

Jharkhand State Electricity Regulatory Commission



Order on
True-up for FY 2021-22,
Annual Performance Review for FY 2022-23
for
Tata Power Company Limited (TPCL)

Ranchi
January 09, 2024



Table of Contents

CHAPTER 1: INTRODUCTION	9
JHARKHAND STATE ELECTRICITY REGULATORY COMMISSION.....	9
TATA POWER COMPANY LIMITED (TPCL)	12
THE PETITIONER’S PRAYERS.....	12
CHAPTER 2: PROCEDURAL HISTORY	15
BACKGROUND	15
INFORMATION GAPS IN THE PETITIONS.....	15
INVITING PUBLIC COMMENTS/SUGGESTIONS	16
CHAPTER 3: BRIEF FACTS OF THE PETITION	18
TRUING UP FOR FY 2021-22.....	18
CHAPTER 4: PUBLIC CONSULTATION PROCESS	20
COMPENSATION ON ACCOUNT OF CHANGE IN LAW	20
PLF COMPENSATION	21
O&M EXPENSES	22
POWER SUPPLY	23
SHAKTI SCHEME.....	23
WATER CHARGE	24
ASH	25
ANNUAL SHUTDOWN.....	25
DISCOUNT.....	26
CHAPTER 5: TRUE-UP FOR FY 2021-22	28
OPERATIONAL PERFORMANCE.....	28
<i>Plant Availability Factor (PAF)</i>	28
<i>Auxiliary Consumption</i>	29
<i>Plant Load Factor and Generation</i>	30
<i>Gross Station Heat Rate (GHR)</i>	31
<i>Specific Fuel Oil Consumption</i>	32
FUEL COST PARAMETER.....	32
<i>Coal Mix and Gross Calorific Value (GCV) of Primary Fuel</i>	32
<i>Transit Loss</i>	34
<i>Landed Cost of Coal</i>	35
<i>Calorific value and Cost of Secondary Fuel</i>	36
SUMMARY OF FUEL COST.....	39
DETERMINATION OF FIXED COST	40
<i>Additional Capitalization</i>	40
<i>Depreciation</i>	48
<i>Operation & Maintenance Expenses</i>	51
<i>Water Charges, Capital Spare</i>	54
<i>Interest on Loan</i>	56
<i>Interest on Working Capital (IOWC)</i>	59
<i>Return on Equity</i>	62
INCENTIVE (PRE-TAX)	65
SHARING GAIN/LOSS.....	66
<i>Operation Gain due to variation in Norms FY 2021-22</i>	66
<i>Gain in Operation & Maintenance</i>	68



True-up for FY 2021-22 & Annual Performance Review for FY 2022-23

IMPACT OF CHANGE IN LAW	70
NON-TARIFF INCOME	70
SHAKTI SCHEME DISCOUNT	71
SUMMARY OF ANNUAL REVENUE REQUIREMENT	72
CHAPTER 6: ANNUAL PERFORMANCE REVIEW FOR FY 2022-23	77
OPERATIONAL PERFORMANCE.....	77
<i>Plant Availability Factor (PAF)</i>	77
<i>Auxiliary Consumption</i>	78
<i>Plant Load Factor and Generation</i>	79
<i>Gross Station Heat Rate (GHR)</i>	80
<i>Specific Fuel Oil Consumption</i>	80
FUEL COST PARAMETER.....	81
<i>Coal Mix and Gross Calorific Value (GCV) of Primary Fuel</i>	81
<i>Transit Loss</i>	84
<i>Landed Cost of Coal</i>	85
<i>Calorific value and Cost of Secondary Fuel</i>	86
<i>Energy Charge Rate (ECR)</i>	87
<i>Commission's Analysis</i>	88
SUMMARY OF FUEL COST.....	89
DETERMINATION OF FIXED COST	90
<i>Additional Capitalization</i>	90
<i>Depreciation</i>	94
<i>Commission's Analysis</i>	95
<i>Operation & Maintenance Expenses</i>	96
<i>Water Charges, Capital Spare</i>	99
<i>Interest on Loan</i>	101
<i>Interest on Working Capital (IOWC)</i>	103
<i>Return on Equity</i>	104
INCENTIVE (PRE-TAX) FY 2021-22	106
SHAKTI SCHEME DISCOUNT	106
SUMMARY OF ANNUAL REVENUE REQUIREMENT	107
CHAPTER 7: STATUS OF EARLIER DIRECTIVES	109
CHAPTER 8: DIRECTIVES.....	113
PRIMARY FUEL	113
RESIDUAL LIFE STUDY.....	113
COMPLIANCE OF DIRECTIVES ISSUED IN EARLIER ORDERS.....	113
CHAPTER 9: ANNEXURE	114



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)
ml	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
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



True-up for FY 2021-22 & Annual Performance Review for FY 2022-23

LIST OF TABLES

Table 1: List of newspapers and dates of publication of public notice by the Petitioner	16
Table 2: List of newspapers and dates of publication of public notice by the Commission.....	16
Table 3: Annual Revenue Requirement (Rs. Cr.) for FY 2021-22 as submitted by the Petitioner.....	18
Table 4: Annual Revenue Requirement (Rs. Cr.) for FY 2022-23 as submitted by the Petitioner.....	19
Table 5: Plant availability as approved by the Commission.....	29
Table 6: Auxiliary Consumptions as approved by the Commission.....	30
Table 7: Plant Load Factor and Generation as approved by the Commission.....	31
Table 8: Gross Station Heat Rate (GHR) as approved by the Commission.....	32
Table 9: Specific Fuel Oil Consumption as approved by the Commission.....	32
Table 10: Coal Mix and GCV for Unit-II as approved by the Commission.....	34
Table 11: Coal Mix and GCV for Unit-III as approved by the Commission.....	34
Table 12: Transit Loss as approved by the Commission.....	35
Table 13: Landed Price of Primary Fuel (Rs/Ton) for Unit-II as approved by the Commission.....	35
Table 14: Landed Price of Primary Fuel (Rs/Ton) for Unit- III as approved by the Commission.....	36
Table 15: Calorific value & Landed Price of Secondary fuel as approved by the Commission.....	36
Table 16: Energy Charge Rate (ECR) for Unit-II as approved by the Commission.....	39
Table 17: Energy Charge Rate (ECR) for Unit-III as approved by the Commission.....	39
Table 18: Fuel Cost for Unit-II as approved by the Commission.....	39
Table 19: Fuel Cost for Unit-III as approved by the Commission.....	40
Table 20: Apportionment ratio as submitted by the Petitioner.....	40
Table 21: Asset wise Capitalization (Rs. Crore) as submitted by the Petitioner.....	42
Table 22: Capitalization and Decapitalization (in Rs. Crore) as submitted by the Petitioner.....	42
Table 23: Asset wise Capitalization (Rs. Crore) as approved by the Commission.....	46
Table 24: Capitalization (Rs. Crore) as approved by the Commission.....	47
Table 25: Gross Fixed Assets (Rs. Crore) for Unit II as approved by the Commission.....	47
Table 26: Gross Fixed Assets (Rs. Crore) for Unit III as approved by the Commission.....	48
Table 27: Depreciation (Rs. Crore) as submitted by the Petitioner.....	48
Table 28: Depreciation (Rs. Crore) as approved by the Commission.....	51
Table 29: O&M Expenses (Rs. Crore) as submitted by the Petitioner.....	52
Table 30: O&M Expenses (Normative Component) as approved by the Commission (Rs. Cr.).....	53
Table 31: O&M Expenses (Variable Component) as approved by the Commission (Rs. Cr.).....	53
Table 32: O&M Expenses (Rs. Crore) as approved by the Commission.....	54
Table 33: Water charges and capital expenses (Rs. Crore) as approved by the Commission.....	55
Table 34: Interest on Loan (Rs. Crore) as submitted by the Petitioner.....	57
Table 35: Interest on Loan (Rs. Crore) as approved by the Commission.....	59
Table 36: IOWC as submitted by the Petitioner (Rs. Crore).....	60
Table 37: IOWC (Rs. Crore) as approved by the Commission.....	61



True-up for FY 2021-22 & Annual Performance Review for FY 2022-23

Table 38: Return on Equity (Rs. Crore) as submitted by the Petitioner.....	62
Table 39: Return on Equity (Rs. Crore) for Unit II as approved by the Commission	65
Table 40: Return on Equity (Rs. Crore) for Unit III as approved by the Commission ...	65
Table 41: Operational Gain (Rs. Cr.) for FY 2021-22 as submitted by Petitioner	66
Table 42: Operational Gain (Rs. Cr.) for FY 2021-22 as approved by the Commission	68
Table 43: Gain in Operation & Maintenance (Rs. Crore) as submitted by Petitioner ...	68
Table 44: Gain in Operation & Maintenance (Rs. Crore) as approved by the Commission.....	70
Table 45: Loss in Energy Charge claimed by the Petitioner for Unit-II & III.	70
Table 46: Non-Tariff Income (Rs. Cr) as submitted by the Petitioner for Unit-II & Unit- III.....	70
Table 47: Non-Tariff income (Rs. Cr.) as approved by the Commission for both Unit..	71
Table 48: Shakti Scheme Discount (Rs. Crore) as submitted by Petitioner.....	71
Table 49: Shakti Scheme Discount (Rs. Crore) as approved by the Commission.....	72
Table 50: Annual Fixed Cost (Rs. Crore) as approved by the Commission.	72
Table 51: AFC (Rs. Cr.) after availability as approved by the Commission.	72
Table 52: Annual Revenue Requirement (Rs. Crore) as approved by the Commission.	73
Table 53: Revenue (Rs. Crore) as submitted by the Petitioner.....	73
Table 54: Revenue (Rs. Crore) as approved by the Commission.....	74
Table 55: Gap/(Surplus) as approved by the Commission.....	75
Table 56: Carrying Cost for Unit-II as approved by the Commission (Rs. Crore)	75
Table 57: Carrying Cost for Unit-III as approved by the Commission (Rs. Crore)	75
Table 58: Carrying Cost on Revenue Gap/(Surplus) for Unit-II & Unit-III as approved by the Commission (In Rs. Cr.)	75
Table 59: Plant Availability Factor as approved by the Commission	78
Table 60: Auxiliary Consumptions as approved by the Commission.....	79
Table 61: Plant Load Factor and Generation as approved by the Commission.....	79
Table 62: Gross Station Heat Rate (GHR) as approved by the Commission.....	80
Table 63: Specific Fuel Oil Consumption as approved by the Commission	81
Table 64: Coal Mix and GCV for Unit-II as approved by the Commission	83
Table 65: Coal Mix and GCV for Unit-III as approved by the Commission	83
Table 66: Transit Loss as approved by the Commission	84
Table 67: Landed Price of Primary Fuel for Unit-II as approved by the Commission ...	85
Table 68: Landed Price of Primary Fuel for Unit- III as approved by the Commission .	86
Table 69: Calorific value & Landed Price of Secondary fuel as approved by the Commission.....	87
Table 70: Energy Charge Rate (ECR) for Unit-II as approved by the Commission.	88
Table 71: Energy Charge Rate (ECR) for Unit-III as approved by the Commission.	88
Table 72: ECR for FY 2022-23 as approved by the Commission after considering the impact of Discounting on SHAKTI Scheme Coal.....	89
Table 73: Fuel Cost for Unit-II as approved by the Commission	89
Table 74: Fuel Cost for Unit-III as approved by the Commission	89
Table 75: Apportionment ratio as submitted by the Petitioner.....	90
Table 76: Asset wise Capitalization (Rs. Crore) as submitted by the Petitioner.	91
Table 77: Capitalization and Decapitalization (Rs. Crore) as submitted by the Petitioner.....	92
Table 78: Asset wise Capitalization as approved by the Commission (Rs. Crore).....	93
Table 79: Capitalization as approved by the Commission (Rs. Crore).....	94
Table 80: Gross Fixed Assets (Rs. Crore) for Unit II as approved by the Commission..	94
Table 81: Gross Fixed Assets (Rs. Cr) for Unit III as approved by the Commission.	94



True-up for FY 2021-22 & Annual Performance Review for FY 2022-23

Table 82: Depreciation (Rs. Crore) as submitted by the Petitioner	95
Table 83: Depreciation (Rs. Crore) as approved by the Commission.	96
Table 84: O&M Expenses (Rs. Crore) as submitted by the Petitioner	97
Table 85: O&M Expenses (Normative Component) as approved by the Commission (Rs. Cr.)	98
Table 86: O&M Expenses (Variable Component) as approved by the Commission (Rs. Cr)	98
Table 87: O&M Expenses as approved by the Commission (Rs. Crore)	99
Table 88: Water charges and capital expenses (Rs. Crore) as approved by the Commission.....	101
Table 89: Interest on Loan as submitted by the Petitioner (Rs. Crore)	102
Table 90: Interest on Loan as approved by the Commission (Rs. Crore).....	102
Table 91: IOWC (Rs. Crore) as submitted by the Petitioner.....	103
Table 92: IOWC (Rs. Crore) as approved by the Commission	103
Table 93: Return on Equity as submitted by the Petitioner (Rs. Crore)	104
Table 94: Return on Equity for Unit II as approved by the Commission (Rs. Crore) ..	105
Table 95: Return on Equity for Unit III as approved by the Commission (Rs. Crore) .	105
Table 96: Shakti Scheme Discount as submitted by Petitioner (Rs. Crore).....	106
Table 97: Shakti Scheme Discount (Rs. Crore) as approved by the Commission.....	107
Table 98: Annual Fixed Cost (Rs. Crore) as approved by the Commission.	107
Table 99: AFC (Rs. Crore) after availability as approved by the Commission.....	107
Table 100: Annual Revenue (Rs. Crore) as approved by the Commission.....	108
Table 102: List of participating members of the Public in the Public Hearing	114



BEFORE

**Jharkhand State Electricity Regulatory Commission,
Ranchi**

Case (Tariff) No.: 18 of 2022

In the matter of:

**Petition for
True-up for FY 2021-22, and
Annual Performance Review for FY 2022-23**

In the matter:

Tata Power Corporation Limited (TPCL)
Jojobera Power Plant, P.O. Rahargora, Jamshedpur-
831016..... **Petitioner**

PRESENT

Hon'ble Justice Amitav Kumar Gupta..... (Chairperson)
Hon'ble Mr. Mahendra Prasad..... Member (Legal)
Hon'ble Mr. Atul Kumar.....Member
(Technical)

Order dated January 09, 2024

Tata Power Company Limited (hereinafter referred to as TPCL or the Petitioner) has filed the Petition dated December 01, 2022 for Truing up for FY 2021-22, Annual Performance Review for FY 2022-23, 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



True-up for FY 2021-22 & Annual Performance Review for FY 2022-23

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;



True-up for FY 2021-22 & Annual Performance Review for FY 2022-23

- (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 2021-22 and APR for FY 2022-23 proposals enclosed herewith;
 - Grant liberty to the Petitioner to approach Hon'ble Commission at appropriate stage subsequently:
 - a. for determination of Supplementary Tariff for FGD System to be installed for Units-II and III including compensation for additional capital cost, operational parameter



deterioration and O&M/water expenses in accordance with Regulation 14.16 and all other relevant Regulations/provisions under JSERC (Terms and 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 & Modernization (R&M) Plan for Unit-II and Unit- III 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 Hon'ble Commission's Orders along with applicable carrying cost;
 - d. for claiming compensation for deterioration in operational parameters due to low PLF and for loss of savings in operational parameters due to change in operational norms;
 - e. to modify/make additions to the above Capex proposal, 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 Turing-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 Hon'ble Commission;
 - Condone any inadvertent omissions/errors/rounding-off



True-up for FY 2021-22 & Annual Performance Review for FY 2022-23

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 Hon'ble 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 vide MYT Order dated November 04, 2022 had approved the Business Plan and determined the Annual Revenue Requirement for the MYT Control Period from FY 2021-22 to FY 2025-26 including Truing-up for FY 2019-20.
- 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.

Information Gaps in the Petitions

- 2.7 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. 18 of 2022/340 dated December 28, 2022.
- 2.8 In response the Petitioner has furnished the additional data/information to the Commission vide letter no. dated January 13, 2023.



True-up for FY 2021-22 & Annual Performance Review for FY 2022-23

2.9 The Commission has scrutinized the Petition and the additional data/information furnished by the Petitioner with respect to its discrepancies identified and has considered the same while passing this Order.

Inviting Public Comments/Suggestions

2.10 On scrutiny of the petition, the Commission has directed the Petitioner 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.

2.11 Accordingly, Public Notice was published by the Petitioner in the newspapers 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	03.02.2023 & 04.02.2023
Dainik Bhaskar	03.02.2023 & 04.02.2023
The Hindustan Times	03.02.2023 & 04.02.2023
The Pioneer	03.02.2023 & 04.02.2023

2.12 Further, the Commission had organized a Public Hearing on March 17, 2023, 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	02.03.2023
Dainik Bhaskar	02.03.2023
The Times of India (English)	02.03.2023
Morning India (English)	02.03.2023
Hindustan	16.03.2023



True-up for FY 2021-22 & Annual Performance Review for FY 2022-23

Newspaper	Date of Publication
Prabhat Khabar	16.03.2023
The Times of India (English)	16.03.2023
Morning India (English)	16.03.2023

Submission of Comments/Suggestions and Conduct of Public Hearing

2.13 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 The following Chapter summarizes the Petition of Truing-up for FY 2021-22, and Annual Performance Review for FY 2022-23, as filed by the Petitioner for the Commission's approval.

