Jharkhand State Electricity Regulatory Commission

Order on

True up for FY 2018-19

for

Inland Power Limited (IPL)

Ranchi

September 22, 2020

CONTENTS

List of Abbreviations

Abbreviation	Description
A&G	Administrative and General
ARR	Aggregate Revenue Requirement
CEA	Central Electricity Authority
COD	Commercial Operation Date
CFBC	Circulating Fluidized Bed Combustion
CCL	Central Coalfield Limited
CIL	Coal India Limited
ECR	Energy Charge Rate
FY	Financial Year
GCV	Gross Calorific Value
GFA	Gross Fixed Assets
GHR	Gross Station Heat Rate
GoI	Government of India
GoJ	Government of Jharkhand
IoWC	Interest on Working Capital
IPL	Inland Power Limited
JBVNL	Jharkhand Bijli Vitran Nigam Limited
JSEB	Jharkhand State Electricity Board
JSERC	Jharkhand State Electricity Regulatory Commission
JUVNL	Jharkhand Urja Vikas Nigam Limited
kCal	Kilocalorie
kg	Kilogram
kWh	Kilowatt-hour
MAT	Minimum Alternative Tax
ML	Millilitre
MOU	Memorandum of Understanding
MT	Million Tonnes
MU	Million Units
MW	Megawatt
MYT	Multi-Year Tariff
NAPAF	Normative Annual Plant Availability Factor
O&M	Operations 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
SLDC	State Load Dispatch Centre
SLM	Straight Line Method

List of Tables

BEFORE

Jharkhand State Electricity Regulatory Commission, Ranchi

Case (Tariff) No.: 12 of 2019

In the matter of:

Petition for

True up for FY 2018-19

In the matter:

Inland Power Limited (IPL)
3A Aukland Place, Suite No. 5A, 5th Floor, Kolkata- 700017………….. **Petitioner**

PRESENT

Hon'ble Mr. R.N. Singh	Member (Engg.)
Hon'ble Mr. P.K. Singh	Member (Legal)

Order dated September 22, 2020

Inland Power Limited (hereinafter referred to as 'IPL' or the 'Petitioner') filed Petition dated December 30, 2019. In this Petition, Inland Power Limited (hereinafter referred to as IPL or the Petitioner) has prayed for True up of FY 2018-19.

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 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.

Inland Power Limited (IPL)

1.8 Inland Power Limited is a company incorporated under the provisions of the Indian Companies Act, 1956. IPL was originally incorporated on June 22, 1993 as a Private Limited Company and was subsequently converted to a Public Limited Company on April 3, 2008.

1.9 The Petitioner signed a Memorandum of Understanding (hereinafter referred to as the MoU) with Government of Jharkhand to develop a 126 MW (+20%) (2x63 MW) thermal power plant based on CFBC technology in two stages in Gola, District Ramgarh, Jharkhand in October 2011. The Petitioner commissioned its 1st Unit (1x63MW) on May 21, 2014.

1.10 As per the provisions of the MoU, the Government of Jharkhand (GoJ) or Distribution Licensees authorized by it will have the first right of claim on a purchase up to 25% of the power delivered to the system by the proposed power plant. Further, the MoU stipulates that out of the 25% under the first right of refusal to the State, the rate of 12% share will be on variable cost. Pursuant to the MoU signed between GoJ and IPL, IPL signed a Power Purchase Agreement (hereinafter also referred to as the PPA) with Jharkhand State Electricity Board (now Jharkhand Bijli Vitran Nigam Limited or JBVNL) on February 23, 2012 for supplying 35 MW of 63 MW from 1st Unit of the project on long term basis. Subsequently, IPL signed a supplementary PPA with JSEB (now JBVNL) on April 22, 2013 for purchase and sale of the entire quantity of 63 MW power from the 1st Unit of 63 MW inclusive of quantity mentioned in earlier Principal PPA.

The Petitioner's Prayers

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

- Accept the petition for True up of FY 2018-19;
- The Hon'ble APTEL vide its judgement dated 17.07.2019 has put a stay Order on the 88% basis used by the JSERC. The Petitioner requests the Hon'ble JSERC to consider full 100% basis for the fixed cost recovery in the computations of True up.
- Approve the numbers for the True up of FY 2018-19 as discussed in this Petition;

- Condone any inadvertent omissions/errors/rounding off differences/shortcomings and permit IPL to add/change/modify this filing and make a further submission as may be at a future date; and
- Pass such further and other Orders, as the Commission may deem fit and proper, keeping in view the facts and circumstances of the case.

Scope of the Present Order

1.12 The Commission in this Order has approved the True up for FY 2018-19.

1.13 While approving this Order, the Commission has taken into consideration:

a) Materials placed on record by the Petitioner including Annual Audited Accounts for FY 2018-19;

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).

1.14 Accordingly, the Commission has scrutinized the Petition in detail and hereby issues the Order on True up for FY 2018-19.

A 2: PROCEDURAL HISTORY

Background

2.1 The Commission had approved the provisional tariff for FY 2014-15 to FY 2015-16 in its MYT Order for FY 2014-15 to FY 2015-16 dated May 27, 2014 based on submission of the anticipated date of Commercial Operation Date (COD) of the plant as May 2014.

2.2 Subsequently, the Commission on May 16, 2017 issued a Tariff Order on approval of Capital cost of Unit-1 (1x63MW), True-up of the ARR for the year FY 2014-15, Annual Performance Review for the year FY 2015-16 and Multi Year Tariff for the 2nd Control period from FY 2016-17 to FY 2020-21.

2.3 The Commission had issued the true-up Order for FY 2015-16 for Unit-1 (1x63MW) on March 19, 2018 based on audited accounts submitted by the Petitioner.

2.4 The Petitioner had filed the review petition on true-up Order for FY 2015-16 which was disposed of by the Commission on May 13, 2019.

2.5 Later, on October 01, 2019, the Commission had issued the True-up Order for FY 2016-17 and FY 2017-18 based on the audited accounts of the respective financial year and methodology adopted in earlier Orders.

2.6 Subsequently, the Commission also approved the Annual Performance Review for FY 2018-19 vide its Order dated December 26, 2019.

2.7 The Petitioner in the current Petition has sought Truing-up of FY 2018-19.

Information Gaps in the Petition

2.8 As part of tariff determination exercise, several deficiencies/information gaps were observed in the Petition submitted by the Petitioner. The information gaps were pointed out and communicated to the Petitioner vide letter no. JSERC/Case (Tariff) no.: 12 of 2019/403 dated January 28, 2020.

2.9 The Petitioner submitted its response to the aforesaid letter and furnished additional data/information vide letter dated February 12, 2020 and email dated August 25, 2020 & September 14, 2020.

2.10 The Commission has scrutinized the additional data/information submitted by the Petitioner in response to the discrepancies pointed out and has considered the same while passing this Order.

Inviting Public Comments/Suggestions

2.11 The Commission directed the Petitioner to make available copies of the petition to the members of the general public on request, and also to issue a public notice inviting comments/suggestions on the Petition for approval of True up for FY 2018-19.

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

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

Newspaper	Date of Publication
Hindustan (Hindi)	20.03.2020 & 21.03.2020
Pioneer (English)	20.03.2020 & 21.03.2020
Sanmarg (Hindi)	20.03.2020 & 21.03.2020
Morning India (English)	20.03.2020 & 21.03.2020

2.13 Further, taking a considerate view of the pandemic condition due to COVID-19, the Commission had issued a notice on its website www.jserc.org and various newspapers giving additional time of 10 days till July 28, 2020 to various Stakeholders to submit their comments/suggestions. Further, the Commission had also organized a Public Hearing through video conference on August 06, 2020, where an additional opportunity to all the Stakeholder was provided to submit their comments/suggestions on the above said 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 Dainik (Hindi)	18.07.2020
Prabhat Khabar (Hindi)	18.07.2020
The Times of India (English)	18.07.2020
The Hindustan Times (English)	18.07.2020

Submission of Comments/Suggestions and Conduct of Public Hearing

2.14 In order to provide adequate opportunities to all the stakeholders and to ensure transparency in the process of tariff determination, the Commission held public hearing through video conferencing on August 06, 2020.

2.15 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

3.1 The following sub-section presents a summary of True up petition for FY 2018-19 as filed by the Petitioner.

True up for FY 2018-19

Operational Parameters of Plant

3.2 The summary of operational parameters approved by the Commission in the MYT Order dated May 16, 2017, APR Order dated December 26, 2019 vis-à-vis actuals as submitted by the Petitioner is provided in the table below.

Table 3: Operational Parameters as submitted by the Petitioner

Particulars	UoM	FY 2018-19		
		MYT Order	APR Order	Petition
Annual Plant Availability Factor	%	82.50	75.48	74.38
Auxiliary Energy Consumption	%	10.50	10.00	11.15
Gross Station Heat Rate	kCal/kWh	2902	2765	2991
Secondary fuel oil Consumption	ml/kWh	1.00	1.00	1.00

Aggregate Revenue Requirement (ARR)

3.3 The summary of actual Annual Revenue Requirement (ARR) as submitted by the Petitioner for FY 2018-19 vis-à-vis as approved by the Commission in its MYT Order dated May 16, 2017 and APR Order dated December 26, 2019 is tabulated below.

