawal Units 4&5	65.55%	83.89%	72.92%
Koradi Units 8-10	56.97%	67.86%	61.35%

- With 26% washed coal in H1 of FY 2022-23, the actual Availability achieved is still lower than the target Availability. Therefore, MSPGCL has considered washed coal to the tune of 34% by weight.
- As per the actual data for FY 2021-22, the washing of coal increase GCV and results in lower coal price in terms of Rs./kcal in comparison to that of raw coal.
- Utilisation of washed coal in addition to raw coal would enable MSPGCL to achieve the design GCV with lower coal price in Rs./kcal terms. Without washed coal, the generation using raw coal will be at lower level. Therefore, increase in washed coal improves availability due to expected improvement in bunkered GCV of coal along with reduction in ECR.
- With raw coal, MSPGCL has been facing the issues of coal quality as it contains higher ash content. Washed coal would help in reduction of the generation of ash.

- Usage of beneficiated coal is necessitated in order to improve Availability in FY 2023-24 and FY 2024-25. MSPGCL has also envisaged the use of imported coal to the extent of 3 MMT in order to meet the deficit in heat content on account of raw coal quality issues.
- Use of washed coal would help in achieving environmental compliance due to reduced ash content. However, MSPGCL has not used washed coal in significant quantum except in Koradi Units 8-10 and to some extent in Koradi and Khaperkheda Unit 5. The actual benefit of washed coal would be evident when the washed coal consumption increases significantly.

8.5.5 As discussed in truing up chapters of this Order, it is observed that MSPGCL has been facing shortage of coal in the previous years on account of low coal materialisation from the linkage coal and the lower GCV received against the contracted grade of coal. The Commission has been considering the arrangement of sufficient coal to meet the normative availability as a business risk and not allowing any relaxation in availability norms for recovery of full fixed charges due to shortage of coal. Accordingly, the Commission, in principally approves the various measures proposed by MSPGCL including coal beneficiation and procurement of imported coal in order to meet the requirement of coal for maintaining normative availability.

8.5.6 The Commission directs MSPGCL to carry out the proper cost benefit analysis of coal beneficiation for each year from FY 2022-23 onwards and submit the same in the true-up of the respective years. MSPGCL should try to ensure that the effective landed price of washed coal at thermal station in terms of Rs./kcal is lower than the landed price of normal mined coal at thermal station in terms of Rs./kcal.

8.5.7 As regards imported coal, the Commission sought the following details:

- Confirmation whether the imported coal contracts have been placed on pricing linked to HBA or ICI indices.
- Measures taken for shifting of imported coal procurement from pricing based on HBA indices to ICI indices.
- Details of study undertaken, if any, regarding the savings in imported coal cost due to shifting of pricing based on HBA indices to ICI indices.

8.5.8 In reply, MSPGCL submitted that the imported coal contracts are placed on pricing methodology linked to modified 'composite index' as per CERC Order dated 23 December, 2013, which includes the Richard Bay AP14, Global New Castle, ICI 5000, Platt's, with weightage 25:25:25:25 for GCV of 6000:6000:5000:5000 with harmonisation to 5000 NAR. MSPGCL submitted that for calculation of FOB price, as per specific country of origin, the weekly daily index published for the Country of Origin of coal is considered. For Indonesian coal, ICI-3 index of 5000 GAR equivalent to 4600 NAR, and Platts FOB Kalimantam 5000 GAR equivalent to 4700 NAR are considered after harmonisation to 5000 NAR with weightage 50:50. MSPGCL submitted that it pays the lower of the FOB price calculated on the basis of CERC index and Country specific index. MSPGCL submitted that the CERC Order dated 23 December, 2013 has mentioned about use of ICI indices instead of HBA index.

8.5.9 As regards the imported coal, MSPGCL should procure imported coal judiciously at lower index price considering the impact of same on variable charge of various stations and their likely dispatch in Merit Order. Further, MSPGCL should make efforts and try to enter into the Contracts for imported coal without any take of pay condition. Any take of pay obligations due to non-procurement of imported coal will not be allowed as pass through.

8.5.10 Regarding Gare-Palma II coal block, the Commission in its Order in Case No. 231 of 2019 has issued certain directions. MSPGCL should comply with all those directions towards development of Gare-Palma II coal block. While principally approving sourcing of coal from Gare Palma coal block in Case No. 231 of 2019 the availability was shown as 85% for new units. The Commission expects that the same will be adhered to.

8.5.11 MSPGCL has sought necessary directives regarding consideration of parameters for usage of biomass pellets for co-firing in coal based power plants. The Commission directs MSPGCL to comply with the notification of GoI regarding the co-firing of biomass pellets in its coal based power plants.

9 REVISED TARIFF FOR FY 2023-24 AND FY 2024-25

9.1 BACKGROUND

9.1.1 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. 296 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, 2019. 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.

9.2 NORMS OF OPERATION

9.2.1 The norms of operation specified under the MYT Regulations, 2019 for thermal generating stations are as follows:

(i) Availability
(ii) PLF
(iii) AEC
(iv) GSHR
(v) SFOC
(vi) Transit and handling loss

9.3 AVAILABILITY

MSPGCL's submission

9.3.1 The projected Availability for FY 2023-24 and FY 2024-25 is as shown in the Table below:

Table 9.1: Projected Availability submitted by MSPGCL for FY 2023-24 and FY 2024-25

Station/unit	Normative	Projected by MPSGCL
Bhusawal	80.00%	80.85%
Chandrapur	80.00%	84.90%
Khaperkheda	85.00%	85.41%
Koradi	72.00%	85.41%
Nashik	80.00%	80.19%
Uran	85.00%	35.33%
Paras Units 3&4	85.00%	84.71%
Parli Units 6&7	85.00%	84.96%
Khaperkheda Unit 5	85.00%	85.23%
Bhusawal Units 4&5	85.00%	84.96%
Koradi Units 8-10	85.00%	84.97%
Chandrapur Units 8&9	85.00%	85.36%

Station/unit	Normative	Projected by MPSGCL
Parli Unit 8	85.00%	85.27%

9.3.2 As regards the normative Availability of Khaperkheda, MSPGCL submitted as under:

- Units 1-4 have completed the useful life of 33 years, 32 years, 22 years and 21 years respectively. The design GCV of Khaperkheda units range from 3500- 4400 kcal/kg. The actual bunkered GCV of domestic coal is in the range of 2900-2950 kcal/kg. While MSPGCL is trying to improve the GCV by usage of washed and imported coal however there are constraints of achieving homogenous blending and overall restrictions of blending more than 15% imported coal in Indian Boilers as per CEA. Furthermore, up gradation, retrofitting and other allied capital works, in order to modify Unit 1&2 for enhancement of efficiency as well as comfortable use of low Calorific value coal is not desirable as the residual life is low. Accordingly, it is practically difficult for MSPGCL to adhere to the normative limits of Availability.
- Considering the above constraints and loss on AFC, the normative Availability of Khaperkheda may be reduced to 80%.
- MSPGCL submitted that a technical agency viz. M/s CPRI may be appointed to suggest likely cost benefit analysis of incurring any capital expenditure to improve the performance and accordingly an appropriate relaxation may be considered by the Commission. In the interim, the relaxed performance parameters as requested by MSPGCL may be allowed subject to final true-up on the basis of the report of the technical agency.

Commission's Analysis and Ruling

9.3.3 MSPGCL sought the relaxation in normative Availability of Khaperkheda. The norms of operation have been specified in the MYT Regulations, 2019 after due consultation process and therefore, the Commission does not find it prudent to revise the normative Availability for Khaperkheda as sought by MSPGCL. The Commission does not accept the request of MSPGCL to appoint a technical agency. MSPGCL can take recourse to any measures, including appointment of a qualified technical agency on its own, required for improvement in the performance of the station, within the provisions of the applicable Regulations.

9.3.4 Regulation 46.1 and 46.2 specify the Target Availability for full recovery of AFC for MSPGCL's Stations.

9.3.5 The Commission in its MYT Order for the 3rd Control Period had projected the Availability of MSPGCL's Stations based on the actual Availability during the immediately preceding three years and accordingly, reduced the AFC on prorata basis for those stations whose projected Availability was lower than the target. MSPGCL in its Review Petition in Case No. 138 of 2016 sought review of the Commission's decision in this regard. The Commission vide its Order dated 3 July, 2017, rejected the Review Petition.

9.3.6 The Commission continued with the same approach of projecting availability based on past trends in its MTR Order dated 12 September, 2018 as well as in the MYT Order for the 4th Control Period dated 30 March, 2020.

9.3.7 As discussed in previous sections, the actual availability of some of MSPGCL's Stations was lower than the normative in FY 2019-20, FY 2020-21, and FY 2021-22. The Commission has been disallowing the AFC for not achieving the Target Availability, in accordance with the Tariff Regulations, in the truing-up for the respective years. As the Availability for subsequent years is projected at the normative level, the energy available from MSPGCL's Stations is also projected at normative levels, while MSPGCL has been unable to achieve the normative availability in most of the Stations. With this approach, MSPGCL initially recovers the entire AFC corresponding to normative Availability, and these are proportionately reduced considering the actual Availability during truing-up. It is therefore more appropriate to project the realistic Availability based on past trends.

9.3.8 In view of the above, the Availability for computation of reduction of AFC for FY 2023-24 and FY 2024-25 has been projected assuming an increase of 5% over the average of the actual Availability for FY 2020-21, FY 2021-22 and revised estimate of Availability for FY 2022-23, considering the improvement in efficiency of operations. For Stations whose average actual Availability for FY 2020-21, FY 2021-22 and revised estimate of FY 2022-23, plus 5%, is more than the normative Availability, the Commission has considered Availability at normative levels.

9.3.9 Accordingly, the following table shows the projected Availability claimed by MSPGCL and that approved by the Commission along with the Availability considered for AFC adjustment for FY 2023-24 and FY 2024-25:

Table 9.2: Availability for FY 2023-24 and FY 2024-25

Station/unit	Normative	Projected by MPSGCL	Considered for AFC adjustment
Bhusawal	80.00%	80.85%	79.75%
Chandrapur	80.00%	84.90%	67.94%
Khaperkheda	85.00%	85.41%	74.63%
Koradi	72.00%	85.41%	72.00%
Nashik	80.00%	80.19%	80.00%
Uran	85.00%	35.33%	38.11%
Paras Units 3&4	85.00%	84.71%	83.70%

Station/unit	Normative	Projected by MPSGCL	Considered for AFC adjustment
Parli Units 6&7	85.00%	84.96%	85.00%
Khaperkheda Unit 5	85.00%	85.23%	85.00%
Bhusawal Units 4&5	85.00%	84.96%	85.00%
Koradi Units 8-10	85.00%	84.97%	71.68%
Chandrapur Units 8&9	85.00%	85.36%	85.00%
Parli Unit 8	85.00%	85.27%	85.00%

9.4 PLF

MSPGCL's submission

9.4.1 The projected PLF submitted by MSPGCL for FY 2023-24 and FY 2024-25 is as shown in the Table below:

Table 9.3: Projected PLF submitted by MSPGCL for FY 2023-24 and FY 2024-25

Station/unit	Projected by MPSGCL
Bhusawal	80.85%
Chandrapur	84.90%
Khaperkheda	85.41%
Koradi	85.41%
Nashik	80.19%
Uran	35.33%
Paras Units 3&4	84.71%
Parli Units 6&7	84.96%
Khaperkheda Unit 5	85.23%
Bhusawal Units 4&5	84.96%
Koradi Units 8-10	84.97%
Chandrapur Units 8&9	85.36%
Parli Unit 8	85.27%

Commission's Analysis and Ruling

9.4.2 Regulation 46.3 of the 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. In case MSPGCL generation is projected at normative levels in Tariff Order and if actual generation is less than the normative levels, the same will affect the MSEDCL and MSEDCL will have to resort to costly power purchase thereby affecting the consumer's tariff. The Commission has considered the PLF projections for each year of the control period, same as Availability projections for the respective years.

Table 9.4: PLF for FY 2023-24 and FY 2024-25

Station/unit	Projected by MPSGCL	Approved by the Commission
Bhusawal	80.85%	79.75%
Chandrapur	84.90%	67.94%
Khaperkheda	85.41%	74.63%
Koradi	85.41%	72.00%
Nashik	80.19%	80.00%
Uran	35.33%	38.11%
Paras Units 3&4	84.71%	83.70%
Parli Units 6&7	84.96%	85.00%
Khaperkheda Unit 5	85.23%	85.00%
Bhusawal Units 4&5	84.96%	85.00%
Koradi Units 8-10	84.97%	71.68%
Chandrapur Units 8&9	85.36%	85.00%
Parli Unit 8	85.27%	85.00%

9.5 AEC

MSPGCL's submission

9.5.1 The AEC claimed for FY 2023-24 and FY 2024-25 is shown in the Table below:

Table 9.5: AEC claimed by MSPGCL for FY 2023-24 and FY 2024-25

Station/unit	Normative	Claimed
Bhusawal	10.96%	10.96%
Chandrapur	7.80%	7.80%
Khaperkheda	9.70%	9.70%
Koradi	9.00%	9.00%
Nashik	10.75%	10.75%
Uran	3.10%	3.10%
Paras Units 3&4	9.30%	9.30%
Parli Units 6&7	9.30%	9.30%
Khaperkheda Unit 5	6.00%	6.00%
Bhusawal Units 4&5	6.00%	6.00%
Koradi Units 8-10	6.00%	6.00%
Chandrapur Units 8&9	6.00%	6.00%
Parli Unit 8	8.50%	8.50%

9.5.2 As regards the AEC of Khaperkheda, MSPGCL submitted as under:

- The deteriorated coal quality requires all Units to be run with 5 mill operation leading to increased coal demand and hence increased Coal Handling Plant (CHP) loading. The increased ash content (>41 %), also requires increased running hours of Ash Handling Plant (AHP). Increase in the flue gas density due to increased ash content leads to increased loading on the Induced Draft (ID) Fan. The increased loading of CHP, milling plant, AHP and ID fans increases AEC of the plant which is evident from the actual AEC of the previous years. MSPGCL requested the Commission to revise AEC for Khaperkheda to 10.8%.

- MSPGCL submitted that a technical agency viz. M/s CPRI may be appointed to suggest likely cost benefit analysis of incurring any capital expenditure to improve the performance and accordingly an appropriate relaxation may be considered by the Commission. In the interim, the relaxed performance parameters as requested by MSPGCL may be allowed subject to final true-up on the basis of the report of the technical agency.

Commission's Analysis and Ruling

9.5.3 MSPGCL sought the relaxation in normative AEC of Khaperkheda. The norms of operation have been specified in the MYT Regulations, 2019 after due consultation process and therefore, the Commission does not find it prudent to revise the normative AEC for Khaperkheda as sought by MSPGCL. The Commission does not accept the request of MSPGCL to appoint a technical agency. MSPGCL can take recourse to any measures, including appointment of a qualified technical agency on its own, required for improvement in the performance of the station, within the provisions of the applicable Regulations.

9.5.4 MSPGCL has claimed the normative AEC for FY 2023-24 and FY 2024-25. Accordingly, the Commission has approved the normative AEC in accordance with the provisions of MYT Regulations, 2019 as shown in the Table below:

Table 9.6: AEC for FY 2023-24 and FY 2024-25

Station/unit	Normative	Claimed	Approved
Bhusawal	10.96%	10.96%	10.96%
Chandrapur	7.80%	7.80%	7.80%
Khaperkheda	9.70%	9.70%	9.70%
Koradi	10.81%	9.00%	10.81%
Nashik	10.75%	10.75%	10.75%
Uran	3.10%	3.10%	3.10%
Paras Units 3&4	9.30%	9.30%	9.30%
Parli Units 6&7	9.30%	9.30%	9.30%
Khaperkheda Unit 5	6.00%	6.00%	6.00%
Bhusawal Units 4&5	6.00%	6.00%	6.00%
Koradi Units 8-10	6.00%	6.00%	6.00%
Chandrapur Units 8&9	6.00%	6.00%	6.00%

Station/unit	Normative	Claimed	Approved
Parli Unit 8	8.50%	8.50%	8.50%

9.6 NET GENERATION

Commission's Analysis and Ruling

9.6.1 The Commission has considered the gross generation for FY 2023-24 and FY 2024-25 considering the approved PLFs. The net generation has been approved considering the approved gross generation and the approved AEC.

