# Jharkhand State Electricity Regulatory Commission



Order on
True-up for FY 2023-24,

Annual Performance Review for FY 2024-25
for

Tata Power Company Limited (TPCL)

Ranchi March 28, 2025



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# **List of Abbreviations**

Abbreviation	Description
A&G	Administrative and General
APR	Annual Performance Review
ARR	Aggregate Revenue Requirement
ATE	Appellate Tribunal for Electricity
COD	Date of Commercial Operation
Cr.	Crore
ECR	Energy Charge Rate
FY	Financial Year
GCV	Gross Calorific Value
GFA	Gross Fixed Assets
GoI	Government of India
HO & SS	Head Office and Shared Services
JSERC	Jharkhand State Electricity Regulatory Commission
Kcal	Kilocalorie
Kg	Kilogram
kWh	Kilowatt-hour
LDC	Load Dispatch Centre
LPPF	Landed Price of primary fuel
MAT	Minimum Alternative Tax
MCL	MCL Mahanadi Coalfields Ltd. (IB Valley Coalfields)
M1	Millilitre
MT	Million Tonnes
MU	Million Units
MW	Megawatt
NAPAF	Normative Annual Plant Availability Factor
O&M	Operation and Maintenance
PAF	Plant Availability Factor
PLF	Plant Load Factor
PPA	Power Purchase Agreement
R&M	Repair and Maintenance



Abbreviation	Description
RoE	Return on Equity
Rs.	Rupees
SBI	State Bank of India
SERC	State Electricity Regulatory Commission
SLM	Straight Line Method
TPCL	Tata Power Company Limited
TSL	Tata Steel Limited
UoM	Unit of Measurement
WB	West Bokaro



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#### **BEFORE**

# Jharkhand State Electricity Regulatory Commission, Ranchi

Case (Tariff) No.: 12 of 2024

In the matter of:

# Petition for True-up for FY 2023-24, and Annual Performance Review for FY 2024-25

#### In the matter:

#### **PRESENT**

Shri Mahendra Prasad Shri Atul Kumar Member (Law) Member (Technical)

# Order dated March 28, 2025

Tata Power Company Limited (hereinafter referred to as TPCL or the Petitioner) has filed the Petition dated November 29, 2024 for Truing up for FY 2023-24, Annual Performance Review for FY 2024-25, for Unit-II and Unit-III at Jojobera.



# **Chapter 1: INTRODUCTION**

#### **Jharkhand State Electricity Regulatory Commission**

- 1.1 The Jharkhand State Electricity Regulatory Commission (hereinafter referred to as the "JSERC" or the "Commission") was established by the Government of Jharkhand under Section 17 of the Electricity Regulatory Commission Act, 1998 on August 22, 2002. The Commission became operational with effect from April 24, 2003.
- 1.2 The Government of Jharkhand vide its notification dated August 22, 2002 has defined the functions of JSERC as per Section 22 of the Electricity Regulatory Commission Act, 1998 to be the following, namely:
  - (a) to determine the tariff for electricity, wholesale, bulk, grid or retail, as the case may be, in the manner provided in section 29;
  - (b) to determine the tariff payable for the use of the transmission facilities in the manner provided in section 29;
  - (c) to regulate power purchase and procurement process of the transmission utilities and distribution utilities including the price at which the power shall be procured from the generating companies, generating stations or from other sources for transmission, sale, distribution, and supply in the State;
  - (d) to promote competition, efficiency, and economy in the activities of the electricity industry to achieve the objects and purposes of this Act.
- 1.3 After the Electricity Act, 2003 came into force, the earlier Electricity Regulatory Commission Act of 1998 stands repealed and the functions of State Electricity Regulatory Commission are now defined under Section 86 of the Act.
- 1.4 In accordance with Section 86 (1) of the Act, the JSERC discharges the following functions:
  - (a) determine the tariff for generation, supply, transmission, and



wheeling of electricity, wholesale, bulk or retail, as the case may be, within the State:

Provided that where open access has been permitted to a category of consumers under section 42, the State Commission shall determine only the wheeling charges and surcharge thereon, if any, for the said category of consumers;

- (b) regulate electricity purchase and procurement process of distribution licensees including the price at which electricity shall be procured from the generating companies or licensees or from other sources through agreements for purchase of power for distribution and supply within the State;
- (c) facilitate intra-state transmission and wheeling of electricity;
- (d) issue licenses to persons seeking to act as transmission licensees, distribution licensees and electricity traders with respect to their operations within the State;
- (e) promote cogeneration and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person, and also specify, for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution licensee;
- (f) adjudicate upon the disputes between the licensees and generating companies; and to refer any dispute for arbitration;
- (g) levy fee for the purposes of this Act;
- (h) specify State Grid Code consistent with the Grid Code specified under Clause (h) of sub-section (1) of Section 79;
- (i) specify or enforce standards with respect to quality, continuity and reliability of service by licensees;
- (j) fix the trading margin in the intra-state trading of electricity, if



considered, necessary;

- (k) discharge such other functions as may be assigned to it under this Act.
- 1.5 The Commission has to also advise the State Government as per sub section 2 of Section 86 of the Act, on all or any of the following matters, namely:
  - (a) promotion of competition, efficiency and economy in activities of the electricity industry;
  - (b) promotion of investment in electricity industry;
  - (c) reorganization and restructuring of electricity industry in the State;
  - (d) matters concerning generation, transmission, distribution and trading of electricity or any other matter referred to the State Commission by that Government.
- 1.6 The State Commission shall ensure transparency while exercising its powers and discharging its functions.
- 1.7 In discharge of its functions, the State Commission is also guided by the National Tariff Policy, 2016 as brought out by Government of India in compliance to Section 3 of the Act. The objectives of the National Tariff Policy are to:
  - (a) ensure availability of electricity to consumers at reasonable and competitive rates;
  - (b) ensure financial viability of the sector and attract investments;
  - (c) promote transparency, consistency and predictability in regulatory approaches across jurisdictions and minimize perceptions of regulatory risks;
  - (d) promote competition, efficiency in operations and improvement in quality of supply;



- (e) Promote generation of electricity from Renewable sources;
- (f) Promote Hydroelectric Power generation including Pumped Storage Projects (PSP) to provide adequate peaking reserves, reliable grid operation and integration of variable renewable energy sources;
- (g) Evolve a dynamic and robust electricity infrastructure for better consumer services;
- (h) Facilitate supply of adequate and uninterrupted power to all categories of consumers;
- (i) Ensure creation of adequate capacity including reserves in generation, transmission and distribution in advance, for reliability of supply of electricity to consumers.

#### Tata Power Company Limited (TPCL)

- 1.8 Tata Power Company Limited (hereinafter referred to as TPCL or the Petitioner), is a company incorporated under the Indian Companies Act, (VII of 1913) with its Registered Office at Bombay House, 24, Homi Mody Street, Fort, Mumbai 400001 and is engaged in the business of Electricity Generation, Transmission and Distribution.
- 1.9 Tata Steel Limited (TSL), which is engaged in the production of iron and steel and is also a distribution licensee in Jamshedpur (Jharkhand), obtained permission from the Government of Bihar to establish power plants in Jojobera in 1991 through its subsidiary company named Jamshedpur Power Company Limited (JAPCOL) which was subsequently transferred to Tata Power Company Limited (TPCL). TPCL thereafter commissioned five Units out of which two Units (Unit-II & Unit-III) of 120 MW each at Jojobera is dedicated to supply power to TSL.
- 1.10 TPCL operates five units at Jojobera, Jharkhand with a cumulative capacity of 547.5 MW out of which two units (Unit-II & Unit-III) are the subject matter of tariff determination in this Tariff Order. Both units have an installed capacity of 120 MW each. Unit-II commenced its operations on February 01, 2001 and Unit-III on February 01, 2002.



#### The Petitioner's Prayers

- 1.11 The Petitioner in the instant Petition made the following prayers before the Commission:
  - Accept the Petition;
  - Approve the Operational, Fuel and Financial Parameters, Additional Capitalization, Annual Revenue Requirement and Generation Tariff for Unit-II and Unit-III of Jojobera proposed through Truing-up for FY 2023-24 and APR for FY 2024-25 proposals enclosed herewith;
  - Grant liberty to the Petitioner to approach the Commission at appropriate stage subsequently:
    - a. for determination of Supplementary Tariff for FGD System to be installed for Units-II and III including compensation operational parameter additional capital cost, deterioration and O&M/water expenses in accordance Regulation 14.16 and all other relevant with Regulations/provisions under JSERC (Terms Conditions for Determination of Generation Tariff) Regulations, 2020. It is pertinent to mention here that Jojobera TPP has been classified to be under Category C and date of implementation of FGD System for this Category has been extended by MoEFCC to December 2026;
    - b. for approval of Renovation & Modernisation (R&M) Plan for Units 2 and 3 after carrying out RLA Study in upcoming annual shutdowns in Third/Fourth Control Period as the case may be;
    - c. for pass through of arrears of Water Charges paid/ payable to TSL but not approved/ claimed as per the Commission's Orders along with applicable carrying cost;
    - d. for claiming compensation for deterioration in operational parameters due to low PLF;
    - e. to modify/make additions to the above Capex/Other proposals, if need arises during the proceedings of the



- present Petition and/or in subsequent True-up/APR Petitions
- f. to seek revision in tariff due to wage revision agreement being reached/or with subsequent Truing-up Petition(s).
- Provide an opportunity to the Petitioner to present its case prior to the finalization of the Tariff Order. Tata Power believes that such an approach would provide a fair treatment to all the stakeholders and may eliminate the need for a review or clarification.
- Permit the Petitioner to propose suitable changes to the Petition and the mechanism of meeting the revenue on further analysis, prior to the final approval by the Commission;
- Condone any inadvertent omissions/errors/rounding-off differences/shortcomings and permit the Petitioner to add/alter this filing and make further submissions as may be required at a future date.
- Pass such further and other Orders, as the Commission may deem fit and proper, keeping in view the facts and circumstances of the case.



# **Chapter 2: PROCEDURAL HISTORY**

#### **Background**

- 2.1 The Commission had passed Business Plan & Multi Year Tariff for Control Period for FY 2016-17 to FY 2020-21 by Order dated February 19, 2018.
- 2.2 Later, the Petitioner had filed a review petition against the MYT Order dated February 19, 2018 which was disposed-off by the Commission by Order dated January 9, 2019.
- 2.3 The Commission had passed the True-up for FY 2016-17 by Order dated December 27, 2019.
- 2.4 The Commission had passed the True-up for FY 2017-18, Annual Performance Review for FY 2018-19 and Mid-Term review for Revised Annual Revenue Requirement and Generation Tariff for FY 2019-20 & FY 2020-21 by Order dated February 14, 2020.
- 2.5 The Commission had passed the True-up for FY 2018-19 and Annual Performance Review for FY 2019-20 by Order dated September 09, 2020.
- 2.6 The Commission had passed the True-up for FY 2019-20, Annual Performance Review for FY 2020-21, Business Plan and Multi Year Tariff for the Control Period for FY 2021-22 to FY 2025-26 by Order dated November 04, 2022.
- 2.7 The Commission had passed the True-up for FY 2020-21 and Annual Performance Review for FY 2021-22 by Order dated May 22, 2023.
- 2.8 Later the Petitioner had filed a review petition against the True-up for FY 2019-20, Annual Performance Review for FY 2020-21, Business Plan and Multi Year Tariff for the Control Period for FY 2021-22 to FY 2025-26 by Order dated November 04, 2022 which was disposed-off by the Commission by Order dated January 09, 2024.
- 2.9 The Commission had passed the True-up for FY 2021-22 and Annual Performance Review for FY 2021-22 by Order dated January 09, 2024.



- 2.10 The Commission had passed the True-up for FY 2022-23 and Annual Performance Review for FY 2023-24 by Order dated June 06, 2024.
- 2.11 The Petitioner filed a review petition challenging the True-up for FY 2021-22 and the Annual Performance Review for FY 2022-23, as per the Order dated January 9, 2024. This petition was subsequently disposed of by the Commission through an Order dated December 20, 2024.
- 2.12 Further, the Petitioner filed a review petition challenging the True-up for FY 2022-23 and Annual Performance Review for FY 2023-24, as per the Order dated June 6, 2024. This petition was subsequently disposed of by the Commission through an Order dated February 27, 2025.

#### Information Gaps in the Petitions

- 2.13 In exercise of the Tariff determination process, several deficiencies/information gaps were found in the Petition submitted by the Petitioner and the same was communicated to the Petitioner vide letter no. JSERC/Case (Tariff) No. 12 of 2024/460 dated December 17, 2024.
- 2.14 On December 28, 2024, the Petitioner responded to the query raised by the Commission and provided the necessary affidavit.
- 2.15 The Commission further scrutinized the additional data/information furnished by the Petitioner with respect to its discrepancies identified and raised additional (2<sup>nd</sup>) queries/discrepancies/information gaps. The same was communicated to the Petitioner vide letter no. JSERC/Case (Tariff) No. 12 of 2024/590 dated February 25, 2025.
- 2.16 The Petitioner responded to the 2<sup>nd</sup> data Gap on March 11, 2025 and provided the necessary evidences as asked by the Commission.
- 2.17 The Commission has re-scrutinized the petition along with the submission of the Petitioner with respect to  $2^{nd}$  information gaps and has considered the same while passing this Order.

#### **Inviting Public Comments/Suggestions**

2.18 During the scrutiny of the petition, the Commission has directed the



Petitioner vide letter no. JSERC/Case (Tariff) No. 12 of 2024/506 dated January 17, 2025. to publish a Public Notice inviting comments/suggestions from public and to make available copies of the Petition to the members of general public on request.

2.19 Accordingly, Public Notice was published by the Petitioner in the newspapers for two consecutive days and a period of twenty-one (21) days was given for submitting the comments/suggestions by the general public.

Table 1: List of newspapers and dates of publication of public notice by the Petitioner

Newspaper	Date of Publication
Prabhat Khabar	24.01.2025 & 25.01.2025
Hindustan	24.01.2025 & 25.01.2025
The Hindustan Times	24.01.2025 & 25.01.2025
The Pioneer	24.01.2025 & 25.01.2025

2.20 Further, the Commission had organized a Public Hearing on February 28, 2025, where an additional opportunity to all the Stakeholders was provided to submit their comments/suggestions on the instant petition. The newspapers wherein the Notice was published by the Commission are mentioned below:

Table 2: List of newspapers and dates of publication of public notice by the Commission

Newspaper	Date of Publication
Prabhat Khabar (Hindi)	18.02.2025
Dainik Bhaskar (Hindi)	18.02.2025
The Times of India (English)	18.02.2025
The Hindustan Times (English)	18.02.2025
Dainik Jagaran (Hindi)	27.02.2025
Hindustan Dainik (Hindi)	27.02.2025
The Times of India (English)	27.02.2025
The Hindustan Times (English)	27.02.2025



# Submission of Comments/Suggestions and Conduct of Public Hearing

2.21 Objections/Comments/Suggestions on the Petition were received. The Objections/Comments/Suggestions of the Public, Petitioner's responses and Commission's views thereon are detailed in **Chapter 4** of this Order.



# **Chapter 3: BRIEF FACTS OF THE PETITION**

3.1 This Chapter summarizes the Petition of Truing-up for FY 2023-24, and Annual Performance Review for FY 2024-25, as filed by the Petitioner for the Commission's approval.

#### Truing up for FY 2023-24

3.2 The table below summarizes the Annual Revenue Requirement for FY 2023-24 as submitted by the Petitioner against approved in the Tariff Order dated June 06, 2024.

Table 3: Annual Revenue Requirement (Rs. Cr.) as submitted by the Petitioner.

Particulars		Unit-II		Unit-III	
Particulars Particulars Particulars	UoM	APR	Petition	APR	Petition
O&M Expenses	Rs. Cr.	55.07	56.89	53.27	54.71
Depreciation	Rs. Cr.	7.36	19.45	7.98	17.82
Interest on Loan	Rs. Cr.	2.41	1.92	2.50	2.16
Interest on Working Capital	Rs. Cr.	11.30	11.80	11.26	11.67
Return on Equity	Rs. Cr.	29.74	29.70	29.04	28.76
AFC	Rs. Cr.	105.87	119.77	104.05	115.13
Water Charges	Rs. Cr.	5.88	5.90	5.68	5.62
Capital Spare	Rs. Cr.	0.00		0.00	0.00
Incentive (Pre-Tax)	Rs. Cr.	0.00	0.00		
Energy Charge	Rs. Cr.	250.75	249.02	243.72	237.29
Less: Discount as per [SHAKTI 2&3]	Rs. Cr.	3.87	3.83	3.58	3.30
Less: Gain on Operational Parameters[25%]	Rs. Cr.	0	1.70	0	1.87
Less: Gain on O&M Expenses [50%]	Rs. Cr.	0	1.78	0	1.78
Less: Non-Tariff Income	Rs. Cr.	0	1.75	0	1.71
Net Annual Revenue Requirement	Rs. Cr.	358.64	365.63	349.86	349.37



#### **Annual Performance Review for FY 2024-25**

3.3 The Petitioner has projected the Annual Revenue Requirement for FY 2024-25 based on the actual figures for first six months of FY 2024-25 and estimated for the remaining six months of FY 2024-25 as tabulated below.

Table 4: Annual Revenue Requirement (Rs. Cr.) as submitted by the Petitioner

Particulars	UoM	Uni	t-II	Un	it-III
Farticulars	OOM	MYT	Petition	MYT	Petition
O&M Expenses	Rs. Cr.	56.66	60.90	54.35	58.52
Depreciation	Rs. Cr.	8.54	23.17	9.02	19.33
Interest on Loan	Rs. Cr.	1.96	0.92	1.90	1.33
Interest on Working Capital	Rs. Cr.	9.14	12.46	9.20	12.15
Return on Equity	Rs. Cr.	28.34	30.04	27.53	28.97
AFC	Rs. Cr.	104.64	127.49	102.01	120.30
Water Charges	Rs. Cr.	6.18	6.21	6.18	6.94
Capital Spare	Rs. Cr.			0.00	0.00
Incentive (Pre-Tax)	Rs. Cr.				0.00
Energy Charge	Rs. Cr.	221.06	246.05	226.92	270.32
Less: Discount as per [SHAKTI 2&3]	Rs. Cr.	3.63	2.43	3.63	2.98
Less: Non-Tariff Income	Rs. Cr.	0.00	0.00		0.00
Net Annual Revenue Requirement	Rs. Cr.	328.25	377.31	331.48	398.40



# Chapter 4: PUBLIC CONSULTATION PROCESS

- 4.1 On the Petitioner's plea several stakeholders responded. The Public Hearing was held on February 28, 2025 at Jamshedpur to ensure maximum public participation and transparency wherein Stakeholders put forth their comments and suggestions before the Commission. The list of attendees is attached as **Chapter 9** to this Order.
- 4.2 The comments and suggestions of the public along with the response of the Petitioner and the views of the Commission are summarized in this Chapter. The issues raised by the stakeholders, which don't fall in the line to True-up, and APR have not been discussed in this Chapter.

#### Querist- Shri. Vinod Kumar Jha

#### Public Comments/Suggestions

- 4.3 The querist enquired about the CSR activities being done for Jojobera
- 4.4 The querist submitted that uninterrupted power should be supplied to Jojobera and nearby areas.
- 4.5 The querist further suggested for implementation of more pollution control measures.

#### Petitioner Response

- 4.6 As regards the query for CSR activities as well as uninterrupted power supply for Jojobera and nearby areas, the petitioner submitted that the same is beyond the purview of tariff petition and may kindly be kept aside.
- 4.7 As regards, the pollution control measures, the Petitioner submitted that TPCL is in compliance with the emission norms as applicable. Further, the FGD (Flue Gas Desulfurization) project is under implementation and shall be commissioned within the time lines prescribed by the Ministry of Environment, Forest and Climate Change (MoEF&CC) in respect of Jojobera Unit-2 and 3.



#### Querist- Shri. Jawaharlal Sharma

#### Public Comments/Suggestions

- 4.8 The querist suggested that no tariff increase should be allowed to the petitioner.
- 4.9 The querist suggested that Tata Power needed to implement permanent solution to the pollution problem.

#### Petitioner Response

- 4.10 As regards the query on increase in tariff, the Petitioner submitted that the expenditure claimed by the Petitioner have been incurred/ claimed as per the Generation Tariff Regulations issued by the Commission. The Petitioner further emphasized that continuous efforts are made by the petitioner to keep the tariff low
- 4.11 As regards the query regarding pollution problem, the same has already been replied in response to the query raised by Mr. Vinod Kumar Jha.

#### Querist-Shri V. P. Singh

#### Public Comments/Suggestions

4.12 The querist stated that the PPA agreement of TPCL, with Tata Steel is for 30 years and expected plant life is also in same line. Hence, depreciation should be allowed by the Commission as per existing practice.

#### Petitioner Response

- 4.13 The Petitioner most humbly submits that the Petitioner has prudently claimed the depreciation as per 1st proviso to regulation 15.30 of Generation Tariff Regulation -20, by spreading balance depreciable value over remaining useful life of the plant which is 25 years.
- 4.14 Further, it is noteworthy here that the Petitioner had incurred the Capital Cost in the year 2001, 2002, with the PPA term of 30 years, envisaging



the returns ensured in the erstwhile PPA. It is to be noted here that with realigning of the terms and conditions of the PPA with the Tariff Regulations (except the term of the PPA remaining same, i.e. 30 years), the returns are reduced as compared to the returns available in the erstwhile PPA. Under such scenario, when returns are reduced as compared to those envisaged in the beginning, keeping the term for recovery of the capital cost through depreciation for the longer/ original term of 30 years, is unreasonable.

4.15 As such, in the humble submission of the Petitioner, the capex is required to be recovered within the useful life of 25 years which is also as per the practice followed by all the regulators including the Central Electricity Regulatory Commission.

#### Querist- Sh. Kush Kumar

#### Public Comments/Suggestions

- 4.16 The querist appreciated the petitioner for maintaining availability above 90%.
- 4.17 The querist suggested that Shakti coal linkage which is presently corresponding to 75% of the PLF, should be increased.

#### Petitioner Response

4.18 The current coal linkage with CCL under Shakti Round-2 and Round-3 which is corresponding to the quantity allowed under the scheme document which was 90% of quantity required for 85% PLF. This was also consistent with the PLF of the units which also used to be around 75%. For additional coal requirement, if any, Tata Power is taking due measures to secure the same at the best possible competitive rates through e-auctions conducted by CIL or coal from Tata Steel West Bokaro mines. It is submitted that further increase in Shakti Coal linkage depends upon the future requirement and its commercial viability.

#### Commission analysis



4.19	The Commission has noted the Stakeholder's objection and Petitioner's response on the said issue.



# Chapter 5: TRUE-UP FOR FY 2023-24

- 5.1 The Commission had passed order on MYT for the 3<sup>rd</sup> Control Period i.e., FY 2021-22 to FY 2025-26 vide Order dated November 04, 2022 based on the principles specified in the JSERC Generation Tariff Regulations, 2020.
- 5.2 The Commission had passed review order case no. 18 of 2022 vide order dated January 09, 2024 based on principles specified in the JSERC Generation Tariff Regulations, 2015, and JSERC Generation Tariff Regulations 2020 along with amendment thereof.
- 5.3 The Commission had passed True-up for FY 2021-22 and Annual Performance Review for FY 2022-23 by Order dated January 09, 2024.
- 5.4 The Commission had passed True-up for FY 2022-23 and Annual Performance Review for FY 2023-24 by Order dated June 06, 2024.
- 5.5 The Commission had passed review order case no. 04 of 2024 vide order dated December 20, 2024 based on principles specified in the JSERC Generation Tariff Regulations, 2015, and JSERC Generation Tariff Regulations 2020 along with amendment thereof.
- 5.6 The Commission further issued a review order in Case No. 21 of 2024 on February 27, 2025, in accordance with the principles outlined in the JSERC Generation Tariff Regulations, 2015, as well as the JSERC Generation Tariff Regulations, 2020, and their subsequent amendments.
- 5.7 In the instant petition the Petitioner has sought approval for True-up for FY 2023-24 and Annual Performance Review for FY 2024-25 based on the Generation Tariff Regulation 2020, Generation Tariff Regulation (1st Amendment) 2023 and the methodology adopted by the Commission in the previous Tariff Order.
- 5.8 The Commission on the basis of provisions of the Tariff Regulations, 2020, and Generation Tariff Regulation (1st Amendment) 2023, has determined the True-up for FY 2023-24 on consideration of:
  - Audited account for FY 2023-24;



- Certified Document submitted by the Petitioner;
- Methodology adopted by the Commission in its earlier Orders.