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

Particulars	FY 2018-19		
	MYT Order	APR Order	Petition
Depreciation	15.60	17.15	17.18
Interest on Loan	21.18	20.03	20.42
Return on Equity	19.84	14.00	15.43
Interest on Working Capital	6.05	5.63	4.99
O&M Expenses	19.22	19.22	20.18
Annual Fixed Cost	81.88	76.02	78.96
Plant Availability	82.50%	74.58%	74.38%
Fixed Cost after PAF adjustment	81.88	67.51	71.19
ARR Publication & fee Expenses	-	-	0.41
88% of Fixed Cost (Entitlement of IPL)	-	59.41	-
Tax Paid	-	-	3.12
Energy Cost	85.17	78.18	89.45
Energy Charge Rate	2.09	2.132	2.508
Aggregate Revenue Requirement	**167.05**	**137.59**	**164.17**

Particulars	FY 2018-19		
	MYT Order	APR Order	Petition
Revenue from sales	-	-	160.22
Revenue from sale of Fly ash brick	-	-	1.22
Gap	-	-	**2.73**

3.4 The Petitioner had computed the carrying cost as Rs. 0.33 Crore on the gap of Rs. 2.73 Crore resulting to total gap of Rs. 3.06 Crore to be recovered from Beneficiary as shown in the table below and has requested the Commission to approve the same while truing up for FY 2018-19.

Table 5: Gap as submitted by the Petitioner (Rs. Crore)

Particulars	FY 2018-19
	Petition
Annual Fixed Charge	71.19
Energy Charge	89.45
Other Expenses	3.53
Net-ARR	164.17
Amount Billed to Beneficiary	160.22
Revenue from Brick Plant	1.22
Gap for FY 2018-19	2.73
Interest Rate	12.20%
Carrying Cost	0.33
Net Gap	**3.06**

A 4: PUBLIC CONSULTATION PROCESS

4.1 The Public Hearing through video conferencing was held on August 06, 2020 to ensure the maximum public participation and transparency wherein stakeholders put forth their comments and suggestions before the Commission. The list of the attendees is attached as **Annexure-1** to this Order.

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

Recovery Mechanism of Fixed Charge

Public Comments/Suggestions

4.3 The Stakeholder requested the Commission to adopt the same methodology to recover the Fixed Charge as approved in the True up for FY 2016-17 & FY 2017-18 and APR for FY 2018-19. Further, in light of interim Order dated July 17, 2019 in case no**.:** 209 of 2019, the Stakeholder requested the Commission to allow recovery of only 88% of Fixed Charge. Further, the Stakeholder also submitted that the Petitioner has separately claimed ARR Publication & Fee and Taxes, where-as normally it should be part of A&G Expenses.

Petitioner's response

4.4 The Petitioner submitted that the issue of recoverability of Fixed Cost is currently pending before Hon'ble APTEL. Hon'ble APTEL has passed an Interim Order dated 05.02.2020 in Appeal no. 411 of 2019, where the counsel for the Respondents (JBVNL) had assured that it would not take any precipitate actions in terms of the Order dated 22.10.2019 till the next date of hearing. Further, the Petitioner submitted that the Hon'ble APTEL vide Order dated 10.12.2019 has stayed the Order dated 01.10.2019 issued by the Commission. Hence, the Petitioner has requested to take note of the above facts before finalizing the recovery mechanism of Fixed Charge.

4.5 Regarding ARR Publication & Taxes Paid, the Petitioner submitted that as per Regulations, the cost is allowed to be recovered separately by the Commission for other Licensees and therefore requested to approve the same for the Petitioner also.

Views of the Commission

4.6 The Commission has considered the objections raised and the response submitted by the Petitioner and has dealt with the same in the Section 5 of this Order.

Controllable Parameters: Gross Station Heat Rate & Auxiliary Consumption

Public Comments/Suggestions

4.7 The Stakeholder pointed out that the Gross Station Heat Rate is a controllable parameter and should be considered on normative basis. Any financial implication due to change in the controllable factor should be on the account of the Petitioner. The Stakeholder further suggested that the GHR should be considered as 2765 kCal/kWh as approved in the APR for FY 2018-19. Similarly, for auxiliary consumption, the Stakeholder requested to consider 10.00% against the actual 11.15% as submitted by the Petitioner.

Petitioner's response

4.8 The Petitioner submitted that the Commission should consider the formula mentioned in Clause 8.6(b)(i) of the Regulations for calculation of GHR. Further, the Petitioner submitted that due to change in Fuel Mix and decrease in the weighted average GCV of fuel from 3061 kCal/kg to 2986 kCal/kg, led to higher quantity of ash generation which affects the SHR of the Generating Station.

4.9 Similarly, in regards to auxiliary consumption, the Petitioner submitted the actual Auxiliary Consumption as 11.15% which is higher than norms due to higher consumption prevalent in CFBC Technology plants. Further, the Petitioner stated the example of other Commission's (RERC, GERC and UPERC) where higher auxiliary consumption is approved and requested the Commission to approve the Auxiliary Consumption on actuals for FY 2018-19.

Views of the Commission

4.10 The Commission has considered the objection raised and the response submitted by the Petitioner and has dealt with the same in the Section 5 of this Order while approving the Gross Station Heat Rate and Auxiliary Consumption for FY 2018-19.

Normative Parameters: O&M Expenses

Public Comments/Suggestions

4.11 The Stakeholder submitted that the Petitioner has estimated the O&M Expenses as Rs. 20.18 Crore based on actuals against the approved value of Rs. 19.22 Crore for FY 2018-19. The Petitioner further added that as per JSERC Tariff Regulations, 2015, the parameters are controllable and need to be determined on normative basis.

Petitioner's response

4.12 The Petitioner submitted that it has claimed the O&M Expenses as per Audited Accounts, which has increased due to change in the primary fuel mix. The Petitioner further added that it has claimed O&M Expenses considering the ground challenges faced by the Petitioner which are uncontrollable in nature like change in Fuel Mix leading to quality variances due to GCV and ash content, compliances and Statutory norms.

Views of the Commission

4.13 The Commission has considered the objection raised and the response submitted by the Petitioner and has dealt with the same in the Section 5 of this Order while approving the O&M Expenses for FY 2018-19.

Return on Equity

Public Comments/Suggestions

4.14 The Stakeholder submitted that the estimated Return on Equity by the Petitioner is not inline to latest true-up Order for FY 2016-17 and FY 2017-18 issued by the Commission on October 01, 2019. The Stakeholder suggested to consider the methodology and approved value in the earlier Commission Orders while approving the Return on Equity for FY 2018-19.

Petitioner's response

4.15 The Petitioner submitted that it has considered the Equity base as Rs. 101.90 Crore as per approved MYT Order dated May 16, 2017 and reduced the common cost of Unit-II as Rs. 2.32 Crore as recognised by the Commission in its Order dated October 01, 2019. The Petitioner further added that as per Audited Accounts, the paid-up Equity is Rs. 104.50 Crore and requested the Commission to consider the paid up Equity after reduction of Common cost of Unit-II (Rs. 4.92 Crore).

Views of the Commission

4.16 The Commission has considered the objection raised and the response submitted by the Petitioner and has dealt with the same in the Section 5 of this Order while approving the Return on Equity for FY 2018-19.

Additional Capitalization

Public Comments/Suggestions

4.17 The Stakeholder submitted that the Petitioner has proposed additional capitalization of Rs. 1.02 Crore for FY 2018-19 for approval of the Commission. The Stakeholder requested the Commission that approval of any additional Capitalization should be approved as per Regulations and cost benefit analysis should be carried out before finalization.

Petitioner's response

4.18 The Petitioner submitted that the vehicle was purchased for Staffs for travelling from work place to their home. The need for a vehicle was recognised by the Petitioner in the FY 2018-19 only considering the safety of the Staffs. The Petitioner further added that other assets of Rs. ~0.93 Crore is purchased in FY 2018-19 for efficient and successful operation of the Generating Station.

Views of the Commission

4.19 The Commission has considered the objection raised and the response submitted by the Petitioner and has dealt with the same in the Section 5 of this Order while approving the additional Capitalization during the FY 2018-19.

Fuel Mix

Public Comments/Suggestions

4.20 The Stakeholder submitted that the Petitioner has deviated in fuel mix as approved by the Commission in the APR Order. The Stakeholder further added that the change in Fuel Mix led to lower GCV at the burner front and a better primary fuel management is required in order to bring down the cost of primary fuel cost. Further, there have been drastic increases in Landed Price of Secondary Fuel. The Stakeholder also highlighted that the Commission in its Order dated December 26, 2019 directed the Petitioner to ensure price discipline while procuring Secondary Fuel and to find other alternative of

HSD oil, if feasible for cost optimization. The Petitioner failed to comply with the directives of the Commission and requested the Commission to penalise for the non-compliance of the directives.

Petitioner's response

4.21 The Petitioner submitted that it has endeavoured to maintain the approved primary fuel mix and also managed to lower its Energy Charge Rate (ECR) by optimizing the primary fuel mix. The Petitioner has also provided the comparison of ECR in case Fuel Mix is burnt in the Boiler as per MYT Order and actuals. The Petitioner has computed the ECR as 2.65/kWh in case the approved Fuel Mix is approved instead of actual Fuel Mix (Rs. 2.51/kWh).

4.22 The Petitioner further submitted that the price of Secondary Fuel Oil of Rs. 47472/kL is based on the price of fuel in FY 2017 as considered by the Commission. The CFBC Plant utilizes High Speed Diesel (HSD) as per the technical configuration requirements. The prices are based on the prices notified by the Oil Marketing Companies (IOCL, HPCL, BPCL) which is uncontrollable in nature.

4.23 In compliance to the directive of the Commission, the Petitioner has engaged a Technical Consultant for assessing the feasibility of using LDO instead of HSD as Secondary Fuel Oil and the report is submitted before the Commission.

Views of the Commission

4.24 The Commission has considered the objection raised and the response submitted by the Petitioner and has dealt with the same in the Section 5 of this Order while approving the Fuel mix, landed price of Primary Fuel and Secondary Fuel.

A 5: TRUE UP FOR FY 2018-19

5.1 The Petitioner has submitted the True up petition for FY 2018-19 based on the audited accounts taking into consideration the provisions of the JSERC Generation Tariff Regulations, 2015.