Table 9.7: Net generation for FY 2023-24 and FY 2024-25

Station/Unit	FY 2023-24			FY 2024-25		
	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved
Bhusawal	1149.03	1324.26	1309.91	1149.03	1324.26	1306.34
Chandrapur	10473.40	13164.95	10564.48	10473.40	13164.95	10535.62
Khaperkheda	4467.19	5675.03	4972.63	4467.19	5675.03	4959.04
Koradi	1168.80	1429.77	1184.57	1168.80	1429.77	1181.33
Nashik	3940.42	3949.73	3951.22	3940.42	3949.73	3940.42
Uran	2898.42	1512.41	2179.71	2898.42	1512.41	2173.76
Paras Units 3&4	3173.79	3365.17	3334.26	3173.79	3365.17	3325.15
Parli Units 6&7	3128.32	3375.04	3386.01	3128.32	3375.04	3376.76
Khaperkheda Unit 5	3352.35	3509.01	3509.21	3352.35	3509.01	3499.62
Bhusawal Units 4&5	6999.24	6995.74	7018.42	6999.24	6995.74	6999.24
Koradi Units 8-10	9785.17	13853.24	11719.50	9785.17	13853.24	11687.48
Chandrapur Units 8&9	6844.89	7028.80	7018.42	6844.89	7028.80	6999.24
Parli Unit 8	1477.12	1708.70	1707.94	1477.12	1708.70	1703.27
Total	**58858.15**	**66891.85**	**61856.28**	**58858.15**	**66891.85**	**61687.27**

9.7 GSHR

MSPGCL's submission

9.7.1 The GSHR claimed for FY 2023-24 and FY 2024-25 is shown in the Table below:

Table 9.8: GSHR claimed by MSPGCL for FY 2023-24 and FY 2024-25 (kcal/kWh)

Station/unit	Normative	Projected for FY 2023-24	Projected for FY 2024-25
Bhusawal	2787.00	2787.14	2787.14
Chandrapur	2688.00	2688.56	2688.56
Khaperkheda	2630.00	2630.06	2630.06
Koradi	2350.00	2354.04	2354.04
Nashik	2754.00	2754.02	2754.02

Station/unit	Normative	Projected for FY 2023-24	Projected for FY 2024-25
Uran	2035.00	2348.48	2348.48
Paras Units 3&4	2430.00	2429.98	2429.98
Parli Units 6&7	2430.00	2430.00	2430.00
Khaperkheda Unit 5	2375.00	2375.01	2375.01
Bhusawal Units 4&5	2375.00	2375.00	2375.00
Koradi Units 8-10	2230.00	2230.00	2230.00
Chandrapur Units 8&9	2375.00	2375.02	2375.02
Parli Unit 8	2430.00	2430.02	2430.02

9.7.2 **Koradi Unit 6**: The guaranteed GSHR for Unit 6 is 2350 kcal/kWh which has been approved by the Commission. MSPGCL submitted that for the new generating stations, an allowance of 4.5% from the design SHR is allowed in order to factor local operating conditions and deviations in overall quality of coal and associated parameters. Hence, it is requested to revise the normative SHR upto (2350*1.045) 2456 kcal/kWh.

Commission's Analysis and Ruling

9.7.3 The Commission, in the Review Order dated 8 March, 2022 approved the normative GSHR of 2350 kcal/kWh for Koradi Unit 6, same as proposed by MSPGCL. Whereas, in the present Petition, MSPGCL has claimed the GSHR of 2456 kcal/kWh. In reply to clarification sought in this regard, MSPGCL submitted that it was inadvertently stated in the Petition, and it has considered the normative GSHR as approved in the Review Order, from FY 2022-23 onwards.

9.7.4 Regulations 46.4, 46.5 and 46.7 of the MYT Regulations, 2019 specify the normative GSHR for existing MSPGCL stations. The Commission has approved the GSHR for FY 2023-24 and FY 2024-25 in accordance with the MYT Regulations, 2019.

Table 9.9: GSHR for FY 2023-24 and FY 2024-25 (kcal/kWh)

Station/unit	Normative	Projected for FY 2023-24	Projected for FY 2024-25	Approved for FY 2023-24 and FY 2024-25
Bhusawal	2787.00	2787.14	2787.14	2787.00
Chandrapur	2688.00	2688.56	2688.56	2688.00
Khaperkheda	2630.00	2630.06	2630.06	2630.00
Koradi	2350.00	2354.04	2354.04	2350.00
Nashik	2754.00	2754.02	2754.02	2754.00
Uran	2035.00	2348.48	2348.48	2035.00
Paras Units 3&4	2430.00	2429.98	2429.98	2430.00
Parli Units 6&7	2430.00	2430.00	2430.00	2430.00

Station/unit	Normative	Projected for FY 2023-24	Projected for FY 2024-25	Approved for FY 2023-24 and FY 2024-25
Khaperkheda Unit 5	2375.00	2375.01	2375.01	2375.00
Bhusawal Units 4&5	2375.00	2375.00	2375.00	2375.00
Koradi Units 8-10	2230.00	2230.00	2230.00	2230.00
Chandrapur Units 8&9	2375.00	2375.02	2375.02	2375.00
Parli Unit 8	2430.00	2430.02	2430.02	2430.00

9.8 SFOC

MSPGCL's Submission

9.8.1 The SFOC claimed for FY 2023-24 and FY 2024-25 is shown in the Table below:

Table 9.10: SFOC claimed by MSPGCL for FY 2023-24 and FY 2024-25 (ml/kWh)

Station/unit	Normative	Claimed
Bhusawal	1.40	1.40
Chandrapur	1.00	1.00
Khaperkheda	1.20	1.20
Koradi	2.81	2.81
Nashik	1.00	1.00
Uran	-	-
Paras Units 3&4	0.50	0.50
Parli Units 6&7	0.50	0.50
Khaperkheda Unit 5	0.50	0.50
Bhusawal Units 4&5	0.50	0.50
Koradi Units 8-10	0.50	0.50
Chandrapur Units 8&9	0.50	0.50
Parli Unit 8	0.50	0.50

Commission's Analysis and Ruling

9.8.2 Regulations 46.11 and 46.12 of the MYT Regulations, 2019 specify the normative SFOC for MSPGCL's stations. The Commission has approved SFOC as per the norms specified in the MYT Regulations, 2019.

Table 9.11: SFOC for FY 2023-24 and FY 2024-25 (ml/kWh)

Station/unit	Normative	Claimed	Approved
Bhusawal	1.40	1.40	1.40
Chandrapur	1.00	1.00	1.00
Khaperkheda	1.20	1.20	1.20
Koradi	2.81	2.81	2.81

Station/unit	Normative	Claimed	Approved
Nashik	1.00	1.00	1.00
Uran	-	-	-
Paras Units 3&4	0.50	0.50	0.50
Parli Units 6&7	0.50	0.50	0.50
Khaperkheda Unit 5	0.50	0.50	0.50
Bhusawal Units 4&5	0.50	0.50	0.50
Koradi Units 8-10	0.50	0.50	0.50
Chandrapur Units 8&9	0.50	0.50	0.50
Parli Unit 8	0.50	0.50	0.50

9.9 CONSIDERATION OF MOISTURE LOSS FOR GCV

MSPGCL's Submission

9.9.1 As regards the GCV of coal, the Commission, in the MYT Order ruled as under:

"7.11.14 The Commission is of the view that if entire GCV loss is allowed, then there will be no incentive for MSPGCL to control the GCV loss. Hence, the Commission allows the relaxation of 225 kCal/kWh in loss of GCV in addition to 300 kCal/kg as per MERC MYT Regulations, 2019, for FY 2020-21. Further, the Commission feels that MSGPCL should gradually try to reduce the GCV loss and accordingly approves the relaxation for subsequent years with some improvement in GCV as follows:

- ***FY 2021-22**: Relaxation of 200 kcal/kg in loss of GCV in addition to 300 kCal/kg as per MYT Regulations, 2019.*
- ***FY 2022-23**: Relaxation of 175 kcal/kg in loss of GCV in addition to 300 kCal/kg as per MYT Regulations, 2019.*
- ***FY 2023-24**: Relaxation of 150 kcal/kg in loss of GCV in addition to 300 kCal/kg as per MYT Regulations, 2019.*
- ***FY 2024-25**: Relaxation of 125 kcal/kg in loss of GCV in addition to 300 kCal/kg as per MYT Regulations, 2019.*

7.11.5 The above relaxation would be applicable to only raw coal including the case IV generators (if any) which have lower GCV on account of Grade Slippage between Loading and Unloading end, and moisture effect. In case of washed due to removal of ash content and impurities, GCV of coal improves which nullifies the effect of grade slippage seen in raw coal. Expenses on coal washeries is pass through in fuel costs. Hence, effect of grade slippage between loading and unloading load is already taken care. The effect of moisture is around 300 kCal in GCV which is well within permissible range of MYT Regulations. Hence, no relaxation is required to be given for washed coal."

9.9.2 Subsequently, the Commission in the Review Order dated 1 March, 2021 ruled as under:

"28.40 In the instant Case, MSPGCL has raised the issue of GCV as a part of review Petition. The Commission is of the view that the submission of MSPGCL on the issue of GCV satisfies the requirement of filing the application as per the condition of Regulations 105 of the MYT Regulations, 2019. Further, the Commission has already heard MSPGCL and MSEDCL which are the parties likely to be affected by grant of the relaxation. Therefore, even if the issue is not qualified on the ground of the review, to avoid one more petition (i.e. a separate petition requesting consideration under Regulation 105 of the MYT Regulations), the Commission is inclined to accept the factual submission of MSPGCL and treating these submissions as an application for a relaxation of the norms under power to relax under Regulations 105 of the MYT Regulations, 2019 and allowing the additional grade slippage of 125 kCal/kg over and above the approved norms in the MYT Order for the period FY 2020-21 to FY 2022-23. Accordingly, the relaxed GCV loss permissible for these 3 years shall be as follows:

- *FY 2020-21: Relaxation of 350 kcal/kg in loss of GCV in addition to 300 kcal/kg as per MYT Regulations, 2019.*
- *FY 2021-22: Relaxation of 325 kcal/kg in loss of GCV in addition to 300 kcal/kg as per MYT Regulations, 2019.*
- *FY 2022-23: Relaxation of 300 kcal/kg in loss of GCV in addition to 300 kcal/kg as per MYT Regulations, 2019.*

28.41 The Commission will decide the relaxation for last two years of the Control Period i.e., FY 2023-24 and FY 2024-25 based on the submission of actual data during the MTR Petition. However, the Commission also directs MSPGCL to take all the necessary and adequate steps to minimize the grade slippage and submit the efforts taken by MSPGCL during the MTR Petition for considering the relaxed norms approved in this Order in its merit."

9.9.3 MSPGCL submitted that the actual deviation in GCV has been around 800 kcal/kg wherein for some of the stations, the deviation has been to the tune of 900-1000 kcal/kg.

Table 9.12: Variation in GCV as submitted by MSPGCL (kcal/kg)

Station	FY 2020-21				FY 2021-22				FY 2022-23 (H1)			
	As Billed Loading	ARB unloading	Actual GCV loss	Ceiling limit	As Billed Loading	ARB unloading	Actual GCV loss	Ceiling limit	As Billed Loading	ARB unloading	Actual GCV loss	Ceiling limit
Bhusawal	4169	3352	817	650	3921	3383	**538**	625	4080	3216	864	600
Chandrapur	4012	3194	818	650	4027	3177	850	625	4032	3235	797	600
Khaperkheda	3717	2959	758	650	3864	3138	726	625	3865	3135	730	600
Koradi	3982	2962	1020	650	3799	3084	715	625	3762	2767	995	600
Nashik	4156	3364	792	650	4075	3113	962	625	4002	3107	895	600
Paras Units 3&4	3940	3313	**627**	650	4062	3142	920	625	4242	3342	900	600
Parli Units 6&7	3926	3203	723	650	3912	3383	**529**	625	4094	3497	**597**	600

Station	FY 2020-21				FY 2021-22				FY 2022-23 (H1)			
	As Billed Loading	**ARB unloading**	**Actual GCV loss**	**Ceiling limit**	**As Billed Loading**	**ARB unloading**	**Actual GCV loss**	**Ceiling limit**	**As Billed Loading**	**ARB unloading**	**Actual GCV loss**	**Ceiling limit**
Khaperkheda Unit 5	3724	2864	860	650	3844	3124	720	625	3827	3092	735	600
Bhusawal Units 4&5	3898	3352	**546**	650	4102	3459	643	625	4102	3242	860	600
Koradi Units 8-10	3924	3030	894	650	3947	3144	803	625	3839	2876	963	600
Chandrapur Units 8&9	4126	3136	990	650	4124	3255	869	625	3983	3232	751	600
Parli Unit 8	3926	3203	723	650	3892	3377	**515**	625	4094	3497	**597**	600
Wtd. Avg.			**807**	**650**			**777**	**625**			**791**	**600**

9.9.4 MSPGCL submitted that it has undertaken the following initiatives to reduce the GCV variations:

- MSPGCL has signed tripartite agreement with M/s CIMFR and Coal companies for the work of coal analysis at loading points. Similarly, bilateral agreement has been signed amongst MSPGCL and M/s CIMFR for the work of sampling and analysis at unloading end.
- Having observed wide variations in GCV between loading and unloading end, MSPGCL has corresponded on several occasions with M/s CIMFR and CIL to check such variations. The matter was discussed with CIMFR officials of Nagpur unit in various meetings.
- MSPGCL has been raising the issue of wide difference in loading and unloading end analysis results at all forums. For instance, the matter was raised in the 10th Apex Committee meeting and subsequently in all such meetings thereafter. As part of the discussions, MSPGCL raised the issue of 10-days joint sampling exercise which was to be conducted at Umrer to find out the root cause of the difference in analysis results. MSPGCL also requested suitable dates to be finalised for the exercise to be conducted at the earliest. The schedule was to be decided by CIMFR in consultation with MSPGCL for WCL.
- Besides the above, MSPGCL has been corresponding with CIMFR for deployment of Augur sampler at loading end as wide variation in GCV loading and unloading end continue to happen. As per the 13th Apex Committee meeting the said responsibility of identification of feasible sites for installation of Augur sampler needs to be undertaken by CIMFR. MSPGCL has been consistently demanding the action plan for CIMFR to curtail this menace.
- One of the reasons for such high variations was also on account of the fact that in certain months, the GCV As Billed was even higher than the declared grade of mine which is declared by Coal Controller after detailed analysis by specified procedures. MSPGCL has observed that the most of the analysed grades of coal

dispatched are higher than declared grade by as high as one to three grades. CIMFR was asked to look into the matter and do the needful for rectification.

- While the said sampling was to be undertaken, MSPGCL has been consistently following up with CIL for undertaking such joint exercise.

9.9.5 MSPGCL is not leaving any stone unturned in order to curb the variations between loading and unloading end GCV. Till the time unloading of coal has happened, the coal has not even been handled by MSPGCL. The huge difference in loading and unloading end GCV even on Equilibrated basis is therefore getting burdened on MSPGCL for no fault at its end. While there would not be any deficiency on part of MSPGCL to pursue such measures which can help reduce this variation, however, loading this entire burden of variations above 600 kcal/kg would mean a tremendous financial impact on the finances of the company.

9.9.6 MSPGCL requested the Commission to allow the entire variation in GCV between loading and unloading points as pass through. However, for the purpose of calculations, the GCV variation of 600 kcal/kg has been considered as a cap for working out the energy charges.

Commission's Analysis and Ruling

9.9.7 The Commission has perused the submissions of MSPGCL along with the copies of correspondences submitted. The issue of GCV variation between loading and unloading ends had been discussed in detail in the Review Order dated 1 March, 2021. The Commission, in its Order dated 10 December, 2020 in MA No. 54 of 2020 ruled that the GCV variation of 300 kcal/kg between loading end and unloading end shall be applicable for the generator under Section 63 in that case. The said Order of the Commission has been challenged before Hon'ble the ATE and the matter is sub-judice. The Commission has maintained fair balance between the generators under Section 62 as well as Section 63. In light of the same, the Commission does not find it prudent to allow the entire variation in GCV between loading end and unloading end as sought by MSPGCL.

9.9.8 For most of the stations, the GCV variation is beyond the ceiling limit. However, for some of the stations, MSPGCL had been able to curtail the GCV variation within the ceiling limit. It would not be prudent to allow the entire GCV variation for such stations.