#### **Operational Performance**

#### Plant Availability Factor (PAF)

#### Petitioner's Submission

5.9 The Petitioner has submitted that the month-wise actual plant availability duly certified by Tata Steel Load Dispatch Centre (LDC). Accordingly, claimed the average annual plant availability for Unit-II & Unit-III as 97.61% and as 91.32% respectively.

#### Commission's Analysis

- 5.10 In accordance with 'clause 16.1' of JSERC Generation Tariff Regulation (1st Amendment) 2023, the Commission approves the Normative Plant Availability factor as 85.00%.
- 5.11 On scrutinizing and analyzing the month wise actual plant availability factor duly certified by Tata Steel, LDC as annexed in 'annexure P3' of main petition and on prudent check, the Commission approves the actual plant availability for FY 2023-24 as 97.61% and as 91.32% for Unit-II and Unit-III respectively as given below:

Table 5: Plant availability as approved by the Commission.

Particulars Particulars	UoM	APR	Petition	Approved			
Unit-II							
NAPAF	%	85.00	85.00	85.00			
Actual Plant Availability	%	93.34	97.61	97.61			
Unit-III							
NAPAF	%	85.00	85.00	85.00			
Actual Plant Availability	%	86.44	91.32	91.32			

#### **Auxiliary Consumption**

#### Petitioner's Submission

5.12 The Petitioner has submitted that the actual Auxiliary Power



Consumption of both the Units, i.e. Unit-II and Unit-III for FY 2023-24 is 8.75% as compared to Normative Auxiliary Power Consumption of 10.00% for each Unit as specified in 1<sup>st</sup> Amendment Generation Tariff Regulation 2023. While these are annual average of monthly actual auxiliary consumption, the Normative of 10.00% has been considered for Truing-up for both Unit-II and Unit-III. Accordingly, Auxiliary Consumption of 10.00% has been considered for FY 2023-24.

#### Commission's Analysis

- 5.13 In accordance with *clause 16.1* of JSERC Generation Tariff Regulation (1st Amendment) 2023, the Commission approves the normative auxiliary Consumption as 10.00% for both units.
- 5.14 On scrutinizing and analyzing the material, information, and actual figure and details as annexed in 'Annexure-P3' data Gap reply submission and on prudent check the Commission approves the actual auxiliary consumption is given below.

Table 6: Auxiliary Consumptions as approved by the Commission.

Particulars		APR	Petition	Approved
	UNIT-II			
Normative Auxiliary Consumption	%	10.00	10.00	10.00
Actual Auxiliary Consumption	%	9.04	8.75	8.75
	UNIT-II	I		
Normative Auxiliary Consumption	%	10.00	10.00	10.00
Actual Auxiliary Consumption	%	9.13	8.75	8.75

#### **Plant Load Factor and Generation**

#### Petitioner's Submission

5.15 The Petitioner has submitted the actual Plant Load Factor (PLF) for Unit-II and Unit-III as 83.34% and 79.20% respectively. For Unit-II the PLF is less than the normative PLF of 85.00% is mainly due to lower system demand for some of the months; while for Unit-III it is because of Annual Shut Down in the month of Dec-23.



5.16 The Petitioner has claimed the actual gross generation from Unit-II and Unit-III of Jojobera generating station as 878.51 MUs and 834.78 MUs respectively as per *Annexure-P2*. Likewise, the Petitioner has submitted net generation (ex-bus generation) for Unit-II and Unit-III as 801.61 MUs and 761.78 MUs respectively.

#### Commission's Analysis

5.17 On scrutinizing and analyzing the material, information, actual figure and details submitted by the Petitioner and on prudent check the Commission approves the Gross Generation, Net Generation, and Plant Load Factor for FY 2023-24 is given below.

Table 7: Plant Load Factor and Generation as approved by the Commission

Particulars	UoM	APR	Petition	Approved				
UNIT-II								
Gross Generation	MU	888.68	878.51	878.51				
Net Generation	MU	808.36	801.61	801.61				
Actual PLF	%	84.31%	83.34%	83.34%				
		UNIT-III						
Gross Generation	MU	859.35	834.78	834.78				
Net Generation	MU	780.89	761.78	761.78				
Actual PLF	%	81.53%	79.20%	79.20%				

#### Gross Station Heat Rate (GHR)

#### Petitioner's Submission

5.18 The Petitioner has submitted the actual Gross Station Heat Rate (GHR) as 2539.37 kCal/kWh for Unit-II and 2538.13 kCal/kWh for Unit-III against the normative approved value of 2567.00 kCal/kWh and 2577.00 kCal/kWh for Unit-II and Unit-III respectively.

#### Commission's Analysis

5.19 In accordance with *clause 16.1* of JSERC Generation Tariff (1st Amendment) Regulation, 2023, the Commission approves the Normative Station Heat Rate as 2567.00 kCal/kWh and 2577.00 kCal/kWh for Unit-



II and Unit-III respectively.

5.20 On scrutinizing and analyzing the material, information, actual figure and details submitted by the Petitioner, the Commission approves the Actual Gross Station Heat Rate for FY 2023-24 is given below.

Table 8: Gross Station Heat Rate (GHR) as approved by the Commission.

Particulars	UoM	UoM APR		Approved			
UNIT-II							
Normative Station Heat Rate	kCal/kWh	2567.00	2567.00	2567.00			
Actual Gross SHR	kCal/kWh	2567.00	2539.37	2539.37			
UNIT-III							
Normative Station Heat Rate	kCal/kWh	2577.00	2577.00	2577.00			
Actual Gross SHR	kCal/kWh	2577.00	2538.13	2538.13			

#### **Specific Fuel Oil Consumption**

#### Petitioner's Submission

5.21 The Petitioner has submitted the specific fuel oil consumption as 0.50 ml/kWh for both the Units for purpose of True-up for FY 2023-24. It has further submitted that actual specific fuel oil consumption as 0.37 ml/kWh for both the units for the purpose of computing gain due to actual operational performance.

#### Commission's Analysis

- 5.22 In accordance with *clause 16.1* of JSERC Generation Tariff Regulation (1st Amendment) 2023, the Commission approves the specific fuel oil consumption as 0.5 ml/kWh for both the Units.
- 5.23 On scrutinizing and analyzing the material, information, actual figure and details submitted by the Petitioner. And on prudent check the Commission approves the actual specific fuel oil consumption for FY 2023-24 is given below.



Table 9: Specific Fuel Oil Consumption as approved by the Commission

Particulars	UoM	APR	Petition	Approved
UN	IT-II			
Specific Fuel Oil Consumption	ml/kWh	0.50	0.50	0.50
Actual Specific Fuel Oil Consumption	ml/kWh	-	0.37	0.37
UN	IT-III			
Specific Fuel Oil Consumption	ml/kWh	0.50	0.50	0.50
Actual Specific Fuel Oil Consumption	ml/kWh	-	0.37	0.37

#### **Fuel Cost Parameter**

#### Coal Mix and Gross Calorific Value (GCV) of Primary Fuel

#### Petitioner's Submission

- 5.24 It was submitted that there has been minor variation in the actual fuel mix as compared to what the Commission has approved. The reasons for such minor variations are discussed in succeeding paragraphs.
- 5.25 It was submitted that in an effort to secure a quality supply of coal, Petitioner has entered into long term FSA with subsidiaries of CIL under Shakti Round 2 (About 4.64 Lakh MT) and Round 3 (About 5.77 Lakh MT) and benefits of the economical coal including the discount of 4 paise/kWh and 7 paise/kWh for generation corresponding to Shakti Round 2 and Round 3 is being passed on to end consumers. With commencement of supply from SHAKTI allocations, consumption of Shakti Coal has been maximized and benefits of the lower tariff along with the SHAKTI Discount has been passed on to the beneficiary through monthly billing.
- 5.26 It was further submitted that the coal supply under the Shakti scheme is only sufficient for a 75% Plant Load Factor (PLF). Therefore, the remaining coal has to be sourced from alternatives such as Middling Coal, other reject coal from West Bokaro collieries, e auction coal etc. This fact was also highlighted by the Petitioner in the MYT Petition, which was also acknowledged by the Commission in the MYT Order dated 04.11.2022. The Commission may further perceive that the demand of a distribution



licensee is beyond the control of the Generating Station. Consequently, these variations are unavoidable and outside the Generating Station's control.

- 5.27 Furthermore, it was submitted that the Ministry of Power (MoP) in series of directions/ notifications including directions issued in FY 23 and FY 24, has recognized the shortage of domestic coal and advised generating stations to procure imported coal to meet shortfall. Vide advisory dated 09.01.2023, MoP had directed all GENCOs to import coal for 6% blending upto Sept' 23, observing that supply of coal is not commensurate with the domestic coal requirement in view of the increasing energy demand. The advisory was extended with 4% blending ratio vide MoP letter dated 01.09.2023 for the remaining period of FY 2024. Further, vide advisory dated 25.10.2023, the advised blending ratio was revised to 6% for remaining period of FY 2024.
- 5.28 Petitioner, during above crisis, apart from approved sources has also relied on other domestic sources viz., e-auction Coal, Tailing and Reject Coal from West Bokaro Collieries to meet its coal requirement and thereby, has averted the need of high cost imported coal by relying upon FSA coal or other domestic sources. The copies of the MoP's direction dated 09.01.2023, 01.09.2023 and 25.10.2023 in this regard are enclosed herewith and marked as ANNEXURE P4A. It was further submitted that with all proactive and diligent measures, Petitioner was able to manage its coal requirements through CIL and Collieries of West Bokaro thereby containing the increase in coal cost.
- 5.29 It was further submitted that the Sub-Group Committee has been constituted comprising of members from MoP, MoC, Railways, CEA, CIL and officials from Generating companies for weekly review on supply of coal to power sector and supply plan to augment the coal stock at Plants/ Generating companies having lesser coal stock. Subgroup Committee during weekly review had mostly recommended a maximum of 1 Rake in RCR mode from CCL to Jojobera Units 2&3. Accordingly, coal supply from CCL to Jojobera unit was constrained to be supplied under Road cum Rail (RCR) mode only. The above restriction has, thus, impacted the actual coal materialization of CCL Shakti coal.



- 5.30 Petitioner, in view of the reasons discussed hereinabove and anticipating their impact on the coal materialization, had projected sourcing of small quantities of WB reject/ tailing coals for the FY 2023-24 which the Commission has also approved vide Order dated 06.06.2024.
- 5.31 Further, in an effort to ensure the adequate/ regular coal supply, Petitioner has now entered into the agreements for sourcing coal from West Bokaro Collieries and through e-auction organized by CIL. Petitioner has started receiving and consuming ECL e-auction coal from Q4 of the FY 2023-24.
- 5.32 Moreover, it was stated that the sourcing of imported coal could have impacted the Energy Charge Rate severely. However, with all proactive measures, petitioner was able to manage its coal requirements through CIL, E-Auction Coal organized by CIL or other coal from West Bokaro Collieries thereby containing the overall increase in coal cost.
- 5.33 It was submitted that Petitioner had duly apprised the beneficiaries for the procurement of coal from e auction to meet the coal deficit/overcome the emergency situation and obtained due consent from the same.
- 5.34 The Petitioner has already submitted the Fuel Supply Agreements between Petitioner & Coal India Limited (CIL) to the Commission vide additional 22 submission dated 11.01.2023 in case (Tariff) no. 18 of 2022 at Annexure 17. The same have not been annexed herewith, since, the documents are quite voluminous. In addition to above, the Petitioner has also entered into the agreements for sourcing coal from West Bokaro Collieries and through e-auction organized by CIL. Sales Agreement between Tata Steel Limited & Tata Power for supply of Middling Coal, Reject Coal & Tailing Coal and allocation letters issued by CIL in terms of the e-auction for FY 2024 had been submitted by the Petitioner for kind reference of the Commission vide additional submission dated 31.01.2024 in Case No. (T) 11 of 2023.
- 5.35 The Petitioner has enclosed annexure P5 which apprised the Commission on such minor deviation and overall impact on ECR on dated 30.06.2023, 30.09.2023, 31.12.2023 and 31.03.2024.



#### Commission's Analysis

- 5.36 The Commission has observed that the Petitioner had procured coal against the planned/agreed quantum that are approved by the Commission in its Tariff Order dated June 06, 2024. Petitioner has submitted justification for the same and the Commission perceive the submission. Nonetheless, it is instructed to adhere to the agreed-upon/planned quantum that has been authorized by the commission.
- 5.37 Considering the facts submitted by the Petitioner and after due diligence, the Commission approves the coal mix and weighted average GCV of coal for Unit-II and Unit-III of Jojobera Generation station as tabulated hereunder.

Table 10: Coal Mix and GCV for Unit-II as approved by the Commission

Table 10. Coal	Fuel Mix (%)			GCV (kCal/kg)		
Particulars	APR	Petition	Approved	APR	Petition	Approved
Middling Coal	7.43%	8.97%	8.97%	3870.51	3908.32	3908.32
WB Reject Coal	0.25%	0.25%	0.25%	1904.80	1904.80	1904.80
CCL [Shakti 3] Coal	42.16%	43.12%	43.12%	3702.02	3692.45	3692.45
ECL SFA Coal	0.00%	0.98%	0.98%	0.00	4802.93	4802.93
Tailing (Road) Coal	4.12%	1.91%	1.91%	4200.10	4257.58	4257.58
CCL [Shakti 2] WIV Coal	11.23%	11.50%	11.50%	3997.13	3997.13	3997.13
ECL [Shakti 2] Coal	6.64%	7.46%	7.46%	4741.04	4757.06	4757.06
CCL [Shakti 2] Coal	10.80%	11.13%	11.13%	3682.41	3676.28	3676.28
MCL [Shakti 2] Coal	16.66%	14.26%	14.26%	2895.87	2902.76	2902.76
CCL SFA	0.70%	0.40%	0.40%	3475.02	3167.91	3167.91
Wtg. Avg. GCV				3694.80	3726.93	3726.93

Table 11: Coal Mix and GCV for Unit-III as approved by the Commission

De die less	Fuel Mix (%)			GCV (kCal/kg)		
Particulars	APR	Petition	Approved	APR	Petition	Approved
Middling Coal	10.10%	12.50%	12.50%	3926.27	3929.95	3929.95
WB Reject Coal	0.20%	0.20%	0.20%	1904.80	1904.80	1904.80
CCL [Shakti 3] Coal	43.11%	38.09%	38.09%	3681.82	3711.73	3711.73



5 // 1	Fuel Mix (%)		(	GCV (kCal/l	l/kg)	
Particulars	APR	Petition	Approved	APR	Petition	Approved
ECL SFA Coal		1.07%	1.07%		4807.52	4807.52
Trailing [Road] Coal	3.48%	2.63%	2.63%	4202.71	4266.08	4266.08
CCL [Shakti 2] WIV Coal	7.47%	7.76%	7.76%	4031.85	4028.38	4028.38
ECL [Shakti 2] Coal	6.82%	6.60%	6.60%	4661.51	4707.98	4707.98
CCL [Shakti 2] Coal	12.53%	12.93%	12.93%	3695.49	3691.26	3691.26
MCL [Shakti 2] Coal	15.55%	17.96%	17.96%	2902.25	2905.77	2905.77
CCL SFA	0.75%	0.26%	0.26%	3675.04	3167.91	3167.91
Wtg. Avg. GCV				3694.58	3703.09	3703.09

#### **Transit Loss**

#### Petitioner's Submission

5.38 For the purpose of computation of Energy Charges, the petitioner has considered the normative transit loss of 0.8% in all categories of coal as provided in Regulation 17.11 of the Generation Tariff Regulation 2020.

#### Commission's Analysis

5.39 The Commission has observed that the actual transit loss of coal depends on various factors like category of coal, foreign particles content, moisture content, distance from mines etc. Considering all the factors, the Commission approves the weighted average normative transit loss of 0.8%.

#### **Landed Cost of Coal**

#### Petitioner's Submission

5.40 The Petitioner has submitted the source wise actual landed price of coal from each source by incorporating the normative transit loss.

#### Commission's Analysis

5.41 On scrutinizing and analyzing the material, information, actual figure



and details submitted by the Petitioner and on prudent check the Commission approves the Landed price of primary fuel for FY 2023-24 is tabulated hereunder.

Table 12: Landed Price of Primary Fuel (Rs/Ton) for Unit-II as approved by the Commission.

Particulars	Rs./Ton					
Particulars	APR	Petition	Approved			
Middling Coal	5225.54	5080.67	5080.67			
WB Reject Coal	4519.00	4519.00	4519.00			
CCL [Shakti 3] Coal	3230.48	3400.20	3400.18			
ECL SFA Coal	0.00	7800.00	7800.00			
Tailing (Road) Coal	7402.97	6622.64	6622.64			
CCL [Shakti 2] WIV Coal	4827.95	4827.95	4827.95			
ECL [Shakti 2] Coal	5603.70	5647.73	5647.73			
CCL [Shakti 2] Coal	3716.48	3719.73	3719.73			
MCL [Shakti 2] Coal	2792.79	2637.30	2637.30			
CCL SFA	4268.32	3525.00	3525.00			
Wtg. Avg. Landed Price of Primary Fuel	3877.83	3917.72	3917.71			

Table 13: Landed Price of Primary Fuel (Rs/Ton) for Unit- III as approved by the Commission.

Particulars		Rs./Ton				
Farticulars	APR	Petition	Approved			
Middling Coal	5494.51	5282.76	5282.76			
WB Reject Coal	4519.00	4519.00	4519.00			
CCL [Shakti 3] Coal	3248.26	3299.74	3299.72			
ECL SFA Coal		7800.00	7800.00			
Trailing [Road] Coal	7384.00	6392.05	6392.05			
CCL [Shakti 2] WIV Coal	4819.87	4817.79	4817.79			
ECL [Shakti 2] Coal	5549.38	5706.37	5706.37			
CCL [Shakti 2] Coal	3647.87	3650.76	3650.76			
MCL [Shakti 2] Coal	2789.07	2656.72	2656.72			
CCL SFA	4842.05	3525.00	3525.00			
Wtg. Avg. Landed Price of Primary Fuel	3886.35	3886.55	3886.54			

#### Calorific value and Cost of Secondary Fuel

#### Petitioner's Submission

5.42 The Petitioner has submitted the weighted average calorific value and landed price of secondary fuel (i.e., LDO) is 8916.67 kCal/L and Rs. 78439.77 /kL for Unit-II and 8917.60 kCal/L and Rs. 80156.92 /kL for Unit-III respectively.

## Commission's Analysis

5.43 On scrutinizing and analyzing the material, information, actual figure and details as annexed in 'annexure P7' & 'annexure P8' of the main petition and on prudent check the Commission approves the calorific value and landed price of secondary fuel for FY 2023-24 is tabulated hereunder.

Table 14: Calorific value & Landed Price of Secondary fuel as approved by the Commission.

Particulars	Calor	ific Value (	kcal/L)	Landed Price (Rs./kL)			
Particulars	APR	Petition	Approved	APR	Petition	Approved	
UNIT-II	8843.41	8916.67	8916.67	77855.08	78439.77	78439.77	
UNIT-III	8849.58	8917.60	8917.60	78156.00	80156.92	80156.92	

#### **Energy Charge Rate (ECR)**

- 5.44 The Petitioner has submitted the Energy Charge Rate (ECR) for FY 2023-24 as Rs. 3.106/kWh and Rs. 3.115/kWh for Unit-II and Unit-III respectively before taking into account the discount of Shakti Coal.
- 5.45 The Petitioner has considered the operational parameters at normative level as specified in Generation Tariff Regulation (First Amendments) 2023 i.e. Specific Fuel Consumption at 0.5 ml/kWh, Auxiliary Power Consumption of 10.00% for each units and station Heat rate as 2567 kCal/kWh and 2577 kCal/kWh for Unit-II & Unit-III respectively, for the purpose of computing the Energy Charge Rate for FY 2023-24.



- 5.46 Further, the Petitioner has considered the storage and handling loss of 85 kCal/kg in received GCV for Computation of ECR as specified in the Generation Tariff Regulation (First Amendments) 2023.
- 5.47 The Petitioner has further submitted that actual ECR (after SHAKTI Discount) for FY 2023-24 is almost same as approved ECR, with minor increase of 0.005 Rs/kWh in Unit 2 and slightly less by 0.003 Rs/kWh in Unit 3. It is worth mentioning that Petitioner has been able to contain the actual ECR to Rs. 3.059/kWh and Rs. 3.072/kWh for Unit-2 and Unit-3 respectively, by resorting to domestic coal supply only through its continued efforts as have been elaborated vide the quarterly reports submitted to the Commission, else sourcing of imported coal would have significantly impacted the actual ECR.

## Commission's Analysis

- 5.48 The Commission has outlined *clause 17.7*, *clause 17.8* of JSERC Generation Tariff Regulation, 2020, and *clause 7.1* of JSERC Generation Tariff (1st Amendment) Regulation, 2023 for the approval of the Energy Charge Rate (ECR) as reproduced below:
  - "17.7 Total Energy charge payable to the Generating Company for a month shall be = Energy charge rate (in Rs. /kWh) x Scheduled energy (ex-bus) for the month (in kWh.)
  - 17.8 Energy charge rate (ECR) in Rupees per kWh on ex-power plant basis shall be determined to three decimal places in accordance with the following formulae:
    - a) For coal based stations

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ECR = \{(SHR - SFC \ x \ CVSF) \ x \ LPPF/CVPF + SFC \ x \ LPSFi + LC \ x \ LPL\} \ x \ 1/ \ (1 - AUX)\}
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Where,

- *AUX Normative auxiliary energy consumption in percentage;*
- CVPF- (a) Weighted Average Gross calorific value of coal as received, in kCal per kg for coal based stations;
  - (b) Weighted Average Gross calorific value of primary fuel as



received in kCal per kg, per litre or per standard cubic meter, as applicable for lignite, gas and liquid fuel based stations;

(c) In case of blending of fuel from different sources, the weighted average Gross calorific value of primary fuel shall be arrived in proportion to blending ratio;

CVSF - Calorific value of secondary fuel, in kCal per ml

ECR - Energy charge rate, in Rupees per kWh.

SHR - Gross station heat rate, in kCal per kWh.

*LC* = *Normative limestone consumption in kg per kWh* 

LPPF - Weighted average landed price of primary fuel, in Rupees per kg, per litre or per standard cubic metre, as applicable, during the month. (In case of blending of fuel from different sources, the weighted average landed price of primary fuel shall be arrived in proportion to blending ratio)

LPSFi=Weighted Average Landed Price of Secondary Fuel in Rs./ml during the month

LPL = Weighted average landed price of limestone in Rupees per kg.

SFC - Specific fuel oil consumption, in ml per kWh ...."

#### Generation Tariff (1st Amendment) Regulation 2023

- 7.1 Provided that the cost of primary fuel shall be based on the landed cost incurred (taking into account normative transit and handling losses) by the generating station and gross calorific value of the fuel on 'as received basis' less 85 kCal/Kg on account of variation during storage at generating station as per actual weighted average for three months preceding the first month for which tariff is to be determined:
- 5.49 In accordance with *clause 10.1* of JSERC (Generation Tariff Regulation) 1<sup>st</sup> Amendment 2023, the Commission approves the normative operational parameter such as normative auxiliary consumption, Normative station Heat Rate, Specific fuel oil Consumption.
- 5.50 Accordingly, the Commission compute the ECR based on coal mix, GCV of primary fuel, GCV of secondary fuel, landed price of primary and



secondary fuel, normative transit loss, operational parameter as approved earlier in this Order is tabulated hereunder.

Table 15: Energy Charge Rate (ECR) for Unit-II as approved by the Commission.