5.2 The Commission has carried out the True up for FY 2018-19 taking into consideration:

a) Audited (Statutory) accounts for the FY 2018-19;
b) JSERC Generation Tariff Regulations, 2015;
c) Methodology adopted by the Commission in its previous Orders.

Operational Performance

Plant Availability Factor (PAF)

Petitioner's Submission

5.3 The Petitioner has submitted the actual plant availability of Unit-I as 74.38% for FY 2018-19 against the approved value of 85.00% in APR Order dated December 26, 2019 and requested the Commission to approve the same. The Petitioner has submitted the State Load Despatch Centre certificate certifying the actual plant availability factor for FY 2018-19.

Commission's Analysis

5.4 The Commission in its MYT Order dated May 27, 2014, provisionally approved the normative availability as 75% for FY 2014-15 & FY 2015-16, subject to be reviewed at the time of truing up after considering the actual performance of Unit-I of the generation station.

5.5 The Commission in the MYT Order dated May 16, 2017 had carried out the true up for FY 2014-15 (COD: May 21, 2014) with actual availability as 67.66%. In the same Order, the Commission had approved the Normative Annual Plant Availability Factor (NAPAF) as 82.50% for 2nd Control period (FY 2016-17 to FY 2020-21) as proposed by the Petitioner, since the true up for 1st complete financial year was yet to be carried out for the plant.

5.6 The Commission in its Order dated March 19, 2018 had carried out prudence check at the time of truing up for FY 2015-16 and based on the facts and actual values of availability revised the Normative Plant Availability Factor (NAPAF) from 75% to 85% for FY 2015-16.

5.7 In line with above methodology adopted during truing up for FY 2015-16, the Commission approved the normative plant availability as 85% while carrying out the True-up for FY 2016-17 and FY 2017-18 vide its Order dated October 01, 2019 and APR for FY 2018-19 vide its Order dated December 26, 2019.The Commission vide letter dated January 28, 2020 directed the Petitioner to submit the reason for lower plant availability factor. The Petitioner vide letter dated February 12, 2020 replied that the plant was under shutdown during the month of May 2018 for nearly 25 days due to maintenance activity.

5.8 The Petitioner has filed an Appeal before the Hon'ble APTEL against the Commission's Order dated October 01, 2019 in which the Commission had considered NAPAF as 85.00% based on the actual operational parameters submitted by the Petitioner while truing up for FY 2015-16. As the Appeal is still pending before the Hon'ble APTEL, therefore, the Commission has adopted the same approach as adopted in truing up Order dated October 01, 2019 and approves the NAPAF for FY 2018-19 as 85.00% subject to final outcome of the pending case before the Hon'ble APTEL. The Commission approves the actual plant availability for FY 2018-19 based on the State SLDC certificate as shown below.

Table 6: Plant availability as approved by the Commission

Particulars	FY 2018-19		
	APR Order	Petition	Approved
Normative Plant Availability Factor	85.00%	-	85.00%
Plant Availability Factor	75.48%	74.38%	74.38%

5.9 The Commission in accordance with the above approved availability has reduced fixed charges of the Petitioner for FY 2018-19 as the actual availability is lower than the normative availability (NAPAF).

Auxiliary Consumption

Petitioner's Submission

5.10 The Petitioner has submitted the actual auxiliary consumption for FY 2018-19 as 11.15% against the approved value of 10.00% in the APR Order dated December 26, 2019.

5.11 The Petitioner has also mentioned that plant runs on CFBC based technology and therefore consumes more auxiliary power than other thermal power plant.

Commission's Analysis

5.12 The Commission vide letter dated January 28, 2020 directed the Petitioner to submit the reason for deviation from normative value in auxiliary consumption as approved in APR Order dated December 26, 2019. The Petitioner vide letter dated February 12, 2020 replied that higher auxiliary consumption is due to variance in the fuel mix affecting Gross Calorific Value and ash content.

5.13 Additionally, the Petitioner highlighted that State Electricity Regulatory Commission (SERC) in other States have allowed higher auxiliary consumption for plants operating on Circulating Fluidized-bed Combustion Technology (CFBC) as shown below.

i. In the case of Rajasthan West Power Limited, Rajasthan Electricity Regulatory Commission had allowed the auxiliary consumption as 11.50%.

ii. In the case of Gujarat Industries Power Company Limited, Gujarat Electricity Regulatory Commission had allowed an auxiliary consumption of 12.5% for 3 years and 11.5% from the 4th year onwards.

iii. In the case of Bajaj Energy Pvt. Limited, Uttar Pradesh Electricity Regulatory Commission had allowed an auxiliary consumption of 11.50% during stabilization and 11.00% post stabilization period.

5.14 The Commission while dealing with the matter of approving the auxiliary consumption in the provisional MYT Order dated May 27, 2014 for the first control period i.e. from FY 2010-11 to FY 2015-16 had relied on the technology specific norms in CERC Generation Tariff Regulations 2014 and the recommendations of CEA and accordingly approved Normative Auxiliary Consumption at 10.50%. Further, the Commission in the second control period i.e. from FY 2016-17 to FY 2020-21 had retained the auxiliary consumption norm as 10.50%.

5.15 Later, during truing up exercise for FY 2015-16, the Commission had scrutinized the Detailed Project Report (DPR) of the plant submitted by the Petitioner and accordingly approved the auxiliary consumption as 10.00% in Tariff Order dated March 19, 2018.

5.16 Adopting the same approach, the Commission had approved the normative auxiliary consumption as 10.00% while carrying out the true-up for FY 2016-17 and FY 2017-18 and APR for FY 2018-19.

5.17 The Petitioner has filed an Appeal before the Hon'ble APTEL against the Commission's Order dated October 01, 2019 in which the Commission had considered auxiliary consumption as 10.00% based on the Detail Project Report (DPR) submitted by the Petitioner while truing up for FY 2015-16. As the Appeal is still pending before the Hon'ble APTEL, therefore, the Commission has adopted the same approach as adopted in truing up Order dated October 01, 2019 and approves the auxiliary consumption for FY 2018-19 as 10.00% subject to final outcome of the pending case before the Hon'ble APTEL.

Table 7: Auxiliary Consumption as approved by the Commission

Particulars	FY 2018-19		
	APR Order	Petition	Approved
Normative Auxiliary Consumption	10.00%	-	10.00%
Actual Auxiliary Consumption	-	11.15%	11.15%

5.18 The Commission has considered the normative auxiliary consumption of 10.00% while calculating the energy charge for FY 2018-19.

Plant Load Factor and Generation

Petitioner's Submission

5.19 The Petitioner has submitted the actual Plant Load Factor (PLF) as 72.75% for FY 2018-19 against the target of 82.50% approved by the Commission in the MYT Order dated May 16, 2017.

5.20 The Petitioner had further submitted the gross generation of Unit-I as 401.52 MU for FY 2018-19 which is lower than that approved value of 455.30 MU in the MYT Order dated May 16, 2017.

Commission's Analysis

5.21 The Commission observed that the Petitioner has wrongly calculated the Plant Load Factor (PLF) on gross generation and therefore Commission has recalculated the PLF as per Regulation which works out to be 71.82%. The Commission has approved the gross generation as submitted by the Petitioner for FY 2018-19.

5.22 The plant load factor, gross generation as approved by the Commission in the APR Order, as submitted by the Petitioner and as approved now by the Commission is summarized in the table below.

Table 8: Plant Load Factor and Generation as approved by the Commission

Particulars	UoM	FY 2018-19		
		APR Order	Petition	Approved
Plant Load Factor	%	74.81	72.75	71.82
Gross Generation	MU	412.83	401.52	401.52

Gross Station Heat Rate (GHR)

Petitioner's Submission

5.23 The Petitioner has claimed the Gross Station Heat Rate (GHR) as 2991 kCal/kWh against the approved value of 2765 kCal/kWh in the APR Order dated December 26, 2019.

Commission's Analysis

5.24 The Commission vide letter dated January 28, 2020 directed the Petitioner to submit the reason for deviation from normative value in Gross Station Heat Rate as approved in APR Order dated December 26, 2019. The Petitioner vide letter dated February 12, 2020 replied that higher Gross Station Heat Rate is due to variance in the fuel mix affecting Gross Calorific Value and ash content.

5.25 The Commission in its true-up Order dated March 19, 2018 for FY 2015-16 had approved the Gross Station Heat Rate (GHR) as 2765 kCal/kWh based on the Detailed Project Report (DPR) of the plant as submitted by the Petitioner. Considering the same approach, the Commission had approved the Gross Station Heat as 2765 kCal/kWh for FY 2016-17 and FY 2017-18 and while carrying out APR for FY 2018-19.

5.26 The Petitioner has filed an Appeal before the Hon'ble APTEL against the Commission's Order dated October 01, 2019 in which the Commission had considered SHR as 2765 kCal/kWh based on the Detail Project Report (DPR) submitted by the Petitioner while truing up for FY 2015-16. As the Appeal is still pending before the Hon'ble APTEL, therefore, the Commission has adopted the same approach as adopted in truing up Order dated October 01, 2019 and approves the SHR for FY 2018-19 as 2765 kCal/kWh subject to final outcome of the pending case before the Hon'ble APTEL.

Table 9: Gross Station Heat Rate (GHR) as approved by the Commission

Particulars	UoM	FY 2018-19		
		APR Order	Petition	Approved
Gross Station Heat Rate	kcal/kWh	2765	2991	2765

Specific Fuel Oil Consumption

Petitioner's Submission

5.27 The Petitioner had submitted the specific fuel oil consumption as 1.00 ml/kWh in line to JSERC Generation Tariff Regulations, 2015.

