Jharkhand State Electricity Regulatory Commission

Order on

True-up for FY 2020-21, FY 2021-22, & FY 2022-23,

for

Adhunik Power and Natural Resources Limited (APNRL)

Ranchi

August 22, 2024

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List of Abbreviations

Abbreviation	Description
A&G	Administrative and General
APNRL	Adhunik Power and Natural Resources Limited
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
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	Milliliter
MOU	Memorandum of Understanding
MT	Million Tons
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.: 03 of 2024

In the matter of:

Petition for

True-up for FY 2020-21, FY 2021-22, & FY 2022-23

In the matter:

Adhunik Power and Natural Resources Limited (APNRL)
H-29, Harmu Housing Colony, Harmu, Ranchi-834002.. **Petitioner**

PRESENT

Hon'ble Mahendra Prasad	Member (Law)
Hon'ble Atul Kumar	Member (Technical)

Order dated August 22, 2024

Adhunik Power and Natural Resources Limited (hereinafter referred to as APNRL or the Petitioner) has filed the Petition dated April 03, 2024 for Truing up for FY 2020-21, FY 2022-23, & FY 2022-23.

Chapter 1: INTRODUCTION

Jharkhand State Electricity Regulatory Commission

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

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

(a) to determine the tariff for electricity, wholesale, bulk, grid or retail, as the case may be,in the manner provided in section 29;

(b) to determine the tariff payable for the use of the transmission facilities in the manner provided in section 29;

(c) to regulate power purchase and procurement process of the transmission utilities and distribution utilities including the price at which the power shall be procured from the generating companies, generating stations or from other sources for transmission, sale, distribution, and supply in the State;

(d) to promote competition, efficiency, and economy in the activities of the electricity industry to achieve the objects and purposes of this Act.

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

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

(a) determine the tariff for generation, supply, transmission, and wheeling of electricity, wholesale, bulk or retail, as the case may be, within the State:

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

(b) regulate electricity purchase and procurement process of distribution licensees including the price at which electricity shall be procured from the generating companies or licensees or from other sources through agreements for purchase of power for distribution and supply within the State;

(c) facilitate intra-state transmission and wheeling of electricity;

(d) issue licenses to persons seeking to act as transmission licensees, distribution licensees and electricity traders with respect to their operations within the State;

(e) promote cogeneration and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person, and also specify, for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution licensee;

(f) adjudicate upon the disputes between the licensees and generating companies; and to refer any dispute for arbitration;

(g) levy fee for the purposes of this Act;

(h) specify State Grid Code consistent with the Grid Code specified under Clause (h) of sub-section (1) of Section 79;

(i) specify or enforce standards with respect to quality, continuity and reliability of service by licensees;

(j) fix the trading margin in the intra-state trading of electricity, if considered, necessary;

(k) discharge such other functions as may be assigned to it under this Act.

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

(a) promotion of competition, efficiency and economy in activities of the electricity industry;

(b) promotion of investment in electricity industry;

(c) reorganization and restructuring of electricity industry in the State;

(d) matters concerning generation, transmission, distribution and trading of electricity or any other matter referred to the State Commission by that Government.

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

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

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

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

(c) promote transparency, consistency and predictability in regulatory approaches across jurisdictions and minimize perceptions of regulatory risks;

(d) promote competition, efficiency in operations and improvement in quality of supply;

(e) Promote generation of electricity from Renewable sources;

(f) Promote Hydroelectric Power generation including Pumped Storage Projects (PSP) to provide adequate peaking reserves, reliable grid operation and integration of variable renewable energy sources;

(g) Evolve a dynamic and robust electricity infrastructure for better consumer services;

(h) Facilitate supply of adequate and uninterrupted power to all categories of consumers;

(i) Ensure creation of adequate capacity including reserves in generation, transmission and distribution in advance, for reliability of supply of electricity to consumers.

Adhunik Power and Natural Resources Limited

1.8 Adhunik Power and Natural Resources Limited (hereinafter referred to as APNRL or the Petitioner) is a company incorporated under the provisions of the Indian Companies Act, 1956.

1.9 Originally incorporated as “Adhunik Thermal Energy Ltd.” (ATEL), in the year 2007, ATEL was renamed to “Neepaz Thermal Energy Limited” (NTEL) and subsequently renamed as “Adhunik Power & Natural Resources Ltd.” (APNRL) in the year 2008 after complying with the applicable provisions of the Companies Act, 1956.

1.10 ATEL, in October 2005, had signed a Memorandum of Understanding (hereinafter referred to as “the MoU”) with Government of Jharkhand to develop a 1,000 MW coal based thermal power plant. Further in January 2007, the Petitioner and Government of Jharkhand agreed to extend the validity period of the MoU further for a period of 12 months. In February 2008, the Petitioner and Government of Jharkhand agreed to extend the validity period of the MoU further for a period of three years upto October 31, 2010. Subsequently in May 2011, the validity of the MoU was again extended for a period of three years from November 1, 2010 to October 31, 2013. In November 2013, the validity of MoU was again extended for a period of three years from November 1, 2013 to October 31, 2016.

1.11 Accordingly, APNRL has set up a 540 MW coal based power plant in Stage-1 (consisting of Unit 1 and Unit 2 of 270 MW each) and is planning to develop an additional 540 MW coal based power plant in Stage-2. Unit 1 of the power plant was synchronized on November 13, 2012 and COD for the same was declared on January 21, 2013. Unit 2 of the power plant was synchronized on March 29, 2013 and COD for the same was declared on May 19, 2013.

1.12 Further, as per the provisions of the MOU, the Government of Jharkhand or Distribution Licensees authorized by it will have the first right of claim on purchase upto 25% of power delivered to the system by the proposed power station.

1.13 Further, the extension of the MoU stipulates that the Government of Jharkhand moved to Government of India for the policy decision through suitable arrangements for making available to the State, 12% of the total power generated at variable cost, by APNRL. Hence, as stated above, as per MoU and its extension's conditions, JSEB will have first right of claim on purchase upto 25% of power delivered to the system, out of which 12% power will be made available to the state at variable cost only.

1.14 Pursuant to the MoU signed between Government of Jharkhand and APNRL, APNRL signed a Power Purchase Agreement (hereinafter also referred to as "the PPA") with Jharkhand State Electricity Board (now Jharkhand Urja Vikas Nigam Limited or "JUVNL") on September 28, 2012 for supplying contracted capacity of 122.85 MW (25% of 491.4 MW, i.e., gross capacity of 2 units of 270 MW each, totaling to 540 MW less normative auxiliary consumption) from Stage-1 of the Project on long term basis.

1.15 As per the terms of the PPA, 63.882 MW capacity, i.e., 13% of Net Capacity of Stage-1 shall be supplied to JSEB (now JUVNL) at total tariff and the balance 58.968 MW capacity, i.e. 12% of total Net Capacity of Stage-1 shall be supplied at variable cost only.

1.16 As per clause 3.1 (ii) and (iii) of the PPA entered into by the Petitioner and JSEB (now JUVNL), the tariff payable shall be determined by the State

Commission:

> *3.1(ii)"The tariff for sale of power by seller to procurer for the contracted capacity of 63.882 MW shall be payable by the procurer as determined by JSERC in accordance with the "Jharkhand State Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2010 as amended from time to time or any other competent authority authorized from time to time. The annual fixed charges determined in accordance with the "Jharkhand State Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2010 shall be recoverable from the net saleable capacity of 432.432 MW (i.e. Gross capacity minus auxiliary consumption minus 12% power to be supplied to procurer at energy charge)".*
>
> *3.1(iii) The energy charge for sale of power by seller to procurer for the contracted capacity of 59.968 MW shall be payable by the procurer as determined by the JSERC in accordance with the "Jharkhand State Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2010", as amended from time to time."*

Overview of the Thermal Station

1.17 The Petitioner had achieved COD of its two units of 270 MW each in the year 2013. Both these units are subject to ARR and Tariff determination. The following table summarizes the information pertaining to both the units:

Sr. no.	Unit	Installed Capacity (MW)	Status of Operation	Actual Date of Commercial Operation
1	Unit 1	270 MW	Operational	January 21, 2013
2	Unit 2	270 MW	Operational	May 19, 2013

The Petitioner's Prayers

1.18 The Petitioner in the instant Petition made the following prayers before the Commission:

- Approve the True-up for supplying the regulated Contracted Capacity of 122.85 MW to Discom for FY 2020-21, 2021-22 and 2022-23;

- Approve the impact of SDR in FY 2021, FY 2022 and FY 2023 in the present Petition;

- Approve the submission of water charges and provide directions to the Respondents to pay for the charges and any penalty from such date as per the judgement of the Hon'ble High Court as and when the same is awarded;

- Approve the expenses as claimed towards Ash - disposal/transportation charges and Capital Spares from the Discom for FY 2020-21, 2021-22 and 2022-23.

- Allow recovery of full capacity charges for the 12% power supplied to JBVNL for the period FY 12 to FY 23 along with the carrying cost

- Allow recovery of full capacity charges for the 12% power for the ensuing years i.e. FY 24 to FY 26

- Allow additional recovery of discount provided under the Shakti scheme to ensure recovery of assured returns as per Tariff Regulations.

- Provide directions for full Fixed cost recovery against 122.85 MW and discontinue the process of supplying 12% power to JBVNL only at Variable cost for the rest of the PPA period

- Condone any inadvertent omissions/ errors/ rounding off difference/ shortcomings and permit the Petitioner to add/alter this filing and make further submissions as may be required by this Hon'ble Commission;

- Pass such further and other Order, as this Hon'ble Commission may deem fit and proper, keeping in view the facts and circumstances of the case;

Chapter 2: PROCEDURAL HISTORY

Background

2.1 The Commission had passed the Provisional Order on the Petition for approval of Capital Cost, Business Plan, and MYT Petition for FY 2012-13 to FY 2015-16 for Adhunik Power and Natural Resources Limited (APNRL) by Order May 26, 2014.

2.2 The Commission had passed Order on petition for approval of final Capital Cost of 540MW (2x270) Coal Based Thermal Power Plant in Jharkhand, True Up of ARR for FY 2012-13, FY 2013-14, APR of FY 2014-15 and ARR and Tariff Determination for FY 2015-16 on September 01, 2016. Further, the Petitioner had filed a petition on September 29, 2016 seeking review of Order dated September 01, 2016. Accordingly, the Commission has issued review order by Order dated January 09, 2018.

2.3 The Commission vide Order dated February 19, 2018 had passed the True-up for FY 2014-15 and FY 2015-16, Business Plan, ARR and Tariff for Multi Year Tariff Period from FY 2016-17 to FY 2020-21.

2.4 The Commission vide Order dated April 10, 2019 issued the Corrigendum Order in Case No. 05 of 2018.

2.5 The Commission had passed Order on True-up for FY 2016-17 and Annual Performance Review for FY 2017-18 by Order dated May 22, 2023.

2.6 The Commission had passed Order on True-up for FY 2017-18, FY 2018-19, FY 2019-20 and Annual Performance Review for FY 2020-21 by order dated June 22, 2023.

2.7 The Commission had passed Order on MYT & Business plan for 3rd Control period i.e. from FY 2021-22 to FY 2025-26 by Order dated December 14, 2023.

2.8 The Commission had passed review order case no. 17 of 2023 vide order dated July 23, 2024 based on principles specified in the JSERC

Generation Tariff Regulations, 2015, and JSERC Generation Tariff Regulations 2020 along with amendment thereof.

Information Gaps in the Petitions

2.9 In response to the True-up petition for FY 2020-21, FY 21-22, and FY 2022-23 the petitioner has submitted additional/data/information to the Commission vide letter no. APNRL/PT-JSERC/FY 24-25/07 dated July 15, 2024.

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

Inviting Public Comments/Suggestions

2.11 On scrutiny of the petition, the Commission has directed the Petitioner to publish a Public Notice inviting comments/suggestions from public and to make available copies of the Petition to the consumer/public on request.

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

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

Newspaper	Date of Publication
Morning India (English)	23.03.2024
Hindustan Times (English)	22.03.2024 & 23.03.2024
Sunmarg (Hindi)	22.03.2024 & 23.03.2024
Hindustan (Hindi)	22.03.2024 & 23.03.2024
Morning India	22.03.2024

2.13 Further, the Commission had organized a Public Hearing on June 24, 2024, where an additional opportunity to all the Stakeholders was provided to submit their comments/suggestions on the instant petition. The newspapers wherein the Notice was published by the Commission are mentioned below:

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

Newspaper	Date of Publication
Prabhat Khabar	15.06.2024
Dainik Bhaskar	15.06.2024
The Times of India (English)	15.06.2024
The Hindustan Times (English)	15.06.2024
Prabhat Khabar (Hindi)	23.06.2024
Hindustan Dainik (Hindi)	23.06.2024
The Times of India (English)	23.06.2024
The Hindustan Times (English)	23.06.2024

Submission of Comments/Suggestions and Conduct of Public Hearing

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

Chapter 3: BRIEF FACTS OF THE PETITION

3.1 This Chapter summarizes the Petition of Truing-up for FY 2020-21, FY 2021-22, & FY 2022-23 as filed by the Petitioner for the Commission's approval.

Truing up for FY 2020-21

3.2 The table below summarizes the Annual Revenue Requirement for FY 2020-21, FY 2021-22, & FY 2022-23 as submitted by the Petitioner against approved in the APR, and MYT Order dated June 22, 2023 and December 14, 2023 respectively.

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

Particulars	UoM	Unit-1		Unit-2	
		APR	Petition	APR	Petition
Net Energy Supplied to JUVNL/JBVNL	MU	482.07	452.74	482.07	452.74
Rate of Energy Charge	Rs/kWh	2.555	2.57	2.641	2.57
AFC Entitlement on True Up	Rs. Cr.	49.77	49.11	51.03	49.82
Incentives	Rs. Cr.	1.17		1.17	
Energy Charge Entitlement upon True up	Rs. Cr.	123.16	116.33	127.31	116.33
Water Charges	Rs. Cr.	0.22	5.97	0.22	5.97
Capital Spares	Rs. Cr.	-	0.60	-	0.60
Ash disposal charges	Rs. Cr.	0.23	0.23	0.23	0.23
Security Expenses	Rs. Cr.		0.00		0.00
Less: Sharing of Gain due to operational parameter	Rs. Cr.				
Total ARR for Jharkhand	**Rs. Cr.**	**174.56**	**172.24**	**179.96**	**172.95**
Revenue Billed					
Annual Fixed Cost	Rs. Cr.	52.86	51.35	53.62	52.07
Energy Charge	Rs. Cr.	123.76	116.22	123.89	116.35
FPA	Rs. Cr.	15	-2.15	14.87	-2.27
Incentive	Rs. Cr.	1.17		1.17	
Imported Coal Bill	Rs. Cr.				
Total Revenue Billed to	Rs. Cr.	**192.78**	**165.41**	**193.55**	**166.15**

Particulars	UoM	Unit-1		Unit-2	
		APR	Petition	APR	Petition
JUVNL/JBVNL					
Gap/(Surplus)	**Rs. Cr.**	**(18.22)**	**6.83**	**(13.59)**	**6.80**
Shakti Discount	**Rs. Cr.**		**1.03**		**1.03**
Net Gap/(Surplus)	**Rs. Cr.**		**5.80**		**5.76**
Carrying Cost	**Rs. Cr.**		**1.53**		**1.52**
Net Gap/(Surplus) incl. carrying Cost	**Rs. Cr.**		**7.32**		**7.28**

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

Particulars	UoM	Unit-1	Unit-2
		Petition	Petition
Net Energy Supplied to JUVNL/JBVNL	MU	481.39	481.39
Rate of Energy Charge	Rs/kWh	2.65	2.65
AFC Entitlement on True Up	Rs. Cr.	42.08	42.74
Incentives	Rs. Cr.	1.62	1.62
Energy Charge Entitlement upon True up	Rs. Cr.	127.43	127.38
Water Charges	Rs. Cr.	15.65	15.65
Capital Spares	Rs. Cr.	1.32	1.32
Ash disposal charges	Rs. Cr.	2.42	2.42
Security Expenses	Rs. Cr.	0.28	0.28
Less: Sharing of Gain due to operational parameter	Rs. Cr.	0.90	0.90
Total ARR for Jharkhand	**Rs. Cr.**	**189.90**	**190.50**
Revenue Billed			
Annual Fixed Cost	Rs. Cr.	51.87	52.60
Energy Charge	Rs. Cr.	123.57	123.72
FPA	Rs. Cr.	0.22	-0.05
Incentive	Rs. Cr.		
Imported Coal Bill	Rs. Cr.		
Total Revenue Billed to JUVNL/JBVNL	Rs. Cr.	**175.662**	**176.27**
Gap/(Surplus)	**Rs. Cr.**	14.24	14.23
Shakti Discount	**Rs. Cr.**	0.73	0.73
Net Gap/(Surplus)	**Rs. Cr.**	13.51	13.50
Carrying Cost	**Rs. Cr.**		
Net Gap/(Surplus) incl. carrying Cost	**Rs. Cr.**		

Table 5: Annual Revenue Requirement (Rs. Cr.) as submitted by the Petitioner for FY 2022-23.

Particulars	UoM	Unit-1	Unit-2
		Petition	Petition
Net Energy Supplied to JUVNL/JBVNL	MU	351.94	351.94
Rate of Energy Charge	Rs/kWh	3.02	3.02
AFC Entitlement on True Up	Rs. Cr.	42.16	42.80
Incentives	Rs. Cr.		
Energy Charge Entitlement upon True up	Rs. Cr.	106.28	106.16
Water Charges	Rs. Cr.	2.83	2.83
Capital Spares	Rs. Cr.	2.01	2.01
Ash disposal charges	Rs. Cr.	1.10	1.10
Security Expenses	Rs. Cr.	0.31	0.31
Less: Sharing of Gain due to operational parameter	Rs. Cr.	0.00	
Total ARR for Jharkhand	**Rs. Cr.**	**154.69**	**155.21**
Revenue Billed			
Annual Fixed Cost	Rs. Cr.	51.87	52.60
Energy Charge	Rs. Cr.	90.34	90.45
FPA	Rs. Cr.	8.58	8.50
Incentive	Rs. Cr.		
Imported Coal Bill	Rs. Cr.	6.03	6.03
Total Revenue Billed to JUVNL/JBVNL	Rs. Cr.	**156.825**	**157.58**
Gap/(Surplus)	**Rs. Cr.**	(2.14)	(2.37)
Shakti Discount	**Rs. Cr.**	1.25	1.25
Net Gap/(Surplus)	**Rs. Cr.**	(3.39)	(3.61)
Carrying Cost	**Rs. Cr.**		
Net Gap/(Surplus) incl. carrying Cost	**Rs. Cr.**		

Chapter 4: PUBLIC CONSULTATION PROCESS

4.1 On the Petitioner's plea several stakeholders responded. The Public Hearing was held on June 24, 2024 at Jamshedpur to ensure maximum public participation and transparency wherein Stakeholders put forth their comments and suggestions before the Commission. The list of attendees is attached as **Chapter 9** to this Order.

4.2 The comments and suggestions of the public along with the response of the Petitioner and the views of the Commission are summarized in this Chapter. The issues raised by the stakeholders, which do not have meaning to True-up, and APR have not been discussed in this Chapter.

Querist- JBVNL

Additional Expenditure for FY 2020-21 and FY 2021-22

4.3 These additional expenditures by APNRL lacks proper justification and there was no prior intimation to JBVNL for this expenditure or the failure or inefficiency of already existing units.

4.4 APNRL is claiming too much capitalization for existing unit without any valid reason. Inspection is required to know and validate such claim. JBVNL was never appraised on such things earlier.

4.5 Further, APNRL has not provided whether the additional expenditure is towards the apportionment of JBVNL's share from its total generation or not. It is requested to the Hon'ble Commission to ask and verify all the expenditure details of APNRL and correctly allocate the rightful expenditure towards JBVNL's share after due verification and prudence check. Also, we would like to get a clarification whether respective DPR's being approved by JSERC prior to such investments?

Petitioner Reply

4.6 The Petitioner has submitted that the JSERC Tariff Regulations 2015 &

2020, states that any extra works or services, not originally included in the project cost, that have become necessary for the efficient and successful operation of a generating station should be acknowledged and addressed. This ensures that the generating station operates effectively and meets its intended objectives.

4.7 Accordingly, the Petitioner had incurred the expenditure towards additional capitalization in the mentioned years.

4.8 The Petitioner in its petition has submitted the all details along with the required formats and certificate related to the additional capitalization incurred.

4.9 Furthermore, if the Hon'ble Commission requires additional details on this matter, the Petitioner stands ready to provide the same.

No clarity on O&M expenses for FY 2020-21.

4.10 There is no clarity on O&M expenses as the actual O&M has not been shown by the APNRL, and there is no itemized breakdown of O&M costs. In such a case, it is very difficult to verify the expenses. If actual values are not provided, the total O&M cost should be disapproved by the Hon'ble Commission.

4.11 Furthermore, APNRL has not indicated whether the O&M expense is attributable to the apportionment of JBVNL's share from its total capacity. It is requested that the Hon'ble Commission ask for and verify all the expenditure details of APNRL and correctly allocate the rightful O&M expenditure towards JBVNL's share after due verification and prudence check. JBVNL is only liable for one-third of the total.

Petitioner Reply

4.12 The Petitioner has submitted that the O&M expenses claimed for the FY 2020-21 is same as approved by the Hon'ble Commission in its MYT order dated 19.02.2018.

4.13 It is important to mention here that as per the JSERC Tariff Regulations, 2015, no gain and loss sharing shall be done on O&M expenses upon True-Up. The related excerpt from the Regulation is reproduced herein below:

> *"6.14 The true up across various controllable parameters shall be conducted as per*
> *principles stated below: -*
> *(a)………*
> *(b) Any surplus and deficit on account of O&M expenses shall be to the account of the generating company and shall not be trued up in ARR."*

4.14 It is apparent from the above that there will be no true-up for the O&M expenses. Hence, as the true-up for period FY 2020-21 governed under the aforesaid JSERC Tariff Regulations, 2015, the Petitioner has claimed the O&M expenses as same as approved by the Hon'ble Commission in its order dated 19.02.2018. In addition to the above the O&M expenses for FY 2021-22 and FY 2022-23 has been claimed based on the revised normative.

4.15 It is crucial to mention here that revised normative has been worked out considering the escalation rate, calculated by considering WPI CPI of respective years, which beyond the control of the Petitioner. The difference in the O&M expenses claimed and approved is due to escalation rate.

4.16 Further, it is important to mention here that the Hon'ble Commission, before allocating the cost pertaining to JBVNL's share, approves the cost for the entire 540 MW capacity. Thereafter, the entire cost of 540 MW is proportioned against JBVNL's share. The Hon'ble Commission has been following this practice since FY 2012-13.

Higher Energy Charges Rate (ECR).

4.17 Eventhough APNRL is receiving Shakti coal due to help and support from GoJ and JBVNL, the same is not reflecting in the energy charges of APNRL.

4.18 The higher energy charges are due to higher rates of coal and oil that needs to be controlled with better planning and strategy. The petitioner cannot claim always that the price and GCV are out of control and make the charges passed to the consumers directly or indirectly.

Petitioner Reply

4.19 The Petitioner has submitted that, according to regulatory practices, the actual cost of fuel shall be passed on to the consumer. Therefore, even if the Petitioner did not allocate coal under the SHAKTI scheme and had procured it from the open market, the higher cost of coal would still be passed through. However, considering the lower cost of coal and the reliable supply of power to the consumer, the Petitioner has made efforts to obtain coal under the SHAKTI scheme. It is crucial to note that, in order to secure coal linkage under the SHAKTI scheme, the Petitioner is providing the discount varies from Rs. 0.03/kWh to Rs. 0.10/kWh on tariff to JBVNL, which is ultimately eroding the Petitioner's RoE.

4.20 Furthermore, the Petitioner has submitted that JBVNL is also procuring power from state generating companies like Inland Power (IPL) and DVC. It has been noted that the energy charges of IPL and DVC for FY 2021-22 was Rs. 2.74/kWh and Rs. 2.91/kWh respectively (as approved by the Hon'ble Commission in its true-up order for FY 2021-22 for the respective generating companies), whereas the Petitioner has claimed an energy charge of Rs. 2.65/kWh for FY 2021-22, which is lower than the above. Hence, the Petitioner understands that the energy charges claimed is very competitive and aligns with the market scenario.

4.21 In addition to the above it is pertinent to mention here that the Ministry of Power on 25.03.2022 notified the direction to blend the imported coal, for the thermal generating plants. Upon receive the directive from the Ministry of Power, APNRL was bound to blend the imported coal with domestic coal. Consequently, the energy charge for FY 2022-23 was increased. The related notification of the MoP is attached herein as Annexure-2.

4.22 All the necessary details and justification has been submitted in the

Petition and along with the petition the auditor certificate for coal price and GCV was attached as Annexures (Vide ***Annexure-5 & 14*** of the petition).

4.23 However, if the Hon’ble Commission requires more detail, the Petitioner will provide the same upon direction of the Hon’ble Commission.

High Water Charges Bill

4.24 The excessive water charges should be disallowed. The JBVNL further requests the Commission to properly verify the details submitted by APNRL and only pass on the genuine charges attributable to power production and units for consumption purposes of JBVNL. Other demands should be disallowed out rightly.

4.25 Further, APNRL has not provided whether water charges are in proportion of JBVNL's share from its total capacity. It is requested to the Hon'ble Commission to ask and verify the water charges of APNRL and correctly allocate the rightful charges towards JBVNL's share after due verification and prudence check. JBVNL is only liable towards one third of its total capacity and the rest of the power is supplied to other states like West Bengal and Tamil Nadu.

Petitioner Reply

4.26 The Petitioner has submitted that the related details and justification has been submitted in the petition and if the Hon’ble Commission requires more detail, the Petitioner will provide the same upon direction of the Hon’ble Commission.

4.27 Further, it is already stated earlier that the Hon’ble Commission, before allocating the cost pertaining to JBVNL's share, approves the cost for the total 540 MW capacity. Thereafter, the entire cost of 540 MW is proportioned against JBVNL's share. The Hon’ble Commission has been following this practice since FY 2012-13.

Ash Disposal Expenses

4.28 The Objector has submitted that the cost and revenue from ash disposal should have been checked thoroughly and the details of bills to be investigated properly on how the ash treatment and disposal happens in APNRL.