Particulars	UoM	APR	Petition	Approved
Normative Auxiliary Consumption (AUX)	%	10.00%	10.00%	10.00%
Normative SHR	kCal/kWh	2,567.00	2,567.00	2,567.00
Normative SFC	mL/kWh	0.50	0.50	0.50
Calorific Value of Oil (CVSF)	kCal/ml	8.84	8.92	8.92
GCV of Primary Fuel (CVPF)	kCal/kg	3,609.80	3,641.93	3,641.93
Landed Price of Primary Fuel (LPPF)	Rs./kg	3.88	3.92	3.92
Landed Price of Secondary Fuel (LPSFi)	Rs./ml	0.08	0.08	0.08
Energy Charge Rate (ECR)	Rs/kWh	3.102	3.106	3.106

Table 16: Energy Charge Rate (ECR) for Unit-III as approved by the Commission

Particulars Particulars	UoM	APR	Petition	Approved
Normative Auxiliary Consumption (AUX)	%	10.00%	10.00%	10.00%
Normative SHR	kCal/kWh	2,577.00	2,577.00	2,577.00
Normative SFC	mL/kWh	0.50	0.50	0.50
Calorific Value of Oil (CVSF)	kCal/ml	8.85	8.92	8.92
GCV of Primary Fuel (CVPF)	kCal/kg	3,609.58	3,618.09	3,618.09
Landed Price of Primary Fuel (LPPF)	Rs./kg	3.89	3.89	3.89
Landed Price of Secondary Fuel (LPSFi)	Rs./ml	0.08	0.08	0.08
Energy Charge Rate (ECR)	Rs/kWh	3.121	3.115	3.115

# **Summary of Fuel Cost**

5.51 On consideration of the submission and details furnished by the Petitioner, the Commission approves the Fuel Cost for both the unit as summarized below:

Table 17: Fuel Cost for Unit-II as approved by the Commission.

Particulars	UoM	APR	Petition	Approved
Primary Fuel Cost	Rs. Cr.	247.26	245.52	245.52



Particulars	UoM	APR	Petition	Approved
Secondary Fuel Cost	Rs. Cr.	3.50	3.49	3.49
Total Energy Cost	Rs. Cr.	250.75	249.02	249.02

Table 18: Fuel Cost for Unit-III as approved by the Commission

Particulars	UoM	APR	Petition	Approved
Primary Fuel Cost	Rs. Cr.	240.33	233.90	233.90
Secondary Fuel Cost	Rs. Cr.	3.38	3.39	3.39
Total Energy Cost	Rs. Cr.	243.71	237.29	237.29

#### **Determination of Fixed Cost**

#### **Additional Capitalization**

- 5.52 The Petitioner has submitted the actual capitalization for Unit-II and Unit-III for FY 2023-24 which is broadly categorized under two heads:
  - **Capitalization-Standalone:** This category includes the capitalized costs incurred for assets/schemes exclusively for Unit-II or Unit-III.
  - Capitalization-Common Facilities: This category includes the assets/schemes which are common to all the Units at the Jojobera Power Plant i.e. Unit-I, Unit-II, Unit-III, Unit-IV of Tata Power and Unit-V of Industrial Energy Limited (IEL). These assets/schemes provide facilities to all the above Units and therefore the capitalized cost of such assets/schemes are apportioned to derive the GFA part of Unit-II and Unit-III appropriately.
- 5.53 The Petitioner has further submitted that the apportionment ratio was worked out individually for Unit-II and Unit-III and combined based on the installed capacity of these Units with respect to the installed capacity of Unit-I, Unit-II, Unit-III, Unit-IV and IEL Unit-V of Jojobera Power Plant is given below.



Table 19: Apportionment ratio as submitted by the Petitioner.

Particulars	UoM	MYT
Installed Capacity (Unit-I)	MW	67.5
Installed Capacity (Unit-II)	MW	120
Installed Capacity (Unit-III)	MW	120
Installed Capacity (Unit-IV)	MW	120
Installed Capacity (Unit-V-IEL)	MW	120
Installed Capacity of Jojobera Power Plant	MW	547.5
Contribution of Unit-II	%	21.92
Contribution of Unit-III	%	21.92
Combined Contribution (Unit-II + Unit-III)	%	43.84

5.54 In **ANNEXURE P11** of this petition, the Petitioner has furnished detailed revised capitalization/ decapitalization approved by the Commission vide APR Order dated 06.06.2024 and the revised capitalization/ decapitalization plan proposed for the remaining years of the control period including actual capitalization/ decapitalization till FY 2024 as given below.

Table 20: Scheme-wise additional capitalization including apportioned additional capitalization (in Rs. Lakh) of common facilities- Unit 2 & 3 for FY 2023-24

Sr · N.	Project Description	Approved Cap. Plan (APR Order) (Value Apportioned to Unit 2&3)				Actual	Capitalisati	on (FY22,23,2	24) and revised	d Cap. Plan	(FY25,26)		
		FY-22	FY-23	FY-24	FY-25	FY-26	Total	FY-22	FY-23	FY-24	FY-25	FY-26	Total
1	Replacement of Dead Tank CT with Live Tank CT (Carry forward)	24.87	13.51	26.61	24.99		89.98	24.87	13.51	40.34	11.26		89.98
2	Control Room AC System			633.50			633.50			505.08	129.13		634.21
3	Workshop machine Tools, Condition Monitoring tools & Mobile Environmental dust Extractor			38.58	49.10		87.67			0.00	87.67		87.67
4	Ash Conveying pipe line			280.00			280.00			276.20			276.20
5	CHP Dozer			317.81			317.81			306.66			306.66
6	New Weigh Bridge for Bulker			49.11			49.11			0.00	49.11		49.11



Sr · N.	Project Description	Appro	Approved Cap. Plan (APR Order) (Value Apportioned to Unit 2&3)					Actual	Capitalisati	on (FY22,23,2	24) and revised	d Cap. Plan	(FY25,26)
		FY-22	FY-23	FY-24	FY-25	FY-26	Total	FY-22	FY-23	FY-24	FY-25	FY-26	Total
7	Multi-Layered Security System for Jojobera Power Plant.			52.84	67.71		120.54			0.00	120.55		120.55
8	Upgradation of Fans Pneumatic Actuators to Electrical Actuator			240.00			240.00			239.68			239.68
9	Procurement of Laptops/IT Equipment	6.80	4.16	0.00			10.95	6.80	4.16	30.4			41.36
10	Other minor assets, Vehicles etc		19.38	0.00			19.38		19.38	29.76			49.14
	Total	31.67	37.05	1638.44	141.79	-	1848.95	31.67	37.05	1428.12	397.73	-	1894.57

- 5.55 The Petitioner submits that the actual capitalization for "145KV LIVE TANK CTS 1000/1 FOR LINES AND BS" deviates from the one approved in APR order dated June 06, 2024. The reason primarily being the preponement of certain expenditure in FY 24 which were envisaged to be occurred during FY 25 considering requirements of project execution.
- 5.56 Moreover, regarding the capitalization of "control room AC system", the Petitioner submits that this project could only be implemented in the winter season of FY 24, as maintaining a constant temperature of around 22°C in the control room is technically feasible only during this period. Therefore, the balance related activity is supposed to be completed in FY 25.
- 5.57 Summarizing above facts, the Petitioner has submitted the scheme wise additional capitalization performed only in FY 2023-24 compared to capitalization plan as proposed in APR petition for FY 2023-24 as hereunder.

Table 21: Asset wise Capitalization (Rs. Crore) as submitted by the Petitioner.

Sr. No.	Scheme Name	Stand- alone Unit 2	Stand- alone Unit 3	Common allocated to Unit 2 & 3
1	145kV Live tank CTS 1000/1 for LINES AND BS	0.00	0.00	0.40



Sr. No.	Scheme Name	Stand- alone Unit 2	Stand- alone Unit 3	Common allocated to Unit 2 & 3
2	Ash conveying pipe line for UNIT#3	0.00	1.38	0.00
3	Ash conveying pipe line for UNIT#2	1.38	0.00	0.00
4	Cat dozer D9GC POWER 412 HP BUCKET CAP. 35.8 CU.M	0.00	0.00	3.07
5	U#3 Electrical actuators for fans	1.20	0.00	0.00
6	U#2 Electrical actuators for fans	0.00	1.20	0.00
7	U#3 Package air conditioning system for CR & NE	0.00	2.53	0.00
8	U#2 Package air conditioning system for CR & NE	2.53	0.00	0.00
9	IT Asset	0.00	0.00	0.30
10	Vehicle	0.00	0.00	0.30
	Grand Total	5.10	5.11	4.07

Table 22: Capitalization and Decapitalization (in Rs. Crore) as submitted by the Petitioner

Doubleylous	Uni	t-II	Unit-III			
Particulars	APR	Petition	APR	Petition		
Capitalization	8.19	7.14	8.19	7.14		
Decapitalization	1.72	1.84	1.72	1.83		

#### Commission's Analysis

5.58 The Commission has outlined *clause 14.1* to *clause 14.6* of JSERC Generation Tariff Regulation, 2020 for approval of any additional capitalization for a generating station as reproduced below:

### "Additional Capitalization

- 14.1 The additional capital expenditure in respect of a new project or an existing project incurred or projected to be incurred, on the following counts within the original Scope of Work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:
  - (a) Undischarged liabilities recognized to be payable at a



future date;

- (b) Works deferred for execution;
- (c) Procurement of initial capital spares within the original scope of work, subject to ceiling norms specified in this Regulation;
- (d) Liabilities to meet award of arbitration or for compliance of the order or directions of any statutory authority, or order or decree of any court of law;
- (e) On account of change in law or in compliance to any existing law;
- (f) Capital Expenses incurred due to force majeure conditions:

Provided that in case of any replacement/up gradation of the assets, the additional capitalization shall be worked out after adjusting the gross fixed assets and cumulative depreciation of the assets replaced on account of decapitalization;

Provided further that the details of work included in the original scope of work along with estimates of expenditure, undischarged liabilities and works deferred for execution shall be submitted along with the application for determination of tariff.

- 14.2 The additional capital expenditure incurred or projected to be incurred in respect of an existing project or a new project within the original scope of work and after the cut-off date may be admitted by the Commission, subject to prudence check on the following counts:
  - (a) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority, or order or decree of any court of law;
  - (b) Change in law or compliance of any existing law;
  - (c) Deferred works relating to ash pond or ash handling system in the original scope of work;
  - (d) Liability for works executed prior to the cut-off date;
  - (e) Force Majeure events;
  - (f) Liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments; and
  - (g) Raising of ash dyke as a part of ash disposal system.

14.3 In case of replacement/up gradation of assets deployed under



the original scope of the existing project after cut-off date, the additional capitalization may be admitted by the Commission, after necessary adjustments in the gross fixed assets and the cumulative depreciation, subject to prudence check on the following grounds:

- (a) The useful life of the assets is not commensurate with the useful life of the project and such assets have been fully depreciated in accordance with the provisions of these regulations;
- (b) The replacement of the asset or equipment is necessary on account of change in law or Force Majeure conditions;
- (c) The replacement of such asset or equipment is necessary on account of obsolescence of technology; and
- (d) The replacement of such asset or equipment has otherwise been allowed by the Commission.
- 14.4 The capital expenditure, in respect of existing generating station incurred or projected to be incurred on the following counts beyond the original scope, may be admitted by the Commission, subject to prudence check:
  - (a) Liabilities to meet award of arbitration or for compliance of order or directions of any statutory authority, or order or decree of any court of law;
  - (b) Change in law or compliance of any existing law;
  - (c) Force Majeure events;
  - (d) Any additional works/services, which have become necessary for efficient and successful operation of the generating station, but not included in the original project cost;
  - (e) Need for higher security and safety of the plant as advised or directed by appropriate Indian Government Instrumentality or statutory authorities responsible for national or internal security;
  - (f) Deferred works relating to ash pond or ash handling system in addition to the original scope of work, on case to case basis:

Provided also that if any expenditure has been claimed under Renovation and Modernisation or repairs and maintenance under O&M expenses, the same shall not be claimed under this Regulation;

(g) Usage of water from sewage treatment plant in thermal generating station.



- 14.5 In case there is additional capitalization proposed during the fag end of the project (at least 5 years before the Useful life or extended Useful life) of the plant, the Generating Company is required to submit the detail justification of its necessity during the fag year, Cost-Benefit analysis, DPR, if any and rate reasonability along with the residual life assessment report of the Project. The Commission may carry out prudence check based on the detail submitted by the Generating Company, its necessity, its financial viability before approval of such additional capitalization.
- 14.6 In case of de-capitalisation of assets of a Generating Company, the original cost of such asset as on the date of decapitalization duly certified by its Statutory Auditor shall be deducted from the value of gross fixed asset and corresponding outstanding loan on such assets as well as equity shall be deducted from loan and the equity balances respectively. Such deductions shall be carried out in the year such de-capitalisation takes place with corresponding adjustments in cumulative depreciation and cumulative repayment of loan shall be carried out duly taking into consideration the year in which it was capitalized"
- 5.59 The Commission has observed that for some projects there are deviations in the capitalization against the APR order dated June 06, 2024 due to technical constraints/demands. However, as a whole the Petitioner is adhering to June 06, 2024, APR order and there is no overall cost escalation against the approved cost. Accordingly, the Commission approves the capitalization for FY 2023-24. Further, in case there is need to review/revise any scheme or change in the Scope of Work, the same need to be submitted before the Commission with proper justification for approval.

Table 23: Asset wise Capitalization (Rs. Crore) as approved by the Commission.

Particulars Particulars	APR	Petition	Approved
Unit II Standalone			
Ash conveying pipe line for UNIT#2	1.40	1.38	1.38
U#2 Electrical actuators for fans	1.20	1.20	1.20
U#2 Package air conditioning system for CR & NE	3.16	2.53	2.53



Particulars Particulars	APR	Petition	Approved
Unit III Standalone			
Ash conveying pipe line for UNIT#3	1.40	1.38	1.38
U#3 Electrical actuators for fans	1.20	1.20	1.20
U#3 Package air conditioning system for CR & NE	3.16	2.53	2.53
Unit II & Unit III Common			
145kV Live tank CTS 1000/1 for LINES AND BS	0.27	0.40	0.40
Cat dozer D9GC POWER 412 HP BUCKET CAP. 35.8 CU.M	3.18	3.07	3.07
IT Asset	0.00	0.30	0.30
Vehicle	0.00	0.30	0.30
Multi-Layered Security System for Jojobera Power Plant.	0.53	0.00	0.00
New Weigh Bridge for Bulker	0.49	0.00	0.00
Workshop machine Tools, Condition Monitoring tools & Mobile Environmental dust Extractor	0.39	0.00	0.00
Net- Capitalization	16.38	14.28	14.28

- 5.60 Based on the submission made by the Petitioner and on prudent check, the Commission observes that the de-capitalization is related to Original Project Cost for which loan already had been paid by the Petitioner and Additional Capitalization for which the Petitioner has financed from internal accruals.
- 5.61 On scrutinizing, analyzing the material, information, and actual figure, the Commission approves the Capitalization and Decapitalization for FY 2023-24 is given below.

Table 24: Capitalization and Decapitalization (Rs. Crore) as approved by the Commission

Doubleston		Unit-II		Unit-III			
Particulars	APR	Petition	Approved	APR	Petition	Approved	
Capitalization	8.19	7.14	7.14	8.19	7.14	7.14	
Decapitalization	1.72	1.84	1.84	1.72	1.83	1.83	



Table 25: Gross Fixed Assets (Rs. Crore) for Unit II as approved by the Commission.

Particulars	APR	Petition	Approved
Opening GFA	491.27	491.27	491.27
Additional Capitalisation	8.19	7.14	7.14
Decapitalisation	1.72	1.84	1.84
Closing GFA	497.74	496.57	496.57

Table 26: Gross Fixed Assets (Rs. Crore) for Unit III as approved by the Commission.

Particulars	APR	Petition	Approved
Opening GFA	475.66	475.67	475.66
Additional Capitalisation	8.19	7.14	7.14
Decapitalisation	1.72	1.83	1.83
Closing GFA	482.13	480.98	480.97

#### **Depreciation**

- 5.62 The Petitioner has submitted the depreciation for FY 2023-24 as summation of depreciation incurred on the following assets:
  - Original Project Cost;
  - Additional Capitalization approved for FY 2011-12 to FY 2022-23;
  - Actual Additional Capitalization for FY 2023-24;
- 5.63 The Petitioner has proposed the recovery of remaining depreciable value on original project cost in accordance with depreciation rate specified in the Regulations, in case the cumulative depreciation of asset is less than 70%, else, by spreading it equally in the remaining Useful life i.e. 25 years.
- 5.64 The Petitioner has submitted that the cumulative depreciation on total assets [i.e. GFA (Including Additional Capitalization)] up to FY 2023-24 has crossed 70% for both the Units-II and-III. Hence, in accordance with *clause 15.30*, the balance depreciable value (i.e. 90% of the Capital Cost negating Cumulative depreciation recovered for assets in service upto 2022-23) spread over the balance useful life (taking useful life of 25 years specified in Regulations) of the Plant.



Table 27: Depreciation (Rs. Crore) as submitted by the Petitioner.

Particulars Particulars	Un	it-II	Unit-III	
Farticulars	APR	Petition	APR	Petition
Depreciation (Original Project Cost)	2.10	5.60	3.29	7.40
Depreciation (Add Cap)	5.26	13.85	4.69	10.42
Net Depreciation	7.36	19.45	7.98	17.82

#### Commission's Analysis

- 5.65 The Commission has outlined *clause 15.28* to *clause 15.34* of JSERC Generation Tariff Regulation, 2020 for the approval of Depreciation for a generating station as reproduced below:
  - "15.28 Depreciation shall be calculated every year, on the amount of Capital Cost of the assets as admitted by the Commission. In case tariff of multiple Units of a generating station is determined, weighted average life for the generating station shall be applied:

Provided that depreciation shall not be allowed on assets funded by Consumer Contribution and Capital Subsidies/Grants. Provision for replacement of such assets shall be made in the Capital Investment Plan.

- 15.29 Depreciation for each year shall be determined based on the methodology as specified in these Regulations along with the rates and other terms specified in these Regulations.
- 15.30 Depreciation shall be calculated annually, based on the straight-line method, at the rates specified at Appendix-I. The base value for the purpose of depreciation shall be original cost of the asset:

Provided that the Generating Company shall ensure that once the individual asset is depreciated to the extent of seventy (70) percent of the Book Value of that asset, remaining depreciable value as on March 31 of the year closing shall be spread over the balance useful life of the asset;

Provided that in case the tenure of PPA executed between the Generating plant and Beneficiaries is more than that of the Useful life of the plant, the Commission after prudence check may consider the PPA life for spreading the remaining



depreciable value as on March 31 of the year instead of useful life;

Provided that in case after carrying out the residual life assessment, it is found that the residual life of the generating station or unit as the case may be is beyond the useful life specified in these regulations the Commission after prudence check, may spread the remaining depreciable value to be recovered over the extended life of the plant.

15.31 Depreciation shall be charged from the first year of commercial operation of the asset. In case, the operation of the asset is for a part of the year, depreciation shall be charged on pro-rata basis:

Provided that any depreciation disallowed on account of lower availability of the generating station shall not be allowed to be recovered at a later stage during the useful life and the extended life.

15.32 The residual value of assets shall be considered as 10%and depreciation shall be allowed to a maximum of 90% of the original cost of the asset. Land is not a depreciable asset and its cost shall be excluded while computing 90% of the original cost of the asset:

Provided that the salvage value for IT equipment and software shall be considered as NIL and 100% value of the assets shall be considered depreciable: Provided further that in case of hydro generating stations, the salvage value shall be as provided in the agreement signed by the developers with the State Government for creation of the site:

- 15.33 The Commission may, in the absence of the Fixed Assets Register, calculate Depreciation (%) arrived by dividing the Depreciation and the Average Gross Fixed Assets as per the latest available Audited Accounts of the Generating Company. The Depreciation (%) so arrived shall be multiplied by the Average GFA approved by the Commission for the relevant Financial Year to arrive at the Depreciation for that Financial Year.
- 15.34 In case of de-capitalization of assets in respect of Generating Station or Unit thereof the cumulative depreciation shall be adjusted by taking into account the depreciation recovered through tariff towards decapitalization asset during its useful



services.

- 5.66 The Commission has observed that the Petitioner has adopted different methodology for calculation of depreciation vis-à-vis the method approved by the Commission.
- 5.67 On scrutinizing and analyzing the data, information submitted by the Petitioner, the Commission observes that the Plant is in fag end of its life and overall depreciation of the generating stations had reached 70% for both the Units. Hence, in accordance with *clause 15.30* Generation Tariff Regulation 2020, the Commission is of the view to spread the remaining depreciable amount equally.
- 5.68 In accordance with *clause 3.1 (65)* of Generation Tariff Regulation 2020, the Useful life of the generating station is 25 years, however, the petitioner had executed the Power Purchase Agreement (PPA) with the beneficiary for 30 years. Such signing of PPA, clearly infers that both the petitioner and beneficiary are aware that the existing plant is able to stand even after 25 years. Further, depreciating the legitimate depreciable amount in 25 years will defeat the purpose of reliability and economical power which is an attribute of long term PPA.
- 5.69 Accordingly, the Commission taking into account the PPA tenure and *clause 15.30 (proviso)* of Generation Tariff Regulation 2020, has spread the remaining depreciable amount in PPA life (30 years) which shall also economize the power cost, and therefore approves the depreciation taking into PPA life instead of Useful life.

Table 28: Depreciation (Rs. Crore) as approved by the Commission.

Particulars		Unit-II		Unit-III			
Farticulars	APR	Petition	Approved	APR	Petition	Approved	
Depreciation (Original Project Cost)	2.10	5.60	2.10	3.29	7.40	3.29	
Depreciation (Add Cap)	5.26	13.85	5.19	4.69	10.42	4.63	
Net Depreciation	7.36	19.45	7.30	7.98	17.82	7.92	



#### **Operation & Maintenance Expenses**

- 5.70 The Petitioner has claimed the Operation and Maintenance (O&M) expenses under the following broad categories: -
  - Projected O&M Expenses for the Control Period FY 2021-22 to 2025-26;
    - ➤ Employee Expenses without Terminal Liabilities;
    - > Repairs & Maintenance (R&M) Expenses;
    - ➤ Administrative and General (A&G) Expenses;
  - Petition application Fee & Publication Expenses;
  - Ash Disposal Expenses;
  - Raw water Expenses;
  - Terminal Benefit
  - Legal Expenses:
- 5.71 It is further submitted that O&M expenses viz., Employee Expenses without Terminal Benefits, R&M Expenses, Other A&G Expenses, Head Office Expenses, Legal Expenses are allowed on normative basis as approved by the Commission subject to truing-up of escalation factor in respective years in terms of Note-1 under Regulation 15.42 of Generation Tariff Regulation 2020. In Addition to it, Employee Expenses shall also be subject to variation in growth factor in respective years. While, O&M Expenses namely, Ash Disposal Expenses, Application and Publication Expenses, Terminal Benefits and Raw Water Charges shall be allowed on actual basis subject to prudence check.
- 5.72 Regarding Employee Expenses, it has been submitted that in the MYT petition, for the purpose of projection, growth factor of 1 was considered. However, considering the tighter norms to be met, stringent emission norms to be complied with and to rationalize already lean strength for improving reliability, additional manpower was required out of which 6 was sanctioned in 2020-21, 8 has been added in 2021-22 and 2 in FY 2022-23 for Units 1-4 of the Jojobera Power Plant. The Commission, vide its earlier true up orders for the respective years, have allowed the additions considering the reasoning cited by the Petitioner. For the FY 2023-24, there has been no addition to the manpower, which is in line



with the projected addition to manpower for FY 2023-24 submitted in APR petition for FY 2023-24. Further, the Petitioner humbly submits that in FY 2025, the Petitioner has envisaged the necessity of addition of manpower, numbering 10, on account of the reasons as stated above. Accordingly, Growth Factor, G, specified in Generation Tariff Regulation 2020 has been revised for three years as follows:

Table 29: Revised growth factor (G) for FY 2021-22, FY 2022-23 and FY 2023-24 – Unit 2 and 3.

Particulars	Submitted for FY 21 and thereafter	Actual as on	Actual as on 31.03.2022	Actual as on 31.03.2023	Actual as on 31.03.2024	Projected as on 31.03.2025
Management Cadre	136	142	150	153	153	163
Non- Management Cadre	43	43	43	42	42	42
Total	179	185	193	195	195	205
Increase		6	8	2	0	10
In % (G)		3.35%	4.32%	1.04%	0.00%	5.13%

5.73 Accordingly, Employee Expenses for FY 24 has been revised considering the actual growth factor till FY 21 and for subsequent years of the MYT considering cumulative growth factor up to FY 24 i.e., (1+3.35%) (1+4.32%) (1+1.04%) (1+0%) and further taking into account the actual inflation factor of 3.72% for FY 24 in place of 3.47% as considered in the MYT Order. The revised employee expenses without terminal benefits are summarized below for kind consideration of the Commission:

Table 30: Normative Employee Expenses (Rs. Crore) as submitted by Petitioner.

