

# **Jharkhand State Electricity Regulatory Commission**



Order on  
True-up for FY 2020-21, Annual Performance  
Review for FY 2021-22  
for  
Tata Power Company Limited (TPCL)

Ranchi May 22, 2023



Table of Contents

A 1: INTRODUCTION.....	8
Jharkhand State Electricity Regulatory Commission .....	8
Tata Power Company Limited (TPCL).....	10
The Petitioner’s Prayers .....	10
Scope of the Present Order.....	12
A 2: PROCEDURAL HISTORY .....	13
Background.....	13
Information Gaps in the Petitions.....	13
Inviting Public Comments/Suggestions.....	13
A 3: BRIEF FACTS OF THE PETITION .....	15
Truing up for FY 2020-21 .....	15
Annual Performance Review for FY 2021-22.....	15
A 4: PUBLIC CONSULTATION PROCESS .....	17
Compensation on account of change in law.....	17
PLF Compensation.....	17
O&M Expenses .....	18
Power Supply.....	19
Shakti Scheme .....	20
Water Charge .....	20
Ash.....	21
Annual Shutdown.....	21
Discount.....	22
A 5: TRUE-UP FOR FY 2020-21.....	24
Operational Performance.....	24
Plant Availability Factor (PAF) .....	24
Auxiliary Consumption .....	25
Plant Load Factor and Generation.....	26
Gross Station Heat Rate (GHR) .....	27
Specific Fuel Oil Consumption .....	28
Fuel Cost Parameter.....	29
Coal Mix and Gross Calorific Value (GCV) of Primary Fuel.....	29
Transit Loss.....	31
Landed Cost of Coal.....	32
Calorific value and Cost of Secondary Fuel .....	34
Energy Charge Rate (ECR) .....	34
Summary of Fuel Cost .....	37
Determination of Fixed Cost .....	37
Additional Capitalization.....	37
Depreciation .....	42
Operation & Maintenance Expenses .....	44
Interest on Loan .....	49
Interest on Working Capital (IOWC) .....	51



Return on Equity .....	53
Tax on Saving on Operational Parameters.....	55
Tax Liability on Gain on Secondary Fuel .....	56
Tax Liability on Gain on Auxiliary Power Consumption .....	57
Tax Liability on Gain on Station Heat Rate.....	57
Tax Liability due to reduction in O&M Expenses .....	58
Shakti Scheme Discount Petitioner's Submission.....	58
Summary of Annual Revenue Requirement .....	59
Revenue from Sale of Power .....	60
Gap/Surplus for FY 2020-21 .....	60
A 6: ANNUAL PERFORMANCE REVIEW FOR FY 2021-22 .....	63
A 7: STATUS OF EARLIER DIRECTIVES .....	64
A 8: DIRECTIVES.....	67
Residual Life Study.....	67
Notice to the Commission .....	67
Transit Loss.....	68
Compliance of directives issued in earlier Orders .....	68
A 9: ANNEXURE.....	69
Annexure-1: List of participating members of the Public in the Public Hearing .....	69



### List of Abbreviations

<b>Abbreviation</b>	<b>Description</b>
<b>A&amp;G</b>	Administrative and General
<b>APR</b>	Annual Performance Review
<b>ARR</b>	Aggregate Revenue Requirement
<b>ATE</b>	Appellate Tribunal for Electricity
<b>COD</b>	Date of Commercial Operation
<b>Cr.</b>	Crore
<b>ECR</b>	Energy Charge Rate
<b>FY</b>	Financial Year
<b>GCV</b>	Gross Calorific Value
<b>GFA</b>	Gross Fixed Assets
<b>GoI</b>	Government of India
<b>HO &amp; SS</b>	Head Office and Shared Services
<b>JSERC</b>	Jharkhand State Electricity Regulatory Commission
<b>Kcal</b>	Kilocalorie
<b>Kg</b>	Kilogram
<b>kWh</b>	Kilowatt-hour
<b>LDC</b>	Load Dispatch Centre
<b>LPPF</b>	Landed Price of primary fuel
<b>MAT</b>	Minimum Alternative Tax
<b>MCL</b>	MCL Mahanadi Coalfields Ltd. (IB Valley Coalfields)
<b>MI</b>	Millilitre
<b>MT</b>	Million Tonnes
<b>MU</b>	Million Units
<b>MW</b>	Megawatt
<b>NAPAF</b>	Normative Annual Plant Availability Factor
<b>O&amp;M</b>	Operation and Maintenance
<b>PAF</b>	Plant Availability Factor
<b>PLF</b>	Plant Load Factor
<b>PPA</b>	Power Purchase Agreement
<b>R&amp;M</b>	Repair and Maintenance
<b>RoE</b>	Return on Equity
<b>Rs.</b>	Rupees
<b>SBI</b>	State Bank of India
<b>SERC</b>	State Electricity Regulatory Commission
<b>SLM</b>	Straight Line Method
<b>TPCL</b>	Tata Power Company Limited
<b>TSL</b>	Tata Steel Limited
<b>UoM</b>	Unit of Measurement
<b>WB</b>	West Bokaro



**LIST OF TABLES**

Table 1: List of newspapers and dates of publication of public notice by the Petitioner .....	14
Table 2: List of newspapers and dates of publication of public notice by the Commission.....	14
Table 3: Annual Revenue Requirement for FY 2020-21 as submitted by the Petitioner (Rs. Cr.) .....	15
Table 4: Annual Revenue Requirement for FY 2021-22 as submitted by the Petitioner (Rs. Cr.) .....	16
Table 5: Plant availability as approved by the Commission .....	25
Table 6: Auxiliary Consumptions as approved by the Commission.....	26
Table 7: Plant Load Factor and Generation as approved by the Commission.....	27
Table 8: Gross Station Heat Rate (GHR) as approved by the Commission.....	28
Table 9: Specific Fuel Oil Consumption as approved by the Commission .....	29
Table 10: Coal Mix and GCV for Unit-II as approved by the Commission .....	30
Table 11: Coal Mix and GCV for Unit-III as approved by the Commission .....	30
Table 12: Transit Loss as Approved by the Commission.....	32
Table 13: Landed Price of Primary Fuel for Unit-II as approved by the Commission ...	33
Table 14: Landed Price of Primary Fuel for Unit- III as approved by the Commission .	33
Table 15: Calorific value & Landed Price of Secondary fuel as approved by the Commission.....	34
Table 16: Energy Charge Rate (ECR) for Unit-II as approved by the Commission .....	36
Table 17: Energy Charge Rate (ECR) for Unit-III as approved by the Commission .....	36
Table 18: ECR for Unit-II as approved by the Commission .....	37
Table 19: ECR for Unit-III as approved by the Commission.....	37
Table 20: Methodology of apportionment as submitted by the Petitioner .....	38
Table 21: Asset wise Capitalization as submitted by the Petitioner (Rs. Crore) .....	38
Table 22: Capitalization and Decapitalization as submitted by the Petitioner (Rs. Crore) .....	39
Table 23: Asset wise Capitalization as approved by the Commission (Rs. Crore).....	41
Table 24: Capitalization as approved by the Commission (Rs. Crore).....	42
Table 25: Gross Fixed Assets (GFA) for Unit II as approved by the Commission (Rs. Crore) .....	42
Table 26: Gross Fixed Assets (GFA) for Unit III as approved by the Commission (Rs. Cr) .....	42
Table 27: Depreciation as submitted by the Petitioner (Rs. Crore) .....	43
Table 28: Depreciation as approved by the Commission (Rs. Crore) .....	44
Table 29: O&M Expenses as submitted by the Petitioner (Rs. Crore) .....	46
Table 30: O&M Expenses (Normative Component) as approved by the Commission (Rs. Cr.) .....	48
Table 31: O&M Expenses (Variable Component) as approved by the Commission (Rs. Cr) .....	48
Table 32: O&M Expenses as approved by the Commission (Rs. Crore) .....	48
Table 33: Interest on Loan as submitted by the Petitioner (Rs. Crore) .....	49
Table 34: Interest on Loan as approved by the Commission (Rs. Crore).....	51
Table 35: IOWC as submitted by the Petitioner (Rs. Crore).....	51
Table 36: IOWC as approved by the Commission (Rs. Crore).....	52
Table 37: Return on Equity as submitted by the Petitioner (Rs. Crore) .....	53
Table 38: Return on Equity for Unit II as approved by the Commission (Rs. Crore) ....	55



Table 39: Return on Equity for Unit III as approved by the Commission (Rs. Crore) ...	55
Table 40: Tax Liability on saving in Operation Parameters as submitted by Petitioner (Rs. Cr.) .....	56
Table 41: Tax Liability on saving in Secondary Fuel as approved by the Commission (Rs. Cr.) .....	56
Table 42: Tax Liability on saving in Auxiliary as approved by the Commission (Rs. Crore) .....	57
Table 43: Tax Liability on saving in SHR as approved by the Commission (Rs. Crore)	57
Table 44: Tax Liability due to reduction in actual O&M Expenses as approved by the Commission (Rs. Crore) .....	58
Table 45: Shakti Scheme Discount as submitted by Petitioner (Rs. Crore).....	58
Table 46: Shakti Scheme Discount as approved by the Commission (Rs. Crore).....	58
Table 47: Annual Fixed Cost as approved by the Commission (Rs. Crore) .....	59
Table 48: AFC after availability as approved by the Commission (Rs. Crore).....	59
Table 49: Annual Revenue Requirement as approved by the Commission (Rs. Crore).	59
Table 50: Revenue as submitted by the Petitioner (Rs. Crore).....	60
Table 51: Revenue as approved by the Commission (Rs. Crore).....	60
Table 52: Gap/(Surplus) for Unit-II as approved by the Commission (Rs. Crore) .....	61
Table 53: Gap/(Surplus) for Unit-III as approved by the Commission (Rs. Crore) .....	61
Table 54: Carrying Cost on Revenue Gap/(Surplus) for Unit-II & Unit-III as approved by the Commission (In Rs. Cr.) .....	61



**BEFORE**

**Jharkhand State Electricity Regulatory Commission, Ranchi**

**Case (Tariff) No.: 06 of 2022**

**In the matter of:**

**Petition  
for**

**True-up for FY 2020-21, APR for FY 2021-22**

**In the matter:**

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

**Petitioner**

**PRESENT**

Hon'ble Mr. Justice Amitav Kumar Gupta  
Hon'ble Mr. Atul Kumar  
Hon'ble Mr. Mahendra Prasad

(Chairperson)  
Member (Technical)  
Member (Law)

**Order dated May 22, 2023**

Tata Power Company Limited (hereinafter referred to as TPCL or the Petitioner) has filed a petition on September 21, 2022 for Truing up for FY 2020-21, Annual Performance Review for FY 2021-22, for Unit-II and Unit-III at Jojobera.



## **A 1: INTRODUCTION**

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

1.1 The Jharkhand State Electricity Regulatory Commission (hereinafter referred to as the “JSERC” or the “Commission”) was established by the Government of Jharkhand under Section 17 of the Electricity Regulatory Commission Act, 1998 on August 22, 2002. The Commission became operational with effect from April 24, 2003.

1.2 The Government of Jharkhand vide its notification dated August 22, 2002 has defined the functions of JSERC as per Section 22 of the Electricity Regulatory Commission Act, 1998 to be the following, namely:

- (a) to determine the tariff for electricity, wholesale, bulk, grid, or retail, as the case may be, in the manner provided in section 29;
- (b) to determine the tariff payable for the use of the transmission facilities in the manner provided in section 29;
- (c) to regulate power purchase and procurement process of the transmission utilities and distribution utilities including the price at which the power shall be procured from the generating companies, generating stations or from other sources for transmission, sale, distribution, and supply in the State;
- (d) to promote competition, efficiency, and economy in the activities of the electricity industry to achieve the objects and purposes of this Act.

1.3 After the Electricity Act, 2003 came into force, the earlier Electricity Regulatory Commission Act of 1998 stands repealed and the functions of State Electricity Regulatory Commission are now defined under Section 86 of the Act.

1.4 In accordance with Section 86 (1) of the Act, the JSERC discharges the following functions:

- (a) determine the tariff for generation, supply, transmission, and wheeling of electricity, wholesale, bulk or retail, as the case may be, within the State: Provided that where open access has been permitted to a category of consumers under section 42, the State Commission shall determine only the wheeling charges and surcharge thereon, if any, for the said category of consumers;
- (b) regulate electricity purchase and procurement process of distribution licensees including the price at which electricity shall be procured from the generating companies or licensees or from other sources through agreements for purchase of power for distribution and supply within the State;





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

1.5 The Commission has to also advise the State Government as per sub-section 2 of Section 86 of the Act, on all or any of the following matters, namely:

- (a) promotion of competition, efficiency and economy in activities of the electricity industry;
- (b) promotion of investment in electricity industry;
- (c) reorganization and restructuring of electricity industry in the State;
- (d) matters concerning generation, transmission, distribution and trading of electricity or any other matter referred to the State Commission by that Government.