4.29 Similarly, the ash generated and its treatment (cost and revenue) should be proportional to the capacity allocated to JBVNL. The Hon'ble commission is requested to verify the details judiciously.

Petitioner Reply

4.30 The Petitioner has submitted that all details related to the ash generation and their transportation expenses, distance wise has been submitted in the petition (vide the page-32 and 70 for FY 2020-21 and FY 2021-22 to FY 2022-23 respectively, also see the ***Annexure-9 & 17*** of the Petition.)

4.31 However, for reference, the Petitioner is attached the CA certificate related to Ash disposal expense herein again as ***Annexure-3.***

4.32 Further, the revenue generated through sale ash is considered under the non-tariff income.

4.33 The Petitioner has further submitted that the all expenses claimed by the Petitioner has been proportionated to the capacity allocated to the JBVNL.

Weighted average rate of interest for FY 2021-22 and FY 2022-23

4.34 The Objector has submitted that it is not clear whether the rate of interest goes down due to refinancing or repayment of higher interest-bearing loans or internal SDR process. If it is due to repayment of highest interest bearing loans due to internal SDR (structural Debt restructuring), that cannot be claimed to be refinancing of loans. Also, because of this, debt portion goes down and equityportion goesup.

4.35 Claiming savings gain on weighted average interest gain from long term loan due to internal SDR and higher rate of return on revised equity base due to SDR is not justifiable.

4.36 Also, allowed interest of loan for previous years in truing up by the Hon'ble Commission cannot be claimed as benchmark rate of interest.

Petitioner Reply

4.37 The Petitioner has clarified that the change of weighted average interest rate was not due to the SDR process.

4.38 It is pertinent to mention here that SDR was completed in the FY 2017-18, while the restructuring of loan or refinancing of loan was completed in FY 2020-21.

4.39 The restructuring of loan or refinancing of loan and SDR is two separate process.

4.40 Hence, the Petitioner has requested to allow the savings gains on weighted average interest gain from long term loan as per the Tariff Regulations.

Return on Equity

4.41 The ROE claimed is higher than the allowed rate of Rs 70.62 Cr for unit 1 and Rs 69.79 Cr for unit 2 by the Hon'ble commission in its MYT order. The Petitioner had computed the equity amount (shown in table above) considering the debt equity ratio of 70:30, considering the increase in equity upon SDR.

Petitioner Reply

4.42 The Petitioner has submitted that the matter related to debt equity ratio is subjudice before the Hon’ble Commission. Considering the above the Petitioner has calculated the RoE based on the debt equity ratio of 70:30.

Non-Tariff Income

4.43 No item wise break up was provided for verifying the same.

Petitioner Reply

4.44 The detailed breakup is given in the audited accounts of the respective years, which attached along with the petition. However, if the Hon'ble Commission require more details, the Petitioner will submit the same upon the direction from the Hon'ble Commission.

Imported Coal Bill

4.45 When FPA is being passed directly to JBVNL in its bill, then why additional bill of imported coal is charged to JBVNL. We request a proper justification from APNRL on this issue.

Petitioner Reply

4.46 It is stated earlier that upon receiving the directives from the Ministry of Power, the Petitioner was compelled to use the imported coal for power generation. As per directives the Petitioner had blend the imported coal in FY 2022-23.

4.47 The Petitioner clarifies that the FPA bill passed by the JBVNL is based on the domestic coal (other than the imported coal).

4.48 The bill of the imported coal was issued separately and the same was accepted and paid by the JBVNL itself.

4.49 Further, if the Hon'ble Commission requires more detail on this, the Petitioner will submit the same upon the direction of the Hon'ble Commission.

Commission analysis

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

<u>Additional Submission of the Petitioner on consideration of supply of 12% of power only on variable charge basis.</u>

4.51 The Petitioner has submitted the chronology of the events regarding the MOUs and PPAs signed between Govt. of Jharkhand, JBVNL and APNRL. The Petitioner has submitted chronology of the events herein below.

a) 1st MOU signed on 31" October 2005 where in GoJ outlined the support and assistance to be provided to APNRL for 1000MW thermal power plant. In point no 15.0 General Clause (C) it is clearly stated that "***other issues as and when they arise and sharing of the responsibilities between parties shall be decided if necessary through mutual agreement on case to case basis***".

b) 2nd MOU (extension) signed on 18th January 2007 in which clause no 10.5 and 12 (d) added. 10.5 states that where a policy decision through suitable arrangements for making available to the state 12% of the total power generated at variable cost by ATEL operating within its territory and levying duty on power produced. Point 12 (d) proposal of Environmental Management fund in order to maintain a clean environment in the state. An annual contribution of 6 paise per unit of the energy to be deposited to this fund for the power sent out to other states.

c) 3rd extension of MOU signed on 1st February 2008 to extend the validity upto 31st October 2010.

d) 1st PPA signed on 28th September 2012, refer clause no D, E and G where in the parties agreed to 12% power at variable cost without any pre-conditions. APNRL agreed fully upon the conditions. Also. in clause no 15 (Miscellaneous Provisions) 15.1 Amendment 15.1.1 states that This agreement may only be amended or supplemented by a written agreement between the parties and after obtaining the approval of the appropriate commission, where necessary. Also refer 15-4 Entirety clause "Except as provided in this agreement, all prior written or oral understandings, offers or other communications of every kind pertaining to this agreement or supply of power up to the contracted capacity under this agreement to the procurer by the seller shall stand superseded and abrogated.

e) 2nd PPA (Supplementary) signed on 6th November 2017 for procurement of additional 66MW from APNRL by JBVNL.

f) PPA amendment no 1 (supplementary) dated 15'h February 2018 pursuant to the article 15.1.1 for provisioning of discount of 3 paise per unit for the contracted capacity of 122.85MW supplied to JBVNL by using coal supplied under the long term FSA signed between APNRL and CCL under the SHAKTI scheme. Discount will be deducted from the gross bill raised by the seller and shall be subjected to quarterly reconciliation.

4.52 Understanding the chronology of the events, it can be inferred that Govt of Jharkhand provided assistance in land acquisition, water support, environment and forest clearance support and other assistance as required by the APNRL. In lieu of these assistance and policy support discussions with other states and GoI, it was mutually decided that APNRL would provide 12% of power at variable cost and the long term association kept going with support in getting captive coal blocks, subsequent PPA, approval of Hon'ble Commission and tariff discovery etc. There was never any confusion regarding the PPA signed and executed. The provisioning of power at variable charges was discussed in several forums including JSERC many times and the dust settled on mutual agreement with approval of the Hon'ble Commission.

4.53 It is unfortunate that the matter is again raised by the APNRL in its petition to JSERC invoking the Commission's power under Regulation A-45 of the JSERC (Conduct of Business Regulations) 2016 which is not in conformity to the power vested on the Hon'ble Commission.

4.54 However, JBVNL would like to raise objection in this matter. First, this MOU was signed between GoJ and APNRL. If APNRL had any objections, it could have raised the issue with Govt of Jharkhand at that point of time or in subsequent MOUs. Even, it could have asked for relevant policy of state govt or central government. Also, the matter could have raised under relevant clause of MOUs and PPAs for bilateral negotiation and discussion for relevant amendments. However, APNRL chose to keep silent while enjoying all the benefits the Govt of Jharkhand and JBVNL.

4.55 JBVNL was not a direct party to the MOU. This understanding is between Govt of Jharkhand and APNRL. However, JBVNL have a long term PPA with APNRL and clause 15.1.1 clearly stated 'This agreement may only be amended or supplemented by a written agreement between the parties and after obtaining the approval of the appropriate commission. To our understanding, we have not received any communication from APNRL on this issue for further review and amendments to the PPA.

4.56 As per the PPA signed between erstwhile JSEB/ JBVNL and APNRL dated 28th September 2012 Clause D and E:

> *Clause D: "As per the provisions .... further, MOU stipulates that the GoJ has moved GOI for the policy decision through suitable arrangement for making available to the state 12% of the total power generated at variable cost by the seller."*
>
> *Clause E: "Pursuant to the .... Out of total contracted capacity of 122.85MW from stage 1, the procurer in proportion will procure 63.882MW (i.e.,) 13% of total net capacity of stage 1 at tariff as approved by JSERC or such other appropriate authority and the procurer will procure balance 58.968MW i.e 12% of total net capacity of stage 1 at variable cost (i.e.,) energy charge as approved by JSERC (JSERC) or such other appropriate plus fuel price*

adjustments".

4.57 Also, the PPA signed between JBVNL and APNRL is sacrosanct lo both the parties and the respective parties are bound to follow the PPA.

4.58 Also, the issue becomes irrelevant when both the parties mutually agreed on the same with due considerations and the same has been approved by the Hon'ble Commission. Moreover, JBVNL has issued certificate for allocation based on long term PP A to APNRL and proposed for coal linkage through SHAKTI policy of GOI where in APNRL is drawing coal for power generation at concession rates. The SHAKTI coal is being used for producing power for JBVNL and other states. Also, JBVNL is paying the FPA (Fuel Price Adjustments) for any increase in fuel price due to coal import from outside. As such, JBVNL is providing full support and assistance to the APNRL, being a thermal IPP in the state.

4.59 Also, JBVNL would like to clarify that the PPA signed between APNRL and JBVNL are sacrosanct, and any issues and disputes should be discussed mutually for an amicable solution, if need arises according to the provision of PPA.

Petitioner Reply

4.60 The Petitioner had acknowledged the chronology of MoUs and PPAs cited by JBVNL, which outline the assistance and support provided by the Government of Jharkhand to APNRL for establishing the power plant. However, it is essential to highlight that the basis of supplying 12% power was contingent to Government of Jharkhand succeeding in obtaining concession as per provisions in 10.5 (a) of the MoU. The Petitioner understands that no such concession has been obtained to date and therefore the basis of taking 12% power at variable cost only does not arise.

4.61 The JBVNL has itself stated that the PPA signed between the JBVNL and APNRL is sacrosanct to both parties and the respective parties are bound to follow the PPA's terms and conditions. In this regard, the Petitioner has submitted that essence of the MoU reflects in the clause D of the PPA, which clearly state that the supply of 12% power at variable cost was contingent upon a policy decision from the Government of India. The relevant clauses highlight that the Government of Jharkhand had moved the Government of India for a policy decision to facilitate this arrangement. However, no such policy decision has been made available to date. The related clause is reproduced herein below:

> *Clause D: "As per the provisions .... further, MOU stipulates that* ***the GoJ has moved GOI for the policy decision through suitable arrangement for making available to the state 12% of the total power generated at variable cost by the seller.****"*

(Emphasis Supplied)

4.62 While JBVNL asserts that the PPA and subsequent agreements were mutually agreed upon and sacrosanct to both parties and approved by the Hon'ble Commission, the clause D of the PPA shall also be considered as sacrosanct to both parties, which explicitly states that the arrangement of 12% of total power generated shall be available for the Jharkhand at variable cost was based on the expectation of a forthcoming policy decision from the Government of India. In absence of such a policy decision renders the current tariff structure inequitable and inconsistent with the principles of the Electricity Act, 2003.

4.63 Further, the Petitioner has denied the statement of the JBVNL that "APNRL is drawing coal for power generation at concession rates". In this regard the Petitioner has submitted that the Petitioner is procuring the coal under the SHAKTI scheme on the notified price. Further, the Petitioner is giving discounts which varies from Rs. 0.03/kWh to Rs. 0.10/kWh in the tariff to JBVNL, upon receiving the coal under the SHAKTI Scheme. The Petitioner is giving concession in tariff to JBVNL, which ultimately eroding the RoE of the Petitioner. The whole arrangement of coal under SHAKTI Scheme only benefits JBVNL.

4.64 Considering the above facts and circumstances the Petitioner has submitted that the Petitioner's submission aligns with Section 61 and 62 of the Electricity Act 2003, which mandate that tariffs should allow for the recovery of the cost of electricity in a reasonable manner. Section 61(d) specifically highlights the need to safeguard consumer interests while ensuring the reasonable recovery of costs.

4.65 In addition to the above, Regulation A-45 of the JSERC (Conduct of Business Regulation) 2016 grants inherent powers to the Hon'ble Commission to make necessary orders for the ends of justice or to prevent the abuse of the process of the Hon'ble Commission. The Petitioner's invocation of this regulation is in conformity with the power vested in the Hon'ble Commission, considering the absence of a policy decision from the Government of India.

4.66 In light of the above points, the Petitioner has respectfully submitted that the current tariff structure, excluding fixed charges for the 12% power supplied, is inequitable and contrary to the principles of the Electricity Act, 2003.

4.67 Considering the above facts and circumstances, the Petitioner has prayed to approve the recovery of the total cost i.e., Fixed cost and variable cost for whole contracted capacity of 122.85 MW,

Commission analysis

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

Chapter 5: TRUE-UP FOR FY 2020-21

5.1 In the instant petition the Petitioner has sought approval for True-up for FY 2020-21, FY 2021-22, & FY 2022-23 based on the Generation Tariff Regulation 2015, Generation Tariff Regulation 2020 and Generation Tariff (1st Amendment) 2023 and the methodology adopted by the Commission in the previous Tariff Order.

5.2 The Commission on the basis of provisions of the Tariff Regulations, 2015, has determined the True-up for FY 2020-21 on consideration of:

- Audited account for FY 2020-21;
- Certified Document submitted by the Petitioner;
- Methodology adopted by the Commission in its earlier Orders.

Operational Performance

Plant Availability Factor (PAF)

Petitioner's Submission

5.3 The Petitioner in additional submission has submitted that as per the PPA, there is no restriction on the Petitioner to supply a certain capacity from a certain unit. The PPA gives the liberty to the Petitioner to supply 122.85 MW of power from 491.4 MW of Net capacity (Including both units). Hence, the petitioner calculates the cumulative plant availability factor considering both units. Accordingly, the Petitioner has submitted that the actual plant availability for Unit-1 & Unit-2 as 84.14% Respectively for FY 2020-21.

Commission's Analysis

5.4 The Commission on scrutinizing the MOU, observed that the Government of Jharkhand or distribution licensees authorized by it will have the first right of claim on purchase upto 25% of power delivered to the system by the proposed Power station under terms of a PPA to be mutually agreed on the basis of existing laws and regulation in force and the tariff for such purchases will be determined by the appropriate Regulatory Commission.

5.5 In accordance with ***'clause 8.4'*** of JSERC Generation Tariff Regulation 2015, the Commission approves the Normative Plant Availability factor as 85.00% for both units respectively.

5.6 On scrutinizing and analyzing additional document submitted by Petitioner as annexed in ***'annexure A'***, the Commission approves the actual plant availability for FY 2020-21 as 84.14% for both units respectively.

Auxiliary Consumption

Petitioner's Submission

5.7 The Petitioner has submitted that the actual Auxiliary Power Consumption of Unit-1 and Unit-2 for FY 2020-21 has been at 7.80% as compared to Normative Auxiliary Power Consumption of 9.00% for each Unit as specified in Generation Tariff Regulation 2015. Accordingly, the Petitioner has been considered the Normative auxiliary consumption as 9.00% for both Unit-1 and Unit-2 for computation of ECR and 7.80% for sharing of Gain/Loss on account of variation in Operational Parameter.

Commission's Analysis

5.8 In accordance with ***clause 8.6(d)(i)*** of JSERC Generation Tariff Regulation 2015, the Commission approves the normative auxiliary Consumption as 9.00% for both units.

5.9 On scrutinizing and analyzing the additional submission as annexed in ***Annexure-1***, the Commission approves the actual auxiliary consumption of 7.80% for both units respectively and same has been considered for computation of sharing of Gain/Loss on account of variation in Operational Parameter.

Plant Load Factor and Generation

Petitioner's Submission

5.10 The Petitioner has submitted that the PPA gives liberty to supply 122.85 MW of power from 491.4 MW of net capacity (including both units). Hence the Petitioner has calculated the cumulative plant load factor considering the cumulative energy supplied from both the Unit.

5.11 The Petitioner has claimed the actual gross generation from Unit-1 and Unit-2 of generating station as 1374.31 MUs and 1669.69 MUs respectively. Likewise, the Petitioner has submitted net generation (ex-bus generation) for Unit-1 and Unit-2 as 1250.63 MUs and 1519.42 MUs respectively.

Commission's Analysis

5.12 The Commission has noted the additional reply submitted by the Petitioner and scrutinized the month wise actual generation as annexed in **'*annexure-2*'** of additional submission. Accordingly, the Commission approves the actual generation for FY 2020-21 as 1374.31 MU for Unit-1 & 1669.69 MU for Unit-2.

5.13 On scrutinizing and analyzing the material, information, actual figure and details submitted by the Petitioner and on prudent check the Commission approves the Gross Generation, Net Generation, and Plant Load Factor for FY 2020-21 is given below.

Table 6: Plant Load Factor and Generation as approved by the Commission.

Particulars	UoM	APR	Petition	Approved
UNIT-II				
Gross Generation	MU	1374.31	1374.31	1374.31
Net Generation	MU	1250.62	1250.63	1250.63
Actual PLF	%		84.14	84.14
UNIT-III				
Gross Generation	MU	1699.69	1669.69	1669.69
Net Generation	MU	1546.72	1519.42	1519.42
Actual PLF	%		84.14	84.14

Gross Station Heat Rate (GHR)

Petitioner's Submission

5.14 The Petitioner has submitted the actual Gross Station Heat Rate (GHR) for FY 2020-21 as 2254.21 kCal/kWh for Unit-1 and 2253.89 kCal/kWh for Unit-2 against the normative approved value of 2387.00 kCal/kWh for Unit-1 and Unit-2 respectively.

Commission's Analysis

5.15 In accordance with ***clause 8.6(d)*** of JSERC Generation Tariff Regulation, 2015, the Commission approves the Normative Station Heat Rate as 2387.00 kCal/kWh for Unit-1 and Unit-2 respectively for computation of energy charge rate later in this order.

5.16 Further the Commission approves the actual station heat rate for FY 2020-21 as 2254.21 kCal/kWh for unit-1 and 2253.89 kCal/kWh for unit-2 for computation of sharing of gain/loss sharing on variation in operational parameter later in this order.

5.17 On scrutinizing and analyzing the material, information, actual figure and details submitted by the Petitioner, the Commission approves the Actual Gross Station Heat Rate for FY 2020-21 is given below.

Table 7: Gross Station Heat Rate (GHR) as approved by the Commission.

Particulars	UoM	APR	Petition	Approved
UNIT-II				
Normative Station Heat Rate	kCal/kWh	2387.00	2387.00	2387.00
Actual Gross SHR	kCal/kWh		2254.21	2254.21
UNIT-III				
Normative Station Heat Rate	kCal/kWh	2387.00	2387.00	2387.00
Actual Gross SHR	kCal/kWh		2253.89	2253.89

Specific Fuel Oil Consumption

Petitioner's Submission

5.18 The Petitioner has submitted the specific fuel oil consumption as 1.00 ml/kWh for both the Units for purpose of True-up for FY 2020-21.

Commission's Analysis

5.19 In accordance with ***clause 8.6 (e)*** of JSERC Generation Tariff Regulation 2015, the Commission approves the specific fuel oil consumption as 1.00 ml/kWh for both the Units.

Table 8: Specific Fuel Oil Consumption as approved by the Commission.

Particulars	UoM	APR	Petition	Approved
UNIT-II				
Specific Fuel Oil Consumption	ml/kWh	1.00	1.00	1.00
UNIT-III				
Specific Fuel Oil Consumption	ml/kWh	1.00	1.00	1.00

Fuel Cost Parameter

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

Petitioner's Submission

5.20 The Petitioner has submitted that there is variation in coal mix, GCV and landed price of primary fuel against the approved value in MYT Order dated February 19, 2018. Further, the Petitioner has added that the reason for variation is not attributable to Petitioner.

5.21 The Petitioner has submitted the source wise and unit-wise quantity of coal, weighted average cost of coal and weighed average GCV of Coal during FY 2020-21 duly certified by the auditor in support of his claim as annexed in **'*annexure-5*'** of main petition.

5.22 Furthermore, the Petitioner has craved the liberty to claim GCV on actual weighted average GCV less 85.00 kCal/kg in terms of variation in storage inside the plant. Hence, in light of the above-made submission and in terms of ***clause 16.4*** of the Tariff Regulation, 2020, petitioner has prayed to relax and allow the GCV as actual weighted average GCV less 85.00 kCal/kg in terms of variation in storage inside the plant.

Commission's Analysis

5.23 The Commission has taken note of submission made by the Petitioner and statutory audited detailing year wise quantity consumed, GCV of coal, and landed price of coal for FY 2020-21 of each Unit as annexed in ***annexure-5***.

5.24 The Commission has observed that there has been significant deviation in the blending ratio, GCV of primary fuel-mix and its price as compared to the approved values by the Commission. Accordingly, the Petitioner is directed to bring to the notice of the Commission any such changes and shortage in supply of coal on quarterly basis and should ensure the cost effectiveness of such purchase.

5.25 Further, the Commission has observed that the petitioner has considered the coal stacking loss of ***'85.00 kCal/kg'*** in terms of variation in storage inside the plant. However, there is no such provision in JSERC (Terms and Condition of Determination of Generation Tariff) Regulation, 2015. Accordingly, the Commission reject the prayer of Petitioner in this regard.

5.26 Considering the facts submitted by the Petitioner and after due diligence, the Commission approves the coal mix and weighted average GCV of coal for Unit-1 and Unit-2 of APNRL Generation station for FY 2020-21 as tabulated hereunder.

Table 9: Coal Mix and GCV for Unit-1 as approved by the Commission.

Particulars	Fuel Mix (%)			GCV (kCal/kg)		
	APR	Petition	Approved	APR	Petition	Approved
Linkage Coal	59.34%	-	-	3344.38	-	-
F-Auction Coal	25.70%	-	-	3628.88	-	-
MCL Auction	6.22%	-	-	2947.43	-	-

Particulars	Fuel Mix (%)			GCV (kCal/kg)		
	APR	Petition	Approved	APR	Petition	Approved
Middling	8.74%	-	-	3667.66	-	-
Shakti B-II		81.37%	81.37%		3374.72	3374.72
Other Coal		18.63%	18.63%		3515.32	3515.32
Wtg. Avg. GCV				**3449.25**	**3400.91**	**3400.91**

Table 10: Coal Mix and GCV for Unit-2 as approved by the Commission.

Particulars	Fuel Mix (%)			GCV (kCal/kg)		
	APR	Petition	Approved	APR	Petition	Approved
Linkage Coal	59.34%	-	-	3344.38		
F-Auction Coal	25.70%	-	-	3628.88		
MCL Auction	6.22%	-	-	2947.43		
Middling	8.74%	-	-	3667.66		
Shakti B-II		81.37%	81.37%		3374.72	3374.72
Other Coal		18.63%	18.63%		3515.32	3515.32
Wtg. Avg. GCV					**3400.91**	**3400.91**

Transit Loss

Petitioner's Submission

5.27 The Petitioner has claimed the actual Transit Loss as 0.8% for domestic coal and 0.2% for imported coal in accordance with the MYT Order dated February 19, 2018.

Commission's Analysis

5.28 The Commission has noted the CA certificate submitted by the Petitioner for the price and GCV of coal, where the landed price has been certified. The landed price of coal has been worked out based on the received quantity of coal at plant side, which means the actual transit loss has already been factored in. It is apparent from the landed price of coal given in ***annexure-5*** and price coal claimed after normative transit loss, the actual transit loss is lower than the normative transit loss. Hence, the Commission for determination of energy for true up of FY 2020-21 is approves the actual landed price of the coal.

Landed Cost of Coal

Petitioner's Submission

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

Commission's Analysis

5.30 The Commission is of opinion that, in accordance with ***clause 6.13*** of JSERC Generation Tariff Regulation 2015, the price of primary fuel cost is uncontrollable parameter. Hence, this Commission rely on the auditor report as annexed in the ***'annexure-5'*** of main petition. Accordingly, the Commission on prudent check approves the landed price of primary fuel for FY 2020-21 equal to auditor report. This approves landed price of primary fuel has been considered for energy charge rate later in this chapter.

5.31 Based on above excerpt the Landed price of primary fuel for FY 2020-21 is tabulated hereunder.

Table 11: Landed Price of Primary Fuel (Rs/MT) for Unit-1 as approved by the Commission.

Particulars	Rs./MT		
	APR	Petition	Approved
Linkage Coal	3102.62	-	-
F-Auction Coal	3579.55	-	-
MCL Auction	3028.39	-	-
Others	3407.67	3610.01	3581.13
Shakti B-II		3100.88	3076.08
Wtg. Avg. Landed Primary Fuel Cost		**3195.74**	**3170.18**

Table 12: Landed Price of Primary Fuel (Rs/Ton) for Unit- 2 as approved by the Commission.

Particulars	Rs./MT		
	APR	Petition	Approved
Linkage Coal	3133.67	-	-

Particulars	Rs./MT		
	APR	Petition	Approved
F-Auction Coal	3903.68	-	-
MCL Auction	2977.66	-	-
Others	3483.72	3610.007	3581.13
Shakti B-II		3100.885	3076.08
Wtg. Avg. Landed Primary Fuel Cost		**3195.74**	**3170.18**

Calorific value and Cost of Secondary Fuel

Petitioner's Submission

5.32 The Petitioner has submitted that the month wise landed price and GCV of secondary fuel truly certified by the auditor includes base price, transportation cost, etc.

Commission's Analysis

5.33 The Commission has analyzed the year wise quantity of secondary fuel consumption, GCV and landed price of secondary fuel duly certified by an auditor.

5.34 The Commission on scrutinizing the additional submission submitted by the Petitioner as annexed in ***annexure-4*** observes that the weighted average landed price of oil as Rs. 46805.92/KL for Unit-1 and as Rs 46643.15/KL for Unit-2, While the weighted average GCV of oil as 9350 kCal/KL for both Unit.

5.35 Accordingly, the Commission on aforesaid observation approves Calorific value and Landed price of Secondary Fuel for each Unit for FY 2020-21 as shown below:

Table 13: Calorific value & Landed Price of Secondary fuel as approved by the Commission.

Particulars	Calorific Value (kcal/L)			Landed Price (Rs./kL)		
	APR	Petition	Approved	APR	Petition	Approved
UNIT-1	9350	9350	9350	46806	46805.92	46805.92

Particulars	Calorific Value (kcal/L)			Landed Price (Rs./kL)		
	APR	Petition	Approved	APR	Petition	Approved
UNIT-2	9350	9350	9350	46643	46643.15	46643.15

Energy Charge Rate (ECR)

Petitioner's Submission

5.36 The Petitioner has submitted the Energy Charge Rate (ECR) as Rs. 2.570/kWh and Rs. 2.569/kWh for Unit-1 and Unit-2 respectively for FY 2020-21 before taking into account the discount of Shakti Coal.