Particulars	FY-21 (Base Year)	FY-22	FY-23	FY-24	FY-25	FY-26	
Unit-II							
Employee Expenses	7.74	9.07	9.79	10.16	11.07	11.49	
Unit-III							
Employee Expenses	7.74	9.07	9.79	10.16	11.07	11.49	

5.74 The Petitioner has considered the actual inflation factor of 3.72% (as elaborated above) for the purpose of truing-up in place of inflation factor



of 3.47% as approved in the MYT Order November 04, 2022. Further it was submitted that to arrive at the Normative R&M Expenses, Other A&G Expenses, Legal Expenses and HO expenses for FY 23 the approved expenses in the MYT Order for FY 2022-23 is multiplied with the factor (1+3.72%)/ (1+3.47%) i.e., inflation of 3.47% is removed and in place of it, the actual inflation of 3.72% has been factored to arrive at the revised Normative Expenses. With actual inflation factor the Normative R&M Expenses, Other A&G Expenses, HO Expenses, Legal Expenses for FY 2023-24 works out to be following for Unit 2&3 and the same has been considered for the purpose of Truing-up of FY 2023-24.

Table 31: Revised normative Expenses (Rs. Crore) as submitted by Petitioner.

	Uni	t 2	Unit 3			
Particulars	Approved in the MYT Order	the MYT Revised		Revised		
	FY 2023-24	FY 2023-24	FY 2023-24	FY 2023-24		
R&M Expenses	18.01	21.03	17.18	19.49		
A&G Expenses	7.20	7.05	6.76	6.62		
Legal Expenses	0.01	0.01	0.01	0.01		
HO Expenses	14.41	14.10	14.36	14.06		

- 5.75 The petitioner has submitted that so far for FY 2022 and FY 2023, Raw Water Charges have been allowed by the Commission in accordance with the approach adopted in the MYT Order i.e. 100% of Base Water Charges and 52% of Water Tax.
- 5.76 As regards the Water Charges for FY 2023-24, the Petitioner has stated that the Government of Jharkhand (GoJ) has issued the revised water notification which is applicable from the 1st of April 2023. In terms of the revised notification, there are separate classifications for supply for industrial usage and supply for municipal. Tata Steel vide its email dated 05.07.2023 informed Tata Power that they agreed to the rates for supply of water for industrial usage (Rs 13.00 per KL) and have started paying the same in its entirety to GoJ and further requested Tata Power to also make full payment in terms of Invoices raised from 01.04.2023. Copy of



the revised Notification and email dated 05.07.2023 have already been provided by the Petitioner in the APR Petition for FY 2024.

5.77 Accordingly, for the purposes of present Petition, the Petitioner has considered 100% of the base water charges and 100% of the tax component, since no dispute is pending before any court for the period 01.04.2023 onward. The copies of the Raw Water Bills are enclosed as **ANNEXURE P17**. The water charges for unit 2 and unit 3 are summarized in the following table:

Table 32: Water Charges (Rs. Crore) as submitted by Petitioner.

	Unit#2	Unit#3
Base Value	3.09	2.94
Water tax	2.81	2.68
Total	5.90	5.62

- 5.78 The Petitioner has claimed Ash Disposal Expenses, and Terminal Liabilities on actual basis for the purpose of true-up for FY 2023-24, which is Rs 3.74 Crore for Unit 2 and Rs. 3.59 Crore for Unit 3 as per the Audited Accounts.
- 5.79 The petitioner has claimed Terminal Benefits of Rs 0.67 Crore each for Unit 2 and Unit 3 as per the Audited Accounts for the true-up 2023-24 in terms of Generation Tariff Regulation, 2020.
- 5.80 The Petitioner has claimed application and publication expenses of Rs 14.20 lakh for filing of True-up petition of FY 2023-24 and APR of FY 2024-25, which have been apportioned equally among Unit-2 & Unit-3. Additionally, the petitioner has incurred expenses of Rs. 11.80 lakh in February 2024 towards publication of public notice for the petition for Truing-up for FY 2023-24 and APR of FY 2024-25.
- 5.81 Based on the above submission, the detailed component-wise summary of O&M expenses for Unit-2 and Unit-3 has been shown below.



Table 33: O&M Expenses (Rs. Crore) as submitted by the Petitioner.

Doubleview	TI - DI	UNIT-II		UNIT-III	
Particulars Particulars	UoM	APR	Petition	APR	Petition
Employee Expenses	Rs. Cr.	10.04	10.16	10.04	10.16
Terminal Liabilities	Rs. Cr.	-	0.67	-	0.67
R&M Expenses	Rs. Cr.	20.58	21.03	19.63	19.49
Ash Disposal Expenses	Rs. Cr.	2.70	3.74	2.80	3.59
Raw Water	Rs. Cr.		5.90		5.62
HO Expenses	Rs. Cr.	14.41	14.10	13.90	14.06
Application & Publication Fee	Rs. Cr.	0.13	0.13	0.13	0.13
Other A&G Expenses	Rs. Cr.	7.20	7.05	6.76	6.62
Capital Spares	Rs. Cr	-			
Legal Expenses	Rs. Cr.	0.01	0.01	0.01	0.01
O&M Expenses	Rs. Cr.	55.07	62.79	53.27	60.33

#### Commission's Analysis

- 5.82 The Commission has outlined *clause 15.35* and *clause 15.40* of JSERC Generation Tariff Regulation, 2020 for the approval of Operation & Maintenance Charges for a generating station as reproduced below:
  - "15.35 Operation and Maintenance (O&M) expenses shall comprise of the following:
    - 1. Salaries, wages, pension contribution and other employee costs:
    - 2. Administrative and General costs;
    - 3. Repairs and maintenance expenses;

#### Existing Thermal Generating Stations:

- 15.40 The O&M Expenses for the Base Year of the Control Period shall be approved by the Commission taking into account the audited accounts of FY 2015-16 to FY 2019-20, Business Plan filed by the Generating Company, estimates of the actual for the Base Year, prudence checks and any other factor considered appropriate by the Commission".
- 5.83 Based on facts and circumstance of the petition, the Commission approves the normative Employee Expenses for FY 2023-24 by taking the actual value of inflation factor (3.72%) and growth factor (0.00%).



Table 34: Normative Employee Expenses (Rs Crore) as approved by the Commission.

Dantiaulana	TI-N/	Unit-II	Unit-III	
Particulars Particulars	UoM	Approved	Approved	
Employee Cost of Previous Year	Rs. Cr.	9.38	9.38	
Inflation Factor	%	3.72%	3.72%	
Growth Factor	%	0.00%	0.00%	
Normative Employee Expenses	Rs. Cr.	9.72	9.72	

5.84 Likewise, the Commission approves the normative A&G Expenses for FY 2023-24 based on the approved normative A&G Expenses for FY 2022-23 (excluding petition filing fee and CGRF expenses) by multiplying the actual inflation factor 3.72%.

Table 35: Normative A&G Expenses (Rs Crore) as approved by the Commission.

Doutieulous	TI - M	Unit-II	Unit-III	
Particulars Particulars	UoM	Approved	Approved	
A&G (n-1) Year	Rs Cr.	6.80	6.38	
Inflation Factor	%	3.72%	3.72%	
Normative A&G Expenses	Rs Cr.	7.05	6.62	

5.85 For the purpose of evaluating the normative R&M Expenses, the Commission has taken the approved opening value of GFA for FY 2023-24 and applied the "K" factor approved in the MYT Order, along with the cumulative inflation factor from the base year (FY 2020-21) to the respective year (FY 2023-24) of the Control Period, as outlined in the Commission's review order (**Case No. 21 of 2024**, dated 27th Feb. 2025). The detailed computation is provided below.

Table 36: Normative R&M Expenses (Rs Crore) as approved by the Commission.

Particulars Particulars	HoM	Unit-II	Unit-III	
Farticulars	UoM	Approved	Approved	
Opening GFA (a)	Rs. Cr.	491.27	475.66	
K-Factor (b)	%	3.46%	3.30%	
Inflation Factor for FY 21-22 (c)	%	6.93%	6.93%	



Powtierland III		Unit-II	Unit-III	
Particulars Particulars	UoM	Approved	Approved	
Inflation Factor for FY 22-23 (d)	%	6.87%	6.87%	
Inflation Factor for FY 23-24 (e)	%	3.72%	3.72%	
Normative R&M Expenses (f)=a*b*(1+c)*(1+d)*(1+e)	Rs. Cr.	20.14	18.60	

- 5.86 Furthermore, the Commission approves the HO Expenses for FY 2023-24 based on the approved normative HO Expenses for FY 2022-23 by multiplying the actual inflation factor as 3.72%.
- 5.87 Based on the above discussion, the Commission summarizes the normative component of O&M expenses as given below.

Table 37: O&M Expenses (Normative Component) as approved by the Commission (Rs. Cr.)

(=====							
Doubless laws	Unit-II			Unit-III			
Particulars	APR	Petition	Approved	APR	Petition	Approved	
Employee Cost	10.04	10.16	9.72	10.04	10.16	9.72	
R&M Expenses	20.58	20.36	20.14	19.63	19.49	18.60	
HO & SS Expenses	14.41	14.10	14.10	13.90	14.06	14.05	
Other A&G Expenses	7.20	7.05	7.05	6.76	6.62	6.62	

5.88 On Scrutinizing and analyzing the data, information, material on record the Commission approves Terminal Liabilities, Ash Disposal Expenses, Legal Expenses, and Petition Application Fee & Publication Expenses as per audited accounts.

Table 38: O&M Expenses (Variable Component) as approved by the Commission (Rs. Cr)

(225, 02)								
Particulars		Unit-II		Unit-III				
Farticulars	APR	Petition	Approved	APR	Petition	Approved		
Terminal Liabilities	-	0.67	0.67	-	0.67	0.67		
Ash Disposal Expenses	2.70	3.74	3.74	2.80	3.59	3.59		
Application & Publication Expenses	0.13	0.13	0.13	0.13	0.13	0.13		
Legal Expenses	0.01	0.01	0.01	0.01	0.01	0.01		



Table 39: Net O&M Expenses (Rs. Crore) as approved by the Commission.

Particulars	Unit-II	Unit-III
Farticulars	Approved	Approved
Employee Cost	9.72	9.72
R&M Expenses	20.14	18.60
HO & SS Expenses	14.10	14.05
Other A&G Expenses	7.05	6.62
Terminal Liabilities	0.67	0.67
Ash Disposal Expenses	3.74	3.59
Application & Publication Expenses	0.13	0.13
Legal Expenses	0.01	0.01
O&M Expenses	55.56	53.39

#### Water Charges, Capital Spare

#### **Commission Analysis**

5.89 The Commission has outlined *clause* 15.46 JSERC Generation Tariff Regulation (1st Amendment), 2023 for the approval of Water Charges, capital spare, security deposit for a generating station as reproduced below:

"The Water Charges, Security Deposit, and Capital Spare for thermal generating stations shall be allowed separately after prudent check".

- 5.90 The Commission has gone through the submissions of the Petitioner and observed that the matter related to Water Tax was sub-judice before the Hon'ble Jharkhand High Court. As per the judgement of Hon'ble Jharkhand High Court, the Commission is approving 100% of base water charge and 100% of the tax component for the FY 2023-24.
- 5.91 The table below summarizes the water charges and capital spare as claimed by the Petitioner and as approved by the Commission for FY 2023-24.

Table 40: Water charges and capital expenses (Rs. Crore) as approved by the Commission.

Particulars	Unit-II	Unit-III
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	APR	Petition	Approved	APR	Petition	Approved
Raw Water Expenses	5.88	5.90	5.90	5.68	5.62	5.62
Capital Spare				-	-	-

#### **Interest on Loan**

- 5.92 The Petitioner has submitted that the repayment of the long-term loan on Original Project Cost of Unit-II & Unit-III had been completed in the FY 2009-10 and FY 2010-11 respectively.
- 5.93 Further, the Petitioner has submitted that all subsequent Additional Capitalization have been done through internal accruals, 70% of the same is considered as Normative Loan for FY 2023-24. The present computation is limited to computation of interest on loan on Normative Loan arising on account of Additional Capitalizations undertaken from 2011-12 onwards.
- 5.94 The Petitioner had considered the normative repayment of debt equal to the depreciation of the additional capitalization only citing the reason that the interest payment on original project cost is already completed in year FY 2009-10 and FY 2010-11 respectively for Unit- II and Unit-III and hence depreciation part on original cost is not considered as part of normative repayment of debt.
- 5.95 Further, the Petitioner has submitted that it has considered the closing loan for FY 2022-23 as the Opening loan for FY 2023-24. Further, interest Rate has been considered as Bank Rate plus 200 basis points as on 01.04.2022 i.e. 1st April of respective year of the Control Period i.e. at 10.50% for Unit-II and Unit-III in accordance with *clause 15.18* of the JSERC Generation Tariff Regulations 2020 for working out the interest on loan on Additional Capitalization. Also, adjustment due to deletion on outstanding loan has been considered as nil since IT Assets and Vehicles are the only assets which have been decapitalized which were not in the Original Project cost and there is no normative outstanding loan on these assets as cumulative depreciation of more than 70% has been recovered



against these Assets.

5.96 The table below summarizes the Interest on Loan as claimed by the Petitioner for FY 2023-24.

Table 41: Interest on Loan (Rs. Crore) as submitted by the Petitioner.

Particulars	UoM	Unit-II		Unit-III	
Farticulars	OOM	APR	Petition	APR	Petition
Opening Loan	Rs. Cr.	22.74	22.74	23.24	23.24
Deemed Loan Addition	Rs. Cr.	5.73	5.00	5.73	5.00
Deemed Loan Repayment	Rs. Cr.	5.26	13.85	4.69	10.42
Closing Loan	Rs. Cr.	23.21	13.89	24.29	17.82
Average Loan Balance	Rs. Cr.	22.97	18.31	23.76	20.53
Interest Rate	%	10.50%	10.50%	10.50%	10.50%
Interest on Loan	Rs. Cr.	2.41	1.92	2.50	2.16

#### Commission's Analysis

- 5.97 The Commission has outlined *clause 15.6* to *clause 15.8* JSERC Generation Tariff Regulation 2020, for the approval Debt: Equity ratio for a generating station as reproduced below:
  - "15.6 Existing Projects: For existing projects declaring Commercial Operation on or before April 01, 2021, the following Capital Structure is allowed: -
    - 1. Debt-Equity ratio allowed by the Commission for determination of tariff for the period ending March 31, 2021 shall be considered;
    - 2. In case of the generating station declared under commercial operation prior to April 01, 2021, but where debt-equity ratio has not been determined by the Commission for determination of tariff for the period ending March 31, 2021, the Commission shall approve the debt-equity ratio in accordance with Clause 15.7 of these Regulations.
    - 3. Any expenditure incurred or projected to be incurred on or after April 01, 2021, as may be admitted by the Commission as additional capital expenditure for determination of tariff and



renovation and modernization expenditure for life extension shall be serviced in the manner as specified in Clause 15.7 of these Regulations.

- 15.7 New Projects: For new projects, declaring Commercial Operation on or after April 01, 2021, the following Capital Structure is allowed:-
  - 1. Normative debt-equity ratio of 70:30 shall be considered for the purpose of determination of Tariff.
  - 2. In case the actual equity employed is in excess of 30%, the amount of equity for the purpose of tariff determination shall be limited to 30%, and the balance amount shall be considered as normative loan;
  - 3. In case the actual equity employed is less than 30%, the actual debt-equity ratio shall be considered;
  - 4. The premium, if any raised by the Generating Company while issuing share capital and investment of internal accruals created out of free reserve, for the funding of the project, shall also be reckoned as paid up capital for the purpose of computing return on equity, only if such premium amount and internal resources are actually utilized for meeting capital expenditure of the generating station;
  - 5. The Equity invested in foreign currency shall be designated in Indian rupees on the date of each investment;
  - 6. Any consumer contribution, work carried out under deposit and grant obtained for the execution of the project shall not be considered as part of the capital structure for the purpose of computation of normative debt-equity.
- Note 1: Any expenditure admitted on account of committed liabilities within the original scope of work and the expenditure deferred on techno-economic grounds but falling within the original scope of work shall be serviced in the normative debt-equity ratio specified in these Regulations;
- Note 2: Any expenditure on replacement of old assets or on renovation and modernization or life extension shall be considered on normative debt-equity ratio specified in these Regulations after writing off the entire book value of the original assets from the



capital cost of the new asset;

- Note 3: Any expenditure admitted by the Commission for determination of tariff on account of new works not in the original scope of work shall be serviced in the normative debt-equity ratio specified in these Regulations.
- 15.8 The Generating Company shall submit the resolution of the Board of the Company or approval of the competent authority in other cases regarding infusion of funds from internal resources in support of the utilization made or proposed to be made to meet the capital expenditure of the generating station.
- 5.98 The Commission has scrutinized the details submitted by the Petitioner and has observed that the actual loan on the assets capitalized as on Commercial Date of Operation is entirely repaid by the Petitioner. Since the normative loan value approved by the Commission is on the additional capitalization from FY 2011-12, the normative opening loan for FY 2023-24 is considered equal to closing normative loan amount of FY 2022-23 as approved in the True-up Order dated June 06, 2024.
- 5.99 In accordance with *clause 15.15* of JSERC Generation Tariff Regulation 2020, the Commission approves the deemed loan repayment equal to approved depreciation (Additional Capitalization) for FY 2023-24.
- 5.100 In accordance with *clause 15.18* of JSERC Generation Tariff Regulations, 2020, the Commission approves the interest rate as 10.50% (SBI MCLR as on 01.04.2023 plus 200 bp) for both the Units as given below.

Table 42: Interest on Loan (Rs. Crore) as approved by the Commission.

Deutleuleus	Unit-II			Unit-III		
Particulars	APR	Petition	Approved	APR	Petition	Approved
Opening Loan	22.74	22.74	22.74	23.24	23.24	23.24
Deemed Loan Addition	5.73	5.00	5.00	5.73	5.00	5.00
Deemed Loan Repayment	5.26	13.85	5.19	4.69	10.42	4.63
Closing Loan	23.21	13.89	22.54	24.29	17.82	23.61



Doubleston	Unit-II			Unit-III		
Particulars	APR	Petition	Approved	APR	Petition	Approved
Average Loan Balance	22.97	18.31	22.64	23.76	20.53	23.43
Interest Rate	10.50%	10.50%	10.50%	10.50%	10.50%	10.50%
Interest on Loan	2.41	1.92	2.38	2.50	2.16	2.46

## Interest on Working Capital (IOWC)

#### Petitioner's Submission

5.101 In accordance with *clause 15.23*, *clause 15.26* of the JSERC Generation Tariff Regulations, 2020, the Petitioner has claimed the Interest on Working Capital (IoWC) as given below.

Table 43: IOWC as submitted by the Petitioner (Rs. Crore)

Particulars	Unit-II		Unit-III	
Farticulars	APR	Petition	APR	Petition
Cost towards Coal for Generation 50 days	33.69	33.74	33.90	33.82
Cost of Oil for Generation (2 months)	0.58	0.59	0.58	0.60
Maintenance Spares (20% O&M)	11.01	12.56	10.65	12.07
O&M Expenses (1 month)	5.08	5.23	4.91	5.03
Receivables (45 days)	43.81	46.25	43.77	45.73
Total Working Capital	94.17	98.37	93.82	97.25
Interest Rate	12.00%	12.00%	12.00%	12.00%
Interest on Working Capital	11.30	11.80	11.26	11.67

### Commission's Analysis

- 5.102 The Commission has outlined *clause 15.23 to clause 15.26* JSERC Generation Tariff Regulation 2020 for approval interest on working capital for a generating station as reproduced below:
  - "15.23 The Commission shall determine the Working Capital requirement on normative basis for coal-based generating stations, which shall comprise the following components:
    - 1. Cost of coal or lignite and limestone towards stock, if applicable, for 10 days for pit-head generating stations and 20



days for non-pit-head generating stations for generation corresponding to the normative annual plant availability factor or the maximum coal/lignite stock storage capacity, whichever is lower;

- 2. Cost of coal or lignite and limestone for 30 days for generation corresponding to normative annual plant availability factor;
- 3. Cost of secondary fuel oil for two months for generation corresponding to the Normative Annual Plant Availability Factor, and in case of use of more than one secondary fuel oil, cost of fuel oil stock for the main secondary fuel oil;
- 4. Operation and Maintenance expenses, including water charge and security expenses for one month;
- 5. Maintenance spares @ 20% of Operation and Maintenance Expenses;
- 6. Receivables equivalent to 45days of capacity charges and energy charges for sale of electricity calculated on the Normative Annual Plant Availability Factor:

Provided that the cost of primary fuel shall be based on the landed cost incurred (taking into account normative transit and handling losses) by the generating station and gross calorific value of the fuel on 'as received basis' as per actual weighted average for three months preceding the first month for which tariff is to be determined:

Provided further that in case of new generating station, the cost of fuel for the first financial year shall be considered based on landed fuel cost (taking into account normative transit and handling losses) and gross calorific value of the fuel as per actual weighted average for three months, as used for infirm power, preceding date of commercial operation for which tariff is to be determined

15.26 The rate of Interest on Working Capital shall be on normative basis and shall be equal to Bank Rate plus 350 basis points as on September 30 of the financial year in which the MYT Petition is file dor as on April 01, of the year during the Control Period from FY 2021-22 to FY 2025-26 in which the generating station or a Unit thereof, is declared under commercial operation, whichever is later:



Provided that the rate of interest on working capital shall be trued up on the basis of Bank Rate plus 350 basis points as applicable on April 01, of the respective financial year at the time of true up".

5.103 Taking into account the above provision of regulation, the Interest on Working capital has been calculated at an interest rate of 12.00% (Bank Rate plus 350 basis points) as specified in the clause 15.26 JSERC Generation Tariff Regulation, 2020 is given below.

Table 44: IOWC (Rs. Crore) as approved by the Commission.

Table 111 10 the (1201 e1010) as approved by				the Commission.			
Particulars	Unit-II			Unit-III			
	APR	Petition	Approved	APR	Petition	Approved	
Cost of Coal (for 50 days)	33.69	33.74	33.74	33.90	33.82	33.82	
Cost of Oil for Generation (2 months)	0.58	0.59	0.59	0.58	0.60	0.60	
Maintenance Spares (20% O&M)	11.01	12.56	11.11	10.65	12.07	10.68	
O&M Expenses (1 month)	5.08	5.23	5.12	4.91	5.03	4.92	
Receivables (45 days)	43.81	45.25	43.86	43.77	45.73	43.67	
Total Working Capital	94.17	98.37	94.43	93.82	97.25	93.69	
Interest Rate	12.00%	12.00%	12.00%	12.00%	12.00%	12.00%	
Interest on Working Capital	11.30	11.80	11.33	11.26	11.67	11.24	

#### **Return on Equity**

- 5.104 The Petitioner has claimed the Return on Equity (Pre-tax) for FY 2023-24 in accordance with *clause 15.9*, *and 15.10* of Generation Tariff Regulation, 2020 read with *Clause 15.11* and considering the estimated Additional Capitalization and decapitalization during 2023-24.
- 5.105 While calculating the Return on Equity (post-tax), the Petitioner has taken Minimum Alternate Tax (MAT) rate of 25.17%. Accordingly, the Petitioner had calculated the Return on Equity for FY 2023-24 as given below.



Table 45: Return on Equity (Rs. Crore) as submitted by the Petitioner.

Particulars	Uni	it-II	Unit-III		
	APR	Petition	APR	Petition	
Opening Equity	147.38	147.38	143.92	142.70	
Net Addition	1.94	1.59	1.94	1.59	
Closing Equity	149.32	148.97	145.86	144.29	
Average Equity	148.35	148.18	144.89	143.50	
Rate of Return on Equity	15.00%	15.00%	15.00%	15.00%	
ROE (Post-Tax)	20.04%	20.05%	20.04%	20.05%	
MAT	25.17%	25.17%	25.17%	25.17%	
ROE (Pre-Tax)	29.74	29.70	29.04	28.76	

#### Commission's Analysis

- 5.106 The Commission has outlined *clause 15.6 to clause 15.8* JSERC Generation Tariff Regulation 2020 and clause 6.1 of Generation Tariff (1st Amendment), Regulation 2023 for approval Return on Equity for a generating station as reproduced below:
  - "15.6 Existing Projects: For existing projects declaring Commercial Operation on or before April 01, 2021, the following Capital Structure is allowed: -
    - 1. Debt-Equity ratio allowed by the Commission for determination of tariff for the period ending March 31, 2021 shall be considered;
    - 2. In case of the generating station declared under commercial operation prior to April 01, 2021, but where debt-equity ratio has not been determined by the Commission for determination of tariff for the period ending March 31, 2021, the Commission shall approve the debt-equity ratio in accordance with Clause15.7 of these Regulations.
    - 3. Any expenditure incurred or projected to be incurred on or after April 01, 2021, as may be admitted by the Commission as additional capital expenditure for determination of tariff and renovation and modernisation expenditure for life extension shall be serviced in the manner as specified in Clause15.7of these Regulations.