1.6 The State Commission shall ensure transparency while exercising its powers and discharging its functions.

1.7 In discharge of its functions, the State Commission is also guided by the National Tariff Policy, 2016 as brought out by Government of India in compliance to Section 3 of the Act. The objectives of the National Tariff Policy are to:

- (a) ensure availability of electricity to consumers at reasonable and competitive rates;
- (b) ensure the 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 the 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 this 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 2020-21 and APR for FY 2021-22 proposals enclosed herewith after relaxing APC to 10%;
- 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 Unit-II and Unit-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 Regulation/provisions under JSERC (Terms and Condition for Determination of Generation Tariff) Regulation, 2020;
  - 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 Control Period;
  - 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 Turing-up Petition;
- Provide an opportunity for the Petitioner to present its case prior to the finalization of the Tariff Order. Tata Power believes that such an approach would provide 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 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.



**Scope of the Present Order**

- 1.12 Through the instant Petition, the Petitioner has sought True up for FY 2020-21, and APR for FY 2021-22.
- 1.13 The Commission in this Order has approved the True-up for FY 2020-21, for both the Units (Unit-II & Unit-III) of Jojobera generating station.
- 1.14 The Commission has not carried out the APR for FY 2021-22 as considerable time has lapsed and the Petitioner has already filed True up Petition for FY 2021-22 which is under active consideration of this Commission.
- 1.15 While approving this Order, the Commission has taken into consideration:
- a) Material placed on record by the Petitioner;
  - b) Provisions of the Electricity Act, 2003;
  - c) Principles laid down in the National Electricity Policy;
  - d) Principles laid down in the National Tariff Policy;
  - e) Provisions of the JSERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015 (hereinafter referred to as JSERC Generation Tariff Regulations, 2015 or the Tariff Regulations);
  - f) Provisions of the JSERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020 (hereinafter referred to as JSERC Generation Tariff Regulations, 2020 or the Tariff Regulations);
- 1.16 Accordingly, the Commission had scrutinized the Petition in detail and hereby issues the Order on Truing-up for FY 2020-21 and APR for FY 2021-22 of Unit-II and Unit-III of Jojobera generating station of TPCL.



## **A 2: PROCEDURAL HISTORY**

### **Background**

- 2.1 The Commission vide MYT Order dated February 19, 2018 approved the Business Plan and determined the Annual Revenue Requirement for the MYT Control Period from FY 2016-17 to FY 2020-21 including Truing-up for FY 2015-16.
- 2.2 Later, the Petitioner had filed a review petition against the MYT Order dated February 19, 2018 which was disposed of by the Commission by Order dated January 9, 2019.
- 2.3 The True-up for FY 2016-17 was disposed of by the Commission vide its Order dated December 27, 2019.
- 2.4 The Commission had approved 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 vide Order dated February 14, 2020.
- 2.5 The Commission has approved the True-up for FY 2018-19 and Annual Performance Review for FY 2019-20 vide Order dated September 09, 2020.
- 2.6 The Commission had approved 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 vide Order dated November 04, 2022.

### **Information Gaps in the Petitions**

- 2.7 As part of the Tariff determination exercise, several deficiencies/information gaps were observed in the Petition submitted by the Petitioner. It was communicated to the Petitioner vide letter no. JSERC/Case (Tariff) No. 06 of 2022/277 dated November 24, 2022.
- 2.8 The Petitioner has submitted its response to the aforesaid letter and furnished additional data/information to the Commission vide letter no. dated November 22, 2022.
- 2.9 Furthermore, the Petitioner submitted an additional data/information on December 8, 2022 for Trueup for FY 2020-21, APR for FY 2021-22.
- 2.10 The Commission has scrutinized the additional data/information and considered the same while passing this Order. The Commission had examined the replies and supporting documents as supplied by the Petitioner on the discrepancies pointed out to it.

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



2.11 The Commission had directed the Petitioner to make available copies of the Petition to the members of the general public on request and also issue a public notice inviting comments/suggestions on the Petition for approval of True-up for FY 2020-21, and APR for FY 2021-22.

2.12 The aforesaid public notice was issued by the Petitioner in various newspapers and a period of twenty-one (21) days was given to the members of the general public for submitting their comments/suggestions.

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

<b>Newspaper</b>	<b>Date of Publication</b>
Hindustan	13.12.2022 & 14.12.2022
Dainik Bhaskar	13.12.2022 & 14.12.2022
The Hindustan Times	13.12.2022 & 14.12.2022
The Pioneer	13.12.2022 & 14.12.2022

2.13 Further, the Commission had also 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 above said petition. The details of newspapers publishing the notice by the Commission are as under:

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

<b>Newspaper</b>	<b>Date of Publication</b>
Prabhat Khabar (Hindi)	02.03.2023
Dainik Bhaskar (Hindi)	02.03.2023
The Times of India (English)	02.03.2023
Morning India (English)	02.03.2023
Prabhat Khabar (Hindi)	16.03.2023
Hindustan (Hindi)	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**

2.14 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 **Section A4** of this Order.



### A 3: BRIEF FACTS OF THE PETITION

#### Truing up for FY 2020-21

3.1 The summary of Aggregate Revenue Requirement for FY 2020-21 as submitted by the Petitioner vis-à-vis as approved by the Commission in MTR Order dated February 14, 2020 is provided in the table below.

**Table 3: Annual Revenue Requirement for FY 2020-21 as submitted by the Petitioner (Rs. Cr.)**

Particulars	UoM	Unit-II		Unit-III	
		MTR Order	Petition	MTR Order	Petition
Depreciation	Rs. Cr.	6.95	11.71	7.64	11.39
Interest on Loan	Rs. Cr.	3.84	3.40	3.32	2.68
O&M Expenses	Rs. Cr.	58.83	54.81	50.74	46.16
Return on Equity	Rs. Cr.	27.74	30.20	26.68	29.13
Interest on Working Capital	Rs. Cr.	13.30	12.75	13.20	12.22
<b>Total Annual Fixed Cost</b>	Rs. Cr.	<b>110.66</b>	<b>112.87</b>	<b>101.57</b>	<b>101.58</b>
<b>Energy Charge Rate</b>	<b>Rs./kWh</b>	2.968*	2.801	2.987**	2.794
<b>Energy Cost</b>	<b>Rs. Cr.</b>	<b>221.94*</b>	<b>189.86</b>	<b>240.21**</b>	<b>169.32</b>
Tax Gain	Rs. Cr.	-	4.99	-	1.80
Discount due to Shakti Coal	Rs. Cr.	1.11	1.90	1.10	1.87
<b>Net ARR</b>	<b>Rs. Cr.</b>	<b>331.49*</b>	<b>305.82</b>	<b>340.68**</b>	<b>270.83</b>
Revenue from Billing	Rs. Cr.	-	297.15	-	267.63
<b>Gap/(Surplus)</b>	<b>Rs. Cr.</b>	-	<b>8.67</b>	-	<b>3.20</b>
<b>Gap/(Surplus) including Carrying Cost upto September 2021.</b>	<b>Rs. Cr.</b>		<b>8.77</b>		<b>3.17</b>

\*As per MTR Order dated 14<sup>th</sup> February, 2020 the ECR, Energy Cost, and ARR for FY 2020-21 were approved as Rs 2.936/kWh, Rs 219.59 Cr, and Rs 330.25 respectively for Unit-2.

\*\* As per the MTR Order dated 14<sup>th</sup> February, 2020 the ECR, Energy Cost, and ARR for FY 2020-21 were approved as Rs 2.947/kWh, Rs 236.97 Cr, and Rs 338.55 respectively for Unit-3.

#### Annual Performance Review for FY 2021-22

3.2 The Petitioner had projected the Annual Revenue Requirement for FY 2021-22 based on the actual figures for first six months of FY 2021-22 and estimated for the remaining six months of FY 2021-22 as tabulated below.



**Table 4: Annual Revenue Requirement for FY 2021-22 as submitted by the Petitioner (Rs. Cr.)**

Particulars	UoM	Unit-II		Unit-III	
		MYT Petition	Proposed	MYT Petition	Proposed
Depreciation	Rs. Cr.	12.34	12.27	12.77	12.77
Interest on Loan	Rs. Cr.	2.22	2.04	2.41	2.23
O&M Expenses	Rs. Cr.	56.60	55.72	48.90	48.53
Return on Equity	Rs. Cr.	27.58	27.56	26.73	26.74
Interest on Working Capital	Rs. Cr.	9.16	8.93	8.99	8.70
<b>Total Annual Fixed Cost</b>	Rs. Cr.	107.89	106.53	99.80	98.96
<b>Energy Charge Rate</b>	<b>Rs./kWh</b>	2.731	2.651	2.808	2.685
<b>Energy Cost</b>	<b>Rs. Cr.</b>	210.79	185.90	217.86	219.57
Discount due to Shakti Coal	Rs. Cr.	3.59	3.39	3.60	3.95
<b>Net ARR</b>	<b>Rs. Cr.</b>	<b>315.09</b>	<b>289.04</b>	<b>314.06</b>	<b>314.58</b>

3.3 The Petitioner had projected the ARR for FY 2021-22 as Rs. 289.04 Crore against the MYT Petition value of Rs. 315.09 Crore for Unit-II and Rs. 314.58 Crore against the MYT Petition value of Rs. 314.06 Crore for Unit-III.





#### **A 4: PUBLIC CONSULTATION PROCESS**

4.1 The Petition filed by the Petitioner evoked responses from several Stakeholders. 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 **Annexure-1** to this Order.

4.2 The comments and suggestions of the members of the public along with the response thereon of the Petitioner and the views of the Commission are detailed hereunder.

#### **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 2&3 and passing discounts to end consumers. Querist further requested Hon'ble Commission to decide in terms 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 of the Petitioner 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 Event as the same is not within its control of the Petitioner 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 In view of foregoing, 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 is 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 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 2&3 had reduced compared to 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 juice before the Hon'ble Jharkhand High Court in WP (C) no. 4544 of 2011. In view of the above 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. The issue has been appropriately dealt with in water charges of True up of FY 2020-21 and APR for FY 2021-22.

#### **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 and 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 2 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.



## **A 5: TRUE-UP FOR FY 2020-21**

- 5.1 The Petitioner has submitted the True-up petition for FY 2020-21 based on the audited account taking into consideration the provisions of the Tariff Regulations, 2015, and the methodology adopted by the Commission in its earlier Tariff Orders.
- 5.2 The Commission has already carried out the Mid-Term Review for Annual Revenue Requirement of FY 2020-21 vide its Order dated February 14, 2020, on the basis of provisional data for FY 2020-21. Therefore, for the purpose of truing up, the gap/surplus amount has been computed by comparing the costs as approved in the MTR Order dated February 14, 2020 vis-à-vis that trued up now.
- 5.3 The Commission has now carried out the True-up for FY 2020-21 taking into consideration the following:
- Audited account for the FY 2020-21;
  - Auditor Certified Document submitted by the Petitioner;
  - JSERC Generation Tariff Regulations, 2015;
  - Methodology adopted by the Commission in its earlier Tariff Orders.

## **Operational Performance**

### **Plant Availability Factor (PAF)**

#### ***Petitioner's Submission***

- 5.4 The Petitioner has submitted the month-wise actual plant availability truly certified by Tata Steel Load Dispatch Centre (LDC). The Petitioner had claimed the average annual plant availability of Unit-II as 96.25% and that of Unit-III as 87.31% respectively.

#### ***Commission's Analysis***

- 5.5 The Commission in its MYT Order dated February 19, 2018 as well as MTR Order dated February 14, 2020 had approved the Normative Annual Plant Availability Factor (NAPAF) as 85.00% for the Control Period (FY 2015-16 to FY 2020-21) in line with Clause 8.4 of JSERC Generation Tariff Regulation, 2015.
- 5.6 The Commission observed that the detail of availability submitted by the Petitioner is declared by "LDC, Tata Steel" and directed the Petitioner to submit the auditor certificate certifying the operational parameters for Unit-II and Unit-III for FY 2020-21. In addition, the Petitioner was also directed to provide the reason for not submitting the true copy certified by State Load Dispatch Centre.
- 5.7 In reply to Commission's query vide Letter no. JSERC/Case (Tariff) No. 06 of 2022/207 dated October 14, 2022, the Petitioner vide letter dated November 22,





2022 submitted that the statutory auditor certifies only financial data. For operational data, the Petitioner had provided the PAF Certificates of each month duly approved by Tata Steel, LDC.