5.37 The Petitioner has considered the operational parameters at normative level as specified in MYT Tariff Order date February 19, 2018 i.e. Specific Fuel Consumption at 1.00 ml/kWh, Auxiliary Power Consumption of 9.00% for each units and station Heat rate as 2387.00 kCal/kWh for both unit, for the purpose of computing the Energy Charge Rate for FY 2020-21.

5.38 Further, the Petitioner has considered the storage and handling loss of 85.00 kCal/kg in received GCV for Computation of ECR as per latest amendments vide dated November 3, 2023 of Tariff Regulation 2020. Furthermore, it has submitted that the Hon'ble Central Electricity Regulatory Commission ("CERC") in its Tariff regulation, 2019 mentioned the deduction up to 85 kCal from actual weighted average GCV in terms and handling loss.

Commission's Analysis

5.39 The Commission has outlined ***clause 8.17, to clause 8.19*** of JSERC Generation Tariff Regulation, 2015, for the approval of the Energy Charge Rate (ECR) as reproduced 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 the following formula:

(a) For coal based stations

ECR = {(GHR – SFC x CVSF) x LPPF/CVPF+SFCxLPSFi+LCxLPL} x 100/(100 – AUX)}

…………..

Where,

AUX - Normative auxiliary energy consumption in percentage

CVPF – Weighted Average Gross calorific value of coal as received, in KCal per kg, for coal based stations. In case of blending of fuel from different sources, the weighted average Gross calorific value of primary fuel shall be arrived in proportion to blending ratio.

CVSF - Calorific value of secondary fuel, in KCal per ml ECR - Energy charge rate, in Rupees per kWh sent out. GHR - Gross station heat rate, in KCal per kWh.

LC – Normative limestone consumption in kg per kWh LPPF - Weighted average landed price of primary fuel, in Rupees per kg, per litre or per standard cubic metre, as applicable, during the month.(In case ofblending 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%.

5.40 The Commission has noted that the Petitioner has included a storage and handling loss of 85.00 kCal/kg in the received GCV for the computation of the Energy Charge Rate (ECR). In this context, the Commission opines that the JSERC (Terms & Conditions of Determination of Tariff Regulation), 2015 does not provide for a storage and handling loss of 85.00 kCal/kg in the received GCV for the computation of ECR. Accordingly, the Commission rejects the prayer for the consideration of a storage and handling loss of 85.00 kCal/kg in the received GCV for the computation of ECR.

5.41 In accordance with ***clause 8.6*** of JSERC (Generation Tariff Regulation) 2015, the Commission approves the normative operational parameter such as normative auxiliary consumption, Normative station Heat Rate, Specific fuel oil Consumption earlier in this order.

5.42 In accordance with ***clause 8.21*** of JSERC (Terms and Condition of determination of Tariff) Regulation 2015, the Commission approves the weighted average GCV of primary and secondary fuel, and Landed Price primary and secondary fuel earlier in this Order.

5.43 Accordingly, the Commission compute the ECR for FY 2020-21 based on GCV of primary fuel, GCV of secondary fuel, landed price of primary and secondary fuel, normative operational parameter as approved earlier in this Order is tabulated hereunder.

Table 14: Energy Charge Rate (ECR) for Unit-1 as approved by the Commission.

Particulars	UoM	APR	Petition	Approved
Normative Auxiliary Consumption (AUX)	%	9.00	9.00	9.00
Normative SHR	kCal/kWh	2387.00	2387.00	2387.00
Normative SFC	mL/kWh	1.00	1.00	1.00
Calorific Value of Oil (CVSF)	kCal/ml	9.35	9.35	9.35
GCV of Primary Fuel (CVPF)	kCal/kg	3389.14	3315.91	3400.91
Landed Price of Primary Fuel (LPPF)	Rs./kg	3.25	3.20	3.17
Landed Price of Secondary Fuel (LPSFi)	Rs./ml	0.05	0.0468	0.0468
Energy Charge Rate (ECR)	**Rs/kWh**	**2.555**	**2.570**	**2.487**

Table 15: Energy Charge Rate (ECR) for Unit-2 as approved by the Commission.

Particulars	UoM	APR	Petition	Approved
Normative Auxiliary Consumption (AUX)	%	9.00	9.00	9.00
Normative SHR	kCal/kWh	2387.00	2387.00	2387.00
Normative SFC	mL/kWh	1.00	1.00	1.00
Calorific Value of Oil (CVSF)	kCal/ml	9.35	9.35	9.35
GCV of Primary Fuel (CVPF)	kCal/kg	3449.253	3315.91	3400.91
Landed Price of Primary Fuel (LPPF)	Rs./kg	3.42	3.20	3.17
Landed Price of Secondary Fuel (LPSFi)	Rs./ml	0.05	0.05	0.05
Energy Charge Rate (ECR)	**Rs/kWh**	**2.641**	**2.569**	**2.487**

Determination of Fixed Cost

Additional Capitalization

Petitioner's Submission

5.44 The Petitioner has submitted that an additional capitalization and de-capitalization of Rs. 10.23 Crore and Rs. 0.81 Crore respectively for each Unit of the generating station for FY 2020-21.

5.45 The details of additional capitalization and de-capitalization as claimed by the Petitioner for FY 2020-21 as annexed in ***annexure-1*** of main petition is tabulated hereunder:

Table 16: GFA, Additional Capitalization and De-capitalization for Unit-1 (Rs. Cr) as submitted by the Petitioner.

Particulars	As on 31st March 2020	Addition during the FY 2020-21	Deduction during the FY 2020-21	As on 31st March 2021
Land under Full title	39.48	0.00	0.00	39.48
Land held under lease	11.20	0.00	0.00	11.20
Plant and Machinery	1416.64	9.85	0.80	1425.69
Building & Civil Engineering works	212.33	0.39	0.01	212.71
Transformers and others	0.03	0.00	0.00	0.03
Others	7.66	0.00	0.00	7.66
Any Other assets not covered above	0.29	0.00	0.00	0.29
Total	**1687.63**	**10.23**	**0.81**	**1697.06**

Table 17: GFA, Additional Capitalization and De-capitalization for Unit-2 (Rs. Cr) as submitted by the Petitioner.

Particulars	As on 31st March 2020	Addition during the FY 2020-21	Deduction during the FY 2020-21	As on 31st March 2021
Land under Full title	39.48	0.00	0.00	39.48
Land held under lease	11.20	0.00	0.00	11.20
Plant and Machinery	1432.02	9.85	0.80	1441.07
Building & Civil Engineering works	210.94	0.39	0.01	211.32
Transformers and others	0.03	0.00	0.00	0.03
Others	7.66	0.00	0.00	7.66
Any Other assets not covered above	0.29	0.00	0.00	0.29
Total	**1701.62**	**10.23**	**0.81**	**1711.05**

Table 18: Additional Capitalization and De-capitalization for Unit-1 & Unit-2 (Rs. Cr) as submitted by the Petitioner.

Sl. No	Particulars	Additional Capitalization	Deletion
1	Coal Handling System	0.28	0.00
2	Steam Generator Island	0.04	0.00
3	Turbine Generator Island	18.53	0.00
4	Workshop Laboratory	0.14	0.00
5	Switchyard Equipment	0.49	0.00
6	Crain, Hoist & Other Miscellaneous asset	1.00	1.61
Total		**20.47**	**1.61**

Commission's Analysis

5.46 The Commission has outlined ***clause 7.5*** to ***clause 7.6*** of JSERC Generation Tariff Regulation, 2015 for approval of any additional capitalization for a generating station as reproduced below:

Additional Capitalization

"7.5 The capital expenditure incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:

Undischarged liabilities;

Works deferred for execution;

Procurement of initial capital spares within the original scope of work, subject to the provisions under clause 7.3,7.4 of these Regulations;

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

Change in law.

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

'7.6 The capital expenditure incurred on the following counts after the cut-off date may, in its discretion, be admitted by the

Commission, subject to prudence check:

Liabilities to meet award of arbitration or for compliance of the order or decree of a court;

Change in law;

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

Any additional works/ services which have become necessary for efficient and successful operation of the generating station, but not included in the original project cost;

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

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

5.47 The Commission has scrutinized the submission supplied by the Petitioner regarding the Capitalization of assets, and its justification for FY 2020-21. Accordingly, the Commission on prudent check approves the Capitalization as per audited book of account as annexed in ***annexure-2*** of main petition as shown below:

Table 19: Additional Capitalization for Unit-1 & Unit-2 (Rs. Cr) as approved by the Commission.

Sr. No.	Detail of Assets	Value (Rs. Cr.)	Justification
1	Coal Handling System	0.28	The Petitioner has submitted that, since the COD of the plant PCRD (Power cord rotating drum) and CCRD (Control cable rotating drum) systems were pending to install. The said systems are important for safety purposes and the smooth operation of stacker reclaimer. Accordingly, the

Sr. No.	Detail of Assets	Value (Rs. Cr.)	Justification
			PCRD and CCRD systems have been purchased. Therefore, the amount of Rs. 0.22 Cr has been incurred towards the same. Further, the 3.5 mm coal crusher was not purchased earlier and it is required for pulverising the coal during the quality inspection of coal. Accordingly, the Petitioner had incurred the cost of Rs 0.04 Cr for purchasing the secondary crusher for crushing the coal. Apart from the above, the foundation for a weigh bridge of capacity 100 MT had been constructed, as 100 MT weighbridge had been installed. Hence, the Petitioner has submitted the cost of Rs. 0.28 Cr towards the weighbridge to ensure the efficient and successful operation of the generating station. The Commission may allow the expenditure under Regulation 7.6 of JSERC Tariff Regulations 2015.
2	Steam generator Island	0.04	The pulveriser has been under use for the last 10 years after the commissioning of the plant. Given the age and continuous usage of pulveriser, it is required to purchase the same as spare to avoid major breakdown/emergency. Accordingly, the Petitioner had incurred the expenditure of Rs. 0.04 Crore against the same.

Sr. No.	Detail of Assets	Value (Rs. Cr.)	Justification
			The Commission may allow the expenditure under Regulation 7.6 of JSERC Tariff Regulations 2015.
3	Turbine Generator Island	18.53	The Petitioner has submitted that the present generator, which was running since the COD of the plant was not performing as per the standards and led to several breakdowns. It is pertinent to mention here that in case breakdown of the plant, the JBVNL has to either purchase the required quantum either from generating station costlier to APNRL or from power exchanges. In both the scenarios there might be a chance that JBVNL has to purchase the costlier power then APNRL. Hence, it is important for APNRL to run the plant with minimal breakdowns. Accordingly, the new generator was procured for efficient and successful operation of the generating station. The Commission may allow the expenditure under Regulation 7.6 of JSERC Tariff Regulations 2015.
4	Workshop Laboratory	0.14	The Petitioner has submitted that to ensure the consistency in quality of coal being fed to the boiler, the testing equipment's had been purchased by the petitioner and expenditure towards the same.

Sr. No.	Detail of Assets	Value (Rs. Cr.)	Justification
			The Commission may allow the expenditure under Regulation 7.6 (iv) of JSERC Tariff Regulations 2015.
5	Switchyard Equipment's	0.49	The Petitioner has submitted that the SAS (Statistical Analysis System) system is used for the maintenance of switch yard equipment and real-time power flow monitoring. The earlier SAS system, which was under use since the COD of the plant was not functioning as per the requirement due to the lower version. Accordingly, the Petitioner had procured the upgraded version of the SAS system to ensure the efficient operation of the switch yard version. In addition to that, a thermal imager had been procured for monitoring the switchyard equipment, as it was not available earlier. The Commission may allow the expenditure under Regulation 7.6 (iv) of JSERC Tariff Regulations 2015.
6	Crain, Hoist & other miscellaneous asset	0.08	The Petitioner has submitted that the electrical hoist had been purchased for lifting the heavy equipment in the crusher house. The said asset had been procured because it was not available in the plant. Therefore, for efficient operation, the expenditure towards the said asset had been incurred.

Sr. No.	Detail of Assets	Value (Rs. Cr.)	Justification
			The Commission may allow the expenditure under Regulation 7.6 (iv) of JSERC Tariff Regulations 2015.
Total (Rs. Crore)		**20.47**	

5.48 The Commission has observed that all the assets capitalized during the FY 2020-21 were not part of the original project. But, these assets may be necessary for efficient and successful operation of generating station and related switchyard. Accordingly, the Commission on his own prudent, approves the aforesaid capitalization in accordance with ***clause 7.6 (iv)*** of JSERC Tariff Regulations 2015.

5.49 The Commission has examined the audited books of accounts for FY 2020-21 as annexed in ***annexure-2*** and as per ***Note-4 (Property, Plant and Equipment)*** of audited accounts, substantiates the fact that Rs. 20.47 Crore (cumulative for both the Units) of assets is capitalized during the FY 2020-21. Based on the submission and justification made by the Petitioner and after a prudent check, the Commission approves the additional capitalization of Rs. 20.47 Crore (cumulative for both the Units) for FY 2020-21 under ***clause 7.6*** of JSERC Tariff Regulations 2015. Furthermore, the additional capitalization as per the audited accounts of 2020-21 is Rs. 20.47 Crores, leading to closing value of GFA as on 31st March, 2021 as Rs. 3,408.11 Crores.

Table 20: Capitalization and Decapitalization (Rs. Crore) as approved by the Commission.

Particulars	Unit-1			Unit-2		
	APR	Petition	Approved	APR	Petition	Approved
Capitalization	-	10.23	10.23	-	10.23	10.23
Decapitalization	-	0.81	0.81	-	0.81	0.81

Depreciation

Petitioner's Submission

5.50 The Petitioner has submitted that depreciation is calculated based on

'Single Line Method' and at the depreciation rates provided in Appendix-I of the JSERC Generation Tariff Regulations 2015.

5.51 Further, the Petitioner has submitted that the depreciation so allowed shall be up to maximum of 90% of the capital cost of the project and the balance is to be considered as the salvage value of the asset.

Table 21: Depreciation (Rs. Crore) as submitted by the Petitioner.

Particulars	Depreciation Rate	Unit-1	Unit-2
Land under Full title	0.00%	0.00	0.00
Land held under lease	3.34%	0.37	0.37
Plant and Machinery	5.28%	75.04	75.85
Building & Civil Engineering works	3.34%	7.10	7.05
Other Assets	5.28%	0.42	0.42
Net Depreciation		**82.93**	**83.70**

Commission's Analysis

5.52 The Commission has outlined ***clause 7.28*** to ***clause 7.33*** of JSERC Generation Tariff Regulation, 2015 for the approval of Depreciation for a generating station as 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."

5.53 In accordance with clause 7.31 JSERC Generation Tariff Regulation 2015 as mentioned above the Commission has considered the asset class depreciation rate for FY 2020-21.

5.54 Further, the Commission has computed the depreciation for both the Unit in accordance with the above mentioned regulations. The table below shows the depreciation approves by the Commission against that submitted by the Petitioner.

Table 22: Depreciation (Rs. Crore) as approved by the Commission.

Particulars	Asset class Depreciation Rate	Unit-1		Unit-2	
		Petition	Approved	Petition	Approved
Land held under lease	3.34%	0.37	0.37	0.37	0.37
Plant and machinery	5.28%	75.04	75.04	75.85	75.85
Building & civil works	3.34%	7.10	7.10	7.05	7.05
Other Assets	5.28%	0.42	0.42	0.42	0.42
Net Depreciation	**Rs.cr.**	**82.93**	**82.93**	**83.70**	**83.70**

Operation & Maintenance Expenses

Petitioner's Submission

5.55 The Petitioner has claimed the normative operational & Maintenance

(O&M) Expenses as approved in the MYT Order dated February 19, 2018.

5.56 Further, the Petitioner has outlined ***clause 6.14*** of the Tariff JSERC Regulations, 2015 provides that any surplus and deficit on account of O&M expenses shall be to the account of the generating company and shall not be trued up in ARR.

5.57 In view of the reasons mentioned above, the Petitioner has prayed to allow the O&M expenses as mentioned below.

Table 23: O&M Expenses (Rs. Crore) as submitted by the Petitioner.

Particulars	UoM	UNIT-1		UNIT-2	
		MYT	Petition	MYT	Petition
O&M Expenses	**Rs. Cr.**	**87.28**	**87.28**	**87.28**	**87.28**

Commission's Analysis

5.58 The Commission has outlined ***clause 15.35*** and ***clause 15.40*** of JSERC Generation Tariff Regulation, 2015 for the approval of Operation & Maintenance Charges for a generating station as reproduced below:

"7.40 Operation and Maintenance (O&M) expenses shall comprise of the following:

(a) Salaries, wages, pension contribution and other employee costs;

(b) Administrative and General costs;

(c) Repairs and maintenance expenses; and

(d) Other miscellaneous expenses statutory levies and taxes (except corporate incometax).

7.41 Existing Thermal Generating Stations:

(a) The Applicant shall submit details of O&M expenses as required by the Commission. The O&M expenses excluding terminal liabilities for the Base Year shall be determined based on accounting statements for the base year, estimates of the Generating Company for relevant years and other factors considered relevant.

(b) The O&M expenses excluding terminal liabilities permissible towards determination of tariff for each year of the Control Period shall be determined after a prudency check by the Commission based on

submissions of the Generating Company, previous years' actual expenses and any other factor considered relevant.

(c) Terminal Liabilities will be approved as per actual submitted by the Generating Company or be established through actuarial studies.

(d) Increase in O&M charges on account of war, insurgency or changes in laws, or like eventualities where the Commission is of the opinion that an increase in O&M charges is justified, may be considered by the Commission for a specified period."

5.59 In accordance with ***clause 6.14*** of JSERC (Terms & Condition for determination of Generation Tariff) Regulation 2015, the Commission approves the normative operation & maintenance charge as approved in MYT Order dated February 19, 2018 as tabulated hereunder:

Table 24: Net O&M Expenses (Rs. Crore) as approved by the Commission.

Particulars	Unit-1	Unit-2
	Approved	Approved
O&M Expenses	**87.28**	**87.28**

Water Charges, Capital Spare

Petitioner Submission

5.60 The Petitioner has entered into an MoU with Govt. of Jharkhand for drawl of water to an extent of 35.60 MCM (4064 m3 per hour) in a phased manner from Subarnarekha river, flowing at a distance of eight km downstream of water intake point from APNRL Project site, vide agreement dated August 29, 2008. The said agreement stipulates that a pump house has to be installed for drawl of required water from the river Subarnarekha withdrawn directly from river and not from any reservoir. Subsequently, Water Department of Govt. of Jharkhand vide its Notification No. 2/PMC/Jalapurti-175/2007 dated April 01, 2011 has revised various categories for water off-take and APNRL was asked to pay @ Rs. 26.40 per thousand gallons. The Petitioner aggrieved by the rate, filed a Writ Petition before High Court of Jharkhand on February 07, 2012 with regard to demand raised by Subarnarekha Dam Division towards withdrawal of water at higher than the agreed rates.

5.61 The Hon'ble High Court of Jharkhand was pleased to pass a stay Order in the above mentioned Writ Petition, restricting the payment of water charges at pre-revised rate of Rs. 4.50 per thousand gallons.

5.62 The Petitioner further mention that clause 18 of the Water agreement, which contains provisions for reduction of the Water quantity, the Petitioner has requested WRD, Government of Jharkhand for lowering of the permitted water quantity from 35.60 MCM to 17.60 MCM i.e. almost 50% of the original allocated quantity, which is yet to be considered by the WRD, State of Jharkhand. As a result, the Petitioner has filed another petition before the Hon'ble High Court at Ranchi for resolution of dispute regarding the billed water quantum in the bill, which is pending.

5.63 Therefore, the Petitioner is paying at Rs. 4.50 per thousand gallon of water withdrawn from river, amounting to Rs. 11.94 Crore for FY 2020-21, as reflected in audited books of accounts. The same is apportioned in proportion to JBVNL share (25%) i.e., Rs. 5.97 Crore for each Unit).

Table 25: Water charges and capital expenses (Rs. Crore) as submitted by petitioner.

Particulars	Unit-1 & 2	
	Approved as per Order dated 19.02.18	True-up 2020-21
Additional Water Charges combined for both Unit 1 and 2 (Attributable to contracted capacity of 122.85 MW) as claimed in the instant petition	3.48	11.94

5.64 The Petitioner has submitted that it has incurred a total expenditure of Rs. 2.18 Crores in FY 2020-21 on account of Capital Spares, the proportionate expenditure towards the contracted capacity supplied to JBVNL, which works out at Rs. 0.54 Crores which was 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 capitalization or consumption of store and spares and renovation and modernization. Hence, it is prayed to allow Capital Spares annexed as ***Annexure-7.***

Table 26: Capital expenses (Rs. Crore) as submitted by petitioner.

Particulars	Capital Spare
Capital Spares for Unit-1 and Unit-2 (Attributable to contracted capacity of 122.85 MW)	1.20

Commission Analysis

5.65 The Commission has outlined ***clause 7.46*** JSERC Generation Tariff Regulation 2015 for the approval of Water Charges, capital spare for a generating station as reproduced below:

> *"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."*

5.66 The Commission has gone through the submissions of the Petitioner and observed that the matter related to Water Tax is sub-judice before the Hon'ble Jharkhand High Court. Thus, the Commission in the instant petition approves the water charges as per ***'note 30'*** of audited books of account for FY 2020-21 in proportion of allocated to JBVNL without considering the old liability. However, the Commission has reserved the liberty to the Petitioner that if any liability arises due to the judgement of the Hon'ble Jharkhand High Court Order the Same shall be Claimed.

5.67 In regard to Capital spares, the Commission is of the view that in compliance to ***2nd proviso of clause 7.46*** of the JSERC Generation Tariff Regulations, the Petitioner is required to 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 JSERC Generation Tariff Regulations or special allowance as per ***clause 7.10 and 7.11*** of the JSERC Generation Tariff Regulations or claimed as a part of additional capitalization or consumption of stores and spares and renovation and modernization. In compliance, the Petitioner has submitted the details of critical spares consumed in FY 2020-21 duly certified by auditor along with the purpose of consumption in ***annexure-7*** of main petition.

5.68 The Commission has examined the details of critical spares consumed in FY 2020-21 duly certified by auditor along with the purpose of consumption. The Commission approves Rs. 1.20 Crore (each units) based on the ratio of the power allocation to JBVNL. Thus, based on the submission and justification made by the Petitioner and after a prudent check, the Commission approves the critical spares of Rs. 0.60 Crore for each unit for FY 2020-21.

5.69 Based on the above excerpt, the overall capital spare and water charges are well within the ***clause 7.46*** of JSERC Generation Tariff Regulation 2015. Accordingly, the Commission approves the capital spare and water charge as shown below:

Table 27: Water charges and capital expenses (Rs. Crore) as approved by the Commission.

Particulars	Unit-1	Unit-2
	Approved	Approved
Water Charge for Unit-1 and Unit-2 (Attributable to contracted capacity of 122.85 MW)	2.45	2.45
Capital Spares for Unit-1 and Unit-2 (Attributable to contracted capacity of 122.85 MW)	0.60	0.60

Ash Disposal Expenses

Petitioner's Submission

5.70 The Petitioner submits that ash disposal and transportation is the statutory requirement of the power plant. The Petitioner has been disposing and transporting the Ash from its power station in accordance with the Government of India, Ministry of Environment, Forest & Climate Change (MOEFCC) notification dated 25.1.2016. The relevant extract is reproduced for immediate reference as:

> *"2 (b) (10) The cost of Transportation of ash for road construction projects or for manufacturing of ash based products or use of soil conditioner in agriculture activity within a radius of hundred kilometers from a coal or lignite based thermal power plant shall be borne by such coal or lignite based thermal power plant and the cost of transportation beyond the radius of hundred kilometers and up to three hundred kilometers shall be shared equally between the user and the coal or lignite based thermal power plant."*

5.71 Further, the Petitioner has submitted that while complying with the above-mentioned notification, it has taken measures to ensure 100% ash utilization and has been transporting ash from its power station to various cement and brick manufacturing units and has incurred the expenditure towards the same. A copy of the said notification is attached hereto and marked as ***Annexure-8***.

5.72 Furthermore, the Petitioner has submitted that in order to fulfil 100% ash utilization it had faced several difficulties, some of which are depicted below:

- Low quantum of local industries to absorb the ash produced in the station
- The Petitioner is in frequent touch with ancillary units to ensure their participation in the offtake of ash generated in the station.

5.73 The Petitioner has emphasis that despite being in difficult situation, it has made all the necessary efforts to offload the ash generated from the plant in an economical manner. The overall expenses towards ash disposal includes ash handling and ash transportation-related expenses. The duly certified details of the quantity of ash generated and the transportation cost along with the revenue generated from the sale of ash are stated as under and marked as ***Annexure-9***.

Table 28: Ash Disposal expenses (Rs. Crore) as approved by the Commission.

Particulars	FY 2020-21
Quantity of Ash transported (MT) (Distance < 100 km)	317765
Quantity of Ash transported (MT) (Distance 100 km-300 km)	0
Total Quantity of Ash transported (MT)	317765
Transportation Cost (in Rs. Cr) (Distance < 100 km)	1.86
Transportation Cost (in Rs. Cr) (Distance 100 km-300 km)	0
Transportation Cost (in Rs. Cr)	1.86
Other handling associated Cost (in Rs. Cr)	0
Total Transportation Cost (Rs. Crore)	**1.86**

Commission's Analysis

5.74 On scrutinizing and analyzing the data, material, information on record, the Commission approves the Ash Disposal Expenses as per ***note 30*** of audited accounts for FY 2020-21 as tabulated hereunder:

Table 29: Ash Disposal expenses (Rs. Crore) as approved by the Commission.

Particulars	Unit-1	Unit-2
	Approved	Approved
Ash Disposal Expenses for Unit-1 and Unit-2 (Attributable to contracted capacity of 122.85 MW)	**0.23**	**0.23**

Interest on Loan

Petitioner's Submission

5.75 The Petitioner has submitted that the Hon'ble Commission vide Order dated May 22, 2023 for True-up of FY 2016-17 had not considered the change in debt equity ratio upon SDR. Accordingly, the Petitioner has filed a review Petition before the Commission to reconsidered its decision. The matter regarding to the SDR is currently sub-judice before this Commission.