Truing up for FY 2021-22

3.2 The table below summarizes the Annual Revenue Requirement for FY 2021-22 as submitted by the Petitioner against the sales approved by the MYT Order dated November 24, 2022.

Table 3: Annual Revenue Requirement (Rs. Cr.) for FY 2021-22 as submitted by the Petitioner.

Particulars	UoM	Unit-II		Unit-III	
		MYT	Petition	MYT	Petition
Depreciation	Rs. Cr.	7.47	12.56	8.43	13.03
Interest on Loan	Rs. Cr.	2.62	1.90	2.40	1.91
O&M Expenses	Rs. Cr.	54.03	50.00	52.48	49.23
Return on Equity	Rs. Cr.	27.89	27.50	27.26	26.63
Interest on Working Capital	Rs. Cr.	9.03	8.58	9.13	8.59
Total Annual Fixed Cost	Rs. Cr.	101.04	100.54	99.70	99.39
Energy Charge Rate	Rs./kWh	2.749	2.605	2.821	2.624
Energy Cost	Rs. Cr.	223.50	177.77	229.36	205.91
Less: Discount due to Shakti Coal	Rs. Cr.	3.59	3.86	3.60	4.53
Less: Gain on Operational Parameters	Rs. Cr.	-	0.36	-	0.96
Less: Gain on O&M Expense	Rs. Cr.	-	0.13	-	0.13
Less: Non-Tariff Income	Rs. Cr.	-	1.03	-	1.09
Add: Compensation due to Change in Law	Rs. Cr.	-	6.90	-	9.79
Net ARR	Rs. Cr.	320.95	279.83	325.47	308.39
Revenue from Billing	Rs. Cr.	-	275.90	-	295.26
Gap/(Surplus)	Rs. Cr.	-	4.07	-	13.12
Gap/(Surplus) including Carrying Cost upto September 2023.	Rs. Cr.	-	4.71	-	15.19

Annual Performance Review for FY 2022-23

3.3 The Petitioner has projected the Annual Revenue Requirement for FY 2022-23 based on the actual figures for first six months of FY 2022-23 and



estimated for the remaining six months of FY 2022-23 as tabulated below.

Table 4: Annual Revenue Requirement (Rs. Cr.) for FY 2022-23 as submitted by the Petitioner

Particulars	UoM	Unit-II		Unit-III	
		MYT	Petition	MYT	Petition
Depreciation	Rs. Cr.	8.09	13.18	8.85	13.42
Interest on Loan	Rs. Cr.	2.35	1.28	1.92	1.39
O&M Expenses	Rs. Cr.	56.53	56.04	54.77	54.25
Return on Equity	Rs. Cr.	28.20	27.63	27.48	26.75
Interest on Working Capital	Rs. Cr.	9.15	10.06	9.23	9.84
Total Annual Fixed Cost	Rs. Cr.	104.31	108.18	102.24	105.66
Energy Charge Rate	Rs./kWh	2.749	3.141	2.821	3.083
Energy Cost	Rs. Cr.	223.50	256.18	229.36	260.00
Discount due to Shakti Coal	Rs. Cr.	3.59	3.05	3.60	3.27
Net ARR	Rs. Cr.	324.22	361.31	328.01	362.39



Chapter 4: PUBLIC CONSULTATION PROCESS

- 4.1 On the Petitioner's plea several stakeholders responded. The Public Hearing was held on March 17, 2023 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 do not have meaning to True-up, and APR have not been discussed in this Chapter.

Compensation on account of change in law

Public Comments/Suggestions

- 4.3 Querist on the petitioner's proposal for compensation on account of change in law, stated that such change in law is premised on change in Operational Targets as stipulated in 2015 Tariff Regulations vis-à-vis as Targets set in 2020 Tariff Regulations which has taken away the premise based on which Tata Power participated in SHAKTI Scheme for allocation of Coal to Unit-II & Unit-III and passing discounts to end consumers. Querist further requested Hon'ble Commission to decide in terms of law/Regulations. (Querist- Mr. Ajay Kumar, TSL)

Petitioner Response

- 4.4 In view of explanation detailed in Petition, Petitioner most humbly requests this Hon'ble Commission to compensate the Petitioner for above Change in law Event as the same is not within its control and is squarely covered under Change in Law as well as Promissory Estoppel/Legitimate Expectation and settled principles of law.

Commission analysis

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



PLF Compensation

Public Comments/Suggestions

- 4.6 Querist stated that Tata Power has claimed SHR with PLF Compensation which is slightly higher compared to norms of 2550. If actual SHR is better, the compensation beyond 2550 may not be applicable? (Querist- Mr. Ajay Kumar, TSL)

Petitioner Response

- 4.7 In view of explanation detailed in Petition, Petitioner most humbly requests this Hon'ble Commission to compensate the Petitioner for above Change in law as the same is not within its control and is squarely covered under Change in Law as well as Promissory Estoppel/Legitimate expectation and settled principles of law. The Petitioner humbly submits that PLF Compensation has been proposed in the current Petition in terms of State/CERC Grid Code and Power to Relax as specified in Generation Tariff Regulations, 2020. The proposed SHR of 2552 and 2551 for Unit 2 & 3 respectively is slightly higher than annual SHR of 2550 as actual SHR for certain months was higher than 2550 and for other months 2550 has been considered.
- 4.8 The Hon'ble CERC has already recognized degradation in Heat Rate/Auxiliary Power Consumption and higher consumption of Secondary Fuel Oil Consumption at lower load/PLF which is because of the lower schedule given by the beneficiaries and is beyond the control of the Generating Station. Accordingly, it has stipulated degradation factor in Heat rate, Auxiliary Power Consumption, and compensation mechanism for increase in Heat Rate/Auxiliary Power Consumption (APC) or higher SFC in its 4th Amendment to Indian Electricity Grid Code (IEGC), Regulations, 2010. Further, second proviso to Regulation 3.1 of JSERC (State Grid Code) Regulations, 2008, which in essence stipulates that provisions of State Grid Code shall be construed in consistency with CERC Grid Code.
- 4.9 The Petitioner most respectfully requests the Hon'ble Commission to exercise its Power under Regulation 3.1 of the State Grid Code read with



“Power to relax” as specified in Regulations A 33 in the Generation Tariff Regulations, 2020 and allow SHR and APC with PLF compensation as claimed in the Petition for Truing-up of FY 2021-22 to avoid hardship and financial loss to the Petitioner who is continuously putting its effort to optimize the energy cost.

Commission analysis

4.10 The Commission has noted the Stakeholder’s objection and Petitioner’s response on the said issue.

O&M Expenses

Public Comments/Suggestions

4.11 Querist stated that Tata Power has been able to contain O&M expenses within the approved O&M Expenses and further requested Tata Power to keep such performance level and to reduce O&M expenses in the ensuing years as well. (Querist- Mr. Ajay Kumar, TSL)

Petitioner Response

4.12 The savings in O&M expenses is mainly on account of reduction in Ash Disposal Expenses which was basically due to availability of low-lying area of ISWP land near the Ash Pond instead of distant low-lying areas which was the normal case for Jojobera in previous year which is because of increase in inhabitation in the nearby areas and unavailability of low-lying areas nearby. Further, ISWP land being filled now, it is expected that Ash Disposal Expenses shall increase in future as projected in MYT Petition.

4.13 However, needless to say, Tata Power is committed to perform and tap any opportunities which benefits the end consumers. Further, for normative components of O&M expenses, the excess burden is not passed on to TSL.

Commission analysis

4.14 The Commission has noted the Stakeholder’s objection and Petitioner’s response on the said issue.



Power Supply

Public Comments/Suggestion

4.15 Tata Power is supplying power to which company of Tata Steel, whether it is the one which is producing steel or the one which is distributing power. Querist further wanted to know the office address of TSL. (Querist-Mr. Rajesh Kumar)

Petitioner Response

4.16 It has submitted that Tata Power's Jojobera Unit 2 and Unit 3 of 120 MW each are supplying to the company named Tata Steel Ltd (TSL), which is a Distribution Licensee as per the provisions of Power Purchase Agreement (PPA) duly approved by the Hon'ble Commission read with Generation Tariff Regulations, 2015 & 2020. The company's registered office is at Bombay House, 24, Homy Mody Street, Mumbai 400001 and TSL is supplying power to consumers in its area of supply licensed by Hon'ble Commission, details of which are not available with the Petitioner.

4.17 Further, TSL is also in the business of manufacturing steel. Units 1&4 of Tata Power Jojobera TPP are captive/unregulated units, which are supplying power to the same company TSL for Tata Steel Works for its own consumption in other businesses. Power procurement by Tata Steel for its other business from its captive Units are beyond the scope of this Petition, hence, need no reply.

Commission Analysis

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

Shakti Scheme

Public Comments/Suggestions

4.19 Querist stated that ECR for Unit-II & Unit-III had reduced as compared to the its level at 2019-20 and thanked for initiatives taken by Tata Power for securing coal under SHAKTI Schemes. (Querist- Mr. Ajay Kumar, TSL)



Petitioner Response

- 4.20 It is submitted that Tata Power after securing Coal Allocations Under SHAKTI Round 2 and Round 3 has been able to reduce ECR for Unit 2 from Rs. 3.290/kWh to Rs. 2.773/kWh in FY 21 and Rs. 2.548/kWh in FY 22 thereby bringing reduction of about 52 paise/kWh in FY 21 and 74 paise/kWh in FY 22. Similarly, in the case of Unit 3, ECR reduced from Rs. 3.308/kWh to Rs. 2.763/kWh in FY 21 and Rs. 2.566/kWh in FY 22 consequently achieving reduction of about 52 paise/kWh in FY 21 and 74 paise/kWh in FY 22.
- 4.21 Tata Power with its continued efforts has been able to reduce ECR despite various challenges, ultimately benefitting end consumers with reduced ECR.

Commission Analysis

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

Water Charge

Public Comments/Suggestions

- 4.23 Whether full water charges are paid by Tata Power to Tata Steel Limited (TSL) for the supply of Raw water or not and if yes then the same should be allowed only if TSL is paying it to Government of Jharkhand? (Querist- Mr. Rajesh Kumar)

Petitioner Response

- 4.24 It is humbly submitted that the issue of increase in Water Tax by Govt. of Jharkhand has already been challenged by TSL and is sub-judice before the Hon'ble Jharkhand High Court in WP (C) no. 4544 of 2011. In view of the above facts and considering the total payment made by TSL to Govt of Jharkhand, the Hon'ble Commission in its previous Tariff Orders allowed water charges to the petitioner on pro-rata basis i.e., @ 52% of billed amount of water tax. In fact, Hon'ble Commission directed the Petitioner to make future payments to TSL on pro rata basis in its order dated 26.08.2020 in Petition No. 4 of 2019.



4.25 Accordingly, payment of water charges to TSL is being made on pro rata basis in terms of the above directions of the Hon'ble Commission.

Commission Analysis

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

Ash

Public Comments/Suggestion

4.27 Ash disposal is a matter which is concerned with Jharkhand State Pollution Control Board. The Hon'ble Commission is requested to scrutinize the discharge of Ash Pond Water without any treatment? (Querist-Mr. Rajesh Kumar)

Petitioner Response

4.28 Tata Power hereby humbly states that Ash Disposal from Jojobera Units 2&3 is being done in accordance with guidelines/directions issued by statutory bodies viz, MoEF & CC, CPCB/JSPCB and following prudent utility practices. Tata Power also promptly complies with any direction given by JSPCB upon its visits to the plant.

4.29 Further, the ash utilization reports are periodically sent to JSPCB and in terms of earlier directive, Tata Power is sending a copy of Quarterly Ash Utilization Reports (sent to JSPCB) to Hon'ble Commission for its kind perusal.

Commission Analysis

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

Annual Shutdown

Public Comments/Suggestion

4.31 With reference to the Annual Shutdown of the Units, the Querist stated that since the major shut down of one Unit in a year causes high R&M expenses in that Unit and low in the other Unit, it shows improper



maintenance practice by Tata Power that causes high expenses in one unit? (Querist-Mr. Rajesh Kumar)

Petitioner Response

4.32 It is humbly submitted that normally all the thermal power plants undertake annual shutdown for every unit as the word 'Annual Shutdown' would suggest. However, since the Jojobera unit 2 and 3 are maintained properly rather than taking annual shutdown, Unit shutdowns are taken bi-annually which ultimately reduces the shutdown cost to half and benefits the beneficiaries and the end consumer. Otherwise with annual shutdowns, shutdown cost would have been charged in both the Units for each year of the Control Period thereby increasing the overall R&M expenses.

4.33 Furthermore, the R&M expenses including shutdown cost are approved by Hon'ble Commission on normative basis in terms of the Tariff Regulations in the MYT Order for entire Control Period. Therefore, the Petitioner humbly requests this Hon'ble Commission to keep aside this objection as it lacks any merit.

Commission Analysis

4.34 The Commission has noted the objection and its response from the Petitioner. The issue has been appropriately dealt with True up for of FY 2020-21 and APR for FY 2021-22.

Discount

Public Comments/Suggestion

4.35 Whether the discount given by Tata Power to TSL is transferred to the end consumers? (Querist-Mr. Rajesh Kumar)

Petitioner Response

4.36 It is humbly submitted by the Petitioner that any benefit of the Shakti discount to the TSL is already considered by Hon'ble Commission in Tariff Orders for the Petitioner and is passed by Petitioner in the Monthly bills as per the methodology approved by this Hon'ble Commission in the



supplementary PPAs.

4.37 The question whether such Discounts is further given to the end consumers will only be reflected in the TSL tariff, which is beyond the scope of this Petition, hence, needs no reply.

Commission Analysis

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



Chapter 5: TRUE-UP FOR FY 2021-22

- 5.1 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.
- 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 In the instant petition the Petitioner has sought approval for True-up for FY 2021-22 and Annual Performance Review for FY 2022-23 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.
- 5.4 The Commission on the basis of provisions of the Tariff Regulations, 2020, and GTR (1st Amendment) 2023, has determined the True-up for FY 2021-22 on consideration of:
- Audited account for FY 2021-22;
 - Auditor Certified Document submitted by the Petitioner;
 - JSERC Generation Tariff Regulations, 2020
 - JSERC Generation Tariff (1st Amendment) Regulation, 2023
 - Methodology adopted by the Commission in its earlier Orders.

Operational Performance

Plant Availability Factor (PAF)

Petitioner's Submission

- 5.5 The Petitioner has submitted 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 90.86% and as 99.68% respectively.

Commission's Analysis

- 5.6 In accordance with clause 16.1 JSERC Generation Tariff Regulation (1st Amendment) 2023, the Commission approves the Normative Plant



Availability factor as 85.00%.

- 5.7 The Commission has observed that the detail of availability submitted by the Petitioner is declared by “LDC, Tata Steel”. In this regard, the Petitioner had directed to provide the reason for not submitting the true copy certified by State Load Dispatch Centre.
- 5.8 In reply to Commission’s query vide Letter no. JSERC/Case (Tariff) No. 18 of 2022/340 on dated December 28, 2022, the Petitioner vide letter dated January 13, 2023 submits that, as per Power Purchase Agreement (PPA) between the Petitioner and Tata Steel Limited (Long Term Beneficiary), Tata Steel Load Dispatch Centre, mean the Power Management Centre of the Tata Steel Limited and shall be authorized to Monitor and certify the Availability Factor of Jojobera power plant Units.
- 5.9 On scrutinizing and analyzing the month wise actual plant availability fact duly certified by Tata Steel, LDC and on prudent check, the Commission approve the actual plant availability for FY 2021-22 as 90.86% and 99.69% for Unit-II and Unit-III respectively as given below:

Table 5: Plant availability as approved by the Commission.

Particulars	UoM	MYT	Petition	Approved
Unit-II				
NAPAF	%	85.00	85.00	85.00
Actual Plant Availability	%	-	90.86	90.86
Unit-III				
NAPAF	%	85.00	85.00	85.00
Actual Plant Availability	%	-	99.69	99.69

Auxiliary Consumption

Petitioner’s Submission

- 5.10 The Petitioner has submitted that the actual Auxiliary Power Consumption of Unit-II and Unit-III for FY 2021-22 has been fixed at 9.19% and 9.10% respectively as compared to Normative Auxiliary Power Consumption of 9.00% for each Unit as specified in GTR 2020. While these are annual average of monthly actual auxiliary consumption, the Normative of 9.00% or Actual Auxiliary Power Consumption (limited to allowable excess over Normative as per compensation mechanism for low



PLF) whichever is higher has been considered for Truing-up for both Unit 2 and Unit 3 under State/CERC Grid Code and Power to Relax. Accordingly, Auxiliary Consumption of 9.34% and 9.26% has been considered for FY 2021-22.

Commission's Analysis

5.11 On scrutinizing and analyzing the material, information, and actual figure and details submitted by the Petitioner and on prudent check the Commission approves the actual auxiliary consumption in accordance with clause 16.1 of Generation Tariff Regulation (1st Amendment) 2023 for FY 2021-22 is given below.

Table 6: Auxiliary Consumptions as approved by the Commission.