9.9.9 As discussed in FUP, MSPGCL had envisaged beneficiation of coal for around 17 MMT of coal from WCL, MCL and SECL. However, due to various reasons submitted by MSPGCL, the materialisation of washed coal largely commenced from FY 2021-22 onwards and the total washed coal quantum of 7.55 MMT was consumed in FY 2021-22. The utilisation of washed coal has improved the realization of coal and the GCV of coal on "As received" basis is comparatively better than that of raw coal received at the station. As MSPGCL has started taking steps to improve the utilisation of washed coal, the Commission is of the view that with the increased utilisation of washed coal, the weighted average GCV of coal will improve over a period of time.

9.9.10 Taking cognizance of the actual GCV variation, the Commission is of the view that the continuation of enhanced GCV variation between loading end and unloading end deserves merit.:

9.9.11 The Commission in the Review Order dated 1 March, 2021 has allowed the relaxation of 350 kcal/kg for FY 2020-21, 325 kcal/kg for FY 2021-22 and 300 kcal/kg for FY 2022-23 in addition to 300 kcal/kg as per MYT Regulations, 2019. Accordingly, the relaxed GCV loss permissible for FY 2022-23 works out to be 600 kcal/kg. The Commission in its MYT Order as well as Review Order allowed the relaxation in GCV with improvement of 25 kcal/kg every year. By applying the same principle, the relaxation in GCV loss for FY 2023-24 and FY 2024-25 works out to be 275 kcal/kg and 250 kcal/kg respectively. Thus, the total GCV loss to be considered for FY 2023-24 and FY 2024-25 works out to be 575 kcal/kg and 550 kcal/kg for FY 2023-24 and FY 2024-25 respectively.

9.9.12 MSPGCL has requested the Commission to allow the entire GCV loss. The Commission is of the view that if entire GCV loss is allowed, then there will be no incentive to MSPGCL to make efforts to reduce the GCV loss and take appropriate efforts to improve the quality of coal. As discussed above, MSPGCL has started taking steps to improve the utilisation of washed coal and overall generation. Therefore, in exercise of the Regulation 105 of the MYT Regulations, 2019, the Commission approves the relaxed GCV loss permissible for FY 2023-24 and FY 2024-25. For the purpose of relaxation, the Commission has categorised the stations in 2 categories as follows:

Stations where GCV loss between loading and unloading end is less than 600 kcal/kg in FY 2021-22 viz., Bhusawal, Paras Units 3&4 and Parli Unit 8.

For these stations, the Commission has allowed the GCV relaxation in line with the approach adopted in Review Order i.e., 25 kcal/kg improvement with respect to relaxation provided in previous year. Accordingly the GCV relaxation for these stations shall be as follows.

- **FY 2023-24**: Relaxation of 275 kcal/kg in loss of GCV in addition to 300 kcal/kg as per the MYT Regulations, 2019.
- **FY 2024-25**: Relaxation of 250 kcal/kg in loss of GCV in addition to 300 kcal/kg as per the MYT Regulations, 2019.

Remaining Stations where GCV loss between loading and unloading end is higher than 600 kcal/kg in FY 2021-22

For these stations, the Commission has allowed the additional GCV relaxation of 50kcal/kg for FY 2023-24 and 25 kcal/kg for FY 2024-25 in addition to the relaxation as per approach adopted Review Order Accordingly the GCV relaxation for these stations shall be as follows:

- **FY 2023-24**: Relaxation of 325 kcal/kg in loss of GCV in addition to 300 kcal/kg as per the MYT Regulations, 2019.
- **FY 2024-25**: Relaxation of 275 kcal/kg in loss of GCV in addition to 300 kcal/kg as per the MYT Regulations, 2019.

9.9.13 The above relaxation would be applicable to only raw coal including the case IV generators (if any) which have lower GCV on account of Grade Slippage between Loading and Unloading end, and moisture effect. In case of washed coal due to removal of ash content and impurities, GCV of coal improves which nullifies the effect of grade slippage seen in raw coal. Expenses on coal washeries is pass through in fuel costs. Hence, effect of grade slippage between loading and unloading load is already taken care. The effect of moisture is around 300 kcal/kg in GCV which is well within permissible range of MYT Regulations. Hence, no relaxation is required to be given for washed coal. Further, in case the actual GCV loss is lower than the GCV worked out as per the relaxation provided above, the actual GCV loss shall be considered for computation of Energy Charges.

9.9.14 However, the Commission also directs MSPGCL to take all the necessary and adequate steps to minimize the grade slippage and submit the efforts taken by MSPGCL in the true-up of respective years for considering the relaxed norms approved in this Order on its merit.

9.10 GCV OF FUELS

MSPGCL's Submission

9.10.1 MSPGCL submitted that it has considered the actual GCV of fuels for H1 of FY 2022-23 with certain improvements for projecting the Energy Charges for FY 2023-24 and FY 2024-25.

Table 9.13: GCV of fuels considered by MSPGCL for FY 2023-24 and FY 2024-25

Station/Unit	FY 2023-24			FY 2024-25		
	As fired Coal (kcal/kg)	Secondary Fuel Oil (kcal/L)	Gas (kcal/SCM)	As fired Coal (kcal/kg)	Secondary Fuel Oil (kcal/L)	Gas (kcal/SCM)
Bhusawal	3983.47	9760.76	-	3983.47	9760.76	-
Chandrapur	3427.49	9686.50	-	3427.49	9686.50	-
Khaperkheda	3601.11	9724.70	-	3601.11	9724.70	-
Koradi	3846.62	9168.12	-	3846.62	9168.12	-
Nashik	3421.25	9583.93	-	3421.25	9583.93	-

Station/Unit	FY 2023-24			FY 2024-25		
	As fired Coal (kcal/kg)	Secondary Fuel Oil (kcal/L)	Gas (kcal/SCM)	As fired Coal (kcal/kg)	Secondary Fuel Oil (kcal/L)	Gas (kcal/SCM)
Uran	-	-	8345.00	-	-	8345.00
Paras Units 3&4	3657.73	9575.23	-	3657.73	9575.23	-
Parli Units 6&7	3439.28	9462.76	-	3439.28	9462.76	-
Khaperkheda Unit 5	3662.15	9724.70	-	3662.15	9724.70	-
Bhusawal Units 4&5	3956.28	9760.76	-	3956.28	9760.76	-
Koradi Units 8-10	3929.43	9168.12	-	3929.43	9168.12	-
Chandrapur Units 8&9	3635.83	9686.50	-	3635.83	9686.50	-
Parli Unit 8	3489.25	9462.76	-	3489.25	9462.76	-

Commission's Analysis and Ruling

9.10.2 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:"

9.10.3 In reply to a query, MSPGCL submitted the actual fuel details for the period from November, 2022-January, 2023. The provisions of the Regulations provide for consideration of the fuel prices for the three preceding months. The actual fuel parameters are available upto the latest month of January, 2023. Therefore, the Commission deems it prudent to consider the actual fuel parameters for the period from November, 2022 to January, 2023 for the purpose of tariff determination for FY 2023-24 and FY 2024-25 in this Order. For domestic coal, the Commission has considered the as billed GCV minus the GCV loss between loading end and unloading end as approved in this Order for FY 2023-24 and FY 2024-25 and thereafter GCV loss of 120 kcal/kg for GCV loss between as received and as fired as per the MYT Regulations, 2019. The Commission has considered the station wise coal mix proposed by MSPGCL for FY 2023-24 and FY 2024-25 to arrive at the weighted average as received GCV.

9.10.4 Accordingly, the Commission has considered the GCV of fuels as shown in the Table below:

Table 9.14: GCV of fuels considered by Commission for FY 2023-24 and FY 2024-25

Station/Unit	FY 2023-24			FY 2024-25		
	Coal (kcal/kg)	Secondary Fuel Oil (kcal/L)	Gas (kcal/SCM)	Coal (kcal/kg)	Secondary Fuel Oil (kcal/L)	Gas (kcal/SCM)
Bhusawal	4029.35	9836.32	-	4031.76	9836.32	-
Chandrapur	3277.81	9592.42	-	3325.57	9592.42	-
Khaperkheda	3397.40	9490.99	-	3423.44	9490.99	-
Koradi	3730.89	9400.92	-	3730.89	9400.92	-
Nashik	3554.22	9864.55	-	3599.99	9864.55	-
Uran	-	-	8815.17	-	-	8815.17
Paras Units 3&4	3370.12	9688.48	-	3395.12	9688.48	-
Parli Units 6&7	3128.01	9327.38	-	3178.01	9327.38	-
Khaperkheda Unit 5	3478.60	9488.93	-	3503.02	9488.93	-
Bhusawal Units 4&5	3888.69	9836.32	-	3896.65	9836.32	-
Koradi Units 8-10	4041.67	9557.39	-	4041.67	9557.39	-
Chandrapur Units 8&9	3564.30	9557.39	-	3602.60	9557.39	-
Parli Unit 8	3044.18	9327.38	-	3068.22	9327.38	-

9.11 LANDED PRICE OF FUELS

MSPGCL's Submission

9.11.1 MSPGCL submitted that Hon'ble the ATE in a catena of judgments had ruled that procurement of coal is the responsibility of the generating company. Abiding by such overarching principles, MSPGCL would endeavour to purchase the coal based on the demand of MSEDCL. However, certain restrictions in the MYT Regulations prohibit the cash flows required to make purchasing decisions. Regulation 50.7 of the MYT Regulations, 2019 specify as under:

*"**50.7 Adjustment of ECR [Fuel Surcharge Adjustment] on account of variation in price or heat value of fuels***

Any variation in Price and Gross Calorific Value of coal/lignite or gas or liquid fuel as billed by supplier less actual stacking loss subject to the maximum stacking loss of 85 kcal/kg or 120 kcal/kg, as the case may be, vis-a-vis approved values shall be adjusted on month to month basis on the basis of average Gross Calorific Value of coal/lignite or gas or liquid fuel in stock received and weighted average landed cost incurred by the Generating Company for procurement of coal/lignite, oil, or gas or liquid fuel, as the case may be for a power Station:

Provided that in its bills, the Generating Company shall indicate Energy Charge Rates at base price of primary and secondary fuel approved by the Commission and the Fuel

Surcharge to it separately:

Provided further that the Generating Company shall provide to the Beneficiaries of the generating Station, the details of parameters of GCV and price of fuel for each type of fuel, i.e., domestic coal, imported coal, e-auction coal, lignite, natural gas, RLNG, liquid fuel, etc., as per the forms prescribed by the Commission:

Provided also that in case of part or full use of alternative source of fuel supply by coal based thermal generating stations other than as agreed by the Generating Company and beneficiary/ies in their power purchase agreement for supply of contracted power on account of shortage of fuel or optimization of economical operation through blending, the use of alternative source of fuel supply shall be permitted to generating station:

Provided also that in such case, prior permission from beneficiaries shall not be a precondition, unless otherwise agreed specifically in the power purchase agreement:
Provided also that the weighted average price of alternative source of fuel shall not exceed 5% of base price of primary and secondary fuel approved by the Commission:
Provided also that where the Energy Charge Rate based on weighted average price of fuel upon use of alternative source of fuel supply exceeds 5% of base Energy Charge Rate as approved by the Commission for that year, prior consent with beneficiary/ies shall be obtained at least three days in advance:

Provided also that in case use of alternative source of fuel is not opted for, based on prior consultation with beneficiary/ies, then the Generating Company shall be entitled to consider deemed Availability to the extent of reduced Availability on account of fuel non-availability, for the purpose of Availability computations for recovery of Annual Fixed Charges in accordance with Regulation 50.2:

Provided also that the details of blending ratio of the imported coal with domestic coal, proportion of e-auction coal and the weighted average GCV of the fuels as billed by supplier shall also be provided separately, along with the bills of the respective month:

Provided also that copies of the bills and details of parameters of GCV and price of fuel, i.e., domestic coal, imported coal, e-auction coal, lignite, natural gas, RLNG, liquid fuel, etc., details of blending ratio of the imported coal with domestic coal, proportion of e-auction coal shall also be displayed month-wise on the website of the Generating Company, and should be available on its website for a period of three *months."*

9.11.2 During H1 of FY 2022-23, the usage of imported coal led to significant increase in the energy charges. The same impacts the monthly Z_{FAC} which may exceed 20% of the variable component of tariff as stipulated by the Commission and may result in under recovery of the fuel cost by MSPGCL due to same. MSPGCL requested that in abnormal circumstances such as that prevailed during the H1 of FY 2022-23, the Commission may allow recovery of fuel cost over and above the 20% factor allowed in the Regulations. The same will help the generating companies to recover the incremental cost and ensure consistent supply of power to the consumers in the State.

9.11.3 MSPGCL submitted that duly considering this aspect, it has considered annual escalation factor of 5% for the landed prices of fuels over the fuel prices considered for H2 of FY 2022-23 in the Petition. In case the actual fuel prices are lower than the projected prices, the same will automatically get factored in the monthly FAC.

Table 9.15: Fuel prices considered by MSPGCL for FY 2023-24 and FY 2024-25

Station/Unit	FY 2023-24			FY 2024-25		
	Coal (Rs./MT)	Secondary Fuel Oil (Rs./kL)	Gas (Rs./'000 SCM)	Coal (Rs./MT)	Secondary Fuel Oil (Rs./kL)	Gas (Rs./'000 SCM)
Bhusawal	5681.99	40004.49	-	5966.09	42004.71	-
Chandrapur	4493.86	58006.29	-	4718.55	60906.61	-
Khaperkheda	4772.88	69864.62	-	5011.52	73357.85	-
Koradi	5197.51	53890.42	-	5457.38	56584.94	-
Nashik	5553.82	67326.81	-	5831.51	70693.15	-
Uran	-	-	29463.00	-	-	30936.15
Paras Units 3&4	4450.34	69909.15	-	4672.86	73404.61	-
Parli Units 6&7	5739.63	55023.89	-	6026.62	57775.09	-
Khaperkheda Unit 5	5460.25	43093.28	-	5733.27	45247.95	-
Bhusawal Units 4&5	6446.97	48903.27	-	6769.32	51348.44	-
Koradi Units 8-10	5691.24	66457.05	-	5975.80	69779.90	-
Chandrapur Units 8&9	5503.68	58006.29	-	5778.87	60906.61	-
Parli Unit 8	6047.99	52646.37	-	6350.39	55278.69	-

Commission's Analysis and Ruling

9.11.4 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:"

9.11.5 In reply to a query, MSPGCL submitted the actual fuel details for the period from November, 2022-January, 2023. The provisions of the Regulations provide for consideration of the fuel prices for the three preceding months. The actual fuel parameters are available upto the latest month of January, 2023. Therefore, the Commission deems it prudent to consider the actual fuel parameters for the period from November, 2022 to January, 2023 for the purpose of tariff determination for FY 2023-24 and FY 2024-25 in this Order.

9.11.6 The Commission analysed the variation in fuel prices for the last 3 years. It is observed that the landed domestical raw coal price of MSPGCL has increased by 2%, 9% and 9% for FY 2020-21, FY 2021-22 and FY 2022-23 (H1) respectively with respect to previous year. The increase in raw coal price is predominantly attributable to the change in policy of WCL to increase the share of Mine Specific and Cost-Plus Coal in place of Notified Price Coal. The share of Notified Price Coal has reduced to a meagre 1 MMT as against 18-19 MMT projected at the time of MYT Order. Currently, the supply of WCL coal is mainly from Mine Specific and Cost-Plus Coal. The increase in landed coal prices excluding the impact of Mine Specific and Cost-Plus coal is in range of 1-2% during the last 3 years.

9.11.7 Accordingly, for the purpose of projecting the energy charges, the Commission for domestic fuels has considered the annual escalation of 1.5% over the actual fuel prices for the period from November, 2022 to January, 2023 for arriving at the fuel prices for FY 2023-24 and FY 2024-25. The Commission has not considered the annual escalation for imported coal and gas prices due to the reducing trend in prices in the recent past. The Commission has considered the station wise coal mix proposed by MSPGCL for FY 2023-24 and FY 2024-25 to arrive at the weighted average coal price. The issue raised by MSPGCL to allow recovery of fuel cost over and above the 20% through Z_{FAC} or Distribution Licensees is request for amendment to MYT Regulations, 2019 and the same cannot be allowed in this Order.