5.76 The Petitioner has computed the loan amount considering the debt equity ratio of 70: 30, considering the increase in equity upon SDR. Accordingly, the Petitioner has considered the closing value of loan in FY 2019-20 as Rs 592.77 crore, and Rs 623.54 crore for unit-1 and unit-2 respectively as opening value for FY 2020-21. Further, the gross additional capitalization (without deletion) have been funded in the ratio of 70:30

5.77 The Petitioner has considered the repayment during the year equivalent to the normative depreciation for the year being in line with the ***clause 7.21*** of JSERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015.

5.78 The Petitioner has submitted that the actual loan portfolio is in the line with the JSERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015., and also considered 70% of the actual capitalization as Normative Loan for FY 2020-21 with interest rate of 10.36% for Unit-1 and Unit-2.

5.79 Further, the Petitioner has submitted the weighted average rate of interest for Unit-1 and Unit-2 duly certified by the auditor as annexed in ***annexure-3*** of main petition.

Table 30: Weighted average rate of interest as submitted by the Petitioner.

Particulars	Rate of Interest	
	From 1st April to 30th September 2020	From 1st October to 31st March 2021
Edelweiss Asset Reconstruction Co. Ltd.	11.78%	9.00%
Bank of Baroda	10.65%	9.00%
Life Insurance Corporation	10.65%	9.00%
Weighted Average Rate of Interest	**10.36%**	

5.80 Based on the above submission the Petitioner has computed the interest on loan for FY 2020-21 as tabulated hereunder.

Table 31: Interest on Loan (Rs. Crore) as submitted by the Petitioner.

Particulars	UoM	Unit-1		Unit-2	
		APR	Petition	APR	Petition
Opening Loan	Rs. Cr.	592.59	592.80	670.03	623.54
Deemed Loan Addition	Rs. Cr.	0	7.16	0	7.16
Deletion During year	Rs. Cr.	0	0.57	0	0.56
Deemed Loan Repayment	Rs. Cr.	82.65	82.93	83.42	83.70
Closing Loan	Rs. Cr.	509.94	516.47	586.61	546.44
Average Loan Balance	Rs. Cr.	551.26	554.64	628.32	584.99
Interest Rate	%	12.31%	10.36%	12.31%	10.36%
Interest on Loan	**Rs. Cr.**	**67.86**	**57.46**	**77.35**	**60.60**

Commission's Analysis

5.81 The Commission has outlined ***clause 7.13*** to ***clause 4.24*** JSERC Generation Tariff Regulation 2015, for the approval Debt: Equity ratio for a generating station as reproduced 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: -

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.*

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.

Any expenditure incurred or projected to be incurred on or after 1stApril 2016 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernization expenditure for life extension shall be serviced in the manner specified in clause 7.14 of this Regulation."

………

"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.

5.82 The Commission has considered the opening Loan for FY 2020-21 equal to the closing loan for FY 2019-20 as per the review order dated July 23, 2024.

5.83 On scrutinizing and analyzing the data, material, information (as annexes in ***annexure-3*** of main petition) on record, the Commission approves the weighted average interest rate as 10.36% as per ***clause 7.23*** of JSERC Generation Tariff Regulation 2015 for both Units.

5.84 In accordance with ***clause 7.21*** of JSERC GTR 2015 as mentioned above, the Commission approves the deemed loan repayment equal to approved depreciation (Additional Capitalization) for FY 2020-21.

Table 32: Interest on Loan (Rs. Crore) as approved by the Commission.

Particulars	Unit-1			Unit-2		
	APR	Petition	Approved	APR	Petition	Approved
Opening Loan	592.59	592.80	592.65	670.03	623.54	622.68
Deemed Loan Addition	0	7.16	7.16	0	7.16	7.16
Deletion during FY	0	0.57	0.57	0	0.56	0.57
Deemed Loan Repayment	82.65	82.93	82.93	83.42	83.70	83.70
Closing Loan	509.94	516.47	516.32	586.61	546.44	545.58
Average Loan Balance	551.26	554.64	554.48	628.32	584.99	584.13
Interest Rate	12.31%	10.36%	10.36%	12.31%	10.36%	10.36%
Interest on Loan	**67.86**	**57.46**	**57.44**	**77.35**	**60.60**	**60.52**

Return on Equity

Petitioner's Submission

5.85 The Petitioner has submitted that this Commission in order dated May 22, 2023 for True-up of FY 2016-17 has not considered the changed in debt equity ratio upon SDR. Accordingly, the petitioner has filed a review petition before this Commission to reconsidered its decision.

5.86 The Petitioner has computed the equity amount considering the debt equity ratio of 70: 30, considering the increase in equity upon SDR. Accordingly, the Petitioner has considered the closing value of loan in FY 2019-20 as Rs 507.11 crore, and Rs 511.31 crore for unit-1 and unit-2 respectively as opening value for FY 2020-21. Further, the gross additional capitalization (without deletion) have been funded in the ratio of 70:30.

5.87 The Petitioner has mention ***clause 7.15 to 7.18*** of JSERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015 to prescribe the provisions for computing the normative return on equity for determination of tariff.

5.88 Further, the Petitioner while calculating return on equity has considered post-tax return as 15.50% in accordance with Generation Tariff Regulations 2015 and approach adopted by the Commission in earlier Orders.

5.89 Accordingly, the Return on Equity (Pre-Tax) claimed by the Petitioner for Unit-1 and Unit-2 for FY 2020-21 is summarized in the table below:

Table 33: Return on Equity (Rs. Crore) as submitted by the Petitioner.

Particulars	Unit-1		Unit-2	
	APR	Petition	APR	Petition
Opening Equity	506.27	507.14	461.20	511.30
Addition the year	0	3.07	0	3.07
Deletion during the Year	0	0.24	0	0.24
Closing Equity	506.27	509.97	461.20	514.13
Average Equity	506.27	508.56	461.20	512.72
Rate of Return on Equity	15.50%	15.50%	15.50%	15.50%
Return on Equity	**78.47**	**78.82**	**71.49**	**79.47**

Commission's Analysis

5.90 The Commission has outlined ***clause 7.13 to clause 7.14*** JSERC Generation Tariff Regulation 2015 for approval Return on Equity for a generating station as reproduced below:

> *"7.13 In case of the generating station declared under commercial operation prior to 1.4.2016, debt-equity ratio allowed by the Commission for determination of Tariff for the period ending 31.3.2016 shall be considered for determination of tariff.*
>
> *During the control period, debt-equity ratio allowed by the Commission for determination of Tariff for the period ending 31st March 2017 shall be considered for determination of tariff.*

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

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

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

Explanation: -

i. *The premium, if any, raised by the Generating Company, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, provided such premium amount and internal resources are actually utilized for meeting the capital expenditure of the generating station.*

ii. *Provided, further that any consumer contribution, deposit work and grant obtained for the execution of the project shall not be considered as part of the capital structure for the purpose of computation of normative debt: equity.*

iii. *Any expenditure incurred or projected to be incurred on or after 1stApril 2016 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernization expenditure for life extension shall be serviced in the manner specified in clause 7.14 of this Regulation."*

7.16 Return on equity shall be computed on pre-tax basis at the base rate of 15.50% for thermal generating stations, and run of the river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run of river generating station with pondage, to be grossed up as per clause 7.17 of these Regulations.

> *Provided that return on equity with respect to the actual base rate applicable to the Generating Company, in line with the performance of the respective generating station for the respective year during the Control period shall be trued up separately for each year of the Control period along with the tariff petition filed for the next Control period.*

5.91 The Commission has considered the opening equity for FY 2020-21 equal to the closing loan for FY 2019-20 as per the review order dated June 23, 2024.

5.92 In accordance with the ***clause 7.16*** of JSERC Generation Tariff Regulation 2015, the Commission approves the Rate of Return on Equity as 15.50%.

5.93 Based on above excerpt, the Commission has computed the return on equity for FY 2020-21 as tabulated hereunder:

Table 34: Return on Equity (Rs. Crore) for Unit-1 as approved by the Commission.

Particulars	APR	Petition	Approved
Opening Equity	506.27	507.14	506.29
Addition During the Year	0	3.07	3.07
Deletion during the Year	0	0.24	0.24
Closing Equity	506.27	509.97	509.12
Average Equity	506.27	508.56	507.70
Rate of Return on Equity	15.50%	15.50%	15.50%
Return on Equity	**78.47**	**78.83**	**78.69**

Table 35: Return on Equity (Rs. Crore) for Unit-2 as approved by the Commission

Particulars	APR	Petition	Approved
Opening Equity	461.20	511.30	510.49
Addition During the Year	0	3.07	3.07
Deletion during the Year	0	0.24	0.24
Closing Equity	461.20	514.13	513.31
Average Equity	461.20	512.72	511.90
Rate of Return on Equity	15.50%	15.50%	15.50%
Return on Equity	**71.49**	**79.47**	**79.34**

Interest on Working Capital (IOWC)

Petitioner's Submission

5.94 The Petitioner has outlined ***'clause 6.14'*** of JSERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015 provides for Truing-up of Interest on Working Capital on account of variation in actual capital expenditure incurred vis-à-vis approved capital expenditure. The relevant clause has been reproduced below:

> *"6.14(c) at the end of the control period –*
>
> *i. the Commission shall review actual capital investment vis-à-vis approved capital investment.*
>
> *ii. depreciation and financing cost, which includes cost of debt including working capital (interest), cost of equity (return) shall be trued up on the basis of actual/ audited information and prudence check by the Commission"*

5.95 The Petitioner has worked out the normative working capital requirement for Unit-1 and Unit-2 for FY 2020-21 and has considered the rate of interest on working capital equal to the Bank Rate specified by State Bank as on April 01, 2020 plus 350 basis points. Accordingly, the Petitioner has considered 12.80% for Unit-1 and Unit-2 as rate of interest on working capital. The detailed computation of interest on working capital for Unit-1 and Unit-2 for FY 2020-21.

5.96 In accordance with ***clause 7.34*** of the JSERC Generation Tariff Regulations, 2015, the Petitioner has computed the Interest on Working Capital (IoWC) for FY 2020-21 as tabulated hereunder:

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

Particulars	Unit-1	Unit-2
Cost of Coal for 30 Days for non-pit head plant	34.97	34.97
Cost of Coal for 30 Days for non-pit head plant	34.97	34.97
Cost of Secondary Fuel Oil for 2 months	1.57	1.56
O&M expenses for 1 month	7.27	7.27

Particulars	Unit-1	Unit-2
Receivables equivalent to 60 days	132.48	133.27
Maintenance Spares @20% of O&M	17.46	17.46
Total Working Capital	**228.71**	**229.49**
Rate of Interest	11.25%	11.25%
Interest on Working Capital	**25.73**	**25.82**

Commission's Analysis

5.97 The Commission has outlined ***clause 7.34 to clause 7.39*** JSERC Generation Tariff Regulation 2015 for approval interest on working capital for a generating station as reproduced below:

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

(a) Cost of coal or lignite and limestone towards stock, if applicable, for 15 days for pit-head generating stations and 30 days for non-pit-head generating stations for generation corresponding to the normative annual plant availability factor or the maximum coal/lignite stock storage capacity whichever is lower;

(b) Cost of coal or lignite and limestone for 30 days for generation corresponding to normative annual plant availability factor;

(c) Cost of secondary fuel oil for two months for generation corresponding to the Normative Annual Plant Availability Factor;

(c) Maintenance spares @ 20% of operation and maintenance expenses;

(d) Operation and Maintenance expenses for 1 month; and

(e) Receivables equivalent to two months of capacity charges and energy charges for sale of electricity calculated on the Normative Annual Plant Availability Factor.

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

"7.38 Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 01.04.2016 or as on 1st April of the year during the tariff period 2016-17 to 2020-21 in which the generating station or a unit thereof, is declared under commercial operation, whichever is later.

Provided that the rate of interest on working capital shall be trued up on the basis of actual bank rate as on 1st April of the respective year at the time of true up for that year.

7.39 The interest on working capital shall be payable on normative basis notwithstanding that the generating company has not taken working capital loan from any outside agency or has exceeded the working capital loan based on the normative figures".

5.98 Taking into account the above provision of regulation, the Interest on Working capital has been calculated at an interest rate of 11.25% (***Bank Rate plus 350 basis points***) as specified in the ***clause 7.38*** JSERC Generation Tariff Regulation, 2015.

5.99 Based on the above provision of JSERC (Generation Tariff Regulation), 2015, the Commission compute the interest on working capital for FY 2020-21 as tabulated hereunder:

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

Particulars	Unit-1			Unit-2		
	APR	Petition	Approved	APR	Petition	Approved
Coal Cost for 2 Months	52.18	69.93	50.77	65.58	69.93	61.68
Cost of Secondary Fuel Oil for 2 Months	1.07	1.57	1.07	1.30	1.57	1.30
O&M Expenses for 1 month	7.27	7.27	7.27	7.27	7.27	7.27
Maintenance Spares (20% of O&M)	17.456	17.46	17.46	17.46	17.46	17.46
Receivables for 2 months	115.76	132.48	106.74	130.60	133.27	119.07
Total Working Capital	193.75	228.71	183.31	222.20	229.50	206.77
Rate of Interest	11.65%	11.25%	11.25%	11.65%	11.25%	11.25%

Particulars	Unit-1			Unit-2		
	APR	Petition	Approved	APR	Petition	Approved
Interest on Working Capital	**22.57**	**25.73**	**20.62**	**25.89**	**25.82**	**23.26**

Sharing Gain/Loss

Sharing of net saving on account of interest rate

Petitioner's Submission

5.100 The Petitioner has submitted that this Commission had approved interest rate of 12.31%. But, the petitioner in instant petition has claimed interest rate of 10.36% for FY 2020-21, which is lower than the approve value for FY 2020-21.

5.101 Accordingly, in terms clause 7.25 of JSERC Generation Tariff Regulation, the Petitioner has claimed the sharing of saving of Rs 3.60 crore, and Rs 3.80 crore for unit-1 and unit-2 respectively.

Table 38: Sharing of saving on account of lower interest rate (Rs. Cr.) as submitted by Petitioner.

Particulars	Units	Unit-1	Unit-2
Interest on Debt (Claiming in the instant Petition)	**Rs. Crore**	**57.46**	**60.60**
Interest on Debt (%) (As per order dated 22.06.2023)	%	12.31%	12.31%
Interest on Debt	Rs. Crore	68.27	72.01
Savings	Rs. Crore	10.81	11.41
Sharing of savings (in ratio of 2:1)	**Rs. Crore**	**3.60**	**3.80**

Commission's Analysis

5.102 The Commission has outlined **clause 7.25** of JSERC Generation Tariff Regulation 2015 for approval sharing of gain/loss on account of interest rate for a generating station as reproduced below:

> *"7.25 The Generating Company shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event there is costs associated with such refinancing, such cost shall be pass through to the Beneficiaries and the net savings*

shall be shared between the Beneficiaries and the Generating Company, in the ratio of 2:1."

5.103 On scrutinizing and analyzing the material, information, and actual figure, the Commission in accordance with aforesaid provision, approves the sharing of saving on account of lower interest rate as computed hereunder.

Table 39: Sharing of saving on account of lower interest rate (Rs. Cr.) as approved by the Commission.

Particulars	Units	Unit-1	Unit-2
		Approved	Approved
Interest on Debt (Claiming in the instant Petition)	**Rs. Crore**	**57.46**	**60.60**
Interest on Debt (%) (As per order dated 22.06.2023)	%	12.31%	12.31%
Interest on Debt	Rs. Crore	68.27	72.01
Savings	Rs. Crore	10.81	11.41
Sharing of savings (in ratio of 2:1)	**Rs. Crore**	**3.60**	**3.80**

Shakti Scheme Discount

Petitioner's Submission

5.104 Based on the allocation of primary fuel under Shakti B-II Linkage Coal Scheme and actual coal consumption, the Petitioner has calculated the energy generated from Shakti coal. The Petitioner has calculated the discount rate at Rs. 0.03/kWh for the coal procured under Shakti B-II Linkage Coal Scheme.

Table 40: Shakti Scheme Discount (Rs. Crore) as submitted by Petitioner.

Particulars	UoM	Unit-1		Unit-2	
		APR	Petition	APR	Petition
Discount Amount	**Rs. Cr.**	-	**0.73**	-	**0.73**

Commission's Analysis

5.105 On scrutinizing and analyzing the material, information, and actual figure, FSA, PPA approvals and details submitted by the Petitioner as annexes in ***annexure-10*** and on prudent check the Commission approves the Shakti Scheme Discount for FY 2020-21 is given below.

Table 41: Shakti Scheme Discount (Rs. Crore) as approved by the Commission.

Particulars	UoM	Unit-1			Unit-2		
		APR	Petition	Approved	APR	Petition	Approved
Shakti scheme Discount Amount attributed JBVNL (25%)	**Rs. Cr.**	**-**	**0.73**	**0.73**	**-**	**0.73**	**0.73**

Summary of Annual Revenue Requirement

Annual Fixed Cost

Commission's Analysis

5.106 On consideration of the submission and details furnished by the Petitioner, the Commission in accordance with ***clause 8.2*** of JSERC Generation Tariff Regulation, 2015 approves the Annual Fixed Cost (AFC) for FY 2021-22 which as summarized below.

Table 42: Annual Fixed Cost (Rs. Crore) as approved by the Commission.

Particulars	Unit-1			Unit-2		
	APR	Petition	Approved	APR	Petition	Approved
O&M excl. water, capital spare, ash	87.28	87.28	87.28	87.28	87.28	87.28
Depreciation	82.65	82.93	82.93	0.00	83.70	83.70
Interest on Loan	67.86	57.46	57.44	77.35	60.60	60.52
Return on Equity	78.47	78.83	78.69	71.49	79.47	79.34
Interest on Working Capital	22.57	25.73	20.62	25.89	25.82	23.26
Add: Saving on account of lower interest rate	0.00	3.61	3.60	0.00	3.80	3.80
Less: Non-Tariff Income	-	-	-	-	-	-
Annual Fixed Cost	**338.84**	**335.83**	**330.58**	**262.00**	**340.67**	**337.90**

Tariff for Unit-1 and Unit-2

Petitioner Submission

5.107 The Petitioner has submitted that in accordance with provisions of Power Purchase Agreement (PPA) executed with DISCOM, out of the total Contracted Capacity of 122.85 MW, APNRL will supply 63.882 MW capacity at total tariff (i.e., 13% of the total net Capacity at total Tariff (both fixed and Variable Charge) and the balance 58.96 MW capacity, i.e., 12% of the Net capacity at variable cost i.e., Energy Charge as approved by the Commission. Accordingly, the tariff for supply of regulated capacity for JUVNL/JBVNL is summarized below:

Table 43: Tariff for 12% of total net capacity as submitted by the petitioner. (Variable Charge)

Particulars	Units	Unit-1		Unit-2	
		APR	Petition	APR	Petition
Variable Cost/ Base Energy Charge Rate	Rs/kWh	**2.555**	**2.570**	**2.641**	**2.569**

Table 44: Tariff for 13% of total net capacity as submitted by the petitioner. (Fixed Charge)

Particulars	Units	Unit-1		Unit-2	
		APR	Petition	APR	Petition
Gross Capacity	MW	270.00	270.00	270.00	270.00
Auxiliary Consumption	%	0.09	0.09	0.09	0.09
Net Capacity	MW	245.70	245.70	245.70	245.70
12% of Net Capacity for Supply to JUVNL/JBVNL at Energy Charge	MW	29.48	29.48	29.48	29.48
Remaining Capacity from which Fixed Charges are to be recovered	MW	216.22	216.22	216.22	216.22
Annual Fixed Charge	Rs Cr.	338.84	335.83	262.00	340.67
Annual Fixed harges/MW	Rs Cr./ MW	1.57	1.55	1.21	1.58
13% of Net Capacity for supply to JUVNL at full tariff	MW	31.94	31.94	31.94	31.94
AFC for 13% of Net Capacity	**MW**	**50.06**	**49.61**	**38.70**	**50.33**

Commission's Analysis

5.108 The tariff for 12% of the total net capacity shall be the variable cost (subject to fuel price adjustment in accordance with Generation Tariff Regulations 2015) approves by the Commission, whereas the tariff for next 13% of total net capacity shall be total tariff i.e., variable cost (subject to fuel price adjustment in accordance with Generation Tariff Regulations 2015) and fixed charges as approves by the Commission as tabulated below.

Table 45: Tariff for 12% of total net capacity as approved by the Commission. (Variable Charge)

Particulars	Units	Unit-1		Unit-2	
		Petition	Approved	Petition	Approved
Variable Cost/ Base Energy Charge Rate	**Rs/kWh**	**2.570**	**2.487**	**2.569**	**2.487**

Table 46: Tariff for 13% of total net capacity for Unit-1 as approved by the Commission. (Fixed Charge).

Particulars	Derivation	Units	Unit-1		
			APR	Petition	Approved
Gross Capacity	A	MW	270.00	270.00	270.00
Auxiliary Consumption	B	%	0.09	0.09	0.09
Net Capacity	C=A x (1-B)	MW	245.70	245.70	245.70
12% of Net Capacity for Supply to JUVNL/JBVNL at Energy Charge	D=C x 12%	MW	29.48	29.48	29.48
Remaining Capacity from which Fixed Charges are to be recovered	E=C-D	MW	216.22	216.22	216.22
Annual Fixed Charge	F	Rs. Cr.	338.84	335.83	330.58
Annual Fixed Charges/MW	G=F/E	Rs. Cr./MW	1.57	1.55	1.53
13% of Net Capacity for supply to JUVNL at full tariff	H=C x 13%	MW	31.94	31.94	31.94
AFC for 13% of Net Capacity	**I=G x H**	**Rs. Cr.**	**50.06**	**49.61**	**48.84**

Table 47: Tariff for 13% of total net capacity for Unit-2 as approved by the Commission. (Fixed Charge)

Particulars	Derivation	Units	Unit-2		
			APR	Petition	Approved
Gross Capacity	A	MW	270.00	270.00	270.00
Auxiliary Consumption	B	%	0.09	0.09	0.09
Net Capacity	C=A x (1-B)	MW	245.70	245.70	245.70
12% of Net Capacity for Supply to JUVNL/JBVNL at Energy Charge	D=C x 12%	MW	29.48	29.48	29.48
Remaining Capacity from which Fixed Charges are to be recovered	E=C-D	MW	216.22	216.22	216.22
Annual Fixed Charge	F	Rs Cr.	262.00	340.67	337.90
Annual Fixed Charges/MW	G=F/E	Rs Cr./MW	1.21	1.58	1.56
13% of Net Capacity for supply to JUVNL at full tariff	H=C x 13%	MW	31.94	31.94	31.94
AFC for 13% of Net Capacity	**I=G x H**	**Rs. Cr.**	**38.70**	**50.33**	**49.92**

Revenue from Sale of Power

Petitioner's Submission

5.109 The Petitioner has submitted the revenue from sale of power comprise of capacity charge, energy charge and fuel cost adjustment bill for FY 2020-21. Accordingly, the petitioner has claimed revenue from sale of power as Rs. 165.41 Crore and Rs. 166.15 Crore for Unit-1 and Unit-2 respectively.

Table 48: Revenue (Rs. Crore) as submitted by the Petitioner.

Particulars	Unit-1	Unit-2
	Petition	Petition
Annual Fixed Cost	51.35	52.07
Energy Charge	116.22	116.35
FPA	-2.15	-2.27
Total Revenue billed to JUVNL/JBVNL	**166.41**	**166.15**

Commission's Analysis

5.110 The Commission has examined monthly bill detail submitted in tariff petition. Accordingly, the Commission approves the revenue from sale of power for FY 2020-21 is given below.

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

Particulars	Unit-1		Unit-2	
	Petition	Approved	Petition	Approved
Annual Fixed Cost	51.35	51.35	52.07	52.07
Energy Charge	116.22	116.22	116.35	116.35
FPA	-2.15	-2.15	-2.27	-2.27
Total Revenue billed to JUVNL/JBVNL	**166.41**	**166.41**	**166.15**	**166.15**

Gap/Surplus for FY 2020-21

Petitioner Submission

5.111 The Petitioner has worked out the impact of true up considering the Trued-up annual fixed charges, trued-up per unit variable charges for the year and the actual availability against the contracted capacity to JBVNL for the year, based on the availability

Table 50: Impact of True-up as submitted by the Petitioner for FY 2020-21.

Particulars	Units	FY 2020-21	
		Unit-1	Unit-2
Net Energy Supplied to JUVNL/JBVNL	MU	452.74	452.74
Rate of Energy Charge	Rs/kWh	2.57	2.57
Energy Charges	Rs Cr	116.33	116.33
AFC Entitlement on True Up	Rs Cr	49.11	49.82
Incentives	Rs Cr	0.00	0.00
Energy Charge Entitlement upon True up	Rs Cr	116.33	116.33
Water Charges	Rs Cr	5.97	5.97
Capital Spares	Rs Cr	0.60	0.60
Additional Ash disposal charges	Rs Cr	0.23	0.23
Security Expense	Rs Cr	0.00	0.00
Total Entitlement	Rs Cr	172.24	172.95
Revenue Billed			
AFC	Rs Cr	51.35	52.07
FPA	Rs Cr	(2.15)	(2.27)
EC	Rs Cr	116.22	116.35
Incentive	Rs Cr	0.00	0.00
Imported Coal Bill	Rs. Cr	0.00	0.00

Particulars	Units	FY 2020-21	
		Unit-1	Unit-2
Total Revenue Billed to JUVNL/JBVNL	Rs Cr	165.41	166.15
Gap/(Surplus)	Rs Cr	6.83	6.80
Less: Shakti Coal discount	Rs Cr	1.03	1.03
Gap/(Surplus) including discount	**Rs Cr**	**5.80**	**5.76**
Carrying Cost	**Rs Cr**	**1.53**	**1.52**
Total Gap/(Surplus)	**Rs Cr**	**7.32**	**7.28**

Commission's Analysis

5.112 The Commission has outlined ***clause 6.16 to 6.18*** of Generation Tariff Regulation 2015 for the approval Gap/Surplus for a generating station as reproduced below:

> *6.16 Where after the truing up, the tariff recovered exceeds the tariff approved by the Commission under these regulations, the generating company shall refund to the beneficiaries as the case may be, the excess amount so recovered shall be as specified in the Clause 6.18 of this regulation.*
>
> *6.17 Where after the truing up, the tariff recovered is less than the tariff approved by the Commission under these regulations; the generating company licensee shall recover from the beneficiaries the under-recovered amount shall be as specified in the Clause 6.18 of this regulation.*
>
> *6.18 The amount under-recovered or over-recovered, along with simple interest at the rate equal to the bank rate as on 1st April of the respective year, shall be recovered or refunded by the generating company in six equal monthly instalments starting within three months from the date of the tariff order issued by the Commission.*

5.113 The Commission has examined the detail submitted by the Petitioner along with audited certificate. Accordingly, this Commission approves the Gap/(Surplus) for FY 2020-21 for Unit-1 and Unit-2 as tabulated hereunder.