Commission's Analysis

5.28 The Commission observes that the submission made by the Petitioner is in line with the Commission's MYT Order dated May 16, 2017 and JSERC Generation Tariff Regulations 2015. Hence, the Commission approves the secondary fuel oil consumption as submitted by the Petitioner.

Table 10: Specific Fuel Oil Consumption as approved by the Commission

Particulars	UoM	FY 2018-19		
		APR Order	Petition	Approved
Secondary Fuel	ml/kWh	1.00	1.00	1.00

Fuel Cost Parameters

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

Petitioner's Submission

5.29 The Petitioner had submitted that due to no fuel linkage, coal is procured from various sources as mentioned below.

- E-Auction of Coal India Limited/Central Coalfield Limited
- Coal from Forward Auctions
- Washery rejects of Central Coalfield Limited
- Rejects from Tata Steel.

5.30 The Petitioner further submitted that based on the availability of coal, the blending ratio of coal and coal rejects deviates significantly from that approved in the MYT Order dated May 16, 2017.

Commission's Analysis

5.31 The Commission observed significant deviation in the blending ratio, Gross Calorific Value (GCV) of primary fuel-mix and its price as compared to the approved values in MYT Order dated May 16, 2017.

5.32 The Commission in the MYT Order dated May 16, 2017 and also in Tariff Order dated March 19, 2018 had directed the Petitioner to prioritize the procurement of primary fuel from the least cost source.

5.33 Further, the Commission in its Order dated December 26, 2019 directed the Petitioner to bring to the notice of the Commission any change in fuel mix on quarterly basis and consolidated report during the next petition filing by the Petitioner. However, the Commission observed that the Petitioner failed to comply with the directive issued by the Commission.

5.34 The Commission again directs the Petitioner to bring to the notice of the Commission any change in fuel mix on quarterly basis and submit consolidated report along with Business Plan and MYT Petition.

5.35 The Commission has scrutinized monthly source wise coal consumption duly certified by auditor as submitted by the Petitioner and approves the coal mix and Gross Calorific Value as shown below.

5.36 The Commission has considered the submission made by the Petitioner including supporting documents certified by auditor while approving the same. Further, the Commission is of the view that securing proper fuel for operating the plant efficiently lies with the generator and therefore any in-efficiency arising out of poor coal quality cannot be passed on to the consumers.

Table 11: Coal Mix and GCV as approved by the Commission

Particulars	UoM	FY 2018-19		
		APR Order	Petition	Approved
Coal	%	35.24	24.77	24.77
Coal Rejects	%	64.76	75.23	75.23
GCV of Coal	kCal/kg	4409	4298.38	4298.38
GCV of Coal Reject	kCal/kg	2418	2554.49	2554.49
Weighted average GCV of Primary Fuel	kCal/kg	3119.63	2986.45	2986.43

Transit Loss

Petitioner's Submission

5.37 The Petitioner has considered the transit loss on normative basis i.e. 0.8% inline to MYT Order dated May 16, 2018 and as per JSERC Generation Tariff Regulations, 2015.

Commission's Analysis

5.38 The Commission has scrutinized the detail along with auditor certificate certifying the transit loss as submitted by the Petitioner and approves the transit loss at a normative value of 0.8% as per Clause 8.21 of the JSERC Generation Tariff Regulations, 2015.

Table 12: Transit Loss as approved by the Commission

Particulars	FY 2018-19		
	APR Order	Petition	Approved
Transit Loss	0.80%	0.80%	0.80%

Landed Cost of Coal

Petitioner's Submission

5.39 The Petitioner had submitted the certified true copy from its auditor for landed cost of primary fuel consumed from different source for Unit-1. The landed price of primary fuel includes base price of coal, royalty, taxes and duties, transport cost, Clean Energy Cess etc.

Commission's Analysis

5.40 As per Clause 8.21 of the JSERC Generation Tariff Regulations, 2015;

> *"8.21 The landed fuel cost of primary fuel and secondary fuel for tariff determination shall be based on actual weighted average cost of primary fuel and secondary fuel of the three preceding months, and in the absence of landed costs for the three preceding months, latest procurement price of primary fuel and secondary fuel for the generating station, before the start of the tariff period for existing stations and immediately preceding three months in case of new generating stations shall be taken into account.*
>
> *The landed cost of fuel for the month shall include price of fuel corresponding to the grade and quality of fuel inclusive of royalty, taxes and duties as applicable, transportation cost by rail / road or any other means, and, for the purpose of computation of energy charge, and in case of coal/lignite shall be arrived at after considering normative transit and handling losses as percentage of the quantity of coal or lignite dispatched by the coal or lignite supply company during the month as given below:*
>
> *Pithead generating stations: 0.2%*

Non-pithead generating stations: 0.8%

Provided that in case of pit head stations if coal or lignite is procured from sources other than the pit head mines which is transported to the station through rail, transit loss of 0.8% shall be applicable:

Provided further that in case of imported coal, the transit and handling losses shall be 0.2%.

5.41 The Petitioner in the petition has provided month wise fuel procurement and rate of primary fuel procured duly certified by the auditor for FY 2018-19.

5.42 Further, the Commission in its Order dated December 26, 2019 directed the Petitioner to bring to the notice of the Commission any change in fuel mix, which leads to price variation on quarterly basis and consolidated report during the next petition filing by the Petitioner. However, the Commission observed that the Petitioner failed to comply with the directive issued by the Commission.

5.43 Considering, the Petitioner's submission and after due prudence check, the Commission approves the landed cost of coal as given in the table below.

Table 13: Weighted Average Landed Price of Coal as approved by the Commission (Rs./Ton)

Particulars	FY 2018-19		
	APR Order	Petition	Approved
Price of Coal	3317	3460.24	3460.24
Price of Coal Reject	1400	1710.78	1710.78
Transit Loss	0.80%	0.80%	0.80%
Landed Price of Primary Fuel	2092.29	2161.41	2161.40

Calorific value and Landed price of Secondary Fuel

Petitioner's Submission

5.44 The Petitioner had submitted the landed price of secondary fuel as Rs. 70400.75/kL based on the secondary fuel consumed for FY 2018-19 duly certified by the auditor. The Petitioner had considered the calorific value as 10,000 kCal/L as approved in the MYT Order dated May 16, 2017.

Commission's Analysis

5.45 The Commission observed that the landed price of secondary fuel increased drastically to Rs. 70400.75/kL against the approved value of Rs. 47472/kL in MYT Order dated May

16, 2017 and directed the Petitioner vide letter dated January 28, 2020 to submit the reason why they are not opting for low cost alternative as LDO. The Petitioner vide letter dated February 12, 2020 submitted that the price of secondary fuel oil is controlled by the Oil Marketing Companies. The Petitioner further added that thus point was sent to technical consultant for their advice and view on the subject and would take necessary steps on receipt of the technical report.

5.46 The Commission in the past has raised its concern related to drastic increase in price of secondary fuel and directed the Petitioner to find other alternative of HSD oil, if feasible for cost optimization. Further, during the Public Hearing scheduled on August 06, 2020, the Commission once again raised the issue and asked about the progress on replacing HSD with cheaper LDO or other alternative fuels.

5.47 The Petitioner in its additional submission via email dated August 25, 2020 and Technical Report submitted vide email dated September 14, 2020 has stated that LDO may also be used as an alternate fuel after installation of another storage tank and detailed proposed LDO system (considering independent unloading & transfer unit and common supply and return line from boiler for LDO & HSD). The Petitioner further submitted that in order to prevent the corrosion due to high Sulphur content of LDO, APH Series tubes needs to be replaced with SS304 Grade. Further, Boiler parameters and APH zone parameters is to be maintained as per designed value to prevent any deterioration and close monitoring is required during boiler cold start-up and normal operation. The Petitioner has further submitted that it shall incur an additional cost of Rs. 15.71 Crore comprising of modification cost and opportunity cost towards plant shutdown for installation of LDO system.

5.48 The Commission observes that the DPR submitted by the Petitioner in its earlier petition (True up petition for FY 2015-16), states Light Diesel Oil (LDO) as secondary fuel for plant. The relevant section of DPR is reproduced below.

" (viii) Support Fuel Oil System

The steam generating unit shall be provided with Light Diesel Oil (LDO) pressurising units for supplying LDO to oil burners during boiler cold and hot start-ups as well as for flame stabilisation with coal firing during low load operations up to maximum 30% BMCR load."

5.49 It is observed from above that the Petitioner on its own changed the recommended secondary fuel to HSD due to which beneficiaries have been subjected to higher cost of secondary fuel oil.

5.50 The Commission has further scrutinized the Technical Report submitted by the Petitioner vide email dated September 14, 2020 and observed that the Technical Report also substantiate the facts that LDO may be used as Secondary Fuel instead of HSD. The cost estimated of Rs. 15.70 Crore as projected by the Petitioner towards modification in the existing infrastructure including opportunity cost of generation loss is without any basis as no specific details of works have been mentioned nor any cost reasonability has been submitted.

5.51 The Commission observed that out of Rs. 15.70 Crore as claimed by the Petitioner, Rs. 7.50 Crore is towards opportunity cost on account of generation loss as works will require shutdown. The Commission observes that the DPR recommended use of LDO as Secondary Fuel, which was unilaterally changed by the Petitioner to HSD. Such design deviation by Petitioner has already burdened the Beneficiary with higher Secondary Fuel Charges since commissioning of the plant. In view of the above, the Petitioner's claim of opportunity cost for its own deviation from DPR is completely baseless. With regard to other capex related modifications as the Petitioner has not submitted any adequate details the Commission has not gone into merits of the same.