Particulars	UoM	MYT	Petition	Approved
UNIT-II				
Normative Auxiliary Consumption	%	9.00	9.34	10.00
Actual Auxiliary Consumption	%	-	9.19	9.19
UNIT-III				
Normative Auxiliary Consumption	%	9.00	10.00	10.00
Actual Auxiliary Consumption	%	-	9.10	9.10

Plant Load Factor and Generation

Petitioner's Submission

5.12 The Petitioner has submitted the actual Plant Load Factor (PLF) for Unit-II and Unit-III as 71.49% and 82.12% respectively which is less than the normative PLF of 85.00% for both Units as approved by the Commission in MYT Order dated November 04, 2022.

5.13 The Petitioner has further submitted that the actual gross generation for both the Units is lower than that approved in MYT Order dated November 04, 2022 is due to low demand from the Beneficiary.

5.14 The Petitioner has claimed the actual gross generation from Unit-II and Unit-III of Jojobera generating station as 751.53 MUs and 863.28 MUs respectively. Likewise, the Petitioner has submitted net generation (ex-bus generation) for Unit-II and Unit-III as 682.46 MUs and 784.74 MUs respectively.



Commission’s Analysis

5.15 On scrutinizing and analyzing the material, information, and 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 2021-22 is given below.

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

Particulars	UoM	MYT	Petition	Approved
UNIT-II				
Gross Generation	MU	893.52	751.53	751.53
Net Generation	MU	813.10	682.46	682.46
Actual PLF	%	-	71.49	71.49
UNIT-III				
Gross Generation	MU	893.52	863.28	863.28
Net Generation	MU	813.10	784.74	784.74
Actual PLF	%	-	82.12	82.12

Gross Station Heat Rate (GHR)

Petitioner’s Submission

5.16 The Petitioner has submitted the actual Gross Station Heat Rate (GHR) as 2544.47 kCal/kWh for Unit-II and 2540.90 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. However, the Petitioner has claimed the normative value of Normative SHR or Actual SHR (limited to allowable excess over Normative as per compensation mechanism for low PLF) whichever is higher has been considered for Truing-up for both Unit 2 and Unit 3 under State/CERC Grid Code and Power to Relax.

Commission’s Analysis

5.17 In accordance with clause 16.1 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.

5.18 On scrutinizing and analyzing the material, information, and actual



figure and details submitted by the Petitioner and on prudent check the Commission approves the Actual Gross Station Heat Rate for FY 2021-22 is given below.

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

Particulars	UoM	MYT	Petition	Approved
UNIT-II				
Normative Station Heat Rate	kCal/kWh	2,550.00	2,550.00	2,567.00
Actual Gross SHR	kCal/kWh	-	2,544.47	2,544.47
UNIT-III				
Normative Station Heat Rate	kCal/kWh	2,550.00	2,550.50	2,577.00
Actual Gross SHR	kCal/kWh	-	2540.90	2540.90

Specific Fuel Oil Consumption

Petitioner's Submission

5.19 The Petitioner has submitted the specific fuel oil consumption as 0.50 ml/kWh for both the Units II and Unit III as specified in Clause 16.1 of JSERC Generation Tariff Regulations, 2020.

Commission's Analysis

5.20 In accordance with clause 16.1 Generation Tariff Regulation (1st Amendment) 2023, the Commission approves the specific fuel oil consumption as 0.5 ml/kWh for both the Units.

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

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

5.21 The Petitioner has submitted that with the commencement of supply from



SHAKTI allocations, particularly under Round 3, 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.

- 5.22 The Petitioner has further submitted that, in Quarter 2 of FY 2021-22, there was a nation-wide scarcity of coal mainly due to water logging in mines because of heavy rains in various parts of the country, logistic congestion coupled with ongoing impact of COVID. Because of above, subsidiaries of Coal India Limited, viz., CCL, MCL, ECL were not able to maintain steady supply of coal under FSA resulting into critical stocks of coal at Jojobera Power Plant. Hence, Tata Steel, West Bokaro Mines were not in a position to supply middling coal as envisaged in the MYT Petition due to lower production of Middling coal.
- 5.23 Accordingly, the Petitioner has conveyed the same to the beneficiaries as well as the Hon'ble Commission on such minor deviations and overall impact on ECR.
- 5.24 The Petitioner has submitted the detail of weighted average GCV of all the type of coal as reference, along with the Auditor's Certificate for Month-wise Landed Price of all types of coal received in FY 2021-22.

Commission's Analysis

- 5.25 The Commission has observed that the Petitioner had procured coal against the planned/agreed quantum and shortage in FY 2021-22 that are approved by the Commission in its MYT Order dated November 04, 2022. In this regard, the Commission in the discrepancy note dated December 28, 2022 directed the Petitioner to provide justification for deviation from the approved coal purchase plan as per earlier Order. The Petitioner in its reply dated January 13, 2023 submitted the details of coal consumption along with justification for deviations from the approved procurement plan.
- 5.26 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

Particulars	Fuel Mix (%)			GCV (kCal/kg)		
	MYT	Petition	Approved	MYT	Petition	Approved
Middling Coal	21.81%	3.64%	3.64%	3860.75	4070.44	4070.44
CCL [Shakti 3] Coal	43.33%	36.85%	36.85%	3837.53	3692.27	3692.27
CCL [Shakti 2] WIV Coal	-	23.45%	23.45%	-	4261.92	4261.92
ECL [Shakti 2] Coal	6.42%	6.15%	6.15%	5109.27	5203.58	5203.58
CCL [Shakti 2] Coal	14.49%	11.06%	11.06%	3837.53	3800.95	3800.95
MCL [Shakti 2] Coal	13.95%	17.94%	17.94%	3129.71	2986.55	2986.55
Vinayak	-	0.90%	0.90%	-	3377.64	3377.64

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

Particulars	Fuel Mix (%)			GCV (kCal/kg)		
	MYT	Petition	Approved	MYT	Petition	Approved
Middling Coal	21.80%	1.72%	1.72%	3859.81	4068.36	4068.36
CCL [Shakti 3] Coal	43.34%	38.61%	38.61%	3856.28	3695.55	3695.55
CCL [Shakti 2] WIV Coal	-	23.53%	23.53%	-	4292.99	4292.99
ECL [Shakti 2] Coal	6.42%	7.60%	7.60%	5000.57	4881.01	4881.01
CCL [Shakti 2] Coal	14.49%	12.54%	12.54%	3856.28	3759.54	3759.54
MCL [Shakti 2] Coal	13.95%	14.81%	14.81%	3107.23	2920.61	2920.61
Vinayak	-	1.19%	1.19%	-	3390.34	3390.34

Transit Loss

Petitioner's Submission

5.27 The Petitioner has submitted the actual Transit Loss in all types of Coal as 0.8%. The transit loss for other category of coal had been considered by the Petitioner as per the norms given in clause 17.11 of the Generation Tariff Regulations 2020.

Commission's Analysis

5.28 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 and in accordance with Generation Tariff Regulations, 2020, the Commission approves the weighted average normative transit loss of 0.8% for all categories of coal.

Table 12: Transit Loss as approved by the Commission.

Particulars	MYT	Petition	Approved
Middling Coal	0.80%	0.80%	0.80%
CCL [Shakti 3] Coal			
CCL [Shakti 2] WIV Coal			
ECL [Shakti 2] Coal			
CCL [Shakti 2] Coal			
MCL [Shakti 2] Coal			
Vinayak			

Landed Cost of Coal

Petitioner’s Submission

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

Commission’s Analysis

5.30 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 2021-22 as tabulated hereunder.

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

Particulars	Rs./Ton		
	MYT	Petition	Approved
Middling Coal	4222.58	4208.50	4208.50
CCL [Shakti 3] Coal	3653.69	2966.33	2966.33
CCL [Shakti 2] WIV Coal	-	4351.28	4351.28
ECL [Shakti 2] Coal	5328.00	5441.65	5441.65
CCL [Shakti 2] Coal	3653.69	2837.45	2837.45
MCL [Shakti 2] Coal	2506.65	2562.74	2562.74



Particulars	Rs./Ton		
	MYT	Petition	Approved
Vinayak	-	5072.66	5072.66
Wtg. Avg. Landed Price of Primary Fuel	3725.22	3421.00	3421.00

Table 14: Landed Price of Primary Fuel (Rs/Ton) for Unit- III as approved by the Commission.

Particulars	Rs./Ton		
	MYT	Petition	Approved
Middling Coal	4222.98	4208.75	4208.75
CCL [Shakti 3] Coal	3820.04	2962.76	2962.76
CCL [Shakti 2] WIV Coal	-	4403.43	4403.43
ECL [Shakti 2] Coal	5347.64	5294.70	5294.70
CCL [Shakti 2] Coal	3820.04	2909.62	2909.62
MCL [Shakti 2] Coal	2518.83	2560.59	2560.59
Vinayak	-	5074.00	5074.00
Wtg. Avg. Landed Price of Primary Fuel	3824.40	3459.10	3459.10

Calorific value and Cost of Secondary Fuel

Petitioner's Submission

5.31 The Petitioner has submitted the weighted average calorific value and landed price of secondary fuel (i.e., LDO) is 10119.75 kCal/L and Rs. 52179.75 /kL for Unit-II and 10135.68 kCal/L and Rs. 49602.60 /kL for Unit-III respectively.

Commission's Analysis

5.32 On scrutinizing and analyzing the material, information, and actual figure and details submitted by the Petitioner and on prudent check the Commission approves the calorific value and landed price of secondary fuel for FY 2021-22 as tabulated hereunder.

Table 15: Calorific value & Landed Price of Secondary fuel as approved by the Commission.

Particulars	Calorific Value (kcal/L)			Landed Price (Rs./kL)		
	MYT	Petition	Approved	MYT	Petition	Approved
UNIT-II	9100.00	10119.75	10119.75	9100.00	10135.68	10135.68
UNIT-III	45198.00	52179.75	52179.75	45195.83	49602.60	49602.60



Energy Charge Rate (ECR)

Petitioner's Submission

- 5.33 The Petitioner has submitted the Energy Charge Rate (ECR) for FY 2021-22 as Rs. 2.60/kWh and Rs. 2.62/kWh for Unit-II and Unit-III respectively before taking into account the discount of Shakti Coal.
- 5.34 The Petitioner has further submitted to consider the storage and handling loss of 85.00 kCal/kg in accordance with the CERC Tariff Regulations 2019 in the GCV of primary fuel as Received GCV for computation of ECR under its Power to Relax as the same is genuine loss that is recognized by most SERCs and CERC. This shall also be consistent with the requirement of section 61(a) of the Electricity Act, 2003, which stipulates that SERCs shall be guided by the principles and methodologies specified by CERC for generation.
- 5.35 Accordingly, for Computation of ECR, the Petitioner has considered a margin of 85.00 kCal/kg in GCV for both Unit-II & Unit-III.
- 5.36 Likewise, the Petitioner has considered the Gross Station Heat Rate with PLF degradation compensation of 2551.58 kCal/kWh for Unit-II and 2550.73 kCal/kWh for Unit-III respectively. Further, Auxiliary Consumption with PLF degradation compensation of 9.34% for Unit-II & 9.26% for Unit-III and normative secondary fuel oil as 0.50 ml/kWh for both the Units has been considered.

Commission's Analysis

- 5.37 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



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

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:

5.38 Accordingly, the Commission approves the ECR based on coal mix, normative transit loss, normative Secondary Fuel Oil consumption as approved earlier in this Order as computed below.

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

Particulars	UoM	MYT	Petition	Approved
Normative Auxiliary Consumption (AUX)	%	9.00	9.34	10.00
Normative SHR	kCal/kWh	2,550.00	2551.58	2,567.00
Specific fuel Oil Consumption (SFC)	mL/kWh	0.50	0.50	0.50
Calorific Value of Oil (CVSF)	kCal/ml	9.10	10.12	10.12
GCV of Primary Fuel (CVPF)	kCal/kg	3,825.49	3,730.20	3,730.20
Landed Price of Primary Fuel (LPPF)	Rs./kg	3.73	3.42	3.42
Landed Price of Secondary Fuel (LPSFi)	Rs./ml	0.05	0.05	0.05
Energy Charge Rate (ECR)	Rs/kWh	2.749	2.60	2.64

Table 17: Energy Charge Rate (ECR) for Unit-III as approved by the Commission

Particulars	UoM	MYT	Petition	Approved
Normative Auxiliary Consumption (AUX)	%	9.00	9.26	10.00
Normative SHR	kCal/kWh	2,550.00	2550.73	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	10.14	10.14
GCV of Primary Fuel (CVPF)	kCal/kg	3,826.01	3,737.18	3,737.18
Landed Price of Primary Fuel (LPPF)	Rs./kg	3.82	3.46	3.46
Landed Price of Secondary Fuel (LPSFi)	Rs./ml	0.05	0.05	0.05
Energy Charge Rate (ECR)	Rs/kWh	2.82	2.62	2.67

Summary of Fuel Cost

5.39 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 18: Fuel Cost for Unit-II as approved by the Commission.

Particulars	UoM	MYT	Petition	Approved
Primary Fuel Cost	Rs. Cr.	221.48		178.17



Particulars	UoM	MYT	Petition	Approved
Secondary Fuel Cost	Rs. Cr.	2.02		1.98
Energy Cost	Rs. Cr.	223.50	177.77	180.14

Table 19: Fuel Cost for Unit-III as approved by the Commission

Particulars	UoM	MYT	Petition	Approved
Primary Fuel Cost	Rs. Cr.	227.35		207.57
Secondary Fuel Cost	Rs. Cr.	2.02		2.16
Energy Cost	Rs. Cr.	229.36	205.91	209.73

Determination of Fixed Cost

Additional Capitalization

Petitioner's Submission

5.40 The Petitioner has submitted the actual capitalization for Unit-II and Unit-III for FY 2021-22 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.

5.41 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 20: Apportionment ratio as submitted by the Petitioner.

Particulars	UoM	MYT
Installed Capacity (Unit-I)	MW	67.5
Installed Capacity (Unit-II)	MW	120



Particulars	UoM	MYT
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

5.42 Further, the Petitioner has filed an additional Affidavit dated 10.08.2022 for revision of the Capitalization and Decapitalization Plan for FY 2021-2022 to 2025-2026, since closings for these years form the openings for subsequent years, and also for MYT period of FY 2021-22 to 2025-26 and with an intent that such revision would give true and fair estimate of Annual Fixed Charges (AFC) for the Control Period.

5.43 Further, the Petitioner has submitted that the Hon'ble Commission could not consider the same while disposing of the MYT Petition but granted liberty to file revised Capex estimate and decapitalization in next tariff filing: The relevant extract of the MYT Order is extracted below for ready reference of the Hon'ble Commission:

“7.68 with regards to Petitioner submission of revised additional capital expenditure/ capitalization and de-capitalisation for the Control Period from FY 2021-22 to FY 2025-26 before the Commission for approval vide letter dated 54 August 10, 2022. It is observed that the revised additional capital expenditure/capitalisation and de-capitalization was submitted to the Commission after public notice was published and just before the public hearing. Hence, this additional information was not published for the public consultation and public at large could not respond to the revised numbers which shall have an incremental impact on ARR. Therefore, the Commission in this order has not considered the revised Capex estimate and de-cap schedule of the Petitioner submitted for the Control Period. However, Petitioner is at liberty to file revised Capex estimate and de-cap. in next tariff filing petition.”

5.44 Accordingly, the Petitioner pray to the Hon'ble Commission to allow the Capitalization of Rs. 5.64 Crore and carry forward of Rs. 3.93 Crore as given below.



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

Particulars	MYT	Petition
Unit II Standalone		
Up Gradation of FSSS and BOP Control System (Carry Forward)		1.33
Turbine and Generator Bearing sets (Carry Forward)		0.36
Control Room AC System	0.86	
Ash Conveying pipe line	0.5	
BFP Destaging	1.375	1.11
Upgradation of Fans Pneumatic Actuators to Electrical Actuator	1.20	
Unit III Standalone		
Up Gradation of FSSS and BOP Control System (Carry Forward)		0.53
Turbine and Generator Bearing sets(Carry Forward)		0.73
Control Room AC System	0.86	
Ash Conveying pipe line	0.5	
BFP Destaging	1.375	1.12
Upgradation of Fans Pneumatic Actuators to Electrical Actuator	1.20	
Unit II & Unit III Common		
Hydraulic Auger for CHP (Carry Forward)	2.00	
Replacement of Dead Tank CT with Live Tank CT (Carry forward)	0.12	0.25
CHP Dozer	2.4	
New Weigh Bridge for Bulker	0.49	
Multi-Layered Security System for Jojobera Power Plant.	0.66	
Procurement of Laptops/IT Equipment's		0.16
Procurement of Chairs for Auditorium/Training Centre		0.05
Upgradation of Metering System		-0.24
Workshop machine Tools, Condition Monitoring tools & Mobile Environmental Dust Extractor	0.33	
Net- Capitalization	13.84	5.64

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

Particulars	Unit-II		Unit-III	
	MYT	Petition	MYT	Petition
Capitalization	6.92	3.03	6.92	2.61
Decapitalization	0.89	0.39	0.10	0.10

Commission's Analysis



5.45 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 de-capitalization;

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”

5.46 The Commission has observed that the Petitioner has claimed capital spare namely “Turbine and Generator Bearing Sets” under Capital Expenditure. But as per clause 15.46 of JSERC GTR 1st amendment Regulation 2023, the water charge, security expense and capital spare shall be allowed separately after prudent check. Accordingly, the Commission disapprove cost of “Turbine and Generator Bearing Sets” under Capital Expenditure and approves later in this order in accordance



with the above said regulation.

