Jharkhand State Electricity Regulatory Commission

Order on

True-up for FY 2016-17

for

Tata Power Company Limited (TPCL)

Ranchi

December 27, 2019

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List of Abbreviations

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

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BEFORE

Jharkhand State Electricity Regulatory Commission, Ranchi

Case (Tariff) No.:05 of 2018

In the matter of:

Petition for

True-up for FY 2016-17

In the matter:

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

PRESENT

Hon'ble Dr.Arbind Prasad	Chairperson
Hon'ble Mr. R.N. Singh	Member (Engg.)
Hon'ble Mr. P.K. Singh	Member (Legal)

Order dated December 27, 2019

Tata Power Company Limited (hereinafter referred to as TPCL or the Petitioner) filed Petition dated October 01, 2018.In this Petition, Tata Power Company Limited (hereinafter referred to as TPCL or the Petitioner) has prayed for Truing up for FY 2016-17 and Annual Performance Review for FY 2017-18.

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 had 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 licences 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) reorganisation 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 as brought out by GoI in compliance to Section 3 of the Act. The objectives of the National Tariff Policy are to:

(a) ensure availability of electricity to consumers at reasonable and competitive rates;

(b) ensure financial viability of the sector and attract investments;

(c) promote transparency, consistency and predictability in regulatory approaches across jurisdictions and minimize perceptions of regulatory risks;
(d) promote competition, efficiency in operations and improvement in quality of supply.

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,HomiMody 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-2 & Unit-3) of 120 MW each at Jojobera is dedicated to supply power to TSL.

1.10 TPCL operates five units at Jojobera, Jharkhand with cumulative capacity of 547.5 MW out of which two units (Unit 2 & Unit 3) are the subject matter of tariff determination in this Tariff Order. Both the units have an installed capacity of 120 MW each. Unit 2 commenced its operations on February 1, 2001 and Unit 3 on February 1, 2002.

The Petitioner's Prayers

1.11 The Petitioner in this Petition has prayed before the Commission:

- Accept the Petition;
- Approve the Trued-up operational, fuel and financial parameters, additional capitalization, Annual Revenue Requirement and Generation Tariff for Unit 2 and Unit 3 of Jojobera proposed through Truing-up for FY 2016-17;
- Approve the proposed operational, fuel and financial parameters, additional capitalization, Annual Revenue Requirement and Generation Tariff for Unit 2 and Unit 3 of Jojobera for Annual Performance Review for FY 2017-18;
- Provide an opportunity to the Petitioner to present its case prior to the finalization of the Tariff Order. Tata Power believes that such an approach would provide a

fair treatment to all the stakeholders and may eliminate the need for a review or clarification;

- Permit the Petitioner to propose suitable changes to the Petition and the mechanism of meeting the revenue on further analysis, prior to the final approval by the Hon'ble Commission;
- Condone any inadvertent omissions/errors/rounding-off 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 The Petitioner filed the current Petition for truing up of FY 2016-17 and APR of FY 2017-18 for both the units of Jojobera generating station. During the pendency of this petition, the Petitioner has submitted the mid-term review petition for revised Annual Revenue Requirement and Generation Tariff for FY 2019-20 to FY 2020-21 including True-up for FY 2017-18 and Annual Performance Review for FY 2018-19.The Commission vide Tariff Petition Case no. 01 of 2019, has accepted the mid-term review petition filed by the Petitioner. In view of the above, the Commission finds no merit in carrying out the Annual Performance Review for FY 2017-18 and shall deal with true-up for FY 2017-18 while disposing of the above-mentioned mid-term review petition.

1.13 The Commission in this Order has therefore approved only the True-up for FY 2016-17.

1.14 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 Regulations).

1.15 Accordingly, the Commission has scrutinized the Petition in detail and hereby issue the Order on Truing-up for FY 2016-17 of Unit 2 & Unit 3 of the Jojobera power plant of TPCL and shall deal with true-up for FY 2017-18 while disposing the mid-term review Petition (Case no. 01 of 2019).

A 2: PROCEDURAL HISTORY

Background

2.1 The Commission vide MYT Order dated February 19, 2018 approved the Business Plan and determine the Annual Revenue Requirement for the 2ndMYT 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 Petitioner has now filed the Petition before the Commission for approval for True-up for FY 2016-17andAnnual Performance Review for FY 2017-18 on October 01, 2018.

Information Gaps in the Petitions

2.4 As part of the Tariff determination exercise, several deficiencies/information gaps were observed in the Petition submitted by the Petitioner that was communicated to the Petitioner vide letter no. JSERC/Case (Tariff) No. 05 of 2018/443 dated November20, 2018.

2.5 The Petitioner has submitted its response to the aforesaid letter and furnished additional data/ information to the Commission vide letter no. JPP/REG/JSERC/25/19 dated February 08, 2019.In addition, the Petitioner has also submitted additional information vide letter no. JPP/REG/JSERC/110/19 dated July 04, 2019 and JPP/REG/JSERC/119/19 dated July 15. 2019 in reply to queries raised during the public hearing held on June 07, 2019.

2.6 The Commission has scrutinized the additional data/information and has considered the same while passing this Order. The Commission has examined the replies and supporting documents as supplied by the Petitioner on the discrepancies pointed out to it.

Inviting Public Comments/Suggestions

2.7 The Commission 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 2016-17 and Annual Performance Review for FY 2017-18.

2.8 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

Newspaper	Date of Publication
Hindustan Times	09th and 10th March 2019
The Telegraph	09th and 10th March 2019
Prabhat Khabar	09th and 10th March 2019
Dainik Bhaskar	09th and 10th March 2019

2.9 Subsequently, the Commission also issued a notice on its website www.jserc.org and various newspapers for conducting the public hearing on the Petition. The details of the 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

Newspaper	Date of Publication
Hindustan	19.05.2019
Dainik Jagran	19.05.2019
Morning India	19.05.2019
The Pioneer	19.05.2019
Dainik Bhaskar	06.06.2019
Prabhat Khabar	06.06.2019
The Times of India	06.06.2019
The Hindustan Times	06.06.2019

Submission of Comments/Suggestions and Conduct of Public Hearing

2.10 In order to provide adequate opportunities to all stakeholders and general public, as mandated under Section 64 (3) of the Electricity Act 2003 and in relevant provisions of Regulation(s) framed by the Commission and in order to ensure transparency in the process of tariff determination, the Commission held public hearing on June 07, 2019 at Golmuri Club, Golmuri, Jamshedpur.

2.11 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 2016-17 and Annual Performance Review for FY 2017-18

Operational Parameters of Plant

3.1 The operational parameters for FY 2016-17 and FY 2017-18 as submitted by the Petitioner and approved in MYT Order dated February 19, 2018 is provided in the table below.

Detail for Unit 2

Table 3: Operational Parameters for Unit 2 as submitted by the Petitioner

Particulars	UoM	FY 2016-17		FY 2017-18	
		MYT Order	Petition	MYT Order	Petition
Gross Station Heat Rate	kCal/kWh	2567	2542	2567	2543
Annual Plant Availability Factor	%	85	93.35	85	96.50
Auxiliary Energy Consumption	%	10	9.03	10	8.79
Secondary Fuel Oil Consumption	ml/kWh	0.50	1.00	0.50	1.00

Detail for Unit 3

Table 4: Operational Parameters for Unit 3 as submitted by the Petitioner

Particulars	UoM	FY 2016-17		FY 2017-18	
		MYT Order	Petition	MYT Order	Petition
Gross Station Heat Rate	kCal/kWh	2577	2541	2577	2552
Annual Plant Availability Factor	%	85	90.33	85	97.27
Auxiliary Energy Consumption	%	10	8.80	10	8.84
Secondary Fuel Oil Consumption	ml/kWh	0.50	1.00	0.50	1.00

Financial Parameters

3.2 The summary of Aggregate Revenue Requirement for FY 2016-17 and FY 2017-18 as submitted by the Petitionervis-à-vis as approved by the Commission in Review Order dated January 9, 2019 is provided in the table below.

Detail for Unit 2

Table 5: Annual Revenue Requirement for Unit 2 as submitted by the Petitioner (Rs. Crore)

Particulars	UoM	FY 2016-17		FY 2017-18	
		MYT Order*	Petition	MYT Order*	Petition
Depreciation	Rs. Cr.	6.27	6.18	6.95	6.41
Interest on Loan	Rs. Cr.	4.18	4.03	4.48	3.96
Return on Equity	Rs. Cr.	28.80	28.71	29.27	28.90

Particulars	UoM	FY 2016-17		FY 2017-18	
		MYT Order*	Petition	MYT Order*	Petition
Interest on Working Capital	Rs. Cr.	12.56	12.56	12.85	13.48
O&M expenses	Rs. Cr.	46.35	45.07	51.00	47.94
Fixed Cost	**Rs. Cr.**	**98.15**	**96.55**	**104.57**	**100.69**
Energy Cost	**Rs. Cr.**	**197.76**	**186.59**	**205.67**	**213.97**
Energy Charge Rate	Rs/kWh	2.578	2.602	2.578	2.877
Add: Tax on Gain on Secondary Fuel	Rs. Cr.	-	0.71	-	0.76
Add: Tax on Gain on Auxiliary	Rs. Cr.	-	0.54	-	0.77
Add: Tax on Gain on Station Heat Rate	Rs. Cr.	-	0.49	-	0.53
Add: Tax on Gain on O&M Expenses	Rs. Cr.	-	1.01	-	-
ARR including Tax on Efficiency Gains	**Rs. Cr.**	**295.92**	**285.89**	**310.24**	**316.72**

** Review Order dated January 09, 2019*

Detail for Unit 3

Table 6: Annual Revenue Requirement for Unit 3 as submitted by the Petitioner (Rs. Crore)

Particulars	UoM	FY 2016-17		FY 2017-18	
		MYT Order*	Petition	MYT Order*	Petition
Depreciation	Rs. Cr.	7.76	7.50	8.62	7.81
Interest on Loan	Rs. Cr.	3.67	3.49	4.26	3.61
Return on Equity	Rs. Cr.	27.74	27.61	28.40	27.90
Interest on Working Capital	Rs. Cr.	12.23	12.29	12.47	12.91
O&M expenses	Rs. Cr.	40.29	38.69	43.51	41.33
Fixed Cost	**Rs. Cr.**	**91.69**	**89.58**	**97.26**	**93.55**
Energy Cost	**Rs. Cr.**	**200.42**	**186.18**	**189.85**	**206.66**
Energy Charge Rate	Rs/kWh	2.587	2.634	2.587	2.823
Add: Tax on Gain on Secondary Fuel	Rs. Cr.	-	0.64	-	0.73
Add: Tax on Gain on Auxiliary	Rs. Cr.	-	0.66	-	0.71
Add: Tax on Gain on Station Heat Rate	Rs. Cr.	-	0.68	-	0.53
Add: Tax on Gain on O&M Expenses	Rs. Cr.	-	-	-	-
ARR including Tax on Efficiency Gains	**Rs. Cr.**	**292.11**	**277.74**	**287.10**	**302.18**

** Review Order dated January 09, 2019*

A 4: PUBLIC CONSULTATION PROCESS

4.1 The Petition filed by the Petitioner evoked responses from several stakeholders. The Public Hearing was held on June 07, 2019 at Golmuri Club, Golmuri, Jamshedpur to ensure the maximum public participation and transparency wherein stakeholders put forth their comments and suggestions before the Commission in the presence of the Petitioner. The list of the attendees is attached as **Annexure-1** to this Order.

4.2 During the proceedings of public hearing, the Commission also allowed persons/representatives of entities who had not submitted prior written representations but attended the public hearing to express their views, in person, regarding the Petition filed by the Petitioner and also about ways and means to improve the services rendered by the Petitioner.

4.3 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.

O&M Expenditure

Public Comments/Suggestions

4.4 The Stakeholder raised that the O&M expenditure claimed by the Petitioner is subjective and the Commission need to carry out surprise visit at least twice in a year at the plant site.

Petitioner's response

4.5 The Petitioner submitted that the O&M expenditure claimed in True-up Petition for FY 2016-17 is in accordance with the corresponding amounts approved by the Commission in the MYT Order dated February 19, 2018 applicable for the 2nd control period and as per the applicable provisions of JSERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015. Furthermore, ash disposal expenses, raw water charges and terminal liabilities have been claimed on actuals in line with the said regulations as have been claimed in previous financial years and subsequently approved by the Commission. Hence, the Petitioner requested the Commission to set aside this objection as it lacks merit.

Commission's *views*

4.6 The Commission has noted the objection raised, response of the Petitioner and dealt the O&M in the subsequent sections of this Order.

Supply of Power

Public Comments/Suggestions

4.7 The Stakeholder commented that the Petitioner directly supplies power in nearby areas like Birsanagar and other consumers i.e. JUSCO, Railways, etc. which is in violation of the provisions of the regulations and requested the Commission to conduct anenquiry.

Petitioner's response

4.8 The Petitioner submitted that the electricity generated from Jojobera Unit 2 and Unit 3 is entirely supplied to Tata Steel Limited (TSL), a Distribution Licensee and not to JUSCO or any other distribution licensee. The Petitioner further submits that the actual units generated in Unit 2 and Unit 3 which is wholly supplied to TSL is scrutinized byTata Load Dispatch Centre (LDC). Thus, the objection raised is factually incorrect.

Commission's *views*

4.9 The Commission has noted the objection raised and the response submitted by the Petitioner. The Commission has scrutinized the documents submitted by the Petitioner in relation to units generated from Unit 2 and Unit 3 and supplied to TSL.

Unit dedicated to TSL

Public Comments/Suggestions

4.10 The Stakeholder raised the concern that, it is not clear that out of which five Units of Jojobera station, the Petitioner is supplying power to Tata Steel Factory or TSL, Distribution Company and suggested the Commission to examine the same.

Petitioner's response

4.11 The Petitioner submits that the electricity generated from Jojobera Unit-2 and Unit-3 is entirely supplied to TSL, a Distribution Licensee. Furthermore, Power Purchase Agreement (PPA) for supply of power from both these Units to TSL has been already approved by the Commission. Hence, the Petitioner humbly requested the Commission to ignore the objection as it devoid of any merit.

Commission's *views*

4.12 The Commission has noted the objection raised and response submitted by the Petitioner. The Commission has scrutinized the detail submitted by the Petitioner and finds that the

Petitioner supply power to TSL, a Distribution Licensee from Unit-2 and Unit-3 of its Jojobera Station.

Coal Purchase

Public Comments/Suggestions

4.13 The Stakeholder raised the issue that the Petitioner cumulatively purchases coal for all the Units located at Jojobera site. However, TPCL is showing the coal consumption only for Unit-2 and Unit-3.

Petitioner's response

4.14 The primary fuel is sourced for Unit-1 to Unit-4 of Jojobera Power Plant by Tata Power under various FSA/Sales Agreement/MoU. For Unit-5, the coal is sourced by IEL, which is a separate company. Since, Unit-2 and Unit-3 is under the jurisdiction of the Commission and therefore coal sourced and consumed in Unit-2 and Unit-3 is submitted in the present petition. The details of coal for other Units is irrelevant for the present petition and therefore, the objection lacks merit and deserves to be rejected.

Commission's *views*

4.15 The Commission has noted the objection raised and response submitted by the Petitioner. The Commission has dealt with the Objection in detail in the subsequent sections of this Order.

Fly Ash

Public Comments/Suggestions

4.16 The Stakeholder objected that the Petitioner supplies Fly ash at no profit and no loss basis. The Stakeholder questioned whether the Petitioner obtained the No Objection Certificate (NOC) from the Revenue Department for the same.

Petitioner's response

4.17 The Petitioner submits that in order to achieve 100% ash utilization at Jojobera Power Plant as mandated by Ministry of Environment and Forests (MoEF), the Petitioner supplies Fly Ash to M/s Lafarge and other off takersat free of cost.Hence, the Petitioner humbly requested the Commission to set aside the objection as it lacks merit.