Table 9.16: Fuel prices considered by the Commission for FY 2023-24 and FY 2024-25

Station/Unit	FY 2023-24			FY 2024-25		
	Coal (Rs./MT)	Secondary Fuel Oil (Rs./kL)	Gas (Rs./'000 SCM)	Coal (Rs./MT)	Secondary Fuel Oil (Rs./kL)	Gas (Rs./'000 SCM)
Bhusawal	5574.87	62704.26	-	5645.48	63644.82	-
Chandrapur	4549.79	65185.75	-	4607.58	66163.54	-
Khaperkheda	4812.59	67086.84	-	4872.12	68093.14	-
Koradi	4459.05	65031.02	-	4525.94	66006.49	-
Nashik	5285.48	66982.34	-	5344.84	67987.07	-

Station/Unit	FY 2023-24			FY 2024-25		
	Coal (Rs./MT)	Secondary Fuel Oil (Rs./kL)	Gas (Rs./'000 SCM)	Coal (Rs./MT)	Secondary Fuel Oil (Rs./kL)	Gas (Rs./'000 SCM)
Uran	-	-	28374.69	-	-	28374.69
Paras Units 3&4	4342.09	69152.71	-	4407.23	70190.00	-
Parli Units 6&7	5925.90	62694.70	-	6014.79	63635.12	-
Khaperkheda Unit 5	5486.31	56002.84	-	5540.80	56842.88	-
Bhusawal Units 4&5	5668.28	64715.56	-	5735.45	65686.30	-
Koradi Units 8-10	5205.50	65020.46	-	5265.66	65995.77	-
Chandrapur Units 8&9	4819.19	65020.46	-	4867.41	65995.77	-
Parli Unit 8	5721.43	63083.94	-	5807.25	64030.20	-

9.12 ENERGY CHARGE RATE

Commission's Analysis and Ruling

9.12.1 Based on the approved performance parameters, fuel prices and GCV, the Energy Charge Rate approved by the Commission for FY 2023-24 and FY 2024-25 is as shown in the Table below:

Table 9.17: Energy Charge Rate for FY 2023-24 and FY 2024-25 (Rs. /kWh)

Station/Unit	FY 2020-21		FY 2021-22	
	Claimed	Approved	Claimed	Approved
Bhusawal	4.506	4.408	4.731	4.461
Chandrapur	3.872	4.103	4.066	4.097
Khaperkheda	3.936	4.197	4.133	4.218
Koradi	3.623	3.319	3.805	3.368
Nashik	5.067	4.647	5.321	4.641
Uran	8.557	6.760	8.985	6.760
Paras Units 3&4	3.292	3.483	3.456	3.510
Parli Units 6&7	4.493	5.100	4.717	5.096
Khaperkheda Unit 5	3.782	4.007	3.971	4.019
Bhusawal Units 4&5	4.135	3.710	4.342	3.746
Koradi Units 8-10	3.464	3.084	3.638	3.119
Chandrapur Units 8&9	3.848	3.444	4.040	3.442
Parli Unit 8	4.623	5.016	4.854	5.052

9.13 ADDITIONAL CAPITALISATION

MSPGCL's submission

9.13.1 MSPGCL has claimed the additional capitalisation of Rs. 2461.39 Crore and Rs 8329.00 Crore as against the approved additional capitalisation of Rs. 344.80 Crore and Rs. 344.80 Crore for FY 2023-24 and FY 2024-25, respectively.

Table 9.18: Additional capitalisation for FY 2023-24 and FY 2024-25 claimed by MSPGCL (Rs. Crore)

Station/Unit	FY 2023-24		FY 2024-25	
	Approved in MYT	Claimed	Approved in MYT	Claimed
Bhusawal	3.24	5.54	3.24	0.00
Chandrapur	34.17	411.92	34.17	1710.56
Khaperkheda	15.30	649.54	15.30	356.29
Koradi	72.77	120.30	72.77	251.45
Nashik	13.80	49.98	13.80	83.04
Uran	2.14	114.04	2.14	25.67
Paras Units 3&4	24.52	49.14	24.52	580.18
Parli Units 6&7	8.08	27.39	8.08	1017.98
Khaperkheda Unit 5	29.17	342.38	29.17	425.79
Bhusawal Units 4&5	21.40	71.13	21.40	1058.15
Koradi Units 8-10	58.28	177.32	58.28	2110.13
Chandrapur Units 8&9	44.83	335.19	44.83	343.23
Parli Unit 8	9.37	7.57	9.37	222.39
Hydro	7.64	99.94	7.64	144.15
Total	**344.80**	**2461.39**	**344.80**	**8329.00**

9.13.2 The additional capitalisation claimed by MSPGCL is inclusive of capitalisation towards FGD as under:

Table 9.19: Capitalisation towards FGD claimed by MSPGCL (Rs. Crore)

Station/Unit	FY 2023-24	FY 2024-25
Chandrapur	-	726.77
Khaperkheda	255.58	-
Koradi	100.92	-
Paras Units 3&4	-	475.43
Parli Units 6&7	-	145.02
Khaperkheda Unit 5	-	310.22
Bhusawal Units 4&5	-	562.09
Koradi Units 8-10	-	1102.34
Chandrapur Units 8&9	220.27	220.27
Parli Unit 8	-	93.78
Total	**576.77**	**3635.92**

9.13.3 MSPGCL submitted that the Commission had relaxed the cut-off date for Koradi Units 8-10, Chandrapur Units 8&9 and Parli Unit 8 upto 31 March, 2022. MSPGCL submitted that execution of some of the works is taking more time than envisaged.

MSPGCL submitted there had been attempts for tenderisation and appointment of the agencies at the envisaged cost, however the response from vendors was poor and the vendors have expressed unwillingness to execute the works at earlier estimated costs. MSPGCL requested the Commission to extend the timeline for incurring this capital expenditure which was within the scope of work till 31 March, 2024 so that it can complete the pending works.

Commission's Analysis and Ruling

9.13.4 In accordance with Regulation 23.5 of the MYT Regulations, 2019, MSPGCL was asked to make detailed submission on each of the following points:

- Least cost approach adopted while undertaking the DPR schemes.
- Mechanism put in place for monitoring the physical progress of projects with respect to their original schedule.
- Optimum drawal of loans in accordance with the physical progress of the capital expenditure schemes, and efficient utilisation of such loans.
- Detailed justification for the schemes that have not commenced during FY 2019-20 but approved for the year.

9.13.5 In reply, MSPGCL submitted that the implementation of schemes is undertaken through vendors/contractors/agencies selected through competitive bidding process so as to ensure that the prices are discovered in a transparent and objective manner. Further, for proprietary items, Original Equipment Manufacturers (OEMs) become the preferred choice wherein detailed due-diligence is performed based on the latest order placed on the OEM for supply of such items. The internal approval process for the proposed appointment of the vendors further ensures that detailed prudence is undertaken towards cost competitiveness of the offer price.

9.13.6 MSPGCL submitted that in order to monitor the physical progress of the projects with respect to their original schedule following mechanisms are followed:

- Video conferencing (VC) is carried out between the Chief Engineer Works and the Deputy Chief Engineer & Head of Maintenance planning division (MPD) of individual power stations on monthly basis. In VC physical status of the schemes are discussed and constraints, if any, regarding its implementation are resolved.
- Monthly Capex implementation status is sent by every station which includes the physical and the financial status of each and every scheme of various DPRs.
- For Civil related schemes, C.E. Civil-III is the nodal officer , who is responsible for monitoring the physical and financial status of civil related schemes and sending the consolidated detailed report to C.E Works on monthly basis.
- For the completed schemes, Station sends the work completion and scheme completion with all the capitalization details.

9.13.7 MSPGCL submitted that in order to monitor the financial progress of the projects with respect to their original schedule following mechanisms are followed:

- Capex Budget is allocated to the respective station / executing authority for effective implementation of the approved scheme in the respective year.
- Monthly Budget Utilisation of various schemes is prepared by the Finance section of MSPGCL which contains the consolidated expenditure status of various schemes of various power stations.
- In addition to above, VC is carried out between the Chief Engineer Works and the Deputy Chief Engineer & Head of MPD of individual power stations on monthly basis. In VC financial status & progress of the schemes are discussed and constraints, if any, regarding its implementation are resolved.
- Monthly Capex implementation status is sent by every station which includes the physical and the financial status of each and every scheme of various DPRs.
- For the completed schemes, Station sends the work completion and scheme completion with complete capitalization details.

9.13.8 MSPGCL submitted that the capital expenditure incurred by it is classified as DPR and Non-DPR schemes. The capital expenditure incurred under DPR schemes is initiated pursuant to approval of the schemes by the Commission. However, complexities arise during the actual implementation of approved capital expenditure schemes such as lead time required for finalisation of design specifications, tender documents and supply conditions, time extensions for changes requested by the bidders, time required for evaluation of bids and establishment of reasonability of prices quoted by the bidders, retendering in case of lower participation by the bidders or price unreasonability, if any, lead time for supply of items, actual implementation of schemes pursuant to supply of materials. Given the complex nature of the schemes, the implementation may require shutdown or have to be undertaken at the time of annual overhauls. Any delay in supply of equipment may defer the implementation to subsequent event of unit shutdown/forced outage. A combination of aforesaid factors therefore may lead to slippages in implementation of the schemes to the subsequent financial year. MSPGCL further submitted that the entire nation had underwent lockdown since March 2020 on account of COVID-19 pandemic and accordingly, the schemes envisaged to be implemented during the years got deferred. MSPGCL submitted that it would be implementing the approved schemes in the ensuing years since the same are required to be implemented for reliable operations of the generating stations. The revised capitalisation proposed by MSPGCL for ensuing years takes into consideration such spill over impacts as well.

9.13.9 As regards the additional capitalisation claimed by MSPGCL, the Commission sought the following additional information:

- Station wise justification for the variation in proposed capitalisation for FY 2023-

24 and FY 2024-25 from that approved in the MYT Order.

- Station wise details of schemes deferred/delayed from previous years and proposed for capitalisation during FY 2023-24 and FY 2024-25.
- Details of study undertaken for its stations, if any, for undertaking renovation and modernisation on a required scale in lieu of the capital expenditure schemes.

9.13.10 In reply, MSPGCL submitted that the variation in approved capitalisation and revised claimed capitalisation is mainly due to the spill over of FGD schemes. MSPGCL further submitted that as the Commission had approved the capitalisation in the MYT Order based on the average of actual capitalisation for the preceding 5 years, comparison of approved capitalisation with the revised claim is not possible. MSPGCL submitted that it is also planning to undertaken Residual Life Assessment (RLA) for its thermal Units of 210 MW size which have completed more than 25 years life in order to assess renovation and modernisation needs for operating the Units for a further period of 8-10 years. Such essential works can be carried out through capital expenditure of approximately Rs. 1 Crore/MW. MSPGCL submitted that it would seek in-principle approval of the Commission after assessment of such needs.

9.13.11 The Commission sought the cost benefit analysis of each of the scheme proposed for capitalisation during FY 2023-24 and FY 2024-25. In reply, MSPGCL submitted that the proposed capitalisation for FY 2023-24 and FY 2024-25 is towards the new schemes as well as spillover schemes from previous years. MSPGCL submitted that as per the MERC (Approval of Capital Investment Schemes) Regulations, 2022, it has to submit the capex rolling plan for FY 2023-24 and FY 2024-25 by 31 January, 2023. Further, any capex scheme of value above Rs. 25 Crore requires in-principle approval of the Commission. MSPGCL submitted that it is in the process of finalising the capex rolling plan and in the MTR Petition, it has submitted all the essential schemes. MSPGCL also submitted it has undertaken exercise to assess the priority of the proposed schemes. MSPGCL requested the Commission to consider the proposed schemes as part of the capex rolling plan and accordingly determine the tariff for FY 2023-24 and FY 2024-25. MSPGCL submitted that it would submit the DPRs for the schemes in due course of time for in-principle approval of the Commission.

9.13.12 The Commission sought the status of implementation of FGDs in its generating stations viz., commission's in-principle approvals, tendering, placement of work orders, physical progress, expected date of completion etc. In reply, MSPGCL submitted the sought details.

9.13.13 The Commission has examined the projected additional capitalisation claimed by MSPGCL as against the schemes accorded in-principle approval. The Commission's approach for approving the additional capitalisation for FY 2023-24 and FY 2024-25 is as follows:

- DPR schemes: Entire capitalisation is approved for all DPR schemes based on the actual physical progress of the approved DPR schemes in respect of which in-principle approval has been accorded limited to the approved cost.
- Non-DPR schemes: The capitalisation of the non-DPR schemes has been considered upto 20% of the cost of the DPR schemes.

9.13.14 Accordingly, the additional capitalisation approved by the Commission for FY 2023-24 and FY 2024-25 is as shown in the Table below:

Table 9.20: Additional capitalisation for FY 2023-24 and FY 2024-25 (Rs. Crore)

Station/Unit	FY 2023-24		FY 2024-25	
	Claimed	Approved	Claimed	Approved
Bhusawal	5.54	5.54	0.00	0.00
Chandrapur	411.92	149.45	1710.56	920.43
Khaperkheda	649.54	421.13	356.29	101.01
Koradi	120.30	88.81	251.45	0.00
Nashik	49.98	29.76	83.04	10.72
Uran	114.04	114.05	25.67	8.50
Paras Units 3&4	49.14	44.95	580.18	381.66
Parli Units 6&7	27.39	25.80	1017.98	145.02
Khaperkheda Unit 5	342.38	269.41	425.79	282.01
Bhusawal Units 4&5	71.13	7.89	1058.15	481.48
Koradi Units 8-10	177.32	41.59	2110.13	997.00
Chandrapur Units 8&9	335.19	301.75	343.23	220.27
Parli Unit 8	7.57	7.57	222.39	89.24
Hydro	99.94	61.46	144.15	61.72
Total	**2461.39**	**1569.16**	**8329.00**	**3699.06**

9.13.15 The above approved additional capitalisation is inclusive of the capitalisation towards FGD schemes as under:

Station/Unit	FY 2023-24		FY 2024-25	
	Claimed	Approved	Claimed	Approved
Chandrapur	-	-	726.77	602.58
Khaperkheda	255.58	109.15	-	-
Koradi	100.92	69.43	-	-
Paras Units 3&4	-	-	475.43	376.06
Parli Units 6&7	-	-	145.02	145.02
Khaperkheda Unit 5	-	-	310.22	260.21
Bhusawal Units 4&5	-	-	562.09	473.50
Koradi Units 8-10	-	-	1102.34	940.00
Chandrapur Units 8&9	220.27	220.27	220.27	220.27

Station/Unit	FY 2023-24		FY 2024-25	
	Claimed	Approved	Claimed	Approved
Parli Unit 8	-	-	93.78	89.24
Total	**576.77**	**398.85**	**3635.92**	**3106.88**

9.13.16 The Commission, at this stage, has limited the cost of FGD schemes to the approved cost as per the DPRs. The actual cost shall be subject to prudence check at the time of true-up of respective years.

9.13.17 MSPGCL has requested for extension of cut-off date upto 31 March, 2024 for completion of balance works within the original scope of work for Koradi Units 8-10, Chandrapur Units 8&9 and Parli Unit 8. The Commission does not find it prudent to grant the relief sought by MSPGCL at this stage. The Commission shall take a view on the same based on the submissions of the MSPGCL in the true-up of the respective years on case to case basis.

9.14 MEANS OF FINANCE OF ADDITIONAL CAPITALISATION

MSPGCL's Submission

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

Commission's Analysis and Ruling

9.14.2 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.

9.15 AFC

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

a. O&M expenses
b. Depreciation
c. Interest on Loan
d. IoWC
e. RoE
f. Income Tax

Less:

g. NTI

9.16 O&M EXPENSES

MSPGCL's submission

9.16.1 Regulation 47.1 of the MYT Regulations, 2019 specify as under:

"c) The Operation and Maintenance expenses for each subsequent year shall be

determined by escalating these Base Year expenses of FY 2019-20 by 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 as per the Office of Economic Advisor of Government of India and 50% weightage to the average yearly inflation derived based on the monthly Consumer Price Index for Industrial Workers (all-India) of the past five financial years as per the Labour Bureau, Government of India, as reduced by an efficiency factor of 1% or as may be stipulated by the Commission from time to time, to arrive at the permissible Operation and Maintenance expenses for each year of the Control Period:"

9.16.2 MSPGCL submitted that on an annual basis, there had been significant disallowance in the O&M expenses due to the consideration of approved expenses as base for projection purposes. MSPGCL submitted that, it being a government company, all the expenses incurred by it are in a transparent manner and are subject to stringent audit checks. Further, such O&M expenses include the expenses towards repairs and maintenance of old units which has be done irrespective of the quantum of expenses approved by the Commission.