- 5.47 The Commission has further observed that the Petitioner has deviated from the MYT Order dated November 04, 2022. Accordingly, the Commission approves the capitalization for FY 2021-22 as detailed above. The Commission also directs the Petitioner to ensure that proper planning should be carried out before finalization and submission of Capex planning 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 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	MYT	Petition	Approved
Unit II Standalone			
Up Gradation of FSSS and BOP Control System (Carry Forward)	-	1.33	1.33
Turbine and Generator Bearing sets (Carry Forward)	-	0.36	-
Control Room AC System	0.86	-	-
Ash Conveying pipe line	0.5	-	-
BFP Destaging	1.375	1.11	1.11
Upgradation of Fans Pneumatic Actuators to Electrical Actuator	1.20	-	-
Unit III Standalone			
Up Gradation of FSSS and BOP Control System (Carry Forward)	-	0.53	0.53
Turbine and Generator Bearing sets(Carry Forward)	-	0.73	-
Control Room AC System	0.86	-	-
Ash Conveying pipe line	0.5	-	-
BFP Destaging	1.375	1.12	1.12
Upgradation of Fans Pneumatic Actuators to Electrical Actuator	1.20	-	-
Unit II & Unit III Common			
Hydraulic Auger for CHP (Carry Forward)	2.00	-	-
Replacement of Dead Tank CT with Live Tank CT (Carry forward)	0.12	0.25	0.25
CHP Dozer	2.4	-	-
New Weigh Bridge for Bulker	0.49	-	-



True-up for FY 2021-22 & Annual Performance Review for FY 2022-23

Particulars	MYT	Petition	Approved
Multi-Layered Security System for Jojobera Power Plant.	0.66	-	-
Procurement of Laptops/IT Equipment's	-	0.16	0.16
Procurement of Chairs for Auditorium/Training Centre	-	0.05	0.05
Upgradation of Metering System	-	-0.24	-0.24
Workshop machine Tools, Condition Monitoring tools & Mobile Environmental Dust Extractor	0.33	-	-
Net- Capitalization	13.84	5.64	4.54

5.48 Further, the Petitioner has submitted that the decapitalization for FY 2021-22 as Rs. 0.39 Crore and Rs.0.10 Crore for Unit-II and Unit-III respectively.

5.49 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.

5.50 On scrutinizing and analyzing the material, information, and actual figure and details submitted by the Petitioner and on prudent check the Commission approves the Capitalization and Decapitalization for FY 2021-22 as given below.

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

Particulars	Unit-II			Unit-III		
	MYT	Petition	Approved	MYT	Petition	Approved
Capitalization	6.92	3.03	2.67	6.92	2.61	1.88
Decapitalization	0.89	0.39	0.39	0.89	0.10	0.10

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

Particulars	MYT	Petition	Approved
Opening GFA	493.93	488.62	488.62
Additional Capitalisation	6.92	3.03	2.67
Decapitalisation	0.89	0.39	0.39
Closing GFA	499.96	491.25	490.89



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

Particulars	MYT	Petition	Approved
Opening GFA	482.62	473.20	473.20
Additional Capitalisation	6.92	2.61	1.88
Decapitalisation	0.89	0.10	0.10
Closing GFA	488.65	475.72	474.98

Depreciation

Petitioner's Submission

5.51 The Petitioner has submitted the depreciation for FY 2021-22 as summation of depreciation incurred on the following assets:

- Original Project Cost;
- Additional Capitalization approved for FY 2011-12 to FY 2020-21;
- Actual Additional Capitalization FY 2021-22; and

5.52 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.

5.53 The Petitioner has submitted that the cumulative depreciation on total assets [i.e. GFA (Including Additional Capitalization)] up to FY 2021-22 has crossed 70% for both the Units-II and-III. Further, in accordance with clause 15.30, the balance depreciable value (i.e. 90% of the Capital Cost minus Cumulative depreciation recovered for assets in service upto 2020-21) 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	Unit-II		Unit-III	
	MYT	Petition	MYT	Petition
Depreciation	7.47	12.56	8.43	13.03

Commission's Analysis

5.54 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.

5.55 The Commission has observed that the Petitioner has adopted different methodology for calculation of depreciation vis-à-vis the method approved by the Commission.

5.56 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 GTR 2020, the



Commission is of the view to spread equally the remaining depreciable amount.

- 5.57 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.
- 5.58 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		
	MYT	Petition	Approved	MYT	Petition	Approved
Depreciation	7.47	12.56	6.80	8.43	13.03	7.51

Operation & Maintenance Expenses

Petitioner's Submission

- 5.59 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;
 - HO Expenses;
 - Legal Expenses;



- 5.60 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 and 8 has been added in 2021-22 for Units 1-4 of the Jojobera Power Plant. Accordingly, Growth Factor (Gn), specified in GTR 2020 has been considered.
- 5.61 The Petitioner has claimed the R&M expenses, other A&G Expenses, Head Office Expenses, and legal Expenses as per normative approved in the MYT Order dated November 04, 2022 for FY 2021-22.
- 5.62 The Petitioner has claimed Raw water, Ash Disposal Expenses, Terminal Liabilities & Application fee and Publication Expenses on actual basis for the purpose of true-up for FY 2021-22.

Table 29: O&M Expenses (Rs. Crore) as submitted by the Petitioner.

Particulars	UoM	UNIT-II		UNIT-III	
		MYT	Petition	MYT	Petition
Employee Expenses	Rs. Cr.	8.41	8.69	8.41	8.69
Terminal Liabilities	Rs. Cr.	0.92	0.50	0.92	0.50
R&M Expenses	Rs. Cr.	16.32	16.32	15.21	15.21
Ash Disposal Expenses	Rs. Cr.	4.16	1.96	4.18	2.24
Raw Water	Rs. Cr.	5.00	3.36	4.97	3.86
HO Expenses	Rs. Cr.	12.72	12.72	12.68	12.68
Application & Publication Fee	Rs. Cr.	0.13	0.07	0.13	0.07
Other A&G Expenses	Rs. Cr.	6.36	6.36	5.97	5.97
Legal Expenses	Rs. Cr.	0.01	0.01	0.01	0.01
O&M Expenses	Rs. Cr.	54.03	50.00	52.48	49.23

Commission’s Analysis

- 5.63 The Commission has outlined clause 15.35 and clause 15.40 of JSERC Generation Tariff Regulation, 2020 for the approval 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 check and any other factor considered appropriate by the Commission”.

- 5.64 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.
- 5.65 The Commission approves the Employee Cost, HO & SS Expenses and other A&G Expenses as per normative value approved in MYT Order dated November 04, 2022. Further R&M expense as per review order case no 18 of 2022.
- 5.66 Based on the facts and circumstance of the petition the Commission approves the O&M expenses as given below.

Table 30: O&M Expenses (Normative Component) as approved by the Commission (Rs. Cr.)

Particulars	Unit-II			Unit-III		
	MYT	Petition	Approved	MYT	Petition	Approved
Employee Cost	8.41	8.69	8.41	8.41	8.69	8.41
R&M Expenses	16.32	16.32	18.56*	15.21	15.21	17.30*
HO & SS Expenses	12.72	12.72	12.72	12.68	12.68	12.68
Other A&G Expenses	6.36	6.36	6.36	5.97	5.97	5.97

*Considered as per Review Order case no 18 of 2022

Table 31: O&M Expenses (Variable Component) as approved by the Commission (Rs. Cr)

Particulars	Unit-II			Unit-III		
	MYT	Petition	Approved	MYT	Petition	Approved
Terminal Liabilities	0.92	0.50	0.50	0.92	0.50	0.50



True-up for FY 2021-22 & Annual Performance Review for FY 2022-23

Ash Disposal Expenses	4.16	1.96	1.96	4.18	2.24	2.24
Application & Publication Expenses	0.13	0.07	0.07	0.13	0.07	0.07
Legal Expenses	0.01	0.01	0.01	0.01	0.01	0.01

Table 32: O&M Expenses (Rs. Crore) as approved by the Commission.

Particulars	Unit-II	Unit-III
	Approved	Approved
Employee Expenses	8.41	8.41
Terminal Liabilities	0.50	0.50
R&M Expenses	18.56*	17.30*
Ash Disposal Expenses	1.96	2.24
HO Expenses	12.72	12.68
Application & Publication Fee	0.07	0.07
Other A&G Expenses	6.36	5.97
Legal Expenses	0.01	0.01
O&M Expenses	48.63	47.19

*Considered as per Review Order case no 18 of 2022

Water Charges, Capital Spare

Petitioner Submission

5.67 The Petitioner has submitted that the Commission in the MYT Order dated November 04, 2022 approved the Raw Water Expense for FY 2021-22 considering the projected Generation, estimated Raw Water charges of Rs 25.12/m³ as charged by Supplier to its industrial consumers including the Petitioner. However, the Petitioner emphasis that actual raw water expenses for FY 2021-22 is lower than the approved value.

5.68 It was submitting by the Petitioner in the earlier petition that the Government of Jharkhand had increased the water charges vide notification dated April 01, 2011 issued by the Water Resources Department, Government of Jharkhand. Tata Steel Limited (TSL) challenged the exorbitant increase in water charges by preferring a writ petition being WPC No. 4544 of 2011 before the Hon'ble High Court of Jharkhand. Hon'ble High Court had passed the Interim Order in favour of TSL directing them to pay only Rs. 1.00 Crore per month towards water charges till the pending writ petition is decided. However, the Interim Order does not specify, what part of Rs. 1.00 Crore is associated to the Petitioner's Unit-II & unit-III of Jojobera plant.

5.69 In regard to capital spare, the Petitioner has submitted that since



provision of the Capital Spares is done away with in the principal Generation Tariff Regulations, 2020, the Petitioner for the purpose of recovery of balance amount of Rs. 78.97 Lakh for each Unit-II and Unit-III under approved capital spares namely 'Turbine and Generator Bearing Sets' has considered the same under Capital Expenditure considering the expenses to be capital in nature. Consequently, the Petitioner requested the Hon'ble Commission to kindly consider the same or alternatively approves the same under O&M Expenses as Capital Spares as one-time exception taking into account the approval given earlier.

Commission Analysis

5.70 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”.

5.71 The Commission has gone through the submissions of the Petitioner and observed that the matter related to Water Tax is sub-judice before the Hon'ble Jharkhand High Court. Thus, the Commission is approving total Water Charge payable to TSL for its service. The net Raw Water Expense approved in this Order is subject to final outcome of above-mentioned Petition before the Hon'ble Jharkhand High Court.

5.72 The Commission has observed that the capital spare expense was approve for 2nd control period, but due to various reason the same capital spare was not utilized during 2nd control period. Hence, the Commission approves the carry forward capital expenses in accordance with the Generation Tariff Regulation (1st Amendment), 2023.

5.73 The table below summarizes the water charges and capital spare as claimed by the Petitioner and as approved by the Commission for FY 2021-22.

Table 33: Water charges and capital expenses (Rs. Crore) as approved by the Commission.



Particulars	Unit-II			Unit-III		
	MYT	Petition	Approved	MYT	Petition	Approved
Raw Water Expenses	5.00	3.36	3.36	4.97	3.86	3.86
Capital Spare	-	-	0.36	-	-	0.73

Interest on Loan

Petitioner's Submission

- 5.74 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.
- 5.75 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 2021-22. 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.
- 5.76 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.
- 5.77 Further, the Petitioner by an additional Affidavit dated 22.11.2022 has submitted that the closing loan for FY 2020-21 has been considered as the Opening loan for 2021-22. Further, interest Rate has been considered as Bank Rate plus 200 basis points as on 01.04.2021 i.e. 1st April of respective year of the Control Period i.e. at 9.00% 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.
- 5.78 The table below summarizes the Interest on Loan as claimed by the



Petitioner for FY 2021-22.

Table 34: Interest on Loan (Rs. Crore) as submitted by the Petitioner.

Particulars	UoM	Unit-II		Unit-III	
		MYT	Petition	MYT	Petition
Opening Loan	Rs. Cr.	30.45	24.32	28.51	23.95
Deemed Loan Addition	Rs. Cr.	4.84	2.12	4.84	1.83
Deletion During year	Rs. Cr.	-	0.06	-	0.06
Deemed Loan Repayment	Rs. Cr.	7.47	8.55	8.43	7.22
Closing Loan	Rs. Cr.	27.82	17.89	24.92	18.56
Interest Rate	%	9.00%	9.00%	9.00%	9.00%
Interest on Loan	Rs. Cr.	2.62	1.90	2.40	1.91

Commission's Analysis

5.79 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 modernisation 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.

- 5.80 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 2021-22 is considered equal to closing normative loan amount of FY 2020-21 as approved in the previous True-up Order for FY 2020-21.
- 5.81 In accordance with clause 15.15, the Commission approves the deemed loan repayment equal to approved depreciation (Additional Capitalization) for FY 2021-22.
- 5.82 In accordance with clause 15.18 of JSERC Generation Tariff Regulations, 2020, the Commission approves the interest rate as 9.00% (SBI MCLR as on 01.04.2021 plus 200 bp) for both the Units as given below.

Table 35: Interest on Loan (Rs. Crore) as approved by the Commission.

Particulars	Unit-II			Unit-III		
	MYT	Petition	Approved	MYT	Petition	Approved
Opening Loan	30.45	24.32	29.89	28.51	23.95	29.81
Deemed Loan Addition	4.84	2.12	1.87	4.84	1.83	1.31
Deemed Loan Repayment	7.47	8.55	4.61	8.43	7.22	4.13
Closing Loan	27.82	17.89	27.14	24.92	18.56	27.00
Average Loan Balance	29.14	21.11	28.52	26.72	21.25	28.41
Interest Rate	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
Interest on Loan	2.62	1.90	2.57	2.40	1.91	2.56

Interest on Working Capital (IOWC)

Petitioner's Submission

- 5.83 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 36: IOWC as submitted by the Petitioner (Rs. Crore)

Particulars	Unit-II		Unit-III	
	MYT	Petition	MYT	Petition
Cost towards Coal for Generation 50 days	30.34	28.69	31.14	28.92
Cost of Oil for Generation (2 months)	0.34	0.39	0.34	0.37
Maintenance Spares (20% O&M)	10.81	10.00	10.50	9.85
O&M Expenses (1 month)	4.5	4.17	4.37	4.10
Receivables (45 days)	40.01	38.51	40.57	38.56
Total Working Capital	86.00	81.76	86.92	81.80
Interest Rate	10.50%	10.50%	10.50%	10.50%
Interest on Working Capital	9.03	8.58	9.13	8.59

Commission's Analysis

5.84 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 filed 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 true 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”.

5.85 Taking into account the above regulation, the Interest on Working capital has been calculated at an interest rate of 10.50% (Bank Rate plus 350 basis points) as specified in the clause 15.26 JSERC Generation Tariff Regulation, 2020 is given below.

Table 37: IOWC (Rs. Crore) as approved by the Commission.

Particulars	Unit-II			Unit-III		
	MYT	Petition	Approved	MYT	Petition	Approved
Cost of Coal (for 50 days)	30.34	28.69	28.76	31.14	28.92	29.14
Cost of Oil for Generation (2 months)	0.34	0.39	0.39	0.34	0.37	0.37
Maintenance Spares (20% O&M)	10.81	10.00	9.72	10.50	9.85	9.44
O&M Expenses (1 month)	4.5	4.17	4.33	4.37	4.10	4.25



Particulars	Unit-II			Unit-III		
	MYT	Petition	Approved	MYT	Petition	Approved
Receivables (45 days)	40.01	38.51	38.00	40.57	38.56	38.15
Total Working Capital	86.00	81.76	81.19	86.92	81.80	81.35
Interest Rate	10.50%	10.50%	10.50%	10.50%	10.50%	10.50%
Interest on Working Capital	9.03	8.58	8.53	9.13	8.59	8.54

Return on Equity

Petitioner's Submission

- 5.86 The Petitioner has claimed the Return on Equity (Pre-tax) for FY 2022-23 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 2021-22.
- 5.87 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 2021-22 as given below.

Table 38: Return on Equity (Rs. Crore) as submitted by the Petitioner.

Particulars	Unit-II		Unit-III	
	MYT	Petition	MYT	Petition
Opening Equity	148.18	146.59	144.79	141.96
Net Addition	1.81	0.79	1.81	0.75
Closing Equity	149.99	147.38	146.60	142.71
Average Equity	149.09	146.98	145.69	142.34
Rate of Return on Equity	14.00%	14.00%	14.00%	14.00%
ROE (Post-Tax)	18.71%	18.71%	18.71%	18.71%
MAT	25.17%	25.17%	25.17%	25.17%
ROE (Pre-Tax)	27.89	27.50	27.26	26.63

Commission's Analysis

- 5.88 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 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 modernisation 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.

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:



- 5.89 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.
- 5.90 In accordance with the clause 6.1 JSERC Generation Tariff (1st Amendment), Regulation 2023, the Commission approves the Rate of Return on Equity as 15.00% is given below.