Table 51: Revenue Gap/(Surplus) Rs Crore as approved by the Commission.

Particulars	MoU	Unit-1		Unit-2	
		Petition	Approved	Petition	Approved
Net Energy Supplied to JUVNL/JBVNL	MU	452.74	452.74	452.74	452.74
Rate of Energy Charge	Rs/kWh	2.57	2.49	2.57	2.49
AFC Entitlement on True Up	Rs. Cr.	49.11	48.34	49.82	49.41
Incentive	Rs. Cr.				
Energy Charge Entitlement upon True up	Rs. Cr.	116.33	112.60	116.33	112.59
Water Charges	Rs. Cr.	5.97	2.45	5.97	2.45
Capital Spares	Rs. Cr.	0.60	0.60	0.60	0.60
Ash Disposal Expenses	Rs. Cr.	0.23	0.23	0.23	0.23
Security Expenses	Rs. Cr.	0.00	0.00	0.00	0.00
Less: sharing of gain on operational parameter	Rs. Cr.				
Total Entitlement	Rs. Cr.	**172.25**	**164.22**	**172.95**	**165.28**
Revenue Billed					
Annual Fixed Cost	Rs. Cr.	51.35	51.35	52.07	52.07
Energy Charge	Rs. Cr.	116.22	116.22	116.35	116.35
FPA	Rs. Cr.	-2.15	-2.15	-2.27	-2.27
Total Revenue Billed to JUVNL/JBVNL	**Rs. Cr.**	**165.41**	**165.41**	**166.15**	**166.15**
Less: Shakti Discount	**Rs. Cr.**	**1.03**	**1.03**	**1.03**	**1.03**
Net Revenue Gap/(Surplus) without Carrying Cost	**Rs. Cr.**	**5.80**	**(2.23)**	**5.76**	**(1.91)**

5.114 The Commission is of opinion that the Petitioner has failed to submit the petition for FY 2020-21 on timeline as stipulated in the clause A17 of the JSERC (Terms & Condition of determination of Tariff) Regulation 2015. Therefore, the Commission is of opinion that inefficiency on the part of Petitioner should not be passed on the beneficiaries. Accordingly, the Commission own his prudent approves any carrying cost for FY 2020-21 as tabulated hereunder:

Table 52: Revenue Gap/(Surplus) for Unit-1 including Carrying Cost for FY 2020-21.

Particulars	**FY 2020-21**	**FY 2021-22**	**FY 2022-23**	**FY 2023-24**
Opening Balance	-	(2.23)	(2.23)	(2.23)
Addition during year	(2.23)	0	0.00	0
closing balance	(2.23)	(2.23)	(2.23)	(2.23)
Average balance	(2.23)	(2.23)	(2.23)	(2.23)
carrying cost rate	11.25%	10.50%	10.50%	12.00%

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Carrying cost of respective years	(0.25)	(0.23)	(0.23)	(0.27)

Table 53: Revenue Gap/(Surplus) for Unit-2 including Carrying Cost for FY 2020-21.

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Opening Balance	-	(1.91)	(1.91)	(1.91)
Addition during year	(1.91)	0	0.00	0
closing balance	(1.91)	(1.91)	(1.91)	(1.91)
Average balance	(1.91)	(1.91)	(1.91)	(1.91)
carrying cost rate	11.25%	10.50%	10.50%	12.00%
Carrying cost of respective years	**(0.21)**	**(0.20)**	**(0.20)**	**(0.23)**

Table 54: Cumulative revenue Gap/(Surplus) including Carrying Cost for FY 2020-21.

Particulars	Unit-1		Unit-2	
	Petition	Approved	Petition	Approved
Opening Gap/Surplus for FY 2020-21		0		0
Gap/(Surplus) addition during the FY 2020-21		(2.23)		(1.91)
Closing Gap/ (Surplus) for FY 2020-21		(2.23)		(1.91)
Carrying Cost of FY 2020-21		(0.25)		(0.21)
Carrying Cost of FY 2021-22		(0.23)		(0.20)
Carrying Cost of FY 2022-23		(0.23)		(0.20)
Carrying Cost of FY 2023-24		(0.27)		(0.23)
Net Gap/(Surplus) incl. Carrying Cost	**7.33**	**(3.22)**	**7.28**	**(2.75)**

5.115 The Commission would like to clarify the above Gap/(Surplus) is computed based on the information submitted before the Commission. In case there is any other adjustment between the Petitioner and its Beneficiaries, the same need to be taken into account while final adjustment which shall be carried out mutually.

5.116 The Commission has directed the Petitioner to adjust the surplus in the subsequent bills as per ***clause 6.17 & clause 6.18*** of JSERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2015.

Chapter 6: Turing-up for FY 2021-22 and FY 2022-23

6.1 In the instant Petition, the Petitioner has now sought for the True-up for FY 2021-22, FY 2023-24 based on the actual taking into consideration the provision of JSERC Generation Tariff Regulation, 2020 and its amendments thereof.

a) Annual Audit Account for FY 2021-22 & FY 2022-23;
b) JSERC Generation Tariff (1st Amendment), Regulation, 2023;
c) MYT Order for FY 2021-22 to FY 2025-26 vide Order dated December 14, 2023;
d) Methodology adopted by the Commission in its earlier Tariff Orders.

6.2 The component-wise description of the Petitioner's submission and the Commission's analysis thereof is provided hereunder.

Operational Performance

Plant Availability Factor (PAF)

Petitioner's Submission

6.3 The Petitioner has submitted the actual Plant Availability Factor for FY 2021-22 and FY 2022-23 as 91.07% & 89.36% respectively for both Unit.

Commission's Analysis

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

6.5 On scrutinizing and analyzing the data, material, and additional submission, information on record, the Commission approves the actual plant availability for FY 2021-22, & FY 2022-23 for Unit-1 and Unit-2 respectively, for computation of Sharing of Gain/Loss on account of variation in operational parameter as given below:

Table 55: Plant Availability Factor as approved by the Commission for FY 2021-22.

Particulars	UoM	MYT	Petition	Approved
Unit-1				
NAPAF	%	85.00	85.00	85.00
Actual Plant Availability	%	-	91.07	91.07
Unit-2				
NAPAF	%	85.00	85.00	85.00
Actual Plant Availability	%	-	91.07	91.07

Table 56: Plant Availability Factor as approved by the Commission for FY 2022-23.

Particulars	UoM	MYT	Petition	Approved
Unit-1				
NAPAF	%	85.00	85.00	85.00
Actual Plant Availability	%	-	89.36	89.36
Unit-2				
NAPAF	%	85.00	85.00	85.00
Actual Plant Availability	%	-	89.36	89.36

Auxiliary Consumption

Petitioner's Submission

6.6 The Petitioner has submitted that the actual Auxiliary Power Consumption of 8.61% for FY 2021-22 and 8.48% for FY 2022-23 as compared to Normative Auxiliary Power Consumption of 9.00% for each Unit as specified in JSERC Generation Tariff Regulation 2020 and its amendments thereof. Accordingly, the Petitioner has been considered the Normative auxiliary consumption as 9.00% for both Unit-1 and Unit-2 for computing the ECR.

Commission's Analysis

6.7 In accordance with ***clause 16.1*** of JSERC Generation Tariff (1st Amendment), Regulation 2023, the Commission approves the normative auxiliary consumption of 9.00%.

6.8 On scrutinizing and analyzing the additional submission as annexed in

annexure-1, the Commission approves the actual auxiliary consumption for FY 2021-22, & FY 2022-23 for Unit-1 and Unit-2 respectively for computation of sharing of gain/loss on account of variation in operational parameter as given below:

Table 57: Auxiliary Consumptions as approved by the Commission for FY 2021-22.

Particulars	UoM	MYT	Petition	Approved
UNIT-1				
Normative Auxiliary Consumption	%	9.00	9.00	9.00
Actual Auxiliary Consumption	%	-	8.61	8.61
UNIT-2				
Normative Auxiliary Consumption	%	9.00	9.00	9.00
Actual Auxiliary Consumption	%	-	8.61	8.61

Table 58: Auxiliary Consumptions as approved by the Commission for FY 2022-23.

Particulars	UoM	MYT	Petition	Approved
UNIT-1				
Normative Auxiliary Consumption	%	9.00	9.00	9.00
Actual Auxiliary Consumption	%	-	8.48	8.48
UNIT-2				
Normative Auxiliary Consumption	%	9.00	9.00	9.00
Actual Auxiliary Consumption	%	-	8.48	8.48

Plant Load Factor and Generation

Petitioner's Submission

6.9 The Petitioner reported a Plant Load Factor (PLF) of 91.01% for FY 2021-22 and 75.27% for FY 2022-23 for both units, which exceeds the normative PLF of 85.00% for FY 2021-22 as approved by the Commission in the MYT Order dated December 12, 2023.

Commission's Analysis

6.10 On scrutinizing and analyzing the additional submission as annexed as ***annexure-A***, ***annexure-2,*** the Commission approves the Gross Generation, Net Generation, and Plant Load Factor for FY 2021-22 & FY

2022-23 is given below:

Table 59: Plant Load Factor and Generation as approved by the Commission for FY 2021-22.

Particulars	UoM	MYT	Petition	Approved
UNIT-1				
Gross Generation	MU	2010.42	1647.57	1647.57
Net Generation	MU	1829.5	1499.3	1499.29
Actual PLF	%	-	91.01	91.01
UNIT-2				
Gross Generation	MU	2010.42	2079.81	2079.81
Net Generation	MU	1829.48	1892.6	1892.62
Actual PLF	%	-	91.01	91.01

Table 60: Plant Load Factor and Generation as approved by the Commission for FY 2022-23.

Particulars	UoM	MYT	Petition	Approved
UNIT-1				
Gross Generation	MU	2010.42	1876.69	1876.69
Net Generation	MU	1829.482	1707.785	1707.785
Actual PLF	%	-	75.27	75.27
UNIT-2				
Gross Generation	MU	2010.42	1626.29	1626.29
Net Generation	MU	1829.48	1479.919	1479.919
Actual PLF	%	-	75.27	75.27

Gross Station Heat Rate (GHR)

Petitioner's Submission

6.11 The Petitioner has submitted the Normative Gross Station Heat Rate (GHR) as 2387 kCal/kWh for both units as specified in JSERC Generation Tariff Regulation (1st Amendment) Regulation 2023.

6.12 Further, the Petitioner has submitted the actual Gross Station Heat Rate (GSHR) as 2349.96 kCal/kWh, and 2528.70 kCal/kWh for FY 2021-22 and FY 2022-23 respectively.

Commission's Analysis

6.13 In accordance with ***clause 16.1*** of JSERC Generation Tariff (1st Amendment), Regulation 2023, the Commission approves the Normative GHR as 2387.00 kCal/kWh for both units.

6.14 On scrutinizing and analyzing the data, information, material and additional submission, the Commission approves the actual station Heat Rate for FY 2021-22 and FY 2022-23 for Unit-1 and Unit-2 respectively as given below:

Table 61: Gross Station Heat Rate (GHR) as approved by the Commission for FY 2021-22.

Particulars	UoM	MYT	Petition	Approved
UNIT-1				
Normative Station Heat Rate	kCal/kWh	2387.00	2387.00	2387.00
Actual Station Heat Rate	kCal/kWh		2349.96	2349.96
UNIT-2				
Normative Station Heat Rate	kCal/kWh	2387.00	2387.00	2387.00
Actual Station Heat Rate	kCal/kWh		2348.53	2348.53

Table 62: Gross Station Heat Rate (GHR) as approved by the Commission for FY 2022-23.

Particulars	UoM	MYT	Petition	Approved
UNIT-1				
Normative Station Heat Rate	kCal/kWh	2387.00	2387.00	2387.00
Actual Station Heat Rate	kCal/kWh		2528.70	2528.70
UNIT-2				
Normative Station Heat Rate	kCal/kWh	2387.00	2387.00	2387.00
Actual Station Heat Rate	kCal/kWh		2528.74	2528.74

Specific Fuel Oil Consumption

Petitioner's Submission

6.15 The Petitioner has submitted the specific fuel oil consumption as 0.50 mL/kWh in line with JSERC Generation Tariff Regulations, 2020 and amendments thereof for both the Units for FY 2021-22, & FY 2022-23.

Commission's Analysis

6.16 In accordance with ***clause 16.1*** of JSERC Generation Tariff Regulation (1st amendment) 2023, the Commission approves the normative specific fuel oil consumption as 0.50 ml/kWh for both the Units for FY 2021-22 and FY 2022-23.

Table 63: Specific Fuel Oil Consumption as approved by the Commission for FY 2021-22 & FY 2022-23.

Particulars	UoM	MYT	Petition	Approved
UNIT-1				
Specific Fuel Oil Consumption	ml/kWh	0.50	0.50	0.50
UNIT-2				
Specific Fuel Oil Consumption	ml/kWh	0.50	0.50	0.50

Fuel Cost Parameter

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

Petitioner's Submission

6.17 The Petitioner has submitted that there is variation in coal mix, GCV and landed price of primary fuel against the approved value in MYT Order dated December 14, 2023. Further, the Petitioner has added that the reason for variation is not attributable to Petitioner.

6.18 The Petitioner has submitted the source wise and unit-wise quantity of coal, weighted average cost of coal and weighed average GCV of Coal during FY 2021-22 & FY 2022-23 duly certified by the auditor in support of his claim as annexed in ***'annexure-14'*** of main petition.

6.19 Furthermore, the Petitioner has craved the liberty to claim GCV on actual weighted average GCV less 85.00 kCal/kg in terms of variation in storage inside the plant. Hence, in light of the above-made submission and in terms of ***clause 16.4*** of the Tariff Regulation, 2020, petitioner has prayed to relax and allow the GCV as actual weighted average GCV less 85.00 kCal/kg in terms of variation in storage inside the plant.

Table 64: Coal Mix and GCV for FY 2021-22 as submitted by the Petitioner.

Particulars	Fuel Mix (%)		GCV (kCal/kg)	
	Unit-1	Unit-2	Unit-1	Unit-2
Shakti B-II	63.06%	63.06%	3748.52	3748.519
Other Coal	36.94%	36.94%	3102.27	3102.274
Wtg. Avg. GCV.			**3509.80**	**3509.80**

Table 65: Coal Mix and GCV for FY 2022-23 as submitted by the Petitioner.

Particulars	Fuel Mix (%)		GCV (kCal/kg)	
	Unit-1	Unit-2	Unit-1	Unit-2
Imported Coal/ MCL Auction	1.66%	1.66%	5045.83	5045.83
Shakti B-II	76.62%	76.62%	3938.58	3938.58
Other Coal	21.73%	21.73%	2921.46	2921.46
Wtg. Avg. GCV			**3735.94**	**3735.94**

Commission's Analysis

6.20 The Commission has taken note of submission made by the Petitioner and statutory audited detailing year wise quantity consumed, GCV of coal, and landed price of coal for FY 2021-22 & FY 2022-23 of each Unit as annexed in ***annexure-14.***

6.21 The Commission has observed that there has been significant deviation in the blending ratio, GCV of primary fuel-mix and its price as compared to the approved values by the Commission.

6.22 Considering the facts submitted by the Petitioner and after due diligence, the Commission approves the coal mix and weighted average GCV of coal for Unit-1 and Unit-2 of APNRL Generation station for FY 2021-22, FY 2022-23 as tabulated hereunder.

Table 66: Coal Mix and GCV for Unit1 as approved by the Commission as per MYT Order dated 14.12.2023.

Particulars	Fuel Mix (%)		GCV (kCal/kg)	
	Unit-1	Unit-2	Unit-1	Unit-2
Linkage Coal	70.01	62.35	3,377.38	3,368.31
F Auction	25.70	33.37	3,363.54	3,317.06
MCL Auction	0.09	0.06	2,414.51	2,315.48
Other (Market Coal)	4.20	4.22	3,891.07	3,904.34
Wtg. Avg. GCV			**3394.51**	**3373.15**

Table 67: Coal Mix and GCV for Unit-2 as approved by the Commission as per MYT Order dated 14.12.2023.

Particulars	Fuel Mix (%)		GCV (kCal/kg)	
	Unit-1	Unit-2	Unit-1	Unit-2
Linkage Coal	70.01	62.35	3,377.38	3,368.31
F Auction	25.70	33.37	3,363.54	3,317.06
MCL Auction	0.09	0.06	2,414.51	2,315.48
Other (Market Coal)	4.20	4.22	3,891.07	3,904.34
Wtg. Avg. GCV			**3394.51**	**3373.15**

Table 68: Coal Mix and GCV for Unit-1 as approved by the Commission for FY 2021-22.

Particulars	Fuel Mix (%)		GCV (kCal/kg)	
	Unit-1	Unit-2	Unit-1	Unit-2
Shakti B-II	63.06%	63.06%	3748.52	3748.519
Other Coal	36.94%	36.94%	3102.27	3102.274
Wtg. Avg. GCV.			**3509.80**	**3509.80**

Table 69: Coal Mix and GCV for Unit-2 as approved by the Commission for FY 2022-23.

Particulars	Fuel Mix (%)		GCV (kCal/kg)	
	Unit-1	Unit-2	Unit-1	Unit-2
Imported Coal/ MCL Auction	1.66%	1.66%	5045.83	5045.83
Shakti B-II	76.62%	76.62%	3938.58	3938.58
Other Coal	21.73%	21.73%	2921.46	2921.46
Wtg. Avg. GCV			**3735.94**	**3735.94**

Transit Loss

Petitioner's Submission

6.23 The Petitioner has projected the transit loss on normative basis for each source of coal for FY 2021-22 & FY 2022-23 in accordance with ***Clause 17.11*** of the Generation Tariff Regulations 2020.

Commission's Analysis

6.24 The Commission has noted the CA certificate as submitted by the Petitioner for the price and GCV of coal, where the landed price has been certified. The landed price of coal has been worked out based on the received quantity of coal at plant side, which means the actual transit loss has already been factored in. It is apparent from the landed price of coal given in ***annexure-14*** and price coal claimed after normative transit loss, the actual transit loss is lower than the normative transit loss. Hence, the Commission for determination of energy for true up of FY 2021-22, FY 2022-23 approves the actual landed price of the coal.

Landed Cost of Coal

Petitioner's Submission

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

Commission's Analysis

6.26 The Commission is of opinion that, in accordance with ***clause 13.14*** of JSERC Generation Tariff Regulation 2020, the price of primary fuel cost is uncontrollable parameter. Hence, this Commission rely on the auditor report as annexed in the ***'annexure-14'*** of main petition. Accordingly, the Commission own prudent, approves the landed price of primary fuel for FY 2021-22 and FY 2022-23 equal to auditor report. This approves landed price of primary fuel has been considered for energy charge rate later in this chapter.

6.27 Based on above excerpt the Landed price of primary fuel for FY 2021-22 and FY 2022-23 is tabulated hereunder

Table 70: Landed Price of Primary Fuel as approved by the Commission for FY 2021-22.

Particulars	Rs./MT			
	Unit-1		Unit-2	
	MYT	Approved	MYT	Approved
Linkage Coal	3,273.18	-	3,319.21	-
F Auction	3,158.10	-	3,167.66	-

Particulars	Rs./MT			
	Unit-1		Unit-2	
	MYT	Approved	MYT	Approved
MCL Auction	3,232.74	-	3,280.63	-
Other (Market Coal)	2,964.89	-	2,965.13	-
Shakti B-II		3528.94		3528.94
Other Coal		3169.63		3169.63
Total	**3,230.62**	**3396.21**	**3,253.68**	**3396.21**

Table 71: Landed Price of Primary Fuel as approved by the Commission for FY 2022-23.

Particulars	Rs./MT			
	Unit-1		Unit-2	
	MYT	Approved	MYT	Approved
Linkage Coal	3,273.18	-	3,319.21	-
F Auction	3,158.10	-	3,167.66	-
MCL Auction	3,232.74	-	3,280.63	-
Other (Market Coal)	2,964.89	-	2,965.13	-
Imported Coal/ MCL Auction		15473.62		15473.62
Shakti B-II		3632.10		3632.10
Other Coal		4946.46		4946.46
Wtg. Avg. Landed Price	**3,230.62**	**4113.73**	**3,253.68**	**4113.73**

Calorific value and Cost of Secondary Fuel

Petitioner's Submission

6.28 The Petitioner has submitted the weighted average calorific value and landed price of secondary fuel (i.e., LDO) for FY 2021-22 as 9350 kCal/L and Rs. 54825.91 /kL for Unit-1 and 9350 kCal/L and Rs. 52745.66/kL for Unit-2 respectively.

6.29 The Petitioner has submitted the weighted average calorific value and landed price of secondary fuel (i.e., LDO) for FY 2022-23 as 9392.25 kCal/L and Rs. 84179.03 /kL for Unit-1 and 9370.24 kCal/L and Rs. 77902.22 /kL for Unit-2 respectively.

Commission's Analysis

6.30 On scrutinizing and analyzing the data, information and submission made by the Petitioner and on prudent check, the Commission has observed that the landed price of secondary fuel had increased drastically as compared to the previous years. Accordingly, the Commission directs the Petitioner to ensure price discipline while purchasing the secondary fuel and also provide the auditor's certificate at the time of true up.

6.31 Considering the fact that the landed price of secondary fuel is volatile and depend on the market supply and demand. Accordingly, the Commission in the instant order, approves the calorific value and landed price of Secondary Fuel as annexed in ***annexure-4*** of additional submission is given below.

Table 72: Calorific value & Landed Price of Secondary fuel as approved by the Commission for FY 2021-22.

Particulars	Calorific Value (kcal/L)			Landed Price (Rs./kL)		
	MYT	Petition	Approved	MYT	Petition	Approved
UNIT-1	9350.00	9350.00	9350.00	44672.00	54825.91	54825.91
UNIT-2	9350.00	9350.00	9350.00	45943.72	52745.66	52745.66

Table 73: Calorific value & Landed Price of Secondary fuel as approved by the Commission for FY 2022-23.

Particulars	Calorific Value (kcal/L)			Landed Price (Rs./kL)		
	MYT	Petition	Approved	MYT	Petition	Approved
UNIT-1	9350.00	9392.25	9392.25	44672.00	84179.03	84179.03
UNIT-2	9350.00	9370.24	9370.24	45943.72	77902.22	77902.22

Energy Charge Rate (ECR)

Petitioner's Submission

6.32 The Petitioner has submitted the Energy Charge Rate (ECR) as Rs. 2.647/kWh and Rs. 2.616/kWh for Unit-1 and Unit-2 respectively for FY 2021-22 before taking into account the discount of Shakti Coal.

6.33 Further, the Petitioner has submitted the Energy Charge Rate (ECR) as

Rs. 3.019/kWh and Rs. 3.015/kWh for Unit-1 and Unit-2 respectively for FY 2022-23 before taking into account the discount of Shakti Coal.

6.34 The Petitioner has considered the operational parameters at normative level as specified in MYT Tariff Order date December 14, 2023 i.e. Specific Fuel Consumption at 0.50 ml/kWh, Auxiliary Power Consumption of 9.00% for each units and station Heat rate as 2387.00 kCal/kWh for both unit, for the purpose of computing the Energy Charge Rate for FY 2021-22 to FY 2022-23.

6.35 Further, the Petitioner has considered the storage and handling loss of 85.00 kCal/kg in received GCV for Computation of ECR as per latest amendments vide dated November 3, 2023 of Tariff Regulation 2020. Furthermore, it has submitted that the Hon'ble Central Electricity Regulatory Commission ("CERC") in its Tariff regulation, 2019 mentioned the deduction up to ***85 kCal*** from actual weighted average GCV in terms and handling loss.

Commission's Analysis

6.36 The Commission has outlined ***clause 17.7, clause 17.8*** of JSERC Generation Tariff Regulation, 2020 and ***clause 7.1*** of JSERC Generation Tariff (1st Amendment) Regulation, 2023 for the approval of Energy Charge Rate (ECR) as reproduced below:

"17.7 Total Energy charge payable to the Generating Company for a month shall be = Energy charge rate (in Rs. /kWh) x Scheduled energy (ex-bus) for the month (in kWh.)

17.8 Energy charge rate (ECR) in Rupees per kWh on ex-power plant basis shall be determined to three decimal places in accordance with the following formulae:

a) For coal based stations

ECR = {(SHR – SFC x CVSF) x LPPF/CVPF + SFC x LPSFi + LC x LPL} x 1/ (1 – AUX)}

Where,

AUX - Normative auxiliary energy consumption in percentage;

CVPF- (a) Weighted Average Gross calorific value of coal as received, in kCal per kg for coal based stations;

(b) Weighted Average Gross calorific value of primary fuel as received in kCal per kg, per litre or per standard cubic meter, as applicable for lignite, gas and liquid fuel based stations;

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

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

ECR - Energy charge rate, in Rupees per kWh.

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

LC = Normative limestone consumption in kg per kWh

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

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

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

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

<u>Generation Tariff (1st Amendment) Regulation 2023</u>

*7.1 Provided that the cost of primary fuel shall be based on the landed cost incurred (taking into account normative transit and handling losses) by the generating station and gross calorific value of the fuel on **‘as received basis’ less 85 kCal/Kg** on account of variation during storage at generating station as per actual weighted average for three months preceding the first month for which tariff is to be determined:*

6.37 In accordance with ***clause 10.1*** of JSERC (Generation Tariff Regulation) 1st Amendment 2023, the Commission approves the normative operational parameter such as normative auxiliary consumption, Normative station Heat Rate, Specific fuel oil Consumption.