9.16.3 MSPGCL submitted that the approval of O&M expenses takes into account the inflation indices as per the Regulations. An average escalation in such indices may/may not be able to map the actual movement of such expenses. For instance, the WPI index showed a dip of -2.49% from FY 2017-18 to FY 2018-19 whereas no such reduction in O&M expenses could be seen in real terms. Therefore, restricting the O&M expenses to historically approved limits would be detrimental to the financial health of the company. MSPGCL requested the Commission to invoke its power to relax as provided in the Regulations and approve the following submissions of MSPGCL:

- Actual O&M expenses (excluding provisions) may be considered for working out the normative expenses for ensuing years or the same may at least be considered at the time of truing up.
- Efficiency improvement factor of 1% may be applied at the time of true-up in case actual O&M expenses are lower than the normative expenses.

9.16.4 MSPGCL submitted that the O&M expenses for new Units have been considered as per the normative expenses specified in Rs. Lakhs/MW. In this regard, MSPGCL submitted that the normative O&M expenses approved in the Regulations for new stations are far lower as compared to the normative expenses specified under the CERC Regulations. MSPGCL submitted that a request for revision of the proposed O&M expenses had been made at the time of framing of MYT Regulations, 2019. However, the submissions were not considered/factored at the time of finalising the O&M norms. The Statement of Reasons (SoR) of the MYT Regulations, 2019 state that CERC norms have been higher on a historical basis and therefore they have not been considered. The historical expenses of the stations have accordingly been considered by the Commission for finalising the norms.

9.16.5 Regulation 105 of MYT Regulations, 2019 empowers the Commission to relax the provisions on the basis of an application made by an interested party. Accordingly, in exercise of its Power to Relax, the Commission may relax the O&M norms specified for the current Control Period, in line with the provisions of the EA 2003 and the Tariff Policy.

9.16.6 MSPGCL submitted that the norms specified by CERC are not only applicable for certain operational Units but also for the new Units that are likely to get commissioned during the Control Period. Accordingly, even CERC could have specified a lower norm for stations which have not been commissioned. However, considering the practical aspects, the CERC had approved uniform norms so that there is no adverse impact on lower O&M norms on any new Unit and that the actual expenses remain range bound to such norms.

9.16.7 Contrary to the above, in the case of MSPGCL, all the new stations have higher O&M norms and that MSPGCL is incurring significant losses on this account. The salaries and wages paid by MSPGCL are as per standard grades prescribed by the Government and there cannot be any change in the same. Further, A&G and R&M expenses are all legitimate expenses given the size of the units.

9.16.8 MSPGCL submitted that the Commission has the power to consider the above submissions and based on prudence check, invoke the power to relax in the interest of justice to the State Government Utility to recover its actual O&M expenses which can further be subjected to the ceiling of CERC norms. The lower norms lead to significant disallowances in actual O&M expenses.

9.16.9 MSPGCL requested the Commission to relax the O&M norms for the new generating stations such that they remain aligned to the CERC Regulations as a ceiling norm by invoking "Power to relax" and "Removal of difficulties" under Regulations 105 and 106 of the MYT Regulations 2019 respectively.

9.16.10 MSPGCL submitted that it has considered the impact of pay revision in the base amount of O&M expenses and accordingly not claimed separately.

Table 9.21: O&M expenses for FY 2023-24 and FY 2024-25 as claimed by MSPGCL (Rs. Crore)

Particulars	FY 2023-24		FY 2024-25	
	Approved in MYT	Claimed	Approved in MYT	Claimed
O&M expenses	2492.39	3423.80	3022.84	3558.61
Pay revision	278.62		284.53	
Water charges	183.28	306.19	183.28	315.37

Particulars	FY 2023-24		FY 2024-25	
	Approved in MYT	Claimed	Approved in MYT	Claimed
Other charges	345.99	278.17	345.99	278.17
Total	**3750.28**	**4008.16**	**3836.64**	**4152.15**

9.16.11 MSPGCL submitted that considering the power deficit situation communication received from CEA, Nashik Unit 5 and Bhusawal Unit 3 can be kept in service by carrying out RLA study and necessary civil work reinforcement based on concurrence of MSEDCL. MSPGCL submitted that it has initiated the proposal of continuation of the said Units communicating the same to MSEDCL for its concurrence. MSPGCL submitted that the Commission had invited comments on the proposed 2nd Amendment to MYT Regulations, 2019. MSPGCL submitted that vide its submission dated 5 December, 2021 requested the Commission to provide for special allowance for Units that have completed life of 25 years, in lieu of renovation and modernisation expenditure, in line with the provisions of the CERC Tariff Regulations, 2019. MSPGCL requested the Commission to provide special O&M allowance in lieu of renovation and modernisation expenditure, while finalising the amendment to the MYT Regulations, 2019 and to provide necessary directions in the MTR Order.

Commission's Analysis and Ruling

9.16.12 The normative O&M expenses claimed by MSPGCL for new stations viz., Paras Units 3&4, Parli Units 6&7, Khaperkheda Unit 5, Bhusawal Units 4&5, Koradi Units 8-10, Chandrapur Units 8&9 and Parli Unit 8 is not in line with the normative O&M expenses specified in Rs. Lakh/MW in the MYT Regulations, 2019. MSPGCL has projected the normative O&M expenses for these stations by escalating the actual O&M expenses for FY 2019-20.

9.16.13 MSPGCL has sought the relaxation in the provisions of the Regulations regarding the normative O&M expenses for old stations and new stations. The Regulations have been notified after due consultation with all the stakeholders. Wherever necessary, the Commission had been giving special dispensations to certain factors. Actual O&M expenses being higher than the normative O&M expenses as determined in accordance with the Regulations cannot be a valid ground for deviation from the Regulations. If the higher actual O&M expenses only deserve to be allowed, it nullifies the entire provisions of the Regulations specifying the normative O&M expenses and mechanism of sharing of gains and losses in O&M expenses. Therefore, the Commission does not find merit in MSPGCL's request to relax the provisions of the Regulations regarding the O&M expenses.

9.16.14 For old stations, the revised normative O&M expenses for FY 2023-24 have been arrived at by escalating the normative O&M expenses for FY 2022-23 by the escalation factor of 3.94%. The revised normative O&M expenses for FY 2024-25 have been arrived at by escalating the normative O&M expenses for FY 2023-24 by the escalation factor of 3.94%. For new Units, the Commission has considered the normative O&M expenses as approved in the MYT Order.

9.16.15 The MYT Regulations, 2019 provide for composite O&M expenses and therefore, the variation in actual and normative O&M expenses will be due to a multitude of factors. The Commission does not find merit in MSPGCL's request to allow the HO O&M expenses separately.

9.16.16 The Commission has considered the water charges and other charges for FY 2023-24 and FY 2024-25, the same as the actuals for FY 2021-22.

Table 9.22: Normative O&M expenses for FY 2023-24 and FY 2024-25 approved by the Commission (Rs. Crore)

<table>
<tr><th rowspan="2">Particulars</th><th colspan="3">FY 2023-24</th><th colspan="3">FY 2024-25</th></tr>
<tr><th>Approved in MYT</th><th>Claimed</th><th>Approved</th><th>Approved in MYT</th><th>Claimed</th><th>Approved</th></tr>
<tr><td>O&M expenses</td><td>2492.39</td><td rowspan="2">3423.80</td><td>3029.65</td><td>3022.84</td><td rowspan="2">3558.61</td><td>3144.76</td></tr>
<tr><td>Pay revision</td><td>278.62</td><td>208.90</td><td>284.53</td><td>217.12</td></tr>
<tr><td>Water charges</td><td>183.28</td><td>306.19</td><td>288.61</td><td>183.28</td><td>315.37</td><td>288.61</td></tr>
<tr><td>Other charges</td><td>345.99</td><td>278.17</td><td>278.17</td><td>345.99</td><td>278.17</td><td>278.17</td></tr>
<tr><td>Total</td><td>3750.28</td><td>4008.16</td><td>3805.33</td><td>3836.64</td><td>4152.15</td><td>3928.67</td></tr>
</table>

9.16.17 As regards the special O&M allowance sought by MSPGCL for Units that have completed life of more than 25 years on similar lines of CERC Tariff Regulations, 2019, it is pertinent to mention that the Commission had been approving additional capitalisation from time to time for the old Units for their upkeep. Moreover, the issue pertains to the subject matter of Regulations and the same shall be dealt with in the amendment to the Regulations. Therefore, no directions are required to be issued in this matter.

9.17 DEPRECIATION

MSPGCL's submission

9.17.1 MSPGCL submitted that depreciation has been computed in accordance with Regulations 28 of the MYT Regulations, 2019. The depreciation has been computed based on straight line method at the rates specified in the Regulations on the opening balance of the GFA as well as on the assets added during each year. Further, Regulation 28.1(b) of the MYT Regulations, 2019 provides that once the individual asset depreciates to the extent of 70% of the value of the asset, remaining depreciable value as of the 31st March of the year closing shall be spread over the balance useful life of the asset. In the MYT Petition, MSPGCL had considered the balance useful life of the asset by assuming an overall life of 40 years for the old thermal stations and 25 years for the new stations. Further, MSPGCL has considered the salvage value of the assets at 10% of the allowable capital cost and has allowed depreciation maximum up to 90% of the allowable cost of the assets in-line with the Regulation 28.1(c) of the MYT Regulations, 2019.

Table 9.23: Depreciation for FY 2023-24 and FY 2024-25 as claimed by MSPGCL (Rs. Crore)

Station/Unit	FY 2023-24		FY 2024-25	
	Approved in MYT	Claimed	Approved in MYT	Claimed
Bhusawal	21.01	21.84	23.69	21.84
Chandrapur	71.60	144.68	76.48	252.77
Khaperkheda	44.24	135.06	45.50	161.41
Koradi	80.79	67.39	84.63	76.98
Nashik	35.11	52.30	24.10	127.23
Uran	36.08	28.11	38.00	33.40
Paras Units 3&4	72.90	79.00	75.06	171.89
Parli Units 6&7	67.98	79.62	68.58	184.73
Khaperkheda Unit 5	188.34	190.26	188.49	209.16
Bhusawal Units 4&5	342.20	349.55	343.33	379.37
Koradi Units 8-10	655.16	719.56	658.24	779.95
Chandrapur Units 8&9	329.35	353.26	331.72	370.88
Parli Unit 8	98.86	101.16	99.35	107.23
Hydro	26.85	15.02	27.26	21.93
Total	**2070.47**	**2336.81**	**2084.42**	**2898.76**

Commission's Analysis

9.17.2 The Commission has considered the station wise closing GFA approved for FY 2022-23 as the opening GFA for FY 2023-24. The approved additional capitalisation for FY 2023-24 has been considered as the GFA addition during the year. The closing GFA for FY 2023-24 has been considered as the opening GFA for FY 2024-25. The approved additional capitalisation for FY 2024-25 has been considered as the GFA addition during the year.

9.17.3 The Commission has computed the depreciation in accordance with the MYT Regulations, 2019. If the accumulated depreciation for a particular asset class has reached 70% of the allowable depreciation, the remaining depreciable value has been spread over the remaining useful life of the station, as submitted by MSPGCL. Else, the depreciation on opening GFA and additional capitalisation has been computed at the depreciation rates specified in the Regulations. The Commission has computed the depreciation on opening GFA for full year and depreciation on additional capitalisation has been computed for half year. The Commission has considered HO depreciation, the same as claimed by MSPGCL.

9.17.4 The depreciation approved by the Commission for FY 2023-24 and FY 2024-25 is as shown in the Table below:

Table 9.24: Depreciation for FY 2023-24 and FY 2024-25 (Rs. Crore)

Station/Unit	FY 2023-24		FY 2024-25	
	Claimed	Approved	Claimed	Approved
Bhusawal	21.84	19.24	21.84	19.24
Chandrapur	144.68	107.43	252.77	215.49
Khaperkheda	135.06	57.80	161.41	65.90
Koradi	67.39	36.59	76.98	36.59
Nashik	52.30	33.88	127.23	42.99
Uran	28.11	66.86	33.40	74.51
Paras Units 3&4	79.00	78.32	171.89	166.28
Parli Units 6&7	79.62	78.35	184.73	90.02
Khaperkheda Unit 5	190.26	185.98	209.16	199.55
Bhusawal Units 4&5	349.55	345.27	379.37	357.34
Koradi Units 8-10	719.56	706.63	779.95	734.05
Chandrapur Units 8&9	353.26	352.67	370.88	366.45
Parli Unit 8	101.16	101.15	107.23	103.71
Hydro	15.02	14.73	21.93	19.07
Total	**2336.81**	**2184.90**	**2898.76**	**2491.19**

9.18 INTEREST ON LONG TERM LOANS AND OTHER FINANCE CHARGES

MSPGCL's submission

9.18.1 MSPGCL has arrived at the normative outstanding loan as on 1 April, 2023 in accordance with Regulation 30.2 of the MYT Regulations, 2019. MSPGCL has considered loan addition equal to 70% of claimed additional capitalisation for the respective year. The normative repayment has been considered as depreciation allowed for the year. MSPGCL has computed the interest on long term loans on the normative average of outstanding opening balance of loan and closing balance of loan by applying the weighted average rate of interest.

9.18.2 MSPGCL has considered the finance charges for FY 2023-24 and FY 2024-25, the same as the actuals for FY 2021-22.

Table 9.25: Interest on loan for FY 2023-24 and FY 2024-25 as claimed by MSPGCL (Rs. Crore)

Station/Unit	FY 2023-24		FY 2024-25	
	Approved in MYT	Claimed	Approved in MYT	Claimed
Bhusawal	0.43	0.29	0.43	0.29
Chandrapur	51.43	73.53	46.19	129.64
Khaperkheda	21.16	22.77	17.54	44.04
Koradi	13.43	17.47	12.27	20.83
Nashik	0.66	0.99	0.66	0.99
Uran	9.83	14.79	6.17	16.93
Paras Units 3&4	21.78	26.79	16.02	35.65
Parli Units 6&7	4.47	8.66	0.66	30.46
Khaperkheda Unit 5	64.98	58.32	48.79	64.07
Bhusawal Units 4&5	162.55	164.96	128.38	168.63
Koradi Units 8-10	507.41	569.42	446.78	575.34
Chandrapur Units 8&9	289.23	309.10	258.47	296.48
Parli Unit 8	91.18	98.18	81.78	95.78
Hydro	12.42	8.43	10.14	15.39
Total	**1250.95**	**1373.70**	**1074.30**	**1494.51**

Commission's Analysis and Ruling

9.18.3 The Commission has considered the station wise closing loan balances approved in the provisional true-up of FY 2022-23 as the opening loan balances for FY 2023-24. The debt portion of the approved additional capitalisation for FY 2023-24 has been considered as the loan addition during the year. The approved depreciation for FY 2023-24 has been considered as the repayment for the year. The closing loan balance for FY 2023-24, has been considered as the opening loan balance for FY 2024-25. The debt portion of the approved additional capitalisation for FY 2024-25 has been considered as the loan addition during the year. The approved depreciation for FY 2024-25 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. The Commission has considered the finance charges as claimed by MSPGCL.

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

Table 9.26: Interest on loan and finance charges for FY 2023-24 and FY 2024-25 (Rs. Crore)

Station/Unit	FY 2023-24		FY 2024-25	
	Claimed	Approved	Claimed	Approved
Bhusawal	0.29	0.29	0.29	0.29
Chandrapur	73.53	63.60	129.64	85.74
Khaperkheda	22.77	18.65	44.04	31.37
Koradi	17.47	19.83	20.83	19.56
Nashik	0.99	2.74	0.99	1.54
Uran	14.79	11.67	16.93	8.69
Paras Units 3&4	26.79	26.28	35.65	28.80
Parli Units 6&7	8.66	8.43	30.46	6.40
Khaperkheda Unit 5	58.32	57.25	64.07	57.46
Bhusawal Units 4&5	164.96	163.40	168.63	145.07
Koradi Units 8-10	569.42	557.39	575.34	522.66
Chandrapur Units 8&9	309.10	308.34	296.48	290.80
Parli Unit 8	98.18	98.17	95.78	90.99
Hydro	8.43	5.37	15.39	9.84
Total	**1373.70**	**1341.42**	**1494.51**	**1299.20**

9.19 IOWC

MSPGCL's submission

9.19.1 The normative IoWC has been computed as per the provisions of Regulation 32.1 of the MYT Regulations, 2019.

Table 9.27: IoWC for FY 2023-24 and FY 2024-25 as claimed by MSPGCL (Rs. Crore)

Station/Unit	FY 2023-24		FY 2024-25	
	Approved in MYT	Claimed	Approved in MYT	Claimed
Bhusawal	16.23	18.52	16.49	19.43
Chandrapur	97.62	152.66	98.97	162.85
Khaperkheda	48.20	69.46	48.82	74.10
Koradi	18.48	19.44	18.88	20.65
Nashik	48.04	59.66	48.70	63.55
Uran	27.52	36.48	27.94	176.50
Paras Units 3&4	37.41	39.18	37.94	42.21
Parli Units 6&7	46.01	48.30	46.70	52.22
Khaperkheda Unit 5	34.57	44.84	34.84	47.56
Bhusawal Units 4&5	86.57	93.84	87.48	98.72
Koradi Units 8-10	104.04	165.43	104.62	173.87
Chandrapur Units 8&9	69.03	90.46	69.61	94.88
Parli Unit 8	23.56	27.25	23.79	28.52
Hydro	12.03	11.27	12.02	11.69

Station/Unit	FY 2023-24		FY 2024-25	
	Approved in MYT	Claimed	Approved in MYT	Claimed
Total	**669.30**	**876.78**	**676.80**	**1066.76**

Commission's Analysis

9.19.2 The Commission has computed normative IoWC in accordance with the provisions of Regulation 32.1 of the MYT Regulations, 2019. The rate of IoWC has been considered as 9.45% for FY 2023-24 and FY 2024-25.