Commission's *views*

4.18 The Commission has noted the objectionraised and response submitted by the Petitioner. The Commission has dealt with the Objection in detail in the subsequent sections of this Order.

Power Sales to State Government

Public Comments/Suggestions

4.19 The Stakeholder raised the query that Adhunik Power Natural and Resource Limited (APNRL) is supplying electricity to State Government, whereas the Petitioner doesn't do so. The Petitioner should provide the detail reasons for the same.

Petitioner's response

4.20 The Petitioner submitted that the above objection raised is beyond the scope of the True-up Petition for FY 2016-17 as submitted before the Commission and hence, should not be entertained.

Commission's *views*

4.21 The Commission has noted the objection raised and response submitted by the Petitioner. The Commission finds no merit in the objection raised by the Stakeholder.

Employee Expenses

Public Comments/Suggestions

4.22 The Stakeholder submitted that the employee expense of the Petitioneris too high and the Petitioner should provide the detail of employee expenses separately for Unit 2 and Unit 3.

Petitioner's response

4.23 The Petitioner submitted that the employee expenses only associatedto Unit 2 and Unit 3 form part of O&M expenses, which is claimed as per JSERC Tariff Regulations 2015 and MYT Order dated February 19, 2018. These norms have in turn been approved by the Commission in line with Tariff Regulations 2015 based on auditedfinancials of previous five years. The MYT Order dated February 19, 2018 has attained finality with respect to this issue and hence, the Stakeholder cannot question Petitioner's claim today on the basis of these approved norms.

Commission's *views*

4.24 The Commission has noted the objection raised and response submitted by the Petitioner. The Commission has dealt with the employee expenses in detail in the subsequent sections of this Order.

Power Sales to TSL

Public Comments/Suggestions

4.25 The Stakeholder asked the Petitioner to clarify whether the Petitioner is supplying power to TSL,a steel company or TSL, a Distribution Licensee with proper documentary evidence and justification.

Petitioner's response

4.26 The Petitioner submitted that they supply electricity generated from its Unit-2 and Unit-3 to Tata Steel Limited, a Distribution Licensee as per Power Purchase Agreement (PPA) duly approved by theJharkhand State Electricity Regulatory Commission (JSERC).

Commission's *views*

4.27 The Commission has noted the objection raised and response submitted by the Petitioner. The Commission has scrutinized the detail submitted by the Petitioner and finds that the Petitioner supply power to TSL, a Distribution Licensee.

Power Sales to JUSCO

Public Comments/Suggestions

4.28 The Stakeholder stated that if, electricity generated from Unit-2 and Unit-3 is supplied to TSL, then from which unit the Petitioneris supplying electricity to JUSCO in the district of Saraikela Kharswan. Whether the Commission has given permission for such supply. The Petitioner is also required to furnish the detail since 2005, about how many units (kWh) of electricity have been supplied to JUSCO and at which rate.

Petitioner's response

4.29 The Petitioner submitted that there is no direct supply of power to JUSCO. Further, the Commission verifies the energy sold from Unit 2 and Unit 3 with the energy procured by Tata Steel Limited. Hence, the Petitioner submitted that the objection is not factually correct and may kindly be rejected.

Commission's *view s*

4.30 The Commission has noted the objection raised and response submitted by the Petitioner. The Commission has scrutinised the sale of power from the generating station to TSL for FY 2016-17 which has been detailed in subsequent sections of this Order.

Expenditure related to Unit 2 and Unit 3

Public Comments/Suggestions

4.31 The Stakeholder submitted that the Petitionershould substantiate that the material purchased, employee salaries claimed andthe taxes paid claimed in the petition is associated to Unit 2 and Unit 3 only. In order to prove the same, the Petitioneris required to submit receipts of materials procured, designation of the employees, loan documents linked to Unit-2 andUnit-3. The Stakeholder also proposed that the expenses shall not be apportioned to Unit 2 and Unit 3 and should be on actuals basis.

Petitioner's response

4.32 The Petitioner submitted that the detail regarding the outstanding normative loan of Unit 2 and Unit 3 as permissible under Tariff Regulations 2015 have been furnished in the True-up petition. The detailed computation of outstanding normative loan considered for additional capitalization has been elaborated in the True-up Petition for FY 2016-17. Further, the Petitioner submitted that no project specific loan has been considered for any capital expenditure scheme incurred in FY 2016-17. The entire expenditure towards additional capitalization has been funded through internal accruals and hence, only normative loan as permissible under Tariff Regulations 2015 has been claimed.

4.33 For expenses towards 'materials purchased' which forms part of R&M expenditure and 'employee salaries' are claimed as per JSERC Tariff Regulations 2015 at normative levels as approved in MYT Order dated February 19, 2018. These norms have in turn been approved by the Commission in line with Tariff Regulations 2015 based on audited financials of previous five years. The MYT Order dated February 19, 2018 has attained finality with respect to this issue and hence, the Stakeholder cannot question Petitioner's claim today on the basis of these approved norms.

Commission's *views*

4.34 The Commission has noted the objection raised and response submitted by the Petitioner. The Commission has scrutinized the detail submitted by the Petitioner and dealt in detail in the subsequent sections of this Order.

Water Charge

Public Comments/Suggestions

4.35 The Stakeholder questioned whether TSL is authorised to claim water charge from the Petitioner. In regard to the same, the Petitioner is required to furnish approval letter, if any to substantiate it. The Petitioner is also required to detail how the same is allocated among five units.

Petitioner's response

4.36 Tata Power submits that they purchase water from Jamshedpur Utility Services Company [JUSCO] - A Tata Enterprise (Parent Organization - Tata Steel Limited). As far as the query regarding the State Government's permission or approval for selling water by Tata Steel is concerned, the same is related to Tata Steel and neither has it pertained to the Petitioner nor to the current petition, which is for determination of generation tariff for Unit 2 and Unit 3 of Jojobera.

4.37 The Petitioner also submitted that the raw water for Jojobera Power Plant i.e. for Unit 1 to Unit 5 is sourced from a single supplier i.e. JUSCO. Tata Steel Limited raises a single bill for water supplied to all the units (Unit 1 to Unit 5) of Jojobera Power Plant each month. As far as monthly consumption of raw water is concerned for Unit 2 and Unit 3,apportionment is done in proportion to gross generation for both the Units as compared to the total generation.

Commission's *views*

4.38 The Commission has noted the objection raised and response submitted by the Petitioner. The Commission has dealt the water charges in detail in the subsequent sections of this Order.

Water Tax

Public Comments/Suggestions

4.39 The Stakeholder questioned, whether the water tax collected from the Petitioner by TSL is paid to the State Government or not. The Petitioner is required to provide the documentary proof for the same including balance, if any.

Petitioner's response

4.40 The Petitioner submitted that the query is related to Tata Steel, hence the above objection is irrelevant and beyond the scope of current petition and should not be entertained.

Commission's *views*

4.41 The Commission has noted the objection raised and response submitted by the Petitioner. The Commission has dealt the water taxin detail in the subsequent sections of this Order.

NOC from Department of Commercial Tax for sale of ash

Public Comments/Suggestions

4.42 The Stakeholder raised an objection that whether the Petitioner has obtained the No Objection Certificate (NOC) for sale of pond ash from Department of Commercial taxes for FY 2018-19 and FY 2019-20.

Petitioner's response

4.43 The Petitioner submits that the above Objection is beyond the scope of the True-up Petition for FY 2016-17 as submitted before the Commission. Hence, the Petitioner requests the Commission not to entertain such irrelevant query.

Commission's *views*

4.44 The Commission has noted the objection raised and response submitted by the Petitioner.

Financial Loss for FY 2016-17

Public Comments/Suggestions

4.45 The Stakeholder submitted that the documents submitted before SEBI and Income-Tax office shows that the Petitioner is in loss.

Petitioner's response

4.46 The Petitioner submitted that the profit/loss earned in a Financial Year (FY) for Tata Power is based on its financial position across various assets. The present petition has been filed for True-up for FY 2016-17 for Unit 2 and Unit 3 of the Petitioner located at Jojobera site. For the purpose of True-up, profit/loss statement has been separately generated and duly certified by the statutory auditor for both the Units. These audited financials of Unit2 and Unit 3 for FY 2016-17 have already been shared with the

Commission in the said petition. The Petitioner hasn't submitted any document before SEBI and Income-Tax Office only for Tata Power - Jamshedpur Operations. Hence, the Petitioner humbly requests before the Commission not to entertain this objection as it lacks merit.

Commission's *views*

4.47 The Commission has noted the objection raised and response submitted by the Petitioner. The Commission has dealt on the subject in detail in the subsequent sections of this Order.

Loan for Unit 2 and Unit 3

Public Comments/Suggestions

4.48 The Stakeholder asked the Petitioner to present the documentary evidence that the loan taken from banks are associated to Unit2 and Unit 3 only and does not includes all the five Units at Jojobera site.

Petitioner's response

4.49 The Petitioner submitted that no project specific loan has been considered for any capital expenditure scheme incurred in FY 2016-17. The entire expenditure towards additional capitalization has been funded through internal accruals and hence only normative loan as permissible under Generation Tariff Regulations 2015 has been proposed.

Commission's *views*

4.50 The Commission has noted the objection raised and response submitted by the Petitioner. The Commission has dealtwith the calculation of loan in detail in the subsequent sections of this Order.

Power Supply to State Government

Public Comments/Suggestions

4.51 As per the rules of the Government, the Petitioner shall supply 25% of the electricity generated from Unit 2 and Unit 3 to the State of Jharkhand. The Petitioner is required to justify the same and also, provide the plan to comply with the same.

Petitioner's response

4.52 The objection raised is vague and presumptive as it has not specified exact rule under which the Petitioner is bound to supply 25% of the electricity to State Government. The Petitioner is supplying electricity to Distribution Licensee in the State i.e. Tata Steel Limited from Unit 2 and Unit 3 as per the terms of PPA approved by the Commission. The Petitioner submits that the above objection is beyond the scope of the True-up Petition for FY 2016-17 as submitted by the Petitioner. Hence, the Petitioner request the Commission not to entertain such irrelevant query.

Commission's *views*

4.53 The Commission find that the Petitioner is supplying the power as per PPA and does not find merit in the query raised by the Stakeholder.

Detail of work and payment made to vendors

Public Comments/Suggestions

4.54 The Stakeholder asked the Petitioner to furnish the following details with respect to nature of jobs carried out and payment released to vendors associated toUnit 2 and Unit 3:

a. Copies of all Work Order placed to vendors;
b. Daily work permits for the jobs;
c. Detailed description of the activities mentioned in the work permits;
d. Copy of material receipts;
e. Work Permit for the materials consumed in Unit 2 and Unit 3.

Petitioner's response

4.55 The Petitioner submitted that based on audit of all expenses under the work permits, material receipts and consumption, the financials of Unit 2 and Unit 3 for FY 2016-17 is prepared and have been duly certified by the Statutory Auditor, which have been already submitted to the Commission for scrutiny. The Stakeholder propose for another audit of Petitioner's expenses, which he is neither authorized to do nor warranted when requisite certificates from Statutory Auditor have already been submitted. Moreover, the claim of R&M expenses by the Petitioner is based on norms approved by the Commission and not on actual expenses. Hence, the objection is not sustainable and deserves to be rejected.

Commission's *views*

4.56 The Commission has noted the objection raised and response submitted by the Petitioner. Considering the same, the Commission has approved the O&M expense which is detailed in the subsequent sections of this Order.

Employee Expenses related to UNION

Public Comments/Suggestions

4.57 The Stakeholder has stated that the Petitioner should not claim the amount related to 'increase in salaries' of UNION employees in its ARR petition.

Petitioner's response

4.58 The Petitioner submitted that the salary of employees is a part of O&M expenses. Since, O&M expenses is controllable in nature, the Commission sets a performance target/norm for each year of the control period and allows them at normative levels irrespective of the actual expenses. The claim of the Petitioner is based on such approved norms and not on actual increases in salaries. As per Generation Tariff Regulations, 2015 any financial gain or loss on account of over-performance or underperformance shall be on the account of Generator. Hence, the Petitioner has claimed the salary of employees at normative basis for the purpose of True-up for FY 2016-17.

Commission's *views*

4.59 The Commission has noted the objection raised, response submitted by the Petitioner and detail the same in the subsequent sections of this Order while approving the O&M expenses.

A 5: TRUE-UP FOR FY 2016-17

5.1 The Petitioner has submitted the True-up petition for FY 2016-17 based on the Account audited by the Statutory Auditor 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 now carried out the True-up for FY 2016-17 taking into consideration:

a) Audited (Statutory) account for the FY 2016-17;
b) JSERC Generation Tariff Regulations, 2015;
c) Methodology adopted by the Commission in its earlier Tariff Orders.

Operational Performance

Plant Availability Factor (PAF)

Petitioner's Submission

5.3 The Petitioner has submitted the month wise actual plant availability truly certified by Tata Steel Load Dispatch Centre (LDC). The Petitioner has claimed the average annual plant availability of Unit 2 as 93.35% and that of Unit 3 as 90.33% for FY 2016-17.

Commission's Analysis

5.4 The Commission in the MYT Order dated February 19, 2018 had approved the Normative Annual Plant Availability Factor (NAPAF) as 85% for 2nd control period in line to Clause 8.4 of JSERC Generation Tariff Regulation, 2015.

5.5 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 justification for not providing availability duly certified by SLDC. In reply to Commission's query dated November 20, 2018, the Petitioner submitted that as per PPA between Tata Power and Tata Steel Limited, the Tata Steel Load Despatch Centre shall mean the Power Management Centre of the Tata Steel Limited and is authorized to monitor and certify Plant Availability Factor of the generating Units of Jojobera Power Plant of Tata Power.

5.6 The Commission has noted the reply submitted by the Petitioner and scrutinized the month wise actual plant availability truly certified by Tata Steel LDC, approves the actual plant availability for FY 2016-17 as 93.35% and 90.33% for Unit 2 and Unit 3 respectively.

5.7 The Plant Availability Factor (PAF) as approved by the Commission in the MYT Order dated February 19, 2018, as submitted by the Petitioner and approved now by the Commission for FY 2016-17is summarised below.

Table 7: Plant availability as approved by the Commission

Particulars	UoM	MYT Order	Petition	Approved
Plant Availability Factor (Unit 2)	%	85	93.35	93.35
Plant Availability Factor (Unit 3)	%	85	90.33	90.33

Auxiliary Consumption

Petitioner's Submission

5.8 The Petitioner has submitted the actual Auxiliary Consumption of Unit 2 and Unit 3 for FY 2016-17as 9.03% and 8.80% respectively as compared to Normative Auxiliary Power Consumption of 10% for each Unit as approved by the Commission in the MYT Order dated February 19, 2018. However, for truing up exercise for FY 2016-17, the Petitioner has claimed the normative value of auxiliary consumption as 10.00% for both the Units.

Commission's Analysis

5.9 The Commission has scrutinized the Petitioner submission and approves the actual auxiliary consumption as submitted by the Petitioner for FY 2016-17.

5.10 Further, according to Provision of Clause 6.11 and 6.12 of JSERC Generation Tariff Regulations, 2015, auxiliary consumption is a controllable factor and any financial loss or gain on account of underperformance or over-performance is not 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 MYT Order dated February 19, 2018.

5.11 The Auxiliary Consumption as approved by the Commission in the MYT Order dated February 19, 2018, as submitted by the Petitioner and approved now by the Commission for FY 2016-17is provided in the table below.

Table 8: Auxiliary Consumption as approved by the Commission

Particulars	UoM	MYT Order	Petition	Approved
Auxiliary Consumption (Unit 2)	%	10	9.03	9.03
Auxiliary Consumption (Unit 3)	%	10	8.80	8.80

Plant Load Factor and Generation

Petitioner's Submission

5.12 The Petitioner has submitted the actual Plant Load Factor (PLF) for Unit 2 as 74.98% and 73.74% for Unit 3 which is less than the PLF of 81.10% for Unit 2 and 81.90% for Unit 3 respectively as approved by the Commission in the MYT Order dated February 19, 2018.