- 5.8 The Petitioner further submitted 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 shall be authorized to Monitor and certify the Availability Factor of Jojobera power plant Units.
- 5.9 The Commission noted the reply submitted by the Petitioner and scrutinized the month wise actual plant availability truly certified by Tata Steel, LDC and approves the actual plant availability for FY 2020-21 as 96.25% and 87.31% for Unit-II and Unit-III respectively as certified by Tata Steel LDC.
- 5.10 The actual Plant Availability as approved by the Commission in the MTR Order dated February 14, 2020 as submitted by the Petitioner and approved now by the Commission for FY 2020-21 is summarized below.

**Table 5: Plant availability as approved by the Commission**

Particulars	UoM	MTR Order	Petition	Approved
<b>Unit-II</b>				
NAPAF	%	85.00	85.00	85.00
Actual Plant Availability	%	87.76	96.25	96.25
<b>Unit-III</b>				
NAPAF	%	85.00	85.00	85.00
Actual Plant Availability	%	87.76	87.31	87.31

## **Auxiliary Consumption**

### ***Petitioner's Submission***

- 5.11 The Petitioner has submitted the actual Auxiliary Consumption of Unit-II and Unit-III for FY 2020-21 as 9.34% and 9.52% respectively as compared to Normative Auxiliary Power Consumption of 10.00% for each Unit as approved. However, for truing up exercise, the Petitioner has claimed the normative value of auxiliary consumption as 10.00% for both the Units.

### ***Commission's Analysis***

- 5.12 The Commission has scrutinized the Petitioner submission and approves the actual auxiliary consumption as submitted by the Petitioner for FY 2020-21.



5.13 Further, according to the Provision of Clause 6.11 and Clause 6.12 of JSERC Generation Tariff Regulations, 2015, auxiliary consumption is a controllable factor, and any financial loss or gain on account of under-performance or over-performance is neither passed on nor recoverable through tariff. Hence, for computation of Energy Charge Rate (ECR), the Commission has considered the normative auxiliary consumption of 10.00% for both the Units as approved in the MTR order dated February 14, 2020.

5.14 The Auxiliary Consumption as approved by the Commission in the MTR Order dated February 14, 2020 as submitted by the Petitioner and approved now by the Commission for FY 2020-21 is provided in the table below.

**Table 6: Auxiliary Consumptions as approved by the Commission**

<b>Particulars</b>	<b>UoM</b>	<b>MTR Order</b>	<b>Petition</b>	<b>Approved</b>
<b>UNIT-II</b>				
Normative Auxiliary Consumption	%	10.00	10.00	10.00
Auxiliary Power Consumption	%	10.00	9.34	9.34
<b>UNIT-III</b>				
Normative Auxiliary Consumption	%	10.00	10.00	10.00
Auxiliary Power Consumption	%	10.00	9.52	9.52

## **Plant Load Factor and Generation**

### ***Petitioner's Submission***

5.15 The Petitioner has submitted the actual Plant Load Factor (PLF) for Unit-II as 71.11% and 63.72% for Unit-III which is less than the PLF as approved by the Commission in MTR Order dated February 14, 2020.

5.16 The Petitioner further submitted that the actual gross generation for both the Units is lower than that approved in MTR Order dated February 14, 2020 is due to low demand from the Beneficiary.

5.17 The Petitioner had claimed the actual gross generation of Unit-II and Unit-III of the Jojobera generating station as 747.53 MUs and 669.80 MUs respectively. Accordingly, the Petitioner submitted net generation (ex-bus generation) for Unit-II and Unit-III as 677.70 MUs and 606.06 MUs respectively after deducting the Auxiliary Consumption.

### ***Commission's Analysis***

5.18 The Commission is of the view that the Petitioner should look into the reasons for the sub-optimal utilization of its assets which could be due to high cost of generation. The Petitioner should take steps towards reduction of the cost of generation so that more power can be scheduled thus increasing the utilization.

5.19 The Commission had scrutinized the detail submitted by the Petitioner and approves the Gross Generation, Net Generation and Plant Load Factor for FY 2020-21 as shown below.

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

Particulars	UoM	MTR Order	Petition	Approved
<b>UNIT-II</b>				
Gross Generation	MU	830.97	747.53	747.53
Net Generation	MU	747.88	677.70	677.70
Plant Load Factor	%	79.05	71.11	71.11
<b>UNIT-III</b>				
Gross Generation	MU	893.52	669.80	669.80
Net Generation	MU	804.17	606.06	606.06
Plant Load Factor	%	85.00	63.72	63.72

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

#### ***Petitioner's Submission***

5.20 The Petitioner has submitted the actual Gross Station Heat Rate (GHR) as 2539.36 kCal/kWh for Unit-II and 2541.52 kCal/kWh for Unit-III against the normative approved value of 2567 kCal/kWh and 2577 kCal/kWh for Unit-II and Unit-III respectively. However, the Petitioner has claimed the normative value of 2567 kCal/kWh for Unit-II and 2577 kCal/kWh for Unit-III for Truing-up exercise.

#### ***Commission's Analysis***

5.21 According to Clause 6.11 and Clause 6.12 of JSERC Generation Tariff Regulations, 2015, Gross Station Heat Rate (GHR) is a controllable factor and any financial loss on account of under-performance is not recoverable through tariff.

5.22 In accordance to the Clause 8.4 of JSERC Generation Tariff Regulation, 2015 and in line with MYT Order dated February 19, 2018, and MTR Order dated February 14, 2020, the Commission approves the SHR as 2567 kCal/kWh for Unit-II and 2577 kCal/kWh for Unit-III respectively.



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

Particulars	UoM	MTR Order	Petition	Approved
<b>UNIT-II</b>				
Normative Station Heat Rate	kCal/kWh	2567.00	2567.00	2567.00
Actual Station Heat Rate	kCal/kWh	-	2539.36	2539.36
<b>UNIT-III</b>				
Normative Station Heat Rate	kCal/kWh	2577.00	2577.00	2577.00
Actual Station Heat Rate	kCal/kWh	-	2541.52	2541.52

## Specific Fuel Oil Consumption

### Petitioner's Submission

5.23 The Petitioner had submitted the specific fuel oil consumption as 1.00 ml/kWh for both Units II and Unit III as specified in Clause 8.4 of JSERC Generation Tariff Regulations, 2015.

### Commission's Analysis

5.24 The Commission in its MYT Order dated February 19, 2018 & MTR Order dated February 14, 2020 approved the Specific Fuel Oil Consumption as 0.50 ml/kWh for 2<sup>nd</sup> Control Period. The abstract from the MYT Order is reproduced below.

*“6.137 The JSERC Generation Tariff Regulations, 2015 specifies the following*

*“16.4 The Commission may in public interest and for reasons to be recorded in writing, relax any of the provision of these Regulations.”*

*6.138 Considering all of the above, the Commission has decided to approve the specific oil consumption (of LDO) at 0.5 ml/kWh for each year of the Control Period i.e. from FY 2016-17 to FY 2020-21 for both Unit 2 and Unit 3. This norm may be re-looked based on Petitioner's actual performance during the Control period and as deemed fit by the Commission after due consideration of the actual performance of the Petitioner. In the subsequent APR and True-up Petitions, the Petitioner is directed to also submit details of number of unit-wise start-ups taken after shutdown. Also, details should include monthly quantity of secondary fuel consumed during plant start-up and flame support if required.”*

5.25 Further, the Petitioner had filed an Appeal before the Hon'ble APTEL against the MYT Order dated February 19, 2018, which is still pending. Since, the matter is sub-judice before the Hon'ble APTEL, the Commission has considered the Specific Fuel Oil Consumption as 0.50 ml/kWh as approved in MYT Order dated February 19, 2018 and MTR Order dated February 14, 2020 for both the Units as shown below.



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

Particulars	UoM	MTR Order	Petition	Approved
<b>UNIT-II</b>				
Specific Fuel Oil Consumption	ml/kWh	0.50	1.00	0.50
<b>UNIT-III</b>				
Specific Fuel Oil Consumption	ml/kWh	0.50	1.00	0.50

### Fuel Cost Parameter

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

#### *Petitioner's Submission*

5.26 The Petitioner submitted that the coal is primarily sourced from West Bokaro Colliery of Tata Steel (Middling Coal) and e-auction coal, from ECL, MCL and BCCL subsidiaries of Coal India Limited.

5.27 The Petitioner submitted that with proposed Coal mix at higher PLF, coal quantity required to be sourced from SHAKTI Round 2 allocation would go beyond the allocated quantum, which is not possible and, hence, revised coal mix needs to be computed in such a manner that Coal under the SHAKTI Scheme Round 2 remains maximum up to the allocated quantity and balance requirement may be met through middling coal.

5.28 The Petitioner submitted that the summary of total coal received at Jojobera Power Plant station as against the Planned/Agreed Quantum and shortages in FY 2020-21. The Petitioner further detailed the source wise actual coal consumption in Unit-II and Unit-III for FY 2020-21.

5.29 The Petitioner submitted that the FSA got signed on 05.10.2020 between Tata Power and CCL whereas the tripartite agreement for coal quality monitoring between third party agency, seller and buyer was executed on 19th October 2020.

5.30 The Petitioner has submitted the month wise and year wise 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 2020-21.

#### *Commission's Analysis*

5.31 The Commission observed that the Petitioner had procured coal from other sources in addition to sources that are approved by the Commission in its MTR Order dated February 14, 2020 owing to different reasons.

5.32 The Commission in the discrepancy note dated October 14, 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 November 22, 2022 submitted the details of coal consumption along with justification for deviations from the approved procurement plan.

5.33 The Commission has computed the GCV for each type of coal by considering the actual weighted average GCV after scrutinizing the actual monthly GCV submitted by the Petitioner. The Petitioner is directed to bring to the notice of the Commission for any such changes and shortage in supply of coal on quarterly basis and should ensure the cost effectiveness of such purchase.

5.34 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 shown below.

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

Particulars	Fuel Mix (%)			GCV (kCal/kg)		
	MTR Order	Petition	Approved	MTR Order	Petition	Approved
Middling Coal	54.30%	20.30%	20.30%	4,057.58	3920.16	3920.16
2P Coal		0.64%	0.64%		2768.49	2768.49
WB Reject Coal		2.23%	2.23%		2723.15	2723.15
CCL [Shakti 3] Coal		20.85%	20.85%		3598.13	3598.13
BCCL [e-auction] Coal		3.72%	3.72%		4312.19	4312.19
ECL [e-auction] Coal		9.56%	9.56%		5289.78	5289.78
Tailing (Road) Coal		4.12%	4.12%		4190.41	4190.41
CCL [Shakti 2] WIV Coal		2.67%	2.67%		5007.13	5007.13
ECL [Shakti 2] Coal	8.42%	6.14%	6.14%	4,848.00	5111.09	5111.09
CCL [Shakti 2] Coal	19.00%	17.90%	17.90%	3,250.00	3792.79	3792.79
MCL [Shakti 2] Coal	18.29%	11.85%	11.85%	2,950.00	3120.99	3120.99
Wt. Avg				3,768.52	3960.30	3960.30

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



Particulars	Fuel Mix (%)			GCV (kCal/kg)		
	MTR Order	Petition	Approved	MTR Order	Petition	Approved
Middling Coal	61.74%	15.06%	15.06%	4,062.69	3,907.64	3,907.64
2P Coal		0.74%	0.74%		2,768.49	2,768.49
WB Reject Coal		3.98%	3.98%		2,723.15	2,723.15
CCL [Shakti 3] Coal		15.24%	15.24%		3,542.57	3,542.57
BCCL [e-auction] Coal		4.16%	4.16%		4,288.38	4,288.38
ECL [e-auction] Coal		2.41%	2.41%		5,284.58	5,284.58
Tailing (Road) Coal		4.76%	4.76%		4,190.41	4,190.41
CCL [Shakti 2] WIV Coal		0.51%	0.51%		5,119.35	5,119.35
ECL [Shakti 2] Coal	7.05%	13.01%	13.01%	4,848.00	5,043.63	5,043.63
CCL [Shakti 2] Coal	15.90%	15.93%	15.93%	3,250.00	3,756.08	3,756.08
MCL [Shakti 2] Coal	15.31%	24.20%	24.20%	2,950.00	3,110.97	3,110.97
Wt. Avg				3,818.43	3,795.86	3,795.86

## Transit Loss

### Petitioner's Submission

5.35 The Petitioner submitted that the actual Transit Loss in all types of Coal as 0.8% except Tailing Road Coal as 0.2%. The transit loss for other category of coal had been considered by the Petitioner as per the norms given in Regulation 8.21 of the Generation Tariff Regulations 2015.

### Commission's Analysis

5.36 The Commission 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 in all type of coal as 0.8% (for non-pit head plant) except Trailing Road Coal as 0.2% (for pit head plant).