Table 39: Return on Equity (Rs. Crore) for Unit II as approved by the Commission

Particulars	MYT	Petition	Approved
Opening Equity	148.18	146.59	146.59
Net Addition	1.81	0.79	0.68
Closing Equity	149.99	147.38	147.27
Average Equity	149.09	146.98	146.93
Rate of Return on Equity	14.00%	14.00%	15.00%
ROE (Post-Tax)	18.71%	18.71%	20.04%
MAT	25.17%	25.17%	25.17%
ROE (Pre-Tax)	27.89	27.50	29.45

Table 40: Return on Equity (Rs. Crore) for Unit III as approved by the Commission

Particulars	MYT	Petition	Approved
Opening Equity	144.79	141.96	143.19
Net Addition	1.81	0.75	0.53
Closing Equity	146.60	142.71	143.72
Average Equity	145.69	142.34	143.45
Rate of Return on Equity	14.00%	14.00%	15.00%
ROE (Pre-Tax)	18.71%	18.71%	20.04%
MAT	25.17%	25.17%	25.17%
ROE (Pre-Tax)	27.26	26.63	28.75

Incentive (Pre-Tax)

Petitioner Submission

- 5.91 The Petitioner has submitted the incentive for FY 2021-22 is nil, since



PLF for both Unit-II & III is lesser than the normative PLF i.e. 85.00%.

Commission Analysis

5.92 Based on the facts and circumstance of the instant petition, the Commission does not approve any incentive (pre-tax) for FY 2021-22.

Sharing Gain/Loss

Operation Gain due to variation in Norms FY 2021-22

Petitioner's Submission

5.93 The Petitioner has submitted that it has followed the clause 6.14 of Generation Tariff Regulation 2020 for computation of gain based on actual performance of controllable parameters

5.94 Accordingly, in terms of above regulation and considering actual performance of FY 2021-22, the Gain due to Operational Performance of SHR, Auxiliary Power Consumption and SFC works out as follows for Unit-II and Unit-III.

Table 41: Operational Gain (Rs. Cr.) for FY 2021-22 as submitted by Petitioner

Particulars	UoM	Unit-II		Unit-III	
		Normative	Petition	Normative	Petition
Heat Rate	kCal/kWh	2550.00	2544.47	2550.00	2540.90
Auxiliary Power	%	9.00%	9.19%	9.00%	9.10%
Sp. LDO Consumption	ml/Kwh	0.50	0.28	0.50	0.09
Equivalent GCV of Coal (CVPF)	Kcal/Kg	3815.20	3815.20	3822.18	3822.18
Equivalent Landed Price of Coal	Rs/Ton	3421.00	3421.00	3459.10	3459.10
Equivalent GCV of LDO (CVPF)	kCal/L	10120	10120	10136	10136
Equivalent Landed Price of LDO	Rs/KL	52180	52180	49603	49603
Energy Charge Rate (ECR)	Rs/kWh	2.536	2.526	2.558	2.534
ECRN - ECR _A			0.011		0.025
Ex-Bus Generation	MU		682.46		784.74
Gain/(Loss) on Operational Parameters	Rs. Cr.		0.72		1.93
Savings/Gain with Petitioner (50%)	Rs. Cr.		0.36		0.96

Commission's Analysis

5.95 The Commission has outlined clause 6.14 JSERC Generation Tariff Regulation 2020 and clause 5.1 of 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 station and shall be shared in the ratio of 50:50 between the generating stations and beneficiaries.

Net Gain = (ECRN - ECRA) x 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.

5.96 On scrutinizing and analyzing the material, information, and actual figure, Regulations and details submitted by the Petitioner and on prudent check the Commission approves the operational gain due to variation for FY 2021-22 as given below.



Table 42: Operational Gain (Rs. Cr.) for FY 2021-22 as approved by the Commission

Particulars	UoM	Unit-II		Unit-III	
		Normative	Approved	Normative	Approved
Auxiliary Consumption (AUX)	%	10.00%	9.19%	10.00%	9.10%
Gross Station Heat Rate (SHR)	kCal/kWh	2567.00	2544.47	2577.00	2540.90
Specific fuel Oil Consumption	mL/kWh	0.50	0.28	0.50	0.09
Calorific Value of Oil (CVSF)	kCal/ml	10.12	10.12	10.14	10.14
GCV of Primary Fuel (CVPF)	kCal/kg	3730.20	3730.20	3737.18	3737.18
Landed Price of Primary Fuel	Rs./kg	3.42	3.42	3.46	3.46
Landed Price of Sec. Fuel	Rs./ml	0.05	0.05	0.05	0.05
Energy Charge Rate (ECR)	Rs/kWh	2.64	2.58	2.67	2.59
ECR_N - ECR_A	Rs/kWh		0.057		0.081
Ex-Bus Generation	MU		682.46		784.74
Gain/(Loss) on Operational Parameters	Rs. Cr		3.87		6.39
Savings/Gain with beneficiary (25%)	Rs. Cr		0.97		1.60

Gain in Operation & Maintenance

Petitioner Submission

- 5.97 Likewise, the Petitioner has submitted the Gain in Operation & Maintenance Expenses in accordance with the above said Regulation.
- 5.98 Further, the Petitioner propose that, for the purpose of sharing gains of O&M expense sharing under clause 6.15 of GTR 2020, the Hon'ble Commission may kindly consider the O&M expenses for both the Units together and if the actual O&M expenses for both the Units are lower than the overall savings may be shared 50:50 with the consumers with half of 50% allocated to each Unit. The Hon'ble Commission is requested to exercise its Power to Relax address this issue.
- 5.99 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 43: Gain in Operation & Maintenance (Rs. Crore) as submitted by Petitioner

Particulars	Unit-II + Unit-III		Unit-II+ Unit-III
	Performance Target Approved	Actual Expenses incurred	Saving
Employee Cost excl. TL	17.38	16.73	0.66
R&M Expenses	31.53	35.36	-3.83



Particulars	Unit-II + Unit-III		Unit-II+ Unit-III
	Performance Target Approved	Actual Expenses incurred	Saving
HO & SS Expenses	25.40	24.11	1.29
Other A&G Expenses	12.33	9.94	2.39
Legal Expenses	0.02	0.004	0.02
Sub-total (f)	86.66	86.13	0.53
Gain to be shared with Beneficiaries of Unit-II & Unit III (50% of f)			0.26

5.100 The Petitioner has considered the adjustment in gain of Rs 0.26 crore in ARR of respective Units-II & Units-III i.e. Rs 0.13 crore with 50:50 gain sharing as per regulation.

Commission Analysis

5.101 The Commission has outlined clause 6.14 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.

5.102 Accordingly, the Commission approves the gain in Operation & Maintenance for FY 2021-22 as tabulated below.



Table 44: Gain in Operation & Maintenance (Rs. Crore) as approved by the Commission.

Particulars	UoM	Unit-II		Unit-III	
		Petition	Approved	Petition	Approved
Normative O&M Expenses	Rs. Cr	44.10	46.06	42.56	44.37
Actual O&M Expenses	Rs. Cr	51.34	51.34	34.79	34.79
Gain/(Loss)	Rs. Cr	(7.24)	(5.28)	7.77	9.58
Gain to be shared with Beneficiaries (50% of Gain)	Rs. Cr.	0.13	0.00	0.13	4.79

Impact of Change in Law

Petitioner Submission

5.103 The Petitioner has claimed that going from Generation Tariff Regulation 2015 regime to Generation Tariff Regulation 2020 regime is nothing but change in law. Accordingly, the computation of additional compensation required for Unit-II and Unit-III as presented below.

Table 45: Loss in Energy Charge claimed by the Petitioner for Unit-II & III.

Particulars	Unit-II	Unit-III
Net Saving as per GTR 2015	7.27	10.76
Net Saving as per GTR 2020	0.36	0.96
Loss of Gain/Compensation Required	6.90	9.79

Commission Analysis

5.104 The Commission is of the view that going from Generation Tariff Regulation 2015 regime to Generation Tariff Regulation 2020 regime is not a change in law process. Accordingly, the Commission disallow the prayer of the Petitioner.

Non-Tariff Income

Petitioner Submission

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

Table 46: Non-Tariff Income (Rs. Cr) as submitted by the Petitioner for Unit-II & Unit-III.

Particulars	UoM	Unit-II	Unit-III
Non-Tariff Income	Rs. Cr.	1.03	1.09



Commission Analysis

5.106 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 2021-22 as given below.

Table 47: Non-Tariff income (Rs. Cr.) as approved by the Commission for both Unit.

Particulars	UoM	Unit-II		Unit-III	
		Petition	Approved	Petition	Approved
Non-Tariff Income	Rs. Cr.	1.03	1.03	1.09	1.09

Shakti Scheme Discount

Petitioner's Submission

5.107 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 produced and consumed under round-III bidding.

Table 48: Shakti Scheme Discount (Rs. Crore) as submitted by Petitioner.

Particulars	UoM	Unit-II		Unit-III	
		MYT	Petition	MYT	Petition
Sales due to Coal (Round-II)	MU	280.22	227.53	278.64	260.74
Sale due to CCL Coal (Round-III)	MU	352.80	420.83	354.52	498.36
Discount Amount	Rs. Cr.	3.59	3.86	3.60	4.53

Commission's Analysis

5.108 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 2021-22 is given below.



Table 49: Shakti Scheme Discount (Rs. Crore) as approved by the Commission.

Particulars	UoM	Unit-II			Unit-III		
		MYT	Petition	Approved	MYT	Petition	Approved
Sales due to Coal (Round-II)	MU	280.22	227.53	226.03	278.64	260.74	258.01
Sale due to CCL Coal (Round-III)	MU	352.80	420.83	418.05	354.52	498.36	498.13
Discount Amount	Rs. Cr.	3.59	3.86	3.83	3.60	4.53	4.48

Summary of Annual Revenue Requirement

Commission's Analysis

5.109 On consideration of the submission and details furnished by the Petitioner, the Commission approves the Annual Fixed Cost (AFC) for FY 2021-22 which as summarized below.

Table 50: Annual Fixed Cost (Rs. Crore) as approved by the Commission.

Particulars	Unit-II			Unit-III		
	MYT	Petition	Approved	MYT	Petition	Approved
O&M Expenses	49.03	46.63	48.59	47.51	45.38	47.19
Depreciation	7.47	12.56	6.80	8.43	13.03	7.51
Interest on Loan	2.62	1.90	2.57	2.40	1.91	2.56
Interest on Working Capital	9.03	8.58	8.53	9.13	8.59	8.54
Return on Equity	27.89	27.50	29.45	27.26	26.63	28.75
AFC	96.04	97.17	95.93	94.73	95.53	94.55
Water Charges	5.00	3.36	3.36	4.97	3.86	3.86
Capital Spare	-	-	0.36	-	-	0.73

5.110 The Commission approves the Annual Fixed Charge after taking into account the availability Factor for FY 2021-22 is given below.

Table 51: AFC (Rs. Cr.) after availability as approved by the Commission.

Particulars	Unit-II			Unit-III		
	MYT	Petition	Approved	MYT	Petition	Approved
Annual Fixed Cost	96.04	97.17	95.93	94.73	95.53	94.55
Availability	85.00%	90.86%	90.86%	85.00%	99.68%	99.69%
AFC after Availability	96.04	97.17	95.93	94.73	95.53	94.55

5.111 On consideration of the submission and details furnished by the



Petitioner, the Commission approve the Annual Revenue Requirement (ARR) for FY 2021-22 which as summarized below.

Table 52: Annual Revenue Requirement (Rs. Crore) as approved by the Commission

Particulars	Unit-II			Unit-III		
	MYT	Petition	Approved	MYT	Petition	Approved
ARR after Availability	324.54	278.31	279.80	329.06	305.31	308.87
Less: Discount as per [SHAKTI 2&3]	3.59	3.86	3.83	3.60	4.53	4.48
Less: Gain on Operational Parameters[25%]		0.36	0.97		0.96	1.60
Less: Gain on O&M Expense [50%]		0.13	0.00		0.13	4.79
Less: Non-Tariff Income		1.03	1.03		1.09	1.09
Add: Compensation due to Change in Law		6.90	0.00		9.79	0
Net ARR	320.95	279.83	273.97	325.47	308.39	296.91

Revenue from Sale of Power

Petitioner's Submission

5.112 The Petitioner has submitted the revenue from sale of power for FY 2021-22 in its account as Rs. 275.90 Crore and Rs. 295.31 Crore for Unit-II and Unit-III respectively.

5.113 Further, the Petitioner has submitted that revenue recovered Rs 0.14 Cr and Rs 0.04 Cr for Unit-II and Unit-III shows in the Audited certificate as TCS, and hence, it is not considered on income of the Petitioner but it is deposited in the Government account.

5.114 Accordingly, The Petitioner has claimed the actual revenue from sale of power for FY 2021-22 as Rs. 275.76 Crore and Rs. 295.26 Crore for Unit-II and Unit-III respectively.

Table 53: Revenue (Rs. Crore) as submitted by the Petitioner.

Particulars	Unit-II	Unit-III
	Petition	Petition
Revenue from Sale of Power	275.76	295.26

Commission's Analysis

5.115 The Commission has examined the detail submitted by the Petitioner



along with audited certificate and on prudent check, the Commission approves the revenue from sale of power for FY 2021-22 is given below.

Table 54: Revenue (Rs. Crore) as approved by the Commission

Particulars	Unit-II		Unit-III	
	Petition	Approved	Petition	Approved
Revenue from Sale of Power	275.76	275.76	295.26	295.26

Gap/Surplus for FY 2021-22

5.116 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”.

5.117 The Commission has examined the detail submitted by the Petitioner along with audited certificate and on prudent check, approves the Gap/(Surplus) for FY 2021-22 for Unit-II and Unit-III as tabulated



hereunder.

Table 55: Gap/(Surplus) as approved by the Commission

Particulars	Unit-II		Unit-III	
	Petition	Approved	Petition	Approved
Net ARR	279.83	273.97	308.39	296.91
Revenue from Sale of Power	275.76	275.76	295.26	295.26
Gap/(Surplus)	4.07	(1.79)	13.12	1.64

Table 56: Carrying Cost for Unit-II as approved by the Commission (Rs. Crore)

Particulars	FY 2021-22	FY 2022-23
Opening Balance	0	(1.79)
Addition During the FY	(1.79)	0
Adjustment during the FY	0	0
Closing Balance	(1.79)	(1.79)
Interest Rate	11.65%	10.50%
Carrying Cost for respective FY	(0.10)	(0.19)

Table 57: Carrying Cost for Unit-III as approved by the Commission (Rs. Crore)

Particulars	FY 2021-22	FY 2022-23
Opening Balance	0	1.64
Addition During the FY	1.64	0
Adjustment during the FY	0	0
Closing Balance	1.64	1.64
Interest Rate	11.65%	10.50%
Carrying Cost for respective FY	0.10	0.17

Table 58: Carrying Cost on Revenue Gap/(Surplus) for Unit-II & Unit-III as approved by the Commission (In Rs. Cr.)

Particulars	Unit-II	Unit-III
	Approved	Approved
Opening Gap/Surplus for FY 2021-22	-	-
Gap/(Surplus) addition during the FY 2021-22	(1.79)	1.64
Closing Gap/ (Surplus) for FY 2021-22	(1.79)	1.64
Carrying Cost of FY 2021-22	(0.10)	0.10
Carrying Cost of FY 2022-23	(0.19)	0.17
Net Gap/(Surplus)	(2.08)	1.91



True-up for FY 2021-22 & Annual Performance Review for FY 2022-23

- 5.118 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.
- 5.119 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 2022-23

- 6.1 The Commission vide MYT Order dated November 04, 2022 had approved the Business Plan and determined the Annual Revenue Requirement for the MYT Control Period from FY 2021-22 to FY 2025-26 including True-up for FY 2019-20.
- 6.2 Later, on January 07, 2019, the Petitioner had filed a True-up Petition & APR based on the actual value for FY 2020-21 & FY 2021-22. Accordingly, the Commission had pass order on True-up FY 2020-21 and APR for FY 2021-22 vide order dated May 22, 2023.
- 6.3 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.
- 6.4 In the instant Petition, the Petitioner has now sought for the Annual Performance Review (APR) for FY 2022-23 based on the actual operational performance till Oct' 2022 and projected for the remaining months of FY 2022-23.
- 6.5 The Commission has carried out the Annual Performance Review for FY 2022-23 taking into consideration the following:
- a) JSERC Generation Tariff Regulations, 2020;
 - b) JSERC Generation Tariff (1st Amendment), Regulation, 2023;
 - b) Methodology adopted by the Commission in its earlier Tariff Orders.
- 6.6 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

- 6.7 The Petitioner has projected the Plant Availability Factor as 93.68% and 93.64% for Unit-II and Unit-III respectively based on actual availability



achieved till October 2022 and estimated for remaining months of FY 2022-23.

Commission’s Analysis

6.8 In accordance with clause 16.1 JSERC Generation Tariff (1st Amendment), Regulation 2023, the Commission approves the Normative Plant Availability factor as 85.00%.