5.52 The Commission **directs the Petitioner to carry out detailed study to accommodate LDO as secondary fuel and approach Commission with DPR along with all necessary details of works to be carried out along with cost Benefit analysis and rate reasonability in case any modification is required in the existing infrastructure within 45 days from this Order. Non-compliance in this regard will lead to curtailment of additional secondary fuel oil cost due to usage of HSD.** The Commission in this Order has not adjusted the impact of higher secondary fuel oil cost till FY 2018-19 and approves the Calorific value and Landed Price of Secondary Fuel as shown below. However, the Commission may take a final view on the same once the Petitioner has complied with the above direction.

Table 14: Calorific value & Landed price of Secondary Fuel as approved by the Commission

Particulars	UoM	FY 2018-19		
		APR Order	Petition	Approved
Calorific Value	kCal/L	10000.00	10000.00	10000.00
Landed Price	Rs./kL	71166.00	70400.75	70400.75

Energy Charge Rate (ECR)

Petitioner's Submission

5.53 The Petitioner had submitted the Energy Charge Rate (ECR) as Rs. 2.508/kWh against the approved value of Rs. 2.09/kWh for FY 2018-19.

Commission's Analysis

5.54 As per JSERC Generation Tariff Regulation, 2015, the energy (variable) charge shall cover primary fuel and secondary fuel costs and limestone consumption cost (where applicable), shall be payable by beneficiary for the total 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 and limestone adjustment).

5.55 The formula for calculation of energy charge payable to a Generating Company is specified in JSERC Generation Tariff Regulation, 2015 as quoted below:

> *"8.17 The energy (variable) charge shall cover primary fuel and secondary fuel costs and limestone consumption cost (where applicable), shall be payable by every Beneficiary for the total energy scheduled to be supplied to such Beneficiary during the calendar month on ex-power plant basis, at the specified energy charge rate of the month (with fuel price adjustment and limestone adjustment).*
>
> *"8.18 Total Energy charge payable to the Generating Company for a month shall be: = (Energy charge rate in Rs. /kWh) x {Scheduled energy (ex-bus) for the month in kWh.}*
>
> *8.19 Energy charge rate (ECR) in Rupees per kWh on ex-power plant basis shall be determined to three decimal places in accordance with the following formula:*
> *(a) For coal-based stations*
> *ECR = {(GHR – SFC x CVSF) x LPPF/CVPF+SFC x LPSFi+LC x LPL} x 100/(100 – AUX)}*
> *…………..*
> *Where,*
> *AUX - Normative auxiliary energy consumption in percentage*
> *CVPF -Weighted Average GCV 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".

8.21 The landed fuel cost of primary fuel and secondary fuel for tariff determination shall be based on actual weighted average cost of primary fuel and secondary fuel of the three preceding months, and in the absence of landed costs for the three preceding months, latest procurement price of primary fuel and secondary fuel for the generating station, before the start of the tariff period for existing stations and immediately preceding three months in case of new generating stations shall be taken into account.

The landed cost of fuel for the month shall include price of fuel corresponding to the grade and quality of fuel inclusive of royalty, taxes and duties as applicable, transportation cost by rail / road or any other means, and, for the purpose of computation of energy charge, and in case of coal/lignite shall be arrived at after considering normative transit and handling losses as percentage of the quantity of coal or lignite dispatched by the coal or lignite supply company during the month as given below:

Pithead generating stations: 0.2%
Non-pithead generating stations: 0.8%

Provided that in case of pit head stations if coal or lignite is procured from sources other than the pit head mines which is transported to the station through rail, transit loss of 0.8% shall be applicable:

Provided further that in case of imported coal, the transit and handling losses shall be 0.2%.

5.56 Accordingly, the Commission has calculated the Energy Charge Rate (ECR) to be charged by the Petitioner as per the formula specified in JSERC Generation Tariff Regulations, 2015. The table below details the ECR and Fuel Cost for True up for FY 2018-19 as submitted by the Petitioner and as approved by the Commission.

Table 15: Energy Charge Rate (ECR) as approved by the Commission

Particulars	UoM	FY 2018-19		
		APR Order	Petition	Approved
Net Generation	MU	366.70	356.74	356.74
Auxiliary Consumption	%	10.00	11.15	10.00
Gross Station Heat Rate	kcal/kWh	2765	2991.00	2765.00
Specific Oil Consumption	ml/kWh	1.00	1.00	1.00
Calorific Value of Oil	kcal/mL	10.00	10.00	10.00
GCV of Primary Fuel	kcal/kg	3119.63	2986.45	2986.43
Landed Price of Primary Fuel	Rs./Ton	2092.29	2161.41	2161.40
Landed Price of Secondary Fuel	Rs./kL	71166	70400.75	70400.75
Energy Charge Rate (ECR)	**Rs//kWh**	**2.132**	**2.508**	**2.294**
Primary Fuel Cost	**Rs. Cr.**	**75.29**	**86.63**	**79.03**
Secondary Fuel Cost	**Rs. Cr.**	**2.90**	**2.83**	**2.79**

Determination of Fixed Cost

Additional Capitalization

Petitioner's Submission

5.57 The Petitioner has claimed additional capitalization of Rs. 1.02 Crore for FY 2018-19 which has been funded mainly through Equity except for Rs. 0.08 Crore loan drawn for purchasing the vehicle. The Petitioner submitted that the additional capitalization incurred is towards purchase of vehicle to convey technical & managerial staff for commuting between workplace to home amounting to Rs. 0.08 Crore and towards other assets of Rs. 0.93 Crore. The Petitioner further added that out of total other assets, Rs. 0.67 Crore is spent on the Brick plant to enhance the capacity and ensure proper utilization of ash generated from the power plant.

Table 16: Details of the Additional Capitalization as submitted by the Petitioner (Rs. Crore)

Particulars	FY 2018-19	
	APR Order	Petition
Capitalization	-	1.02

Commission's Analysis

5.58 The Commission vide its discrepancy note dated January 28, 2020 directed the Petitioner to substantiate the deviation in regard to additional capitalization when compared to MYT Order dated May 16, 2017. The Petitioner in its reply dated February 12, 2020 submitted the detail of assets capitalized in the FY 2018-19 as shown below.

Table 17: Details of the assets capitalized during the FY 2018-19 as submitted by the Petitioner (Rs. Crore)

Particulars	FY 2018-19
	Petition
Plant & Machinery	0.72
Office Equipment & Furniture	0.15
Vehicle	0.08
Computers & IT Equipment	0.004
Other (Miscellaneous)	0.06
Total-Additional Capitalization	**1.02**

5.59 The Petitioner submitted that out of additional capitalization Rs. 0.72 Crore towards Plant & Machinery, major portion of Rs. 0.67 Crore is spent to ensure efficient and environmentally friendly disposal of the fly ash generated from the plant.

5.60 The Commission approves the additional capitalization carried out by the Petitioner towards Plant & Machinery. The Commission appreciates Petitioner's initiative to enhance brick plant capacity resulting in environmentally friendly disposal of Ash and also has resulted in increase in revenue. However, the Commission directs the Petitioner to submit the report detailing the enhanced capacity of the Brick plant and expected revenue in the future along with the next tariff petition. The Petitioner is also directed to submit the actual ash generation and its disposal for FY 2019-20 along with next tariff petition. In addition to Plant & Machinery, the Commission approves the expenses towards vehicle, incurred for communing staff between workplace and home.

5.61 The Commission observes that other minor expenses towards Office Equipment & Furniture, Computers & IT Equipment and Other (Miscellaneous) are recurring expenses and are part of O&M Expenses and hence has not been approved.

5.62 The additional capitalization as approved by the Commission in the APR Order, as submitted by the Petitioner and as approved now by the Commission has been summarized in the table below.

Table 18: Details of the Additional Capitalization as approved by the Commission (Rs. Crore)

Particulars	FY 2018-19		
	APR Order	Petition	Approved
Capitalization	-	1.02	0.80

Depreciation

Petitioner's Submission

5.63 The Petitioner had submitted that depreciation had been calculated as per the depreciation rates provided in the Appendix-I of the JSERC Generation Tariff Regulations 2015.

5.64 The Petitioner calculated the depreciation taking into account the closing asset for FY 2017-18 and additional capitalization of Rs. 1.02 Crore for FY 2018-19. The depreciation submitted by the Petitioner is given in the table below.

Table 19: Depreciation as submitted by the Petitioner (Rs. Crore)

Particulars	FY 2018-19	
	APR Order	Petition
Depreciation	17.15	17.18

Commission's Analysis

5.65 The provisions laid out in the JSERC Generation Tariff Regulations, 2015 for approval of depreciation is reproduced below.

> *"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.*
>
> *7.31 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."*

5.66 The Commission has calculated the depreciation for Unit-I by considering the approved capital cost, capitalization and the depreciation rates as specified in Appendix-I of the JSERC Generation Tariff Regulations, 2015.

5.67 The following table shows the depreciation approved by the Commission against that submitted by the Petitioner.

Table 20: Depreciation as approved by the Commission (Rs. Crore)

Particulars	FY 2018-19		
	APR Order	Petition	Approved
Depreciation	17.15	17.18	17.17

Operation & Maintenance Expenses

Petitioner's Submission

5.68 The Petitioner submitted that the actual Operation and Maintenance (O&M) expenses varies from the number approved by the Commission. The reason cited by the Petitioner for the variation is fuel quality due to GCV and ash content.

5.69 The Petitioner had claimed water charge as Rs. 0.74 Crore based on actuals for FY 2018-19 in line Clause 7.46 of the JSERC Generation Tariff Regulations, 2015.

5.70 In view of the reasons stated above, the Petitioner has prayed to the Commission to allow the increase in the O&M expenses as shown below.