5.37 In accordance with the Clause 8.21 of JSERC Generation Tariff Regulation, 2015, the Commission had approved the normative transit loss as 0.80% in the MTR Order dated February 14, 2020.

5.38 The Commission further observes that the Petitioner had filed an Appeal in this matter before the Hon'ble APTEL against the MYT Order dated February 19, 2018,





which is still pending. Since, the matter is sub-judice before the Hon'ble APTEL, the Commission approves the transit loss as 0.80% for the non-pit head plant and 0.20% for the pit head plant for FY 2020-21 for both Units.

5.39 In view of the above, the Commission approves the transit loss on a normative basis for FY 2020-21 as shown below.

**Table 12: Transit Loss as Approved by the Commission**

Particulars	MTR Order	Petition	Approved
Middling Coal	0.80%	0.80%	0.80%
2P Coal			
WB Reject Coal			
CCL [Shakti 3] Coal			
BCCL [e-auction] Coal			
ECL [e-auction] Coal			
Tailing (Road) Coal	0.20%	0.20%	0.20%
CCL [Shakti 2] WIV Coal	0.80%	0.80%	0.80%
ECL [Shakti 2] Coal			
CCL [Shakti 2] Coal			
MCL [Shakti 2] Coal			

### **Landed Cost of Coal**

#### **Petitioner's Submission**

5.40 The Petitioner had submitted 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, 2015.

5.41 The Petitioner also submitted that for all procurements other than coal from West Bokaro mines of Tata Steel, Tata Steel has always been duly informed in advance, which had full knowledge of cost implication and granted prior consent.

5.42 The Petitioner further submitted that the price and quality of the fuel are uncontrollable in nature for a generating company as per regulation 6.13 of JSERC Generation Tariff Regulations, 2015 and requested the Commission to approve the same as proposed by the Petitioner.

#### **Commission's Analysis**

5.43 The Commission has scrutinized the total coal consumption, GCV and landed price





of primary coal submitted by the Petitioner.

5.44 The Commission for reasons already stated earlier in this Order approves the normative transit loss for the calculation of landed price of coal.

5.45 After scrutinizing the submission made by the Petitioner, the Commission has arrived at the weighted average landed cost of coal by the following methodology: -

- Audited figures 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.

5.46 The weighted average landed price of coal as approved in its MTR Order dated February 14, 2022 as submitted by the Petitioner and approved now by the Commission for FY 2020-21 is provided in the table below.

**Table 13: Landed Price of Primary Fuel for Unit-II as approved by the Commission**

Particulars	Rs./Ton		
	MTR Order	Petition	Approved
Middling Coal	4388.51	4215.76	4215.76
2P Coal		3103.00	3103.00
WB Reject Coal		2713.00	2713.00
CCL [Shakti 3] Coal		2917.02	2917.02
BCCL [e-auction] Coal		5483.08	5483.08
ECL [e-auction] Coal		6110.00	6110.00
Tailing (Road) Coal		4362.00	4362.00
CCL [Shakti 2] WIV Coal		4106.50	4106.50
ECL [Shakti 2] Coal	5441.29	5547.44	5547.44
CCL [Shakti 2] Coal	2788.49	3195.95	3195.95
MCL [Shakti 2] Coal	2723.52	2518.76	2518.76
<b>Wtg. Avg. Landed Price of Primary Fuel</b>	<b>3869.06</b>	<b>3833.77</b>	<b>3833.77</b>

**Table 14: Landed Price of Primary Fuel for Unit- III as approved by the Commission**

Particulars	Rs./Ton		
	MTR Order	Petition	Approved
Middling Coal	4389.01	4196.92	4196.92
2P Coal		3103.00	3103.00
WB Reject Coal		2713.00	2713.00



CCL [Shakti 3] Coal		2830.96	2830.96
BCCL [e-auction] Coal		5614.36	5614.36
ECL [e-auction] Coal		6110.00	6110.00
Tailing (Road) Coal		4362.00	4362.00
CCL [Shakti 2] WIV Coal		4070.97	4070.97
ECL [Shakti 2] Coal	5441.29	5465.09	5465.09
CCL [Shakti 2] Coal	2788.49	3207.55	3207.55
MCL [Shakti 2] Coal	2723.52	2577.66	2577.66
<b>Wtg. Avg. Landed Price of Primary Fuel</b>	<b>3869.77</b>	<b>3649.23</b>	<b>3649.23</b>

### Calorific value and Cost of Secondary Fuel

#### Petitioner's Submission

5.47 The Petitioner submitted the weighted average calorific value and landed price of secondary fuel (i.e., LDO) is 10284.92 kCal/L and Rs. 46313.37/kL for Unit-II and 10241.02 kCal/L and Rs. 46803.36/kL for Unit-III respectively.

#### Commission's Analysis

5.48 The Commission had scrutinized the month wise secondary oil consumption and landed price of secondary fuel oil consumption detail submitted by the Petitioner and approves the calorific value and landed price of secondary fuel as shown below.

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

Particulars	Calorific Value (kcal/L)			Landed Price (Rs./kL)		
	MTR Order	Petition	Approved	MTR Order	Petition	Approved
<b>UNIT-II</b>	9,100.00	10,284.92	10,284.92	49,749.00	46,313.37	46,313.37
<b>UNIT-III</b>	9,100.00	10,241.02	10,241.02	49,562.00	46,803.36	46,803.36

### Energy Charge Rate (ECR)

#### Petitioner's Submission

5.49 The Petitioner submitted the Energy Charge Rate (ECR) for FY 2020-21 as Rs. 2.80/kWh and Rs. 2.79/kWh for Unit-II and Unit-III respectively before taking into account the discount of Shakti Coal.

5.50 Further, the Petitioner has pass 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 1<sup>st</sup> amended of Power Purchase Agreement (PPA) between the Petitioner and Beneficiary for Jojobera Plant Unit-II and Unit-III.

5.51 For calculation of ECR, the Petitioner has considered the normative Gross Station Heat Rate of 2567 kCal/kWh for Unit-II and 2577 kCal/kWh for Unit-III respectively, normative Auxiliary Consumption of 10.00% and normative secondary fuel oil as 1.00 ml/kWh for both the Units has been considered.

### **Commission's Analysis**

5.52 As per Clause 8.17 of JSERC Generation Tariff Regulation, 2015, the energy charge (i.e. Variable Charge) shall cover primary fuel and secondary fuel costs and shall be payable by every beneficiary for the energy scheduled to be supplied to such beneficiary during the calendar month on an ex-power plant basis, at the specified energy charge rate of the month (with fuel price adjustment).

5.53 The formula for calculation of energy charge payable to a Generating Company is specified in Clause 8.18 and Clause 8.19 of JSERC Generation Tariff Regulation, 2015 as quoted below.

*“8.18 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.}*

*8.19 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 formula:*

*(a) For coal based stations*

*$$ECR = \{(GHR - SFC \times CVSF) \times LPPF / CVPF + SFC \times LPSFi + LC \times LPL\} \times 100 / (100 - AUX)$$*

*.....*

*Where,*

*AUX - Normative auxiliary energy consumption in percentage*

*CVPF - Weighted Average Gross calorific value of coal as received, in KCal per kg, for coal based stations. 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 sent out. GHR - 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”.

5.54 The Commission approved the ECR based on approved coal mix, normative transit loss, normative Secondary Fuel Oil consumption as approved in this Order. The table below details the ECR and Fuel Cost for Unit-II and Unit-III as approved by the Commission for FY 2020-21.

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

Particulars	UoM	FY 2020-21		
		MTR Order	Petition	Approved
Net Generation	MU	747.88	677.70	677.70
Normative Auxiliary Consumption (AUX)	%	10.00%	10.00%	10.00%
Normative Gross Station Heat Rate (SHR)	kCal/kWh	2,567.00	2,567.00	2,567.00
Specific fuel Oil Consumption (SFC)	mL/kWh	0.50	1.00	0.50
Calorific Value of Oil (CVSF)	kCal/ml	9.10	10.28	10.28
GCV of Primary Fuel (CVPF)	kCal/kg	3,768.52	3,960.30	3,960.30
Landed Price of Primary Fuel (LPPF)	Rs./kg	3.87	3.83	3.83
Landed Price of Secondary Fuel (LPSFi)	Rs./ml	0.05	0.05	0.05
<b>Energy Charge Rate (ECR)</b>	<b>Rs/kWh</b>	<b>2.968*</b>	<b>2.80</b>	<b>2.78</b>

\*As Per MTR Order ECR for FY 2020-21 is Rs 2.951/kWh

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

Particulars	UoM	UNIT-III		
		MTR Order	Petition	Approved
Net Generation	MU	804.17	606.06	606.06
Normative Auxiliary Consumption (AUX)	%	10.00%	10.00%	10.00%
Normative Gross Station Heat Rate (SHR)	kCal/kWh	2,577.00	2,577.00	2,577.00
Specific fuel Oil Consumption (SFC)	mL/kWh	0.50	1.00	0.50



Calorific Value of Oil (CVSF)	kCal/ml	9.10	10.24	10.24
GCV of Primary Fuel (CVPF)	kCal/kg	3,771.38	3,795.86	3,795.86
Landed Price of Primary Fuel (LPPF)	Rs./kg	3.87	3.65	3.65
Landed Price of Secondary Fuel (LPSFi)	Rs./ml	0.05	0.05	0.05
<b>Energy Charge Rate (ECR)</b>	<b>Rs/kWh</b>	<b>2.987*</b>	<b>2.79</b>	<b>2.77</b>

\*As Per MTR order ECR for FY 2020-21 is Rs 2.960/kWh

### Summary of Fuel Cost

5.55 The table below provides the summary of Fuel Cost as submitted by the Petitioner and approved by the Commission for True-up of FY 2020-21.

**Table 18: ECR for Unit-II as approved by the Commission**

Particulars	UoM	FY 2020-21		
		MTR Order	Petition	Approved
Primary Fuel Cost	Rs. Cr.	217.52		186.74
Secondary Fuel Cost	Rs. Cr.	2.07		1.74
Energy Cost	Rs. Cr.	219.59	189.86	188.49

**Table 19: ECR for Unit-III as approved by the Commission**

Particulars	UoM	FY 2020-21		
		MTR Order	Petition	Approved
Primary Fuel Cost	Rs. Cr.	234.76		166.50
Secondary Fuel Cost	Rs. Cr.	2.21		1.58
Energy Cost	Rs. Cr.	236.97	169.32	168.07

### Determination of Fixed Cost

#### Additional Capitalization

##### *Petitioner's Submission*

5.56 The Petitioner had submitted the actual capitalization for Unit-II and Unit-III for FY 2020-21 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.

5.57 The Petitioner submitted that the same methodology has been adopted by the Commission for approving additional capitalization in the MTR Order dated February 14, 2020. The Petitioner 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 shown below.

**Table 20: Methodology of apportionment as submitted by the Petitioner**

Particulars	UoM	MTR Order
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
<b>Combined Contribution (Unit-II+Unit-III)</b>	<b>%</b>	<b>43.84</b>

5.58 The following table summarizes the additional capitalization for Unit-II and Unit-III as proposed by the Petitioner for FY 2020-21. The Petitioner submitted that the major reason for deviation from approved capitalization is mainly change in scope of work, time and cost overrun, savings in the Capex Schemes were also submitted before this Hon'ble Commission vide letters dated 30.09.2020, 04.12.2020, 27.02.2021 and 30.09.2021.

5.59 The Petitioner requested Hon'ble Commission to allow the above Capitalization of Rs. 20.76 Crore and carry forward of Rs. 3.93 Crore.