- 15.7 New Projects: For new projects, declaring Commercial Operation on or after April 01, 2021, the following Capital Structure is allowed: -
  - 1. Normative debt-equity ratio of 70:30 shall be considered for the purpose of determination of Tariff.
  - 2. In case the actual equity employed is in excess of 30%, the amount of equity for the purpose of tariff determination shall be limited to 30%, and the balance amount shall be considered as normative loan;
  - 3. In case the actual equity employed is less than 30%, the actual debt-equity ratio shall be considered;
  - 4. The premium, if any raised by the Generating Company while issuing share capital and investment of internal accruals created out of free reserve, for the funding of the project, shall also be reckoned as paid up capital for the purpose of computing return on equity, only if such premium amount and internal resources are actually utilized for meeting capital expenditure of the generating station;
  - 5. The Equity invested in foreign currency shall be designated in Indian rupees on the date of each investment;
  - 6. Any consumer contribution, work carried out under deposit and grant obtained for the execution of the project shall not be considered as part of the capital structure for the purpose of computation of normative debt-equity.
- Note 1: Any expenditure admitted on account of committed liabilities within the original scope of work and the expenditure deferred on techno-economic grounds but falling within the original scope of work shall be serviced in the normative debt-equity ratio specified in these Regulations;
- Note 2: Any expenditure on replacement of old assets or on renovation and modernization or life extension shall be considered on normative debt-equity ratio specified in these Regulations after writing off the entire book value of the original assets from the capital cost of the new asset;
- Note 3: Any expenditure admitted by the Commission for determination of tariff on account of new works not in the original scope of work shall



be serviced in the normative debt-equity ratio specified in these Regulations.

15.8 The Generating Company shall submit the resolution of the Board of the Company or approval of the competent authority in other cases regarding infusion of funds from internal resources in support of the utilization made or proposed to be made to meet the capital expenditure of the generating station.

#### JSERC Generation Tariff Regulation (1st Amendment) 2023

Clause 6.1 states that:

The return on equity shall be computed on post-tax basis at the base rate of 14.50% for thermal generating stations, and run of the river hydro generating station, and at the base rate of 15.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run of river generating station with pondage for generating stations whose Date of Commercial Operation is after April 01, 2021:

The return on equity shall be computed on post-tax basis at the base rate of 15.00% for thermal generating stations, and run of the river hydro generating station, and at the base rate of 16.00% for the storage type hydro generating stations including pumped storage hydro generating stations and run of river generating station with pondage for generating stations whose Date of Commercial Operation is before April 01, 2021:

- 5.107 On scrutinizing and analyzing the data, information and material on record, the Commission observed that the company has transitioned to the new tax regime effective from 01.04.2020. Accordingly, approves the applicable Tax rate of 25.168% (22%\*1.10\*1.04) (i.e. 22% (with surcharge of 10% and cess of 4%) in accordance with Generation Tariff Regulations, 2020.
- 5.108 In accordance with the *clause 6.1* of JSERC Generation Tariff (1st Amendment), Regulation 2023, the Commission approves the Rate of Return on Equity as 15.00% is given below.

Table 46: Return on Equity (Rs. Crore) for Unit II as approved by the Commission

Particulars	APR	Petition	Approved
Opening Equity	147.38	147.38	147.38



Particulars	APR	Petition	Approved
Net Addition	1.94	1.59	1.59
Closing Equity	149.32	148.97	148.97
Average Equity	148.35	148.18	148.18
Rate of Return on Equity	15.00%	15.00%	15.00%
ROE (Post-Tax)	20.04%	20.05%	20.04%
MAT	25.17%	25.17%	25.17%
ROE (Pre-Tax)	29.74	29.70	29.70

Table 47: Return on Equity (Rs. Crore) for Unit III as approved by the Commission

Commission					
Particulars Particulars	APR	Petition	Approved		
Opening Equity	143.92	142.70	143.92		
Net Addition	1.94	1.59	1.59		
Closing Equity	145.86	144.29	145.52		
Average Equity	144.89	143.50	144.72		
Rate of Return on Equity	15.00%	15.00%	15.00%		
ROE (Pre-Tax)	20.04%	20.05%	20.04%		
MAT	25.17%	25.17%	25.17%		
ROE (Pre-Tax)	29.04	28.76	29.01		

## Sharing Gain/Loss

### Operation Gain due to variation in Norms FY 2023-24

- 5.109 The Petitioner has submitted that it has followed the *clause 6.14* of Generation Tariff Regulation 2020 read with its first amendment for computation of gain based on actual performance of controllable parameters.
- 5.110 Accordingly, in terms of above regulation and considering actual performance of FY 2023-24, the Gain due to Operational Performance of SHR, Auxiliary Power Consumption and SFC works out as follows for Unit-II and Unit-III.



Table 48: Operational Gain (Rs. Cr.) as submitted by Petitioner

	UoM	Unit-II		Unit-III	
Particulars Particulars		Normative	Petition	Normative	Petition
Auxiliary Power	%	10.00%	8.75%	10.00%	8.75%
Heat Rate	kCal/kWh	2567.00	2539.37	2577.00	2538.13
Sp. LDO Consumption	ml/Kwh	0.50	0.37	0.50	0.37
Equivalent GCV of Coal (CVPF)	Kcal/Kg	8.92	8.92	8.92	8.92
Equivalent Landed Price of Coal	Rs/Ton	3641.93	3641.93	3618.09	3618.09
Equivalent GCV of LDO (CVPF)	kCal/L	3.92	3.92	3.89	3.89
Equivalent Landed Price of LDO	Rs/KL	0.08	0.08	0.08	0.08
Energy Charge Rate (ECR)	Rs/kWh	3.11	3.02	3.12	3.02
ECRN - ECRA			0.085		0.098
Ex-Bus Generation	MU		801.61		761.78
Gain/(Loss) on Operational Parameters	Rs. Cr.		6.81		7.49
Savings/Gain with Beneficiaries (25%)	Rs. Cr.		1.70		1.87

#### Commission's Analysis

- 5.111 The Commission has outlined **clause 6.14** of JSERC Generation Tariff Regulation 2020 and **clause 5.1** of JSERC Generation Tariff (1st Amendment) Regulation 2023 for approval sharing of gain/loss due to variation in operation norms for a generating station as reproduced below:
  - 6.14 Sharing of gains due to variation in norms: The Generating Company shall workout gains based on the actual performance of applicable controllable parameters as under: -
    - 1. Station Heat Rate:
    - 2. Secondary Fuel Oil Consumption;
    - 3. Auxiliary Energy Consumption; and
    - 4. Operations and Maintenance Expenses.

The financial gains by the Generating Company, on account of above



controllable parameters shall be shared between the Generating Company and the beneficiaries on annual basis. The financial gains on account of parameters (1) to (3) shall be computed as per the following formula for a thermal generating stationand shall be shared in the ratio of 50:50 between the generating stations and beneficiaries.

Net  $Gain = (ECRN - ECRA) \times Scheduled Generation;$ Where,

**ECRN:** Normative Energy Charge Rate computed on the basis of norms specified for Station Heat Rate, Auxiliary Energy Consumption and Secondary Fuel Oil consumption.

**ECRA:** Actual Energy Charge Rate computed on the basis of actual Station Heat Rate, Auxiliary Energy Consumption and Secondary Fuel Oil Consumption for the month.

## JSERC Generation Tariff Regulation (1st Amendment) 2023

Clause 5.1 (provisos) states that:

Provided that for generating stations that have signed coal linkage agreement through Shakti Scheme, sharing of gains in the ratio of 75:25 between the generating stations and beneficiaries shall be applicable due to variation in normative controllable operational parameters.

5.112 On scrutinizing and analyzing the material, information, and actual figure as submitted by the Petitioner and on prudent check the Commission approves the operational gain due to variation for FY 2023-24 as given below.

Table 49: Operational Gain (Rs. Cr.) as approved by the Commission

Particulars	UoM	Unit	t-II	Unit	:-III
Farticulars	OOM	Normative	Approved	Normative	Approved
Auxiliary Consumption (AUX)	%	10.00%	8.75%	10.00%	8.75%
Gross Station Heat Rate (SHR)	kCal/kWh	2567.00	2539.37	2577.00	2538.13
Specific fuel Oil Consumption	mL/kWh	0.50	0.37	0.50	0.37
Calorific Value of Oil (CVSF)	kCal/ml	8.92	8.92	8.92	8.92
GCV of Primary Fuel (CVPF)	kCal/kg	3641.93	3641.93	3618.09	3618.09



Particulars	UoM	Uni	t-II	Unit	:-III
Farticulars	OOM	Normative	Approved	Normative	Approved
Landed Price of Primary Fuel	Rs./kg	3.92	3.92	3.89	3.89
Landed Price of Sec. Fuel	Rs./ml	0.08	0.08	0.08	0.08
Energy Charge Rate (ECR)	Rs/kWh	3.11	3.02	3.12	3.02
ECR <sub>N</sub> - ECR <sub>A</sub>	Rs/kWh		0.085		0.098
Ex-Bus Generation	MU		801.61		761.78
Gain/(Loss) on Operational Parameters	Rs. Cr		6.81		7.49
Savings/Gain with beneficiary (25%)	Rs. Cr		1.70		1.87

## Gain in Operation & Maintenance

#### **Petitioner Submission**

- 5.113 Likewise, the Petitioner has claimed the Gain in Operation & Maintenance Expenses in accordance with the aforementioned Regulation.
- 5.114 Further, the Petitioner pray to consider the O&M expenses for both the Units together and if the actual O&M expenses for both the Units are lower than normative one, the overall savings may be shared 50:50 with the consumers with half of 50% allocated to each Unit.
- 5.115 Accordingly, instead of computing and sharing O&M expense gain separately, the Petitioner has computed the gain collectively (half of which is to be used for each Unit) as given below.

Table 50: Gain in Operation & Maintenance (Rs. Crore) as submitted by Petitioner

	Unit-II	Unit-II+ Unit-III	
Particulars	Performance Target Approved	Actual Expenses incurred	Saving
Employee Cost excl. TL	20.31	20.80	-0.49
R&M Expenses	40.51	38.34	2.17
HO & SS Expenses	28.16	23.38	4.78
Other A&G Expenses	13.67	13.02	0.65
Legal Expenses	0.02	0.00	0.02



	Unit-II -	Unit-II+ Unit-III	
Particulars	Performance Target Approved	Actual Expenses incurred	Saving
Sub-total (f)	102.67	95.54	7.13
Gain to be shared with Beneficiaries of Unit-II &Unit III (50% of f)			3.57

5.116 With 50:50 gain sharing as per regulation, the petitioner has considered the net adjustment of **Rs 1.78** crore for gain in operation and maintenance in total ARR (i.e. gain of Rs. **1.78** crore for Unit-II & Unit-III respectively)

# **Commission Analysis**

- 5.117 The Commission has outlined *clause 6.14 and clause 6.15* of Generation Tariff Regulation 2020 for the approval of Gain in operation and Maintenance for a generating station as reproduced below:
  - 6.14 Sharing of gains due to variation in norms: The Generating Company shall workout gains based on the actual performance of applicable controllable parameters as under: -
    - 1. Station Heat Rate;
    - 2. Secondary Fuel Oil Consumption;
    - 3. Auxiliary Energy Consumption; and
    - 4. Operations and Maintenance Expenses.

The financial gains by the Generating Company, on account of above controllable parameters shall be shared between the Generating Company and the beneficiaries on annual basis. The financial gains on account of parameters (1) to (3) shall be computed as per the following formula for a thermal generating station and shall be shared in the ratio of 50:50 between the generating stations and beneficiaries.

6.15 The financial gains on account of Operations and Maintenance Expenses for thermal and hydro stations shall be shared in the ratio of 50:50 between the generating stations and beneficiaries at the time of truing up.



- 5.118 Furthermore, it is noted that the petitioner's method for determining the gain in O&M is considered legitimate, citing the commissioner's review order (**Case No. 04 of 2024**, Tata Power Company Limited (TPCL) Vs. Tata Steel Limited (TSL)).
- 5.119 Accordingly, the Commission approves the gain in Operation & Maintenance for FY 2023-24 as tabulated below.

Table 51: Gain in Operation & Maintenance (Rs. Crore) as approved by the Commission.

	** **	Unit-II	Unit-III	
Particulars Particulars	UoM	Approved	Approved	
Normative O&M Expenses	Rs. Cr	51.02	49.01	
Actual O&M Expenses	Rs. Cr	42.97	52.58	
Gain/(Loss)	Rs. Cr	8.06	-3.57	
Consolidated Gain	8.06-3.57 =4.49			
Gain to be shared with both Units	50% of 4.49=2.24			
Gain to be shared with Beneficiaries (50% of Gain)	Rs. Cr.	1.12	1.12	

## **Non-Tariff Income**

#### **Petitioner Submission**

5.120 The Petitioner has submitted the non-tariff income as per audited P&L account for Unit-II and III for FY 2023-24 as given below:

Table 52: Non-Tariff Income (Rs. Cr) as submitted by the Petitioner for Unit-II & Unit-III.

Particulars Particulars	UoM	Unit-II	Unit-III
Non-Tariff Income	Rs. Cr.	1.75	1.71

## **Commission Analysis**

5.121 On scrutinizing and analyzing the material, information, and actual figure and details submitted by the Petitioner and on prudent check the Commission approves the Non-Tariff Income for FY 2023-24 as given below.



Table 53: Non-Tariff income (Rs. Cr.) as approved by the Commission for both Unit.

Particulars	HoM	Unit-II UoM			Unit-III		
Particulars	OOM	Petition	Approved	Petition	Approved		
Non-Tariff Income	Rs. Cr.	1.75	1.75	1.71	1.71		

#### **Shakti Scheme Discount**

## Petitioner's Submission

- 5.122 Based on the allocation of primary fuel under Shakti Scheme and actual coal consumption, the Petitioner has calculated the energy generated from Shakti coal. The Petitioner has calculated the discount rate at Rs. 0.04/kWh for the coal procured under round-II and Rs. 0.07/kWh for coal procured and consumed under round-III bidding.
- 5.123 Further, it is stated that CCL WIV coal was supplied both under round-II and round-III with a coal quantum as provided in **ANNEXURE P10.** Hence total sale of energy due to coal, under round-II and round-III for both the units are tabulated hereunder.

Table 54: Shakti Scheme Discount (Rs. Crore) as submitted by Petitioner.

Particulars Particulars	UoM	Unit	:-II	Uni	t-III
Farticulars	OOM	APR	Petition	APR	Petition
Sales due to Coal (Round-II)	MU	295.20	286.88	291.27	298.75
Sale due to CCL Coal (Round-III)	MU	383.73	383.72	345.67	301.31
Discount Amount	Rs. Cr.	3.87	3.83	3.58	3.30

## Commission's Analysis

5.124 On scrutinizing and analyzing the material, information, and actual figure, FSA, PPA approvals and details submitted by the Petitioner and on prudent check the Commission approves the Shakti Scheme Discount for FY 2023-24 as tabulated below.



Table 55: Shakti Scheme Discount (Rs. Crore) as approved by the Commission.

Particulars	UoM	Unit-II			Unit-III		
Farticulars	OOM	APR	Petition	Approved	APR	Petition	Approved
Sales due to Coal (Round-II)	MU	295.20	286.88	286.88	291.27	298.75	298.75
Sale due to CCL Coal (Round-III)	MU	383.73	383.72	383.72	345.67	301.31	301.31
Discount Amount	Rs. Cr.	3.87	3.83	3.83	3.58	3.30	3.30

# **Summary of Annual Revenue Requirement**

# Commission's Analysis

5.125 On consideration of the submission and details furnished by the Petitioner, the Commission approves the Annual Fixed Cost (AFC) for FY 2023-24 which as summarized below.

Table 56: Annual Fixed Cost (Rs. Crore) as approved by the Commission.

Particulars	Unit-II			Unit-III			
Farticulars	APR	Petition	Approved	APR	Petition	Approved	
O&M Expenses	55.07	56.89	55.56	53.27	54.71	53.39	
Depreciation	7.36	19.45	7.30	7.98	17.82	7.92	
Interest on Loan	2.41	1.92	2.38	2.50	2.16	2.46	
Interest on Working Capital	11.17	11.80	11.33	11.26	11.67	11.24	
Return on Equity	29.74	29.70	29.70	29.04	28.76	29.01	
AFC	105.87	119.76	106.27	104.05	115.13	104.03	
Water Charges	5.88	5.90	5.90	5.68	5.62	5.62	
Capital Spare	0.00		0.00	0.00	0.00	0.00	
Incentive		0.00	0.00			0.00	

5.126 The Commission approves the Annual Fixed Charge after taking into account the availability Factor for FY 2023-24 is given below.

Table 57: AFC (Rs. Cr.) after availability as approved by the Commission.

<b>D</b> 1	Unit-II			Unit-III		
Particulars APR		Petition	Approved	APR	Petition	Approved
Annual Fixed Cost	105.87	119.76	106.27	104.05	115.13	104.03



Particulars	Unit-II			Unit-III		
Particulars	APR	Petition	Approved	APR	Petition	Approved
Availability	93.34%	97.61%	97.61%	86.44%	91.32%	91.32%
AFC after Availability	105.87	119.77	106.27	104.05	115.13	104.03

5.127 On consideration of the submission and details furnished by the Petitioner, the Commission approve the Annual Revenue Requirement (ARR) for FY 2023-24 which as summarized below.

Table 58: Annual Revenue Requirement (Rs. Crore) as approved by the Commission

Particulars		Unit-II		Unit-III			
Farticulars	APR	Petition	Approved	APR	Petition	Approved	
ARR after Availability	362.52	374.69	361.19	353.45	358.04	346.94	
Less: Discount as per [SHAKTI 2&3]	3.87	3.83	3.83	3.58	3.30	3.30	
Less: Gain on Operational Parameters[25%]	0	1.70	1.70	0	1.87	1.87	
Less: Gain on O&M Expense [50%]	0	1.78	1.12	0	1.78	1.12	
Less: Non-Tariff Income	0	1.75	1.75	0	1.71	1.71	
Net ARR	358.64	365.63	352.79	349.86	349.36	338.93	

#### Revenue from Sale of Power

# Petitioner's Submission

5.128 The Petitioner has submitted the revenue from sale of power for FY 2023-24 as Rs. 349.07 Crore and Rs. 335.40 Crore for Unit-II and Unit-III respectively.

Table 59: Revenue (Rs. Crore) as submitted by the Petitioner.

Particulars	Unit-II	Unit-III
Farticulars	Petition	Petition
Revenue from Sale of Power	349.07	335.40



# Commission's Analysis

5.129 The Commission has examined the details submitted by the Petitioner in tariff model and 2<sup>nd</sup> data-gap reply, along with audited certificate and on prudent check, the Commission has computed total revenue as given below.

Table 60: Computation of net Revenue by the Commission for FY 2023-24.

	Revenue Recovered/(Refund) for FY 23-24 (Rs. Crore)		Page No. of Petition	Unit-II	Unit-III
	Through- Monthly billing w/o Rebate	P20	300	344.38	330.30
A	Through – Subsequent Orders (Invoice dated 01.02.2024) read with Amendment to tariff regulations – 3 Installments Jan -24, Feb -24, Mar- 24	P21	309	4.69	5.09
	Total (Up to March-24)			349.07	335.40
	Refund of Operational Gain for FY 2023-24				
В	Sharing of operational Gains through invoice dated 01.09.2024	P21	304	-1.70	-1.87
c	Through – Subsequent Orders (Invoice dated 01.02.2024) read with Amendment to tariff regulations – 3 Installments Apr -24, May -24, Jun- 24	P21	309	4.69	5.09
	Through Invoice dated 01.07.2024 as per Tariff Order dated 06.06.2024	P21	306	0.41	0.98
	Recovered in FY 25 for FY 2023-24			5.10	6.07
	Total Revenue for FY 23-24 (A+B+C)			352.47	339.60



- 5.130 The Commission has considered all the billing data available till FY 23-24 for the computation of revenue for instant petition. If any adjustment happens between the Petitioner and the beneficiary, the same need to be adjusted in next financial year.
- 5.131 Hence, the Commission approves the net revenue, along with revenue from sale of power for FY 2023-24 as given below.

Table 61: Revenue (Rs. Crore) as approved by the Commission

Particulars	U	nit-II	Unit-III	
Farticulars	Petition	Approved	Petition	Approved
Net Revenue for FY 23-24	349.07	352.47	335.40	339.60

# Gap/Surplus for FY 2023-24

- 5.132 The Commission has outlined *clause* 7.2 to 7.4 of Generation Tariff Regulation 2020 for the approval Gap/Surplus for a generating station as reproduced below:
  - "7.2 Where after the truing up, the revenue recovered exceeds the trued up value approved by the Commission under these Regulations, the Generating Company shall refund to the Beneficiaries, the surplus amount so recovered as specified in Clause 7.4 of these Regulations.
  - 7.3 Where after the truing up, the revenue recovered is less than the trued up value approved by the Commission under these Regulations, the Generating Company shall recover from the Beneficiaries, the gap amount in accordance with Clause 7.4 of these Regulations.
  - 7.4 The amount under-recovered or over-recovered, along with simple interest at the rate equal to Bank Rate as on April 01 of the respective year plus 350 basis points, shall be recovered or refunded by the Generating Company in six equal monthly instalments starting within three months from the date of the Tariff Order issued by the Commission:

Provided that no carrying cost on the duration of delay shall be allowed on unrecovered gap if the Generating Company fails to submit the Petition as per timelines stipulated in Section A 39:



Provided further that any adverse financial impact on account of variation in uncontrollable items due to lapse on part of the Generating Company or its suppliers/contractors shall not be allowed in truing up".

5.133 The Commission has examined the details submitted by the Petitioner along with audited certificate and on prudent check, approves the Gap/(Surplus) for FY 2023-24 for Unit-II and Unit-III as tabulated hereunder.

Table 62: Gap/(Surplus) as approved by the Commission

Particulars Particulars	Uni	t-II	Uni	t-III
Farticulars	Petition	Approved	Petition	Approved
Net ARR	365.63	352.79	349.37	338.93
Revenue from Sale of Power	349.07	352.47	335.40	339.60
Gap/(Surplus)	16.56	0.32	13.97	(0.67)

Table 63: Carrying Cost for Unit-II as approved by the Commission (Rs. Crore)

Particulars	FY 2023-24	FY 2024-25
Opening Balance	0	0.32
Addition During the FY	0.32	0
Adjustment during the FY	0	0
Closing Balance	0.32	0.32
Interest Rate	12.00%	12.15%
Carrying Cost for respective FY	0.02	0.02

Table 64: Carrying Cost for Unit-III as approved by the Commission (Rs. Crore)

Particulars	FY 2023-24	FY 2024-25
Opening Balance	0	(0.67)
Addition During the FY	(0.67)	0
Adjustment during the FY	0	0
Closing Balance	(0.67)	(0.67)
Interest Rate	12.00%	12.15%
Carrying Cost for respective FY	(0.04)	(0.04)



Table 65: Carrying Cost on Revenue Gap/(Surplus) for Unit-II & Unit-III as approved by the Commission (In Rs. Cr.)

Particulars Particulars	Unit-II	Unit-III
Farticulars	Approved	Approved
Opening Gap/Surplus for FY 2022-23	-	-
Gap/(Surplus) addition during the FY 2023-24	0.32	(0.67)
Closing Gap/ (Surplus) for FY 2023-24	0.32	(0.67)
Carrying Cost of FY 2023-24	0.02	(0.04)
Carrying Cost of FY 2024-25	0.02	(0.04)
Net Gap/(Surplus)	0.36	(0.75)

- 5.134 The Commission would like to clarify the above Gap/(Surplus) is computed based on the information submitted before the Commission. In case there is any other adjustment between the Petitioner and its Beneficiaries, the same need to be taken into account while final adjustment which shall be carried out mutually.
- 5.135 The Commission has directed the Petitioner to adjust the surplus in the subsequent bills as per *Clause 7.4* of JSERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020.