6.38 Further, in accordance with ***clause 7.1*** of JSERC Generation Tariff Regulation (1st Amendments) 2023, the Commission approves the gross calorific value of the fuel on ***'as received basis' less 85.00 kCal/kg.***

6.39 Accordingly, the Commission has computed the ECR based on coal mix, GCV of primary fuel, GCV of secondary fuel, landed price of primary and secondary fuel, operational parameter as approved earlier in this Order is tabulated hereunder

Table 74: Energy Charge Rate (ECR) for Unit-1 as approved by the Commission for FY 2021-22.

Particulars	UoM	MYT	Petition	Approved
Normative Auxiliary Consumption (AUX)	%	9.00	9.00	9.00
Normative Gross Station Heat Rate (SHR)	kCal/kWh	2387.00	2387.00	2387.00
Specific fuel Oil Consumption (SFC)	mL/kWh	0.50	0.50	0.50
Calorific Value of Oil (CVSF)	kCal/ml	9.35	9.35	9.35
GCV of Primary Fuel (CVPF)	kCal/kg	3309.51	3424.80	3424.80
Landed Price of Primary Fuel (LPPF)	Rs./kg	3.23	3.42	3.40
Landed Price of Secondary Fuel (LPSFi)	Rs./ml	0.04	0.0548	0.0548
Energy Charge Rate (ECR)	**Rs/kWh**	**2.580**	**2.647**	**2.626**

Table 75: Energy Charge Rate (ECR) for Unit-2 as approved by the Commission for FY 2021-22.

Particulars	UoM	MYT	Petition	Approved
Normative Auxiliary Consumption (AUX)	%	9.00	9.00	9.00
Normative Gross Station Heat Rate (SHR)	kCal/kWh	2387.00	2387.00	2387.00
Specific fuel Oil Consumption (SFC)	mL/kWh	0.50	0.50	0.50
Calorific Value of Oil (CVSF)	kCal/ml	9.35	9.35	9.35
GCV of Primary Fuel (CVPF)	kCal/kg	3288.15	3424.80	3424.80
Landed Price of Primary Fuel (LPPF)	Rs./kg	3.25	3.42	3.40
Landed Price of Secondary Fuel (LPSFi)	Rs./ml	0.05	0.05	0.05
Energy Charge Rate (ECR)	**Rs/kWh**	**2.616**	**2.646**	**2.625**

Table 76: Energy Charge Rate (ECR) for Unit-1 as approved by the Commission for FY 2022-23.

Particulars	UoM	MYT	Petition	Approved
Normative Auxiliary Consumption (AUX)	%	9.00	9.00	9.00
Normative Gross Station Heat Rate (SHR)	kCal/kWh	2387.00	2387.00	2387.00
Specific fuel Oil Consumption (SFC)	mL/kWh	0.50	0.50	0.50
Calorific Value of Oil (CVSF)	kCal/ml	9.35	9.39	9.39
GCV of Primary Fuel (CVPF)	kCal/kg	3309.51	3650.94	3650.94
Landed Price of Primary Fuel (LPPF)	Rs./kg	3.23	4.15	4.11
Landed Price of Secondary Fuel (LPSFi)	Rs./ml	0.04	0.08	0.08
Energy Charge Rate (ECR)	**Rs/kWh**	**2.580**	**3.019**	**2.996**

Table 77: Energy Charge Rate (ECR) for Unit-2 as approved by the Commission for FY 2022-23.

Particulars	UoM	MYT	Petition	Approved
Normative Auxiliary Consumption (AUX)	%	9.00	9.00	9.00
Normative Gross Station Heat Rate (SHR)	kCal/kWh	2387.00	2387.00	2387.00
Specific fuel Oil Consumption (SFC)	mL/kWh	0.50	0.50	0.50
Calorific Value of Oil (CVSF)	kCal/ml	9.35	9.37	9.37
GCV of Primary Fuel (CVPF)	kCal/kg	3288.15	3650.94	3650.94
Landed Price of Primary Fuel (LPPF)	Rs./kg	3.25	4.15	4.11
Landed Price of Secondary Fuel (LPSFi)	Rs./ml	0.50	0.08	0.08
Energy Charge Rate (ECR)	**Rs/kWh**	**2.616**	**3.015**	**2.993**

Determination of Fixed Cost

Additional Capitalization

Petitioner's Submission

6.40 It is submitted that an additional capitalization and de-capitalization of Rs. 10.23 Crore and Rs. 0.81 Crore respectively for each Unit of the generating station for FY 2020-21, has been incurred by the Petitioner.

6.41 The details of additional capitalization and de-capitalization as claimed by the Petitioner for FY 2020-21 as annexure-1 of main petition is tabulated hereunder:

Table 78: GFA, Asset wise Capitalization & De-capitalization (Rs. Crore) for unit-1 as submitted by the Petitioner for FY 2021-22 to FY 2022-23.

Particulars	As on 31st March 2021	Addition during the FY 2021-22	Deduction during the FY 2021-22	As on 31st March 2022	Addition during the FY 2022-23	Deduction during the FY 2022-23
Land under Full title	39.48	0.00	0.00	39.48	0.00	0.00
Land held under lease	11.20	0.00	0.00	11.20	0.00	0.00
Plant and Machinery	1425.69	0.49	0.00	1426.18	3.07	0.00
Building & Civil Engineering works	212.71	0.05	0.00	212.76	0.00	0.00
Transformers and others	0.03	0.00	0.00	0.03	0.00	0.00
Others	7.66	0.21	0.00	7.87	0.28	0.00
Any Other assets not covered above	0.29	0.00	0.00	0.29	0.00	0.00
Total	**1697.06**	**0.75**	**0.00**	**1697.81**	**3.35**	**0.00**

Table 79: GFA, Asset wise Capitalization & De-capitalization(Rs. Crore) for unit-2 as submitted by the Petitioner for FY 2021-22 to FY 2022-23.

Particulars	As on 31st March 2021	Addition during the FY 2021-22	Deduction during the FY 2021-22	As on 31st March 2022	Addition during the FY 2022-23	Deduction during the FY 2022-23
Land under Full title	39.48	0.00	0.00	39.48	0.00	0.00
Land held under lease	11.20	0.00	0.00	11.20	0.00	0.00
Plant and Machinery	1441.07	0.41	0.00	1441.48	3.15	0.00
Building & Civil Engineering works	211.32	0.05	0.00	211.37	0.00	0.00
Transformers and others	0.03	0.00	0.00	0.03	0.00	0.00
Others	7.66	0.21	0.00	7.87	0.28	0.00
Any Other assets not covered above	0.29	0.00	0.00	0.29	0.00	0.00
Total	**1711.05**	**0.67**	**0.00**	**1711.72**	**3.43**	**0.00**

Table 80: Asset Additional Capitalization (Rs. Crore) for both Unit as submitted by the Petitioner for FY 2021-22.

Sl. No	Particulars	Additional Capitalization	Deletion
1	Ash Handling System	0.13	0.00
2	Coal Handling System	0.17	0.00
3	DM Water Plant	0.05	0.00
4	Fuel Oil Handling & Storage	0.08	0.00
5	Other Assets	0.52	0.00
6	Workshop & Laboratory	0.47	0.00
Total		**1.42**	**0.00**

Commission's Analysis

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

> *14.1 The additional capital expenditure in respect of a new project or an existing project incurred or projected to be incurred, on the following counts within the original Scope of Work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:*
>
> *(a) Undischarged liabilities recognized to be payable at a future date;*
> *(b) Works deferred for execution;*
> *(c) Procurement of initial capital spares within the original scope of work, subject to ceiling norms specified in this Regulation;*
> *(d) Liabilities to meet award of arbitration or for compliance of the order or directions of any statutory authority, or order or decree of any court of law;*
> *(e) On account of change in law or in compliance to any existing law;*
> *(f) Capital Expenses incurred due to force majeure conditions:*
>
> *Provided that in case of any replacement/ up gradation of the assets, the additional capitalization shall be worked out after adjusting the gross fixed assets and cumulative depreciation of the assets replaced on account of de-*

capitalization;

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

14.2 The additional capital expenditure incurred or projected to be incurred in respect of an existing project or a new project within the original scope of work and after the cut-off date may be admitted by the Commission, subject to prudence check on the following counts:

(a) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority, or order or decree of any court of law;
(b) Change in law or compliance of any existing law;
(c) Deferred works relating to ash pond or ash handling system in the original scope of work;
(d) Liability for works executed prior to the cut-off date;
(e) Force Majeure events;
(f) Liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments; and
(g) Raising of ash dyke as a part of ash disposal system.

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

(a) The useful life of the assets is not commensurate with the useful life of the project and such assets have been fully depreciated in accordance with the provisions of these regulations;
(b) The replacement of the asset or equipment is necessary on account of change in law or Force Majeure conditions;
(c) The replacement of such asset or equipment is necessary on account of obsolescence of technology; and
(d) The replacement of such asset or equipment has otherwise been allowed by the Commission.

14.4 The capital expenditure, in respect of existing generating *station incurred or projected to be incurred on the following counts beyond the original scope, may be admitted by the Commission, subject to prudence check:*

(a) Liabilities to meet award of arbitration or for compliance of order or directions of any statutory authority, or order or decree of any court of law;
(b) Change in law or compliance of any existing law;
(c) Force Majeure events;
(d) Any additional works/services, which have become necessary for efficient and successful operation of the generating station, but not included in the original project cost;

(e) Need for higher security and safety of the plant as advised or directed by appropriate Indian Government Instrumentality or statutory authorities responsible for national or internal security;
(f) Deferred works relating to ash pond or ash handling system in addition to the original scope of work, on case to case basis:

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

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

14.5 In case there is additional capitalization proposed during the fag end of the project (at least 5 years before the Useful life or extended Useful life) of the plant, the Generating Company is required to submit the detail justification of its necessity during the fag year, Cost-Benefit analysis, DPR, if any and rate reasonability along with the residual life assessment report of the Project. The Commission may carry out prudence check based on the detail submitted by the Generating Company, its necessity, its financial viability before approval of such additional capitalization.

14.6 In case of de-capitalisation of assets of a Generating Company, the original cost of such asset as on the date of decapitalization duly certified by its Statutory Auditor shall be deducted from the value of gross fixed asset and corresponding outstanding loan on such assets as well as *equity shall be deducted from loan and the equity balances respectively. Such deductions shall be carried out in the year such de-capitalisation takes place with corresponding adjustments in cumulative depreciation and cumulative repayment of loan shall be carried out duly taking into consideration the year in which it was capitalized"*

6.43 The Commission has scrutinized the submission supplied by the Petitioner regarding the Capitalization of assets, and its justification for FY 2020-21. Accordingly, the Commission on prudent check approves the Capitalization as per audited book of account as annexed in ***annexure-2*** of main petition as shown below:

Table 81: Additional Capitalization for Unit-1 & Unit-2 (Rs. Cr) as approved by the Commission for FY 2021-22.

Sr. No.	Detail of Assets	Value (Rs. Cr.)	Justification
1	Coal Handling System	0.17	The Petitioner has submitted that the installation of the robust Weigh Bridge Foundation, along with accompanying Retaining and Guard Walls, was an investment that holds paramount importance in ensuring the smooth and efficient operation of the thermal power plant. The foundation, retaining wall, and guard wall collectively form a sturdy base for the Weigh Bridge, providing essential stability and support for accurate weight measurement. In addition to the above, the shift from 12-wheel tippers to 14-wheel tippers represents a significant advancement in transportation capacity. The longer body length of 14-wheel tippers necessitated the extension of the Truck

Sr. No.	Detail of Assets	Value (Rs. Cr.)	Justification
			Tippler Platform to ensure seamless unloading and loading operations. The Commission may allow the expenditure under Regulation 14.4 (d) of JSERC Tariff Regulations 2020.
2	Ash Handling System	0.13	The Petitioner has submitted that upon directions received from the MOEFCC to install a Dust Suppression System, APNRL incurred the expenditure towards the same. The primary objective of the Dust Suppression System is to significantly reduce the airborne dust particles generated during various operations within the plant. Hence, the aforesaid expenditure was necessary for the efficient and successful operation of the generating station. The Commission may allow the expenditure under Regulation 14.4 (d) of JSERC Tariff Regulations 2020.
3	DM Water Plant	0.05	The Petitioner has submitted that high-pressure boilers a need complex feed water treatment systems to remove as many impurities as possible. The DM Water Plant significantly enhances the quality of water used in the thermal plant's processes. This, in turn, resulted in reduced scaling, corrosion, and fouling of critical equipment such as boilers, turbines, and heat exchangers.

Sr. No.	Detail of Assets	Value (Rs. Cr.)	Justification
			Hence, the aforesaid expenditure was necessary for the efficient and successful operation of the generating station. The Commission may allow the expenditure under Regulation 14.4 (d) of JSERC Tariff Regulations 2020.
4	Oil Handling & Storage	0.08	The Petitioner has submitted that the Fuel oil is a crucial component in the power generation process and ensuring its quality during storage is essential to prevent the accumulation of moisture, which can lead to corrosion and degradation of fuel quality. The investment in procuring improved fuel oil handling and storage facilities directly contributes towards the preservation of the integrity of fuel, resulting in better combustion efficiency and reduced emissions. Considering the aforesaid reason, the Petitioner had procured the facilities for unit-1. The Governing valve system relies on hydraulic oil for efficient operation. The presence of moisture in hydraulic oil can lead to accelerated wear and tear, affecting the performance and longevity of the governing valve. The Commission may allow the expenditure under Regulation 14.4 (d) of JSERC Tariff Regulations 2015.

Sr. No.	Detail of Assets	Value (Rs. Cr.)	Justification
5	Other Ready Assets	0.52	To enhance the working efficiency of support services and smooth & safe movement of employees, the Petitioner has purchased / some assets like vehicles and replaced the IT equipment. Hence, the aforesaid expenditure was necessary for the efficient and successful operation of the generating station. The Commission may allow the expenditure under Regulation 14.4 (d) of JSERC Tariff Regulations 2020.
6	Workshop & Laboratory	0.47	The Petitioner has submitted that to ensure the quality of coal, testing equipment had been purchased by the Petitioner and expenditure towards the same has been claimed in the present Petition. Hence, the aforesaid expenditure was necessary for the efficient and successful operation of the generating station. The Commission may allow the expenditure under Regulation 14.4 (d) of JSERC Tariff Regulations 2020.
Total (Rs. Crore)		**1.42**	

Table 82: Capitalization (Rs. Crore) for both Unit as approved by the Commission for FY 2021-22.

Sl. No	Particulars	Additional Capitalization	Deletion
1	Ash Handling System	0.13	0.00
2	Coal Handling System	0.17	0.00
3	DM Water Plant	0.05	0.00
4	Fuel Oil Handling & Storage	0.08	0.00
5	Other Assets	0.52	0.00
6	Workshop & Laboratory	0.47	0.00
Total		**1.42**	**0.00**

Table 83: Additional Capitalization for Unit-1 & Unit-2 (Rs. Cr) as approved by the Commission for FY 2022-23.

Sr. No.	Detail of Assets	Value (Rs. Cr.)	Justification
1	Coal Handling System	0.17	The expense under the coal handling system was incurred for procuring the In-Line Magnetic Separator ("ILMS"). The ILMS plays a crucial role in enhancing the efficiency, reliability, and safety of coal handling operations in a power plant by effectively removing ferrous contaminants from the coal. The procurement of ILMS was necessitated in order to prevent interruptions and unwanted breakdowns of equipment due to the unavailability of oil-cooled ILMS. Unlike dry ILMS, the newly acquired ILMS boasts superior magnetic particle catching and lifting capacities, thus enhancing the efficacy of the coal handling system. Hence, by investing in ILMS, the Petitioner aims to mitigate operational risks associated with the equipment failures and downtime, thereby ensuring the uninterrupted operation of the coal handling system. The Commission may allow the expenditure under Regulation 14.4 (d) of JSERC Tariff Regulations 2020.
2	Ash Handling System	0.48	The Petitioner has submitted that the previous air compressors were found to be inadequate in developing the required pressure for efficient operation of ash handling system.

Sr. No.	Detail of Assets	Value (Rs. Cr.)	Justification
			To ensure compliance with the operational standards and to enhance the efficiency of the ash handling system, the Petitioner procured an air compressor with enhanced capacity. It is pertinent to mention here that the air compressor in the ash handling plant is installed primarily to provide compressed air for various operations within the system. The air compressor plays a crucial role in facilitating the efficient handling and transportation of ash within the thermal generating station's ash handling plant, contributing to the overall operational effectiveness and environmental compliance of the thermal generating stations. Further, a significant amount of sludge was found deposited at the bottom of the Ash Water Sump, with a depth of approximately 2.5 meters, posing a potential risk to the uninterrupted operation of the plant. To mitigate this operational risk and ensure the continuous operation of HP & LP pumps without obstruction, the Petitioner procured a slurry-based sludge pump for online removal of sludge The Commission may allow the expenditure under Regulation 14.4 (d) of JSERC Tariff Regulations 2020.
3	Oil Handling & Storage	0.08	Fuel oil plays a critical role in the power generation process, and it's vital to maintain

Sr. No.	Detail of Assets	Value (Rs. Cr.)	Justification
			its quality during storage to prevent the build-up of moisture. This moisture can cause corrosion and degrade the quality of the fuel. Investing in upgraded fuel oil handling and storage facilities directly contributes to preserving the integrity of the fuel, leading to improved combustion efficiency and reduced emissions. Considering the aforesaid reason, the Petitioner had procured the facilities for unit-2. The effective operation of the governing valve system depends on hydraulic oil and if moisture is present in the hydraulic oil, it can accelerate wear and tear, impacting the performance and lifespan of the governing valve. The Commission may allow the expenditure under Regulation 14.4 (d) of JSERC Tariff Regulations 2020.
4	Transformers switchgear and cable	0.57	The Petitioner submitted that, the inclusion of a Fast Bus Transfer Relay ("FBT") was not envisioned for the thermal generating station of the Petitioner 2 X 270 MW electrical system design. However, operational observations have revealed instances where the outage of one

Sr. No.	Detail of Assets	Value (Rs. Cr.)	Justification
			unit, lead to the tripping of another unit, which further resulted in delays in manually changing the power source from one unit to another. By introducing the FBT system, the Petitioner aims to minimize the time required for power source transfer between units, thereby averting the potential tripping of one unit due to the tripping of another unit. The Commission may allow the expenditure under Regulation 14.4 (d) of JSERC Tariff Regulations 2015.
5	Other Ready Assets	0.56	To enhance the working efficiency of support services and smooth & safe movement of employees, the Petitioner has purchased / some assets like vehicles and replaced the IT equipment. Hence, the aforesaid expenditure was necessary for the efficient and successful operation of the generating station. The Commission may allow the expenditure under Regulation 14.4 (d) of JSERC Tariff Regulations 2020.
6	Turbine Generator island	3.22	The Petitioner has submitted that it has procured a jacking oil pump which plays a vital role in the safe and efficient operation of the turbine generator unit. The detailed function of jacking oil pump is as following: Lubrication: Turbine generator units operate at high speeds and under heavy loads, necessitating efficient lubrication to reduce

Sr. No.	Detail of Assets	Value (Rs. Cr.)	Justification
			friction and wear between moving parts. The jacking oil pump supplies lubricating oil to critical components such as bearings and gears, ensuring smooth operation and extending the lifespan of these parts. Hydraulic Clearance: Hydraulic clearance refers to the space required for components to move freely without interference. During startup and shutdown procedures, it's crucial to maintain appropriate hydraulic clearance to prevent damage caused by components coming into contact with each other. The jacking oil pump helps in adjusting and maintaining the hydraulic clearance as needed. Alignment Control: Proper alignment of components is essential for the smooth operation and longevity of the turbine generator unit. Misalignment can lead to excessive vibration, increased wear and tear, and ultimately, equipment failure. The jacking oil pump aids in aligning various components correctly, thereby optimizing performance and minimizing the risk of mechanical issues. Cooling: The operation of a turbine generator unit generates significant amounts of heat, which can adversely affect performance and reliability if not managed effectively. The jacking oil pump facilitates cooling by circulating oil to remove excess heat from

Sr. No.	Detail of Assets	Value (Rs. Cr.)	Justification
			critical components, ensuring that they operate within safe temperature limits. Start-up, Shutdown, and Maintenance: These are critical phases in the operation of a generating station where special attention is required to ensure smooth transitions and minimize wear and tear on equipment. The jacking oil pump plays a crucial role during these phases by providing essential lubrication, clearance adjustment, alignment control, and cooling, thereby enhancing the efficiency and reliability of the turbine generator unit The Commission may allow the expenditure under Regulation 14.4 (d) of JSERC Tariff Regulations 2020.
7		0.71	The Petitioner has submitted that to ensuring the quality of coal, some testing equipment had been purchased by the Petitioner and expenditure towards the same has been claimed. Hence, the aforesaid expenditure was necessary for the efficient and successful operation of the generating station. The Commission may allow the expenditure under Regulation 14.4 (d) of JSERC Tariff Regulations 2020.
Total		6.78	

Table 84: Capitalization (Rs. Crore) for both Unit as approved by the Commission for FY 2022-23.

Sl. No	Particulars	Additional Capitalization	Deletion
1	Ash Handling System	0.48	0.00
2	Coal Handling System	1.15	0.00
3	Oil Handling & Storage	0.08	0.00
4	Other Ready Assets	0.56	0.00
5	Transformers, Switchgear, Cables	0.57	0.00
6	Turbine Generator Island	3.22	0.00
7	Workshop & Laboratory	0.71	0.00
Total		**6.78**	**0.00**

6.44 The Commission has observed that all the assets capitalized during the FY 2021-22 & FY 2022-23 were not part of the original project. But, these assets may be necessary for efficient and successful operation of generating station and related switchyard. Accordingly, the Commission on his own prudent, approves the aforesaid capitalization in accordance with clause 14.4 (d) of JSERC Tariff Regulations 2020.

6.45 The Commission has examined the audited books of accounts for FY 2021-22, FY 2022-23 as annexed in ***annexure-2*** and as per ***Note-4 (Property, Plant and Equipment)*** of audited accounts, substantiates the fact that Rs 1.42 crore, Rs. 6.78 Crore (cumulative for both the Units) of assets is capitalized during the FY 2021-22, FY 2022-23. Based on the submission and justification made by the Petitioner and after a prudent check, the Commission approves the additional capitalization of 1.42 Crore and Rs 6.78 crore (cumulative for both the Units) for FY 2021-22 & FY 2022-23 under clause 14.4(d) of JSERC Tariff Regulations 2020. Furthermore, the additional capitalization as per the audited accounts of 2021-22 is Rs. 1.42 Crores, leading to closing value of GFA as on 31st March, 2022 as Rs. 3,409.10 Crores and additional capitalization of Rs 6.78 crore for FY 2022-23 leading to closing value of GFA as on 31st March 2023 as Rs 3415.33 crore.

Table 85: Capitalization (Rs. Crore) as approved by the Commission for FY 2021-22.

Particulars	Unit-1			Unit-2		
	MYT	Petition	Approved	MYT	Petition	Approved
Capitalization		0.75	0.71		0.67	0.71
Decapitalization	-	-	-	-	-	-

Table 86: Capitalization (Rs. Crore) as approved by the Commission for FY 2022-23.

Particulars	Unit-1			Unit-2		
	MYT	Petition	Approved	MYT	Petition	Approved
Capitalization		3.35	3.39		3.43	3.39
Decapitalization	-	-	-	-	-	-

Depreciation

Petitioner's Submission

6.46 The Petitioner has submitted that depreciation is calculated based on 'Single Line Method' and at the depreciation rates provided in Appendix-I of the ***clause 15.30*** of JSERC Generation Tariff Regulations 2020.

6.47 Further, the Petitioner has submitted that the depreciation so allowed shall be up to maximum of 90% of the capital cost of the project and the balance is to be considered as the salvage value of the asset.

Table 87: Depreciation (Rs. Crore) as submitted by the Petitioner.

Particulars	Depreciation Rate	FY 2021-22		FY 2022-23	
		Unit-1	Unit-2	Unit-1	Unit-2
Land Under full title	0.00%	0.00	0.00	0.00	0.00
Land held under lease	2.67%	0.30	0.30	0.30	0.30
Plant and Machinery	4.22%	60.17	60.82	60.25	60.90
Buildings & Civil engineering works	2.67%	5.68	5.64	5.68	5.64
Others Assets	4.22%	0.34	0.34	0.36	0.36
Total		**66.50**	**67.11**	**66.59**	**67.20**

Commission's Analysis

6.48 The Commission has outlined ***clause 15.28*** to ***clause 15.34*** of JSERC Generation Tariff Regulation, 2020 for the approval of Depreciation for a generating station as reproduced below:

"15.28 Depreciation shall be calculated every year, on the amount of Capital Cost of the assets as admitted by the Commission. In case tariff of multiple Units of a generating station is determined, weighted average life for the generating station shall be applied:

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

15.29 Depreciation for each year shall be determined based on the methodology as specified in these Regulations along with the rates and other terms specified in these Regulations.

15.30 Depreciation shall be calculated annually, based on the straight-line method, at the rates specified at Appendix-I. The base value for the purpose of depreciation shall be original cost of the asset:

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

Provided that in case the tenure of PPA executed between the Generating plant and Beneficiaries is more than that of the Useful life of the plant, the Commission after prudence check may consider the PPA life for spreading the remaining depreciable value as on March 31 of the year instead of useful life;

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

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

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

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

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

15.33 The Commission may, in the absence of the Fixed Assets Register, calculate Depreciation (%) arrived by dividing the Depreciation and the Average Gross Fixed Assets as per the latest available Audited Accounts of the Generating Company. The Depreciation (%) so arrived shall be multiplied by the Average GFA approved by the Commission for the relevant Financial Year to arrive at the Depreciation for that Financial Year.

15.34 In case of de-capitalization of assets in respect of Generating Station or Unit thereof the cumulative depreciation shall be adjusted by taking into account the depreciation recovered through tariff towards decapitalization asset during its useful services.

6.49 In accordance with rate specified in Appendix-I of JSERC Generation Tariff Regulation 2020, the Commission has considered the asset class depreciation rate for FY 2021-22 & FY 2022-23.

6.50 Further, the Commission has computed the depreciation for both the Unit in accordance with the above mentioned regulations. The table below shows the depreciation approves by the Commission for FY 2021-22, & FY 2022-23.

Table 88: Depreciation (Rs. Crore) for both unit as approved by the Commission.