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

Particulars	MYT Order	Petition
<b>Unit II Standalone</b>		
Oil filtration system for Coal Mill	-	0.028
Compressed air system for fly ash handling system	1.75	1.75
Hydraulic Augur for CHP	1.00	-
6.6 kV Switchboard Replacement	-	0.04
2X 60 KVA UPS	0.40	-



Up Gradation of Furnace Safeguard & Supervisory System and BOP Control System	7.03	3.70
Replacement of Battery Chargers	-	0.0004
<b>Unit III Standalone</b>		
210 AH UPS battery bank	0.40	0.29
6.6 Kv Switchboard Replacement	2.54	2.72
2X 60 KVA UPS	0.40	0.30
Oil filtration system for Coal Mill		0.03
Compressed air system for fly ash handling system	1.75	1.74
Hydraulic Augur for CHP	1.00	
Up Gradation of Furnace Safeguard & Supervisory System and BOP Control System	12.00	9.11
<b>Unit II &amp; Unit III Common</b>		
Relining of Ash Ponds	0.44	0.16
<b>Actual Capitalization &amp; New Scheme Proposed</b>		
IT Assets	-	0.04
Replacement of Dead Tank CT with live Tank CT	-	0.08
Miscellaneous Item	-	0.04
<b>Actual Capitalization &amp; New Scheme proposed</b>	-	<b>0.15</b>
<b>Net- Capitalization</b>	<b>28.71</b>	<b>20.76</b>

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

Particulars	Unit-II		Unit-III	
	MTR Order	Petition	MTR Order	Petition
Capitalization	10.41	6.04	18.31	14.72
Decapitalization	-	0.94	-	5.83

### Commission's Analysis

5.60 The Commission has outlined the provisions for the approval of any additional capitalization for a generating station as mentioned in the JSERC Generation Tariff Regulation, 2015. The Clause is stated below: -

*“Additional Capitalisation*

*‘7.5 The capital expenditure 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:*

- (i) Undischarged liabilities;*
- (ii) Works deferred for execution;*
- (iii) Procurement of initial capital spares within the original scope of work, subject to the provisions under clause 7.3,7.4 of these*





*Regulations;*

*(iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and*

*(v) Change in law.*

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

*'7.6 The capital expenditure incurred on the following counts after the cut-off date may, in its discretion, be admitted by the Commission, subject to prudence check:*

*(i) Liabilities to meet award of arbitration or for compliance of the order or decree of a court;*

*(ii) Change in law;*

*(iii) Deferred works relating to ash pond or ash handling system in the original scope of work;*

*(iv) 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;*

*(v) Any liability for works executed prior to the cut-off date, after prudence check of the details of such undischarged liability, total estimated cost of package, reasons for such withholding of payment and release of such payments etc.*

*(vi) Any capital expenditure found justified after prudence check necessitated on account of modifications required or done in fuel receiving system arising due to non-materialisation of coal supply corresponding to full coal linkage in respect of thermal generating station as result of circumstances not within the control of the generating station:*

5.61 The Commission observed that the additional capital expenditure submitted by the Petitioner are in line with the MTR Order dated February 14, 2020. Thus, the Commission approves the capitalization for FY 2020-21 as detailed above.

5.62 Further, 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. 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.





5.63 The Commission has also scrutinized the auditor certificate submitted by the Petitioner regarding the Capitalization of assets for FY 2020-21 and after a prudent check approves the Capitalization as shown below.

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

<b>Particulars</b>	<b>MYT</b>	<b>Petition</b>	<b>Approved</b>
<b>Unit II Standalone</b>			
Oil filtration system for Coal Mill	-	0.028	0.028
Compressed air system for fly ash handling system	1.75	1.75	1.75
Hydraulic Augur for CHP	1.00	-	-
6.6 Kv Switchboard Replacement	-	0.04	0.04
2X 60 KVA UPS	0.40	-	-
Up Gradation of Furnace Safeguard & Supervisory System and BOP Control System	7.03	3.70	3.70
Replacement of Battery Chargers	-	0.0004	0.0004
<b>Unit III Standalone</b>			
210 AH UPS battery bank	0.40	0.29	0.29
6.6 Kv Switchboard Replacement	2.54	2.72	2.72
2X 60 KVA UPS	0.40	0.30	0.30
Oil filtrations system for Coal Mill		0.03	0.03
Compressed air system for fly ash handling system	1.75	1.74	1.74
Hydraulic Augur for CHP	1.00		
Up-Gradation of Furnace Safeguard & Supervisory System and BOP Control System	12.00	9.11	9.11
<b>Unit II &amp; Unit III Common</b>			
Relining of Ash Ponds	0.44	0.16	0.16
<b>Actual Capitalization &amp; New Scheme Proposed</b>			
IT Assets	-	0.04	0.04
Replacement of Dead Tank CT with live Tank CT	-	0.08	0.08
Miscellaneous Item	-	0.04	0.04
<b>Actual Capitalization &amp; New Scheme proposed</b>	-	<b>0.15</b>	<b>0.15</b>
<b>Net- Capitalization</b>	<b>28.71</b>	<b>20.76</b>	<b>20.76</b>

5.64 Further, the Petitioner in its main petition had submitted decapitalization for FY 2020-21 as Rs.1.38 Crore and Rs.5.84 Crore for Unit-II and Unit-III respectively. The Petitioner vide its additional submission dated November 22, 2022, revised the decapitalization for FY 2020-21 as Rs. 0.94 Crore for Unit-II and no Change in Unit-III.

5.65 Based on the submission made by the Petitioner and after a prudent check, the Commission observes that the de-capitalization is related to Original Project Cost for which the loan is already paid by the Petitioner.

5.66 The Commission has also scrutinized the auditor certificate submitted by the



Petitioner regarding the de-capitalization of assets for FY 2020-21 and after a prudence check approves the decapitalization as shown below.

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

Particulars	Unit-II			Unit-III		
	MTR Order	Petition	Approved	MTR Order	Petition	Approved
Capitalization	10.41	6.04	6.04	18.31	14.72	14.72
Decapitalization	-	0.94	0.94	-	5.83	5.83

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

Particulars	FY 2020-21		
	MTR Order	Petition	Approved
Opening GFA	487.18	483.52	483.52
Additional Capitalisation	10.41	6.04	6.04
Decapitalisation	-	0.94	0.94
Closing GFA	497.58	488.62	488.62

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

Particulars	FY 2020-21		
	MTR Order	Petition	Approved
Opening GFA	464.29	464.31	464.31
Additional Capitalisation	18.31	14.72	14.72
Decapitalisation	-	5.83	5.83
Closing GFA	482.60	473.20	473.20

## Depreciation

### Petitioner's Submission

5.67 The Petitioner submitted the depreciation for FY 2020-21 as summation of depreciation incurred on the following assets:

- Original Project Cost;
- Additional Capitalization approved for FY 2011-12 to FY 2019-20;
- Actual Additional Capitalization FY 2020-21; and

5.68 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.

5.69 The Petitioner submitted that the cumulative depreciation on total assets [i.e. GFA (Including Additional Capitalization)] up to FY 2017-18 has crossed 70% for both



the Units 2 and 3, the Petitioner as per Regulation 7.32 read with Regulation 2.1(58) and 2.1(27) of GTR 2015, had spread the balance depreciable value (i.e. 90% of the Capital Cost minus Cumulative depreciation recovered for assets in service upto 2018-19) over the balance useful life (taking useful life of 25 years specified in Regulations) of the Plant.

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

Particulars	Unit-II		Unit-III	
	MTR Order	Petition	MTR Order	Petition
<b>Depreciation</b>	<b>6.95</b>	<b>11.71</b>	<b>7.64</b>	<b>11.39</b>

**Commission’s Analysis**

5.70 The JSERC Generation Tariff Regulation, 2015 has specified the following methodology for the calculation of depreciation expense for existing generating station

*“7.28 Depreciation shall be calculated for each year of the tariff period, on the amount of Capital Cost of the assets admitted by the Commission;*

*Provided that depreciation shall not be allowed on assets funded by any capital subsidy/grant.*

*7.29 The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset.*

.....

*7.30 Land other than land held under lease and the land for reservoir in case of hydrogenerating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.*

*7.31 Depreciation shall be calculated annually based on ‘Straight Line Method’ and at rates specified in Appendix-I to these Regulations for the assets of the generating station:*

*Provided that, the remaining depreciable value as on 31st March of the Year closing after a period of 12 Years from the Date of Commercial operation shall be spread over the balance Useful life of the assets.*

*7.32 In case of existing projects, the balance depreciable value as on 1st April 2016 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31<sup>st</sup> March 2016 from the gross depreciable value of the assets.*

*The rate of depreciation shall be continued to be charged at the rate*



*specified in Appendix-I till cumulative depreciation reaches 70%. Thereafter the remaining depreciable value shall be spread over the remaining life of the asset such that the maximum depreciation does not exceed 90%.*

*7.33 Depreciation shall be chargeable from the first Year of commercial operation. In case of commercial operation of the asset for part of the Year, depreciation shall be charged on pro rata basis.*

5.71 The Commission observed that the Petitioner proposes different methodology for calculation of depreciation vis-à-vis the method approved by the Commission. Further, the Petitioner submitted that since cumulative depreciation on Gross Fixed Asset, i.e., (Original Cost and Additional Capitalizations) has crossed 70% upto FY 2017-18, the Petitioner, therefore, in terms of Regulation 7.32 of the Generation Tariff Regulations 2015 has computed the depreciation on the aggregate asset by dividing the balance depreciable value by balance useful life of the project.

5.72 The Commission has scrutinized the detail submitted by the Petitioner and 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 Regulations 7.3, the Commission is of the view to spread equally the remaining depreciable amount.

5.73 As per Regulation 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.

5.74 Hence, the Commission taking into account the PPA tenure and the methodology used by Commission in earlier Order, 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 as approved by the Commission (Rs. Crore)**

Particulars	Unit-II			Unit-III		
	MTR Order	Petition	Approved	MTR Order	Petition	Approved
Depreciation	6.95	11.71	6.39	7.64	11.39	6.65

## **Operation & Maintenance Expenses**



### **Petitioner's Submission**

5.75 The Petitioner had claimed the Operation and Maintenance (O&M) expenses under the following broad categories: -

- Employee Expenses
- Terminal Benefits;
- Repairs & Maintenance (R&M) Expenses;
- Administrative and General (A&G) Expenses;
- Petition application Fee & Publication Expenses;
- Ash Disposal Expenses;
- Raw water Expenses;
- Capital Spares.

5.76 The Petitioner has claimed the normative employee expenses as approved in the MTR Order dated February 14, 2020. The terminal liabilities are considered on actuals based on the audited accounts.

5.77 The Petitioner has claimed the normative R&M expenses as approved in the MTR Order dated February 14, 2020 for the purpose of true-up for FY 2020-21 as per Clause 6.14.b read with Clause 6.11 and Clause 6.12 of the JSERC Generation Tariff Regulations, 2015.

5.78 The A&G expenses submitted by the Petitioner comprises of ash disposal expenses, head office expenses & shared services expenses, application fees, and publication expenses and other A&G expenses.

5.79 The Petitioner has claimed the ash disposal expenses, application fees and publication expenses based on the actual as per audited accounts. However, the expenses related to head office expenses & shared services expenses and other A&G expenses are considered on normative basis as approved in the MTR Order dated February 14, 2020.

5.80 The Petitioner has submitted that the Water Charges to TSL on the basis of estimated payment proportion of TSL to GoJ bill (which was 44.63%) from August 2020 onwards. For the purposes of present Petition, the Petitioner has considered actual payment made during FY 2020-21, i.e. 100% for the Period April to July 2020 since payment was made to TSL and 44.63% of the Monthly billing pertaining to Unit 2 and Unit 3 as Raw Water Charges for the Period August'20 to March'21 as per Hon'ble Commission's directions.

5.81 Further, the Petitioner has submitted that only Raw Water Charges are under dispute before Hon'ble High Court of Jharkhand and, hence, this proportion may be applied only on Raw Water Charges and Base Water Charges may kindly be



allowed fully. The ratio of 44.63% has been computed by taking ratio of Tata Steel Actual Payment to GoJ against total water tax bill raised by GoJ up to month of August 2020 (Rs. 333 Crore/ 746.08 Crore = 44.63%).

5.82 Further, the Petitioner has provisionally considered the actual payment of Rs. 2.64 Cr. and Rs. 2.44 Cr. towards Raw water charges for FY 2020-21 for Unit 2 and Unit 3 respectively.

5.83 In regards to capital spare, the Petitioner has submitted that the variations in the projection and actual expenditure is mainly because of part of material which was projected for FY 2020-21 were actually delivered in FY 2019-20 itself. Furthermore, in FY 2019-20, actual Capital Expenditure of Rs 2.53 Cr and 2.59 Cr has been claimed against approved 0.7 Cr. in each Unit 2 and Unit 3 respectively in True-up Petition for FY 2019-20 dated 01.12.2020. Also, because of COVID-19, there was delay in delivery of Turbine and Generator Bearing Sets amounting to Rs. 0.79 Crore each for Unit 2 and 3 leading to carry forward of the same to FY 2021-22. However, it may kindly be noted that expenditure claimed towards Capital Spares is well within the limit as approved in the MTR and APR Order.