# Chapter 6: ANNUAL PERFORMANCE REVIEW FOR FY 2023-24

- 6.1 The Commission had passed order on MYT for the 3rd Control Period i.e., FY 2021-22 to FY 2025-26 vide Order dated November 04, 2022 based on the principles specified in the JSERC Generation Tariff Regulations, 2020.
- 6.2 The Commission had passed review order case no. 18 of 2022 vide order dated January 09, 2024 based on principles specified in the JSERC Generation Tariff Regulations, 2015, and JSERC Generation Tariff Regulations 2020 along with amendment thereof.
- 6.3 The Commission had passed True-up for FY 2021-22 and Annual Performance Review for FY 2022-23 by Order dated January 09, 2024.
- 6.4 The Commission had passed True-up for FY 2022-23 and Annual Performance Review for FY 2023-24 by Order dated June 06, 2024.
- 6.5 In the instant Petition, the Petitioner has now sought for the Annual Performance Review (APR) for FY 2024-25 based on the actual operational performance till Oct' 2024 and projected for the remaining months of FY 2024-25.
- 6.6 The Commission has carried out the Annual Performance Review for FY 2024-25 taking into consideration the following:
  - a) JSERC Generation Tariff Regulations, 2020;
  - b) JSERC Generation Tariff (1st Amendment), Regulation, 2023;
  - c) Methodology adopted by the Commission in its earlier Tariff Orders.
- 6.7 The component-wise description of the Petitioner's submission and the Commission's analysis thereof is provided hereunder.

# **Operational Performance**

Plant Availability Factor (PAF)

Petitioner's Submission

6.8 The Petitioner has projected the Plant Availability Factor as 87.05% and 94.63% for Unit-II and Unit-III respectively based on actual availability achieved till October 2024 and estimated for remaining months of FY 2024-25.

# Commission's Analysis

- 6.9 In accordance with *clause* 16.1 of JSERC Generation Tariff (1st Amendment), Regulation 2023, the Commission approves the Normative Plant Availability factor as 85.00%.
- 6.10 On scrutinizing and analyzing the actual data till October FY 2024 and the estimated one for remaining month of FY 2024-25 and on prudent check, the Commission approves the estimated plant availability for FY 2024-25 as 87.05% and 94.63% for Unit-II and Unit-III respectively as given below:

Table 66: Plant Availability Factor as approved by the Commission

Particulars	UoM	MYT	Petition	Approved	
	Unit-	·II			
NAPAF	%	85.00	85.00	85.00	
Estimated Plant Availability	%	-	87.05	87.05	
Unit-III					
NAPAF	%	85.00	85.00	85.00	
Estimated Plant Availability	%	-	94.63	94.63	

# **Auxiliary Consumption**

## Petitioner's Submission

6.11 The Petitioner has estimated the Auxiliary Consumption as 9.47% and 9.46% for Unit-II and Unit-III respectively based on actuals till October 2024 and projected as normative value of 10.00% for remaining months of FY 2024-25.

## Commission's Analysis

6.12 In accordance with clause 16.1 of JSERC Generation Tariff (1st



- Amendment), Regulation 2023, the Commission approves the normative auxiliary consumption of 10.00%.
- 6.13 On scrutinizing and analyzing the actual data till October FY 2024 and the estimated one for remaining month of FY 2024-25 and on prudent check, the Commission approves the estimated auxiliary consumption for FY 2024-25 as 9.47% and 9.46% for Unit-II and Unit-III respectively as given below:

Table 67: Auxiliary Consumptions as approved by the Commission

Particulars	UoM	MYT	Petitio n	Approved
	UNIT-II			
Normative Auxiliary Consumption	%	9.00	10.00	10.00
Estimated Auxiliary Consumption	%	-	9.47%	9.47%
1	UNIT-III			
Normative Auxiliary Consumption	%	9.00	10.00	10.00
Estimated Auxiliary Consumption	%	-	9.46%	9.46%

#### **Plant Load Factor and Generation**

#### Petitioner's Submission

- 6.14 The Petitioner has estimated Plant Load Factor (PLF) as 80.85% and 90.51% for Unit-II & Unit-III respectively, which is the outcome of planned outage and demand projected by the beneficiary
- 6.15 The Petitioner has further submitted that the estimated gross generation to be 849.90 MUs for Unit 2 and 951.45 MUs for Unit 3 as compared to 893.52 MUs as approved in MYT Order for both the Units.

## Commission's Analysis

6.16 On scrutinizing and analyzing the actual till October FY 2024 and estimated for remaining month of FY 2024-25 and on prudent check, the Commission approves the Gross Generation, Net Generation, and Plant Load Factor for FY 2024-25 for Unit-II and Unit-III respectively as given below:



Table 68: Plant Load Factor and Generation as approved by the Commission

Particulars	UoM	MYT	Petition	Approved					
UNIT-II									
Gross Generation	MU	893.52	849.90	849.90					
Net Generation	MU	813.10	769.42	769.42					
Estimated PLF	%	85.00%	80.85%	80.85%					
	U	NIT-III							
Gross Generation	MU	893.52	951.45	951.45					
Net Generation	MU	813.10	861.45	861.45					
Estimated PLF	%	85.00%	90.51%	90.51%					

## **Gross Station Heat Rate (GHR)**

#### Petitioner's Submission

6.17 The Petitioner has taken the normative value of Gross Station Heat Rate (GHR) for the APR of FY 2024-25. Which are 2567 kCal/kWh for Unit-II and 2577 kCal/kWh for Unit-III as specified in JSERC Generation Tariff Regulation (1st Amendment) Regulation 2023.

# Commission's Analysis

6.18 In accordance with *clause 16.1* of JSERC Generation Tariff (1st Amendment), Regulation 2023, the Commission approves the Normative GHR as 2567.00 kCal/kWh for Unit-II and 2577.00 for Unit-III as given below.

Table 69: Gross Station Heat Rate (GHR) as approved by the Commission

Particulars	UoM	MYT	Petition	Approved		
UNIT-II						
Normative Station Heat Rate	kCal/kWh	2525.00	2567.00	2567.00		
Estimated Station Heat Rate	kCal/kWh		2567.00	2567.00		
UNIT-III						
Normative Station Heat Rate	kCal/kWh	2525.00	2577.00	2577.00		
Estimated Station Heat Rate	kCal/kWh		2577.00	2577.00		

# **Specific Fuel Oil Consumption**

#### Petitioner's Submission

6.19 In accordance with *clause 16.1* of JSERC Generation Tariff (1st Amendment), Regulation 2023, the Petitioner has claimed the specific fuel oil consumption as 0.50 ml/kWh for both the Units.

# Commission's Analysis

6.20 In accordance with *clause 16.1* of JSERC Generation Tariff Regulation (1st amendment) 2023, the Commission approves the normative specific fuel oil consumption as 0.50 ml/kWh for both the Units.

Table 70: Specific Fuel Oil Consumption as approved by the Commission

Particulars Particulars	UoM	MYT	Petition	Approved			
UNIT-II							
Specific Fuel Oil Consumption	ml/kWh	0.50	0.50	0.50			
UNIT-III							
Specific Fuel Oil Consumption	ml/kWh	0.50	0.50	0.50			

## **Fuel Cost Parameter**

## Coal Mix and Gross Calorific Value (GCV) of Primary Fuel

#### Petitioner's Submission

- 6.21 The Petitioner has submitted that for the purpose of projecting the fuel mix for FY 2024-25, actual coal consumption up to month of October 2024 has been taken. Further, Coal Consumption for the balance months has been worked out considering the projected generation, normative operational performance level, considering available fuel supply from SHAKTI coal and Trailing road. The balance coal requirement over and above the supply from the SHAKTI has been estimated to be met preferably from TSL middling coal, tailing coal or E-Auction Route and in case of exigencies/constraint it will be sourced from available sources.
- 6.22 The Petitioner has further submitted that the reason of variation in coal mix proposed in the instant petition for the APR of FY 2024-25 are depicted below:



- (a) Restriction in FSA coal supply/ Supply of CCL allocations under RCR mode due to nationwide coal scarcity.
- (b) The growing power demand in various industries has caused an increase in the Plant Load Factor (PLF) of station, leading to a greater demand for coal.
- 6.23 The Petitioner has further submitted that there is a nation-wide scarcity of coal mainly due to higher demand of electricity vis-à-vis inadequate coal production in the country to meet such demand coupled with logistic congestion. Because of above, subsidiaries of Coal India Limited, viz., CCL, MCL, ECL are not able to maintain steady supply of coal under FSA resulting into critical stocks of coal at Jojobera Power Plant. Accordingly, the Petitioner, to manage the crisis has sourced coal other than middling coal from West Bokaro Collieries and coal from e-Auction Route which is transparent as it is organized/facilitated by Government entity and is the cheapest route compared to any other sources viz, private coal or imported coal. The Petitioner has already apprised the Commission in its Directive reports for Q1 of FY 2024-25 regarding the reasons for variation in Fuel Mix and Impact on Energy Charge Rate and Energy Charges.
- 6.24 That the Petitioner has submitted that, in order to meet the demand of TSL and to bridge the gap of non-availability of SHAKTI coal in the remaining months i.e. Oct-24 to March-25, the Petitioner in addition to the linkage sources has further projected to source the balance coal requirement through Middling coal, Tailing Coal from West Bokaro Collieries of TSL and through e-Auction Route to the extent possible. Only as a last resort, it has envisaged/planned to source coal through Private Washeries/Imported coal to meet the deficit.
- 6.25 The Petitioner further submitted that due to above uncontrollable factor, it had to depend on source approved in the MYT Order for meeting the deficit and accordingly the coal mixed is projected.
- 6.26 That the Petitioner for all procurements other than TSL sources and sources as proposed in the MYT Business Plan, has always been duly



informed to the Commission in advance, which had full knowledge of cost implication and granted prior consent.

6.27 Accordingly, the Petitioner has submitted the revised the fuel mix, detail of weighted average GCV and Landed Price of all types of coal received are summarized for FY 2024-25 in the table below.

Table 71: Coal Mix and GCV for Unit-II as submitted by the Petitioner

Particulars Particulars	Fuel 1	Mix (%)	GCV (kCal/kg)		
Particulars	MYT	Petition	MYT	Petition	
Middling Coal	21.04%	34.17%	3860.75	4402.50	
2P Coal					
WB Reject Coal					
CCL [Shakti 3] Coal	43.76%	32.53%	3837.53	3694.03	
BCCL [e-auction] Coal					
E Auction					
Tailing (Road) Coal	0.00%	0.28%	0.00	4321.85	
CCL [Shakti 2] WIV Coal					
ECL [Shakti 2] Coal	6.48%	5.95%	5109.27	4726.12	
CCL [Shakti 2] Coal	14.63%	10.61%	3837.53	3889.96	
MCL [Shakti 2] Coal	14.09%	13.59%	3129.71	3251.85	
CCL SFA	0.00%	2.86%	0.00	4441.17	
Wtg. Avg. GCV			3825.15	3981.45	

Table 72: Coal Mix and GCV for Unit-III as submitted by the Petitioner.

Particulars	Fuel l	Mix (%)	GCV (kCal/kg)		
Farticulars	MYT	Petition	MYT	Petition	
Middling Coal	21.03%	31.29%	3859.81	4429.43	
2P Coal					
WB Reject Coal					
CCL [Shakti 3] Coal	43.76%	35.77%	3856.28	3702.34	
BCCL [e-auction] Coal					
E Auction					
Tailing (Road) Coal	0.00%	0.25%	0.00	4321.85	
CCL [Shakti 2] WIV Coal					



Particulars Particulars	Fuel 1	Mix (%)	GCV (kCal/kg)		
Farticulars	MYT	Petition	MYT	Petition	
ECL [Shakti 2] Coal	6.48%	6.90%	5000.57	4721.11	
CCL [Shakti 2] Coal	14.64%	12.94%	3856.28	3868.79	
MCL [Shakti 2] Coal	14.09%	12.25%	3107.23	3252.49	
CCL SFA	0.00%	0.60%	0.00	4444.35	
Wtg. Avg. GCV			3825.67	3972.60	

# Commission's Analysis

- 6.28 The Commission has observed that the Petitioner has procured coal from other sources in addition to sources that are approved by the Commission in its MYT Order dated November 04, 2022 owing to various reasons.
- 6.29 The Commission has computed the GCV for each type of coal by considering the actual weighted average GCV after scrutinizing the actual for first six-month and estimated for remaining for next six month of FY 2024-25. The Petitioner is directed to bring to the notice of the Commission of any such changes and shortage in supply of coal on quarterly basis and should ensure the cost effectiveness of such purchase.
- 6.30 Considering the submission and the facts and circumstances and on due diligence, the Commission approves the coal mix and weighted average GCV of coal for Unit-II and Unit-III of Jojobera Generation station as given below.

Table 73: Coal Mix and GCV for Unit-II as approved by the Commission

Doubleulous	Fuel Mix (%)			GCV (kCal/kg)		
Particulars	MYT	Petition	Approved	MYT	Petition	Approved
Middling Coal	21.04%	34.17%	34.17%	3860.75	4402.50	4402.50
2P Coal			0.00%			0.00
WB Reject Coal			0.00%			0.00
CCL [Shakti 3] Coal	43.76%	32.53%	32.53%	3837.53	3694.03	3694.03
BCCL [e-auction] Coal			0.00%			0.00
ECL/E auction			0.00%			0.00



Particulars	Fuel Mix (%)		GCV (kCal/kg)			
Farticulars	MYT	Petition	Approved	MYT	Petition	Approved
Tailing (Road) Coal	0.00%	0.28%	0.28%	0.00	4321.85	4321.85
CCL [Shakti 2] WIV Coal			0.00%			0.00
ECL [Shakti 2] Coal	6.48%	5.95%	5.95%	5109.27	4726.12	4726.12
CCL [Shakti 2] Coal	14.63%	10.61%	10.61%	3837.53	3889.96	3889.96
MCL [Shakti 2] Coal	14.09%	13.59%	13.59%	3129.71	3251.85	3251.85
CCL SFA	0.00%	2.86%	2.86%	0.00	4441.17	4441.17
Wtg. Avg. GCV				3825.15	3981.45	3981.45

Table 74: Coal Mix and GCV for Unit-III as approved by the Commission

Doubleulous	Fuel Mix (%)			GCV (kCal/kg)			
Particulars	MYT	Petition	Approved	MYT	Petition	Approved	
Middling Coal	21.03%	31.29%	31.29%	3859.81	4429.43	4429.43	
2P coal			0.00%			0.00	
WB Reject Coal			0.00%			0.00	
CCL [Shakti 3] Coal	43.76%	35.77%	35.77%	3856.28	3702.34	3702.34	
BCCL [e-auction] coal			0.00%			0.00	
ECL/E Auction			0.00%			0.00	
Tailing (Road) Coal	0.00%	0.25%	0.25%	0.00	4321.85	4321.85	
CCL [Shakti 2] WIV Coal			0.00%			0.00	
ECL [Shakti 2] Coal	6.48%	6.90%	6.90%	5000.57	4721.11	4721.11	
CCL [Shakti 2] Coal	14.64%	12.94%	12.94%	3856.28	3868.79	3868.79	
MCL [Shakti 2] Coal	14.09%	12.25%	12.25%	3107.23	3252.49	3252.49	
CCL SFA	0.00%	0.60%	0.60%	0.00	4444.35	4444.35	
Wtg. Avg. GCV				3825.67	3972.60	3972.60	

## **Transit Loss**

# Petitioner's Submission

6.31 The Petitioner has projected the transit loss on normative basis for each source of coal for FY 2024-25 in accordance with *Clause 17.11* of the Generation Tariff Regulations 2020.



# Commission's Analysis

6.32 The Commission has observed that the actual transit loss of coal depends on various factors like category of coal, foreign particles content, moisture content, distance from mines etc. Considering all the factors, in accordance with *clause 17.11* of JSERC Generation Tariff Regulations, 2020, the Commission stipulated the weighted average normative transit loss of 0.8% for all categories of coal.

#### **Landed Cost of Coal**

#### Petitioner's Submission

6.33 The Petitioner has submitted the source-wise actual landed price of coal upto Sept-24 and the projected price for Oct-24 onwards for the FY 2024-25 in *ANNEXURE P22 B*. Normative transit loss has been considered for other categories of coal as per JSERC Generation Tariff Regulations, 2020.

# Commission's Analysis

- 6.34 The Commission has considered following particulars for the approval of the weighted average landed cost of coal: -
  - Actual figures up to October 2024 and projected for remaining months considering Base price of coal including sizing charges, applicable tax, transportation charges, handling charges and provisional adjustment/stock adjustment (if any);
  - Normative Transit loss as approved by the Commission;
  - Actual consumption of various types of coal.
- 6.35 On scrutinizing and analyzing the material, information, and actual figure for first six months and estimated for the remaining six month submitted by the Petitioner and on prudent check the Commission approves the landed price of primary fuel for FY 2024-25 as tabulated hereunder.



Table 75: Landed Price of Primary Fuel for Unit-II as approved by the Commission

Particulars	Rs./Ton					
Farticulars	MYT	Petition	Approved			
Middling Coal	4222.58	4934.94	4934.94			
WB Reject Coal						
CCL [Shakti 3] Coal	3653.69	3851.32	3851.32			
Tailing (Road) Coal	0.00	5878.00	5878.00			
CCL [Shakti 2] WIV Coal						
ECL [Shakti 2] Coal	5328.00	5844.67	5844.67			
CCL [Shakti 2] Coal	3653.69	3948.10	3948.10			
MCL [Shakti 2] Coal	2506.65	3100.58	3100.58			
CCL SFA	0.00	6036.83	6036.83			
Wtg. Avg. Landed Price of Primary Fuel	3720.33	4316.89	4316.89			

Table 76: Landed Price of Primary Fuel for Unit- III as approved by the Commission

Particulars	Rs./Ton					
Farticulars	MYT	Petition	Approved			
Middling Coal	4222.98	4907.60	4907.60			
WB Reject Coal						
CCL [Shakti 3] Coal	3820.04	3782.12	3782.12			
Tailing (Road) Coal	0.00	5878.00	5878.00			
CCL [Shakti 2] WIV Coal			0.00			
ECL [Shakti 2] Coal	5347.64	5358.01	5358.01			
CCL [Shakti 2] Coal	3820.04	3983.44	3983.44			
MCL [Shakti 2] Coal	2518.83	3140.02	3140.02			
CCL SFA	0.00	6018.19	6018.19			
Wtg. Avg. Landed Price of Primary Fuel	3820.48	4209.03	4209.03			

# Calorific value and Cost of Secondary Fuel

# Petitioner's Submission

6.36 The Petitioner has submitted the weighted average calorific value and



landed price of secondary fuel i.e., LDO is 9006.90 kCal/L and Rs. 78139.77 /kL for Unit-II and 8781.85 kCal/L and Rs. 77607.99 /kL for Unit-III respectively.

# Commission's Analysis

- 6.37 On scrutinizing and analyzing the data, information and submission made by the Petitioner and on prudent check, the Commission has observed that the landed price of secondary fuel had increased drastically as compared to the MYT order. Accordingly, the Commission directs the Petitioner to ensure price discipline while purchasing the secondary fuel and also provide the auditor's certificate at the time of true up.
- 6.38 Considering the fact that the landed price of secondary fuel is volatile and depend on the market supply and demand, the Commission in the instant order, approves the calorific value and landed price of Secondary Fuel as submitted by the Petitioner as given below.

Table 77: Calorific value & Landed Price of Secondary fuel as approved by the Commission

Calorific Value (kcal/L)			cal/L)	Landed Price (Rs./kL)			
Particulars	MYT	Petition	Approved	MYT	Petition	Approved	
UNIT-II	9100.00	9006.90	9006.90	45197.95	78139.77	78139.77	
UNIT-III	9100.00	8781.85	8781.85	45195.83	77607.99	77607.99	

## **Energy Charge Rate (ECR)**

#### Petitioner's Submission

- 6.39 The Petitioner has estimated the Energy Charge Rate (ECR) for FY 2024-25 as Rs. 3.198/kWh and Rs. 3.138/kWh for Unit-II and Unit-III respectively before taking into account the discount of Shakti Coal.
- 6.40 Further, the Petitioner has passed on the discount of Rs. 0.04/kWh and Rs 0.07/kWh to its beneficiaries on the Units generation corresponding to Shakti Coal allocated under round#2 & round #3 procurement as per the methodology approved by the Commission in the amended Power Purchase Agreement (PPA) between the Petitioner and Beneficiary for



- Jojobera Plant Unit-II and Unit-III.
- 6.41 In accordance with JSERC (Generation Tariff Regulation) (1st Amendment) 2023 the Petitioner has considered a margin of 85.00 kCal/kg in GCV for both Unit-II & Unit-III for computation of ECR.
- 6.42 Further, in accordance with JSERC (Generation Tariff Regulation) (1st Amendment) 2023 the Petitioner has considered normative Gross Station Heat Rate as 2567.00 kCal/kWh for Unit-II & 2577 kcal/kWh for Unit-III, Normative Auxiliary Consumption of 10.00% and Normative secondary fuel oil of 0.5 ml/kWh for both the Unit for FY 2024-25 for computation of the Energy Charge rate.

## Commission's Analysis

- 6.43 The Commission has outlined *clause 17.7*, *clause 17.8* of JSERC Generation Tariff Regulation, 2020 in True-up chapter of this order for approval of the Energy Charge Rate (ECR).
- 6.44 Accordingly, the Commission compute the ECR based on actual coal mix (for first six months and estimated for next six months of FY 2024-25), normative transit loss, normative Secondary Fuel Oil consumption, normative SHR, normative Auxiliary consumption, landed price of primary & secondary fuel, weightage average GCV of primary & secondary fuel as approved earlier in this order.

Table 78: Energy Charge Rate (ECR) for Unit-II as approved by the Commission.

Particulars Particulars	UoM	MYT	Petition	Approved
Normative Auxiliary Consumption (AUX)	%	9.00%	10.00%	10.00%
Normative Gross Station Heat Rate (SHR)	kCal/kW h	2,525.00	2567.00	2567.00
Specific fuel Oil Consumption (SFC)	mL/kWh	0.50	0.50	0.50
Calorific Value of Oil (CVSF)	kCal/ml	9.10	9.01	9.01
GCV of Primary Fuel (CVPF)	kCal/kg	3,825.15	3,896.45	3,896.45
Landed Price of Primary Fuel (LPPF)	Rs./kg	3.72	4.32	4.32
Landed Price of Secondary Fuel (LPSFi)	Rs./ml	0.05	0.08	0.08
Energy Charge Rate (ECR)	Rs/kWh	2.719	3.198	3.198



Table 79: Energy Charge Rate (ECR) for Unit-III as approved by the Commission.

Particulars	UoM	MYT	Petition	Approved
Normative Auxiliary Consumption (AUX)	%	9.00%	10.00%	10.00%
Normative Gross Station Heat Rate (SHR)	kCal/kWh	2,525.00	2577.00	2,577.00
Specific fuel Oil Consumption (SFC)	mL/kWh	0.50	0.50	0.50
Calorific Value of Oil (CVSF)	kCal/ml	9.10	8.78	8.78
GCV of Primary Fuel (CVPF)	kCal/kg	3,825.67	3,887.60	3,887.60
Landed Price of Primary Fuel (LPPF)	Rs./kg	3.82	4.21	4.21
Landed Price of Secondary Fuel (LPSFi)	Rs./ml	0.05	0.08	0.08
Energy Charge Rate (ECR)	Rs/kWh	2.791	3.138	3.138

- 6.45 The Commission has observed that due to discount of Rs. 0.04/kWh on sale of SHAKTI round #2 and Rs 0.07/kWh on sale of SHAKTI round #3 scheme coal, there will be reduction in energy cost by Rs. 2.43 Crore and Rs. 2.98 Crore in Unit-II and Unit-III respectively for FY 2024-25.
- 6.46 The Commission has scrutinized the submission of the Petitioner and approved the reduction as submitted by the Petitioner as shown below and shall be subject to prudence check at the time of truing up.

Table 80: Total Shakti discount for FY 2024-25 as approved by the Commission after considering the impact of Discounting on SHAKTI Scheme Coal.