5.13 The Petitioner further submitted that the actual gross generation for both the Units is lower than that approved in the MYT Order dated February 19, 2018is due to low demand by the distribution licensee.

5.14 The Petitioner has claimed the actual gross generation of Unit 2 and Unit 3 of the Jojobera generating station as 788.15 MU and 775.16 MU respectively. Accordingly, the Petitioner submitted net generation (ex-bus generation) for Unit 2 and Unit 3 as716.98 MU and 706.94 MU respectively after deducting the auxiliary consumption.

Commission's Analysis

5.15 The Commission observed that there is huge gap between the actual Plant Availability Factor (PAF) and actual Plant Load factor (PLF). The Commission is of the view that the proper co-ordination needs to be there between the Petitioner and the Beneficiary for optimal utilization of the existing infrastructure.

5.16 The Commission has scrutinized the detail submitted by the Petitioner and approves the actual Plant Load Factor and gross generation as submitted by the Petitioner.

5.17 The Plant Load Factor, Gross and Net Generation as approved by the Commission for FY 2016-17 is summarized in the table below.

Table 9: Plant Load Factor and Generation as approved by the Commission

Particulars	UoM	MYT Order	Petition	Approved
Unit 2				
Gross Generation	MU	852.49	788.15	788.15
Net Generation	MU	767.24	716.98	716.98
Plant Load Factor	%	81.10	74.98	74.98
Unit 3				
Gross Generation	MU	860.93	775.16	775.16
Net Generation	MU	774.84	706.94	706.94
Plant Load Factor	%	81.90	73.74	73.74

Gross Station Heat Rate (GHR)

Petitioner's Submission

5.18 The Petitioner has submitted the actual Gross Station Heat Rate (GHR) as 2542 kCal/kWh for Unit 2 and 2541 kCal/kWh for Unit 3 against the normative approved value of 2567 kCal/kWh and 2577 kCal/kWh for Unit 2 and Unit 3 respectively. However, the Petitioner has claimed the normative value of 2567 kCal/kWh for Unit 2 and 2577 kCal/kWh for Unit 3 for Truing-up exercise.

Commission's Analysis

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

5.20 In accordance to the Clause 8.4 of JSERC Generation Tariff Regulation, 2015 and in line to MYT Order dated February 19, 2018 the Commission approves the GHR as 2567kCal/kWh for Unit 2 and 2577 kCal/kWh for Unit 3 respectively.

5.21 The Gross Station Heat Rate (GHR) as approved by the Commission for FY 2016-17 is summarized in the table below.

Table 10: Gross Station Heat Rate (GHR) as approved by the Commission

Particulars	UoM	MYT Order	Petition	Approved
Gross Station Heat Rate (Unit 2)	kCal/kWh	2567	2567	2567
Gross Station Heat Rate (Unit 3)	kCal/kWh	2577	2577	2577

Specific Fuel Oil Consumption

Petitioner's Submission

5.22 The Petitioner has submitted the specific fuel oil consumption as 1.00 ml/kWh for both Unit 2 and Unit 3 as specified in Clause 8.4 of JSERC Generation Tariff Regulations, 2015.

Commission's Analysis

5.23 The Commission in its MYT Order dated February 19, 2018 approved the Specific Fuel Oil Consumption as 0.50 ml/kWh for 2nd 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."

5.24 The Petitioner had filed the review Petition before the Commission against the MYT Order dated February 19, 2018 for revision of targets on specific fuel oil consumption for the 2nd control period. The Commission retain the normative value as approved in the MYT Order dated February 19, 2018 and dispose of the review petition. The relevant abstract is reproduced below.

"the Commission has fixed 0.5 ml/kWh for each year of the control period at this stage. However, as mentioned in the MYT Order itself, the Commission may re-look into the same during APR and True up of the years to be submitted by the Petitioner subject to the petitioner providing the details of start-ups taken after the shut downs and monthly quantity of secondary fuel consumed during plant start-up"

5.25 The Commission has examined the detail of actual secondary fuel oil consumption for FY 2016-17 which comes out to be ~0.20 ml/kWh and ~0.28 ml/kWh for Unit 2 and Unit 3 respectively which is very less than the approved value of 0.5 ml/kWh for both the Units. Also, the Petitioner had filed the petition 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 0.5 ml/kWh as approved in MYT Order dated February 19, 2018 for both Unit 2 and Unit 3 as shown below.

Table 11: Specific Fuel Oil Consumption as approved by the Commission

Particulars	UoM	MYT Order	Petition	Approved
Specific Fuel Oil Consumption (Unit 2)	ml/kWh	0.5	1.00	0.5
Specific Fuel Oil Consumption (Unit 3)	ml/kWh	0.5	1.00	0.5

Fuel Cost Parameters

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

Petitioner's Submission

5.26 The Petitioner submits that the coal is primarily sourced from West Bokaro Colliery of Tata Steel (Middling Coal) and Mahanadi Coal Fields, Odisha (MCL Coal).

5.27 The Petitioner has further submitted that due to short supply of Middling coal from West Bokaro Collieries, the Petitioner had to source two other categories of washed coal from West Bokaro Collieries i.e. 2-Product coal and Tailing coal.

5.28 In addition to the above source, the Petitioner also sourced a small quantity of coal from Coal India Limited (CIL) to meet its requirement in the month of February, 2017 and March, 2017.

5.29 The Annual Weighted Average Gross Calorific Value (GCV) from various sources of coal has been computed as weighted average of monthly GCV of coal (which in turn has been arrived at by computing weighted average of daily GCV of coal from that source with the daily coal consumption as weight) from that source with the monthly consumption as weight. The Petitioner has submitted the month wise and year wise detail of weighted average GCV of all the type of coal as reference.

Commission's Analysis

5.30 The Commission has observed that the Petitioner had procured coal from other sources in addition to sources that are approved by the Commission in the MYT Order dated February 19, 2018 owing to different reasons.

5.31 The Commission in the discrepancy note dated November 20, 2018 directed the Petitioner to submit the statutory audited details of month wise Opening Stock, fuel procured during the month, utilized and balance stock for coal at the end of each month. In addition, the Commission had also sought approved coal procurement plan, FSA, reason for the shortfall in coal from the approved sources along with documentary evidence (like correspondence) for deviation from the approved plan.

5.32 The Petitioner has submitted the monthly wise consumption and GCV from each source of coal narrating the reason for deviation from the approved plan. The Commission approves the coal mix for different types of coal by considering the month wise actual quantity of coal used as submitted by the Petitioner. The Commission further 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.**

5.33 In reply to the Commission's query, the key reasons cited by the Petitioner for variation in the weighted average cost of the primary fuel as compared to approved in MYT Order dated February 19, 2018 are as follows:

a. Lower dispatch than agreed Middling quantity from West Bokaro
b. Crisis of empty wagon at MCL/West Bokaro/CCL loading points
c. Reduction in monthly coal allocation at MCL even after making timely payments
d. Frequently restrictions on coal supply by Ministry/Coal Companies
e. Additionally, GOI initiatives like bringing down the imported coal to zero for PSUs and for State Generating Companies and resorting to domestic supply has further aggravated the non-availability of empty wagons, congestion in the rail network and scarcity of coal.

5.34 Further, the Petitioner has quoted thatas per the MYT Order dated February, 19 2018 and Generation Tariff Regulations 2015 it is the responsibility of Generating Company to arrange primary fuel and has to bear the risk in case it fails to do so. Therefore, considering the short supply of coal from approved sources, the Petitioner had to resort to alternate fuel sources to comply with the direction of the Commission and its obligation as per Generation Tariff Regulations 2015. The relevant extract of MYT Order dated February, 19 2018 and Generation Tariff Regulations 2015 is reproduced below:

Extract of MYT Order dated February 19, 2018

"4.34 The Commission is of the view that the road transportation is inevitable for source or destination not having rail connectivity and as per the submissions made by the Petitioner, very low amount of coal has been transported by roadways for the FY 2015-16 due to the unavailability of coal. ***<u>However, the Petitioner should ensure the availability of coal in future</u>*** *and make sure that the coal is mostly transported though railways using the infrastructure which have been developed.*

....

5.34 The Petitioner has submitted month- wise audited consumption of coal along with the GCV of the coal recorded in its chemical laboratory used for the FY 2015-

16.TheCommission approves the coal mix for different types of coal by considering the month wise actual quantity of coal used for the FY 2015-16 as submitted by the Petitioner. ***The Petitioner, while using alternate sources of coal other than what had been approved by the Commission, should ensure that the price (in Rs /MT) and GCV of the coal used should not vary much from the approved figures. Also, any usage of such coal should be brought to the notice of the Commission during the APR filings of the Petitioner****."*

Extract of Generation Tariff Regulations 2015

"21 Declared Capacity" or 'DC' in relation to a generating station means, the capability to deliver ex-bus electricity in MW declared by such generating station in relation to any time-block of the day or whole of the day, ***duly taking into account the availability of fuel or water, and subject to further qualification in the relevant regulation****;"*

5.35 In addition, the Petitioner further submitted that in pursuit to bring down the cost of primary fuel, the Petitioner has participated in the e-auction under the Scheme for Harnessing and Allocating Koyala (coal) Transparently in India (**SHAKTI Policy**) of Ministry of Coal and managed to get a provisional allocation of 4,64,300 Tonnes per Annum (TPA) of coal for Unit-2 and Unit-3 from three different source at respective notified price. The grant of coal linkage from each source in based on the discount of four paisa/kWh on existing tariff for balance period of the Power Purchase Agreement (PPA). The said coal shall significantly bring down the average power purchase cost of Tata Steel Distribution benefitting end consumers and certainly demonstrates the commitment of Tata Power to supply economical power to its beneficiary.

5.36 Considering the facts submitted by the Petitioner and after due diligence, the following tables summarize the coal mix and weighted average GCV of coal as approved by the Commission for Unit 2 and Unit 3 of Jojobera Generation station.

Table 12: Coal Mix and GCV for Unit 2 as approved by the Commission

Particulars	Coal Mix (%)			GCV (kCal/kg)		
	MYT Order	Petition	Approved	MYT Order	Petition	Approved
Middling Coal	70	45.75	45.75	4149	4251	4251
MCL Coal	30	43.25	43.25	2662	2855	2855
2-Product+Trailing (By Rake)	-	6.64	6.64	-	3405	3405
Trailing (By Road)	-	1.31	1.31	-	4431	4431
CCL Coal	-	2.55	2.55	-	3852	3852
Imported Coal	-	0.50	0.50	-	4405	4405

Table 13: Coal Mix and GCV for Unit 3 as approved by the Commission

Particulars	Coal Mix (%)			GCV (kCal/kg)		
	MYT Order	Petition	Approved	MYT Order	Petition	Approved
Middling Coal	70	43.32	43.32	4149	4277	4277
MCL Coal	30	43.17	43.17	2662	2839	2839
2-Product+Trailing (By Rake)	-	6.40	6.40	-	3281	3281
Trailing (By Road)	-	1.41	1.41	-	4427	4427
CCL Coal	-	5.70	5.70	-	3850	3850

Transit Loss

Petitioner's Submission

5.37 The Petitioner has submitted that coal is procured primarily from two sources i.e. Middling Coal from the West Bokaro Collieries of Tata Steel in Jharkhand and MCL Coal procured from the Mahanadi Coalfields in Orissa. In addition to these, the Petitioner has additionally procured two different by-products of coal from West Bokaro Collieries i.e. Two (2) Product and Tailing in order to cater the demand adequately. The Petitioner emphasis that the coal procured from West Bokaro Collieries are by-products of the Coal Beneficiation process and therefore falls under the category of Washed Coal having high moisture content.

5.38 The Petitioner further highlighted that the actual Transit Loss in Middling Coal and 2-Product + Tailing Coal (by Rake) is higher than the normative value and works out to be 2.74% and 3.36 % respectively which is mainly on account of reduction in moisture content during transportation by rake and is beyond the control of the Petitioner.

5.39 The Petitioner has calculated the Transit Loss on actuals basis for Middling and 2-Product +Tailing (Rake) coal and on normative basis for rest of coal other than Middling and 2- Product +Tailing (Rake).

5.40 The Petitioner has requested the Commission to approve the actual Transit Loss in case of Middling coal and 2-Product+Tailing coal (by Rake) for FY 2016-17 in view of the Judgment of the Hon'ble Tribunal dated November 14, 2013 in Appeal No. 147 of 2012 and normative transit loss for other category of coal.

Commission's Analysis

5.41 The Commission observes that the actual transit loss of coal depends on various factors like category of coal, foreign particles content, moisture content, distance from mines etc. Considering all the factors, the Commission stipulated the weighted average normative transit loss of 0.8% for non-pit head plant and 0.2% for pit head plant in the Generation Tariff Regulations, 2015.

5.42 In accordance with the Clause 8.21 of JSERC Generation Tariff Regulation, 2015, the Commission had approved the normative transit loss as 0.8% in the MYT Order dated February 19, 2018.

5.43 The Petitioner had filed a review petition before the Commission for considering the higher transit loss of washed coal and allows 1% transit loss for washed coal i.e. middling coal for 2nd Control period. The Commission disposed off the review petition vide its Order dated January 9, 2019 allowing normative transit loss of 0.8% for 2nd Control period. The extract is reproduced below.

> *"The Commission has approved the Normative Transit Loss of 0.8% irrespective of the coal type as per Regulation 8.21 of the JSERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015. Normative transit loss under the Regulation accounts for higher loss for some categories of coal such as middling coal and lower transit loss for other types of coals. The Commission may examine the actual transit loss for the year during APR and True-up and will decide on the quantum of transit loss to be passed on".*

5.44 The Petitioner has submitted that due to a shortfall in supply of Middling coal, additionally two different by-products of coal were procured from West Bokaro Collieries i.e. Two (2) Product and Tailing (Rake) in order to cater the demand of power adequately. The Petitioner has requested for a relaxation in transit loss up to 2.74% for Middling coal and 3.36% for 2-Product + Tailing coal (by rake).

5.45 The Commission 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 FY 2016-17 for both the Units for domestic coal and 0.2% for imported coal.

5.46 In view of the above, the Commission approves the transit loss on normative basis for FY 2016-17 as shown below.

Table 14: Transit Loss as approved by the Commission

Particulars	UoM	MYT Order	Petition	Approved
Middling Coal	%	0.8	2.74	0.8
MCL Coal	%	0.8	-2.43	

Particulars	UoM	MYT Order	Petition	Approved
2-Product+Tailing (by rake)	%	-	3.36	
Tailing (by road)	%	-	0.38	
CCL Coal	%	-	-1.56	
Imported Coal	%	0.2	1.11	0.2

Landed Cost of Coal

Petitioner's Submission

5.47 The Petitioner submitted source wise actual landed price from each source. For Middling coal and 2-Product+Trailing coal (by Rake), the landed price was calculated considering the actual transit loss however, normative transit loss is considered for other category of coal as per JSERC Generation Tariff Regulations, 2015.

5.48 The Petitioner further submitted that the price and quality of the fuel are uncontrollable in nature for a generating company and requested the Commission to approve the same as proposed by the Petitioner.

Commission's Analysis

5.49 The Commission in its discrepancy note dated November 20, 2018has directed the Petitioner to provide the calculation of landed cost of coal procured from each source including bills as documentary evidence. In reply to the Commission query, the Petitioner has provided the detail calculation of landed price of coal from each source and also submitted the bills as supporting documents.

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

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

a) The audited figures of the base price of coal including sizing charges, applicable tax, transportation charges, handling charges and provisional adjustment/stock adjustment (if any) as submitted by the Petitioner.
b) Normative Transit loss as approved by the Commission.
c) Actual consumption of various types of coal.

5.52 The weighted average landed price of coal as approved by the Commission for FY 2016-17 is provided in the table below.