6.9 On scrutinizing and analyzing the actual till October FY 2022 and estimate for remaining month of FY 2022-23 and on prudent check, the Commission approves the estimated plant availability for FY 2022-23 as 93.68% and 93.68% for Unit-II and Unit-III respectively as given below:

Table 59: 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	%	-	93.68	93.68
Unit-III				
NAPAF	%	85.00	85.00	85.00
Estimated Plant Availability	%	-	93.64	93.64

Auxiliary Consumption

Petitioner’s Submission

6.10 The Petitioner has estimated the Auxiliary Consumption as 8.76% and 8.87% for Unit-II and Unit-III respectively based on actuals till October 2022 and projected as normative value of 9.00% for remaining months of FY 2022-23.

Commission’s Analysis

6.11 In accordance with clause 16.1 JSERC Generation Tariff (1st Amendment), Regulation 2023, the Commission approves the auxiliary consumption of 10.00%.

6.12 On scrutinizing and analyzing the actual till October FY 2022 and estimate for remaining month of FY 2022-23 and on prudent check, the Commission approves the estimated auxiliary consumption for FY 2022-23 as 8.76% and 8.87% for Unit-II and Unit-III respectively as given



below:

Table 60: Auxiliary Consumptions as approved by the Commission

Particulars	UoM	MYT	Petition	Approved
UNIT-II				
Normative Auxiliary Consumption	%	9.00	9.00	10.00
Estimated Auxiliary Consumption	%	-	8.76	8.76
UNIT-III				
Normative Auxiliary Consumption	%	9.00	9.00	10.00
Estimated Auxiliary Consumption	%	-	8.87	8.87

Plant Load Factor and Generation

Petitioner's Submission

- 6.13 The Petitioner has submitted the estimated Plant Load Factor (PLF) for Unit-II as 85.03% and 88.03% for Unit-III which is higher than the normative PLF of 85.00% for both Unit-II and Unit-III respectively as approved by the Commission in MYT Order dated November 04, 2022.
- 6.14 The Petitioner has further submitted that the estimated gross generation for both the Units is higher than that approved in MYT Order dated November 04, 2022 as based on demand projected by the Beneficiary.

Commission's Analysis

- 6.15 On scrutinizing and analyzing the actual till October FY 2022 and estimate for remaining month of FY 2022-23 and on prudent check, the Commission approves the Gross Generation, Net Generation, and Plant Load Factor for FY 2022-23 for Unit-II and Unit-III respectively as given below:

Table 61: Plant Load Factor and Generation as approved by the Commission

Particulars	UoM	MYT	Petition	Approved
UNIT-II				
Gross Generation	MU	893.52	893.80	893.80
Net Generation	MU	813.10	815.47	815.47
Estimated PLF	%	-	85.03	85.03
UNIT-III				
Gross Generation	MU	893.52	925.33	925.33
Net Generation	MU	813.10	843.26	843.26
Estimated PLF	%	-	88.03	88.03



Gross Station Heat Rate (GHR)

Petitioner’s Submission

6.16 The Petitioner has submitted the estimated Gross Station Heat Rate (GHR) as 2541.32 kCal/kWh for Unit-II and 2540.62 kCal/kWh for Unit-III against the normative approved value of 2550.00 kCal/kWh for both Unit respectively.

Commission’s Analysis

6.17 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.

6.18 On scrutinizing and analyzing the actual till October FY 2022 and estimate for remaining month of FY 2022-23 and on prudent check, the Commission approves the estimated station Heat Rate for FY 2022-23 for Unit-II and Unit-III respectively as given below:

Table 62: Gross Station Heat Rate (GHR) as approved by the Commission.

Particulars	UoM	MYT	Petition	Approved
UNIT-II				
Normative Station Heat Rate	kCal/kWh	2550.00	2550.00	2567.00
Estimated Station Heat Rate	kCal/kWh		2541.32	2541.32
UNIT-III				
Normative Station Heat Rate	kCal/kWh	2550.00	2550.00	2577.00
Estimated Station Heat Rate	kCal/kWh		2540.62	2540.62

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 claim 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 specific fuel oil consumption as 0.50 ml/kWh for both the Units.



Table 63: Specific Fuel Oil Consumption as approved by the Commission

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 2022-23, actual coal consumption upto month of October 2022 has been taken. Further, Coal Consumption for the balance months has been worked out considering the projected generation, normative operational performance level, fuel mix till October 2022 and capping the monthly SHAKTI coal consumption to 90% of the Allocations of ACQ (i.e ACQ*90%) as also approved in the MYT Order. The balance coal requirement has been estimated to be met preferably from E-Auction Route and in case of exigencies/constraint it will be sourced from available sources. Above assumptions have been taken considering the past trends/irregular supply from subsidiaries of Coal India Limited.
- 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 2022-23 are depicted below:
- Increase in Demand of Distribution Licensee compared to initial estimation, thus, requiring more coal than initially projected for meeting the increased demand.
 - Restriction in FSA coal supply/ Supply of CCL allocations under RCR mode due to nationwide coal scarcity.
 - Almost no supply of middling coal from West Bokaro Collieries in view of non-availability of surplus coal beyond their own captive consumption.
- 6.23 The Petitioner has further submitted that, in Quarter 4 of FY 22, there was a nationwide scarcity of coal mainly due to water logging in mines because of heavy rains in various parts of the country, logistic congestion



coupled with ongoing impact of COVID. Because of above, subsidiaries of Coal India Limited, viz., CCL, MCL, ECL were not able to maintain steady supply of coal under FSA resulting into critical stocks of coal at Jojobera Power Plant.

- 6.24 Further, the Petitioner has submitted that, to manage the crisis it has sourced 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.
- 6.25 That the Petitioner has submitted that, in order to meet the excess demand of TSL and to bridge the gap of non-availability of middling coal in the remaining months i.e. November 22 to March-23, the Petitioner in addition to the linkage sources has further projected to source the balance coal requirement 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. As an alternative, other coals from TSL West Bokaro Mines can also be sourced depending upon its availability to meet the coal requirement in balance months of FY 23.
- 6.26 That, the Petitioner submitted that 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.
- 6.27 That the Petitioner has submitted the summary of total coal received at Jojobera Power Plant station as against the Planned/Agreed Quantum and shortages in FY 2022-23. The Petitioner further detailed the source wise actual coal consumption in Unit-II and Unit-III for FY 2022-23.
- 6.28 That the Petitioner in its quarterly reports dated 29.06.2022 and 30.09.2022 has already apprised the Hon'ble Commission on such minor deviations and overall impact on ECR.
- 6.29 That the Petitioner has submitted the revised fuel mix, detail of weighted average GCV and Landed Price of all types of coal received in FY 2022-23.



Commission's Analysis

- 6.30 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 different reasons.
- 6.31 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 2022-23. The Petitioner is directed to bring to the notice of the Commission any such changes and shortage in supply of coal on quarterly basis and should ensure the cost effectiveness of such purchase.
- 6.32 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 64: Coal Mix and GCV for Unit-II as approved by the Commission

Particulars	Fuel Mix (%)			GCV (kCal/kg)		
	MYT	Petition	Approved	MYT	Petition	Approved
Middling Coal	54.30%	5.54%	5.54%	3860.75	4140.12	4140.12
CCL [Shakti 3] Coal		9.44%	9.44%	3837.53	3717.68	3717.68
CCL [Shakti 2] WIV Coal		28.87%	28.87%	0.00	3944.59	3944.59
ECL [Shakti 2] Coal	8.42%	6.21%	6.21%	5109.27	5041.66	5041.66
CCL [Shakti 2] Coal	19.00%	10.80%	10.80%	3837.53	3634.42	3634.42
MCL [Shakti 2] Coal	18.29%	11.89%	11.89%	3129.71	3137.84	3137.84
CCL SFA		19.28%	19.28%	0.00	2940.27	2940.27
E Auction		7.97%	7.97%	0.00	4140.12	4140.12

Table 65: Coal Mix and GCV for Unit-III as approved by the Commission

Particulars	Fuel Mix (%)			GCV (kCal/kg)		
	MYT	Petition	Approved	MYT	Petition	Approved
Middling Coal	21.80%	6.56%	6.56%	3859.81	4145.34	4145.34
CCL [Shakti 3]	43.34%	9.71%	9.71%	3856.28	3776.13	3776.13



Particulars	Fuel Mix (%)			GCV (kCal/kg)		
	MYT	Petition	Approved	MYT	Petition	Approved
Coal						
CCL [Shakti 2] WIV Coal	0.00%	28.06%	28.06%	0.00	3954.52	3954.52
ECL [Shakti 2] Coal	6.42%	6.07%	6.07%	5000.57	4970.10	4970.10
CCL [Shakti 2] Coal	14.49%	13.90%	13.90%	3856.28	3683.29	3683.29
MCL [Shakti 2] Coal	13.95%	14.14%	14.14%	3107.23	3195.33	3195.33
CCL SFA		14.67%	14.67%		2985.29	2985.29
E Auction		6.88%	6.88%		4145.34	4145.34

Transit Loss

Petitioner's Submission

6.33 The Petitioner has projected the transit loss on normative basis for each source of coal for FY 2022-23 in accordance with Clause 17.11 of the Generation Tariff Regulations 2020.

Commission's Analysis

6.34 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 stipulated the weighted average normative transit loss of 0.8% for all categories of coal in accordance with clause 17.11 of JSERC Generation Tariff Regulations, 2020 as given below.

Table 66: Transit Loss as approved by the Commission

Particulars	MYT	Petition	Approved
Middling Coal	0.80%	0.80%	0.80%
CCL [Shakti 3] Coal			
CCL [Shakti 2] WIV Coal			
ECL [Shakti 2] Coal			
CCL [Shakti 2] Coal			
MCL [Shakti 2] Coal			
CCL SFA			
E Auction			



Landed Cost of Coal

Petitioner's Submission

6.35 The Petitioner has submitted the source-wise actual landed price of coal from each source. However, normative transit loss has been considered for other categories of coal as per JSERC Generation Tariff Regulations, 2020.

Commission's Analysis

6.36 The Commission has considered following figures for the approval of the weighted average landed cost of coal: -

- Actual figures up to October 2022 and projected for remaining months of the 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.

6.37 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 2021-22 as tabulated hereunder.

Table 67: Landed Price of Primary Fuel for Unit-II as approved by the Commission

Particulars	Rs./Ton		
	MYT	Petition	Approved
Middling Coal	4222.58	5316.81	5316.81
CCL [Shakti 3] Coal	3653.69	3627.93	3627.93
CCL [Shakti 2] WIV Coal	0.00	4390.91	4390.91
ECL [Shakti 2] Coal	5328.00	5545.15	5545.15
CCL [Shakti 2] Coal	3653.69	3340.35	3340.35
MCL [Shakti 2] Coal	2506.65	2653.23	2653.23
CCL SFA	0.00	3411.29	3411.29
E Auction	0.00	5316.81	5316.81
Wtg. Avg. Landed Price of Primary Fuel	3725.22	4006.76	4006.76



Table 68: Landed Price of Primary Fuel for Unit- III as approved by the Commission

Particulars	Rs./Ton		
	MYT	Petition	Approved
Middling Coal	4222.98	5407.84	5407.84
CCL [Shakti 3] Coal	3820.04	3649.19	3649.19
CCL [Shakti 2] WIV Coal	-	4401.88	4401.88
ECL [Shakti 2] Coal	5347.64	5464.17	5464.17
CCL [Shakti 2] Coal	3820.04	3294.44	3294.44
MCL [Shakti 2] Coal	2518.83	2652.30	2652.30
CCL SFA	-	3388.01	3388.01
E Auction	-	5407.84	5407.84
Wtg. Avg. Landed Price of Primary Fuel	3824.40	3978.40	3978.40

Calorific value and Cost of Secondary Fuel

Petitioner's Submission

6.38 The Petitioner has submitted the weighted average calorific value and landed price of secondary fuel i.e., LDO is 10331.04 kCal/L and Rs. 67946.50 /kL for Unit-II and 10326.70 kCal/L and Rs. 67399.32 /kL for Unit-III respectively.

Commission's Analysis

- 6.39 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 previous years. 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.
- 6.40 Considering the fact that the landed price of secondary fuel is volatile and depend on the market supply and demand. Hence, 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 69: Calorific value & Landed Price of Secondary fuel as approved by the Commission

Particulars	Calorific Value (kcal/L)			Landed Price (Rs./kL)		
	MYT	Petition	Approved	MYT	Petition	Approved
UNIT-II	9100.00	10331.04	10331.04	45198.00	67946.50	67946.50
UNIT-III	9100.00	10326.70	10326.70	45196.00	67399.32	67399.32

Energy Charge Rate (ECR)

Petitioner's Submission

- 6.41 The Petitioner has estimated the Energy Charge Rate (ECR) for FY 2022-23 as Rs. 3.14/kWh and Rs. 3.08/kWh for Unit-II and Unit-III respectively before taking into account the discount of Shakti Coal.
- 6.42 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 auction 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.
- 6.43 It is submitted by the Petitioner to consider the storage and handling loss of 85.00 kCal/kg allowed in CERC Tariff Regulations 2019 in the GCV of primary fuel as Received GCV for computation of ECR under its Power to Relax as the same is genuine loss that is recognized by most SERCs and CERC. This shall also be consistent with the requirement of section 61(a) of the Electricity Act, 2003, which stipulates that SERCs shall be guided by the principles and methodologies specified by CERC for generation.
- 6.44 Hence for the Computation of ECR, the Petitioner has considered a margin of 85.00 kCal/kg in GCV for both Unit-II & Unit-III and considered GCV as 3609.71 kCal/kg for Unit-II and 3652.18 kCal/kg for Unit-III respectively.
- 6.45 Further, the Petitioner has considered normative Gross Station Heat Rate of 2550.00 kCal/kWh for each Unit, Normative Auxiliary Consumption of 9.00% and Normative secondary fuel oil of 0.5 ml/kWh for both the Unit-II & Unit-III in accordance with the Generation Tariff Regulation 2020 for FY 2022-23 for computing the Energy Charge rate.



Commission's Analysis

- 6.46 In para 5.36, the Commission has outlined clause 17.7, clause 17.8 of JSERC Generation Tariff Regulation, 2020 for approval of the Energy Charge Rate (ECR).
- 6.47 The Commission approves the ECR based on actual coal mix (for first six months and estimated for next six months of FY 2022-23 for), normative transit loss, normative Secondary Fuel Oil consumption, normative SHR, normative Auxiliary as approved earlier in this order.

Table 70: Energy Charge Rate (ECR) for Unit-II as approved by the Commission.

Particulars	UoM	MYT	Petition	Approved
Net Generation	MU	813.10	815.47	815.47
Normative Auxiliary Consumption (AUX)	%	9.00%	9.00%	10.00%
Normative Gross Station Heat Rate (SHR)	kCal/kWh	2,550.00	2550.00	2,567.00
Specific fuel Oil Consumption (SFC)	mL/kWh	0.50	0.50	0.50
Calorific Value of Oil (CVSF)	kCal/ml	9.10	10.33	10.33
GCV of Primary Fuel (CVPF)	kCal/kg	3,825.49	3,609.71	3,609.71
Landed Price of Primary Fuel (LPPF)	Rs./kg	3.73	4.01	4.01
Landed Price of Secondary Fuel (LPSFi)	Rs./ml	0.05	0.07	0.07
Energy Charge Rate (ECR)	Rs/kWh	2.75	3.14	3.20

Table 71: Energy Charge Rate (ECR) for Unit-III as approved by the Commission.

Particulars	UoM	MYT	Petition	Approved
Net Generation	MU	813.10	843.26	843.26
Normative Auxiliary Consumption (AUX)	%	9.00%	9.00%	10.00%
Normative Gross Station Heat Rate (SHR)	kCal/kWh	2,550.00	2550.00	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	10.33	10.33
GCV of Primary Fuel (CVPF)	kCal/kg	3,826.01	3,652.18	3,652.26
Landed Price of Primary Fuel (LPPF)	Rs./kg	3.82	3.98	3.98
Landed Price of Secondary Fuel (LPSFi)	Rs./ml	0.05	0.07	0.07
Energy Charge Rate (ECR)	Rs/kWh	2.82	3.08	3.15

- 6.48 The Petitioner has further submitted 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. 1.20 Crore and Rs. 1.39 Crore in Unit-II and Unit-III respectively for FY 2022-23.

6.49 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 72: ECR for FY 2022-23 as approved by the Commission after considering the impact of Discounting on SHAKTI Scheme Coal.