Particulars	UoM	Uni	it-II	Un	it-III
Farticulars	OOM	Petition	Approved	Petition	Approved
Fuel Charge Before Discount	Rs. Cr.	246.05	246.05	270.32	270.32
Sales due to ECL (Shakti 2) Coal	MU	53.04	53.04	68.92	68.92
Sales due to CCL (Shakti 2) Coal	MU	77.48	77.48	105.47	105.47
Sales due to CCL (Shakti 2) WIV Coal	MU		0.00		0.00
Sales due to MCL (Shakti 2) Coal	MU	82.61	82.61	83.52	83.52
Discount Amount (@ Rs. 0.04/kWh)	Rs. Cr.	0.85	0.85	1.03	1.03
Sales due to CCL Coal (Shakti 3)	MU	225.31	225.31	278.66	278.66
Discount Amount (@ Rs. 0.07/kWh)	Rs. Cr.	1.58	1.58	1.95	1.95
Total Shakti Discount	Rs. Cr.	2.43	2.43	2.98	2.98



# **Summary of Fuel Cost**

6.47 On consideration of the submission and details furnished by the Petitioner, the Commission approves the Fuel Cost for both the unit as summarized below:

Table 81: Fuel Cost for Unit-II as approved by the Commission

Particulars	UoM	MYT	Petition	Approved
Primary Fuel Cost	Rs. Cr.	219.04	242.71	242.71
Secondary Fuel Cost	Rs. Cr.	2.02	3.34	3.34
Total Energy Cost	Rs. Cr.	221.06	246.05	246.05

Table 82: Fuel Cost for Unit-III as approved by the Commission

Particulars	UoM	MYT	Petition	Approved
Primary Fuel Cost	Rs. Cr.	224.90	266.60	266.60
Secondary Fuel Cost	Rs. Cr.	2.02	3.71	3.71
Total Energy Cost	Rs. Cr.	226.92	270.32	270.32

#### **Determination of Fixed Cost**

## **Additional Capitalization**

#### Petitioner's Submission

- 6.48 The Petitioner has submitted the actual capitalization for Unit-II and Unit-III for FY 2024-25 which is broadly categorized under two heads:
  - **Capitalization-Standalone:** This category includes the capitalized costs incurred for assets/schemes exclusively for Unit-II or Unit-III.
  - Capitalization-Common Facilities: This category includes the assets/schemes which are common to all the Units at the Jojobera Power Plant i.e. Unit-I, Unit-II, Unit-III, Unit-IV of Tata Power and Unit-V of Industrial Energy Limited (IEL). These assets/schemes provide facilities to all the above Units and therefore the capitalized cost of such assets/schemes are apportioned to derive the GFA part of Unit-II and Unit-III appropriately.



6.49 The Petitioner has further submitted that the apportionment ratio was worked out individually for Unit-II and Unit-III and combined based on the installed capacity of these Units with respect to the installed capacity of Unit-I, Unit-II, Unit-IV and IEL Unit-V of Jojobera Power Plant. The methodology of such apportionment is given below.

Table 83: Apportionment ratio as submitted by the Petitioner

Particulars	UoM	MYT
Installed Capacity (Unit-I)	MW	67.5
Installed Capacity (Unit-II)	MW	120
Installed Capacity (Unit-III)	MW	120
Installed Capacity (Unit-IV)	MW	120
Installed Capacity (Unit-V-IEL)	MW	120
Installed Capacity of Jojobera Power Plant	MW	547.5
Contribution of Unit-II	%	21.92
Contribution of Unit-III	%	21.92
Combined Contribution (Unit-II+ Unit-III)	%	43.84

6.50 The petitioner has submitted the projected scheme-wise capitalization and decapitalization for FY 2024-25 as tabulated below.

Table 84: Projected Scheme-Wise Additional Capitalization and decapitalization (In Rs. Lakh) for FY 2024-25 for Unit # 2&3

Sr. No	Project Description	Total Proposed Cost (Lakh)	Used in Units	Apportioned Cost (Proposed) to U2&3(Lakh)	Revised Phasing for FY25 approved in Order dated 6.6.24 (ii)	Revised Phasing proposed For FY-25 (iii)	Proposed Decapitalisati on for FY-25
1	Hydraulic Auger for CHP (Carry Forward)	456.00	1,2,3,4,	200.00	200.00	0.00	0.00
2	Replacement of Dead Tank CT with Live Tank CT (Carry forward)	205.26	1,2,3,4,	89.98	89.98	11.26	3.15
3	Control Room AC System	633.5	2,3	633.5	0.00	129.13	36.17



Sr. No	Project Description	Total Proposed Cost (Lakh)	Used in Units	Apportioned Cost (Proposed) to U2&3(Lakh)	Revised Phasing for FY25 approved in Order dated 6.6.24 (ii)	Revised Phasing proposed For FY-25 (iii)	Proposed Decapitalisati on for FY-25
4	Workshop machine Tools, Condition Monitoring tools & Mobile Environmental dust Extractor	200	1,2,3,4,	87.67	38.58	87.68	24.56
5	Turbine Parting Plane Bolts & Coupling Bolts	433.76	2	433.76	433.76	433.76	121.51
6	New Weigh Bridge for Bulker	112.04	1,2,3,4,	49.11	-	49.11	13.76
7	Multi-Layered Security System for Jojobera Power Plant.	275	1,2,3,4,	120.55	67.71	120.55	33.77
8	Spray Nozzle for Boiler	70	2	70.00	0.00	70.00	19.61
9	Upgradation of DAVR (Digital Automatic Voltage Regulator)	130	2	130.00	0.00	130.00	36.42
	Total	2515.56		1814.57	1263.53	1031.49	288.96

- 6.51 The Petitioner submits that from the schemes presented in the above table, schemes at Sr. No. 2,3,4,6 and 7 are same as discussed in the true up section of this petition
- 6.52 Regarding the scheme at Sr. No.1 of the above table, i.e. Hydraulic Auger for CHP, the Petitioner submits that this scheme had been approved by the Commission vide Order dated 06.06.2024 for FY 2024-25 as Online Sampler System, considering the detailed justifications submitted by the Petition in the Petition for APR of FY 2024. However, phasing of this scheme has been changed to FY 26 for execution as it involves extensive engineering and deliberation with other generating stations on performance.
- 6.53 Further, the schemes at Sr. No. 5, 8 and 9 are the schemes for which the Commission has already approved the capitalization in FY 2025. The Petitioner submits that these schemes are expected to be completed as per approved phasing.
- 6.54 Further, the Petitioner proposes and seeks approval for the new schemes



to enhance operational efficiency and reliability, with implementation and phasing planned for FY 2025-26. These schemes include critical spare for compressor, upgradation of DM plant, upgradation of Boiler-lift, upgradation of Ash handling plant PLC and upgradation of cyber security system. The Petitioner has already apprised the Commission regarding these schemes vide the Quarterly Report submitted for quarter ended 30.06.2024. These proposed schemes have been summarized below.

Table 85: New Schemes proposed for FY 2025-26 by the Petitioner.

S. No.	Project Description	Capex (Cr.)	Regulation	Justification
1	Critical spare for compressor	6.75	Regulation 14.3 (a,c)	Obsolescence/End of useful life
2	Upgradation of DM Plant	4.13	Regulation 14.3 (a)	Reliability/End of useful life
3	Upgradation of Boiler Lift	0.5	Regulation 14.3 (b)	Change in law
4	Upgradation of Ash handling plant PLC	2.00	Regulation 14.3 (c)	Obsolescence
5	Upgradation of cyber security system	4.00	Regulation 14.3 (b)	Change in law/ Cyber security

6.55 The table below summarizes the scheme wise projected additional capitalization for Unit-II and Unit-III for FY 2024-25.

Table 86: Asset wise Capitalization (Rs. Crore) as submitted by the Petitioner.

Particulars Particulars	Petition
Unit II standalone	
Turbine Parting Plane Bolts & Coupling Bolts	4.34
Spray Nozzle for Boiler	0.70
Upgradation of DAVR(Digital Automatic Voltage Regulator)	1.30
Unit II & Unit III Common	
Replacement of Dead Tank CT with Live Tank (Carry Forward)	0.11
Control Room AC system	1.29
Workshop machine Tools, Condition Monitoring tools & Mobile Environmental dust Extractor	0.88
New Weigh Bridge for Bulker	0.49



Particulars Particulars	Petition
Unit II standalone	
Turbine Parting Plane Bolts & Coupling Bolts	4.34
Spray Nozzle for Boiler	0.70
Upgradation of DAVR(Digital Automatic Voltage Regulator)	1.30
Multi-Layered Security System for Jojobera Power Plant.	1.21
Net- Capitalization	10.31

Table 87: Capitalization and Decapitalization (Rs. Crore) as submitted by the Petitioner.

Doubleyless	U	nit-II	Unit-III		
Particulars	MYT Petition		MYT	Petition	
Capitalization	0.12	8.33	0.12	1.99	
Decapitalization	0.04	2.33	0.04	0.56	

# Commission's Analysis

- 6.56 The Commission has outlined *clause 14.1 to clause 14.6* of JSERC Generation Tariff Regulation, 2020 in Truing Chapter of this Order for approval of any additional capitalization for a generating station.
- 6.57 The Commission has observed that the Petitioner has submitted the revised Capitalization phasing for Unit-II & Unit-III for FY 2024-25.
- 6.58 In regard to revision in capitalization phasing for FY 2024-25, the Commission has scrutinized the detail and reasoning submitted by the Petitioner and on prudent check the Commission approves the revised capitalization plan.
- 6.59 Moreover, the Commission hereby approves the proposed phasing of the new capitalization schemes for FY 2025-26 as outlined by the Petitioner, after a comprehensive evaluation of their anticipated necessity in the future.
- 6.60 The Commission also directs the Petitioner to bring the actual capitalization for each year of the control period. Further, in case there is a need to review/revise any scheme or change in the Scope of Work, the



same need to be submitted before the Commission with proper justification.

6.61 The table below summaries the asset wise capitalization as submitted by Petitioner vis-à-vis approved by the Commission for FY 2024-25 is given below.

Table 88: Asset wise Capitalization as approved by the Commission (Rs. Crore)

Particulars	Petition	Approved
Unit II standalone		
Turbine Parting Plane Bolts & Coupling Bolts	4.34	4.34
Spray Nozzle for Boiler	0.70	0.70
Upgradation of DAVR (Digital Automatic Voltage Regulator)	1.30	1.30
Unit II & Unit III Common		
Replacement of Dead Tank CT with Live Tank (Carry Forward)	0.11	0.11
Control Room AC system	1.29	1.29
Workshop machine Tools, Condition Monitoring tools & Mobile Environmental dust Extractor	0.88	0.88
New Weigh Bridge for Bulker	0.49	0.49
Multi-Layered Security System for Jojobera Power Plant.	1.21	1.21
Net- Capitalization	10.31	10.31

6.62 On scrutinizing and analyzing the data, information, material on record and on prudent check, the Commission approves the de-capitalization phasing for FY 2024-25 and direct the Petitioner to bring the actual decapitalization each year of the control period.

Table 89: Capitalization as approved by the Commission (Rs. Crore)

Doutioulous	_	Unit-II			Unit-III		
Particulars	MYT	Petition	Approved	MYT	Petition	Approved	
Capitalization	0.12	8.33	8.33	0.12	1.99	1.99	
Decapitalization	0.04	2.33	2.33	0.04	0.56	0.56	

Table 90: Gross Fixed Assets (Rs. Crore) for Unit II as approved by the



#### Commission

Particular	MYT	Petition	Approved
Opening GFA	504.83	496.57	496.57
Additional Capitalisation	0.12	8.33	8.33
Decapitalisation	0.04	2.33	2.33
Closing GFA	504.91	502.57	502.57

Table 91: Gross Fixed Assets (Rs. Cr) for Unit III as approved by the Commission.

Particulars	MYT	Petition	Approved
Opening GFA	490.54	480.98	480.97
Additional Capitalisation	0.12	1.99	1.99
Decapitalisation	0.04	0.56	0.56
Closing GFA	490.62	482.41	482.40

# **Depreciation**

#### Petitioner's Submission

- 6.63 The Petitioner has submitted the depreciation for FY 2023-24 as summation of depreciation incurred on the following assets:
  - Original Project Cost;
  - Additional Capitalization approved for FY 2011-12 to FY 2015-16;
  - Additional Capitalization approved for FY 2016-17 to FY 2020-21;
  - Additional Capitalization approved for FY 2021-22 to FY 2022-23;
  - Additional Capitalization projected for FY 2023-24 to FY 2024-25
  - Additional Capitalization projected for FY 2025-26
- 6.64 The Petitioner has proposed the recovery of remaining depreciable value on original project cost as per depreciation rate specified in the Regulations, in case the cumulative depreciation of asset is less than 70%, else, by spreading it equally in the remaining Useful life i.e. 25 years.
- 6.65 The Petitioner has submitted that the cumulative depreciation on total assets [i.e. GFA (Including Additional Capitalization)] up to FY 2023-24 has crossed 70% for both the Units-II and Unit-III, the Petitioner as per *clause 15.30*, has spread the balance depreciable value (i.e. 90% of the



Capital Cost minus Cumulative depreciation recovered for assets in service up to 2023-24) over the balance useful life (taking useful life of 25 years specified in Regulations) of the Plant

Table 92: Depreciation (Rs. Crore) as submitted by the Petitioner

Particulars	Unit	-II	Unit-III		
Farticulars	MYT	Petition	MYT	Petition	
Depreciation	8.54	23.17	9.02	19.33	

# Commission's Analysis

- 6.66 In Truing up chapter of this petition, the Commission has outlined *clause*15.28 to clause 15.34 of JSERC Generation Tariff Regulation, 2020 for approval of Depreciation for a generating station.
- 6.67 The Commission has observed that the Petitioner has adopted different methodology for calculation of depreciation vis-à-vis the method approved by the Commission.
- 6.68 On scrutinizing and analyzing the data, information submitted by the Petitioner, the Commission observes that the Plant is in fag end of its life and overall depreciation of the generating stations had reached 70% for both the Units. Accordingly, in accordance with *clause 15.30* Generation Tariff Regulation 2020, the Commission is of the view to spread equally the remaining depreciable amount.
- 6.69 In accordance with *clause 3.1 (65)* of Generation Tariff Regulation 2020, the Useful life of the generating station is 25 years. However, the Petitioner had executed the Power Purchase Agreement (PPA) with the Beneficiary for 30 years. Such signing of PPA, clearly infers that both the Petitioner and Beneficiary are aware that the existing plant is able to stand even after 25 years. Further, depreciating the legitimate depreciable amount in 25 years will defeat the purpose of reliability and economical power which is an attribute of long term PPA.



6.70 Accordingly, the Commission taking into account the PPA tenure and *clause 15.30* of Generation Tariff Regulation 2020, has spread the remaining depreciable amount in PPA life (30 years) which shall also economize the power cost, and therefore approves the depreciation taking into PPA life instead of Useful life.

Table 93: Depreciation (Rs. Crore) as approved by the Commission.

Particulars	Unit-II			Unit-III			
Particulars	MYT	Petition	Approved	MYT	Petition	Approved	
Depreciation	8.54	23.17	8.25	9.02	19.33	8.49	

# Operation & Maintenance Expenses

#### Petitioner's Submission

- 6.71 The Petitioner has claimed the Operation and Maintenance (O&M) expenses under the following broad categories: -
  - Projected O&M Expenses for the Control Period FY 2021-22 to 2025-26;
    - > Employee Expenses without Terminal Liabilities;
    - ➤ Repairs & Maintenance (R&M) Expenses;
    - ➤ Administrative and General (A&G) Expenses;
  - Ash Disposal Expenses;
  - Petition Application Fee & Publication Expenses
  - Raw water Expenses;
  - Terminal Benefits
  - Legal Expenses:
- 6.72 Employee Expenses: As elaborated in True-up chapter of this order growth factor (Gn) and inflation factor, as specified in Generation Tariff Regulation 2020 has been revised/undergone a change. Consequently, the updated Employee Expenses for the APR of FY 2024-25 is tabulated hereunder.

Table 94: Normative Employee Expenses (Rs. Crore) as submitted by the Petitioner

Particulars (Base Year)	FY- 22	FY-23	FY-24	FY-25	FY-26
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Unit-II						
Employee Expenses	7.74	9.07	9.79	10.16	11.05	
Unit-III						
Employee Expenses         7.74         9.07         9.86         10.16         11.05						

6.73 The petitioner has submitted that in the MYT Petition, for the purpose of projection, growth factor of 1 was considered. However, considering the tighter norms to be met, stringent emission norms to be complied with and to rationalize already lean strength for improving reliability, additional manpower was required out of which 6 was sanctioned in 2020-21, 8 has been added in 2021-22 and 2 in FY 2022-23 for Units 1-4 of the Jojobera Power Plant. As has been brought out in the True-Up section of this petition, there has been no man power addition in the FY 2023-24. For APR FY 2024-25, the Petitioner has projected the addition in number of employees as 10 for the reasons stated above. Accordingly, growth rate is factored as 5.13% and escalation rate is considered 3.47 % as approved in MYT order. Therefore, to arrive at the Normative R&M Expenses, Other A&G Expenses, Legal Expenses and HO expenses for FY 2024-25, considering FY 2023-24 as a base value, inflation of 3.47% and with 5.13% growth factor is considered as multiplier for arriving at the Normative Expenses for FY 2024-25.

Table 95: Revised Normative O&M Expenses (Rs. Crore) as submitted by the Petitioner

	Unit 2		Unit 3			
Particulars	Approved in the MYT Order			Revised		
	FY 24-25			FY 24-25		
R&M Expenses	21.02	21.76	19.48	20.17		
A&G Expenses	7.05	7.30	6.61	6.84		
Legal Expenses	0.01	0.01	0.01	0.01		
HO Expenses	14.09	14.59	14.05	14.55		

6.74 The Petitioner has estimated raw water expenses by considering the projected computation and raw water charge rate applicable for the year.



- Further it was submitted that the projection has been worked out considering the actual consumption till Sept 2024 and thereafter considering the weighted average consumption for remaining months.
- 6.75 Further, it was submitted that the Gov. of Jharkhand (GoJ) has issued the revised water notification which is applicable from 1st of April 2023. In terms of the revised notification, there are separate classifications for supply for industrial usage and supply for municipal. Tata Steel vide its email dated 05.07.2023 informed Tata Power that they agreed to the rates for supply of water for industrial usage (Rs 13.00 per KL) and have started paying the same in its entirety to GoJ and further requested Tata Power to also make full payment in terms of invoices raised from 01.04.2023.
- 6.76 Accordingly, the Petitioner has considered 100% of the base water charge and 100% of the water tax component, since no dispute is pending before any court for the period April 01, 2023 and the projection summarizes in the table are subject to true-up later based on actual.

Table 96: Water Charges (Rs. Crore) as submitted by the Petitioner

Particulars	Unit wis Consur allocated generatio	nption based on	Effective Water Rate for FY 2024-25(in	Water Charges (in Rs. Cr.)	
	Unit 2 (a)	Unit 3 (b)	Rs./m3)	Unit 2	Unit 3
Base water charge rate	1985046	2221547	16.38	3.25	3.64
Water tax			14.88	2.95	3.31
Total			31.26	6.21	6.94
Claim of Water Charges in Unit 2	100% base water charges+@100% for Water Tax as per new Notification on Water Tax which has been accepted by TSL			6.5	21
Claim of Water Charges in Unit 3				6.9	94

6.77 Ash disposal expenses, Terminal Liabilities and Applications Fee/Publication expenses for Unit 2 and Unit 3 have been claimed by the Petitioner as per projections approved in the MYT Order dated 04.11.2022.



6.78 Based on above, the detailed component-wise summary of Operation & maintenance expenses for Unit-II and Unit-III is shown below.

Table 97: O&M Expenses (Rs. Crore) as submitted by the Petitioner

Particulars	UoM	UNIT-II		UNIT-III	
Farticulars	OOM	MYT	Petition	MYT	Petition
Employee Expenses	Rs. Cr.	9.31	11.05	9.31	11.05
Terminal Liabilities	Rs. Cr.	0.92	0.92	0.92	0.92
R&M Expenses	Rs. Cr.	21.02	21.76	19.48	20.17
Ash Disposal Expenses	Rs. Cr.	5.05	5.05	4.76	4.76
Raw Water	Rs. Cr.	6.18	6.21	6.18	6.94
HO Expenses	Rs. Cr.	14.09	14.59	14.05	14.55
Application & Publication Fee	Rs. Cr.	0.22	0.22	0.14	0.22
Other A&G Expenses	Rs. Cr.	7.05	7.30	6.61	6.84
Legal Expenses	Rs. Cr.	0.01	0.01	0.01	0.01
O&M Expenses	Rs. Cr.	62.84	67.10	60.53	65.46

### Commission's Analysis

- 6.79 In True-up chapter of this petition, the Commission outlines **clause**15.35 and clause 15.40 of JSERC Generation Tariff Regulation, 2020 for approval of Operation & Maintenance Charges for a generating station.
- 6.80 Based on facts and circumstance of the petition, the Commission approves the normative Employee Expenses for FY 2024-25 by taking the inflation factor 5.84% (average value of last 3 Year inflation) and growth factor (0.00%). The rationale behind selecting this growth factor is that the plant capacity and the gross generation remain unchanged, making the increase in number of staffs unjustified. The growth factor shall be subject to truing up on the basis of actual nos. of employees.

Table 98: Normative Employee Expenses (Rs Crore) as approved by the



Commission.

Doutieulous	Ham	Unit-II	Unit-III	
Particulars Particulars	UoM	Approved	Approved	
Employee Cost of Previous Year	Rs. Cr.	9.72	9.72	
Estimated Inflation Factor	%	5.84%	5.84%	
Growth Factor	%	0.00%	0.00%	
Normative Employee Expenses	Rs. Cr.	10.29	10.29	

6.81 The Commission computes the normative A&G Expenses for FY 2024-25 by multiplying the estimated inflation factor 5.84% with the approved normative A&G Expenses for FY 2023-24 (excluding petition filing fee and CGRF expenses).

Table 99: Normative A&G Expenses (Rs Crore) as approved by the Commission.

Doutioulous	UoM	Unit-II	Unit-III
Particulars Particulars	OOM	Approved	Approved
A&G (n-1) Year	Rs Cr.	7.05	6.62
Inflation Factor	%	5.84%	5.84%
Normative A&G Expenses (A)	Rs Cr.	7.46	7.00

6.82 For the purpose of assessing the normative R&M Expenses, the Commission has adopted the same methodology utilized in the true-up for FY 23-24, as outlined in this order.

Table 100: Normative R&M Expenses (Rs Crore) as approved by the Commission.

Particulars	II.a.M	Unit-II	Unit-III
Farticulars	UoM	Approved	Approved
Opening GFA (a)	Rs. Cr.	496.57	480.97
K-Factor (b)	%	3.46%	3.30%
Inflation Factor for FY 21-22 (c)	%	6.93%	6.93%
Inflation Factor for FY 22-23 (d)	%	6.87%	6.87%
Inflation Factor for FY 23-24 (e)	%	3.72%	3.72%
Inflation Factor for FY 24-25 (f)	%	5.84%	5.84%
Normative R&M Expenses (g=a*b*(1+c)*(1+d)*(1+e)*(1+f))	Rs. Cr.	21.55	19.91



- 6.83 Furthermore, the Commission approves the HO Expenses for FY 2024-25 based on the approved value of HO Expenses for FY 2023-24 by multiplying it with the estimated inflation factor as 5.84%.
- 6.84 The Commission approves the legal expenses, application & publication fee as per the MYT Order Dated November 22, 2022.
- 6.85 The Commission also approves the ash disposal charge as sought in the MYT Order Dated November 22, 2022 equal to Rs 5.05 cr and Rs 4.76 cr for unit –II & III respectively for FY 2024-25 subject to trued-up on actual basis.
- 6.86 As per *clause 15.42 (Note-3)* of JSERC Generation Tariff Regulation 2020, the Commission does not approve terminal liabilities in the instant case. However, the Commission will allow the terminal liabilities in the true-up process based on the actuals submitted by the generating company, supported by documentary evidence such as actuarial studies.
- 6.87 The O&M expense projected by the Petitioner vis-à-vis as approved by the Commission for FY 2023-24 as given below.