Table 15: Landed Price of Coal for Unit 2 as approved by the Commission (Rs./Ton)

Particulars	MYT Order	Petition	Approved
Price of Middling Coal	3830.25	3910.16	3910.16
Price of MCL Coal	2127.80	2431.13	2431.13
Price of 2-Product+Tailing (by rake)	-	2604.75	2604.75
Price of Tailing (by road)	-	4555.36	4555.36
Price of CCL Coal	-	3484.67	3484.67
Price of Imported Coal	-	4060.00	4060.00
Average Landed Price of Coal including Transit loss	**3319.43**	**3222.49**	**3182.17**

Table 16: Landed Price of Coal for Unit 3 as approved by the Commission (Rs./Ton)

Particulars	MYT Order	Petition	Approved
Price of Middling Coal	3831.73	3939.50	3939.50
Price of MCL Coal	2119.13	2465.24	2465.24
Price of 2-Product+Tailing (by rake)	-	2578.94	2578.94
Price of Tailing (by road)	-	4564.01	4564.01
Price of CCL Coal	-	3469.34	3469.34
Average Landed Price of Coal including Transit loss	**3317.95**	**3236.51**	**3198.04**

Calorific value and Cost of Secondary Fuel

Petitioner's Submission

5.53 The Petitioner has submitted the monthly calorific value and landed price of Secondary Fuel for Unit 2 and Unit 3 for FY 2016-17. The weighted average calorific value and landed price as claimed by the Petitioner is 9100 kCal/L and Rs. 42152 per litre for Unit 2 and 9100 kCal/L and Rs. 42394 per litre for Unit 3 respectively.

Commission's Analysis

5.54 The Commission has scrutinized the submission and approved the calorific value and landed price of Secondary Fuel based on the audited value as submitted by the Petitioner. The detail of the approved value of Calorific value and landed price of secondary fuel by the Commission and submitted by the Petitioner is shown below.

Table 17: Calorific value & Landed price of Secondary fuel as approved by the Commission

Particulars	Calorific Value (kCal/L)			Landed Price (Rs./kL)		
	MYT Order	Petition	Approved	MYT Order	Petition	Approved
Unit 2	9100	9100	9100	-	42152.33	42152.33
Unit 3	9100	9100	9100	-	42394.00	42394.00

Energy Charge Rate (ECR)

Petitioner's Submission

5.55 The Petitioner has submitted the Energy Charge Rate (ECR) for FY 2016-17 as Rs. 2.602 per kWh and Rs. 2.578 per kWh for Unit 2 and Unit 3 respectively as per JSERC Generation Tariff Regulations, 2015.

5.56 The Petitioner has further submitted that for calculation of ECR, normative Gross Station Heat Rate of 2567kCal/kWh for Unit 2 and 2577 kCal/kWh for Unit 3 respectively, normative Auxiliary Consumption of10.00% and normative secondary fuel oil as 1.00 ml/kWh for both the Units.

Commission's Analysis

5.57 As per Clause 8.17 of JSERC Generation Tariff Regulation, 2015, the energy (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).

5.58 The formula for calculation of energy charge payable to generating Company is specified in Regulation 8.18 and 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.}*
>
> *8.18 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 x CVSF) x LPPF/CVPF+SFCxLPSFi+LCxLPL} x 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".

5.59 The Commission observed that the energy charge of Rs. 2.602 per kWh and Rs. 2.578 per kWh for Unit 2 and Unit 3 respectively claimed by the Petitioner seems to be on higher side due to higher coal purchase price and transit loss. The main reasons cited by the Petitioner for higher ECR as compared to the base ECR approved in the MYT Order dated February 19, 2018 are as follows:

a. Increase in coal price of the approved sources along with variation in the GCV which are market driven and is beyond the control of the Petitioner.
b. On account of claim of higher transit loss in Middling coal and Tailing & 2 Product coal as compared to normative transit loss.
c. On account of firing of the substitute coal having variation in price and GCV as compared to approved value to fulfil the demand of the beneficiaries.
d. On account of claim of Specific Secondary Fuel Oil Consumption of 1.00 ml/kWh against the value of 0.50 ml/kWh as approved in MYT Order dated February 19, 2018.

5.60 Accordingly, the Commission has calculated the ECR to be charged by the Petitioner as per the formula specified in JSERC Generation Tariff Regulations, 2015 and approved parameters in this Order. The table below detailed the ECR and Fuel Cost for Unit 2 and Unit 3 as approved by the Commission for FY 2016-17.

Table 18: Energy Charge Rate (ECR) for Unit 2 as approved by the Commission

Particulars	UoM	MYT Order	Petition	Approved
Net Generation	MU	767.24	716.98	716.98
Auxiliary Consumption	%	10	10	10
Gross Station Heat Rate	kCal/kWh	2567	2567	2567
Specific Oil Consumption	mL/kWh	0.50	1.00	0.50
Calorific Value of Oil	kCal/mL	9.1	9.1	9.1
GCV of Primary Fuel	kCal/kg	3702.90	3583.75	3583.75
Landed Price of Primary Fuel	Rs./Ton	3319.43	3222.49	3182.17
Landed Price of Secondary Fuel	Rs./kL	-	42152.33	42152.33
Energy Charge Rate (ECR)	**Rs/kWh**	**2.578**	**2.602**	**2.552**

Table 19: Energy Charge Rate (ECR) for Unit 3 as approved by the Commission

Particulars	UoM	MYT Order	Petition	Approved
Net Generation	MU	774.84	706.94	706.94
Auxiliary Consumption	%	10	10	10
Gross Station Heat Rate	kCal/kWh	2577	2577	2577
Specific Oil Consumption	mL/kWh	0.50	1.00	0.50
Calorific Value of Oil	kCal/mL	9.1	9.1	9.1
GCV of Primary Fuel	kCal/kg	3702.90	3570.18	3570.18
Landed Price of Primary Fuel	Rs./Ton	3317.89	3236.51	3198.04
Landed Price of Secondary Fuel	Rs./kL	-	42394	42394
Energy Charge Rate (ECR)	**Rs/kWh**	**2.587**	**2.633**	**2.584**

Summary of Fuel Cost

5.61 The table below provides the summary of Fuel Cost submitted by the Petitioner and approved by the Commission for True-up of FY 2016-17.

Table 20: Fuel Cost for Unit 2 as approved by the Commission

Particulars	UoM	MYT Order	Petition	Approved
Cost of Primary Fuel	Rs. Cr.			181.26
Cost of Secondary Fuel	Rs. Cr.	-	-	1.68
Energy Cost	**Rs. Cr.**	**197.76**	**186.59**	**182.94**

Table 21: Fuel Cost for Unit 3 as approved by the Commission

Particulars	UoM	MYT Order	Petition	Approved
Cost of Primary Fuel	Rs. Cr.			181.00
Cost of Secondary Fuel	Rs. Cr.	-	-	1.66
Energy Cost	**Rs. Cr.**	**200.42**	**186.18**	**182.67**

Determination of Fixed Cost

Additional Capitalization

Petitioner's Submission

5.62 The Petitioner in the MYT Business Plan and Tariff Petition for FY 2017-21 presented the additional Capitalization Plan for FY 2017-21 in accordance with the JSERC Generation Tariff Regulations, 2015 and spill over schemes from 1st Control Period to 2nd Control Period with detailed justification for the same. The Commission after due diligence and due prudence check approved the various Capital Expenditure Schemes in the MYT Order dated February 19, 2018 including new and carry forward Capex Schemes.

5.63 The Petitioner has now submitted that since MYT Order was issued on February 19, 2018 i.e. nearly at the end of FY 2017-18, so except for urgent and necessary capital works, the Petitioner had kept the original additional capitalization plan of the new Capex Schemes for FY 2016-17 and FY 2017-18 in abeyance till the time it was approved by the Commission.

5.64 In regard to the Carry Forward Schemes from 1st Control Period, maximum schemes are capitalization in FY 2016-17 as per plan, however, some of the schemes have been carried forward to FY2017-18 and FY 2018-19 due to various inevitable reasons as mentioned below.

- Changes in Annual Shutdown Plan
- Technical constraints like technological obsolescence, OEM Support, etc.
- Deviations in Cost and Budgeting as planned
- Delay in Grant of necessary permission from Statutory Bodies in certain schemes
- Reassessment of necessity/usefulness of Schemes owing to ever-changing scenario
- Delay in supply of Materials from designated OEMs due to various exigencies at their end.

5.65 The Petitioner has further submitted that the additional capitalization for FY 2016-17 is broadly categorised under two heads:

i. **Capitalization-Standalone:** This category includes the capitalized costs incurred for assets/schemes exclusively for Unit 2 or Unit 3.

ii. **Capitalization-Common Facilities:** This category includes the assets/schemes which are common to all the Units at the Jojobera Power Plant i.e. Unit-1, Unit-2, Unit-3, Unit-4 of Tata Power and Unit 5 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 2 and Unit 3 appropriately.

5.66 The same methodology has been approved by the Commission for determining of additional capitalization in the MYT Order dated February 19, 2018.The Petitioner further submitted that the apportionment ratio was worked out individually for Unit 2 and Unit 3 and combined based on the installed capacity of these Units with respect to the installed capacity of Unit-1, Unit-2, Unit-3, Unit-4 and IEL Unit-5 of Jojobera Power Plant. The methodology of such apportionment is shown below.

Table 22: Methodology of apportionment as submitted by the Petitioner

Particulars	UoM	MYT Order
Installed Capacity (Unit 1)	MW	67.5
Installed Capacity (Unit 2)	MW	120
Installed Capacity (Unit 3)	MW	120
Installed Capacity (Unit 4)	MW	120
Installed Capacity (Unit 5-IEL)	MW	120
Installed Capacity of Jojobera Power Plant	MW	547.5
Contribution of Unit 2	%	21.92
Contribution of Unit 3	%	21.92
Combined Contribution (Unit 2+Unit 3)	**%**	**43.84**

5.67 The detail of actual capitalization during the FY 2016-17 with reasons for cost overrun or time overrun is shown below.

Table 23: Asset wise Capitalization as submitted by the Petitioner (Rs. Lakhs)

Particular	MYT Order	Petition	Reason
Unit-2 (Standalone)			
Flame Scanner Panel Up gradation	50	68.14	Cost overrun due to addition of infrared spectrum along visible spectrum. It will increase reliability in term of detecting flame failure and reduce the spurious boiler tripping due to flame failure.
Turbine IPSV Actuator	11.67	-	Carry Forward due to delay in receiving the Order.
Reheater Coils	122.21	141.35	Cost overrun due to increase in cost of alloy steel.
Burner Panel Bends	85.33	14.04	Carry forward due to delay in receiving the Order. Cost overrun because earlier it was proposed for replacement in single shutdown. However, long shutdown will lead to generation loss, the work is carried out in phase manner and

Particular	MYT Order	Petition	Reason
			hence cost increases slightly than the approved value will be reflected in future years.
Centrifugal Compressor for Ash Plant	65.36		Carry forward due to delay in receiving the Order. Cost overrun due to change in the Scope of work.
Anhydrous Ammonia System	55.18	-	Carry forward
Replacement of Battery Chargers	20.38	18.86	-
Net value (Unit-2)	**410.12**	**242.39**	
Unit-3 (Standalone)			
Up gradation of Relay	20	19.66	-
24 V DC Battery Bank-2	5.53	4.96	-
Turbine IPSV Actuator	11.67	-	Carry Forward due to delay in receiving the Order.
Flame Scanner Panel Up gradation	50	63.67	Cost overrun due to addition of infrared spectrum along visible spectrum. It will increase reliability in term of detecting flame failure and reduce the spurious boiler tripping due to flame failure
LTSH Tubes and Bends 50%	114.36	-	Carry forward
Steam Cooled Wall Bottom Header	81.47	-	Carry forward
HRH & MS Safety Valve	28.47	23.44	-
Centrifugal Compressor for Ash Plant	65.36	-	Carry forward
APH Tubes	203.14	236.50	Cost overrun due to purchase of additional tube plates to ensure leakage free joints.
Replacement of Battery Chargers	20.14	16.95	-
Net value (Unit-3)	**600.13***	**365.18**	
Unit-2 & 3 (Common)			
Anhydrous Ammonia System	55.18	54.25	-
Relining of Ash Ponds	423.87	49.08	Carry forward and partially Surrender
Renovation of Main Store	5.96	5.97	-
Installation of Fire Detection & Monitoring System	565.90	569.38^	-
Fire Hydrant Line for CHP	31.56	34.98	Cost Overrun
Fire Detection & Protection System for LDO Storage Tank Area^	34.19	-	Scheme is capitalized along with fire Detection & Monitoring System
Net value (Common Facilities)	**1116.66***	**713.66**	
Extension job of Conveyor 5	-	35.22	Scheme missed out to seek Carry Forward in the 2nd Control Period
Net- Capitalization	**2126.91**	**1356.44**	

** the value is different From MYT Order dated February 19, 2018 because anhydrous ammonia system was earlier shown as asset of Unit-3 (standalone), however latter in True-up it is proposed as common asset for Unit 2 & Unit 3.*
^the actual value of Rs. 569.38 lakh includes the cost of Installation of Fire Detection & Monitoring System and Fire Detection & Protection System for LDO Storage Tank Area.

5.68 The Petitioner further submitted that the actual additional capitalization as Rs 6.17 Crore for Unit 2 and Rs. 7.40 Crore for Unit 3 against the approved value of Rs 9.41 Crore and Rs. 11.86 Crore in the MYT Order dated February 19, 2018. The Fixed Assets Register duly certified by the Statutory Auditor was also submitted. The following table summarises the actual additional capitalization for Unit 2 and Unit 3 as proposed by the Petitioner.

Table 24: Capitalization as submitted by the Petitioner (Rs. Crore)

Particulars	Unit 2		Unit 3	
	MYT Order	Petition	MYT Order	Petition
Capitalization- Standalone	4.10	2.70	6.55	3.92
Capitalization- Apportioned (Common Facilities)	5.31	3.47	5.31	3.47
Net Capitalization	**9.41**	**6.17**	**11.86**	**7.40**

Commission's Analysis

5.69 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 outlined 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:

(vii) In case of hydro generating stations, any expenditure which has become necessary on account of damage caused by natural calamities (but not due to flooding of power house attributable to the negligence of the generating company) including due to ecological reasons after adjusting for proceeds from any insurance scheme, and expenditure incurred due to any additional work which has become necessary for successful and efficient plan operation; and

Provided that in respect sub-clause (vii) above, any expenditure on acquiring the minor items or the assets like tools and tackles, furniture air conditioners, voltage stabilizers, refrigerators, coolers, fans, washing machine, heat convectors, mattresses, carpets etc. brought after the cut-off date shall not be considered for additional capitalization for determination of tariff w.e.f. 01.04.2016 for the Control period.

Provided further that any capital expenditure other than that of the nature specified
above in (i) to (vi) in case of coal/lignite-based station shall be met out of compensation allowance as specified in Clause 7.46;

> *Provided also that if any expenditure has been claimed under Renovation and Modernisation (R&M), repairs and maintenance under (O&M) expenses and Compensation Allowance, same expenditure cannot be claimed under this regulation."*

5.70 The Commission is of the view that additional capitalization must be carried out with an objective to increase in efficiency, life span, capacity or performance. Hence, the Petitioner is required to furnish justification that addition of assets is of capital in nature or qualifies as O&M expense. In reply, the Petitioner has submitted that the expenditure related to fixed assets which improves the deteriorated performance to original level or reduce deterioration in the future benefits from the existing asset and having asset life of more than one year is recognized as a capital expenditure and is added to the Gross Fixed Assets as per Generally Accepted Accounting Standards (GAAP) applicable till 2015 or Indian Accounting Standard (Ind-As) as applicable from 2016 onwards. On the other hand, R&M expenses is recognized as the cost incurred for day-to-day servicing and are primarily the cost of labour, consumables and may include the cost of small parts.