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

Particulars	UoM	UNIT-II		UNIT-III	
		MTR Order	Petition	MTR Order	Petition
Employee Expenses	Rs. Cr.	8.45	8.45	8.45	8.45
Terminal Liabilities	Rs. Cr.	0.25	0.58	0.25	0.58
R&M Expenses	Rs. Cr.	21.94	21.94	15.66	15.66
Ash Disposal Expenses	Rs. Cr.	5.00	3.39	4.87	3.17
Raw Water	Rs. Cr.	2.82	2.64	3.04	2.44
HO Expenses	Rs. Cr.	11.53	11.53	10.11	10.11
Application & Publication Fee	Rs. Cr.	0.33	0.43	0.32	0.43
Other A&G Expenses	Rs. Cr.	5.51	5.51	5.04	5.04
Capital Spares	Rs. Cr.	3.00	0.34	3.00	0.27
<b>O&amp;M Expenses</b>	<b>Rs. Cr.</b>	<b>58.83</b>	<b>54.81</b>	<b>50.74</b>	<b>46.16</b>

### Commission's Analysis

5.84 As per JSERC Generation Tariff Regulations, 2015 Clause 7.40 and Clause 7.41 lays out the provision for determination of O&M expenses and the same is quoted below.

*“7.40 Operation and Maintenance (O&M) expenses shall comprise of the*



following:

- (a) Salaries, wages, pension contribution and other employee costs;
- (b) Administrative and General costs;
- (c) Repairs and maintenance expenses; and
- (d) Other miscellaneous expenses statutory levies and taxes (except corporate incometax).

7.41 Existing Thermal Generating Stations:

- (a) The Applicant shall submit details of O&M expenses as required by the Commission. The O&M expenses excluding terminal liabilities for the Base Year shall be determined based on accounting statements for the base year, estimates of the Generating Company for relevant years and other factors considered relevant.
- (b) The O&M expenses excluding terminal liabilities permissible towards determination of tariff for each year of the Control Period shall be determined after a prudence check by the Commission based on submissions of the Generating Company, previous years' actual expenses and any other factor considered relevant.
- (c) Terminal Liabilities will be approved as per actual submitted by the Generating Company or be established through actuarial studies.
- (d) Increase in O&M charges on account of war, insurgency or changes in laws, or like eventualities where the Commission is of the opinion that an increase in O&M charges is justified, may be considered by the Commission for a specified period.”

5.85 The Commission has scrutinized the submission made by the Petitioner and approves the Terminal Liabilities, Ash Disposal Expenses and Petition Application Fee & Publication Expenses as per audited accounts.

5.86 The Commission has approved the Employee Cost, R&M Expenses, HO & SS Expenses and other A&G Expenses as per normative value approved in MTR Order dated February 14, 2020.

5.87 The Petitioner in its previous year true-up 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.

5.88 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 in present petition has approved the total Water Charge on the actual payment basis as Rs 2.64 Cr. & Rs 2.44 Cr for Unit-II and Unit-III respectively. 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.

5.89 It is observed that, the overall capital spares claimed is well within the overall approved value as per MYT Order dated February 19, 2018 and MTR Order dated February 14, 2020. The Commission has therefore approved the capital spares as claimed by the Petitioner.

5.90 Considering the facts and circumstances of the given petition the Commission approved the Operation & Maintenance expense for FY 2020-21 is shown below.

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

Particulars	Unit-II			Unit-III		
	MTR Order	Petition	Approved	MTR Order	Petition	Approved
Employee Cost	8.45	8.45	8.45	8.45	8.45	8.45
R&M Expenses	21.94	21.94	21.94	15.66	15.66	15.66
HO & SS Expenses	11.53	11.53	11.53	10.11	10.11	10.11
Other A&G Expenses	5.51	5.51	5.51	5.04	5.04	5.04

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

Particulars	Unit-II			Unit-III		
	MTR Order	Petition	Approved	MTR Order	Petition	Approved
Terminal Liabilities	0.25	0.58	0.58	0.25	0.58	0.58
Ash Disposal Expenses	5.00	3.39	3.39	4.87	3.17	3.17
Raw Water Expenses	2.82	2.64	2.64	3.04	2.44	2.44
Application & Publication Expenses	0.33	0.43	0.43	0.32	0.43	0.43
Capital Spares	3.00	0.34	0.34	3.00	0.27	0.27

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

Particulars	Unit-II			Unit-III		
	MTR Order	Petition	Approved	MTR Order	Petition	Approved





Employee Cost	8.45	8.45	8.45	8.45	8.45	8.45
Terminal Liabilities	0.25	0.58	0.58	0.25	0.58	0.58
R&M Expenses	21.94	21.94	21.94	15.66	15.66	15.66
Ash Disposal Expenses	5.00	3.39	3.39	4.87	3.17	3.17
Raw Water Expenses	2.82	2.64	2.64	3.04	2.44	2.44
HO & SS Expenses	11.53	11.53	11.53	10.11	10.11	10.11
Application & Publication Expenses	0.33	0.43	0.43	0.32	0.43	0.43
Other A&G Expenses	5.51	5.51	5.51	5.04	5.04	5.04
Capital Spares	3.00	0.34	0.34	3.00	0.27	0.27
<b>O&amp;M Expenses</b>	<b>58.83</b>	<b>54.81</b>	<b>54.81</b>	<b>50.74</b>	<b>46.16</b>	<b>46.16</b>

### Interest on Loan

#### Petitioner's Submission

5.91 The Petitioner had 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.

5.92 In line with the MTR Order dated February 14, 2020, the Petitioner had considered 70% of the actual capitalization as Normative Loan for FY 2020-21 with interest rate of 13.02% and 12.33% for Unit-II and Unit-III respectively.

5.93 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.

5.94 The Interest and Finance Charges claimed by the Petitioner is shown in the table below.

**Table 33: Interest on Loan as submitted by the Petitioner (Rs. Crore)**

Particulars	Unit-II		Unit-III	
	MTR Order	Petition	MTR Order	Petition
Opening Loan	28.18	27.84	22.42	19.56
Deemed Loan Addition	7.28	4.23	12.82	10.31
Deletion During year	-	0.08	-	0.08
Deemed Loan Repayment	4.68	7.74	3.87	5.92
Closing Loan	30.78	24.32	31.37	23.95
Interest Rate	13.02%	13.02%	12.33%	12.33%
<b>Interest on Loan</b>	<b>3.84</b>	<b>3.40</b>	<b>3.32</b>	<b>2.68</b>

#### Commission's Analysis

5.95 The Commission has calculated the gross normative loan for FY 2020-21 as per



Clause 7.13 and Clause 7.14 of the JSERC Generation Tariff Regulation, 2015 as quoted below.

*“7.13 In case of the generating station declared under commercial operation prior to 1.4.2016, debt-equity ratio allowed by the Commission for determination of Tariff for the period ending 31.3.2016 shall be considered for determination of tariff.*

*During the control period, debt-equity ratio allowed by the Commission for determination of Tariff for the period ending 31st March 2017 shall be considered for determination of tariff.*

*7.14 For the project declared under commercial operation on or after 1.04.2016, if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:*

*Provided that where equity deployed is less than 30% of capital cost, the actual equity shall be considered for determination of tariff:*

*Provided further that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:*

*Explanation: -*

- i. The premium, if any, raised by the Generating Company, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, provided such premium amount and internal resources are actually utilized for meeting the capital expenditure of the generating station.*
- ii. Provided, further that any consumer contribution, deposit work 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.*
- iii. Any expenditure incurred or projected to be incurred on or after 1<sup>st</sup> April 2016 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernization expenditure for life extension shall be serviced in the manner specified in clause 7.14 of this Regulation.”*

5.96 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 2020-21 is considered equal to closing normative loan amount of FY 2019-20 as approved in the previous True-up Order dated November 04, 2022.

5.97 The Commission has considered the deemed loan repayment equal to approved depreciation (Additional Capitalization) for FY 2020-21.

5.98 In accordance to Clause 7.23 of JSERC Generation Tariff Regulations, 2015 and as approved in MTR Order dated February 14, 2020, the Commission has approved the interest rate as 13.02% and 12.33% for Unit-II and Unit-III respectively as shown below.

**Table 34: Interest on Loan as approved by the Commission (Rs. Crore)**

Particulars	Unit-II			Unit-III		
	MTR Order	Petition	Approved	MTR Order	Petition	Approved
Opening Loan	28.18	27.84	27.84	22.42	19.56	19.56
Deemed Loan Addition	7.28	4.23	3.57	12.82	10.31	6.22
Deemed Loan Repayment	4.68	7.74	4.22	3.87	5.92	3.46
Closing Loan	30.78	24.32	27.19	31.37	23.95	22.32
Interest Rate	13.02%	13.02%	13.02%	12.33%	12.33%	12.33%
Interest on Loan	<b>3.84</b>	<b>3.40</b>	<b>3.58</b>	<b>3.32</b>	<b>2.68</b>	<b>2.58</b>

### Interest on Working Capital (IOWC)

#### Petitioner's Submission

5.99 The Petitioner submitted the Interest on Working Capital (IOWC) requirement in line with Clause 7.34 of the JSERC Generation Tariff Regulations, 2015, as shown below.

**Table 35: IOWC as submitted by the Petitioner (Rs. Crore)**

Particulars	Unit-II		Unit-III	
	MTR Order	Petition	MTR Order	Petition
Coal Stock (30 Days)	39.18	36.86	39.30	36.75
Coal for Generation (30 Days)				
Cost of Secondary Fuel (60 Days)	0.37	0.69	0.37	0.70
Maintenance Spares (20% O&M)	11.77	10.96	10.15	9.23
O&M Expenses (1 Month)	4.9	4.57	4.23	3.85
Receivables (2 Months)	55.04	56.36	56.42	54.38
Total Working Capital requirement	111.26	109.45	110.47	104.90
Interest rate on WC	11.95%	11.65%	11.95%	11.65%



<b>Interest on Working Capital</b>	<b>13.30</b>	<b>12.75</b>	<b>13.20</b>	<b>12.22</b>
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### Commission's Analysis

5.100 The Commission has computed the Interest on Working Capital (IOWC) for FY 2020-21 for both the Units as per Clause 7.34 and Clause 7.37 of JSERC Generation Tariff Regulations, 2015 as reproduced below.

*“7.34 The Commission shall determine the Working Capital requirement for coal based generating stations containing the following components:*

- (a) Cost of coal or lignite and limestone towards stock, if applicable, for 15 days for pit-head generating stations and 30 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;*
- (b) Cost of coal or lignite and limestone for 30 days for generation corresponding to normative annual plant availability factor;*
- (c) Cost of secondary fuel oil for two months for generation corresponding to the Normative Annual Plant Availability Factor;*
- (c) Maintenance spares @ 20% of operation and maintenance expenses;*
- (d) Operation and Maintenance expenses for 1 month; and*
- (e) Receivables equivalent to two months of capacity charges and energy charges for sale of electricity calculated on the Normative Annual Plant Availability Factor.*

*7.37 The cost of fuel in cases covered under clause 7.34 and 7.35 of these Regulations shall be based on the landed cost incurred (taking into account normative transit and handling losses) by the Generating Company and gross calorific value of the fuel as per actual for the three months preceding the first month for which tariff is to be determined and no fuel price escalation shall be provided during the tariff period.”*

5.101 The Commission has considered the Bank Rate (as on April 01, 2020) for the purpose of computation of Interest on Working Capital (IOWC) as per Clause 7.38 of JSERC Generation Tariff Regulation, 2015. Hence, the Interest on Working Capital (IOWC) as approved by the Commission for FY 2020-21 is summarized in the following table.

**Table 36: IOWC as approved by the Commission (Rs. Crore)**



Particulars	Unit-II			Unit-III		
	MTR Order	Petition	Approved	MTR Order	Petition	Approved
Coal Stock (30 Days)			19.02			16.96
Coal for Generation (30 Days)	39.18	36.86	19.02	39.30	36.75	16.96
Cost of Secondary Fuel (60 Days)	0.37	0.69	0.36	0.37	0.70	0.32
Maintenance Spares (20% O&M)	11.77	10.96	10.96	10.15	9.23	9.23
O&M Expenses (1 Month)	4.9	4.57	4.57	4.23	3.85	3.85
Receivables (2 Months)	55.04	56.36	55.51	56.42	54.38	53.41
Total Working Capital requirement	111.26	109.45	109.43	110.47	104.90	100.73
Interest rate on Working Capital	11.95%	11.65%	11.65%	11.95%	11.65%	11.65%
<b>Interest on Working Capital</b>	<b>13.30</b>	<b>12.75</b>	<b>12.75</b>	<b>13.20</b>	<b>12.22</b>	<b>11.73</b>

## Return on Equity

### Petitioner's Submission

5.102 The Petitioner stated that the additional capitalization is done from internal accrual and hence considered the financing of additional capitalization at Normative Debt: Equity ratio of 70:30 for FY 2020-21. The Petitioner had further submitted that for additional capitalization during the FY 2020-21, Return on Equity had been computed from mid-year.

5.103 The Petitioner has submitted that the company has transitioned to the new tax regime effective 01.04.2020 and, accordingly, the applicable Tax rate of 25.168% (22%\*1.10\*1.04) (i.e. 22%(with surcharge of 10% and cess of 4%) has been considered for the purpose of Truing-up in terms of Regulation 7.17 and 7.18 of Generation Tariff Regulations, 2015.