Particulars	UoM	Unit-II		Unit-III	
		Petition	Approved	Petition	Approved
Fuel Charge Before Discount	Rs. Cr.	256.18	260.73	260.01	265.64
Sales due to ECL (Shakti 2) Coal	MU	68.85	68.39	67.79	66.91
Sales due to CCL (Shakti 2) Coal	MU	86.29	85.71	114.97	113.48
Sales due to CCL (Shakti 2) WIV Coal	MU	250.25	248.59	248.82	245.95
Sales due to MCL (Shakti 2) Coal	MU	81.95	81.41	101.48	100.16
Discount Amount (@ Rs. 0.04/kWh)	Rs. Cr.	1.20	1.19	1.39	1.37
Sales due to CCL Coal (Shakti 3)	MU	77.12	76.60	82.30	81.23
Discount Amount (@ Rs. 0.07/kWh)	Rs. Cr.	1.85	1.84	1.88	1.86
Total Shakti Discount	Rs. Cr.	3.05	3.03	3.27	3.23

Summary of Fuel Cost

6.50 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 73: Fuel Cost for Unit-II as approved by the Commission

Particulars	UoM	MYT	Petition	Approved
Primary Fuel Cost	Rs. Cr.	221.48		257.65
Secondary Fuel Cost	Rs. Cr.	2.02		3.08
Energy Cost	Rs. Cr.	223.50	256.18	260.73

Table 74: Fuel Cost for Unit-III as approved by the Commission

Particulars	UoM	MYT	Petition	Approved
Primary Fuel Cost	Rs. Cr.	227.35	256.88	262.49
Secondary Fuel Cost	Rs. Cr.	2.02	3.12	3.16
Energy Cost	Rs. Cr.	229.36	260.01	265.64



Determination of Fixed Cost

Additional Capitalization

Petitioner's Submission

6.51 The Petitioner has submitted the actual capitalization for Unit-II and Unit-III for FY 2022-23 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.

6.52 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. The methodology of such apportionment is given below.

Table 75: 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

6.53 Further, the Petitioner has filed an Additional Affidavit dated 10.08.2022 for revision of the Capitalization and Decapitalization Plan for FY 2021-



2022 to 2025-2026 since closings for these years form the openings for subsequent years, and also for MYT period of FY 2021-22 to 2025-26 with an intent that such revision would give true and fair estimate Annual Fixed Charges (AFC) for the Control Period.

- 6.54 Further, the Petitioner has submitted that the Hon'ble Commission could not consider the same while disposing of the MYT Petition but granted liberty to file revised Capex estimate and decapitalization in next tariff filing; The relevant extract of the MYT Order is extracted below for ready reference of the Hon'ble Commission:

“7.68 with regards to Petitioner submission of revised additional capital expenditure/ capitalization and de-capitalisation for the Control Period from FY 2021-22 to FY 2025-26 before the Commission for approval vide letter dated 54 August 10, 2022. It is observed that the revised additional capital expenditure/capitalisation and de-capitalisation was submitted to the Commission after public notice was published and just before the public hearing. Hence, this additional information was not published for the public consultation and public at large could not respond to the revised numbers which shall have an incremental impact on ARR. Therefore, the Commission in this order has not considered the revised Capex estimate and de-cap schedule of the Petitioner submitted for the Control Period. However, Petitioner is at liberty to file revised Capex estimate and de-cap. in next tariff filing petition.”

- 6.55 Further, the Petitioner has submitted that new scheme like CHP PLC Upgradation will improve the reliability of the DCS system which in turn would ensure better availability of the Units.
- 6.56 The table summarizes the additional capitalization for Unit-II and Unit-III as projected by the Petitioner for FY 2022-23.

Table 76: Asset wise Capitalization (Rs. Crore) as submitted by the Petitioner.

Particulars	MYT	Petition
Unit II Standalone		
Turbine and Generator Bearing sets (Carry Forward)	-	0.43
Control Room AC System	0.86	0.86
Ash Conveying pipe line	0.90	0.25



Particulars	MYT	Petition
BFP Destaging	-	0.26
Turbine Parting Plane Bolts & Coupling Bolts	4.34	-
Unit III Standalone		
Control Room AC System	0.86	0.86
Ash Conveying pipe line	0.90	0.25
BFP Destaging	-	0.26
Unit II & Unit III Common		
Replacement of Dead Tank CT with Live Tank CT (Carry forward)	0.18	0.18
CHP PLC Upgradation	-	0.66
Multi-Layered Security System for Jojobera Power Plant.	0.55	0.40
Workshop machine Tools, Condition Monitoring tools & Mobile Environmental Dust Extractor	0.55	0.30
Net- Capitalization	9.14	4.72

Table 77: Capitalization and Decapitalization (Rs. Crore) as submitted by the Petitioner.

Particulars	Unit-II		Unit-III	
	MYT	Petition	MYT	Petition
Capitalization	6.74	2.57	2.40	2.15
Decapitalization	1.94	0.44	0.58	0.44

Commission's Analysis

- 6.57 In para 5.44, 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.
- 6.58 The Commission has observed that the Petitioner has claimed capital spare namely "Turbine and Generator Bearing Sets" under Capital Expenditure. Accordingly, the Commission disapprove "Turbine and Generator Bearing Sets" under Capital Expenditure and will consider the approval separately in this order in accordance with the clause 9.1 of JSERC Generation Tariff Regulation (1st Amendment) 2023.
- 6.59 The Commission has observed that the Petitioner has submitted the revised Capitalization phasing for Unit-II & Unit-III for entire control period.
- 6.60 In regard to revision in capitalization phasing for FY 2022-23, the Commission has scrutinized the detail and reasoning for cost overrun



submitted by the Petitioner and on prudent check the Commission approves CHP PLC Upgradation and other capitalization phasing for FY 2022-23.

6.61 The Commission has directed 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.

6.62 The table below summaries the asset wise capitalization as submitted by Petitioner vis-à-vis approved by the Commission for FY 2022-23 is given below.

Table 78: Asset wise Capitalization as approved by the Commission (Rs. Crore)

Particulars	MYT	Petition	Approved
Unit II Standalone			
Turbine and Generator Bearing sets (Carry Forward)	-	0.43	-
Control Room AC System	0.86	0.86	0.86
Ash Conveying pipe line	0.90	0.25	0.25
BFP Destaging	-	0.26	0.26
Turbine Parting Plane Bolts & Coupling Bolts	4.34	0.0	0.0
Unit III Standalone			
Control Room AC System	0.86	0.86	0.86
Ash Conveying pipe line	0.90	0.25	0.25
BFP Destaging	-	0.26	0.26
Unit II & Unit III Common			
Replacement of Dead Tank CT with Live Tank CT (Carry forward)	0.18	0.18	0.18
CHP PLC Upgradation	-	0.66	0.66
Multi-Layered Security System for Jojobera Power Plant.	0.55	0.40	0.40
Workshop machine Tools, Condition Monitoring tools & Mobile Environmental Dust Extractor	0.55	0.30	0.30
Net- Capitalization	9.14	4.72	4.29

6.63 On scrutinizing and analyzing the data, information, material on record and on prudent check, the Commission approves the de-capitalization



phasing for FY 2022-23 and direct the Petitioner to bring the actual de-capitalization each year of the control period.

Table 79: Capitalization as approved by the Commission (Rs. Crore)

Particulars	Unit-II			Unit-III		
	MYT	Petition	Approved	MYT	Petition	Approved
Capitalization	6.74	2.57	2.15	2.40	2.15	2.15
Decapitalization	1.94	0.44	0.44	0.58	0.44	0.44

Table 80: Gross Fixed Assets (Rs. Crore) for Unit II as approved by the Commission

Particular	MYT	Petition	Approved
Opening GFA	499.96	491.25	490.89
Additional Capitalisation	6.74	2.57	2.15
Decapitalisation	1.94	0.44	0.44
Closing GFA	504.76	493.39	492.60

Table 81: Gross Fixed Assets (Rs. Cr) for Unit III as approved by the Commission.

Particulars	MYT	Petition	Approved
Opening GFA	488.65	475.72	474.98
Additional Capitalisation	2.40	2.15	2.15
Decapitalisation	0.58	0.44	0.44
Closing GFA	490.47	477.43	476.69

Depreciation

Petitioner's Submission

6.64 The Petitioner has submitted the depreciation for FY 2022-23 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 projected for FY 2021-22 to FY 2025-26;
- Additional Capitalization projected for FY 2022-23;

6.65 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.

- 6.66 The Petitioner submitted that the cumulative depreciation on total assets [i.e. GFA (Including Additional Capitalization)] up to FY 2021-22 has crossed 70% for both the Units 2 and 3, the Petitioner as per Regulation 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 2020-21) over the balance useful life (taking useful life of 25 years specified in Regulations) of the Plant

Table 82: Depreciation (Rs. Crore) as submitted by the Petitioner

Particulars	Unit-II		Unit-III	
	MYT	Petition	MYT	Petition
Depreciation	8.09	13.18	8.85	13.42

Commission’s Analysis

- 6.67 In para 5.53, the Commission has outlined clause 15.28 to clause 15.34 of JSERC Generation Tariff Regulation, 2020 for approval Depreciation for a generating station.
- 6.68 The Commission has observed that the Petitioner has adopted different methodology for calculation of depreciation vis-à-vis the method approved by the Commission.
- 6.69 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 GTR 2020, the Commission is of the view to spread equally the remaining depreciable amount.
- 6.70 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 infer 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.

- 6.71 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 83: Depreciation (Rs. Crore) as approved by the Commission.

Particulars	Unit-II			Unit-III		
	MYT	Petition	Approved	MYT	Petition	Approved
Depreciation	8.09	13.18	7.03	8.85	13.42	7.67

Operation & Maintenance Expenses

Petitioner's Submission

- 6.72 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;
- HO Expenses;
- Legal Expenses:

- 6.73 Regarding Employee Expenses, it has submitted in the MYT Petition, no increase in number of employee 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 and 8 has been added in 2022-23 for Units 1-4 of the Jojobera Power Plant. Accordingly, Growth Factor (Gn), specified in GTR 2020 has been considered.

- 6.74 The Petitioner has claimed the R&M expenses, other Admin & General



Expenses, Head Office Expenses & legal Expenses as per normative approved in the MYT Order dated November 04, 2022 for the purpose of APR for FY 2022-23.

- 6.75 The Petitioner has claimed Raw water expenses, Ash Disposal Expenses, Terminal Liabilities and Application fee and Publication Expenses on actual basis for the purpose of APR for FY 2022-23.
- 6.76 Further, the Petitioner for the purpose of APR FY 2022-23, estimated raw water expense based on actual consumption till October'22 and thereafter considering the weighted average consumption so far for remaining months.
- 6.77 The Petitioner has projected Raw Water Expenses for FY 2022-23 considering projected Generation, estimated Raw Water charges of Rs 27.04/m³ and water tax rate of Rs. 12.87/m³ as charged by Supplier to its industrial consumers including the Petitioner.
- 6.78 In regard to capital spare, the Petitioner submitted that since provision of the Capital Spares is done away with in the Generation Tariff Regulations, 2020 the Petitioner for the purpose of recovery of balance amount of Rs. 78.97 Lakh for each Unit 2 and 3 under approved capital spares namely Turbine and Generator Bearing Sets, has considered the same under Capital Expenditure considering the expenses to be capital in nature. Accordingly, it is requested before the Hon'ble Commission to kindly consider the same or alternatively approves the same under O&M Expenses as Capital Spares as a time exception, in view of earlier approval.

Table 84: O&M Expenses (Rs. Crore) as submitted by the Petitioner

Particulars	UoM	UNIT-II		UNIT-III	
		MYT	Petition	MYT	Petition
Employee Expenses	Rs. Cr.	8.70	9.38	8.70	9.38
Terminal Liabilities	Rs. Cr.	0.92	0.92	0.92	0.92
R&M Expenses	Rs. Cr.	17.09	17.09	15.94	15.94
Ash Disposal Expenses	Rs. Cr.	4.56	4.56	4.43	4.43
Raw Water	Rs. Cr.	5.38	4.21	5.35	4.15
HO Expenses	Rs. Cr.	13.16	13.16	13.12	13.12
Application & Publication Fee	Rs. Cr.	0.13	0.13	0.13	0.13



Particulars	UoM	UNIT-II		UNIT-III	
		MYT	Petition	MYT	Petition
Other A&G Expenses	Rs. Cr.	6.58	6.58	6.17	6.17
Legal Expenses	Rs. Cr.	0.01	0.01	0.01	0.01
O&M Expenses	Rs. Cr.	56.53	56.04	54.77	54.25

Commission's Analysis

- 6.79 In para 5.62, the Commission outlines clause 15.35 and clause 15.40 of JSERC Generation Tariff Regulation, 2020 for approval Operation & Maintenance Charges for a generating station.
- 6.80 The Commission on consideration of the submission and on scrutinizing the material submitted by the Petitioner approves Terminal Liabilities, Ash Disposal Expenses, Legal expenses and Petition Application Fee & Publication Expenses as approved in MYT Order dated November 04, 2022, subject to true-up based on actual as per audited account.
- 6.81 The Commission has approved the Employee Cost, R&M Expenses, HO & SS Expenses and other A&G Expenses as per normative value approved in MYT Order dated November 04, 2022.
- 6.82 The O&M expense projected by the Petitioner vis-à-vis as approved by the Commission for FY 2020-21 as given below.

Table 85: O&M Expenses (Normative Component) as approved by the Commission (Rs. Cr.)

Particulars	Unit-II			Unit-III		
	MYT	Petition	Approved	MYT	Petition	Approved
Employee Cost	8.70	9.38	8.70	8.70	9.38	8.70
R&M Expenses	17.09	17.09	19.44*	15.94	15.94	18.13*
HO & SS Expenses	13.16	13.16	13.16	13.12	13.12	13.12
Other A&G Expenses	6.58	6.58	6.58	6.17	6.17	6.17
Legal Expenses	0.01	0.01	0.01	0.01	0.01	0.01

Table 86: O&M Expenses (Variable Component) as approved by the Commission (Rs. Cr)

Particulars	Unit-II			Unit-III		
	MYT	Petition	Approved	MYT	Petition	Approved
Terminal Liabilities	0.92	0.92	0.92	0.92	0.92	0.92



Particulars	Unit-II			Unit-III		
	MYT	Petition	Approved	MYT	Petition	Approved
Ash Disposal Expenses	4.56	4.56	4.56	4.43	4.43	4.43
Application & Publication Expenses	0.13	0.13	0.13	0.13	0.13	0.13

Table 87: O&M Expenses as approved by the Commission (Rs. Crore)

Particulars	Unit-II			Unit-III		
	MYT	Petition	Approved	MYT	Petition	Approved
Employee Cost	8.70	9.38	8.70	8.70	9.38	8.70
Terminal Liabilities	0.92	0.92	0.92	0.92	0.92	0.92
R&M Expenses	17.09	17.09	19.44*	15.94	15.94	18.13*
Ash Disposal Expenses	4.56	4.56	4.56	4.43	4.43	4.43
Raw Water Expenses	5.38	4.21	-	5.35	4.15	-
HO & SS Expenses	13.16	13.16	13.16	13.12	13.12	13.12
Application & Publication Expenses	0.13	0.13	0.13	0.13	0.13	0.13
Other A&G Expenses	6.58	6.58	6.58	6.17	6.17	6.17
Legal Expenses	0.01	0.01	0.01	0.01	0.01	0.01
O&M Expenses	56.53	56.04	53.50	54.77	54.25	51.61

* Considered as per review order case no 18 of 2022

Water Charges, Capital Spare

Petitioner Submission

- 6.83 The Petitioner, in previous petition has submitted that the Government of Jharkhand had increased the water charges vide notification dated April 01, 2011 issued by the Water Resources Department, Government of Jharkhand. Tata Steel Limited (TSL) challenged the exorbitant increase in water charges by preferring a writ petition being WPC No. 4544 of 2011 before the Hon'ble High Court of Jharkhand. Hon'ble High Court had passed the Interim Order in favour of TSL directing them to pay only Rs. 1.00 Crore per month towards water charges till the pending writ petition is decided. However, the Interim Order does not specify, what part of Rs. 1.00 Crore is associated to the Petitioner's Unit-II & unit-III of Jojobera plant.
- 6.84 The Commission had gone through the submissions of the Petitioner and observed that the matter related to Water Tax is sub-judice before the Hon'ble Jharkhand High Court. Thus, the Commission is approving total Water Charge payable to TSL for its service and accepted the same methodology as adopted in its MTR Order dated February 14, 2020 &



Order dated November 4, 2022 for approving the Water Tax. The net Raw Water Expense approved in this Order is subject to final outcome of above-mentioned Petition before the Hon'ble Jharkhand High Court.

- 6.85 With regard to capital spare, the Petitioner has submitted that since provision of the Capital Spares is done away with in the principal Generation Tariff Regulations, 2020, the Petitioner for the purpose of recovery of balance amount of Rs. 78.97 Lakh for each Unit-II and Unit-III under approved capital spares namely 'Turbine and Generator Bearing Sets' has considered the same under Capital Expenditure considering the expenses to be capital in nature. Accordingly, it is requested before the Hon'ble Commission to kindly consider the same or alternatively approves the same under O&M Expenses as Capital Spares as a time exception and in view of earlier approval.

Commission Analysis

- 6.86 The Commission has outlined clause 9.1 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”.

- 6.87 The Commission has gone through the submissions of the Petitioner and observed that the matter related to Water Tax is sub-judice before the Hon'ble Jharkhand High Court. Thus, the Commission is approving total Water Charge payable to TSL for its service and accepted the same methodology as adopted in its previous order. The net Raw Water Expense approved in this Order is subject to final outcome of above-mentioned Petition before the Hon'ble Jharkhand High Court.
- 6.88 The Commission has observed that the capital spare expense was approved for 2nd control period, but due to various reason the same capital spare was not utilized during 2nd control period. Accordingly, the Commission approves the carry forward capital expenses in accordance with the Generation Tariff Regulation (1st Amendment), 2023.
- 6.89 The table below summarizes the water charges and capital spare as claimed by the Petitioner and as approved by the Commission for FY



2022-23.