5.71 The Petitioner further added that the replacement of small parts or expenditure which is incurred at frequent intervals for the upkeep of the plant has been always immediately charged to the Profit and Loss account as R&M expenditure. But here, we are replacing/upgrading/refurbishing battery chargers/APH tubes after seventeen years. This replacement/up gradation/refurbishment had happened after seventeen years, with technological upgraded version and is expected to last for similar number of years i.e. for more than one accounting period of 12 months/one year. The Petitioner further emphasized that the capital expenditure undergoes rigorous statutory audit process for capitalization of the expenditure as Fixed Asset.

5.72 The Commission directed the Petitioner to furnish the detail of recapitalization carried out during the FY 2016-17. The Petitioner submitted that while revisiting the True-up filings of the previous years, they have observed that inadvertently recapitalization for the past years had not been considered while proposing the net actual additional capitalization for the respective years. Accordingly, unit wise decapitalization as submitted by the Petitioner since FY 2011-12 to FY 2017-18 as per books is shown below.

Table 25: Detail of Decapitalization as submitted by the Petitioner (Rs. Lakh)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18
Unit-2	-	31.9	48.5	0.40	0.90	4.00	9.93
Unit-3	-	-	-	50.50	0.50	-	6.34

5.73 The Petitioner has further divided the above-mentioned detail of decapitalized assets associated to Unit 2 and Unit 3 based on following categories:

- Standalone assets
- Common assets apportioned to Unit 2 and Unit 3
- Assets (Common or Standalone) either not claimed in the Tariff Petition or disallowed by the Commission.

5.74 The Petitioner further submitted that assets which are not claimed or disallowed by the Commission should not be part of decapitalization and hence the net effective decapitalization for Unit 2 and Unit 3 has been submitted as mentioned below:

Table 26: Net Decapitalization as submitted by the Petitioner (Rs. Lakh)

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18
Unit-2	-	31.87	48.48	0.10	0.29	0.97	5.25
Unit-3	-	-	-	50.64	0.29	0.97	5.25

5.75 The Commission has gone through the submissions of the Petitioner and is of the view that it is a huge negligence on part of Petitioner and **directs the Petitioner to ensure that no such instance occur in the future tariff filing, failing to which may attract penalty.**

5.76 Further, during scrutinizing the detail of decapitalization as submitted by the Petitioner, the Commission observed that for the period from FY 2011-12 and FY 2017-18, the approved value of additional capitalization is approx. 110.73 Crore against which the Petitioner has submitted only Rs.86.96 Lakh for Unit-2 and Rs. 57.16 Lakh for Unit-3 as decapitalized between FY 2011-12 and FY 2017-18. The Commission after due diligence directed the Petitioner to provide the book value/historical value of assets which have been replaced since FY 2011-12.

5.77 For the purpose of finding out Historical Cost, the Petitioner has divided the additional capitalization up to FY 2017-18 under five categories as mentioned below:

a. New asset
b. Upgradation of existing asset

c. Replaced asset have been repaired/refurbished & kept as spares (Replacement/Spare)
d. Replaced asset is scrapped (Replacement)
e. Replaced asset is still under assessment i.e. to be categorized under (c) or (d) are presently placed under this category (Replacement/Under assessment)

5.78 The breakup of these additional capitalization associated to Unit 2 and Unit 3 as submitted by the Petitioner is shown below:

Table 27: Add. Cap. since FY 2011-12 as submitted by the Petitioner (Rs. Crore)

Particular	FY12	FY13	FY14	FY15	FY16	FY17	FY18	Total
Unit-2 & Unit-3 (Combined)								
New Assets	7.70	4.34	11.32	4.65	7.13	7.17	1.38	43.70
Up gradation	1.61	2.88	4.11	2.30	1.70	0.55	-	13.15
Replacement/Spare	1.85	2.80	5.17	3.93	3.75	2.93	1.59	22.02
Replacement	3.67	2.71	3.58	4.38	4.62	0.41	-	19.37
Replacement/Under Assessment	-	1.62	1.92	2.86	3.58	2.51	-	12.48
Net value	**14.82**	**14.36**	**26.11**	**18.12**	**20.77**	**13.56**	**2.97**	**110.73**

5.79 The Petitioner further submitted that out of Rs. 110.73 Crore, replacement totalling to the tune of Rs. 53.87 Crore (Rs. 41.39 Crore either scrapped or kept as spare and Rs. 12.48 Crore still under assessment for future use as spare or scrapping off) and balance additional Capital Expenditure of around Rs. 56.85 Crore are either under new schemes or up gradations wherein no de-capitalization is mandated. The Petitioner further emphasized those new assets and up gradation of asset do not require any removal of existing assets and hence does not qualify for decapitalization.

5.80 Further, in terms of Accounting Standards (AS10 replaced with IndAS16), removed assets under replacement/spare category where the removed assets are kept as spares are also not been decapitalized from books as they entail future economic value to be derived from them and have not been discarded or scrapped.

5.81 The practice of not removing/de-capitalising assets and keeping it as spares under category replacement/spare category which may be repaired/refurbished is an industry practice by Utilities and is accepted by various Regulatory Commissions including Hon'ble CERC (Order dated 15.03.2017 in Petition No. 344/GT/2014) and Hon'ble UERC (Order dated 10th April 2014 on Retail Tariff for Uttarakhand Power Corporation Ltd. for FY 2014-15).

5.82 Accordingly, the estimate of Historical Cost for all the Additional Capitalization worked out by discounting at annual inflation rates for the past has been worked out as follows:

Table 28: Historical value of Capex Schemes [Estimate based on de-inflated Cost] as submitted by the Petitioner (Rs. Crore)

Particular	FY12	FY13	FY14	FY15	FY16	FY17	FY18	Total
Unit-2 & Unit-3 (Combined)								
New Assets	-	-	-	-	-	-	-	-
Up gradation	-	-	-	-	-	-	-	-
Replacement/Spare	0.90	1.26	2.17	1.60	1.53	1.16	0.61	**9.23**
Replacement	1.79	1.22	1.51	1.78	1.88	0.16	-	**8.34**
Replacement/Under Assessment	-	0.73	0.81	1.16	1.45	0.99	-	**5.15**
Net value	**2.69**	**3.21**	**4.49**	**4.55**	**4.86**	**2.31**	**0.61**	**22.72**

5.83 The Petitioner further submitted that considering 50% of Historical Cost as de-capitalized in case of replacement in which some part has been already been discarded and remaining has been kept as spare for future. Similarly as above, 50% of Historical Cost as de-capitalized in case of replacement in which removed assets have been kept for assessment and part which will be decapitalized after assessment in coming years; further, considering 100% of the removed assets as Capital spare which has already been assessed of having future economic benefit, estimated Historical Cost for all the additional capitalizations for replaced assets have been worked out as Rs. 14.18 Crore in the table below:

Table 29: Historical value of Capex Schemes under which Decapitalization shall be performed [Weighted Average - 60(WPI):40 (CPI)] as submitted by the Petitioner (Rs. Crore)

Particular	FY12	FY13	FY14	FY15	FY16	FY17	FY18	Total
Unit-2 & Unit-3 (Combined)								
New Asset	-	-	-	-	-	-	-	-
Up gradation	-	-	-	-	-	-	-	-
Replacement/Spare	0.45	0.63	1.03	0.20	0.65	-	0.31	**3.27**
Replacement	1.79	1.22	1.51	1.78	1.88	0.16	-	**8.34**
Replacement/Under Assessment	-	0.36	0.40	0.58	0.73	0.50	-	**2.57**
Net value	**2.24**	**2.22**	**2.94**	**2.56**	**3.25**	**0.66**	**0.31**	**14.18**

5.84 The Petitioner also elaborated that the increase in average value of inflation between the FY 2011-12 to FY 2017-18works out to be ~2.38 times than the price level in FY 2000-01. In other words, the Original Cost of each asset would be around 1/2.38 = 42% of additional capitalization. This de-inflated cost could be considered as the Original/Historical Cost of each part/asset if the entire BTG Unit was commissioned by assembling all such parts/assets purchased individually. The Petitioner added that such cost would be much higher than when entire package is assigned to one contractor as turnkey project, which gives tremendous cost benefits. Hence, the average value of inflation value of 42% derived from individual assets may be anywhere between 3-5 times the embedded cost of such assets created through a package in turnkey project. Because of the above-mentioned reason, the estimate of Historical Cost of Rs. 14.18 Crore cannot be used as a fair estimate of Historical Cost due to inherent overestimation.

5.85 In the absence of better alternative, the Petitioner has relied upon the Order dated 11.01.2010 of Hon'ble CERC in Petition No. 128 of 2009 for NTPC's Korba Super Thermal Power Station, wherein the Hon'ble CERC has approved the value to be considered for decapitalization (where Original/Historical Cost were not available) as 10% of additional capitalization as per recommendation of Technical Committee of NTPC. The relevant extract of the said Order is as follows:

> *"40….*
>
> *(B) Expenditure under CEA approved schemes: The petitioner has claimed an expenditure of Rs.704.78 lakh against capital addition schemes approved by CEA vide letter dated 22.8.2000. The assets/works covered under this claim are:*
>
> *(i) H2 Purity meter for Stage-I generators- The expenditure of Rs.47.90 lakh incurred by the petitioner on CEA approved capital addition scheme for replacement of purity meters, is allowed as the asset is considered necessary for efficient operation of the generating station. However, in terms of Note-2 under Regulation 18, the expenditure on replacement can be allowed after deducting the gross value of the original asset. In this connection, the petitioner has submitted as under:*
>
>> *"The replacement values of old purity analyzers are "Nil" as assessed by committee of experts. Therefore, nothing is de-capitalized in books though physically asset has been replaced/ discarded."*
>
> *The submission of the Petitioner that the gross value of original purity meters is "nil" cannot be accepted.* ***In terms of Note-2 under Regulation 18, the asset cannot be permitted to be capitalized, in the absence of the original value. It is pertinent to mention that in most of cases under replacement, the gross value of the original asset as evaluated by the technical committee is 10% of the value of***

new asset. Hence, considering the fact that the asset is necessary for the efficient operation of the generating station, an amount of Rs. 43.11 lakh is allowed after deducting 10% of the value of new asset, considering it to be gross value of the original asset."

5.86 Accordingly, the Petitioner proposes 10% of the value of additional capitalization claimed for replaced assets may kindly be treated as Original/Historical Cost as shown below.

Table 30: Historical value @10% of replaced assets as submitted by the Petitioner (Rs. Crore)

Particular	FY12	FY13	FY14	FY15	FY16	FY17	FY18	Total
Unit-2 & Unit-3 (Combined)								
New Assets	-	-	-	-	-	-	-	-
Up gradation	-	-	-	-	-	-	-	-
Replacement/Spare	0.09	0.14	0.26	0.20	0.19	0.15	0.08	**1.10**
Replacement	0.37	0.27	0.36	0.44	0.46	0.04	-	**1.94**
Replacement/Under Assessment	-	0.08	0.10	0.14	0.18	0.13	-	**0.62**
Net value	**0.46**	**0.49**	**0.71**	**0.78**	**0.83**	**0.31**	**0.08**	**3.66**

5.87 The Commission has scrutinized the detail and reply submitted by the Petitioner and is of the view that economic cost of any asset which is replaced and kept as spares should not be passed on to Beneficiaries as extra burden in the form of increased tariff as the asset is not put to use. Hence, the Commission has considered 100% value of Historic value as submitted by the Petitioner in case of replacement/spare, replacement and replacement/under assessment for decapitalization.

5.88 The approved value of decapitalization as approved by the Commission since FY 2011-20 till FY 2016-17 is tabulated below.

Table 31: Decapitalization since FY 2011-12 as approved by the Commission (Rs. Crore)

Particular	FY12	FY13	FY14	FY15	FY16	FY17
Unit-2	1.53	2.63	1.14	3.87	2.34	0.96
Unit-3	1.15	0.58	3.34	0.68	2.52	1.35

5.89 The Commission after prudence check has approved the addition capitalization for FY 2016-17 as submitted by the Petitioner, however, the Commission has observed that deviation from approved capitalization either cost overrun, time overrun or change in the scope of work become frequent phenomenon in the past without any prior intimation or approval from the Commission. The Commission has taken the note of the same and directed the Petitioner to adhere to the capitalization plan as approved in the MYT Order dated February 19, 2018 and any deviation need to be communicated to the Commission with proper justification without any delay. Any such instance and negligence in future may be treated as non-compliance of the direction of the Commission and may be dealt accordingly.

Table 32: Capitalization for FY 2016-17 as approved by the Commission (Rs. Crore)

Particular	MYT Order	Petition	Approved
Unit-2 (Standalone)			
Flame Scanner Panel Up gradation	50	68.14	50
Turbine IPSV Actuator	11.67	-	-
Reheater Coils	122.21	141.35	122.21
Burner Panel Bends	85.33	14.04	14.04
Centrifugal Compressor for Ash Plant	65.36		
Anhydrous Ammonia System	55.18	-	-
Replacement of Battery Chargers	20.38	18.86	18.86
Net value (Unit-2)	**410.12**	**242.39**	**205.11**
Unit-3 (Standalone)			
Up gradation of Relay	20	19.66	19.66
24 V DC Battery Bank-2	5.53	4.96	4.96
Turbine IPSV Actuator	11.67	-	-
Flame Scanner Panel Up gradation	50	63.67	50
LTSH Tubes and Bends 50%	114.36	-	-
Steam Cooled Wall Bottom Header	81.47	-	-
HRH & MS Safety Valve	28.47	23.44	23.44
Centrifugal Compressor for Ash Plant	65.36	-	-
APH Tubes	203.14	236.50	203.14
Replacement of Battery Chargers	20.14	16.95	16.95
Net value (Unit-3)	**600.13***	**365.18**	**318.15**
Unit-2 & 3 (Common)			
Anhydrous Ammonia System	55.18	54.25	54.25
Relining of Ash Ponds	423.87	49.08	49.08
Renovation of Main Store	5.96	5.97	5.96
Installation of Fire Detection & Monitoring System	565.90	569.38	569.38
Fire Hydrant Line for CHP	31.56	34.98	31.56
Fire Detection & Protection System	34.19	-	-
Net value (Common Facilities)	**1116.66***	**713.66**	**710.23**
Extension job of Conveyor 5	-	35.22	-
Net- Capitalization	**2126.91**	**1356.44**	**1233.49**

** the value is different From MYT Order dated February 19, 2018 because anhydrous ammonia system was earlier shown as asset of Unit-3 (standalone), however latter in True-up it is proposed as common asset for Unit 2 & Unit 3*

5.90 The approved value of de-capitalization as mentioned above till 2015-16 is deducted from the closing value of FY 2015-16 to derive the opening GFA for FY 2016-17. The

Gross Fixed Assets (GFA) as approved by the Commission for FY 2016-17 is shown below.

Table 33: Gross Fixed Assets (GFA) as approved by the Commission (Rs. Crore)

Particulars	Unit 2			Unit 3		
	MYT Order	Petition	Approved	MYT Order	Petition	Approved
Opening GFA	482.50	482.50	470.99	463.33	463.33	455.05
Capitalization	9.41	6.17	5.60	11.86	7.40	6.73
Decapitalization	-	-	0.96	-	-	1.35
Closing GFA	491.91	488.67	475.63	475.19	470.73	460.43

Depreciation

Petitioner's Submission

5.91 The Petitioner has submitted the depreciation for FY 2016-17 as summation of the depreciation on the following assets:

- Original Project Cost
- Additional Capitalization approved from FY 2011-12 to FY 2015-16 and
- Actual Additional Capitalization for FY 2016-17.

5.92 Since Unit 2 and Unit 3 commenced their Commercial Operation in the year 2001 and 2002(CoD) hence, it falls under the category of "Existing Generating Station" or "Existing Project" as predefinition in Clause 26 and 27 of JSERC Generation Tariff Regulations, 2015. Considering the above, the methodology prescribed in Clause 7.32 of JSERC Generation Tariff Regulations, 2015 for Existing Generation Station/Existing Project was applied.