5.104 Further, the Petitioner has filed its return in terms of Section 115BAA of the Income Tax Act, under which Tax rate is 22%. Considering surcharge and cess on tax rate of FY21 thereof, Applicable Tax Rate works out to 25.168%.

**Table 37: Return on Equity as submitted by the Petitioner (Rs. Crore)**

Particulars	Unit-II		Unit-III	
	MTR Order	Petition	MTR Order	Petition
Opening Equity	146.15	145.06	139.29	139.29
Net Addition	3.12	1.53	5.49	2.67
Closing Equity	149.27	146.59	144.78	141.96
Average Equity	147.71	145.82	142.03	140.63



Rate of Return on Equity	15.50%	15.50%	15.50%	15.50%
ROE (Post-Tax)	18.78%	20.71%	18.78%	20.71%
MAT	17.47%	25.17%	17.47%	25.17%
<b>ROE (Pre-Tax)</b>	<b>27.74</b>	<b>30.20</b>	<b>26.68</b>	<b>29.13</b>

### Commission's Analysis

5.105 The Commission has calculated the Gross Normative Equity for FY 2020-21 as per Clause 7.13 and Clause 7.14 of the JSERC Generation Tariff Regulations, 2015.

*“7.13 In case of the generating station declared under commercial operation prior to 1.4.2016, debt-equity ratio allowed by the Commission for determination of Tariff for the period ending 31.3.2016 shall be considered for determination of tariff.*

*During the control period, debt-equity ratio allowed by the Commission for determination of Tariff for the period ending 31st March 2017 shall be considered for determination of tariff.*

*7.14 For the project declared under commercial operation on or after 1.04.2016, if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:*

*Provided that where equity deployed is less than 30% of capital cost, the actual equity shall be considered for determination of tariff:*

*Provided further that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:*

Explanation: -

- i. The premium, if any, raised by the Generating Company, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, provided such premium amount and internal resources are actually utilized for meeting the capital expenditure of the generating station.*
- ii. Provided, further that any consumer contribution, deposit work 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.*
- iii. Any expenditure incurred or projected to be incurred on or after 1<sup>st</sup> April 2016 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernization*



*expenditure for life extension shall be serviced in the manner specified in clause 7.14 of this Regulation.”*

5.106 The Commission had scrutinized the details submitted by the Petitioner in its reply and observed that the company has transitioned to the new tax regime effective 01.04.2020 and, accordingly, the applicable Tax rate of 25.168% (22%\*1.10\*1.04) (i.e. 22% (with surcharge of 10% and cess of 4%) has been considered for the purpose of Truing-up in terms of Regulation 7.17 and 7.18 of Generation Tariff Regulations, 2015.

5.107 The Commission has noted the reply of the Petitioner and in accordance with Clause 7.16, Clause 7.17 and Clause 7.18 of the JSERC Generation Tariff Regulations, 2015, approves the Return on Equity at 15.50% which is grossed up with the MAT rate i.e. 25.17% as applicable for FY 2020-21 as shown below.

**Table 38: Return on Equity for Unit II as approved by the Commission (Rs. Crore)**

Particulars	MTR Order	Petition	Approved
Opening Equity	146.15	145.06	145.06
Net Addition	3.12	1.53	1.53
Closing Equity	149.27	146.59	146.59
Average Equity	147.71	145.82	145.82
Rate of Return on Equity	15.50%	15.50%	15.50%
ROE (Post-Tax)	18.78%	20.71%	20.71%
MAT	17.47%	25.17%	25.17%
<b>ROE (Pre-Tax)</b>	<b>27.74</b>	<b>30.20</b>	<b>30.20</b>

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

Particulars	MTR Order	Petition	Approved
Opening Equity	139.29	139.29	139.29
Net Addition	5.49	2.67	2.67
Closing Equity	144.78	141.96	141.96
Average Equity	142.03	140.63	140.63
Rate of Return on Equity	15.50%	15.50%	15.50%
ROE (Post-Tax)	18.78%	20.71%	20.71%
MAT	17.47%	25.17%	25.17%
<b>ROE (Pre-Tax)</b>	<b>26.68</b>	<b>29.13</b>	<b>29.13</b>

## Tax on Saving on Operational Parameters

### Petitioner's Submission





5.108 The Petitioner has submitted that the Income Tax due to gain on account of Secondary Fuel Consumption, Auxiliary Power Consumption, Gross Station Heat Rate (GHR) and O&M Expenses is recoverable from the Beneficiary as per Clause 7.49 of the JSERC Generation Tariff Regulations, 2015 which had also been clarified and upheld by the Hon'ble Tribunal in their Judgment dated August 10, 2016 in Appeal no.: 195 of 2015.

**Table 40: Tax Liability on saving in Operation Parameters as submitted by Petitioner(Rs. Cr.)**

Particulars	Unit-II	Unit-III
	Petition	Petition
Tax on Gain on Secondary Fuel	0.78	0.73
Tax on Gain on Aux. Consumption	0.46	0.30
Tax on Gain on Station Heat Rate	0.67	0.77
Tax on reduction in O&M Expenses	3.08	-

### Commission's Analysis

5.109 The Commission has scrutinized the claim of the Petitioner on Tax Liability on saving on operational parameters as per Clause 7.49 of the JSERC Generation Tariff Regulations, 2015 as reproduced below.

*“Tax on Income*

*7.49 Tax on the income streams of the Generating Company shall not be recovered from the Beneficiaries.*

*Provided that the deferred tax liability, excluding Fringe Benefit Tax, for the period up to 31<sup>st</sup> March, 2016 whenever it materializes, shall be recoverable directly from the beneficiaries and the long-term customers;*

*Provided further that any tax liability on incentives and savings due to improved performance on any parameter, if any, shall be considered for passing onto the Beneficiaries in the ratio of the sharing of the gains as prescribed under these Regulations.”*

### Tax Liability on Gain on Secondary Fuel

5.110 The Commission observed that the Petitioner had claimed the incentive on 1.00 ml/kWh against the approved value of 0.5 ml/kWh as per MTR Order dated February 14, 2020.

5.111 Commission has considered the MTR Order value and calculated the tax liability on gain secondary fuel as shown below.

**Table 41: Tax Liability on saving in Secondary Fuel as approved by the Commission(Rs. Cr.)**





Particulars	UoM	Unit-II		Unit-III	
		Petition	Approved	Petition	Approved
Actual Gross Generation	MU	747.53	747.53	669.80	669.80
Normative LDO	ml/kWh	1.00	0.50	1.00	0.50
LDO Consumption	kL	747.53	373.76	669.80	334.90
Actual LDO Consumption	kL	248.60	248.60	248.60	205.00
Difference in LDO	kL	498.93	125.17	421.20	129.90
Landed Price of Oil	Rs./kL	46313.37	46313.37	46803.36	46803.36
<b>Gain/Loss on LDO Consumption</b>	Rs. Crore	2.31	0.58	2.18	0.61
Applicable Tax Rate	%	25.17%	25.17%	25.17%	25.17%
<b>Tax Liability on Secondary Fuel</b>	<b>Rs. Cr.</b>	0.78	0.19	0.73	0.20

### Tax Liability on Gain on Auxiliary Power Consumption

5.112 The Commission approves the tax liability gain on auxiliary consumption as tabulated below.

**Table 42: Tax Liability on saving in Auxiliary as approved by the Commission (Rs. Crore)**

Particulars	UoM	Unit-II		Unit-III	
		Petition	Approved	Petition	Approved
Normative Aux. Consumption	%	10.00%	10.00%	10.00%	10.00%
Actual Aux. Consumption	%	9.34%	9.34%	9.52%	9.52%
Energy Charge	Rs. Cr.	189.86	188.49	169.32	168.07
Gain due to lower Auxiliary	Rs. Cr	1.38	1.37	0.91	0.90
Applicable Tax Rate	%	25.17%	25.17%	25.17%	25.17%
<b>Tax liability on Auxiliary</b>	<b>Rs. Cr.</b>	0.46	0.46	0.30	0.30

### Tax Liability on Gain on Station Heat Rate

5.113 In line to the Clause 7.49, the Commission approves the tax liability on gain on Station HeatRate as shown below.

**Table 43: Tax Liability on saving in SHR as approved by the Commission (Rs. Crore)**

Particulars	UoM	Unit-II		Unit-III	
		Petition	Approved	Petition	Approved
Normative Heat Rate	kCal/kWh	2567.00	2567.00	2577.00	2577.00
Actual Heat Rate	kCal/kWh	2539.36	2539.35	2541.52	2541.52
Gain in Heat Rate	kCal/kWh	27.64	27.65	35.48	35.48
Actual Gross Generation	MU	747.53	747.53	669.80	669.80
Total Heat Energy Saved	MkCal	20662.70	20672.39	23761.94	23761.94
Equivalent GCV of Coal	kCal/kg	3960	3960.30	3796	3795.86
Equivalent Coal Saved	Ton	5217	5219.91	6260	6259.97
Actual Landed Price of Coal	Rs./Ton	3834	3833.77	3649	3649.23
Gain on Account of GHR	Rs. Crore	2.00	2.00	2.28	2.28



Applicable Tax Rate	%	25.17%	25.17%	25.17%	25.17%
Tax liability Gain on GHR	Rs. Cr.	0.67	0.67	0.77	0.77

### Tax Liability due to reduction in O&M Expenses

5.114 In line to the Clause 7.49, the Commission approves the tax liability due to reduction in actual O&M Expenses as shown below.

**Table 44: Tax Liability due to reduction in actual O&M Expenses as approved by the Commission (Rs. Crore)**

Particulars	UoM	Unit-II		Unit-III	
		Petition	Approved	Petition	Approved
Normative O&M Expenses	Rs. Cr.	47.43	47.43	39.26	39.26
Actual O&M Expenses	Rs. Cr.	38.28	38.28	50.97	50.97
Saving	Rs. Cr.	(9.15)	(9.15)	11.71	11.71
Applicable MAT	%	25.17%	25.17%	25.17%	25.17%
<b>Tax liability Gain O&amp;M Expenses</b>	<b>Rs. Cr.</b>	3.08	3.08	-	-

### Shakti Scheme Discount Petitioner's Submission

5.115 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 45: Shakti Scheme Discount as submitted by Petitioner (Rs. Crore)**

Particulars	UoM	Unit-II	Unit-III
		Petition	Petition
Sales due to Coal (Round-II)	MU	253.03	319.83
Sale due to CCL Coal (Round-III)	MU	126.83	84.91
<b>Discount Amount</b>	<b>Rs. Cr.</b>	<b>1.90</b>	<b>1.87</b>

### Commission's Analysis

5.116 The Commission has scrutinized the detail of coal procured and consumed from Shakti Scheme in FY 2020-21. 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 46: Shakti Scheme Discount as approved by the Commission (Rs. Crore)**



Particulars	UoM	Unit-II	Unit-III
		Approved	Approved
Sales due to Coal (Round-II)	MU	253.03	319.83
Sale due to CCL Coal (Round-III)	MU	126.83	84.91
<b>Discount Amount</b>	<b>Rs. Cr.</b>	<b>1.90</b>	<b>1.87</b>

### Summary of Annual Revenue Requirement

#### Commission's Analysis

5.117 The summary of Annual Fixed Charge (AFC) for FY 2020-21 as approved by the Commission is shown below.

**Table 47: Annual Fixed Cost as approved by the Commission (Rs. Crore)**

Particulars	Unit-II			Unit-III		
	MTR Order	Petition	Approved	APR Order	Petition	Approved
O&M Expenses	58.83	54.81	54.81	50.74	46.16	46.16
Depreciation	6.95	11.71	6.39	7.64	11.39	6.65
Interest on Loan	3.84	3.40	3.58	3.32	2.68	2.58
Int. on WC	13.30	12.75	12.75	13.20	12.22	11.73
Return on Equity	27.74	30.20	30.20	26.68	29.13	29.13
<b>Annual Fixed Cost</b>	<b>110.66</b>	<b>112.87</b>	<b>107.74</b>	<b>101.57</b>	<b>101.58</b>	<b>96.25</b>

5.118 The summary of Annual Fixed Charge after taking into account the availability Factor for FY 2020-21 as approved by the Commission is shown below.