Table 21: O&M Expenses as submitted by the Petitioner (Rs. Crore)

Particulars	FY 2018-19	
	APR Order	Petition
O&M Expenses	19.22	20.18
Water Charges	-	0.74

Commission's Analysis

5.71 The provisions laid out in the JSERC Generation Tariff Regulations, 2015 for approval of O&M expenses are as under:

> *"7.40 Operation and Maintenance (O&M) expenses shall comprise of the following:*
>
> *Salaries, wages, pension contribution and other employee costs;*
> *Administrative and General costs;*
> *Repairs and maintenance expenses; and*
> *Other miscellaneous expenses statutory levies and taxes (except corporate income tax).*
>
> …………….......
>
> *7.46 The Water Charges and capital spares for thermal generating stations shall be allowed separately:*
>
> *Provided that water charges shall be allowed based on water consumption depending upon type of plant, type of cooling water system etc., subject to*

prudence check. The details regarding the same shall be furnished along with the petition:

Provided that the generating station shall submit the details of year wise actual capital spares consumed at the time of truing up with appropriate justification for incurring the same and substantiating that the same is not funded through compensatory allowance as per Clause 7.47 of the Regulation or special allowance as per Clause 7.10 and 7.11 of the Regulation or claimed as a part of additional capitalisation or consumption of stores and spares and renovation and modernization.

5.72 Since, the JSERC Generation Tariff Regulations, 2015 do not specify norms specifically for 63 MW sets based on CFBC technology, the Commission had considered the O&M norms for 200/210/250 MW capacity CFBC Technology based thermal plants in the MYT Order dated May 16, 2017. Accordingly, the Commission had approved the O&M expenses based on the norms specified for 200/210/250 MW sets for MYT period FY 2016-17 to FY 2020-21.

5.73 The Commission has noted the submission of the Petitioner regarding the increase in the O&M costs and is of the opinion that the primary reason for the increase is change in the fuel mix of the primary fuel which had resulted in lowering of overall GCV, increase in ash output and subsequently led to increase in O&M Expenses.

5.74 The Commission observed that the Petitioner had claimed the O&M Expenses on actual basis instead of normative basis as per regulations and directed the Petitioner to re-submit the same as per the Regulations. In compliance to the Commission’s direction, the Petitioner submitted that they claim the O&M cost in line with its audited accounts.

5.75 The Commission is of the view that ensuring reliable coal source at an economical price is the prime responsibility of Generator and even after repetitive directions to the Petitioner, no substantial progress has been made in this regard. The Commission is of the view that the procurement of fuel is the responsibility of the Petitioner and therefore no commercial impact on account of any inefficiency in procurement of fuel can be passed on to the Beneficiary and hence approves the O&M expenses as considered in MYT Order dated May 16, 2017.

5.76 With regard to water charges claimed, the Commission directed the Petitioner to provide the detail of actual specific water consumption and basis of water rate at which water bill was raised for FY 2018-19. In compliance to the Commission’s direction, the Petitioner submitted the month wise water consumption and rate of water charge to derive the total water charge for FY 2018-19. The Petitioner further submitted the water bill to substantiate the water consumption and water drawal rate.

5.77 The Commission has scrutinized the details submitted by the Petitioner and approves the water charge as Rs 0.74 Crore as claimed by the Petitioner.

Table 22: O&M Expenses as approved by the Commission (Rs. Crore)

Particulars	FY 2018-19		
	APR Order	Petition	Approved
O&M Expenses	19.22	20.18	19.22
Water Charges	-	0.74	0.74

Interest on Loan

Petitioner's Submission

5.78 The Petitioner for computing interest on loan has considered the actual loan portfolio and repayment equal to the actual repayment by the Petitioner for estimating the interest and financing charges on loan for FY 2018-19. The Petitioner has submitted the Interest certificate issued by the Banks in support of interest rate and interest paid by the Petitioner in FY 2018-19.

5.79 The Petitioner further submitted that a vehicle loan of Rs. 0.08 Crore was taken in FY 2018-19 to purchase a vehicle to transport technical and managerial staff from home to plant.

Table 23: Interest on Loan as submitted by the Petitioner (Rs. Crore)

Particulars	FY 2018-19	
	APR Order	Petition
Opening Debt Balance	180.02	177.33
Net Additions	0.00	0.08
Repayment	17.15	28.68
Closing Debt Balance	162.87	148.73
Average Debt	171.45	163.03
Rate of Interest (%)	11.68%	12.53%
Interest on Debt	20.03	20.11
Finance Charges	0.00	0.31
Interest & Finance Charges	**20.03**	**20.42**

Commission's Analysis

5.80 The Commission has calculated the gross normative loan for FY 2018-19 as per 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 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."

…….

"7.19 The loans arrived at in the manner indicated in clause 7.13 and 7.14 of these Regulations shall be considered as gross normative loan for calculation of interest on loan.

7.20 The normative loan outstanding as on 1st April 2016 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31st March 2016 from the gross normative loan

7.21 The repayment for any year during the Tariff Period shall be deemed to be equal to the depreciation allowed for that Year.

7.22 Notwithstanding any moratorium period availed by the Generating Company, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed.

7.23 The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each year applicable to the Project:

Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered:

Provided further that if the generating station does not have actual loan, then the weighted average rate of interest of the Generating Company as a whole shall be considered

7.24 The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest".

5.81 The Commission has calculated the opening balance of normative debt for FY 2018-19 based on the closing balance for FY 2017-18 as per the True-up Order dated October 01, 2019.

5.82 The Commission has scrutinized the audited accounts for FY 2018-19 submitted by the Petitioner and found that the Shareholders' Funds (Equity Share Capital) remain unchanged in FY 2018-19 when compared to FY 2017-18. Hence, the Commission has considered the entire additional capitalization approved for FY 2018-19, to be funded through loan and has considered the same while calculating the Interest on Loan.

5.83 The Commission further observed that the Petitioner has considered the actual repayment against the norms which states that the repayment shall be equal to depreciation allowed for that respective financial year. The Commission has approved the repayment equal to approved depreciation in line with the methodology specified in JSERC Generation Tariff Regulations, 2015 to arrive at the closing balance of normative debt component. The Commission observed that the Petitioner had claimed the interest and finance charges on loan for FY 2018-19 including penal charges of 2.00% for Bank of Baroda as submitted in the petition. The Commission directed the Petitioner to clarify whether the penal charge is also included in calculation of rate of interest or not and provide the reasons for increase in interest rate for Bank of Baroda from 11.85% till July 2018 to ~14% from October 2018 onwards.

5.84 The Petitioner vide its reply dated February 12, 2020 clarified that the penal charge is included in the interest payment submitted before the Commission. The Petitioner further added that these charges are in terms of the sanctioned letter of the bank.

5.85 The Commission does not find the reply submitted by the Petitioner to pass on the penalty charged by Bank of Baroda in the ARR satisfactory. The Commission has considered the interest rate for Bank of Baroda for FY 2018-19 as 11.85% without taking into account the penal charge.

5.86 The Commission has computed the weighted average rate of interest as 11.56% based on the actual loan portfolio as submitted by the Petitioner except for Bank of Baroda which is considered without penal charge because of reasons mentioned above.

5.87 The Commission further observed that the Finance Charges claimed by the Petitioner is not related to term loan and is associated with Cash Credit account, which might be taken by the Petitioner to fund their working capital or day to day activities. Hence, the Commission has not approved any Finance Charges for FY 2018-19.

5.88 In accordance with the methodology submitted above, the Commission has computed the interest on loan as shown below.

Table 24: Interest on Loan as approved by the Commission (Rs. Crore)

Particulars	FY 2018-19		
	APR Order	Petition	Approved
Opening Debt Balance	180.02	177.33	180.02
Net Additions	0.00	0.08	0.80
Repayment	17.15	28.68	17.17
Closing Debt Balance	162.87	148.73	163.65

Particulars	FY 2018-19		
	APR Order	Petition	Approved
Average	171.45	163.03	171.84
Rate of Interest (%)	11.68%	12.53%	11.56%
Interest on Debt	20.03	20.11	19.86
Finance Charges	0.00	0.31	-
Interest & Finance Charges	**20.03**	**20.42**	**19.86**

Interest on Working Capital (IoWC)

Petitioner's Submission

5.89 The Petitioner has claimed the Interest on Working Capital as Rs. 4.99 Crore based on actual and requested the Commission to approve the same for FY 2018-19.

Table 25: IoWC as submitted by the Petitioner (Rs. Crore)

Particulars	FY 2018-19	
	APR Order	Petition
Interest on Working Capital	**5.63**	**4.99**

Commission's Analysis

5.90 The Commission observed that the Petitioner had claimed the interest on working capital on actual basis instead of normative basis as specified in the regulations.

5.91 In reply to the Commission's direction, the Petitioner submitted that they have claimed the Interest on Working Capital as per audited accounts as specified in Jharkhand State Electricity Regulatory Commission (Terms & Conditions for Determination of Generation Tariff) Regulations, 2015.

5.92 The Petitioner is required to compute the Interest on Working Capital on normative basis as per Regulations, however the Petitioner had claimed the same on actuals. Hence, the Commission has calculated the Interest on Working Capital based on normative basis for FY 2018-19.

5.93 Further, the Petitioner has received an amount of Rs. 6.63 Crore as Delay Payment Surcharge from its Beneficiary in the FY 2018-19 based on the audited accounts. However, the Petitioner has not shown the same in the revenue for FY 2018-19. The Commission has considered the revenue received from Delay Payment Surcharge as per audited accounts and approves the expenses required to finance the same in calculating the Interest on Working Capital. The Commission has considered the rate for Delay Payment Surcharge as 1.25% per month in line with Clause 8.3.5 of the

Principle PPA between Inland Power Limited & JSEB (now JBVNL), which is equivalent to 15.00% per annum for calculation of corresponding receivables against Delay Payment Surcharge,).