5.93 However, going forward with the same methodology the Petitioner highlighted certain difficulties particularly towards the fag end of Useful Life (25 years) of each Unit i.e. FY2025-26 for Unit 2 and FY 2026-27 for Unit 3. On the other hand, continuing with this methodology at the rates specified in the Tariff Regulations 2015, the Petitioner shall not be able to recover full allowable depreciation of 90% till the Useful Life of the Units particularly for additional capitalisation allowed since FY 2011-12.Accordingly, the Petitioner has proposed an alternate methodology for computing the depreciation from FY2016-17 onwards to overcome such difficulties without impacting much on end consumer tariff.

5.94 The Petitioner submitted that the asset life in all categories should be considered co-terminus with the Plant life of 25 years which falls in the year 2025-26 for Unit-2 and

2026-27 for Unit-3. Following the said methodology, assets which would reach cumulative depreciation of 70% well before 2025-26 for Unit-2 and 2026-27 for Unit-3shall be allowed to recover the balance 20% depreciation in remaining years or balance Useful Life i.e. the year in which it reaches 70% till useful plant life i.e. FY 2025-26 for Unit-2 and FY 2026-27 for Unit-3. The balance Useful Life of an asset category after reaching 70% cumulative depreciation depends on

(i) Rate of Depreciation for that category of asset; and
(ii) Year of Capitalisation.

In those cases, where balance Useful Life of a particular asset category is only 0-3 years, spreading of 20% depreciation over balance Useful Life may require charging the depreciation from 6.66% to the tune more than 20% in the last year(s) of Useful Life. Thus, the depreciation rates chargeable on these categories of assets may jump upto almost four times the normal depreciation rates applicable to them in these years. The above proposition shall lead to a situation where in the Petitioner shall be required to charge a substantial depreciation cost in the balance useful plant life in order to recover the allowable cost of depreciation up to 90% of the value of the assets. Such higher depreciation cost will lead to higher tariff for the balance useful life which would critically impact the end consumers.

Also, in case of assets having lower depreciation rate or essential assets capitalized in later years, which are not able to reach cumulative depreciation of 70% by FY 2025-26 for Unit-2 and FY 2026-27 for Unit-3, the Petitioner shall be left with under-recovery of the allowable depreciation of 90% as mentioned in Clause 7.29 of the Regulation as reproduced below.

> *"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."*

Thus, Clause 7.29 entitles the Petitioner to recover 90% of the capital cost of an asset through depreciation and treat 10% of the asset value as salvage value at the end of Useful Life of the asset. However, continuing with present rates of depreciation and the specified methodology, the Petitioner shall not be able to recover full 90% of the entitled depreciation till the end of Useful Life of assets. The Petitioner estimates that if existing provisions continue to be applicable on assets approved by the Commission, it would end up with not recovering an amount of Rs 13.98 Crore for Unit 2 and Rs 15.42 Crore for

Unit 3 required for 90% cost recovery contrary to the Regulations which provides for recovery of depreciation up to 90% of the assets value.

5.95 Moreover, even if applicable depreciation rate as specified in Appendix-1 of the JSERC Generation Tariff Regulations, 2015 are applied on the assets till Power Purchase Agreement (PPA) life of 30 years i.e. beyond their Useful Life of 25 years specified in the Regulations and till FY 2030-31 for Unit 2 and FY 2030-31 for Unit 3, it shall still leave the Petitioner with non-recovery of cost of depreciation of Rs 7.32 Crore for Unit 2 and Rs 5.67 Crore for Unit 3 not only impacting the Petitioner but also is not inline to Clause 7.29 of the JSERC Generation Tariff Regulations, 2015.

5.96 Therefore, in order to overcome the above difficulties and to avoid tariff jolt in the fag years of the useful Plant life and to smoothen the recovery of depreciation cost, the Petitioner most humbly proposes that balance depreciable value as on April 01, 2016, after deducting the cumulative depreciation as allowed by the Commission up to March 31, 2016 from the gross depreciable value of the assets, may be allowed to be spread equally in balance years of the PPA life having validity of 30 years i.e. tillJanuary31, 2031 for Unit 2 and January 31, 2032 for Unit 3 respectively. The Petitioner has proposed to spread the estimated recovery of total depreciation required to reach 90% asset value i.e. (i) depreciation as per rates specified in existing provisions; and (ii) balance under-recovery at the end of PPA life, equally till end of FY31or FY32 as the case may be.

5.97 The Petitioner has further submitted that some of the non-critical Capex Schemes which are not so crucial for operations of Jojobera Unit 2 & Unit 3 had been dropped from the Capitalization Plan which shall further contain the cost of depreciation thereby leading to lower claimed depreciation of Rs 36.37 Crore for Unit 2 and Rs 41.65 Crore for Unit3 as compared to the depreciation of Rs 39.44 Crore for Unit 2 and Rs 47.05 Crore for Unit 3 as approved by the Commission for the 2ndControl Period. In fact, there shall also be reduction in Return on Equity (RoE) and Interest on Loan (IoL) due to such sacrifice of some schemes and overall savings for Beneficiaries shall far outweigh the additional amount of depreciation that is being sought to be recovered in balance PPA life starting from FY 2016-17. By doing so, benefit on account of dropping of certain non-critical schemes shall be passed onto the Beneficiaries and the effect of recovery of Rs 7.32 Crore for Unit 2 and Rs 5.67 Crore for Unit 3onaccount of left-over depreciation post-PPA term can be absorbed completely without increasing tariff of end consumers. Moreover, the proposed methodology of spreading the balance depreciable value of each asset over balance PPA life from FY 2016-17 onwards avoids any need for sudden increases in depreciation rates.

5.98 In view of foregoing and to avoid tariff jolt to the end consumers during fag end and simultaneously enabling the Petitioner to recover depreciation up to 90% by end of PPA life, the Petitioner requested the Commission to exercise its power conferred under Power to remove difficulties under Clause 16.3 to remove difficulty by allowing the Petitioner to recover depreciation on assets till PPA life and relaxing the Clause 7.32 of the Regulations under Power of Relaxation under Clause 16.4 of the JSERC Generation Tariff Regulations, 2015 and enabling it to spread the balance depreciable value as on March 31, 2016 and for capitalization thereafter in remaining PPA life. The depreciation as claimed by the Petitioner is shown in the table below.

Table 34: Depreciation as submitted by the Petitioner (Rs. Crore)

Particulars	Unit 2		Unit 3	
	MYT Order	Petition	MYT Order	Petition
Depreciation on Original Capital Cost	3.36	3.38	5.11	5.11
Depreciation on Additional Capitalization FY 12		0.36		0.31
Depreciation on Additional Capitalization FY 13		0.49		0.23
Depreciation on Additional Capitalization FY 14		0.49		0.81
Depreciation on Additional Capitalization FY 15		0.74		0.24
Depreciation on Additional Capitalization FY 16	2.68	0.56	2.36	0.61
Depreciation on Additional Capitalization FY 17	0.23	0.16	0.29	0.19
Net Depreciation	**6.27**	**6.18**	**7.76**	**7.50**

Commission's Analysis

5.99 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 hydro generating 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 31st 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.

5.100 The Commission observed that the methodology adopted by the Petitioner for calculation of depreciation is not in line to the Generation Tariff Regulations 2015. The reasons cited by the Petitioner of under recovery of assets value in case the rate of depreciation as mentioned in Appendix-I of Generation Tariff Regulations 2015 is considered for calculation of depreciation is not found satisfactory.

5.101 The Commission is of the view that to substantiate its proposal for change in the methodology for calculation of depreciation, the Petitioner was required to carry out detail study to ascertain the residual life of asset. At present, the Petitioner proposal for accepting the different methodology for calculation of depreciation without any documentary evidence demonstrate only its eagerness to recover the expenditure incurred. Hence, for carrying out the True-up for FY 2016-17, the Commission has approved the deprecation as per rate defined in JSERC Generation Tariff Regulations, 2015. **The Commission has also directed the Petitioner that any deviation from Regulations should be substantiated with proper justification either it may be treated as non-compliance of Regulations and will be treated as per Law.**

5.102 The Commission has approved the value of depreciation for FY 2016-17 as shown below.

Table 35: Depreciation as approved by the Commission (Rs. Crore)

Particulars	Unit 2			Unit 3		
	MYT Order	Petition	Approved	MYT Order	Petition	Approved
Original Capital Cost	3.36	3.38	2.27	5.11	5.11	3.77
Additional Capitalization FY12		0.36	0.43		0.31	0.38
Additional Capitalization FY13		0.49	0.58		0.23	0.32
Additional Capitalization FY14		0.49	0.43		0.81	0.81
Additional Capitalization FY15		0.74	0.73		0.24	0.26
Additional Capitalization FY16	2.68	0.56	0.51	2.36	0.61	0.59
Additional Capitalization FY17	0.23	0.16	0.15	0.29	0.19	0.18
Net Depreciation	**6.27**	**6.18**	**5.10**	**7.76**	**7.50**	**6.31**

Operation & Maintenance Expenses

Petitioner's Submission

5.103 The Petitioner has claimed the Operation and Maintenance (O&M) expenses under the following four broad categories.

a. Employee Expenses with Terminal Benefits;
b. Repairs & Maintenance (R&M) Expenses;
c. Administrative and General (A&G) Expenses includes ash disposal expenses, raw water expenses, head office expenses & shared services expenses, application expenses and other A&G expenses;
d. Capital Spares.

5.104 The Petitioner has claimed the normative employee expenses as approved in the MYT Order dated February 19, 2018. The terminal liabilities are considered on actuals based on the audited accounts.

5.105 The Petitioner has claimed the normative R&M expenses as approved in the MYT Order dated February 19, 2018 for the purpose of true-up for FY 2016-17 as per Clause 6.14.b read with Clause 6.11 and Clause 6.12 of the JSERC Generation Tariff Regulations, 2015.

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

5.107 The Petitioner has claimed the ash disposal expenses, application fees and publication expenses based on the actuals 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 MYT Order dated February 19, 2018.

5.108 The Petitioner submitted that the Commission in the MYT Order dated February 19, 2018 approved the Raw Water Expense for FY 2016-17 considering projected Generation, estimated Specific Raw Water Consumption of 3.18 m^3/MWh and the revised Raw Water charges of Rs 17.52/m^3 as charged by JUSCO to its industrial consumers including the Petitioner. However, the Petitioner submitted that actual raw water expenses for FY 2016-17 is lower than that approved mainly on the account of improved Specific Raw Water Consumption and lower Generation. In light of the above, the Petitioner has claimed the actual raw water expenses as per audited accounts.

5.109 As per approved plan, no capital spare is planned for FY 2016-17 and all the capital spares are scheduled for the period between FY 2017-18 and FY 2019-20. Hence, the Petitioner has not claimed any capital spares expenses for FY 2016-17.

5.110 The detail of O&M expenses claimed by the Petitioner is shown in the table below.

Table 36: O&M Expenses as submitted by the Petitioner (Rs. Crore)

Particulars	Unit 2		Unit 3	
	MYT Order	Petition	MYT Order	Petition
Employee Expenses	6.39	6.39	6.39	6.39
Terminal Liabilities	0.25	0.31	0.25	0.31
R&M Expenses	16.60	16.60	11.85	11.85
Ash Disposal Expenses	5.14	4.58	5.21	4.52
HO & SS Expenses	8.73	8.73	7.65	7.65
Other A&G Expenses	4.17	4.17	3.81	3.81
Raw Water Expenses	4.75	4.10	4.80	3.97
Application Fees & Publication Expenses	0.32	0.19	0.32	0.19
Capital Spares	-	-	-	-
Net O&M Expenses	**46.35**	**45.07**	**40.29**	**38.69**

Commission's Analysis

5.111 Clauses7.40 and 7.41 of the JSERC Generation Tariff Regulations, 2015 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 income tax).

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 prudency 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."

5.112 The Commission has scrutinized the submission made by the Petitioner and approves the terminal liabilities, ash disposal expenses and application fees &publication expenses, as per audited accounts.

5.113 The Commission has approved the employee cost, R&M expenses, HO & SS expenses and other A&G expenses as per normative value approved in the MYT Order dated February 19, 2018.

5.114 The Petitioner submitted that the Govt. of Jharkhand had increased the water charges vide notification dated April 01, 2011 issued by the Water Resources Department, Government of Jharkhand (GoJ). 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. The Hon'ble High Court has passed the Interim Order in favour of TSL directing them to pay Rs. 1.00 Crore per month towards water charges till the pending writ petition is finally decided. It could not be brought on record as to what part of Rs. 1.00 Crore is associated to the Petitioner's Jojobera plant Unit-2 and unit-3.

5.115 As per the submission of the Petitioner, they are billed as per new increased rate and the Petitioner is paying to TSL as per the revised rate. It is apparent that TSL is recovering water charges as per the revised rates while it is paying Govt. of Jharkhand at the rate permitted by Hon'ble High Court.

5.116 TSL further submitted the details regarding the water consumption, rate of billing for industrial and municipal consumption. The detail as submitted by the TSL is shown below.

Table 37: Water Consumption detail as submitted by TSL

Financial Year	Consumption ('000 Gallons)		Rate (Rs./'000 Gallons)		Industrial Bill (Rs. Cr.)	Municipal Bill (Rs. Cr.)	Total Bill (Rs. Cr.)	Payment made to State Government (Rs. Cr.)
	Industrial	Municipal	Industrial	Municipal				
FY 11-12	1,80,12,960	1,13,62,990	26.4	7.9	47.55	8.98	56.53	12
FY 12-13	1,97,20,920	1,31,01,870	28.38	8.49	55.97	11.12	67.09	37
FY13-14	2,00,66,000	95,27,570	30.51	9.13	61.22	8.70	69.92	37
FY14-15	2,02,70,410	1,47,06,500	32.8	9.81	66.49	14.43	80.91	182
FY15-16	1,82,49,560	1,48,61,190	35.26	10.55	64.35	15.68	80.03	12
FY 16-17	**1,71,63,270**	**1,39,54,960**	**37.9**	**11.34**	**65.05**	**15.82**	**80.87**	**12**
FY 17-18	1,67,58,990	1,17,63,460	40.74	12.19	68.28	14.34	82.62	12
FY 18-19	1,58,51,270	1,51,00,050	43.8	13.11	69.43	19.80	89.22	12
Total	**14,60,93,380**	**10,43,78,590**			**498.33**	**108.87**	**607.20**	**316**

5.117 The detail of water consumption as submitted by the Petitioner for FY 2016-17 is shown below.

Table 38: Water Consumed by TPCL in FY 2016-17 as submitted by the Petitioner

FY 16-17	UoM	Consumption	
		Unit-2	Unit-3
TPCL	'000 Gallons	5,15,435	4,99,572

5.118 Since, the matter is sub-judice before the Hon'ble High Court of Jharkhand and also TSL has partially paid the water tax to Government of Jharkhand (GoJ) amounting to Rs. 316 Crore against the submitted value of Rs. 607.20 Crore, the Commission is of the view that passing the complete raw water charge as claimed by the Petitioner to the consumers at this juncture is not appropriate. Hence, based on the details presented before the Commission by the Petitioner and TSL, the Commission has approved the raw water expenses in proportion to actual payment made to GoJ by TSL including ad hoc payment made at the rate of Rs. 1.00 Crore per month. The water charges allowed is provisional and subject to the final outcome of the writ petition pending before Hon'ble High Court of Jharkhand.

5.119 The Commission directs the Petitioner to perform prudence check on the bills submitted by TSL for Water Charges in the future and ensure that it pays only the part of the Water Charges attributable to it out of the overall consumption, considering the order on payment for Rs. 1.00 Crore by the Hon'ble High Court of Jharkhand.