Table 9.28: IoWC for FY 2023-24 and FY 2024-25 (Rs. Crore)

Station/Unit	FY 2023-24		FY 2024-25	
	Claimed	Approved	Claimed	Approved
Bhusawal	18.52	19.00	19.43	19.29
Chandrapur	152.66	140.19	162.85	142.49
Khaperkheda	69.46	69.80	74.10	71.11
Koradi	19.44	17.18	20.65	17.60
Nashik	59.66	58.56	63.55	58.87
Uran	36.48	45.56	176.50*	45.84
Paras Units 3&4	39.18	41.43	42.21	43.02
Parli Units 6&7	48.30	56.56	52.22	56.83
Khaperkheda Unit 5	44.84	49.00	47.56	49.77
Bhusawal Units 4&5	93.84	90.79	98.72	91.74
Koradi Units 8-10	165.43	140.66	173.87	142.34
Chandrapur Units 8&9	90.46	87.78	94.88	88.31
Parli Unit 8	27.25	30.28	28.52	30.50
Hydro	11.27	11.87	11.69	12.19
Total	**876.78**	**858.65**	**1066.76**	**869.88**

**computational error by MSPGCL in receivables for working capital*

9.20 ROE & INCOME TAX

MSPGCL's submission

9.20.1 MSPGCL has computed RoE at a rate of 14% on the opening balance of the equity portion of the capitalised assets and 50% of the equity portion of the capitalised assets added during each year in accordance with Regulations 29 of the Tariff Regulations, 2019. Additional RoE shall be claimed at the time of true-up.

9.20.2 MSPGCL submitted that no income tax liability has been considered for FY 2023-24 and FY 2024-25. Any tax liability actually paid shall be considered at the time of true-up.

Table 9.29: RoE for FY 2023-24 and FY 2024-25 as claimed by MSPGCL (Rs. Crore)

Station/Unit	FY 2023-24		FY 2024-25	
	Approved in MYT	Claimed	Approved in MYT	Claimed
Bhusawal	14.10	13.52	14.23	13.64
Chandrapur	128.66	146.50	130.10	191.07
Khaperkheda	153.28	153.23	153.92	174.36
Koradi	51.09	41.03	54.14	48.84
Nashik	39.06	36.33	39.64	39.13
Uran	47.65	45.50	47.74	48.43
Paras Units 3&4	136.71	135.32	137.74	148.54
Parli Units 6&7	135.16	132.85	135.50	154.80
Khaperkheda Unit 5	110.33	111.45	111.55	127.58
Bhusawal Units 4&5	184.06	185.71	184.96	209.42
Koradi Units 8-10	398.47	444.94	400.91	492.98
Chandrapur Units 8&9	172.20	188.40	174.09	202.42
Parli Unit 8	58.16	59.21	58.55	64.04
Hydro	13.10	9.70	13.42	14.83
Total	**1642.02**	**1703.70**	**1656.50**	**1930.06**

Commission's Analysis

9.20.3 The Commission has considered the station wise closing equity approved in the provisional true-up of FY 2022-23 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.

9.20.4 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.

9.20.5 The Base Rate of RoE has been considered as 14% in accordance with Regulation 29.2. The additional RoE shall be allowable at the time of true-up subject to fulfilment of the conditions specified for the same.

9.20.6 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:

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.”

9.20.7 The Commission has considered the effective tax rate of 0% based on actuals for FY 2023-24 and FY 2024-25 for the purpose of this Order.

9.20.8 Accordingly, the RoE approved by the Commission for FY 2023-24 and FY 2024-25 is given in Table below:

Table 9.30: RoE for FY 2023-24 and FY 2024-25 (Rs. Crore)

Station/Unit	FY 2023-24		FY 2024-25	
	Claimed	Approved	Claimed	Approved
Bhusawal	13.52	13.52	13.64	13.64
Chandrapur	146.50	139.08	191.07	161.54
Khaperkheda	153.23	148.43	174.36	159.39
Koradi	41.03	40.11	48.84	41.97
Nashik	36.33	35.85	39.13	36.70
Uran	45.50	45.50	48.43	48.07
Paras Units 3&4	135.32	134.92	148.54	143.88
Parli Units 6&7	132.85	132.63	154.80	136.22
Khaperkheda Unit 5	111.45	109.90	127.58	121.47
Bhusawal Units 4&5	185.71	183.80	209.42	194.07
Koradi Units 8-10	444.94	434.66	492.98	456.47
Chandrapur Units 8&9	188.40	187.93	202.42	198.90
Parli Unit 8	59.21	59.21	64.04	61.24
Hydro	9.70	8.39	14.83	10.97
Total	**1703.70**	**1673.90**	**1930.06**	**1784.53**

9.21 NTI

MSPGCL's submission

9.21.1 As against the approved NTI of Rs. 99.12 Crore for each year, MSPGCL has claimed the NTI of Rs. 133.07 Crore for FY 2023-24 and FY 2024-25 respectively.

Commission's Analysis

9.21.2 The Commission has considered the NTI of Rs. 133.07 Crore for FY 2023-24 and FY 2024-25, same as actual for FY 2021-22.

9.22 AFC

Commission's Analysis and Ruling

9.22.1 Based on the above analysis, the AFC approved by the Commission for FY 2023-24 and FY 2024-25, that is fully recoverable at target Availability, is as shown in the Tables below:

Table 9.31: AFC claimed by MSPGCL and approved by the Commission for FY 2023-24 (Rs. Crore)

Station/Unit	Return on Equity			Interest on loan			Depreciation			O&M expenses			IoWC			Less:NTI			AFC		
	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved
Bhusawal	14.10	13.52	13.52	0.43	0.29	0.29	21.01	21.84	19.24	120.07	124.08	123.40	16.23	18.52	19.00	2.73	1.78	1.78	**169.11**	**176.47**	**173.68**
Chandrapur	128.66	146.50	139.08	51.43	73.53	63.60	71.60	144.68	107.43	710.93	709.86	709.19	97.62	152.66	140.19	19.60	6.38	6.38	**1040.64**	**1220.85**	**1153.11**
Khaperkheda	153.28	153.23	148.43	21.16	22.77	18.65	44.24	135.06	57.80	331.60	340.00	395.55	48.20	69.46	69.80	5.16	13.27	13.27	**593.33**	**707.25**	**676.96**
Koradi	51.09	41.03	40.11	13.43	17.47	19.83	80.79	67.39	36.59	231.71	250.20	247.84	18.48	19.44	17.18	1.60	63.01	63.01	**393.90**	**332.52**	**298.53**
Nashik	39.06	36.33	35.85	0.66	0.99	2.74	35.11	52.30	33.88	390.23	346.07	345.24	48.04	59.66	58.56	12.54	4.74	4.74	**500.56**	**490.61**	**471.53**
Uran	47.65	45.50	45.50	9.83	14.79	11.67	36.08	28.11	66.86	94.20	103.12	103.05	27.52	36.48	45.56	2.38	1.14	1.14	**212.89**	**226.85**	**271.50**
Paras Units 3&4	136.71	135.32	134.92	21.78	26.79	26.28	72.90	79.00	78.32	195.40	267.13	187.40	37.41	39.18	41.43	3.94	4.10	4.10	**460.25**	**543.31**	**464.24**
Parli Units 6&7	135.16	132.85	132.63	4.47	8.66	8.43	67.98	79.62	78.35	199.65	206.25	190.60	46.01	48.30	56.56	3.95	3.91	3.91	**449.33**	**471.76**	**462.65**
Khaperkheda Unit 5	110.33	111.45	109.90	64.98	58.32	57.25	188.34	190.26	185.98	140.17	178.38	154.64	34.57	44.84	49.00	4.10	8.14	8.14	**534.27**	**575.11**	**548.63**
Bhusawal Units 4&5	184.06	185.71	183.80	162.55	164.96	163.40	342.20	349.55	345.27	291.93	284.11	257.11	86.57	93.84	90.79	14.87	7.78	7.78	**1052.44**	**1070.39**	**1032.59**
Koradi Units 8-10	398.47	444.94	434.66	507.41	569.42	557.39	655.16	719.56	706.63	439.88	534.95	464.00	104.04	165.43	140.66	7.27	10.92	10.92	**2097.68**	**2423.39**	**2292.42**
Chandrapur Units 8&9	172.20	188.40	187.93	289.23	309.10	308.34	329.35	353.26	352.67	261.37	295.27	278.29	69.03	90.46	87.78	15.14	2.36	2.36	**1106.05**	**1234.13**	**1212.64**
Parli Unit 8	58.16	59.21	59.21	91.18	98.18	98.17	98.86	101.16	101.15	111.17	117.08	97.35	23.56	27.25	30.28	1.08	2.14	2.14	**381.85**	**400.74**	**384.03**
Hydro	13.10	9.70	8.39	12.42	8.43	5.37	26.85	15.02	14.73	231.98	251.67	251.67	12.03	11.27	11.87	4.76	3.39	3.39	**291.62**	**292.70**	**288.63**
Total	**1642.02**	**1703.70**	**1673.90**	**1250.95**	**1373.70**	**1341.42**	**2070.47**	**2336.81**	**2184.90**	**3750.28**	**4008.16**	**3805.33**	**669.30**	**876.78**	**858.65**	**99.12**	**133.07**	**133.07**	**9283.92**	**10166.07**	**9731.12**

Table 9.32: AFC claimed by MSPGCL and approved by the Commission for FY 2024-25 (Rs. Crore)

Station/Unit	Return on Equity			Interest on loan			Depreciation			O&M expenses			IoWC			Less:NTI			AFC		
	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved	Approved in MYT	Claimed	Approved
Bhusawal	14.23	13.64	13.64	0.43	0.29	0.29	23.69	21.84	19.24	122.54	128.71	127.67	16.49	19.43	19.29	2.73	1.78	1.78	**174.65**	**182.13**	**178.35**
Chandrapur	130.10	191.07	161.54	46.19	129.64	85.74	76.48	252.77	215.49	724.05	735.87	734.85	98.97	162.85	142.49	19.60	6.38	6.38	**1056.18**	**1465.82**	**1333.73**
Khaperkheda	153.92	174.36	159.39	17.54	44.04	31.37	45.50	161.41	65.90	337.77	352.21	407.62	48.82	74.10	71.11	5.16	13.27	13.27	**598.40**	**792.84**	**722.12**
Koradi	54.14	48.84	41.97	12.27	20.83	19.56	84.63	76.98	36.59	236.47	259.14	255.54	18.88	20.65	17.60	1.60	63.01	63.01	**404.80**	**363.42**	**308.26**
Nashik	39.64	39.13	36.70	0.66	0.99	1.54	24.10	127.23	42.99	396.74	358.43	357.17	48.70	63.55	58.87	12.54	4.74	4.74	**497.29**	**584.58**	**492.51**
Uran	47.74	48.43	48.07	6.17	16.93	8.69	38.00	33.40	74.51	96.18	107.16	107.06	27.94	176.50	45.84	2.38	1.14	1.14	**213.65**	**381.28**	**283.03**
Paras Units 3&4	137.74	148.54	143.88	16.02	35.65	28.80	75.06	171.89	166.28	201.35	276.36	193.41	37.94	42.21	43.02	3.94	4.10	4.10	**464.16**	**670.55**	**571.30**
Parli Units 6&7	135.50	154.80	136.22	0.66	30.46	6.40	68.58	184.73	90.02	205.57	213.88	196.71	46.70	52.22	56.83	3.95	3.91	3.91	**453.07**	**632.18**	**482.26**
Khaperkheda Unit 5	111.55	127.58	121.47	48.79	64.07	57.46	188.49	209.16	199.55	144.11	184.69	158.60	34.84	47.56	49.77	4.10	8.14	8.14	**523.68**	**624.92**	**578.71**
Bhusawal Units 4&5	184.96	209.42	194.07	128.38	168.63	145.07	343.33	379.37	357.34	299.77	294.03	265.16	87.48	98.72	91.74	14.87	7.78	7.78	**1029.04**	**1142.38**	**1045.60**
Koradi Units 8-10	400.91	492.98	456.47	446.78	575.34	522.66	658.24	779.95	734.05	451.90	554.03	476.76	104.62	173.87	142.34	7.27	10.92	10.92	**2055.18**	**2565.24**	**2321.36**
Chandrapur Units 8&9	174.09	202.42	198.90	258.47	296.48	290.80	331.72	370.88	366.45	269.18	304.72	286.18	69.61	94.88	88.31	15.14	2.36	2.36	**1087.92**	**1267.01**	**1228.27**
Parli Unit 8	58.55	64.04	61.24	81.78	95.78	90.99	99.35	107.23	103.71	114.15	121.38	100.37	23.79	28.52	30.50	1.08	2.14	2.14	**376.55**	**414.80**	**384.66**
Hydro	13.42	14.83	10.97	10.14	15.39	9.84	27.26	21.93	19.07	236.89	261.57	261.57	12.02	11.69	12.19	4.76	3.39	3.39	**294.97**	**322.02**	**310.24**
Total	**1656.50**	**1930.06**	**1784.53**	**1074.30**	**1494.51**	**1299.20**	**2084.42**	**2898.76**	**2491.19**	**3836.64**	**4152.15**	**3928.67**	**676.80**	**1066.76**	**869.88**	**99.12**	**133.07**	**133.07**	**9229.55**	**11409.18**	**10240.40**

9.23 AFC REDUCTION

Commission's Analysis and Ruling

9.23.1 As detailed in the preceding section, the Commission has reduced the AFC for FY 2023-24 and FY 2024-25 as shown in the Table below:

Table 9.33: AFC reduction for FY 2023-24

Station/Unit	Target Availability	Projected Availability	Total AFC	Less: water charges	Total AFC minus water charges	AFC Reduction	Reduced AFC	Reduced AFC plus water charges
	%	%	Rs. Crore	Rs. Crore	Rs. Crore	Rs. Crore	Rs. Crore	Rs. Crore
Bhusawal	80.00%	79.75%	173.68	11.26	162.42	0.50	161.91	173.17
Chandrapur	80.00%	67.94%	1153.11	10.97	1142.14	172.18	969.96	980.93
Khaperkheda	85.00%	74.63%	676.96	60.09	616.87	75.24	541.63	601.72
Koradi	72.00%	72.00%	298.53	38.73	259.80	0.00	259.80	298.53
Nashik	80.00%	80.00%	471.53	13.58	457.95	0.00	457.95	471.53
Uran	85.00%	38.11%	271.50	1.12	270.38	0.00	121.22	122.34
Paras Units 3&4	85.00%	83.70%	464.24	4.28	459.96	7.03	452.93	457.21
Parli Units 6&7	85.00%	85.00%	462.65	13.62	449.03	0.00	449.03	462.65
Khaperkheda Unit 5	85.00%	85.00%	548.63	35.86	512.77	0.00	512.77	548.63
Bhusawal Units 4&5	85.00%	85.00%	1032.59	3.14	1029.45	0.00	1029.45	1032.59
Koradi Units 8-10	85.00%	71.68%	2292.42	81.80	2210.62	346.31	1864.31	1946.11
Chandrapur Units 8&9	85.00%	85.00%	1212.64	5.71	1206.93	0.00	1206.93	1212.64
Parli Unit 8	85.00%	85.00%	384.03	8.45	375.58	0.00	375.58	384.03
Total			**9442.50**	**288.61**	**9153.89**	**601.26**	**8403.46**	**8692.07**