Table 101: Normative O&M Expenses (Rs. Cr.) as approved by the Commission

<b>D</b> 1		Unit-II	·	Unit-III			
Particulars	MYT	Petition	Approved	MYT	Petition	Approved	
Employee Cost	9.31	11.05	10.29	9.31	11.05	10.29	
R&M Expenses	21.02	21.76	21.55	19.48	20.17	19.91	
HO & SS Expenses	14.09	14.59	14.92	14.05	14.55	14.88	
Other A&G Expenses	7.05	7.30	7.46	6.61	6.84	7.00	

Table 102: O&M Expenses (Variable Component) as approved by the Commission (Rs. Cr)

Particulars	Unit-II			Unit-III			
Particulars	MYT	Petition	Approved	MYT	Petition	Approved	
Terminal Liabilities	0.92	0.92	-	0.92	0.92	-	
Ash Disposal Expenses	5.05	5.05	5.05	4.76	4.76	4.76	
Application &	0.14	0.22	0.22	0.14	0.22	0.22	



Particulars		Unit-II		Unit-III		
Farticulars	MYT	Petition	Approved	MYT	Petition	Approved
Publication Expenses						
Legal Expenses	0.01	0.01	0.01	0.01	0.01	0.01

Table 103: Net O&M Expenses (Rs. Crore) as approved by the Commission.

Deutleuleus		Unit-II			Unit-III		
Particulars	MYT	Petition	Approved	MYT	Petition	Approved	
Employee Cost	9.31	11.05	10.29	9.31	11.05	10.29	
R&M Expenses	21.02	21.76	21.55	19.48	20.17	19.91	
HO & SS Expenses	14.09	14.59	14.92	14.05	14.55	14.88	
Other A&G Expenses	7.05	7.30	7.46	6.61	6.84	7.00	
Terminal Liabilities	0.92	0.92	-	0.92	0.92	-	
Ash Disposal Expenses	5.05	5.05	5.05	4.76	4.76	4.76	
Application & Publication Expenses	0.14	0.22	0.22	0.14	0.22	0.22	
Legal Expenses	0.01	0.01	0.01	0.01	0.01	0.01	
O&M Expenses	56.66	60.90	59.50	54.35	58.52	57.07	

### Water Charges, Capital Spare

### **Commission Analysis**

6.88 The Commission has outlined *clause 9.1* of JSERC Generation Tariff (1st Amendment), Regulation 2023, for approval Water Charges, capital spare for a generating station as reproduced below:

"The Water Charges, Security Deposit, and Capital Spare for thermal generating stations shall be allowed separately after prudent check".

6.89 The Commission has observed that the Government of Jharkhand has issued the revised water notification, where a separate classification for the supply of industrial usage and supply for municipal is done. In this regard, the Tata Steel vide email dated 05.07.2023 informed TPCL that they agreed to the rates for supplying of water for industrial usage (Rs 13.00 per KL) and have started paying the same in its entirety to GOJ and further requested Tata Power to also make full payment in terms of



invoices raised from 01.04.2023 as annexed in the **ANNEXURE P27**.

6.90 The table below summarizes the water charges as claimed by the Petitioner and as approved by the Commission for FY 2024-25.

Table 104: Water charges and capital expenses (Rs. Crore) as approved by the Commission.

Particulars	Unit-II			Unit-III			
Particulars	MYT	Petition	Approved	MYT	Petition	Approved	
Raw Water Expenses	6.18	6.21	6.21	6.18	6.94	6.94	
Capital Spare	-	-	-	-	-	-	

#### **Interest on Loan**

### Petitioner's Submission

- 6.91 The Petitioner has submitted that the repayment of the long-term loan on Original Project Cost of Unit-II & Unit-III had been completed in the FY 2009-10 and FY 2010-11 respectively. Therefore, the present computation is limited to computation of interest on loan on Normative Loan arising on account of Additional Capitalizations undertaken from 2011-12 onwards.
- 6.92 Further, the Petitioner has submitted that Deemed Repayment has been considered as depreciation for the year on Additional Capitalization only and not total depreciation as Normative loan pertains to Additional Capitalizations undertaken from 2011-12 onwards.
- 6.93 Furthermore, the Petitioner has submitted that the closing loan for FY 2023-24 has been considered as the Opening loan for 2024-25. Further, interest Rate has been considered as Bank Rate plus 200 basis points as on 01.04.2024 i.e. 1st April of respective year of the Control Period i.e. at 8.50% for Unit-II and Unit-III in accordance with *clause 15.18* of the JSERC Generation Tariff Regulations 2020 for working out the interest on loan on Additional Capitalization.
- 6.94 The Interest on loan computed by the Petitioner for FY 2024-25 is given below.



Table 105: Interest on Loan as submitted by the Petitioner (Rs. Crore)

Particulars	TT - N/I	Uni	it-II	Unit-III		
Particulars	UoM	MYT	Petition	MYT	Petition	
Opening Loan	Rs. Cr.	15.99	13.88	8.81	17.82	
Deemed Loan Addition	Rs. Cr.	0.08	5.83	0.08	1.39	
Deemed Loan Repayment	Rs. Cr.	8.54	16.06	9.02	11.74	
Closing Loan	Rs. Cr.	7.53	3.65	-0.13	7.47	
Average loan Balance	Rs. Cr.	11.76	8.77	4.34	12.65	
Interest Rate	%	9.00%	10.50%	9.00%	10.50%	
Interest on Loan	Rs. Cr.	1.06	0.92	0.40	1.33	

### Commission's Analysis

- 6.95 In True-up chapter, the Commission has outlined *clause 15.6 to clause*15.8 of JSERC Generation Tariff Regulation 2020, for the approval Debt: Equity ratio for a generating station.
- 6.96 The Commission has scrutinized the details submitted by the Petitioner and observed that the actual loan on the assets capitalized as on Commercial Date of Operation is entirely repaid by the Petitioner. Since the normative loan value approved by the Commission is on the additional capitalization from FY 2011-12, the normative opening loan for FY 2024-25 is considered equal to closing normative loan amount of FY 2023-24 as approved in the True-up chapter of this Order.
- 6.97 In accordance with *clause 15.15*, the Commission approves the deemed loan repayment equal to approved depreciation (Additional Capitalization) for FY 2024-25.
- 6.98 In accordance with *clause 15.18* of JSERC Generation Tariff Regulations, 2020 and as approved in MYT Order dated November 04, 2022, the Commission has approved the interest rate as 10.50% (SBI MCLR as on 01.04.2024 plus 200 bp) for both the Unit and Unit as shown below.



Table 106: Interest on Loan as approved by the Commission (Rs. Crore)

Particulars	Unit-II			Unit-III			
Farticulars	MYT	Petition	Approved	MYT	Petition	Approved	
Opening Loan	15.99	13.88	22.54	8.81	17.82	23.61	
Deemed Loan Addition	0.08	5.83	5.83	0.08	1.39	1.39	
Deemed Loan Repayment	8.54	16.06	5.71	9.02	11.74	5.12	
Closing Loan	7.53	3.65	22.65	-0.13	7.47	19.88	
Average Loan	11.76	8.77	22.60	4.34	12.65	21.74	
Interest Rate	9.00%	10.50%	10.50%	9.00%	10.50%	10.50%	
Interest on Loan	1.06	0.92	2.37	0.40	1.33	2.28	

### **Interest on Working Capital (IOWC)**

### Petitioner's Submission

6.99 The Petitioner has estimated the Interest on Working Capital (IOWC) requirement in accordance with *clause 15.23*, *clause 15.26* of JSERC Generation Tariff Regulations, 2020, as tabulated hereunder.

Table 107: IOWC (Rs. Crore) as submitted by the Petitioner.

Particulars	Un	it-II	Unit-III	
Farticulars	MYT	Petition	MYT	Petition
Cost towards Coal for Generation 50 days	30.00	34.75	30.81	34.09
Cost of Oil for Generation (2 months)	0.34	0.58	0.34	0.58
Maintenance Spares (20% O&M)	11.33	13.42	10.87	13.09
O&M Expenses (1 month)	5.24	5.59	5.04	5.46
Receivables (45 days)	40.15	48.19	40.55	46.80
Total Working Capital	87.07	102.53	87.61	100.02
Interest Rate	10.50%	12.15%	10.50%	12.15%
Interest on Working Capital	9.14	12.46	9.20	12.15

### Commission's Analysis

6.100 In True-up chapter, the Commission has outlined clause 15.23 to clause 15.26 of JSERC Generation Tariff Regulation 2020 and clause 6.1 of JSERC Generation Tariff (1st Amendment), Regulation 2023 for



approval interest on working capital for a generating station.

6.101 Taking into account the above regulation, the Interest on Working capital has been calculated at an interest rate of 12.00% (Bank Rate plus 350 basis points) as specified in the *clause 15.26* JSERC Generation Tariff Regulation, 2020 is given below.

Table 108: IOWC (Rs. Crore) as approved by the Commission

Particulars	Unit-II			Unit-III		
rarticulars	MYT	Petition	Approved	MYT	Petition	Approved
Cost of Coal (for 50 days)	30.00	34.75	34.65	30.81	34.09	34.00
Cost of Oil for Generation (2 months)	0.34	0.58	0.58	0.34	0.58	0.58
Maintenance Spares (20% O&M)	11.33	13.42	11.90	10.87	13.09	11.41
O&M Expenses (1 month)	5.24	5.59	5.48	5.04	5.46	5.33
Receivables (45 days)	40.15	48.19	45.40	40.55	46.80	44.39
Total Working Capital	87.07	102.53	98.01	87.61	100.02	95.71
Interest Rate	10.50%	12.15%	12.15%	10.50%	12.15%	12.15%
Interest on Working Capital	9.14	12.46	11.91	9.20	12.15	11.63

### Return on Equity

#### Petitioner's Submission

- 6.102 The Petitioner has computed Return on Equity (Pre-tax) for FY 2024-25 in accordance with *clause 15.9*, *clause 15.10* of Generation Tariff Regulation, 2020 read with Clause 15.11 and considering the estimated Additional Capitalization and decapitalization during 2024-25.
- 6.103 While calculating the Return on Equity (post-tax), the Petitioner has taken Minimum Alternate Tax (MAT) rate of 25.17%. Accordingly, the Petitioner had calculated the Return on Equity for FY 2024-25 as given below.



Table 109: Return on Equity as submitted by the Petitioner (Rs. Crore)

Particulars	Unit	-II	Unit-III		
Farticulars	MYT	Petition	MYT	Petition	
Opening Equity	151.45	148.97	147.16	144.29	
Net Addition	0.02	1.80	0.02	0.43	
Closing Equity	151.47	150.77	147.19	144.72	
Average Equity	151.46	149.87	147.17	144.51	
Rate of Return on Equity	15.00%	15.00%	15.00%	15.00%	
ROE (Post-Tax)	18.71%	20.05%	18.71%	20.05%	
MAT	25.17%	25.17%	25.17%	25.17%	
ROE (Pre-Tax)	28.34	30.04	27.53	28.97	

### Commission's Analysis

- 6.104 In True-up chapter, the Commission has outlined *clause 15.6 to clause*15.8 of JSERC Generation Tariff Regulation 2020 and *clause 6.1* of JSERC Generation Tariff (1st Amendment), Regulation 2023 for approval of Return on Equity for a generating station.
- 6.105 On scrutinizing and analyzing the data information and material on record submitted by the Petitioner, the Commission observed that the company has transitioned to the new tax regime effective from 01.04.2020. Accordingly, it approves the applicable Tax rate of 25.168% (22%\*1.10\*1.04) (i.e. 22% (with surcharge of 10% and cess of 4%) in accordance with Generation Tariff Regulations, 2020.
- 6.106 In accordance with the *clause 6.1* of JSERC Generation Tariff Regulation, (1st Amendment) 2023, the approved ROE by the Commission with the Rate of Return on Equity as 15.00% is tabulated below.

Table 110: Return on Equity for Unit II as approved by the Commission (Rs. Crore)

	01010		
Particulars Particulars	MYT	Petition	Approved
Opening Equity	151.45	148.97	148.97
Net Addition	0.02	1.80	1.80



Particulars	MYT	Petition	Approved
Closing Equity	151.47	150.77	150.77
Average Equity	151.46	149.87	149.87
Rate of Return on Equity	15.00%	15.00%	15.00%
ROE (Post-Tax)	18.71%	20.05%	20.04%
MAT	25.17%	25.17%	25.17%
ROE (Pre-Tax)	28.34	30.04	30.04

Table 111: Return on Equity for Unit III as approved by the Commission (Rs. Crore)

Particulars Particulars Particulars	MYT	Petition	Approved
Opening Equity	147.16	144.29	145.52
Net Addition	0.02	0.43	0.43
Closing Equity	147.19	144.72	145.94
Average Equity	147.17	144.51	145.73
Rate of Return on Equity	15.00%	15.00%	15.00%
ROE (Pre-Tax)	18.71%	20.05%	20.04%
МАТ	25.17%	25.17%	25.17%
ROE (Pre-Tax)	27.53	28.97	29.21

## Incentive (Pre-Tax) FY 2024-25

### **Petitioner Submission**

6.107 The Petitioner has sought the incentives for FY 2024-25 as nil for Unit 2, and Rs 3.83 Cr. for Unit 3, subject to True-up as per Generation Tariff Regulation 2020.

### **Commission Analysis**

6.108 Considering the facts and circumstances given in the petition, the Commission isn't inclined to approve any incentive for FY 2024-25, subject to true-up as per Generation Tariff Regulation 2020.

## Summary of Annual Revenue Requirement

### Commission's Analysis

6.109 On consideration of the submission and details furnished by the Petitioner, the Commission approves the Annul Fixed Cost (AFC) for FY 2024-25 as summaries below.

Table 112: Annual Fixed Cost (Rs. Crore) as approved by the Commission.

Particulars	Unit-II			Unit-III		
Particulars	MYT	Petition	Approved	MYT	Petition	Approved
O&M Expenses	56.66	60.90	59.50	54.35	58.52	57.07
Depreciation	8.54	23.17	8.25	9.02	19.33	8.49
Interest on Loan	1.96	0.92	2.37	1.90	1.33	2.28
Int. on WC	9.14	12.46	11.91	9.20	12.15	11.63
Return on Equity	28.34	30.04	30.04	27.53	28.97	29.21
AFC	104.64	127.49	112.07	102.01	120.30	108.68
Water Charge	6.18	6.21	6.21	6.18	6.94	6.94
Capital Spare	0.00	0.00	0.00	0.00	0.00	0.00

6.110 The summary of Annual Fixed Charge after taking into account the availability Factor for FY 2024-25 as approved by the Commission is shown below.

Table 113: AFC (Rs. Crore) after availability as approved by the Commission

Particulars	Unit-II			Unit-III		
Particulars	MYT	Petition	Approved	MYT	Petition	Approved
Annual Fixed Cost	104.64	127.49	112.07	102.01	120.31	108.68
Availability	93.34%	97.61%	97.61%	85.00%	94.63%	94.63%
AFC after Availability	104.64	127.49	112.07	102.01	120.31	108.68

6.111 The summary of recoverable Annual Revenue Requirement (ARR) for FY 2024-25 as approved by the Commission is shown below.



Table 114: Net ARR (Rs. Crore) as approved by the Commission

Particulars	Unit-II			Unit-III		
Particulars	MYT	Petition	Approved	MYT	Petition	Approved
ARR after Availability	331.88	379.74	364.33	335.11	401.40	385.94
Less: Discount as per [SHAKTI 2&3]	3.63	2.43	2.43	3.63	2.98	2.98
Net ARR	328.25	377.31	361.90	331.48	398.42	382.96



# **Chapter 7: STATUS OF EARLIER DIRECTIVES**

7.0 The directives issued by the Commission in its earlier Orders, its compliance by the Petitioner and further view of the Commission on compliance is tabulated below:

Directive	Status	View of the Commission				
1. Transit Loss						
"The Commission directs the Petitioner to devise ways to control the expenses and maintain transit loss at the levels specified as per Generation Tariff Regulations 2015"	Tata Power deliberated with TSL West Boakro to minimize Transit Loss in Middling Coal. Team was formed to devise ways to minimize the Transit loss. Consequent to implementation of initiatives, Tata Power has been able to reduce transit loss in middling coal and same has also been acknowledged by TSL. A short note on various initiatives implemented in last few years and TSL Acknowledgement have already been submitted by the Petitioner in the previous Tariff petition. It is pertinent to mention here that since quantity of washery Coal (Washed coal from mines of TSL West Boakro) is getting nil in current financial year and for balance year of the control period, this issue will have much lower impact. Further, since Tata Power is claiming	The Commission has acknowledged the status of compliance and direct the petitioner to continue submitting the same.				



Directive	Status	View of the Commission
	Transit Loss in the present Petition at normative levels specified in the Regulations, this issue does not survive for present Petition.	
2. Start Ups		
The Commission had directed to submit monthly details of a number of unit-wise start-ups taken after shutdown. Also, details should include the monthly quantity of secondary fuel consumed during plant start up and flame support if required. The same should be submitted with subsequent APR and True-up Petitions."	Submitted in instant Petition as ANNEXURE P28.	The Commission has taken note of the status of <b>compliance</b> and instructs the Petitioner to keep presenting the same in this regard.
3. DPR of Scheme		
The Petitioner has submitted DPR of schemes that have been proposed along with the petition. In the DPRs the Petitioner has submitted details about the project along with costs and have also worked out the impact of such schemes. However, the Commission has observed that such analysis and costs have not been supported by rate reasonability and should have the approval of the	This directive is compiled in MYT Petition for FY 2021-22 to FY 2025-26, wherein capitalization plan for Third Control Period has been given along with Detailed Project Report for each Scheme and also acknowledged by the Commission in the MYT Order. Also, for new schemes submitted in last Petition detailed project report has been enclosed.	The Commission direct the Petitioner to continue with this practice, whenever they submit the DPR of the Scheme for the approval.



Directive	Status	View of the Commission
competent authority of Tata Power. The petitioner should provide supporting documents in the form of ordered rates, order for work carried out previously, quotations etc. The Petitioner is directed to ensure the compliance.		
4. Notice to the Co	ommission	
The Petitioner was directed that during the execution of work pertaining to any preapproved schemes, any increase in the scope of work, procurement, services, price/cost etc. should be brought to the notice of commission immediately."	For FY 24, and for current years as well, all Add Cap Reports have been submitted to the Commission. The Commission has acknowledged the submission of quarterly reports for earlier years in the MYT Order. For FY 2024 25, Q1 Report has been submitted on 29.08.2024	The Commission directs the Petitioner to continue with the same Practice in the future also.
5. Ash Disposal		
The Petitioner had directed to submit status report of actions taken for disposal of ashes generated from the plant as per the statutory guidelines specified by MoEF and JSPCB and submit quarterly reports to the Commission. Such reports should also form part of the subsequent APR and True-up Petitions."	This Directive is being complied through submission of quarterly ash utilization reports. All reports of FY 2023-24 including Q1 of FY 2024-25 have been submitted.	The Commission directs the Petitioner to continue with the same Practice in the future also.
6. Energy Charge O	ptimization	



Directive	Status	View of the Commission
The Commission had observed that due to various reasons like primary fuel mix, GCV and Landed price the energy charge rate is too high. The Petitioner is required to prepare its strategy for coal procurement plan to optimize its energy charge.	This is to submit that this directive is being complied through Quarterly Directive Reports submitted to the Commission and the same has been acknowledged by the Commission in the MYT Order. Revised Fuel Mix Plan has been also submitted along with the instant Petition.	The Commission is of view that the Energy Charge increase drastically in last years. Therefore, the Commission re-direct the Petitioner to prepare its strategy for reduction in energy charge rate.
7. Capex Planning		
The Commission had directed the Petitioner to ensure that proper planning should be carried out before finalization and submission of Capex plan before the Commission for approval. Further, in case there is need to review/revise any scheme or change in the Scope of Work, the same is required to be submitted before the Commission with proper justification for approval.	Revised Phasing of Capex has been submitted in instant Petition.	The Commission directs the Petitioner to submit capital expenditure in accordance with clause 14.15 of JSERC Generation Tariff Regulations 2020 before re-phasing the capital expenditure plan.
8. Residual Life Stu	dy	
The Commission had observed that both the Units (Unit-II & Unit-III) have a remaining useful life of less than ten years as per regulations. The Petitioner is required to carry out residual life study before any	Tata power is Planning for this activity on critical equipments in the annual shutdown. However, RLA for undertaking Renovation and Modernization of the Plant is yet to be finalized by the Petitioner and, therefore, it shall intimate	The Commission directs the Petitioner to carry out a residual life Assessment (RLA) study as soon as possible before any additional capitalization in the plant and justify its operational and financial benefits. However, prior to



Directive	Status	View of the Commission
additional capitalization in the plant and justify its operational and financial benefits.	the Commission as soon as the scope of the RLA is finalized.	executing the capital investment as per the study report, the Petitioner must seek approval from the Commission.



## **Chapter 8: DIRECTIVES**

### **Primary Fuel**

8.1 The Commission has observed that due to various reasons like primary fuel mix, GCV and Landed price the energy charge rate is on higher side. The Petitioner is required to prepare its strategy for coal procurement plan to optimize its energy charges.

### Residual Life Study

8.2 The Commission has observed that both the Units (Unit-II & Unit-III) have remaining useful life less than 10 years as per regulations. Accordingly, the Commission directs the Petitioner to carry out residual life study before any additional capitalization in the plant and justify its operational and financial benefits. However, before undertaking this study, the Petitioner is to submit the complete scope of work to be carried under RLA for Commission's approval.

### Compliance of directives issued in earlier Orders

8.3 In addition to above, the Petitioner is also directed to submit the compliance to the directives issued by the Commission in its earlier Orders.

This Order is signed and issued by the Jharkhand State Electricity Regulatory Commission on March 28, 2025

Date: 28.03.2025

Place: Ranchi

Sd/- Sd/-

Shri. Atul Kumar Shri. Mahendra Prasad

Member (Technical) Member (Law)



# Chapter 9: List of Participant

Table 115: List of participant who attend Public Hearing

S1. No.	Name S/Shri	Address / Organization if any
1	U. R. Prabharara Rao	Tata Power, Jamshedpur
2	T. Moharana	Tata Power
3	Nezamuddin Khan	Tata power
4	Ritesh	Tata Power
5	Siddheswar ho	Saranda
6	Santosh Kumar	TELCO, Jamshedpur
7	A N Choudhary	Tata Power UISL
8	Varun Kumar	Tata Power UISL
9	Jawahar Lal Sharma	Sonari
10	Soab Ahmad	Tata Steel
11	Satyajeet Singh Choudhary	Baridih
12	Golak Bihari Shoo	Tata Power
13	Sunil Kumar Kunwar	Tata Power
14	Basudev Hansdatt	Tata Power
15	Rakesh Talukdar	Tata Steel Limited
16	Chandrasekhar Singh	Tata Power
17	Binod kr. Yadav	Jobobera
18	Pradeep Kumar	Tata Power
19	Gaurav Bowase	Tata Power
20	Soumendra Mandal	Tata Power
21	Amitava Das	Tata Power
22	Mukesh Kumar Layak	Tata Power
23	Udit Agarwal	Tata Power
24	K K raj	Tata Power



S1. No.	Name S/Shri	Address / Organization if any
25	Rakeshwar Pandey	Bistupur
26	V P Singh	Tata Steel USIL
27	Kush Kumar	Tata Steel Ltd.
28	Suman Mandal	Tata Steel USIL
29	Sonav Vishnu	Dinna, Jamshedpur
30	R. S. Bhadoriya	Jojobera
31	Ariya Das	Tata Power
32	Pravin Kumar	Jojobera
33	Dipak Kumar Singh	Jojobera
34	Mukul Kumar Singh	Jojobera
35	Dilip Kumar	Jojobera
36	Pintu Kumar Srivastava	Tata Power
37	Prabhakar Kumar	Tata Power
38	Ankit Kumar Singh	Tata Power
39	Sanjay gautam	Tata Steel UISL
40	Koustiv Banija	Tata Steel UISL
41	Sudhakar Prasad	Telco, Jamshedpur
42	Manash Kushani	Telco, Jamshedpur
43	Vishnu Kumar Gopi	Chota Govindpur, Jamshedpur
44	Pntani Bag	Baridih
45	Jitendra Kumar Singh	Dayal City, Chota Govindpur, Jamshedpur
46	Abhijal Kumar	Chota Govindpur, Jamshedpur
47	Sunny Kumar	Jamshedpur
48	Nirmal Prasad	Danik Jagram
49	Lalit Dubey	Danik Bhaskar
50	Bijendra Kumar	Danik Bhaskar
51	Ranjan Kumar Jha	Chamakta Aina



S1. No.	Name S/Shri	Address / Organization if any
52	Brij Kishore Goswami	Prabhat Khabar