Particulars	Depreciation Rate	FY 2021-22		FY 2022-23	
		Unit-1	Unit-2	Unit-1	Unit-2
Land Under full title	0.00%	0.00	0.00	0.00	0.00
Land held under lease	2.67%	0.30	0.30	0.30	0.30
Plant and Machinery	4.22%	60.17	60.82	60.25	60.90
Buildings & Civil engineering works	2.67%	5.68	5.64	5.68	5.64
Others Assets	4.22%	0.34	0.34	0.35	0.34
Total		**66.49**	**67.10**	**66.58**	**67.18**

Operation & Maintenance Expenses

Petitioner's Submission

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

- Projected O&M Expenses for FY 2021-22, FY 2022-23;
  - Employee Expenses without Terminal Liabilities;
  - Repairs & Maintenance (R&M) Expenses;
  - Administrative and General (A&G) Expenses;

6.52 Employee Expenses: the petitioner has submitted that it has arrived at employee expenses for FY 2021-22 and FY 2022-23 using inflation factor of 6.93% and 6.87% of respective years, the same is shown below.

Table 89: Normative Employee Expenses (Rs. Crore) as submitted by the Petitioner.

Particulars	FY 2021-22		FY 2022-23	
	Unit-1	Unit-2	Unit-1	Unit-2
Employee Expenses	13.65	13.65	14.49	14.49

6.53 A&G Expenses: the petitioner has submitted that in order to arrive the revised normative A&G expenses for the period FY 2021-22 and FY 2022-23, the Petitioner has used the inflation factor of 6.93% and 6.87% over the base year expenses, the same has been depicted below:

Table 90: Normative A&G Expenses (Rs. Crore) as submitted by the Petitioner.

Particulars	FY 2021-22		FY 2022-23	
	Unit-1	Unit-2	Unit-1	Unit-2
A&G Expenses	35.54	35.54	37.98	37.98

6.54 R&M expenses: The Petitioner has submitted that to arrive the revised the normative R&M expenses for the period for FY 2021-22 and FY 2022-23, the Petitioner has used the inflation factor of 6.93% and 6.87% and 'K-factor of 1.14% as approved by this Hon'ble Commission in the MYT order dated 14.12.2023, the same has been depicted below:

Table 91: Normative R&M Expenses (Rs. Crore) as submitted by the Petitioner.

Particulars	FY 2021-22		FY 2022-23	
	Unit-1	Unit-2	Unit-1	Unit-2
R&M Expenses	19.43	19.43	19.43	19.43

6.55 Legal & Consultancy expenses: The Petitioner has submitted that it has carried out legal & consultancy expenses as per clause 15.43 of JSERC Tariff Regulation 2020. Further, the Petitioner has incurred expenses for various litigation, regulatory, financial and technical matters along with internal audit, through legal and consulting firms. Accordingly, the Petitioner is claiming the legal & consultancy expenditure towards the same for the period FY 2021-22 and FY 2022-23.

Table 92: Legal & Consultancy Expenses (Rs. Crore) as submitted by the Petitioner.

Particulars	FY 2021-22		FY 2022-23	
	Unit-1	Unit-2	Unit-1	Unit-2
Legal & Consultancy Expenses	5.00	5.00	6.58	6.58

6.56 Based on the above submission the Petitioner has submitted the net O&M expenses for FY 2021-22 and FY 2022-23 as show below:

Table 93: O&M Expenses (Rs. Crore) as submitted by the Petitioner.

Particulars	FY 2021-22		FY 2022-23	
	Unit-1	Unit-2	Unit-1	Unit-2
Employee Expenses	13.65	13.65	14.49	14.49
A&G Expenses	35.54	35.54	37.98	37.98
R&M Expenses	19.43	19.43	19.43	19.43
Legal Expenses	5.00	5.00	6.58	6.58
Total O&M Expenses	**73.62**	**73.62**	**78.49**	**78.49**

Commission's Analysis

6.57 The Commission has outlined ***clause 15.35 and clause 15.40*** of JSERC Generation Tariff Regulation, 2020 for approval Operation & Maintenance Charges for a generating station as reproduced below:

> *"15.35 Operation and Maintenance (O&M) expenses shall comprise of the following:*
> 1. *Salaries, wages, pension contribution and other employee costs;*
> 2. *Administrative and General costs;*
> 3. *Repairs and maintenance expenses;*
>
> *Existing Thermal Generating Stations:*
>
> *15.40 The O&M Expenses for the Base Year of the Control Period shall be approved by the Commission taking into account the audited accounts of FY 2015-16 to FY 2019-20, Business Plan filed by the Generating Company, estimates of the actual for the Base Year, prudence checks and any other factor*

considered appropriate by the Commission".

6.58 Based on facts and circumstance of the petition, the Commission approves the normative Employee Expenses for FY 2021-22, & FY 2022-23 by taking the inflation factor and growth factor of respective financial years.

Table 94: Revised Growth Factor as approved by the Commission.

Particulars	FY 2020-21	FY 2021-22	FY 2022-23
Number of Employees	432	438	438
G (Growth Factor)		1.39%	0.00%

Table 95: Normative Employee Expenses (Rs Crore) as approved by the Commission.

Particulars	UoM	FY 2021-22	FY 2022-23
		Approved	Approved
Employee Cost of Previous Year	Rs. Cr.	25.18	27.30
Inflation Factor	%	6.93%	6.87%
Growth Factor	%	1.39%	0.00%
Normative Employee Expenses	**Rs. Cr.**	**27.30**	**29.18**

6.59 Accordingly, the Commission approves the unit wise normative employee expenses for FY 2021-22 & FY 2022-23 respectively as tabulated hereunder.

Particulars	UoM	FY 2021-22		FY 2022-23	
		Unit-1	Unit-2	Unit-1	Unit-2
Normative Employee Expenses	**Rs Cr.**	**13.65**	**13.65**	**14.59**	**14.59**

6.60 Likewise, the Commission approves the normative A&G Expenses for FY 2021-22 & FY 2022-23 based on the approved normative A&G Expenses for previous year (excluding petition filing fee) by multiplying the actual inflation factor of respective financial year.

Table 96: Normative A&G Expenses (Rs Crore) as approved by the Commission.

Particulars	UoM	FY 2021-22 Approved	FY 2022-23 Approved
A&G (n-1) Year	Rs Cr.	66.48	71.09
Inflation Factor	%	6.93%	6.87%
Normative A&G Expenses	**Rs Cr.**	**71.09**	**75.97**

6.61 Accordingly, the Commission approves the unit wise normative A&G expenses for FY 2021-22 & FY 2022-23 respectively as tabulated hereunder.

Particulars	UoM	FY 2021-22		FY 2022-23	
		Unit-1	Unit-2	Unit-1	Unit-2
Normative A&G Expenses	**Rs Cr.**	**35.54**	**35.54**	**37.98**	**37.98**

6.62 For the purpose of evaluating the normative R&M Expenses, the Commission has taken the approved opening value of GFA for FY 2020-21 and multiplied it with the "K" factor as approved in the MYT Order and actual inflation factor for FY 2021-22 & FY 2022-23 as tabulated hereunder:

Table 97: Normative R&M Expenses (Rs Crore) as approved by the Commission.

Particulars	UoM	FY 2021-22 Approved	FY 2022-23 Approved
Opening GFA	Rs. Cr.	3408.11	3409.10
K-Factor	%	1.14%	1.14%
Inflation Factor	%	6.93%	6.87%
Normative R&M Expenses	**Rs. Cr.**	**41.55**	**41.53**

6.63 The Commission has observed that the petitioner has failed to considered the inflation factor of respective financial year during the calculation of R&M expenses. While the provision of JSERC (Terms & condition of determination of Generation Tariff) Regulation 2020 allow to considered the inflation factor while calculating the R&M Cost. Accordingly, the Commission has considered the inflation factor while calculating the R&M expenses for FY 2021-22 & FY 2022-23.

6.64 Based on above excerpt, the Commission approves the unit wise normative R&M expenses for FY 2021-22 & FY 2022-23 respectively as tabulated hereunder.

Particulars	UoM	FY 2021-22		FY 2022-23	
		Unit-1	Unit-2	Unit-1	Unit-2
Normative R&M Expenses	**Rs Cr.**	**20.77**	**20.77**	**20.77**	**20.77**

6.65 In accordance with clause 15.43 of JSERC (Terms & Condition of determination of Generation Tariff) Regulation, 2020, the Commission approves the legal expenses for FY 2021-22 & FY 2022-22 for both the Unit.

6.66 The O&M expense projected by the Petitioner vis-à-vis as approved by the Commission for FY 2021-22 & FY 2022-23 as given below.

Table 98: Normative O&M Expenses (Rs. Cr.) as approved by the Commission for FY 2021-22.

Particulars	Unit-1			Unit-2		
	MYT	Petition	Approved	MYT	Petition	Approved
Employee Expenses	13.36	13.65	13.65	14.17	13.65	13.65
A&G Expenses	35.36	35.54	35.54	37.41	35.54	35.54
R&M Expenses	20.45	19.43	20.77	21.70	19.43	19.43
Petition filing & Legal Expenses	0.22*	5.00	5.00	0.22*	5.00	5.00
Net Normative O&M Expenses	**69.29**	**73.62**	**74.97**	**73.50**	**73.62**	**74.97**

attributed to 122.85 MW only

Table 99: Normative O&M Expenses (Rs. Cr.) as approved by the Commission for FY 2022-23.

Particulars	Unit-1			Unit-2		
	MYT	Petition	Approved	MYT	Petition	Approved
Employee Expenses	14.17	14.49	13.65	14.17	14.49	14.49
A&G Expenses	37.41	37.98	35.54	37.41	37.98	37.98
R&M Expenses	21.70	19.43	20.77	21.70	19.43	20.77
Petition filing & Legal Expenses	0.22*	6.58	6.58	0.22*	6.58	6.58
Net Normative O&M Expenses	**73.50**	**78.49**	**79.92**	**73.50**	**78.49**	**79.92**

attributed to 122.85 MW only

Water Charges, Security Expenses, Capital Spare

Petitioner Submission

6.67 The Petitioner has entered into an MoU with Govt. of Jharkhand for drawl of water to an extent of 35.60 MCM (4064 m3 per hour) in a phased manner from Subarnarekha river, flowing at a distance of eight km downstream of water intake point from APNRL Project site, vide agreement dated August 29, 2008. The said agreement stipulates that a pump house has to be installed for drawl of required water from the river Subarnarekha withdrawn directly from river and not from any reservoir. Subsequently, Water Department of Govt. of Jharkhand vide its Notification No. 2/PMC/Jalapurti-175/2007 dated April 01, 2011 has revised various categories for water off-take and APNRL was asked to pay @ Rs. 26.40 per thousand gallons. The Petitioner aggrieved by the rate, filed a Writ Petition before High Court of Jharkhand on February 07, 2012 with regard to demand raised by Subarnarekha Dam Division towards withdrawal of water at higher than the agreed rates.

6.68 The Hon'ble High Court of Jharkhand was pleased to pass a stay Order in the above mentioned Writ Petition, restricting the payment of water charges at pre-revised rate of Rs. 4.50 per thousand gallons.

6.69 The Petitioner further mention that clause 18 of the Water agreement, which contains provisions for reduction of the Water quantity, the Petitioner has requested WRD, Government of Jharkhand for lowering of the permitted water quantity from 35.60 MCM to 17.60 MCM i.e. almost 50% of the original allocated quantity, which is yet to be considered by the WRD, State of Jharkhand. As a result, the Petitioner has filed another petition before the Hon'ble High Court at Ranchi for resolution of dispute regarding the billed water quantum in the bill, which is pending.

6.70 The Petitioner has submitted that it has decided on most conservative basis to account for the water liability based on rate applicable for Dam water as per notification No. 2/PMC/Jalapurti-175/2007 dated April 01, 2011, issued by WRD, GOJ multiplied by the quantity of 35.60 MCM for the initial 5 Years and thereafter by the requested quantity of 17.80 MCM, including past year. Hence the accumulated liability till 31.03.2021 has been accounted for in the FY 2021-22.

Table 100: Water charges accumulated liability till 31.03.2021 as submitted by Petitioner.

Particular	Amount (Rs. Cr.)
Liability for 50% allocation as on 31.03.2021	164.28
Liability as on 31.03.2021 already accounted	60.12
Balance Liability accounted in FY 2021-22	104.16
Total Balance Liability	104.17

6.71 Accordingly, the Petitioner has submitted the water expenses as per audited account for FY 2021-22 and FY 2022-23 are depicted below:

Table 101: Water charges (Rs. Crore) as submitted by the Petitioner.

Particulars	Unit-1 & 2	
	FY 2021-22	FY 2022-23
Additional Water Charges combined for both Unit 1 and 2 (Attributable to contracted capacity of 122.85 MW) as claimed in the instant petition	31.31	5.66

6.72 The Petitioner has submitted that based on the total expenditure of Rs. 4.65 Crores and Rs.1.30 Crores incurred in FY 2021-22 and FY 2022-23 respectively on account of Capital Spares, the proportionate expenditure towards the contracted capacity supplied to JBVNL, works out at Rs. 1.16 Crores and Rs 0.32 Crores respectively and the same was not funded through special allowance as per ***clause 14.11 and 14.12*** of the Regulation or claimed as a part of additional capitalization or consumption of store and spares and renovation and modernization. Accordingly, the Petitioner has prayed to allow Capital Spares as mentioned in the petition for FY 2021-22 and FY 2022-23, along with related justifications is attached hereto and marked as ***Annexure-16***.

Table 102: Capital Spare (Rs. Crore) as submitted by the Petitioner.

Particulars	FY 2021-22	FY 2022-23
Capital Spares for Unit-1 and Unit-2	2.64	4.03

Particulars	FY 2021-22	FY 2022-23
(Attributable to contracted capacity of 122.85 MW)		

6.73 The Petitioner has further claimed the security expenses in accordance with the MYT Order dated December 14, 2024 and ***clause 15.46*** of JSERC Generation Tariff Regulation (1st Amendments) 2023 as depicted below:

Table 103: Security Expenses (Rs. Crore) as submitted by the Petitioner.

Particulars	FY 2021-22	FY 2022-23
Security expenses for Unit-1 and Unit-2 (Attributable to contracted capacity of 122.85 MW)	0.56	0.62

Commission Analysis

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

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

5.117 The Commission has gone through the submissions of the Petitioner and observed that the matter related to Water Tax is sub-judice before the Hon'ble Jharkhand High Court. Thus, the Commission in the instant petition approves the water charges as per ***'note 31'*** of audited books of account for FY 2021-22 and FY 2022-23 in proportion of allocated to JBVNL. However, the Commission has reserved the liberty to the Petitioner that if any liability arises due to the judgement of the Hon'ble Jharkhand High Court Order the Same shall be Claimed.

6.75 In regard to Capital spares, the Commission is of the view that in compliance to ***2nd proviso of clause 9.1*** of the JSERC Generation Tariff

1st Amendment Regulations 2023, the Petitioner is required to 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 special allowance as per ***clause 14.11 and 14.12*** of the JSERC Generation Tariff Regulations or claimed as a part of additional capitalization or consumption of stores and spares and renovation and modernization. In compliance, the Petitioner has submitted the details of critical spares consumed in FY 2020-21 duly certified by auditor along with the purpose of consumption in ***annexure-16*** of main petition.

6.76 The Commission has examined the details of critical spares consumed in FY 2021-22 and FY 2022-23 duly certified by auditor along with the purpose of consumption. The Commission approves Rs. 2.64 Crore (cumulative for both unit) and Rs 4.03 crore for FY 2021-22 & FY 2022-23 respectively, based on the ratio of the power allocation to JBVNL. Thus, based on the submission and justification made by the Petitioner and after a prudent check, the Commission approves the critical spares of Rs. 1.32 Crore and Rs 2.01 Crores for each unit for FY 2021-22 & FY 2022-23 respectively.

6.77 In accordance with ***clause 15.46*** of JSERC (Terms and Condition for determination of Tariff) Regulation (1st Amendments) 2023, and note-31 of annual books of account the Commission approves the cumulative security expenses for both the Unit as Rs 0.56 crore for FY 2021-22 and Rs 0.62 crore for FY 2022-23 respectively attributed to contracted capacity of 122.85 MW.

6.78 Based on the above excerpt, the overall capital spare, Security Expenses and water charges are well within the ***clause 7.46*** of JSERC Generation Tariff (1st Amendments) Regulation 2023. Accordingly, the Commission approves the capital spare and water charge for FY 2021-22 and FY 2022-23 as shown below:

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

Particulars	FY 2021-22		FY 2022-23	
	Unit-1	Unit-2	Unit-1	Unit-2
Additional Water Charges combined for both Unit 1 and 2 (Attributable to contracted capacity of 122.85 MW)	2.63	2.63	2.83	2.83
Capital Expenses combined for both the Ubit-1 & Unit-2 (Attributed to contracted capacity of 122.85 MW)	1.32	1.32	2.01	2.01
Security Expenses combined for both the Ubit-1 & Unit-2 (Attributed to contracted capacity of 122.85 MW)	0.28	0.28	0.31	0.31

Ash Disposal Expenses

Petitioner's Submission

6.79 The Petitioner submits that ash disposal and transportation is the statutory requirement of the power plant. The Petitioner has been disposing and transporting the Ash from its power station in accordance with the Government of India, Ministry of Environment, Forest & Climate Change (MOEFCC) notification dated 25.1.2016. The relevant extract is reproduced for immediate reference as:

> *"2 (b) (10) The cost of Transportation of ash for road construction projects or for manufacturing of ash based products or use of soil conditioner in agriculture activity within a radius of hundred kilometers from a coal or lignite based thermal power plant shall be borne by such coal or lignite based thermal power plant and the cost of transportation beyond the radius of hundred kilometers and up to three hundred kilometers shall be shared equally between the user and the coal or lignite based thermal power plant."*

6.80 Further, the Petitioner has submitted that while complying with the above-mentioned notification, it has taken measures to ensure 100% ash utilization and has been transporting ash from its power station to various cement and brick manufacturing units and has incurred the expenditure towards the same. A copy of the said notification is attached hereto and marked as ***Annexure-17***.

6.81 Furthermore, the Petitioner has submitted that in order to fulfil 100% ash utilization it had faced several difficulties, some of which are depicted below:

- Low quantum of local industries to absorb the ash produced in the station
- The Petitioner is in frequent touch with ancillary units to ensure their participation in the offtake of ash generated in the station.

6.82 The Petitioner has emphasis that despite being in difficult situation, it has made all the necessary efforts to offload the ash generated from the plant in an economical manner. The overall expenses towards ash disposal includes ash handling and ash transportation-related expenses. The duly certified details of the quantity of ash generated and the transportation cost along with the revenue generated from the sale of ash are stated as under and marked as ***Annexure-17***.

Table 105: Ash Disposal expenses (Rs. Crore) as submitted by the Petitioner for FY 2021-22 and FY 2022-23.

Particulars	FY 2021-22	FY 2022-23
Quantity of Ash transported/Disposal Expenses (MT) (Distance < 100 Km)	637045	568199
Total Quantity of Ash transported (MT)	637045	568199
Transportation Cost/Disposal Expenses (in Rs. Cr) (Distance < 100 Km)	19.35	8.80
Transportation Cost/Disposal Expenses (in Rs. Cr)	**19.35**	**8.80**

Table 106: Ash Disposal expenses (Rs. Crore) as submitted by the Petitioner.

Particulars	FY 2021-22	FY 2022-23
Ash disposal expenses for Unit-1 and Unit-2 (Attributable to contracted capacity of 122.85 MW)	4.38	4.38

Commission's Analysis

6.83 On scrutinizing and analyzing the data, material, information on record, the Commission approves the Ash Disposal Expenses as per ***note-31*** of audited books of accounts for FY 2021-22 & FY 2022-23 as tabulated hereunder:

Table 107: Ash Disposal expenses (Rs. Crore) as approved by the Commission.

Particulars	FY 2021-22		FY 2022-23	
	Unit-1	Unit-2	Unit-1	Unit-2
Ash Disposal Expenses for Unit-1 and Unit-2 (Attributable to contracted capacity of 122.85 MW)	2.42	2.42	1.10	1.10

Interest on Loan

Petitioner's Submission

6.84 The Petitioner has submitted that the Hon'ble Commission vide Order dated May 22, 2023 for True-up of FY 2016-17 had not considered the change in debt equity ratio upon SDR. Accordingly, the Petitioner has filed a review Petition before the Commission to reconsidered its decision. The matter regarding to the SDR is currently sub-judice before this Commission.

6.85 The Petitioner has computed the loan amount considering the debt equity ratio of 70: 30, considering the increase in equity upon SDR. Accordingly, the Petitioner has considered the closing value of loan in FY 2020-21 as Rs 576.06 crore, and Rs 586.61 crore for unit-1 and unit-2 respectively as opening value for FY 2021-22 and closing value of FY 2021-22 as Rs 491.48 crore for unit-1 & Rs 520.42 crore for unit-2 as opening value of FY 2022-23. Further, the gross additional capitalization (without deletion) have been funded in the ratio of 70:30

6.86 The Petitioner has considered the repayment during the year equivalent to the normative depreciation for the year being in line with the ***clause 15.15*** of JSERC (Terms and Conditions for Determination of Generation

Tariff) Regulations, 2020.

6.87 The Petitioner has further submitted that the actual loan portfolio is in the line with the JSERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020., and also considered 70% of the actual capitalization as Normative Loan for FY 2021-22 and FY 2022-23 with interest rate of 9.00% for Unit-1 and Unit-2.

6.88 Accordingly, the Petitioner has submitted the weighted average rate of interest for Unit-1 and Unit-2 duly certified by the auditor as annexed in ***annexure-12*** of main petition for FY 2021-22 and FY 2022-23.

Table 108: Weighted average rate of interest as submitted by the Petitioner.

Particulars	Rate of Interest	
	From 1st April to 30th September 2020	From 1st October to 31st March 2021
Edelweiss Asset Reconstruction Co. Ltd.	9.00%	9.00%
Life Insurance Corporation	9.00%	9.00%
Weighted Average Rate of Interest	**9.00%**	

6.89 Based on the above submission the Petitioner has computed the interest on loan for FY 2021-22 and FY 2022-23 as tabulated hereunder.

Table 109: Interest on Loan (Rs. Crore) as submitted by the Petitioner for FY 2021-22.

Particulars	UoM	Unit-1		Unit-2	
		MYT	Petition	MYT	Petition
Opening Loan	Rs. Cr.	557.06	516.47	586.61	546.44
Deemed Loan Addition	Rs. Cr.	0.50	0.50	0.50	0.50
Deletion During year	Rs. Cr.	0	0.00		0.00
Deemed Loan Repayment	Rs. Cr.	66.07	66.50	66.69	67.11
Closing Loan	Rs. Cr.	491.48	450.47	520.42	479.83
Average Loan Balance	Rs. Cr.	524.27	483.47	553.52	513.14
Interest Rate	%	12.31%	9.00%	12.31%	9.00%
Interest on Loan	**Rs. Cr.**	**64.54**	**43.51**	**68.14**	**46.18**

Table 110: Interest on Loan (Rs. Crore) as submitted by the Petitioner for FY 2022-23.

Particulars	UoM	Unit-1		Unit-2	
		MYT	Petition	MYT	Petition
Opening Loan	Rs. Cr.	491.48	450.47	520.42	479.83
Deemed Loan Addition	Rs. Cr.	3.12	2.37	4.94	2.37
Deletion During year	Rs. Cr.		0.00		0.00
Deemed Loan Repayment	Rs. Cr.	66.18	66.59	66.85	67.20
Closing Loan	Rs. Cr.	428.42	386.26	458.51	415.01
Average Loan Balance	Rs. Cr.	459.95	418.36	489.47	447.42
Interest Rate	%	12.31%	9.00%	12.31%	9.00%
Interest on Loan	**Rs. Cr.**	**56.62**	**37.65**	**60.25**	**40.27**

Commission's Analysis

6.90 The Commission has outlined ***clause 15.6 to clause 15.8*** JSERC Generation Tariff Regulation 2020, for the approval Debt: Equity ratio for a generating station as reproduced below:

"15.6 Existing Projects: For existing projects declaring Commercial Operation on or before April 01, 2021, the following Capital Structure is allowed: -

1. Debt-Equity ratio allowed by the Commission for determination of tariff for the period ending March 31, 2021 shall be considered;

2. In case of the generating station declared under commercial operation prior to April 01, 2021, but where debt-equity ratio has not been determined by the Commission for determination of tariff for the period ending March 31, 2021, the Commission shall approve the debt-equity ratio in accordance with Clause15.7 of these Regulations.

3. Any expenditure incurred or projected to be incurred on or after April 01, 2021, as may be admitted by the Commission as additional capital expenditure for determination of tariff and renovation and modernization expenditure for life extension shall be serviced in the manner as specified in Clause15.7of these Regulations.

15.7 New Projects: For new projects, declaring Commercial Operation on *or after April 01, 2021, the following Capital Structure is allowed:-*

1. *Normative debt-equity ratio of 70:30 shall be considered for the purpose of determination of Tariff.*
2. *In case the actual equity employed is in excess of 30%, the amount of equity for the purpose of tariff determination shall be limited to 30%, and the balance amount shall be considered as normative loan;*
3. *In case the actual equity employed is less than 30%, the actual debt-equity ratio shall be considered;*
4. *The premium, if any raised by the Generating Company while issuing share capital and investment of internal accruals created out of free reserve, for the funding of the project, shall also be reckoned as paid up capital for the purpose of computing return on equity, only if such premium amount and internal resources are actually utilized for meeting capital expenditure of the generating station;*
5. *The Equity invested in foreign currency shall be designated in Indian rupees on the date of each investment;*
6. *Any consumer contribution, work carried out under deposit and grant obtained for the execution of the project shall not be considered as part of the capital structure for the purpose of computation of normative debt-equity.*

Note 1: Any expenditure admitted on account of committed liabilities within the original scope of work and the expenditure deferred on techno-economic grounds but falling within the original scope of work shall be serviced in the normative debt-equity ratio specified in these Regulations;

Note 2: Any expenditure on replacement of old assets or on renovation and modernization or life extension shall be considered on normative debt-equity ratio specified in these Regulations after writing off the entire book value of the original assets from the capital cost of the new asset;

Note 3: Any expenditure admitted by the Commission for determination of tariff on account of new works not in the original scope of work shall *be serviced in the normative debt-equity ratio specified in these Regulations.*

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

6.91 The Commission has considered the opening loan for FY 2021-22 as closing loan of FY 2020-21 and opening Loan for FY 2022-23 as closing loan of FY 2021-22 as approved in this order.