Table 39: Raw water as approved by the Commission (Rs. Crore)

FY 16-17	UoM	Unit-2	Unit-3
Consumption	'000 Gallons	5,15,435	4,99,572
Rate	Rs./'000 Gallons	79.65	79.65
Water Bill	Rs. Cr.	4.11	3.98
TPCL apportion based on actuals	**Rs. Cr.**	**2.14**	**2.07**

5.120 The O&M expense as approved by the Commission for FY 2016-17 is shown below.

Table 40: O&M Expenses (Normative Component) as approved by the Commission (Rs. Crore)

Particulars	Unit 2			Unit 3		
	MYT Order	Petition	Approved	MYT Order	Petition	Approved
Employee Cost	6.39	6.39	6.39	6.39	6.39	6.39
R&M Expenses	16.60	16.60	16.60	11.85	11.85	11.85
HO & SS Expenses	8.73	8.73	8.73	7.65	7.65	7.65
Other A&G Expenses	4.17	4.17	4.17	3.81	3.81	3.81

Table 41: O&M Expenses (Variable Component) as approved by the Commission (Rs. Crore)

Particulars	Unit 2			Unit 3		
	MYT Order	Petition	Approved	MYT Order	Petition	Approved
Terminal Liabilities	0.25	0.31	0.31	0.25	0.31	0.31
Ash Disposal Expenses	5.14	4.58	4.58	5.21	4.52	4.52
Raw Water Expenses	4.75	4.10	2.14	4.80	3.97	2.07
Application & Publication Expenses	0.32	0.19	0.19	0.32	0.19	0.19
Capital Spares	-	-	-	-	-	-

Table 42: O&M Expenses as approved by the Commission (Rs. Crore)

Particulars	Unit 2			Unit 3		
	MYT Order	Petition	Approved	MYT Order	Petition	Approved
Employee Cost	6.39	6.39	6.39	6.39	6.39	6.39
Terminal Liabilities	0.25	0.31	0.31	0.25	0.31	0.31
R&M Expenses	16.60	16.60	16.60	11.85	11.85	11.85
Ash Disposal Expenses	5.14	4.58	4.58	5.21	4.52	4.52
HO & SS Expenses	8.73	8.73	8.73	7.65	7.65	7.65
Other A&G Expenses	4.17	4.17	4.17	3.81	3.81	3.81

Particulars	Unit 2			Unit 3		
	MYT Order	Petition	Approved	MYT Order	Petition	Approved
Raw Water Expenses	4.75	4.10	2.14	4.80	3.97	2.07
Application & Publication Expenses	0.32	0.19	0.19	0.32	0.19	0.19
Capital Spares	-	-	-	-	-	-
O&M Expenses	**46.35**	**45.07**	**43.10**	**40.29**	**38.69**	**36.79**

Interest on Loan

Petitioner's Submission

5.121 The Petitioner submitted that the repayment of the long-term loan on Original Project Cost of Unit 2 and Unit 3 has been completed in the year FY 2009-10 and 2010-11 respectively.

5.122 In line to the MYT Order dated February 19, 2018, the Petitioner has considered 70% of the actual capitalization as Normative Loan for FY 2016-17 with interest rate of 13.02% and 12.33% for Unit 2 and Unit 3 respectively.

5.123 The Petitioner has 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 2 and Unit 3 and hence depreciation part on original cost is not considered as part of normative repayment of debt.

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

Table 43: Interest on Loan as submitted by the Petitioner (Rs. Crore)

Particulars	Unit 2		Unit 3	
	MYT Order	Petition	MYT Order	Petition
Opening Loan	30.23	30.23	26.94	26.94
Deemed Loan Addition	6.59	4.32	8.30	5.18
Deemed Loan Repayment	2.91	2.80	2.65	2.39
Closing Loan	33.91	31.74	32.59	29.73
Interest Rate	13.02%	13.02%	12.33%	12.33%
Interest on Loan	**4.18**	**4.03**	**3.67**	**3.49**

Commission's Analysis

5.125 The Commission has calculated the gross normative loan for FY 2016-17 as per Clause 7.13 and 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 1stApril 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."

5.126 In reply to Commission's query regarding decapitalisation, the Petitioner had submitted that while revisiting the True-up filings of previous years, it has been observed that inadvertently decapitalization for the past years had not been considered while proposing the net actual additional capitalization for the respective years. The Petitioner further stated that out of depreciable value of Rs. 78.27 Lakh and Rs. 51.44 Lakh for Unit 2 and 3 respectively, nearly entire depreciation of Rs. 74.58 Lakh and Rs. 47.75 Lakh respectively has been recovered on the date of decapitalization. Hence, there is negligible recovery of depreciation on these decapitalized assets thereafter. Since, the entire depreciable value of assets decapitalized from Original Project Cost has been recovered, small value of assets added after FY12 and decapitalized till date was remaining on the date of decapitalisation. Similarly, since most of the assets deleted are from Original project cost as on COD, there were no loans outstanding on these assets that had been ever approved by the Commission.

5.127 The Commission has scrutinized the detail submitted by the Petitioner and observed that the actual loan on the Assets Capitalised as on COD has been entirely repaid by the Petitioner. Since the normative loan value approved by the Commission is on the Additional Capitalisation from FY 2011-12, the normative opening loan for FY 2016-17 is considered equal to closing normative loan amount of FY 2015-16 as approved in the previous Order dated February 19, 2018.

5.128 The Commission is continuing with the same methodology as adopted in the earlier Orders for deriving the value of deemed loan repayment for FY 2016-17.

5.129 In accordance to Clause 7.23 of JSERC Generation Tariff Regulations, 2015 and as approved in MYT Order dated February 19, 2018, the Commission has approved the interest rate as 13.02% and 12.33% for Unit 2 and Unit 3 respectively as shown below.

Table 44: Interest on Loan as approved by the Commission (Rs. Crore)

Particulars	Unit 2			Unit 3		
	MYT Order	Petition	Approved	MYT Order	Petition	Approved
Opening Loan	30.23	30.23	30.23	26.94	26.94	26.94
Deemed Loan Addition	6.59	4.32	3.25	8.30	5.18	3.76
Deemed Loan Repayment	2.91	2.80	2.83	2.65	2.39	2.53
Closing Loan	33.91	31.74	30.65	32.59	29.73	28.17
Interest Rate	13.02%	13.02%	13.02%	12.33%	12.33%	12.33%
Interest on Loan	**4.18**	**4.03**	**3.96**	**3.67**	**3.49**	**3.40**

Interest on Working Capital (IoWC)

Petitioner's Submission

5.130 The Petitioner has submitted the Interest on Working Capital (IoWC) requirement in line with Clause7.34 of the JSERC Generation Tariff Regulations, 2015, as provided in the Table below.

Table 45: IoWC as submitted by the Petitioner (Rs. Crore)

Particulars	Unit 2		Unit 3	
	MYT Order*	Petition	MYT Order*	Petition
Coal Stock (30 Days)				
Coal for Generation (30 Days)	33.74	33.78	33.86	34.19
Cost of Secondary Fuel (60 Days)	0.34	0.63	0.34	0.63
Maintenance Spares (20% O&M)	9.27	9.01	8.06	7.74
O&M Expenses (1 Month)	3.86	3.76	3.36	3.22
Receivables (2 Months)	50.91	50.97	49.95	50.23
Total Working Capital requirement	98.12	98.15	95.56	96.01
Interest rate on WC	12.80%	12.80%	12.80%	12.80%
Interest on Working Capital	**12.56**	**12.56**	**12.23**	**12.29**

** Revised in Review Order dated January 09, 2019*

Commission's Analysis

5.131 The Commission has computed the Interest on Working Capital (IoWC) for FY 2016-17 for both Unit 2 and Unit 3 as per Clause 7.34 and 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."*

5.132 The Bank Rate as on April 01, 2016is considered for the purpose of computation of Interest on Working Capital (IoWC) as perClause7.38 of JSERC Generation Tariff Regulation, 2015.The Interest on Working Capital (IoWC) as approved by the Commission for FY 2016-17 is summarized in the following table.

Table 46: IoWC as approved by the Commission (Rs. Crore)

Particulars	Unit 2			Unit 3		
	MYT Order*	Petition	Approved	MYT Order*	Petition	Approved
Coal Stock (30 Days)			16.94			17.16
Coal for Generation (30 Days)	33.74	33.78	16.94	33.86	34.19	17.16
Cost of Secondary Fuel (60 Days)	0.34	0.63	0.31	0.34	0.63	0.32
Maintenance Spares (20% O&M)	9.27	9.01	8.62	8.06	7.74	7.36
O&M Expenses (1 Month)	3.86	3.76	3.59	3.36	3.22	3.07
Receivables (2 Months)	50.91	50.97	45.82	49.95	50.23	44.62
Total Working Capital requirement	98.12	98.15	92.23	95.56	96.01	89.67
Interest rate on WC	12.80%	12.80%	12.80%	12.80%	12.80%	12.80%
Interest on Working Capital	**12.56**	**12.56**	**11.81**	**12.23**	**12.29**	**11.48**

** Revised in Review Order dated January 09, 2019*

Return on Equity

Petitioner's Submission

5.133 The Petitioner has stated that the additional capitalization is done from internal accrual and hence has considered the financing of additional capitalization at Normative Debt: Equity ratio of 70:30 for FY 2016-17. The Petitioner has further submitted that for additional capitalization during the FY 2016-17, Return on Equity (RoE) has been computed from mid-year considering capitalization of the assets throughout the year.

5.134 The Petitioner has further submitted that the Minimum Alternate Tax (MAT) rate as 21.34% as approved in the MYT Order dated February 19, 2019 for consideration in calculation of Return on Equity (RoE) post-tax. Accordingly, the Petitioner has calculated the Return on Equity (RoE) for FY 2016-17 as shown below.

Table 47: RoE as submitted by the Petitioner (Rs. Crore)

Particulars	Unit 2		Unit 3	
	MYT Order	Petition	MYTOrder	Petition
Opening Equity	144.75	144.75	139.00	139.00
Addition	2.82	1.85	3.56	2.22
Closing Equity	147.57	146.60	142.56	141.22

Particulars	Unit 2		Unit 3	
	MYT Order	Petition	MYTOrder	Petition
Rate of Return	15.50%	15.50%	15.50%	15.50%
ROE (Pre-Tax)	22.65	22.58	21.82	21.72
MAT	21.34%	21.34%	21.34%	21.34%
ROE after MAT	19.71%	19.71%	19.71%	19.71%
ROE (Post-Tax)	**28.80**	**28.71**	**27.74**	**27.61**

Commission's Analysis

5.135 The Commission has calculated the Gross Normative Equity for FY 2016-17 as per Clause 7.13 and 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 1st 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."

5.136 The Commission has decapitalized assets worth of Rs. 11.51 Crore and Rs. 8.28 Crore for Unit 2 and Unit 3 respectively for the period between FY 2011-12 and FY 2015-16. Considering the normative ratio of debt: equity as 70:30, the Commission has deducted the normative value from the opening Equity of FY 2016-17.

5.137 The Commission vide letter dated November 20, 2018 directed the Petitioner to submit the actual income tax paid along with the documentary evidence instead of grossing up MAT rate in the Petition for FY 2016-17. The Petitioner vide letter dated February 08, 2019 replied to the Commission discrepancy stating that the Income Tax on profit earned in the FY 2016-17 is being paid for the company as a whole based on its financial position across the various assets. For FY 2016-17, the Petitioner had paid total Income Tax of Rs. 222 Crore. The Petitioner has also submitted the Profit and Loss (P&L) Statement extracted from Annual Report highlighted profit earned before tax as Rs. 506.13 Crore and MAT rate of 21.34%i.e. Rs. 290.92 Crore. In addition, adjustment of deferred tax amounting to Rs. 68.24 Crore has been done in FY 2016-17. Hence, Net Income Tax paid for FY 2016-17 is Rs. 222.68 Crore resulting in net effective tax rate of 43.99%. However, the Petitioner has claimed Income Tax @ MAT rate i.e. 21.34% which is lower than the Corporate Tax (34.61%) as well as Net Effective Tax (43.99%).

5.138 In accordance with Clause 7.16, Clause 7.17 and Clause 7.18 of the JSERC Generation Tariff Regulations, 2015, the Commission has approved the RoE at15.50% which is grossed up with the MAT rate i.e. 21.34%applicable for the FY 2016-17. Accordingly, the Commission approves the Return on Equity for FY 2016-17 as shown below.

Table 48: RoE as approved by the Commission (Rs. Crore)

Particulars	Unit 2			Unit 3		
	MYT Order	Petition	Approved	MYT Order	Petition	Approved
Opening Equity	144.75	144.75	141.30	139.00	139.00	136.51
Addition	2.82	1.85	1.39	3.56	2.22	1.61

Particulars	Unit 2			Unit 3		
	MYT Order	Petition	Approved	MYT Order	Petition	Approved
Closing Equity	147.57	146.60	142.69	142.56	141.22	138.13
Rate of Return	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%
ROE (Pre-Tax)	22.65	22.58	22.01	21.82	21.72	21.28
MAT	21.34%	21.34%	21.34%	21.34%	21.34%	21.34%
ROE after MAT	19.71%	19.71%	19.71%	19.71%	19.71%	19.71%
ROE (Post-Tax)	**28.80**	**28.71**	**27.98**	**27.74**	**27.61**	**27.06**

Tax on Saving on Operational Parameters

Petitioner's Submission

5.139 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 is recoverable from Tata Steel Distribution Company as per Clause 7.49 of the JSERC Generation Tariff Regulations, 2015 which has also been clarified and upheld by the Hon'ble Tribunal in their Judgment dated August 10, 2016 in Appeal No. 195 of 2015.

5.140 The Tax liability on gain of operational parameters as claimed by the Petitioner is shown below.

Table 49: Tax Liability on saving in Operation Parameters as submitted by the Petitioner (Rs. Crore)

Particulars	Unit 2		Unit 3	
	MYT Order	Petition	MYT Order	Petition
Tax on Gain on Secondary Fuel	-	0.71	-	0.64
Tax on the Gain on Aux. Consumption	-	0.54	-	0.66
Tax on the Gain on Station Heat Rate	-	0.49	-	0.68
Tax on the Savings on O&M Expenses	-	1.10	-	-

Commission's Analysis

5.141 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 31st 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

5.142 The Commission observed that the Petitioner has claimed the incentive on 1 ml/kWh against the approved value of 0.5 ml/kWh as per MYT Order dated February 19, 2018. The Commission has considered the MYT Order value and calculated the tax liability on gain secondary fuel is shown below.