Table 26: IoWC as approved by the Commission (Rs. Crore)

Particulars	FY 2018-19		
	APR Order	Petition	Approved
Coal Cost for 2 Months	14.45	-	15.59
Cost of Secondary Fuel Oil for 2 Months	0.56		0.55
O&M Expenses for 1 month	1.60		1.66
Maintenance Spares (20% of O&M)	3.84		3.99
Receivables for 2 months	25.70		29.92
Total Working Capital	46.15		51.72
Rate of Interest	12.20%		12.20%
IoWC without taking into account of DPS impact	5.63	4.99	6.31
Delay Payment Surcharge	-	-	6.63
Corresponding Receivables against DPS	-	-	44.23
Interest on Receivables against DPS	-	-	5.40
Net-Interest on Working Capital	**5.63**	**4.99**	**11.71**

Return on Equity

Petitioner's Submission

5.94 The Petitioner has claimed the Return on Equity at 15.50% in accordance with the JSERC Generation Tariff Regulations, 2015 on opening equity base of Rs. 99.58 Crore after deduction of equity component of Rs. 2.32 Crore corresponding to common cost of Unit-II as approved by the Commission vide true up Order dated October 01, 2019. The Petitioner has claimed the income tax separately.

Table 27: Return on Equity as submitted by the Petitioner (Rs. Crore)

Particulars	FY 2018-19	
	APR Order	Petition
Opening Equity	90.31	99.58
Addition during the Year	-	-
Closing Equity	90.31	99.58
Average Equity	90.31	99.58
Rate of ROE	15.50%	15.50%
Return on Equity	**14.00**	**15.43**

Commission's Analysis

5.95 The Commission had approved the value of closing equity as Rs. 90.31 Crore in its true up Order dated October 01, 2019 for FY 2017-18. However, the Petitioner has considered the opening value of equity for FY 2018-19 as Rs. 99.58 Crore. The Commission vide its letter dated January 28, 2020 directed the Petitioner to justify the reason for such deviation and reconcile the same.

5.96 The Petitioner in its reply dated February 12, 2020 submitted that they have considered the equity base of Rs. 101.90 Crore as per approved MYT Order dated May 16, 2017 and deducted the common cost of Unit-II of Rs. 2.32 Crore as recognised by the Commission in its Order dated October 01, 2019.

5.97 The Commission observes that the methodology adopted by the Petitioner is not in line with the regulations. The adjustment of the common cost of Unit-II is already carried out during true up for FY 2016-17 and therefore should not be repeated once again. The Commission has considered the opening equity for FY 2018-19 equal to closing equity approved by the Commission for FY 2017-18.

5.98 As stated earlier, the Commission has scrutinized the audited accounts for FY 2018-19 submitted by the Petitioner and found that the Shareholders' Funds (Equity Share Capital) remained unchanged in FY 2018-19 when compared to FY 2017-18. Hence, the Commission has considered the entire additional capitalization approved for FY 2018-19, raised from loan and considered no equity addition in FY 2018-19, while calculating the RoE.

5.99 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 rate of return on equity as 15.50% as shown below.

Table 28: Return on Equity as approved by the Commission (Rs. Crore)

Particulars	FY 2018-19		
	APR Order	Petition	Approved
Opening Equity	90.31	99.58	90.31
Addition during the Year	0.00	0.00	-
Closing Equity	90.31	99.58	90.31
Average Equity	90.31	99.58	90.31
Rate of ROE	15.50%	15.50%	15.50%
Return on Equity	**14.00**	**15.43**	**14.00**

Fixed Charge excluding Tax, ARR Publication & Fee Expenses

Petitioner's Submission

5.100 The summary of Fixed Charge excluding Income Tax, ARR Publication & Fee Expenses as submitted by the Petitioner before the Commission for FY 2018-19 is shown below.

Table 29: Fixed Charge excluding Tax, ARR Publication & Fee Expenses as submitted by the Petitioner (Rs. Crore)

Particulars	FY 2018-19	
	APR Order	Petition
O&M Expenses	19.22	20.92
Depreciation	17.15	17.18
Interest on Loan	20.03	20.42
Return on Equity without Tax	14.00	15.43
Interest on Working Capital	5.63	4.99
Annual Fixed Cost excluding Tax, ARR Publication & Fee Expenses	**76.02**	**78.96**

Commission's Analysis

5.101 The Fixed Charge excluding Income Tax, ARR Publication & Fee Expenses as approved by the Commission for FY 2018-19 is shown below.

Table 30: Fixed Charge excluding Tax, ARR Publication & Fee Expenses as approved by the Commission (Rs. Crore)

Particulars	FY 2018-19		
	APR Order	Petition	Approved
O&M Expenses	19.22	20.92	19.96
Depreciation	17.15	17.18	17.17
Interest on Loan	20.03	20.42	19.86
Return on Equity without Tax	14.00	15.43	14.00
Interest on Working Capital	5.63	4.99	11.71*
Fixed Cost excluding Tax, ARR Publication & Fee Expenses	**76.02**	**78.96**	**82.70**

** Including the expenses to finance the DPS while calculating the IoWC*

Fixed Charge excluding Tax, ARR Publication & Fee Expenses after PAF Adjustment

Petitioner's Submission

5.102 The Petitioner submitted the Fixed Charge excluding Tax, ARR Publication & Fee Expenses after PAF adjustment as Rs. 71.19 Crore as shown below consecrating normative PAF as 82.5% as shown below.

Table 31: Capacity Charges after PAF adjustment as submitted by the Petitioner (Rs. Crore)

Particulars	FY 2018-19	
	APR Order	Petition
Fixed Cost excluding Tax, ARR Publication & Fee Expenses	76.02	78.96
Plant Availability Factor	75.48%	74.38%
Fixed Cost excluding Tax, ARR Publication & Fee Expenses after PAF adjustment	**67.51**	**71.19**

Commission's Analysis

5.103 The Commission has calculated the Fixed Charge excluding Tax, ARR Publication & Fee Expenses after PAF adjustment considering the normative PAF of 85.00%, as mentioned above.

Table 32: Capacity Charges after PAF adjustment as approved by the Commission (Rs. Crore)

Particulars	FY 2018-19		
	APR Order	Petition	Approved
Fixed Cost excluding Tax, ARR Publication & Fee Expenses	76.02	78.96	82.70
Plant Availability Factor	75.48%	74.38%	74.38%
Fixed Cost excluding Tax, ARR Publication & Fee Expenses after PAF adjustment	**67.51**	**71.19**	**72.36**

Income Tax

Petitioner's Submission

5.104 The Petitioner has claimed the Income Tax based on actual and requested the Commission for approval. The Petitioner also submitted ITR Acknowledgement in support of its claim.

Table 33: Income Tax as submitted by the Petitioner (Rs. Crore)

Particulars	FY 2018-19	
	APR Order	Petition
Income Tax	-	3.12

Commission's Analysis

5.105 The Commission in its APR Order for FY 2018-19 dated December 26, 2019 didn't approve the Income Tax and gave the liberty to the Petitioner to submit the actuals at the time of Truing up.

5.106 The Commission scrutinized the ITR acknowledgement submitted by the Petitioner and after due prudence approves the Income Tax as tabulated below.

Table 34: ARR Publication & Fee Expenses as approved by the Commission (Rs. Crore)

Particulars	FY 2018-19		
	APR Order	Petition	Approved
Income Tax	-	3.12	3.12

ARR Publication & Fee Expenses

Petitioner's Submission

5.107 The Petitioner submitted that they have incurred an expense of Rs. 0.41 Crore as ARR Publication and Fee Expenses in FY 2018-19 and submitted the original receipt.

Table 35: ARR Publication & Fee Expenses as submitted by the Petitioner (Rs. Crore)

Particulars	FY 2018-19	
	APR Order	Petition
ARR Publication & Fee Expenses	-	0.41

Commission's Analysis

5.108 The Commission in its APR Order for FY 2018-19 dated December 26, 2019 didn't approve the ARR Publication & Fee Expenses and provided the liberty to the Petitioner to submit the actuals at the time of Truing up.

5.109 The Commission after due prudence approves the ARR Publication & Fee Expenses as tabulated below.

Table 36: ARR Publication & Fee Expenses as approved by the Commission (Rs. Crore)

	FY 2018-19		
Particulars	APR Order	Petition	Approved
ARR Publication & Fee Expenses	-	0.41	0.41

Fixed Charge

Petitioner's Submission

5.110 The summary of Fixed Charge including Income Tax, ARR Publication & Fee Expenses after PAF adjustment as submitted by the Petitioner for FY 2018-19 is shown below.

Table 37: Fixed Charge including Income Tax, ARR Publication & Fee Expenses after PAF adjustment as submitted by the Petitioner (Rs. Crore)

Particulars	FY 2018-19	
	APR Order	Petition
Fixed Cost excluding Income Tax, ARR Publication & Fee Expenses after PAF adjustment	67.51	71.19
Income Tax	-	3.12
ARR Publication & Fee Expenses	-	0.41
Fixed Charges including Income Tax, ARR Publication & Fee Expenses after PAF adjustment	**67.51**	**74.72**

Commission's Analysis

5.111 The Commission approves the Annual Fixed Charges including Income Tax, ARR Publication & Fee Expenses after PAF adjustment for FY 2018-19 as shown below.