Table 9.34: AFC reduction for FY 2024-25

Station/Unit	Target Availability	Projected Availability	Total AFC	Less: water charges	Total AFC minus water charges	AFC Reduction	Reduced AFC	Reduced AFC plus water charges
	%	%	Rs. Crore	Rs. Crore	Rs. Crore	Rs. Crore	Rs. Crore	Rs. Crore
Bhusawal	80.00%	79.75%	178.35	11.26	167.09	0.52	166.57	177.83
Chandrapur	80.00%	67.94%	1333.73	10.97	1322.76	199.41	1123.35	1134.32
Khaperkheda	85.00%	74.63%	722.12	60.09	662.03	80.75	581.28	641.37
Koradi	72.00%	72.00%	308.26	38.73	269.53	0.00	269.53	308.26
Nashik	80.00%	80.00%	492.51	13.58	478.93	0.00	478.93	492.51
Uran	85.00%	38.11%	283.03	1.12	281.91	0.00	126.39	127.51
Paras Units 3&4	85.00%	83.70%	571.30	4.28	567.02	8.67	558.35	562.63
Parli Units 6&7	85.00%	85.00%	482.26	13.62	468.64	0.00	468.64	482.26
Khaperkheda Unit 5	85.00%	85.00%	578.71	35.86	542.85	0.00	542.85	578.71
Bhusawal Units 4&5	85.00%	85.00%	1045.60	3.14	1042.46	0.00	1042.46	1045.60
Koradi Units 8-10	85.00%	71.68%	2321.36	81.80	2239.56	350.84	1888.72	1970.52

Station/Unit	Target Availability	Projected Availability	Total AFC	Less: water charges	Total AFC minus water charges	AFC Reduction	Reduced AFC	Reduced AFC plus water charges
	%	%	Rs. Crore	Rs. Crore	Rs. Crore	Rs. Crore	Rs. Crore	Rs. Crore
Chandrapur Units 8&9	85.00%	85.00%	1228.27	5.71	1222.56	0.00	1222.56	1228.27
Parli Unit 8	85.00%	85.00%	384.66	8.45	376.21	0.00	376.21	384.66
Total			**9930.15**	**288.61**	**9641.54**	**640.18**	**8845.83**	**9134.44**

9.24 REVISED TARIFF FOR THERMAL GENERATING STATIONS

Commission's Analysis and Ruling

9.24.1 The revised tariff for thermal generating stations for FY 2023-24 and FY 2024-25 is as shown in the Tables below:

Table 9.35: Tariff for thermal generating stations for FY 2023-24

Station/Unit	Approved in MYT		Claimed		Approved	
	AFC	ECR	AFC	ECR	AFC	ECR
	Rs. Crore	Rs./kWh	Rs. Crore	Rs./kWh	Rs. Crore	Rs./kWh
Bhusawal	148.46	4.199	176.47	4.506	173.17	4.408
Chandrapur	880.08	2.720	1220.85	3.872	980.93	4.103
Khaperkheda	470.65	3.016	707.25	3.936	601.72	4.197
Koradi	196.56	3.399	332.52	3.623	298.53	3.319
Nashik	500.56	3.660	490.61	5.067	471.53	4.647
Uran	212.89	2.932	226.85	8.557	122.34	6.760
Paras Units 3&4	432.88	3.227	543.31	3.292	457.21	3.483
Parli Units 6&7	417.73	4.360	471.76	4.493	462.65	5.100
Khaperkheda Unit 5	511.98	2.649	575.11	3.782	548.63	4.007
Bhusawal Units 4&5	1052.44	3.524	1070.39	4.135	1032.59	3.710
Koradi Units 8-10	1492.82	2.457	2423.39	3.464	1946.11	3.084
Chandrapur Units 8&9	1081.74	2.636	1234.13	3.848	1212.64	3.444
Parli Unit 8	333.48	4.174	400.74	4.623	384.03	5.016
Total	**7732.28**		**9873.37**		**8692.07**	

Table 9.36: Tariff for thermal generating stations for FY 2024-25

Station/Unit	Approved in MYT		Claimed		Approved	
	AFC	ECR	AFC	ECR	AFC	ECR
	Rs. Crore	Rs./kWh	Rs. Crore	Rs./kWh	Rs. Crore	Rs./kWh
Bhusawal	153.33	4.298	182.13	4.731	177.83	4.461
Chandrapur	893.20	2.783	1465.82	4.066	1134.32	4.097
Khaperkheda	474.67	3.087	792.84	4.133	641.37	4.218
Koradi	201.96	3.489	363.42	3.805	308.26	3.368
Nashik	497.29	3.753	584.58	5.321	492.51	4.641
Uran	213.65	3.020	381.28	8.985	127.51	6.760
Paras Units 3&4	436.55	3.311	670.55	3.456	562.63	3.510
Parli Units 6&7	421.20	4.482	632.18	4.717	482.26	5.096

Station/Unit	Approved in MYT		Claimed		Approved	
	AFC	ECR	AFC	ECR	AFC	ECR
	Rs. Crore	Rs./kWh	Rs. Crore	Rs./kWh	Rs. Crore	Rs./kWh
Khaperkheda Unit 5	501.83	2.713	624.92	3.971	578.71	4.019
Bhusawal Units 4&5	1029.04	3.615	1142.38	4.342	1045.60	3.746
Koradi Units 8-10	1462.80	2.518	2565.24	3.638	1970.52	3.119
Chandrapur Units 8&9	1064.01	2.700	1267.01	4.040	1228.27	3.442
Parli Unit 8	328.88	4.290	414.80	4.854	384.66	5.052
Total	**7678.42**		**11087.16**		**9134.44**	

9.25 HYDRO LEASE RENTAL

MSPGCL's submission

9.25.1 MSPGCL has claimed the lease rent of Rs. 533.76 Crore and Rs. 525.55 Crore for FY 2023-24 and FY 2024-25 respectively.

Commission's Analysis and Ruling

9.25.2 The Commission has approved the lease rent of Rs. 533.76 Crore and Rs. 525.55 Crore for FY 2023-24 and FY 2024-25 respectively, the same being in line with the approved lease rent.

9.26 TARIFF FOR HYDRO STATIONS

Commission's Analysis and Ruling

9.26.1 The Commission, in its MYT Order had approved the recovery mechanism of hydro stations with installed capacity above 25 MW, which are pure power projects (Koyna, Bhira TR and Tillari) in accordance with then prevailing MYT Regulations, 2019. In line with that approach, the Commission has now approved the AFC for these hydro Stations considering the proportion of AFC as submitted by MSPGCL for each of those Stations out of the total AFC for all hydro stations for FY 2023-24 and FY 2024-25.

9.26.2 The performance parameters approved by the Commission for hydro stations which are purely power projects are shown in the Table below:

Table 9.37: Norms for hydro stations

Station	Capacity (MW)	NAPAF (%)	Design Energy (MU)	AEC (%)
Koyna	1956	89.65%	3158	1.13%
Bhira TR	80	90.00%	70	0.70%
Tillari	60	90.00%	131	1.20%
Total	**489**		**1077**	

9.26.3 The AFC for hydro approved by the Commission is as shown in the Table below:

Table 9.38: AFC for hydro stations for FY 2023-24 and FY 2024-25 (Rs. Crore)

Particulars	FY 2023-24		FY 2024-25	
	Claimed	Approved	Claimed	Approved
AFC for Hydro	292.70	288.63	322.02	310.24
AFC for Hydro Stations with capacity more than 25 MW				
Koyna	129.47	127.66	148.68	143.25
Bhira TR	7.74	7.63	8.00	7.71
Tillari	17.17	16.93	17.66	17.02
AFC for other hydro stations	138.33	136.40	147.67	142.27

9.26.4 The Commission approves the recovery of AFC of Koyna, Bhira TR and Tillari through Capacity Charge and ECR as shown in the Table below:

Table 9.39: Capacity Charge and ECR for Koyna, Bhira TR and Tillari for FY 2023-24 and FY 2024-25

Particulars	Units	FY 2023-24		FY 2024-25	
		Claimed	Approved	Claimed	Approved
AFC for Hydro Stations with capacity more than 25 MW					
Koyna	Rs. Crore	129.47	127.66	148.68	143.25
Bhira TR	Rs. Crore	7.74	7.63	8.00	7.71
Tillari	Rs. Crore	17.17	16.93	17.66	17.02
AFC for other hydro stations	Rs. Crore	138.33	136.40	147.67	142.27
Design Energy					
Koyna	MU	3158.00	3158.00	3158.00	3158.00
Bhira TR	MU	70.00	70.00	70.00	70.00
Tillari	MU	106.06	106.06	106.06	106.06
Auxiliary Energy Consumption					
Koyna	%	1.13%	1.13%	1.13%	1.13%
Bhira TR	%	0.70%	0.70%	0.70%	0.70%
Tillari	%	1.20%	1.20%	1.20%	1.20%
Capacity Charge					
Koyna	Rs. Crore	64.73	63.83	74.34	71.62
Bhira TR	Rs. Crore	3.87	3.82	4.00	3.85
Tillari	Rs. Crore	8.58	8.46	8.83	8.51
Energy Charge Rate					
Koyna	Rs./kWh	0.207	0.204	0.238	0.229
Bhira TR	Rs./kWh	0.557	0.549	0.575	0.554
Tillari	Rs./kWh	0.819	0.808	0.843	0.812

9.26.5 The Commission approves the recovery of AFC of other hydro stations approved for the year in twelve equal monthly instalments.

9.27 INCIDENTAL EXPENSES TOWARDS FLY ASH UTILISATION

MSPGCL's submission

9.27.1 MSPGCL submitted that in order to comply with MoEF notification dated 31 December, 2021 and subsequent MoP Advisory notification dated 22 February, 2022 regarding ash utilisation, it is following the option-wise procedure stipulated to be followed to dispose off the ash in order to achieve 100% ash utilisation.

9.27.2 MSPGCL submitted that as per the procedure given in MoP advisory guidelines dated 22 February, 2022, as the first option the fly ash is to be sold through competitive bidding process and ash remaining unused after option 1 is to be given free of cost. If ash remains unutilised even after the steps taken in option 1 and 2 above, generator shall bear the cost of transportation of fly ash to be provided free to eligible projects. The transportation cost wherever required to be borne as per provisions of MOEF&CC notification by the power plants, shall be discovered on competitive bidding basis only. As per the notification, thermal power plants shall prepare a panel of transportation agencies every year based on competitive bidding for transportation in slabs of 50 km which may be used for the period.

9.27.3 Further, point no. 6 of MoP advisory guidelines dated 22 February, 2022, reads that "The Appropriate Commission shall scrutinize any expenses regarding ash utilization proposed to be passed through in tariff by the Generation Company in accordance with these guidelines to ensure that the least possible burden is passed on to electricity consumers and full transparency is ensured by Generating Company as envisaged in these Guidelines".

9.27.4 As the target of 100% ash utilization is not achieved in some of the power stations (especially Koradi, Khaperkheda etc.), MSPGCL is planning to undertake efforts under option 3 i.e., transport and supply the ash remaining unused even after options 1 & 2 to the eligible projects free of cost and bear the transportation costs. MSPGCL will adopt the competitive bidding process for empanelment of transportation agencies.

9.27.5 MSPGCL submitted that CERC vide its Order dated 1 November, 2022 in Case No. 205/MP/2021 approved the transportation charges for disposal of ash for NTPC stations. On similar lines, MSPGCL requested the Commission to allow pass through of such incidental transportation costs incurred by it in order to achieve 100% ash utilisation in the stations on a monthly basis as part of the monthly bills along with the fixed charges. MSPGCL further requested that the Commission may specify the prudence check that may be adopted for allowing such pass through of costs such that the same may be adhered to by the Petitioner and the relevant details may be submitted to the Commission as part of the true-up exercises.

Commission's Analysis and Ruling

9.27.6 The Commission has perused the submissions of MSPGCL in this regard. The Commission does not find it prudent to grant an umbrella approval for pass through of the expenses sought by MSPGCL, in the absence of estimates for the same. Therefore, the Commission directs MSPGCL to submit its claim of expenses in this regard duly submitting the compliance to the notifications of GoI along with justification under the relevant provisions of the Regulations in the true-up of the respective years for prudence check by the Commission.

10 PROVISIONAL TARIFF OF BHUSAWAL UNIT 6

10.1 BACKGROUND

10.1.1 The Commission, vide the Order dated 1 August, 2018 in Case No. 154 of 2018 ruled as under:

"12. The Commission in that Order dated 27 March, 2018 in Case No. 42 of 2017 had directed MSPGCL to approach the Commission afresh before initiating any new Thermal Projects which were approved in the PPA.

> *"24. MSPGCL shall approach the Commission afresh accordingly. In the meantime, it shall not take any effective steps in pursuance of the Generation Projects approved in the PPA or the other Projects now proposed in these proceedings which are at the planning stage or in respect of which contracts which had not been awarded at the time of the last MYT Order. Any capital expenditure incurred on these Projects shall be at MSPGCL's own risk and cost."*

13. In compliance with the Commission directives MSPGCL submitted a Petition for approval of Bhusawal Unit 6 (1X660 MW) and Umred Unit 1 (1 X800). MSPGCL in its submission has stated that it has issued the LoA to BHEL on17.01.2018 for Bhusawal Unit 6.

14. Further, MSPGCL vide its letter dated 5 June, 2018 informed that it is assessing the feasibility of implementing 2 X 660 MW project at Umred instead of presently envisaged 1X800 MW project. Therefore MSPGCL requested to consider only the part related to Bhusawal Unit 6 (1X660 MW) at this stage, as feasibility study and subsequent decision finalization for Umred project configuration are expected to take some more time. It will submit a separate Petition for Umred project, after finalization of the decision of project configuration. The scope in the present Petition is limited to additional generating capacity of Bhusawal Unit 6 (1 x 660 MW) against replacement of existing 630 MW.

15. At present, the MSPGCL, has a coal based thermal installed capacity of 10380 MW tied up on long term basis with MSEDCL. The evaluation of proposed Bhusawal Unit 6 (1 X660 MW) is done to assess the need of Coal based Thermal Power Plant, demand supply of the Maharashtra and impact of tariff on Consumer of Maharashtra."

"17.10 The Commission notes that the proposed thermal capacity is not exactly an addition as it is limited to the extent of retiring old and expensive units of 630 MW (Bhusawal Unit 2 & 3 and Nashik Unit 3) which are having Energy Charges of Rs 3.09/kWh, Rs 3.38/kWh respectively."

10.2 PROVISIONAL TARIFF OF BHUSAWAL UNIT 6

MSPGCL's Submission

10.2.1 MSPGCL submitted that Bhusawal Unit 6 (1x660 MW) is expected to be commissioned in FY 2023-24. Accordingly, MSPGCL requested the Commission to approve the provisional tariff for Bhusawal Unit 6 to be applicable till the determination of final tariff. MSPGCL submitted that it has considered the following assumptions for claiming the provisional tariff:

- Capital cost = Rs. 6097 Crore
- Availability & PLF = 85%
- GSHR = 2139 kcal/kWh
- SFOC = 0.5 ml/kWh
- AEC = 6.95%
- Transit loss = 0.80%
- Landed coal price = Rs. 3880/MT
- GCV as billed = 4100 kcal/kg
- GCV as received = 3500 kcal/kg

10.2.2 Based on the above assumptions, MSPGCL submitted the provisional tariff as under:

Table 10.1: Provisional tariff for Bhusawal Unit 6 claimed by MSPGCL

Particulars	Units	FY 2023-24	FY 2024-25
O&M expenses	Rs. Crore	1186.13	1310.05
Depreciation	Rs. Crore	103.78	116.18
Interest on loan	Rs. Crore	297.25	321.95
IoWC	Rs. Crore	389.19	404.44
RoE	Rs. Crore	236.45	256.09
Less: NTI	Rs. Crore	0.00	0.00
AFC	**Rs. Crore**	**1065.84**	**1145.58**
ECR	**Rs./kWh**	**2.809**	**2.865**

10.2.3 MSPGCL submitted the computations of claimed provisional tariff.

Commission's Analysis and Ruling

10.2.4 MSPGCL has considered the COD of Bhusawal Unit 6 as 30 April, 2023 for the purpose of provisional tariff computations.