Table 50: Tax Liability on saving in Secondary Fuel as approved by the Commission (Rs. Crore)

Particulars	UoM	Unit 2			Unit 3		
		MYT Order	Petition	Approved	MYT Order	Petition	Approved
Actual Gross Generation	MU	-	788.15	788.15	-	775.16	775.16
Normative LDO	ml/kWh	-	1.00	0.50	-	1.00	0.50
LDO Consumption	kL	-	788.15	394.08	-	775.16	387.58
Actual LDO Consumption	kL	-	164.00	164.00	-	222.00	222.00
Difference in LDO	kL	-	624.15	230.08	-	553.16	165.58
Landed Price of Oil	Rs./kL	-	42152.00	42152.33	-	42394.00	42394.00
Gain	Rs. Crore	-	2.63	0.97	-	2.35	0.70
Applicable Tax Rate	%	-	21.34	21.34	-	21.34	21.34
Tax Liability Gain on Secondary Fuel	**Rs. Crore**	**-**	**0.71**	**0.26**	**-**	**0.64**	**0.19**

Tax Liability on Gain on Auxiliary Power Consumption

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

Table 51: Tax Liability on saving in Auxiliary as approved by the Commission (Rs. Crore)

Particulars	UoM	Unit 2			Unit 3		
		MYT Order	Petition	Approved	MYT Order	Petition	Approved
Normative Auxiliary Power Consumption	%	-	10.00	10.00	-	10.00	10.00
Actual Auxiliary Power Consumption	%	-	9.03	9.03	-	8.80	8.80
Units Saved	MU	-	7.64	7.64	-	9.29	9.29

Particulars	UoM	Unit 2			Unit 3		
		MYT Order	Petition	Approved	MYT Order	Petition	Approved
ECR	Rs./kWh	-	2.60	2.55	-	2.63	2.58
Gain due to lower Aux.	Rs. Crore	-	1.99	1.95	-	2.45	2.40
Applicable Tax Rate	%	-	21.34	21.34	-	21.34	21.34
Tax liability Gain on Aux. Consumption	**Rs. Crore**	**-**	**0.54**	**0.53**	**-**	**0.66**	**0.65**

Tax Liability on Gain on Station Heat Rate

5.144 In line to the Clause 7.49, the Commission approves the tax liability on gain on Station Heat Rate as shown below.

Table 52: Tax Liability on saving in SHR as approved by the Commission (Rs. Crore)

Particulars	UoM	Unit 2			Unit 3		
		MYT Order	Petition	Approved	MYT Order	Petition	Approved
Normative Heat Rate	kCal/kWh	-	2567	2567	-	2577	2577
Actual Heat Rate	kCal/kWh	-	2542	2542	-	2541	2541
Gain in Heat Rate	kCal/kWh	-	25	25	-	36	36
Actual Gross Generation	MU	-	788.15	788.15	-	775.16	775.16
Total Heat Energy Saved	MkCal	-	19980	19703.79	-	27530	27905.78
Equivalent GCV of Coal	kCal/kg	-	3584	3583.75	-	3570	3570.19
Equivalent Coal Saved	Ton	-	5575	5498.09	-	7711	7816.34
Actual Equivalent Landed Price of Coal	Rs./Ton	-	3222	3182.17	-	3237	3198.04
Gain on Account of Normative Heat Rat	Rs. Crore	-	1.8	1.75	-	2.5	2.50
Applicable Tax Rate	%	-	21.34	21.34	-	21.34	21.34
Tax liability Gain on GHR	**Rs. Crore**	**-**	**0.49**	**0.47**	**-**	**0.68**	**0.68**

Tax Liability on Gain on O&M Expenses

5.145 The Commission has approved the tax liability on gain on O&M expenses as shown below.

Table 53: Tax Liability on saving in O&M Exp. as approved by the Commission (Rs. Crore)

Particulars	UoM	Unit 2			Unit 3		
		MYT Order	Petition	Approved	MYT Order	Petition	Approved
Normative O&M Expenses	Rs. Crore	-	45.07	43.10	-	-	-
Actual O&M Expenses	Rs. Crore	-	41.33	41.33	-	-	-
Saving	Rs. Crore	-	3.74	1.77	-	-	-
Applicable Tax Rate	%	-	21.34	21.34	-	-	-

Particulars	UoM	Unit 2			Unit 3		
		MYT Order	Petition	Approved	MYT Order	Petition	Approved
Tax liability Gain O&M Expenses	**Rs. Crore**	**-**	**1.01**	**0.48**	**-**	**-**	**-**

5.146 Based on the final outcome of the judgement of High Court in Case no. WPC No. 4544 of 2011, the tax liability on saving in O&M expenses will be recalculated.

Summary of Annual Revenue Requirement

Commission's Analysis

5.147 The summary of Annual Revenue Requirement (ARR) for FY 2016-17 as approved by the Commission is shown below.

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

Particulars	Unit 2			Unit 3		
	MYT Order	Petition	Approved	MYT Order	Petition	Approved
O&M Expenses	46.35	45.07	43.10	40.29	38.69	36.79
Depreciation	6.27	6.18	5.10	7.76	7.50	6.31
Interest on Loan	4.18	4.03	3.96	3.67	3.49	3.40
Int. on WC	12.56	12.56	11.81	12.23	12.29	11.48
Return on Equity	28.8	28.71	27.98	27.74	27.61	27.06
Annual Fixed Cost	98.15	96.55	91.96	91.69	89.58	85.03
Availability	85.00%	93.35%	93.35%	85.00%	90.33%	90.33%
AFC after Availability	98.15	96.55	91.96	91.69	89.58	85.103
Energy Cost	197.76	186.59	182.94	200.42	186.18	182.67
Annual Revenue Requirement	295.91	283.14	274.90	292.11	275.76	267.70
Tax on Gain (Secondary Fuel)	-	0.71	0.26	-	0.64	0.19
Tax on Gain (SHR)	-	0.49	0.47	-	0.68	0.68
Tax on Gain (Auxiliary)	-	0.54	0.53	-	0.66	0.65
Tax on Saving (O&M Expense)	-	1.01	0.48	-	-	-
Annual Revenue Requirement	**295.91**	**285.89**	**276.64**	**292.11**	**277.74**	**269.22**

Revenue from Sale of Power

Petitioner's Submission

5.148 The Petitioner has submitted the revenue from sale of power for FY 2016-17 as Rs. 265.51 Crore and Rs. 253.90 Crore for Unit 2 and Unit 3 respectively.

Table 55: Revenue as submitted by the Petitioner (Rs. Crore)

Particulars	Unit 2		Unit 3	
	MYT Order	Petition	MYT Order	Petition
Revenue from Sale of Power	295.91	265.51	292.11	253.90

Commission's Analysis

5.149 The Commission vide letter dated November 20, 2018 directed the Petitioner to clarify the discrepancy between the revenue claimed and reflected in the Audited Accounts. The Petitioner vide letter dated February 08, 2019 replied to the Commission discrepancy, detailing that the audit account shows the consolidated revenue however, the billed revenue for FY 2016-17 is Rs. 265.51 for Unit 2 and Rs. 253.90 for Unit 3 respectively as claimed in the true-up petition.

5.150 The Commission has examined the reply of the Petitioner and approves the revenue for FY 2016-17 as shown below.

Table 56: Revenue as approved by the Commission (Rs. Crore)

Particulars	Unit 2			Unit 3		
	MYT Order	Petition	Approved	MYT Order	Petition	Approved
Revenue from Sale of Power	295.91	265.51	265.51	292.11	253.90	253.90

Gap/Surplus for FY 2016-17

5.151 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 1st 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."*

5.152 As per timelines specified in the Generation Tariff Regulations, 2015, the Petitioner is required to provide the True-up petition for FY 2016-17 by November 30, 2017. However, the Petitioner has filed the petition in October 10, 2018. The Commission is of the view that since the Petitioner has not filed the petition within the time, the carrying cost on gap created in FY 2016-17, is not allowed.

5.153 Accordingly, the Commission has calculated the gap/surplus for FY 2016-17 for Unit 2 and Unit 3 in the following tables.

Table 57: Gap/(Surplus) for Unit 2 as approved by the Commission (Rs. Crore)

Particulars	Unit 2			
	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Opening Gap	-	11.13	(3.32)	(3.73)
Addition	11.13	0.00	0.00	0.00
Closing Gap	11.13	11.13	(3.32)	0.00
Carrying Cost Rate	-	12.60%	12.20%	12.55%
Interest	0.00	0.70	(0.41)	(0.23)
Closing including Carrying Cost	11.13	11.84	(3.73)	(3.96)
Revenue Recovered in April, 2018	-	15.16	0.00	0.00
Net Closing Gap/(Surplus)	11.13	(3.32)	(3.73)	(3.96)

Table 58: Gap/(Surplus) for Unit 3 as approved by the Commission (Rs. Crore)

Particulars	Unit 3			
	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Opening Gap	-	15.32	(3.83)	(4.30)
Addition	15.32	0.00	0.00	0.00
Closing Gap	15.32	15.32	(3.83)	0.00
Carrying Cost Rate	-	12.60%	12.20%	12.55%
Interest	0.00	0.96	(0.47)	(0.27)
Closing including Carrying Cost	15.32	16.28	(4.30)	(4.57)
Revenue Recovered in April, 2018	0.00	20.11	0.00	0.00
Net Closing Gap/(Surplus)	15.32	(3.83)	(4.30)	(4.57)

A 6: STATUS OF EARLIER DIRECTIVES

6.1 The Commission has time and again issued various directives in order to improve the functioning of the Petitioner. However, the Commission notes with concern that the Petitioner has repeatedly failed to comply with the directives of the Commission. The Commission directs the Petitioner to comply with the directives with utmost sincerity failing which penal action may be taken.

Directives	Status	Views of the Commission
Filling of True up petition for FY 2016-17 and APR for FY 2017-18		
The Commission directs the Petitioner to submit the petition for truing up of FY 2016-17 and APR for FY 2017-18. The Petitioner should adhere to the timelines as provided in the JSERC Generation tariff Regulations 2015.	The Petitioner has submitted the true-up Petition for FY 2016-17 along with APR for FY 2017-18. The Petitioner has also submitted the mid-term review petition for revised ARR and generation tariff for FY 2019-20 to FY 2020-21 including true-up for FY 2017-18 and APR for FY 2018-19.	The Commission note the submission of the Petitioner. **The Commission directs the Petitioner to adhere the timelines as specified in the JSERC Generation tariff Regulations 2015 failing which attract penalty under non-compliance of directive.**
Data Adequacy in next Tariff Petition		
The Commission directs the Petitioner to note the data deficiencies highlighted throughout the present petition and submit the required details and certificates along with the next petition while submitting the true up for FY 2016-17.	The Petitioner has submitted that it has followed the directives as highlighted and tried to comply. However, the Petitioner requests the Commission to condone inadvertent miss-out, if any.	The Commission note the compliance of the Petitioner.
Transit Loss		
The Commission is concerned regarding the year on year increasing trend of Transit loss due to various reasons as mentioned in the petition. 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.	The Petitioner submits that they have identified probable reasons for high transit loss and continuously working along with coal suppliers to contain the transit loss. Some of the reasons identified are non-timely calibrations of static weighbridge, speed of wagons at the time of weighing, high moisture content in coal and formation of CFT. In addition, the regular visit is ensured at a loading point for frequent interaction with the handling agent and officials of West Bokaro.	The Commission note the compliance of the Petitioner. **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.**
Fuel Mix		
The Commission has observed	The Petitioner submits that the	The Commission note the

Directives	Status	Views of the Commission
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 during the APR order in case coal is to be procured from sources other than what has been approved.	details of various coal sources other than the approved along with the corresponding GCV and landed price. They have also submitted that such procurement of coal is done due to a shortfall in supply of coal from the major source i.e. West Bokaro Colliery of Tata Steel (Middling Coal).The Petitioner also apprise that similar situation may also arise in the remaining years of the control period. However, the Petitioner highlighted that for any deviation from the approved plan, Tata Steel is duly informed and consent is obtained in advance.	compliance of the Petitioner. **The Petitioner is directed to bring to the notice of the Commission any such changes on Quarterly basis and should ensure the reliability and cost effectiveness of such purchase.**
Specific Fuel Consumption		
The Petitioner is directed to submit monthly 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. The same should be submitted with subsequent APR and True-up Petitions.	The Petitioner has submitted the unit wise start-ups taken along with the consumption details of secondary fuel during the unit start-ups and while taking flame support (as & when required) for FY 16-17 & FY 17-18.	The Commission note the compliance of the Petitioner. The Petitioner should ensure submitting such data in the subsequent petition also.
Ash disposal		
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.	The Petitioner has submitted the quarterly Ash generation and utilization report for FY 2016-17, FY 2017-18 and Q1 of FY 18-19.	The Commission note the compliance of the Petitioner. The Petitioner should ensure submitting such data in the subsequent petition also.
Detailed Project Report (DPR)		
The Petitioner has submitted DPR of schemes that has 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	With regards to the process of awarding contracts on various projects, the Petitioner submits that they follow a well-defined procurement process while placing Orders for supply and services. To substantiate the same	The Commission note the compliance of the Petitioner.

Directives	Status	Views of the Commission
schemes. The Commission has observed that such analysis and costs have not been supported by rate reasonability and should have 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 compliance.	the petitioner hereby submits the selection and award documents for an Order placed under one of our approved CAPEX schemes. Additionally, the Petitioner submitted that the award documents are available at Jojobera Power Plant and shall be made available if desired by the Commission.	
New Addition/ Increase in the Scope of Work during the Execution of Approved Schemes		
The Petitioner is hereby directed that during execution of work pertaining to any pre-approved schemes, any increase in scope of work, procurement, services etc. should be brought to the notice of the Commission immediately.	The Petitioner submits that detailed justification has been provided against the Capex schemes where there is cost over-run or has been carried forward due to inevitable reasons. The Petitioner also submitted that due to various unforeseen and unavoidable circumstances, there is a deviation between the actual plan and approved MYT business plan.	The Commission note the compliance of the Petitioner. The Commission is of the view that various instance was observed where there is variation from the original scope of work. **The Commission is of the view that any change in scope of work, procurement, services etc. should be brought to the notice of the Commission immediately.**

A 7: DIRECTIVES

Data adequacy in next Tariff petition

7.1 The Commission directs the Petitioner to note the data deficiencies highlighted in this petition and submit the required details and certificates while submitting the next Tariff Petition.

Transit Loss

7.2 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.

Fuel Mix

7.3 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 on Quarterly basis and should ensure the reliability and cost effectiveness of such purchase.

Specific Fuel Consumption

7.4 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.

Ash disposal

7.5 The Petitioner is directed to submit a 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. The Commission is concerned regarding the year on year increasing trend of ash disposal expense due to various reasons as mentioned in the petition. The Commission appreciates the steps taken by the Petitioner to contain the ash disposal expenses and further directs the Petitioner to devise ways to control the expenses.

New addition/ increase in the scope of work during the execution of approved schemes

7.6 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 etc. should be brought to the notice of the Commission immediately.

This Order is signed and issued by the Jharkhand State Electricity Regulatory Commission on December 27, 2019.

Date: 27.12.2019
Place: Ranchi

Sd/-	**Sd/-**	**Sd/-**
(P. K. Singh)	**(R. N. Singh)**	**(Arbind Prasad)**
MEMBER (Legal)	**MEMBER (Engg.)**	**CHAIRPERSON**

ANNEXURE

Annexure-1: List of participating members of the public in the public hearing

Sr. No.	Name	Address/Organization
Golmuri Club, Golmuri, Jamshedpur		**Date & Time: June 07, 2019 02:30 PM**
1	Daitari Swain	Rahargorah, Jamshedpur
2	A. N. Choudhary	JUSCO, Jamshedpur
3	Ajay Kumar	Tata Steel Ltd.
4	Shekhar Mukherjee	Tata Power
5	V. Ranjan	Tata Power
6	A Ain Das	Tata Power
7	Barun Kumar	Vijaya Garden
8	Durgesh Sharma	Tata Power
9	Anshuk De	Tata Power
10	Sunil Kunwar	Tata Power
11	Saurav Sanyal	Tata Power
12	Rajesh Kumar	Sonari, Jamshedpur
13	Vijay Prakash Singh	JUSCO, Jamshedpur
14	Boban Chacko	Tata Power
15	Sanjiv Kumar	Tata Power
16	Pramod Singh	Tata Power
17	V. Singh	Tata Power
18	Rakesh Rajak	Tata Power
19	V. S. Mishra	H-3, RTI Co-op. Housing Society, Adityapur -2, JSR-13
20	Satish Kumar	Telco
21	Tushar Raj	JUSCO, Jamshedpur
22	N. Leena	JUSCO, Jamshedpur
23	Supratik Mukherji	Tata Power
24	Dilip Kumar	Tata Power
25	Ritesh Kumar Jain	Chowk Bazar, Jugsalai
26	Golak Bihari Sahoo	Jamshedpur, Tata Power
27	Debashish Singha	JUSCO, Jamshedpur
28	Subrato Ray	IEL, KPO
29	Raja Biswas	Tata Power
30	Manoj Kumar Sharma	B-14, Bijaynagar, Golmuri-JSR-9
31	S.S. Chawla	A-33, Vijaynager, Golmuri
32	Ashutosh Prasad	Tata Steel, Jamshedpur
33	Rakesh Ranjan	Lotous Appt. Sonari