Table 38: Fixed Charge including Income Tax, ARR Publication & Fee Expenses after PAF adjustment as approved by the Commission (Rs. Crore)

Particulars	FY 2018-19		
	APR Order	Petition	Approved
Fixed Cost excluding Income Tax, ARR Publication & Fee Expenses after PAF adjustment	67.51	71.19	72.36
Income Tax	-	3.12	3.12
ARR Publication & Fee Expenses	-	0.41	0.41
Fixed Charges including Income Tax, ARR Publication & Fee Expenses after PAF adjustment	**67.51**	**74.72**	**75.89**

Recovery Mechanism

Commission's Analysis

5.112 The Government of Jharkhand and Inland Power Limited had executed the MoU to set up 126MW (+/- 20MW) power project in the State of Jharkhand. The relevant clause relate to sale of power is reproduced below:

"10.0 Sale of Power

10.1 The Government of Jharkhand or distribution licensees authorized by it will have the first right of claim on purchase up to 25% of power delivered to the system by the proposed power plant under terms of a Power Purchase Agreement to be mutually agreed on the basis of existing laws and regulations in force and the tariff for such power purchase will be determined by the appropriate Regulatory Commission.

10.2 Out of 25% under the first right of refusal of the State, the rate of 13% share will be as approved by JSERC and 12% share will be on variable cost by M/s. Inland Power Limited."

5.113 In terms of the above, IPL will supply 12% of power at variable cost and rest 13% at the tariff approved by JSERC.

5.114 Subsequently to above, IPL had signed a PPA for 35MW with Jharkhand State Electricity Board (JSEB) on February 23, 2012 with tariff as mentioned below:

"The generation Tariff of Seller which is payable by the Buyer shall be as determined by Jharkhand State Electricity Regulatory Commission (JSERC). Out of 25% of 63MW i.e. 15.75MW, Board will purchase 12% of 63MW i.e. 7.56MW at variable cost only and balance at the tariff determined by Hon'ble JSERC.

"8.8 Tariff at Delivery Point
8.8.1 Subject to the provisions of this Agreement, Seller shall supply the Contracted Capacity and the Energy Output at the delivery Point on scheduled basis and Buyer shall pay to Seller for the Scheduled Energy as per joint reading done by both Parties. Tariff for such sale of Energy Output by Seller to Buyer at the Delivery Point shall be determined by JSERC"

11.14 Approval of the Agreement
This power purchase agreement is subject to approval of JSERC, with or without modification"

5.115 Later, on April 22, 2013, Supplementary Agreement was executed between IPL and JSEB for the remaining Capacity of 28WM from Unit-1. The supplementary PPA specified as follows:

" ………….. WHEREAS the Buyer" Jharkhand State Electricity Board" and the Seller "Inland Power Ltd" are mutually agreed for purchase and sale of entire quantity of power to be generated from the 1st Unit of 63MW inclusive of quantity mentioned in earlier Principle PPA.

WHEREAS parties are mutually agreed that <u>all the terms and condition will remain the same as on the Principle PPA</u>."

5.116 The Commission in its Order dated May 28, 2019 had approved the PPA as follows:

"25. Hence, it derives from the above observations that the tariff applicable for the supplementary PPA, which is for entire quantity of power to be generated from the 1st unit of 63 MW will be same as of the levelised tariff of the Principal PPA i.e. weighted average of 12% power procured at variable cost only and 13% power procured at the tariff approved by the JSERC."

5.117 Inland Power Limited had filed an Appeal before the Hon'ble APTEL (Appeal no. 209 of 2019), in which the Hon'ble APTEL on July 17, 2019 passed as Order as:

"We stay the operations of paragraph of the impugned order and make it clear that the power generated from Unti-1 of the 63MW will be in terms of principle PPA, i.e.

weighted average of 12% power procured at variable cost and 88% of power procured at the tariff approved by the Commission"

5.118 The Commission, in view of the Stay by the Hon'ble APTEL and still pending before the Hon'ble APTEL, allows recovery of 88% of fixed charges approved by the Commission and entire variable charges corresponding to power supplied to JBVNL, subject to the final Order by the Hon'ble APTEL as shown in the following table:

Table 39: Annual Revenue Requirement (ARR) as approved by the Commission (Rs. Crore)

Particulars	UoM	FY 2018-19		
		APR Order	Petition	Approved
Fixed Cost after PAF adjustment	Cr	67.51	74.72	75.89
88% of Fixed Cost (Entitlement of IPL)	**Cr**	**59.41**	**-**	**66.79**
Energy Cost	**Cr**	**78.18**	**89.45**	**81.82**
Recoverable ARR	**Cr**	**137.59**	**164.17**	**148.61**
Energy Charge Rate (ECR)	**Rs./kWh**	**2.132**	**2.508**	**2.294**

Revenue

Petitioner's Submission

5.119 The Petitioner had submitted that the amount billed to JBVNL was Rs. 160.22 Crore which includes capacity charge and energy charges and fuel cost adjustment bill. The Petitioner further stated additional revenue of Rs. 1.22 Crore from Fly Ash Brick plant.

Table 40: Revenue as submitted by the Petitioner (Rs. Crore)

Particulars	FY 2018-19
	Petition
Revenue from Sale of Power	160.22
Revenue from Fly Ash Brick Plant	1.22
Revenue from Operations	161.44

Commission's Analysis

5.120 The Commission observed that the Petitioner had not considered the income generated from Delay Payment Surcharge invoice generated to the Beneficiary. The Commission has also considered their income of Rs. 6.63 Crore in form of Delay Payment Surcharge while calculating the net revenue as it has already approved the impact of working capital funding required to finance the Delay Payment Surcharge.

5.121 The Commission after due prudence check the auditor certificate approved the revenue for FY 2018-19 including Delay Payment Charge as tabulated below.

Table 41: Revenue as approved by the Commission (Rs. Crore)

Particulars	FY 2018-19	
	Petition	Approved
Revenue from Sale of Power	160.22	160.22
Revenue from Delay Payment Surcharge	-	6.63
Revenue from Sale of Fly Ash Bricks	1.22	1.22
Revenue from Operations	**161.44**	**168.08**

Gap/ Surplus for FY 2018-19

Petitioner's Submission

5.122 The Petitioner had claimed the gap of Rs. 2.73 Crore for FY 2018-19 and requested the Commission to approve the carrying cost of Rs. 0.33 Crore on the above said gap as shown below.

Table 42: Gap/(Surplus) as submitted by the Petitioner (Rs. Crore)

Particulars	FY 2018-19
	Petition
Fixed Charge	71.19
Energy Charge	89.45
Other Expenses	3.53
Net Annual Revenue Requirement	164.17
Revenue from Sale of Power	160.22
Revenue from Sale of Fly Ash Brick	1.22
Gap/(Surplus)	2.73
Interest Rate	12.20%
Carrying Cost	0.33
Gap including Carrying Cost	**3.06**

Commission's Analysis

5.123 The JSERC Generation Tariff Regulations, 2015, states that:

> *"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".

5.124 Based on the approved Annual Revenue Requirement (ARR) and revenue, the Commission has approved the Gap/(Surplus) for FY 2018-19 as shown below.

Table 43: Gap/(Surplus) as approved by the Commission (Rs. Crore)

Particulars	FY 2018-19 Approved
Annual Revenue Requirement	148.61
Revenue from Operations	168.08
Gap/(Surplus)	(19.47)

5.125 The Commission has approved the surplus for FY 2018-19 along with carrying cost as shown below.

Table 44: Gap/(Surplus) including Carrying Cost as approved by the Commission (Rs. Crore)

Particulars	Approved
Opening Gap/(Surplus) for FY 2018-19	-
Gap/(Surplus) addition during the FY 2018-19	(19.47)
Closing Gap/(Surplus) for FY 2018-19	(19.47)
Carrying Cost on Gap/(Surplus) for the period FY 2018-19	(1.19)
Carrying Cost on Gap/(Surplus) for the period FY 2019-20	(2.44)
Carrying Cost on Gap/(Surplus) for the period FY 2020-21	(1.70)
Gap/(Surplus) including Carrying Cost	(24.80)

5.126 The Commission has carried out the True-up for FY 2018-19 and directs the Petitioner to refund the above surplus to its Beneficiary as per Clause 6.18 of JSERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015.

A 6: DIRECTIVES

Development of a Fuel Procurement Plan

6.1 The Petitioner is directed to develop a fuel procurement plan and explore options with its suppliers in order to reduce the cost of coal. The Petitioner should prioritize the procurement of primary fuel from the least cost source. The Commission has observed that due to various reasons, the Petitioner had procured coal from sources other than what had been approved. Such variations lead to a change in the fuel mix and the landed cost.

6.2 The Commission further directs the Petitioner to bring to the notice of the Commission any change in fuel mix on quarterly basis and submit consolidated report along with Business Plan and MYT Petition.

Enhancement of Brick Plant & Ash disposal detail

6.3 The Commission directs the Petitioner to submit the report detailing the enhanced capacity of the Brick plant and expected revenue in the future along with the next petition. The Petitioner is also directed to submit the actual ash generation and its disposal for FY 2019-20 along with next petition.

Specific Fuel Consumption

6.4 The Petitioner is directed to submit monthly details of number of start-ups taken after shutdown. The details should also 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.

Use of LDO as Secondary Fuel

6.5 The Commission directs the Petitioner to carry out detailed study to accommodate LDO, as secondary fuel and may approach Commission with DPR along with all necessary details of works to be carried out along with cost Benefit analysis and rate reasonability in case any modification is required in the existing infrastructure. Any non-compliance in this regard will lead to curtailment of additional secondary fuel oil cost due to usage of HSD.

This Order is signed and issued by the Jharkhand State Electricity Regulatory Commission on September 22, 2020.

Date: 22.09.2020
Place: Ranchi

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

ANNEXURE

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

Sr. No.	Name	Address/Organization
		Date & Time: 06.08.2020 & 2:30 PM
1	M.L. Khetan	Inland Power Ltd., Director-Finance & Corporate Affairs
2	Rishi Nandan	Jharkhand Bijli Vitran Nigam Limited
3	Anita Prasad	Jharkhand Bijli Vitran Nigam Limited
4	Shailendra Nath Sinha	Inland Power Ltd