10.2.5 Regulation 39 of the MYT Regulations, 2019 specifies as under:

"…

39.5 The Generating Company shall file the Petition for determination of provisional Tariff for new Generating Station, at least two months prior to the anticipated date of *commercial operation of Generatin Unit or Stage or Generating Station as a whole, as the case may be.*

39.6 The Generating Company shall file a Petition for determination of provisional Tariff for new Generating Station based on capital expenditure incurred and projected to be incurred up to the date of commercial operation and additional capital expenditure incurred, duly certified by the statutory auditors:

Provided that the Petition shall contain details of underlying assumptions for the projected capital cost and additional capital cost, wherever applicable.

39.7 In the case of new projects, the Generating Company may be allowed provisional Tariff by the Commission from the anticipated date of commercial operation, based on the projected capital expenditure, subject to prudence check.

39.8 If the date of commercial operation is likely to be delayed beyond six months from the date of issue of the order approving the provisional Tariff, the Genrating Company may submit a Petition for seeking extension of the validity of the applicability of the provisional Tariff, giving details of the present status of completion and justification for the delay in project completion, which may be considered by the Commission after necessary prudence check."

10.2.6 In reply to a query, MSPGCL submitted the physical and financial progress of Bhusawal Unit 6. The start date of the project is 31 December, 2018 and the anticipated completion date is 30 June, 2023. The actual capital expenditure incurred upto Q2 of FY 2022-23 is Rs. 3183.27 Crore which amounts to 52% of the estimated capital cost of Rs. 6097 Crore. The actual physical progress upto Q2 of FY 2022-23 is 73%. As per the CEA's monthly report on broad status of under construction thermal power projects for the month of January, 2023, anticipated trial run of Bhusawal Unit 6 is in July, 2023.

10.2.7 The Commission in the Order dated 17 January, 2014 in Case No. 91 of 2013 ruled as under:

"4.6.37 The Commission is of the view that as the Generating Companies may submit the Petition for determination of provisional tariff based on capital expenditure actually incurred duly audited and certified by the statutory auditors, which may vary from project to project, it is necessary to have a framework in place for approving the provisional AFC in the present Case and for similar Cases in the future. The amount of audited capital expenditure incurred and the expected capital expenditure for the balance work to be completed to achieve CoD of the power plant as submitted by the Petitioner will be analysed for approval of provisional tariff. The Commission

proposes the following slabs for approving provisional Fixed Charges based on audited capital expenditure incurred, as submitted by the Petitioner:

Table 4.20: Slabs for approving provisional Fixed Charges based on audited capital expenditure

S. No.	***Audited Capital Expenditure as a % (percentage) of total estimated Project Cost till COD of the Plant***	***Allowable provisional Annual Fixed Charges as % of AFC claimed by the Petitioner***
1	*Upto 75%*	*No approval of provisional AFC*
2	*Above 75% and upto 80%*	*75% of AFC claimed by the Petitioner*
3	*Above 80% and upto 85%*	*80% of AFC claimed by the Petitioner*
4	*Above 85% and upto 90%*	*85% of AFC claimed by the Petitioner*
5	*Above 90%*	*90% of AFC claimed by the Petitioner*

“

10.2.8 The Commission deems it appropriate to determine the eligibility of provisional tariff for Bhusawal Unit 6 in line with the above matrix approved by the Commission. In the present case, the actual capital expenditure is only 52%. Therefore, in accordance with the above matrix, the Commission has not approved the provisional AFC of Bhusawal Unit 6 in this Order.

10.2.9 As regards ECR, MSPGCL submitted that the FSA with CIL under the SHAKTI Policy is yet to be executed for Bhusawal Unit 6. Therefore, there is no firm coal arrangement at this point of time. Therefore, the Commission does not find it prudent to approve ECR.

10.2.10 The Commission directs MSPGCL to file a separate Petition for approval of provisional tariff of Bhusawal Unit 6 after incurring atleast 75% of the estimated capital cost and in compliance to the provisions of the Regulations.

11 SUMMARY OF APPROVED TARIFF

11.1 TARIFF FOR THERMAL GENERATING STATIONS

11.1.1 The approved tariff for thermal generating stations of MSPGCL for FY 2023-24 and FY 2024-25 is as shown in the Table below:

Table 11.1: Approved tariff for thermal generating stations

Station/Unit	FY 2023-24		FY 2024-25	
	AFC	ECR	AFC	ECR
	Rs. Crore	Rs./kWh	Rs. Crore	Rs./kWh
Bhusawal	173.17	4.408	177.83	4.461
Chandrapur	980.93	4.103	1134.32	4.097
Khaperkheda	601.72	4.197	641.37	4.218
Koradi	298.53	3.319	308.26	3.368
Nashik	471.53	4.647	492.51	4.641
Uran	122.34	6.760	127.51	6.760
Paras Units 3&4	457.21	3.483	562.63	3.510
Parli Units 6&7	462.65	5.100	482.26	5.096
Khaperkheda Unit 5	548.63	4.007	578.71	4.019
Bhusawal Units 4&5	1032.59	3.710	1045.60	3.746
Koradi Units 8-10	1946.11	3.084	1970.52	3.119
Chandrapur Units 8&9	1212.64	3.444	1228.27	3.442
Parli Unit 8	384.03	5.016	384.66	5.052
Total	**8692.07**		**9134.44**	

11.1.2 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"

11.1.3 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 SLDC, 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.

11.1.4 As per Regulation 50.8 of the MYT Regulations, 2019, the thermal generating stations of MSPGCL 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).

11.2 TARIFF FOR HYDRO STATIONS

Commission's Analysis and Ruling

11.2.1 The approved tariff for hydro stations of MSPGCL for FY 2023-24 and FY 2024-25 is as shown in the Table below:

Table 11.2: Capacity Charge and ECR for Koyna, Bhira TR and Tillari

Station/Unit	FY 2023-24		FY 2024-25	
	Capacity Charge	ECR	Capacity Charge	ECR
	Rs. Crore	Rs./kWh	Rs. Crore	Rs./kWh
Koyna	63.83	0.204	71.62	0.229
Bhira TR	3.82	0.549	3.85	0.554
Tillari	8.46	0.808	8.51	0.812

Particulars	FY 2023-24	FY 2024-25
AFC for other hydro stations (Rs. Crore)	136.40	142.27

11.2.2 The Commission directs MSPGCL that Billing shall be done for Koyna, Bhira TR and Tillari separately, clearly indicating the capacity charges, energy charges and incentive, if any.

11.2.3 The AFC approved for other hydro stations shall be recoverable in twelve equal monthly instalments.

12 COMMISSION'S DIRECTIVES

12.1 DIRECTIVES IN ORDER DATED 30 AUGUST, 2016 IN CASE NO. 46 OF 2026

12.1.1 The Commission directed MSPGCL to submit the details of LD recovered from the Contractors for Bhusawal Units 4&5. MSPGCL has submitted the details of finalised LD for Bhusawal Units 4&5, which has been considered as discussed in Chapter 3 of the Order.

12.2 DIRECTIVES IN ORDER DATED 12 SEPTEMBER, 2018 IN CASE NO. 196 OF 2017

12.2.1 The Commission directed MSPGCL to devise a yearly action plan for effective utilisation of water available for power generation at Koyna HPS in consultation with MSEDCL so that the peak power requirements of MSEDCL during the corresponding year are met at least cost possible. The Commission further directed to apprise the Commission of the yearly action plan chalked out at the beginning of each water year and the monthly report on the adherence to the same along with detailed justification for deviations, if any.

12.2.2 In compliance to this directive MSPGCL submitted as under:

12.2.3 MSPGCL usually operates the Koyna HPA as per the instructions from SLDC or MSEDCL. MSPGCL has always strived in consultation with MSEDCL for effective utilisation of water available for power generation so that the peak demand requirements of MSEDCL during the corresponding year are met. For planning purpose, MSPGCL prepares planned outages programme for the various units at Koyna HPS. Following are the various aspects considered for broader annual planning:

- As per Krishna Water Tribunal Award only 67.5 TMC water is allocated for westward diversion i.e., for generation through Stage I &II (600 MW) and Stage IV (1000 MW) of Koyna HPS.
- The Koyna Dam Power House (KDPH) (2 x 18 MW) is run as per schedule intimated by GoMWRD during eastward water release for irrigation &drinking purpose.
- As per the prevailing Scheduling procedure under DSM, the schedules for Koyna Generation Complex are given by MSEDCL on the basis of daily capacity declaration given by Koyna in the Scheduling module. For such daily capacity declaration, MSPGCL takes into consideration the balance water availability, unit outages programme and constraints like restrictions on water release etc. Units are usually operated as per these schedules. However, in the real-time the Units are also operated as per instructions of SLDC according to demand of electricity & generation stability.
- For efficient use of water, 1/3rd water is allotted to Stages I &II (600 MW) and

2/3rd water is allotted to Stage IV (1000 MW).

- Yearly generation targets are given by CEA.
- MSPGCL has limited control over water utilization due to fixed water quota allocation and operations as per instructions from MSEDCL or SLDC.

12.3 DIRECTIVES IN ORDER DATED 30 MARCH, 2020 IN CASE NO. 296 OF 2019

Evaluation of all possible options to meet the environment norms.

12.3.1 The Commission directed MSPGCL to evaluate all the possible options in detail to meet the environmental norms in the DPRs to be submitted by MSPGCL for approval of capital expenditure to meet the environment norms.

12.3.2 MSPGCL submitted that it has carried out detailed study and analysis of possible options for meeting the revised environment norms and has accordingly submitted the proposed capex schemes for installation of FGDs / additional ESPs, wherever required. The Commission has considered these submissions and has accorded In-principle approval to such capex proposals.

Separation of capital cost related data for Units proposed for retirement.

12.3.3 The Commission directed MSPGCL to finalise the separation of capital cost related data like GFA, accumulated depreciation, long-term loans, equity etc. for the Units proposed to be retired and submit the same with the MTR Petition. The Commission further directs MSPGCL that pursuant to COD of the upcoming Units, MSPGCL should retire the old Units and stop raising the bills towards approved ARR for the retired Units.

12.3.4 MSPGCL submitted that it has not envisaged retirement of any of the old Units during FY 2023-24 and FY 2024-25.

Cost Benefit Analysis of Coal Beneficiation

12.3.5 The Commission directed MSPGCL to carry out the proper cost benefit analysis of coal beneficiation after receiving the tenders and before going ahead for placing the contracts for coal beneficiations. MSPGCL should try to ensure that the effective landed price of washed coal at thermal stations in terms of Rs./kcal is lower than the landed price of coal at thermal stations in terms of Rs./kcal. MSPGCL submitted that the cost benefit analysis has been submitted in the FUP. The Commission once again directs MSPGCL to comply with this direction.

12.4 DIRECTIVES ISSUED IN THIS ORDER

Additional capitalisation of Bhusawal Units 4&5 for FY 2022-23 (Para 3.1.9)

12.4.1 The Commission directs MSPGCL to include the said amount in its claim of final true-up for FY 2022-23 along with all the supporting documents for prudence check by the Commission.

Reimbursement of expenses from GoM (Para 3.11.8)

12.4.2 The Commission directs MSPGCL to pass through the expenses reimbursed by GoM to MSEDCL and submit the status of the same in the MYT Petition for the next Control Period.

Discrepancies in submissions (Para 4.1.3)

12.4.3 The Commission directs MSPGCL to take adequate caution in its submissions made before the Commission.

Operation of Uran Power Station in Combined Cycle (Para 4.7.3)

12.4.4 The Commission directs MSPGCL to optimally utilise the gas available and operate the Uran Power Station in combined cycle mode to the maximum extent possible. The Commission also directs MSPGCL to submit the complete details and justification in case Uran Power Station is operated in open cycle mode for a certain period of the year at the time of true-up.

Generation loss due to O&M factors (Para 4.3.8, Para 5.3.7)

12.4.5 The Commission directs MSPGCL to submit a plan within three months to ensure the improvement in its O&M practices for reduction in generation loss due to O&M factors.

Detailed Action Plan towards Coal Shortage (Para 4.3.10)

12.4.6 MSPGCL shall submit its detailed action plan for long term solution based on scientific study on the alternative of procurement of coal to he financial impact of the same. coal short while filing the MYT petition for the next control period.

Compensation under the Grid Code (Para 5.8.6)

12.4.7 The Commission directs MSPGCL to take recourse to the provisions of the MERC (State Grid Code) Regulations, 2020 and the claim compensation accordingly from the Buyer.

Coal beneficiation (Para 8.5.6)

12.4.8 The Commission directs MSPGCL to carry out the proper cost benefit analysis of coal beneficiation for each year from FY 2022-23 onwards and submit the same in the true-up of the respective years. MSPGCL should try to ensure that the effective landed price of washed coal at thermal station in terms of Rs./kcal is lower than the landed price of normal mined coal at thermal station in terms of Rs./kcal.

Co-firing of biomass pellets (Para 8.5.11)

12.4.9 The Commission directs MSPGCL to comply with the notification of GoI regarding the co-firing of biomass pellets in its coal based power plants.

Grade slippage (Para 9.9.14)

12.4.10 The Commission directs MSPGCL to take all the necessary and adequate steps to minimize the grade slippage and submit the efforts taken by MSPGCL in the true-up of respective years for considering the relaxed norms approved in this Order on its merit.

Incidental expenses towards fly ash utilisation (Para 9.27.6)

12.4.11 The Commission directs MSPGCL to submit its claim of expenses in this regard duly submitting the compliance to the notifications of GoI along with justification under the relevant provisions of the Regulations in the true-up of the respective years for prudence check by the Commission.

Provisional tariff of Bhusawal Unit 6 (Para 10.2.10)

12.4.12 The Commission directs MSPGCL to file a separate Petition for approval of provisional tariff of Bhusawal Unit 6 after incurring atleast 75% of the estimated capital cost and in compliance to the provisions of the Regulations.

13 APPLICABILITY OF THE ORDER

This Order shall come into effect from 1 April, 2023.

The Petition of Maharashtra State Power Generation Company Limited in Case No. 227 of 2022 stands disposed of accordingly.

Sd/-	Sd-	Sd/-
(Mukesh Khullar)	**I. M. Bohari**	**(Sanjay Kumar)**
Member	**Member**	**Chairperson**

(Abhijit Deshpande)
Secretary

Annexure-I: List of Persons who attended the Technical Validation Session held on 13 December, 2022

Sr. No.	Name	Company / Institution
1.	Shri. Balasaheb Thite	MSPGCL
2.	Shri. S. M. Marudkar	MSPGCL
3.	Shri. Diwakar Gokhale	MSPGCL
4.	Shri. Abhay Harne	MSPGCL
5.	Shri. Rajesh Patil	MSPGCL
6.	Shri. Rajesh Morale	MSPGCL
7.	Shri. Rahate	MSPGCL
8.	Shri. Pankaj Sharma	MSPGCL
9.	Shri. Anil A. Bapat	MSPGCL
10.	Shri. Sushant Patil	MSPGCL
11.	Shri. Yogesh Karwande	MSPGCL
12.	Shri. Ramandeep Singh	Consultant for MSPGCL
13.	Shri. Anil Patkare	Consultant for MSPGCL

Annexure-II: List of Persons who attended the e-Public Hearing held on 31 January, 2023

Sr. No.	Name	Company/Institution
1	Shri. P. Anabalgan, IAS	CMD, MSPGCL
2	Shri. Balasaheb Thite	MSPGCL
3	Shri. S. M. Marudkar	MSPGCL
4	Shri. Diwakar Gokhale	MSPGCL
5	Shri. Abhay Harne	MSPGCL
6	Shri. Rajesh Patil	MSPGCL
7	Shri. Girish Kumarwar	MSPGCL
8	Shri. Vijay P. Rathod	MSPGCL
9	Shri. Ramandeep Singh	Consultant for MSPGCL
10	Shri. Anil Patkare	Consultant for MSPGCL
11	Shri Sunil Patil	MSEDCL
12	Shri. Ashok Sreenivas,	Prayas Energy Group, Pune
13	Ms. Maria Chirayil,	Prayas Energy Group, Pune
14	Ms. Ashwini Chitnis,	Energy sector researcher
15	Shri. R. B. Goenka	VIA
16	Shri. Rahul Sihani	MSPGCL
17	Shri. Pankaj Sharma	MSPGCL
18	Shri. Anil A. Bapat	MSPGCL
19	Shri. R.R.Kulkarni	MSPGCL
20	Shri. S.A.Nikalaje	MSPGCL