Table 88: Water charges and capital expenses (Rs. Crore) as approved by the Commission.

Particulars	Unit-II			Unit-III		
	MYT	Petition	Approved	MYT	Petition	Approved
Raw Water Expenses	5.38	4.21	4.21	5.35	4.15	4.35
Capital Spare	-	0.43	0.43	-	-	-

Interest on Loan

Petitioner's Submission

- 6.90 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.
- 6.91 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 2021-22. 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 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.
- 6.93 Further, the Petitioner has submitted that the closing loan for FY 2021-22 has been considered as the Opening loan for 2022-23. 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 9.00% for Unit-II and Unit-III in accordance with Regulations 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 2022-23 is given below.



Table 89: Interest on Loan as submitted by the Petitioner (Rs. Crore)

Particulars	UoM	Unit-II		Unit-III	
		MYT	Petition	MYT	Petition
Opening Loan	Rs. Cr.	27.82	17.89	24.92	18.56
Deemed Loan Addition	Rs. Cr.	4.72	1.80	1.68	1.50
Deemed Loan Repayment	Rs. Cr.	8.09	9.18	8.85	7.64
Closing Loan	Rs. Cr.	24.45	10.51	17.75	12.41
Average loan Balance	Rs. Cr.	26.13	14.20	21.34	15.49
Interest Rate	%	9.00%	9.00%	9.00%	9.00%
Interest on Loan	Rs. Cr.	2.35	1.28	1.92	1.39

Commission's Analysis

- 6.95 In para 5.78, 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.
- 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 2021-22 is considered equal to closing normative loan amount of FY 2022-23 as approved in the previous True-up Order for FY 2021-22.
- 6.97 In accordance with clause 15.15 the Commission approves the deemed loan repayment equal to approved depreciation (Additional Capitalization) for FY 2022-23.
- 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 9.00% (SBI MCLR as on 01.04.2021 plus 200 bp) for both the Unit and Unit as shown below.

Table 90: Interest on Loan as approved by the Commission (Rs. Crore)

Particulars	Unit-II			Unit-III		
	MYT	Petition	Approved	MYT	Petition	Approved
Opening Loan	27.82	17.89	27.14	24.92	18.56	27.00
Deemed Loan Addition	4.72	1.80	1.50	1.68	1.50	1.50
Deemed Loan	8.09	9.18	4.85	8.85	7.64	4.31



Particulars	Unit-II			Unit-III		
	MYT	Petition	Approved	MYT	Petition	Approved
Repayment						
Closing Loan	24.45	10.51	23.79	17.75	12.41	24.19
Average Loan	26.13	14.20	25.47	21.34	15.49	25.59
Interest Rate	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
Interest on Loan	2.35	1.28	2.29	1.92	1.39	2.30

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 the JSERC Generation Tariff Regulations, 2020, as tabulated hereunder.

Table 91: IOWC (Rs. Crore) as submitted by the Petitioner.

Particulars	Unit-II		Unit-III	
	MYT	Petition	MYT	Petition
Cost towards Coal for Generation 50 days	30.34	34.58	31.14	33.93
Cost of Oil for Generation (2 months)	0.34	0.51	0.34	0.50
Maintenance Spares (20% O&M)	11.31	11.21	10.95	10.85
O&M Expenses (1 month)	4.71	4.67	4.56	4.52
Receivables (45 days)	40.42	44.83	40.88	43.93
Total Working Capital	87.11	95.79	87.88	93.74
Interest Rate	10.50%	10.50%	10.50%	10.50%
Interest on Working Capital	9.15	10.06	9.23	9.84

Commission's Analysis

5.120 In para 5.83, 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.

6.100 Taking into account the above regulation, the Interest on Working capital has been calculated at an interest rate of 10.50% (Bank Rate plus 350 basis points) as specified in the clause 15.26 JSERC Generation Tariff Regulation, 2020 is given below.

Table 92: IOWC (Rs. Crore) as approved by the Commission

Particulars	Unit-II			Unit-III		
	MYT	Petition	Approved	MYT	Petition	Approved
Cost of Coal (for 50 days)	30.34	34.58	34.81	31.14	33.93	34.37



Particulars	Unit-II			Unit-III		
	MYT	Petition	Approved	MYT	Petition	Approved
Cost of Oil for Generation (2 months)	0.34	0.51	0.51	0.34	0.50	0.41
Maintenance Spares (20% O&M)	11.31	11.21	10.70	10.95	10.85	10.32
O&M Expenses (1 month)	4.71	4.67	4.81	4.56	4.52	4.66
Receivables (45 days)	40.42	44.83	44.32	40.88	43.93	43.59
Total Working Capital	87.11	95.79	95.14	87.88	93.74	93.35
Interest Rate	10.50%	10.50%	10.50%	10.50%	10.50%	10.50%
Interest on Working Capital	9.15	10.06	9.99	9.23	9.84	9.80

Return on Equity

Petitioner's Submission

6.101 The Petitioner has computed Return on Equity (Pre-tax) for FY 2022-23 in accordance with clause 15.9, 15.10 of Generation Tariff Regulation, 2020 read with Clause 15.11 and considering the estimated Additional Capitalization and decapitalization during 2022-23.

6.102 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 2021-22 as given below.

Table 93: Return on Equity as submitted by the Petitioner (Rs. Crore)

Particulars	Unit-II		Unit-III	
	MYT	Petition	MYT	Petition
Opening Equity	149.99	147.38	146.60	142.71
Net Addition	1.44	0.64	0.55	0.51
Closing Equity	151.43	148.02	147.14	143.23
Average Equity	150.71	147.70	146.87	142.97
Rate of Return on Equity	14.00%	14.00%	14.00%	14.00%
ROE (Post-Tax)	18.71%	18.71%	18.71%	18.71%
MAT	25.17%	25.17%	25.17%	25.17%
ROE (Pre-Tax)	28.20	27.63	27.48	26.75

Commission's Analysis

6.103 In para 5.87, the Commission has outlined clause 15.6 to clause 15.8 JSERC Generation Tariff Regulation 2020 and clause 6.1. of JSERC Generation Tariff (1st Amendment), Regulation 2023 for approval Return



on Equity for a generating station.

6.104 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.

6.105 In accordance with the clause 6.1 JSERC Generation Tariff Regulation, (1st Amendment) 2023, the Commission approves the Rate of Return on Equity as 15.00% as given below.

Table 94: Return on Equity for Unit II as approved by the Commission (Rs. Crore)

Particulars	MYT	Petition	Approved
Opening Equity	149.99	147.38	147.27
Net Addition	1.44	0.64	0.51
Closing Equity	151.43	148.02	147.78
Average Equity	150.71	147.70	147.52
Rate of Return on Equity	14.00%	14.00%	15.00%
ROE (Post-Tax)	18.71%	18.71%	20.04%
MAT	25.17%	25.17%	25.17%
ROE (Pre-Tax)	28.20	27.63	29.57

Table 95: Return on Equity for Unit III as approved by the Commission (Rs. Crore)

Particulars	MYT	Petition	Approved
Opening Equity	146.60	142.71	143.72
Net Addition	0.55	0.51	0.51
Closing Equity	147.14	143.23	144.23
Average Equity	146.87	142.97	143.98
Rate of Return on Equity	14.00%	14.00%	15.00%
ROE (Pre-Tax)	18.71%	18.71%	20.04%
MAT	25.17%	25.17%	25.17%
ROE (Pre-Tax)	27.48	26.75	28.86



Incentive (Pre-Tax) FY 2021-22

Petitioner Submission

6.106 The Petitioner has submitted that the incentive for FY 2022-23 as nil as of now and same shall be subjected to True-up as per Generation Tariff Regulation 2020.

Commission Analysis

6.107 Considering the facts and circumstances given in the petition, the Commission isn't incline to approves any incentive as for FY 2022-23.

Shakti Scheme Discount

Petitioner's Submission

6.108 Based on the allocation of primary fuel under Shakti Scheme rounds and actual coal consumption, the Petitioner has calculated the energy generated from Shakti coal. Accordingly, 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 produced and consumed under round-III bidding.

Table 96: Shakti Scheme Discount as submitted by Petitioner (Rs. Crore)

Particulars	UoM	Unit-II		Unit-III	
		MYT	Petition	MYT	Petition
Sales due to Coal (Round-II)	MU	280.21	299.65	278.64	346.45
Sale due to CCL Coal (Round-III)	MU	352.80	264.80	354.52	268.91
Discount Amount	Rs. Cr.	3.59	3.05	3.60	3.27

Commission's Analysis

6.109 The Commission has scrutinized the detail of coal procured and consumed from Shakti Scheme six month actual and remaining month projected in FY 2022-23. Further, in line to FSA and PPA approval from the Commission the Commission approves the discount amount due to Shakti Scheme coal as mentioned below.



Table 97: Shakti Scheme Discount (Rs. Crore) as approved by the Commission

Particulars	UoM	Unit-II			Unit-III		
		MYT	Petition	Approved	MYT	Petition	Approved
Sales due to Coal (Round-II)	MU	280.21	299.65	297.67	278.64	346.45	342.05
Sale due to CCL Coal (Round-III)	MU	352.80	264.80	263.05	354.52	268.91	265.69
Discount Amount	Rs. Cr.	3.59	3.05	3.03	3.60	3.27	3.23

Summary of Annual Revenue Requirement

Commission's Analysis

6.110 On consideration of the submission and details furnished by the Petitioner, the Commission approves the Annual Fixed Cost (AFC) for FY 2022-23 as summarised below.

Table 98: Annual Fixed Cost (Rs. Crore) as approved by the Commission.

Particulars	Unit-II			Unit-III		
	MYT	Petition	Approved	MYT	Petition	Approved
O&M Expenses	51.15	51.83	53.50	49.42	50.10	51.61
Depreciation	8.09	13.18	7.03	8.85	13.42	7.67
Interest on Loan	2.35	1.28	2.29	1.92	1.39	2.30
Int. on WC	9.15	10.06	9.99	9.23	9.84	9.80
Return on Equity	28.20	27.63	29.57	27.48	26.75	28.86
AFC	98.93	103.98	102.39	96.89	101.50	100.24
Water Charge	5.38	4.21	4.21	5.35	4.15	4.35
Capital Spare	-	0.00	0.00	-	0.00	0.00

6.111 The summary of Annual Fixed Charge after taking into account the availability Factor for FY 2022-23 as approved by the Commission is shown below.

Table 99: AFC (Rs. Crore) after availability as approved by the Commission

Particulars	Unit-II			Unit-III		
	MYT	Petition	Approved	MYT	Petition	Approved
Annual Fixed Cost	98.93	103.98	102.39	96.89	101.50	100.24
Availability	85.00%	93.68%	93.68%	85.00%	93.64%	93.64%
AFC after Availability	98.93	103.98	102.39	96.89	101.50	100.24

6.112 The summary of recoverable Annual Revenue Requirement (ARR) for FY 2022-23 as approved by the Commission is shown below.



Table 100: Annual Revenue (Rs. Crore) as approved by the Commission

Particulars	Unit-II			Unit-III		
	MYT	Petition	Approved	MYT	Petition	Approved
ARR after Availability	327.81	364.36	367.33	331.61	365.66	370.23
Less: Discount as per [SHAKTI 2&3]	3.59	3.05	3.03	3.60	3.27	3.23
Net ARR	324.22	361.31	364.30	328.01	362.39	367.01



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		
<p>“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”</p>	<p>Washery Coal consists higher transit loss. Since quantity of washery Coal is getting lower in current financial year and same is projected for next control period, this issue will have much lower impact. Further, since Tata Power is claiming Transit Loss in the present Petition at normative levels specified in the Regulations, this issue does not survive for present Petition. Although this issue is mainly due to loss of moisture and weight loss in Railway transportation, the Petitioner has no control on such factors. Nevertheless, Tata Power is exploring the possibility of reducing it and shall update Hon'ble Commission on the same subsequently.</p>	<p>The Commission directs the Petitioner to complete task on exploring the possibility of reducing the transit loss and update the Commission as soon as possible.</p>
2. Start Ups		



Directive	Status	View of the Commission
<p>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.”</p>	<p>Submitted in instant Petition as ANNEXURE P27.</p>	<p>The Commission has noted the status of compliance. In this regard the Commission direct the Petitioner to continue submitting the same.</p>
<p>3. DPR of Scheme</p>		
<p>The Commission had submitted DPR of schemes that have been proposed along with the petition.</p>	<p>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 Hon’ble Commission in the MYT Order.</p>	<p>The Commission direct the Petitioner to continue with this practice, whenever they submit the DPR of the Scheme for the approval.</p>
<p>4. Notice to the Commission</p>		
<p>The Petitioner had hereby directed that during the execution of work pertaining to any preapproved schemes, any increase in the scope</p>	<p>For FY 21, 22 and for current years as well, All Add Cap Reports have been submitted to Hon’ble Commission. And the Hon’ble Commission has</p>	<p>The Commission directs the Petitioner to continue with the same Practice in the future also.</p>



Directive	Status	View of the Commission
of work, procurement, services, price/cost etc. should be brought to the notice of commission immediately.”	acknowledged the same in the MYT Order. For FY 2022-23, Q1 Report has been submitted on 30.09.2022.	
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 2021-22 including Q 1 of FY 2022-23 have been submitted	The Commission directs the Petitioner to continue with the same Practice in the future also.
6. Energy Charge Optimization		
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 Hon'ble Commission and the same has been acknowledged by the Hon'ble 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 to the Petitioner to prepare its strategy for reduction in energy charge rate.
7. Capex Planning		



Directive	Status	View of the Commission
<p>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.</p>	<p>Revised Phasing of Capex has been submitted in instant Petition.</p>	<p>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.</p>
<p>8. Residual Life Study</p>		
<p>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 additional capitalization in the plant and justify its operational and financial benefits.</p>	<p>Tata power is Planning for this activity in the ensuing annual shutdown and the Petitioner shall ,accordingly, intimate Hon'ble Commission as soon as the scope of the RLA is finalized.</p>	<p>The Commission direct 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, before undertaking this study, the Petitioner to submit the complete scope of work to be carried under RLA for Commission's approval.</p>



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 too high. The Petitioner is required to prepare its strategy for coal procurement plan to optimize its energy charge.

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 January 09, 2024.

Date: 09.01.2024

Place: Ranchi

Sd/-

Mr. Atul Kumar
Member (Technical)

Sd/-

Mr. Mahendra Prasad
Member (Law)

Sd/-

Justice Amitav Kumar Gupta
Chairperson



Chapter 9: ANNEXURE

Table 101: List of participating members of the Public in the Public Hearing

Sl. No.	Name S/Shri	Address / Organization if any
1	Gaurav Bawase	Tata Power, Jamshedpur
2	Sunil Kumar	Bagbera Colony, Jamshedpur
3	Amitava Das	Tata Power, Jamshedpur
4	Pintu Kumar shrivastava	Tata Power, Jamshedpur
5	Randhir Kumar	Tata Power, Jamshedpur
6	Manish Tiwari	Tata Power, Jamshedpur
7	Mukul Kumar Singh	Jojobera Power Plant, TPCL, Jamshedpur
8	Rakesh Singh Bhadosia	Jojobera Power Plant, TPCL, Jamshedpur
9	Pankaj Kumar Roy	Jojobera Power Plant, TPCL, Jamshedpur
10	Satyajeet singh Choudhary	Jojobera Power Plant, TPCL, Jamshedpur
11	Golak B Sohan	Jojobera Power Plant, TPCL, Jamshedpur
12	Rakesh Kumar	Hindustan
13	V. S. Mishra	Jojobera Power Plant, TPCL, Jamshedpur
14	Prabhakar Kumar	Jojobera Power Plant, TPCL, Jamshedpur
15	U R Prabhakar Roy	Tata Power, Jamshedpur
16	Rakesh Ranjan	Tata Power, Jamshedpur
17	Chandrashekhar Singh	Tata Power, Jamshedpur
18	B Hansdah	Tata Power, Jamshedpur
19	Sharad Kumar	Tata Steel Ltd.
20	V. B. Srivastava	Tata Power, Jamshedpur
21	Anshuk De	Tata Power, Jamshedpur
22	Lalit Dubey	Dainik Bhaskar
23	V P Singh	Tata Steel UISL
24	N. Leena	Tata Steel UISL
25	Dipak Kumar Singh	Tata Power, Jamshedpur



Sl. No.	Name S/Shri	Address / Organization if any
26	Shraddha Singhania	Tata Power, Jamshedpur
27	Subhangi Banka	Tata Power, Jamshedpur
28	Garenaa Parihar	Tata Power, Jamshedpur
29	Tusar Raj	Tata Steel UISL
30	Suman Mandal	Tata Steel UISL
31	Harsh Lunia	Mango, Jamshedpur
32	Avik Gupta	Sakchi, Durga Puja Maidan
33	Pankaj Prakash	Head-regulatory (ER), Tata Power Co. Ltd.
34	Suvojit Maity	L-Regulatory (ER), TPCL
35	Nirmal Prasad	Dainik Jagran
36	Rajesh Kumar	Sonari
37	Soumya Bandyopadhyay	Deloitte LLP, Kolkata
38	Trinath Koganti	Feedback Infra Pvt. Ltd., Mumbai
39	Shreyansh Kumar	Sonari
40	Sorjan Kumar Sinha	Press