**Table 48: AFC after availability as approved by the Commission (Rs. Crore)**

Particulars	Unit-II			Unit-III		
	MTR Order	Petition	Approved	MTR Order	Petition	Approved
Annual Fixed Cost	<b>110.66</b>	<b>112.87</b>	<b>107.74</b>	<b>101.57</b>	<b>101.58</b>	<b>96.25</b>
Availability	87.76%	96.25%	96.25%	87.76%	87.31%	87.31%
<b>AFC after Availability</b>	<b>110.66</b>	<b>112.87</b>	<b>107.74</b>	<b>101.57</b>	<b>101.58</b>	<b>96.96</b>

5.119 The summary of recoverable Annual Revenue Requirement (ARR) for FY 2020-21 as approved by the Commission is shown below.

**Table 49: Annual Revenue Requirement as approved by the Commission (Rs. Crore)**

Particulars	Unit-II			Unit-III		
	MTR Order	Petition	Approved	MTR Order	Petition	Approved
AFC after Availability	110.66	112.87	107.74	101.57	101.58	96.25
Energy Cost	219.59	189.86	188.49	236.97	169.32	168.07
Tax on Gain (Secondary)		0.78	0.19		0.73	0.20



Fuel)						
Tax on Gain (SHR)		0.67	0.67		0.77	0.77
Tax on Gain (Auxiliary)		0.46	0.46		0.30	0.30
Tax on Gain (O&M Expenses)		3.08	3.08		-	-
Less: Shakti Scheme Discount		1.90	1.90		1.87	1.87
<b>Annual Revenue Requirement</b>	<b>330.25</b>	<b>305.82</b>	<b>298.73</b>	<b>338.55</b>	<b>270.83</b>	<b>263.73</b>

## Revenue from Sale of Power

### Petitioner's Submission

5.120 The Petitioner has submitted the revenue from sale of power for FY 2020-21 as Rs. 297.15 Crore and Rs. 267.63 Crore for Unit-II and Unit-III respectively. The summary of monthly billing as certified by the Statutory Auditor including arrears bill arising out of MTR Order dated February 14, 2020 is enclosed as supporting document along with Petition.

**Table 50: Revenue as submitted by the Petitioner (Rs. Crore)**

Particulars	Unit-II	Unit-III
	Petition	Petition
Revenue from Sale of Power	297.15	267.63

### Commission's Analysis

5.121 The Commission has examined the detail submitted by the Petitioner along with audited certificate submitted with the Petition and approves the revenue for FY 2020-21 as shown below.

**Table 51: Revenue as approved by the Commission (Rs. Crore)**

Particulars	Unit-II		Unit-III	
	Petition	Approved	Petition	Approved
Revenue from Sale of Power	297.15	297.15	267.63	267.63

## Gap/Surplus for FY 2020-21

5.122 In accordance to Clause 6.16 and Clause 6.18 of the JSERC Generation Tariff Regulations, 2015 as reproduced below.

“6.16 Where after the truing up, the tariff recovered exceeds the tariff approved by the Commission under these regulations, the generating company shall refund to the beneficiaries as the case may be, the excess amount so recovered shall be as specified in the Clause 6.18 of this regulation.

6.17 Where after the truing up, the tariff recovered is less than the tariff



approved by the Commission under these regulations; the generating company licensee shall recover from the beneficiaries the under-recovered amount shall be as specified in the Clause 6.18 of this regulation.

6.18 The amount under-recovered or over-recovered, along with simple interest at the rate equal to the bank rate as on 1<sup>st</sup> April of the respective year, 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.”

5.123 The Commission has examined the detail submitted by the Petitioner along with audited certificate submitted with the Petition and approves the Gap/(Surplus) for FY 2020-21 for Unit-II and Unit-III in the following tables.

**Table 52: Gap/(Surplus) for Unit-II as approved by the Commission (Rs. Crore)**

Particulars	FY 2020-21	FY 2021-22	FY 2022-23
Opening Balance	-	1.58	1.58
Addition During the FY	1.58	-	-
Adjustment during the FY	-	-	-
Closing Balance	1.58	1.58	1.58
Interest Rate	11.65%	10.50%	10.50%
<b>Carrying Cost for respective FY</b>	<b>0.09</b>	<b>0.17</b>	<b>0.17</b>

**Table 53: Gap/(Surplus) for Unit-III as approved by the Commission (Rs. Crore)**

Particulars	FY 2020-21	FY 2021-22	FY 2022-23
Opening Balance	-	(3.91)	(3.91)
Addition During the FY	(3.91)	-	-
Adjustment during the FY	-	-	-
Closing Balance	(3.91)	(3.91)	(3.91)
Interest Rate	11.65%	10.50%	10.50%
<b>Carrying Cost for respective FY</b>	<b>(0.23)</b>	<b>(0.41)</b>	<b>(0.41)</b>

**Table 54: 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 2020-21	-	-
Gap/(Surplus) addition during the FY 2020-21	1.58	(3.91)
Closing Gap/ (Surplus) for FY 2020-21	1.58	(3.91)



**True-up for FY 2020-21 & Annual Performance Review for FY 2021-22**

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Carrying Cost of FY 2020-21	0.09	(0.23)
Carrying Cost of FY 2021-22	0.17	(0.41)
Carrying Cost of FY 2022-23	0.17	(0.41)
<b>Net Gap/(Surplus)</b>	<b>2.00</b>	<b>(4.95)</b>

5.124 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 Petitioner and its Beneficiaries, the same need to be taken into account while final adjustment which shall be carried out mutually.

5.125 The Commission directed the Petitioner to adjust the surplus in the subsequent bills as per Clause 6.18 of JSERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015.



**A 6: ANNUAL PERFORMANCE REVIEW FOR FY 2021-22**

- 6.1 The Commission vide MYT Order dated February 19, 2018 approved the Business Plan and determined the Annual Revenue Requirement for the MYT Control Period from FY 2016- 17 to FY 2020-21 including Truing-up for FY 2015-16.
- 6.2 Later, on January 07, 2019, the Petitioner filed a Mid-Term Review (MTR) Petition based on the actual value for FY 2016-17 & FY 2017-18 and revised the value for the subsequent year of the Control Period i.e. from FY 2018-19 to FY 2020-21. The Commission has carried out the MTR based on the realistic facts presented before the Commission and after the prudence check and issued the MTR Order on February 14, 2020.
- 6.3 The Petitioner, in the current Petition, has sought the Annual Performance Review (APR) for FY 2021-22 based on the actual operational performance till Oct' 2021 and projected for the remaining months of FY 2021-22. The Petitioner had already submitted the actual financial performance for FY 2021-22 before the Commission for approval.
- 6.4 The Commission has, however, decided not to carry out the APR for FY 2021-22 as considerable time has lapsed and the Petitioner has already filed truing-up Petition for FY 2021-22 based on an audited account. As the truing up petition is under active consideration of this Commission. The Commission, therefore, does not find any merit in carrying out APR for FY 2021-22.



## A 7: STATUS OF EARLIER DIRECTIVES

7.1 The Commission has time and again issued various directives in order to improve the functioning of the Petitioner. The compliance submitted by the Petitioner to the Commission earlier directions is tabulated below.

Directive	Status	Remarks
<p><b>Transit loss</b> “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 to complete task on exploring the possibility of reducing the transit loss and update the Commission as soon as possible</p>
<p><b>Start Ups</b> The Petitioner is 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 <b>ANNEXURE P17.</b></p>	<p>Commission has noted the compliance. The Petitioner to continue submitting the same.</p>





<p><b>Fuel Mix Report</b> The commission has observed that due to various reasons, the Petitioner has procured coal from sources other than what had been approved. Such variations lead to a change in the fuel mix and the landed cost. The Petitioner is directed to bring to the notice of the commission any such changes with regard to coal mix with proper justification on Quarterly Basis. Further the petitioner is directed to carry out techno-commercial audit to identify the reasons for high energy charge and submit the report within six months of issuance of this order.”</p>	<p>Techno Commercial Audit Report was submitted on 14.08.2020. For FY 2020-21, All four Quarterly Reports have been Submitted. For FY 2021-22, Q1 Report has been submitted on 30.09.2021.</p>	<p>The Petitioner shall continue the practice to submit the Fuel Mix Report quarterly basis.</p>
<p><b>DPR of Scheme</b> The Petitioner has submitted DPR of schemes that have been proposed along with the petition. In the DPRs the Petitioner has submitted details about the project along with costs and have also worked out the impact of such schemes. The Commission has observed that such analysis and costs have not been supported by rate reasonability and should have the approval of the competent authority of Tata Power. The petitioner should provide supporting documents in the form of ordered rates, order for work carried out previously, quotations etc. The Petitioner is directed to ensure the compliance.”</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.</p>	<p>The Petitioner shall continue with this practice whenever they submit the DPR of the Scheme for the approval.</p>



<p><b>Notice to the Commission</b> The Petitioner is hereby directed that during the execution of work pertaining to any preapproved schemes, any increase in the scope of work, procurement, services, price/cost etc. should be brought to the notice of commission immediately.”</p>	<p>For FY 2020-21, All Reports have been submitted to Hon’ble Commission. For FY 2021-22, Q1 Report has been submitted on 30.09.2021.</p>	<p>The Petitioner shall continue with the Practice in the future also.</p>
<p>The Petitioner is 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.”</p>	<p>For FY 2020-21, All Reports have been submitted to Hon’ble Commission. For FY 2021-22, Q1 Report has been submitted on 30.09.2021.</p>	<p>The Petitioner shall continue with the Practice in the future also</p>
<p><b>Energy Charge Optimization:</b> 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.</p>	<p>Fuel Mix Plan has been submitted along with MYT Petition as well as the instant Petition</p>	<p>The Petitioner shall continue with the Practice in the future also</p>
<p><b>Capex Planning</b> The Commission 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</p>	<p>Revised Phasing of Capex has been submitted in instant Petition</p>	<p>The Petitioner shall continue with the Practice in the future also</p>



<p>or change in the Scope of Work, the same is required to be submitted before the Commission with proper justification for approval.</p>		
<p><b>Residual Life Study</b> The Commission observed that both the Units (Unit-II &amp; 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>Currently, Tata power is Planning for this activity in compliance to this directive in the upcoming annual shutdowns, Petitioner shall intimate Hon'ble Commission as soon as it will be finalized.</p>	<p>As per Regulation remaining useful for both units have around Five Years The Petitioner should carry out a residual life 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>

## A 8: DIRECTIVES

### Residual Life Study

8.1 The Commission observed that both the Units (Unit-II & Unit-III) have remaining useful life 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. However, before undertaking this study, the Petitioner to submit the complete scope of work to be carried under RLA for Commission's approval.

### Notice to the Commission

8.2 The Petitioner is hereby directed that during the execution of work pertaining to any pre-approved schemes, any increase in the scope of work, procurement,



services, price/cost etc. should be brought to the notice of commission immediately.

**Transit Loss**

8.3 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

**Compliance of directives issued in earlier Orders**

8.4 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 May 22, 2023.

Date: 22.05.2023

Place: Ranchi

**Sd/-**

**(Atul Kumar)  
Member (Technical)**

**Sd/-**

**(Mahendra Prasad)  
Member (Law)**

**Sd/-**

**(Hon'ble Justice Amitav Kumar Gupta)  
Chairperson**



**A 9: ANNEXURE**

**Annexure-1: List of participating members of the Public in the Public Hearing**

Sl. No.	Name S/Shri	Address / Organisation if any
1	Rajesh Rajak	TPCL
2	Abhishek Bose	TPCL
3	Randhir Kumar	TPCL
4	M. M. Singh	Mango, Jamshedpur
5	C. S. Singh	TPCL
6	Satyajeet Singh Couhan	TPCL
7	Rabish Kumar	MPL, Dhanbad
8	Dilip Kumar	TPCL
9	Rajesh Kumar	Sonari, Jamshedpur
10	Ajay Kumar	Bagbera Colony, Jamshedpur
11	Niraj	TPCL
12	Garemaa Parihar	TPCL
13	Rajesh Singh Bhadoriya	TPCL
14	Golak Sanoo	TPCL
15	Sunil Kumar	TPCL
16	Tusar Raj	Tata Steel Limited
17	Pintu Kumar Shrivastava	TPCL
18	Kumar Kundan Raj	TPCL
19	Mithilesh Sah	TPCL
20	Ajay Kumar	Tata Steel Limited
21	M. K. Singh	TPCL
22	D. K. Singh	TPCL
23	A. N. Choudhary	Tata Steel Limited
24	Shoeb Ahmad	Tata Steel Limited



**True-up for FY 2020-21 & Annual Performance Review for FY 2021-22**

25	Prabhakar Kumar	TPCL
26	Pankaj Kumar Roy	TPCL
27	Rajeev Kumar	MPL, Dhanbad
28	S. Singhonia	TPCL
29	Vikash Kumar	Tata Steel Limited
30	Raju Bose	Sitaramdera, Jamshedpur
31	N. Leena	Tata Steel Limited
32	Bimal Kumar	TPCL
33	V. S. Mishra	TPCL