6.92 In accordance with ***annexure-12*** of main petition, the Commission approves the weighted average interest rate as 9.00% as per ***clause 15.18*** of JSERC Generation Tariff Regulation 2020 for both Units.

6.93 In accordance with ***clause 15.15*** of JSERC GTR 2020 as mentioned above, the Commission approves the deemed loan repayment equal to approved depreciation (Additional Capitalization) for FY 2021-22 and FY 2022-23.

6.94 Based on above excerpt the Commission approves the interest on loan for FY 2021-22 and FY 2022-23 as computed hereunder.

Table 111: Interest on Loan (Rs. Crore) as approved by the Commission for FY 2021-22.

Particulars	Unit-1			Unit-2		
	MYT	Petition	Approved	MYT	Petition	Approved
Opening Loan	557.06	516.47	516.32	586.61	546.44	545.58
Deemed Loan Addition	0.50	0.50	0.50	0.50	0.50	0.50
Deletion During year	0	0.00	0.00		0.00	0.00
Deemed Loan Repayment	66.07718	66.50	66.49	66.69	67.11	67.10
Closing Loan	491.48	450.47	450.32	520.42	479.83	478.98
Average Loan Balance	524.27	483.47	483.32	553.52	513.14	512.28
Interest Rate	12.31%	9.00%	9.00%	12.31%	9.00%	9.00%
Interest on Loan	**64.54**	**43.51**	**43.50**	**68.14**	**46.18**	**46.11**

Table 112: Interest on Loan (Rs. Crore) as approved by the Commission for FY 2022-23.

Particulars	Unit-1			Unit-2		
	MYT	Petition	Approved	MYT	Petition	Approved
Opening Loan	491.48	450.47	450.32	520.42	479.83	478.98
Deemed Loan Addition	3.12	2.37	2.37	4.94	2.37	2.37
Deletion During year		0.00	0.00		0.00	0.00
Deemed Loan Repayment	66.18	66.59	66.58	66.85	67.20	67.18
Closing Loan	428.42	386.26	386.11	458.51	415.01	414.17
Average Loan Balance	459.95	418.36	418.22	489.47	447.42	446.57
Interest Rate	12.31%	9.00%	9.00%	12.31%	9.00%	9.00%
Interest on Loan	**56.62**	**37.65**	**37.64**	**60.25**	**40.27**	**40.19**

Return on Equity

Petitioner's Submission

6.95 The Petitioner has submitted that this Commission in order dated May 22, 2023 for True-up of FY 2016-17 has not considered the changed in debt equity ratio upon SDR. Accordingly, the petitioner has filed a review petition before this Commission to reconsidered its decision.

6.96 The Petitioner has computed the equity amount considering the debt equity ratio of 70: 30, considering the increase in equity upon SDR. Accordingly, the Petitioner has considered the closing value of loan in FY 2020-21 opening value for FY 2021-22 and closing value to later year as opening value for FY 2022-23. Further, the gross additional capitalization (without deletion) have been funded in the ratio of 70:30.

6.97 The Petitioner has calculated return on equity in accordance with ***clause 15.9*** of JSERC (Terms and Conditions for Determination of Generation Tariff) Regulations.

6.98 Further, the Petitioner while calculating return on equity has considered post-tax return as 15.00% in accordance with Generation Tariff Regulations (1st Amendment) Regulation 2020.

6.99 Accordingly, the Return on Equity (Pre-Tax) claimed by the Petitioner for Unit-1 and Unit-2 for FY 2021-22 and FY 2022-23 is summarized in the table below:

Table 113: Return on Equity (Rs. Crore) as submitted by the Petitioner for FY 2021-22.

Particulars	Unit-1		Unit-2	
	MYT	Petition	MYT	Petition
Opening Equity	456.57	509.97	461.20	514.13
Addition the year	0.21	0.21	0.21	0.21
Deletion during the Year		0.00		0.00
Closing Equity	456.78	510.18	461.41	514.35
Average Equity	456.68	510.08	461.31	514.24
Rate of Return on Equity	15.00%	15.00%	15.00%	15.00%
Return on Equity	**68.50**	**76.51**	**69.20**	**77.14**

Table 114: Return on Equity (Rs. Crore) as submitted by the Petitioner for FY 2022-23.

Particulars	Unit-1		Unit-2	
	MYT	Petition	MYT	Petition
Opening Equity	456.78	510.18	461.41	514.35
Addition the year	1.34	1.00	2.12	1.02
Deletion during the Year		0.00		0.00
Closing Equity	458.12	511.19	463.53	515.36
Average Equity	457.45	510.69	462.47	514.85
Rate of Return on Equity	15.00%	15.00%	15.00%	15.00%
Return on Equity	**68.62**	**76.60**	**69.37**	**77.23**

Commission's Analysis

6.100 The Commission has outlined ***clause 15.6 to clause 15.8*** JSERC Generation Tariff Regulation 2020 and clause 6.1 of Generation Tariff (1st Amendment), Regulation 2023 for approval Return on Equity for a generating station as reproduced below:

"15.6 Existing Projects: For existing projects declaring Commercial Operation on or before April 01, 2021, the following Capital Structure is allowed: -

1. Debt-Equity ratio allowed by the Commission for determination of tariff for the period ending March 31, 2021 shall be considered;

2. In case of the generating station declared under commercial operation prior to April 01, 2021, but where debt-equity ratio has not been determined by the Commission for determination of tariff for the period ending March 31, 2021, the Commission shall approve the debt-equity ratio in accordance with Clause15.7 of these Regulations.

3. Any expenditure incurred or projected to be incurred on or after April 01, 2021, as may be admitted by the Commission as additional capital expenditure for determination of tariff and renovation and modernisation expenditure for life extension shall be serviced in the manner as specified in Clause15.7of these Regulations.

15.7 New Projects: For new projects, declaring Commercial Operation on or after April 01, 2021, the following Capital Structure is allowed: -

1. Normative debt-equity ratio of 70:30 shall be considered for the purpose of determination of Tariff.

2. In case the actual equity employed is in excess of 30%, the amount of equity for the purpose of tariff determination shall be limited to 30%, and the balance amount shall be considered as normative loan;

3. In case the actual equity employed is less than 30%, the actual debt-equity ratio shall be considered;

4. The premium, if any raised by the Generating Company while issuing share capital and investment of internal accruals created out of free reserve, for the funding of the project, shall also be reckoned as paid up capital for the purpose of computing return on equity, only if such premium amount and internal resources are actually utilized for meeting capital expenditure of the generating station;

5. The Equity invested in foreign currency shall be designated in Indian rupees on the date of each investment;

6. Any consumer contribution, work carried out under deposit and grant obtained for the execution of the project shall not be considered as part of the capital structure for the purpose of computation of normative debt-equity.

Note 1: Any expenditure admitted on account of committed liabilities within the original scope of work and the expenditure deferred on techno-economic grounds but falling within the original scope of work shall be serviced in the normative debt-equity ratio specified in these Regulations;

Note 2: Any expenditure on replacement of old assets or on renovation and modernization or life extension shall be considered on normative debt-equity ratio specified in these Regulations after writing off the entire book value of the original assets from the capital cost of the new asset;

Note 3: Any expenditure admitted by the Commission for determination of tariff on account of new works not in the original scope of work shall be serviced in the normative debt-equity ratio specified in these Regulations.

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

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Clause 6.1 states that:

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

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

6.101 The Commission has considered the opening equity for FY 2021-22 equal to the closing loan for FY 2020-21 and opening value of FY 2022-23 equal to closing value for FY 2021-22 as approved earlier in this order.

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

6.103 Based on above excerpt, the Commission has computed the return on equity for FY 2021-22 and FY 2022-23 as tabulated hereunder:

Table 115: Return on Equity (Rs. Crore) as approved by the Commission for FY 2021-22.

Particulars	Unit-1			Unit-2		
	MYT	Petition	Approved	MYT	Petition	Approved
Opening Equity	456.57	509.97	509.10	461.20	514.13	513.29
Addition During the Year	0.21	0.21	0.21	0.21	0.21	0.21
Deletion during the Year		0.00	0.00		0.00	0.00
Closing Equity	456.78	510.18	509.31	461.41	514.35	513.50
Average Equity	456.68	510.08	509.21	461.31	514.24	513.39
Rate of Return on Equity	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%
Return on Equity	**68.50**	**76.51**	**76.38**	**69.20**	**77.14**	**77.01**

Table 116: Return on Equity (Rs. Crore) as approved by the Commission for FY 2022-23.

Particulars	Unit-1			Unit-2		
	MYT	Petition	Approved	MYT	Petition	Approved
Opening Equity	456.78	510.18	509.33	461.41	514.35	513.53
Addition During the Year	1.34	1.00	1.02	2.12	1.02	1.02
Deletion during the Year		0.00	0.00		0.00	0.00
Closing Equity	458.12	511.19	510.35	463.53	515.36	514.54
Average Equity	457.45	510.69	509.84	462.47	514.85	514.03
Rate of Return on Equity	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%
Return on Equity	**68.62**	**76.60**	**76.48**	**69.37**	**77.23**	**77.11**

Interest on Working Capital (IOWC)

Petitioner's Submission

6.104 In accordance with ***clause 15.23, clause 15.26*** of JSERC Generation Tariff Regulations, 2020, the Petitioner has computed the Interest on Working Capital (IOWC) requirement for FY 2021-22 and FY 2022-23 as tabulated hereunder.

Table 117: IOWC (Rs. Crore) as submitted by the Petitioner for FY 2021-22.

Particulars	Unit-1		Unit-2	
	MYT	Petition	MYT	Petition
Coal Cost for 2 Months	62.56	63.04	63.42	63.03
Cost of Secondary Fuel Oil for 2 Months	0.73	0.92	0.75	0.88
O&M Expenses for 1 month	5.89	6.14	5.89	6.14
Maintenance Spares (20% of O&M)	13.86	14.72	13.86	14.72
Receivables for 2 months	93.43	94.82	94.87	95.35
Total Working Capital	**176.48**	**179.65**	**178.79**	**180.12**
Rate of Interest	10.50%	10.50%	10.50%	10.50%
Interest on Working Capital	**18.53**	**18.86**	**18.77**	**18.91**

Table 118: IOWC (Rs. Crore) as submitted by the Petitioner for FY 2022-23.

Particulars	Unit-1		Unit-2	
	MYT	Petition	MYT	Petition
Coal Cost for 2 Months	62.56	77.23	63.42	77.23
Cost of Secondary Fuel Oil for 2 Months	0.73	1.41	0.75	1.31
O&M Expenses for 1 month	6.25	6.55	6.25	6.55
Maintenance Spares (20% of O&M)	14.70	15.72	14.70	15.72
Receivables for 2 months	93.03	103.29	94.49	103.75
Total Working Capital	**177.27**	**204.20**	**179.61**	**204.56**
Rate of Interest	10.50%	10.50%	10.50%	10.50%
Interest on Working Capital	**18.61**	**21.44**	**18.86**	**21.48**

Commission's Analysis

6.105 The Commission has outlined ***clause 15.23 to clause 15.26*** of JSERC Generation Tariff Regulation 2020 and ***clause 6.1*** of JSERC Generation Tariff (1st Amendment), Regulation 2023 for approval interest on working capital for a generating station.

"15.23 The Commission shall determine the Working Capital

requirement on normative basis for coal-based generating stations, which shall comprise the following components:

1. *Cost of coal or lignite and limestone towards stock, if applicable, for 10 days for pit-head generating stations and 20 days for non-pit-head generating stations for generation corresponding to the normative annual plant availability factor or the maximum coal/lignite stock storage capacity, whichever is lower;*
2. *Cost of coal or lignite and limestone for 30 days for generation corresponding to normative annual plant availability factor;*
3. *Cost of secondary fuel oil for two months for generation corresponding to the Normative Annual Plant Availability Factor, and in case of use of more than one secondary fuel oil, cost of fuel oil stock for the main secondary fuel oil;*
4. *Operation and Maintenance expenses, including water charge and security expenses for one month;*
5. *Maintenance spares @ 20% of Operation and Maintenance Expenses;*
6. *Receivables equivalent to 45days of capacity charges and energy charges for sale of electricity calculated on the Normative Annual Plant Availability Factor:*

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

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

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

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

6.106 Taking into account the above regulation, the Interest on Working capital has been calculated at an interest rate of 10.50% for FY 2021-22 and FY 2022-23 (Bank Rate plus 350 basis points) as specified in the ***clause 15.26*** JSERC Generation Tariff Regulation, 2020 is given below.

Table 119: IOWC (Rs. Crore) as approved by the Commission for FY 2021-22.

Particulars	Unit-1			Unit-2		
	MYT	Petition	Approved	MYT	Petition	Approved
Coal Cost for 2 Months	62.56	63.04	63.04	63.42	63.03	63.03
Cost of Secondary Fuel Oil for 2 Months	0.73	0.92	0.92	0.75	0.88	0.88
O&M Expenses for 1 month	5.89	6.14	6.25	5.89	6.14	6.25
Maintenance Spares (20% of O&M)	13.86	14.72	14.99	13.86	14.72	13.86
Receivables for 2 months	93.43	94.82	93.48	94.87	95.35	93.90
Total Working Capital	176.48	179.65	178.68	178.79	180.12	177.91
Rate of Interest	10.50%	10.50%	10.50%	10.50%	10.50%	10.50%
Interest on Working Capital	**18.53**	**18.86**	**18.76**	**18.77**	**18.91**	**18.68**

Table 120: IOWC (Rs. Crore) as approved by the Commission for FY 2022-23.

Particulars	Unit-1			Unit-2		
	MYT	Petition	Approved	MYT	Petition	Approved
Coal Cost for 2 Months	62.56	77.23	73.72	63.42	77.23	73.72
Cost of Secondary Fuel	0.73	1.41	1.41	0.75	1.31	1.30

Particulars	Unit-1			Unit-2		
	MYT	Petition	Approved	MYT	Petition	Approved
Oil for 2 Months						
O&M Expenses for 1 month	6.25	6.55	6.66	6.25	6.55	6.66
Maintenance Spares (20% of O&M)	14.70	15.72	15.98	14.70	15.72	14.70
Receivables for 2 months	93.03	103.29	102.04	94.49	103.75	102.40
Total Working Capital	177.27	204.20	199.82	179.61	204.56	198.78
Rate of Interest	10.50%	10.50%	10.50%	10.50%	10.50%	10.50%
Interest on Working Capital	**18.61**	**21.44**	**20.98**	**18.86**	**21.48**	**20.87**

Sharing of Gain/Loss

Sharing of net saving on account of interest rate

Petitioner Submission

6.107 The Petitioner has submitted that this Commission had approved interest rate of 12.31%. But, the petitioner in instant petition has claimed interest rate of 9.00% for FY 2021-22 and FY 2022-23, which is lower than the approved value for FY 2021-22 & FY 2022-23.

6.108 Accordingly, in terms ***clause 15.21*** of JSERC Generation Tariff Regulation 2020, the Petitioner has claimed the sharing of saving of Rs 8.00 crore for unit-1 and Rs 8.49 crore for unit-2 for FY 2021-22. The Petitioner has further submitted that the sharing of saving of Rs 6.92 crore for unit-1 and Rs 7.40 crore for unit-2 for FY 2022-23.

Table 121: Sharing of saving on account of lower interest rate (Rs. Cr.) as submitted by Petitioner.

Particulars	Units	FY 2021-22		FY 2022-23	
		Unit-1	Unit-2	Unit-1	Unit-2
Interest on Debt (Claiming in the instant Petition)	Rs. Cr.	43.51	46.18	37.65	40.27
Interest on Debt (%) (As per order dated 22.06.2023)	%	12.31%	12.31%	12.31%	12.31%
Interest on Debt	Rs. Cr.	59.51	63.16	51.50	55.07
Savings	Rs. Cr.	16.00	16.98	13.85	14.81
Sharing of savings (50:50)	**Rs. Cr.**	**8.00**	**8.49**	**6.92**	**7.40**

Commission's Analysis

6.109 The Commission has outlined **clause 15.21** of JSERC Generation Tariff Regulation 2020 for approval sharing of gain/loss on account of interest rate for a generating station as reproduced below:

> *"15.21 The Generating Company shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be pass-through to the Beneficiaries and the net savings shall be shared between the beneficiaries and the Generating Company, in the ratio of 50:50."*

6.110 On scrutinizing and analyzing the material, information, and actual figure, the Commission in accordance with the aforesaid provision, approves the sharing of saving on account of lower interest rate as tabulated hereunder.

Table 122: Sharing of saving on account of lower interest rate (Rs. Cr.) as approved by the Commission.

Particulars	Units	FY 2021-22		FY 2022-23	
		Unit-1	Unit-2	Unit-1	Unit-2
Interest on Debt (Claiming in the instant Petition)	**Rs. Cr.**	**43.49**	**46.10**	**37.63**	**40.19**
Interest on Debt (%) (As per order dated 22.06.2023)	%	12.31%	12.31%	12.31%	12.31%
Interest on Debt	Rs. Cr.	59.49	63.05	51.48	54.96
Savings	Rs. Cr.	16.00	16.95	13.84	14.78
Sharing of savings (50:50)	**Rs. Cr.**	**8.00**	**8.48**	**6.92**	**7.39**

6.111 The Commission noted that the petitioner has refinance his loan amount at weightage average rate of 9.00%. but failed to submit the APR for FY 2023-24 in this petition. Hence, the Commission approves the interest rate of loan as 9.00% for FY 2023-24.

Sharing of net saving on account of variation in operational parameter

Petitioner Submission

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

6.113 Accordingly, in terms of above regulation and considering actual performance of FY 2021-22 and FY 2022-23, the Gain due to Operational Performance of SHR, Auxiliary Power Consumption and SFC works out as follows for Unit-1 and Unit-2 as tabulated hereunder.

Table 123: Sharing Gain/Loss (Rs. Cr.) on account of operational parameter as submitted by Petitioner.

Particulars	Unit	FY 2021-22		FY 2022-23	
		U-1	U-2	U-1	U-2
Aux	%	8.61%	8.61%	8.48%	8.48%
Heat Rate	Kcal/Kwh	2,350.37	2,348.35	2,528.54	2,528.91
Specific Oil consumption	ml / kWh	0.17	0.19	0.23	0.13
Calorific value of Oil	Kcal/ml	9.35	9.35	9.39	9.37
Weighted avg. cost of oil	Rs/ml	0.05	0.05	0.08	0.08
Wt. avg. cost of coal	Rs/Kg	3.42	3.42	4.15	4.15
Weighted avg. GCV of coal	Kcal/kg	3,424.80	3,424.80	3,650.94	3,650.94
ECR Actual	**Rs. /kWh**	**2.58**	**2.58**	**3.16**	**3.15**
ECR Normative	**Rs. /kWh**	**2.65**	**2.65**	**3.02**	**3.02**
Gain/(Loss)	Rs./kWh	0.07	0.07	-0.14	-0.13
Gain/(Loss)	Rs. Crore	3.57	3.61	-5.27	-5.06
Sharing of Gain / (Loss) (75:25)	**Rs. Crore**	**0.89**	**0.90**	**0.00**	**0.00**

Commission Analysis

6.114 The Commission has outlined ***clause 6.14*** of JSERC Generation Tariff Regulation 2020 and ***clause 5.1*** of JSERC Generation Tariff (1st Amendment) Regulation 2023 for approval sharing of gain/loss due to variation in operation norms for a generating station as reproduced below:

> *6.14 Sharing of gains due to variation in norms: The Generating Company shall workout gains based on the actual performance of applicable controllable parameters as under: -*
>
> 1. *Station Heat Rate;*
> 2. *Secondary Fuel Oil Consumption;*
> 3. *Auxiliary Energy Consumption; and*
> 4. *Operations and Maintenance Expenses.*

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

Net Gain = (ECRN -ECRA) x Scheduled Generation;

Where,

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

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

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Clause 5.1 (provisos) states that:

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

6.115 On scrutinizing and analyzing the material, information, and actual figure as submitted by the Petitioner, the Commission approves the operational gain due to variation for FY 2021-22 and FY 2022-23 as given below.

Table 124: Operational Gain (Rs. Cr.) as approved by the Commission for FY 2021-22.

Particulars	UoM	Unit-1		Unit-2	
		Normative	Approved	Normative	Approved
Auxiliary Consumption (AUX)	%	9.00	8.61	9.00	8.61
Gross Station Heat Rate (SHR)	kCal/kWh	2387.00	2349.96	2387.00	2348.53
Specific fuel Oil Consumption	mL/kWh	0.50	0.17	0.50	0.19

Particulars	UoM	Unit-1		Unit-2	
		Normative	Approved	Normative	Approved
Calorific Value of Oil (CVSF)	kCal/ml	9.35	9.35	9.35	9.35
GCV of Primary Fuel (CVPF)	kCal/kg	3424.80	3424.80	3424.80	3424.80
Landed Price of Primary Fuel	Rs./kg	3.40	3.40	3.40	3.40
Landed Price of Sec. Fuel	Rs./ml	0.0548	0.05	0.05	0.05
Energy Charge Rate (ECR)	**Rs/kWh**	**2.63**	**2.56**	2.63	**2.56**
ECR_N - ECR_A	**Rs/kWh**		**0.068**		**0.068**
Ex-Bus Generation	MU		526.74		526.74
Gain/(Loss) on Operational Parameters	Rs. Cr		**3.58**		**3.57**
Savings/Gain with beneficiary (25%)	**Rs. Cr**		**0.89**		**0.89**

Table 125: Operational Gain (Rs. Cr.) as approved by the Commission for FY 2022-23.

Particulars	UoM	Unit-1		Unit-2	
		Normative	Approved	Normative	Approved
Auxiliary Consumption (AUX)	%	9.00	8.48	9.00	8.48
Gross Station Heat Rate (SHR)	kCal/kWh	2387.00	2528.70	2387.00	2528.74
Specific fuel Oil Consumption	mL/kWh	0.50	0.23	0.50	0.13
Calorific Value of Oil (CVSF)	kCal/ml	9.39	9.39	9.37	9.37
GCV of Primary Fuel (CVPF)	kCal/kg	3650.94	3650.94	3650.94	3650.94
Landed Price of Primary Fuel	Rs./kg	4.11	4.11	4.11	4.11
Landed Price of Sec. Fuel	Rs./ml	0.08	0.08	0.08	0.08
Energy Charge Rate (ECR)	**Rs/kWh**	**3.00**	**3.13**	2.99	**3.12**
ECR_N - ECR_A	**Rs/kWh**		**0.000**		**0.000**
Ex-Bus Generation	MU		384.55		384.55
Gain/(Loss) on Operational Parameters	Rs. Cr		**0.00**		**0.00**
Savings/Gain with beneficiary (25%)	**Rs. Cr**		**0.00**		**0.00**

Gain in Operation & Maintenance

Petitioner Submission

6.116 The Petitioner has submitted that the actual O&M expenses as per audited books of account for FY 2021-22 and FY 2022-23 is as follows:

Table 126: Actual O&M Expenses (Rs. Cr.) as submitted by the Petitioner.

Particulars	FY 2021-22		FY 2022-23	
	Unit-1	Unit-2	Unit-1	Unit-2
Actual O&M Expenses (Excluding Legal & Consultancy Charges)	81.98	81.98	81.86	81.86

6.117 The Petitioner has further submitted it has incurred a higher O&M expense for smooth running of the plant in the FY 2021-22 and FY 2022-23. Accordingly, as per the working of the True-up, the petitioner is facing financial loss on account of O&M expenses. It is further submitted that as per the JSERC Generation Tariff Regulation 2020, the financial loss on account of O&M expenses will be entirely borne by the Petitioner as tabulated hereunder:

Table 127: Gain on account of Operational and Maintenance expenses (Rs. Cr.) as submitted by the Petitioner.

Particulars	FY 2021-22		FY 2022-23	
	Unit-1	Unit-2	Unit-1	Unit-2
Actual O&M Expenses (excluding Legal & Consultancy Charges)	81.98	81.98	81.86	81.86
Revised Normative O&M Expenses (excluding Legal & Consultancy Charges)	68.62	68.62	71.91	71.91
Gain on Account of O&M Expenses (50% share to JBVNL)	0.00	0.00	0.00	0.00

Commission's Analysis

6.118 The Commission has outlined ***clause 6.14*** of Generation Tariff Regulation 2020 for the approval of Gain in operation and Maintenance for a generating station as reproduced below:

6.14 Sharing of gains due to variation in norms: The Generating Company shall workout gains based on the actual performance of applicable controllable parameters as under: -

1.Station Heat Rate;
2.Secondary Fuel Oil Consumption;
3.Auxiliary Energy Consumption; and

4.Operations and Maintenance Expenses.

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

6.119 Accordingly, the Commission approves the gain in Operation & Maintenance for FY 2021-22 & FY 2022-23 as tabulated below.

Table 128: Gain in Operation & Maintenance (Rs. Crore) as approved by the Commission.

Particulars	FY 2021-22		FY 2022-23	
	Unit-1	Unit-2	Unit-1	Unit-2
Actual O&M Expenses (Excluding Legal & Consultancy Charges)	81.98	81.98	81.86	81.86
Revised Normative O&M Expenses (Excluding Legal & Consultancy Charges)	69.97	69.97	73.34	73.34
Gain on Account of O&M Expenses (50% share to JBVNL)	0.00	0.00	0.00	0.00

Shakti Scheme Discount

Petitioner's Submission

6.120 The Petitioner has submitted that lifting of coal under the Shakti scheme started in July'2019 and it has been raising credit notes for 3 paisa discount in tariff for units supplied to JBVNL through coal allocated under said scheme. The Energy Charges have been computed on the basis of actual Coal details for the respective year which excludes a discount of 3 Paisa per unit as described earlier in the petition. Hence, the revenue billed amount excludes the discount of 3 paisa per unit as it has been raising separate credit notes for discount in tariff to JBVNL. Thus, the Petitioner has subtracted the amount of Rs 0.73 crore and Rs. 1.25 crore w.r.t Shakti coal discount for each unit-1 & 2 for FY 2021-22 and FY 2022-23 respectively in the gap/surplus adjustment. The detailed calculations of discount for FY 2021-22 and FY 2022-23 are attached in ***Annexure-18*** of main petition.

Commission's Analysis

6.121 On scrutinizing and analyzing the material, information, and actual figure, FSA, PPA approvals and details submitted by the Petitioner as annexes in ***annexure-18***, the Commission approves the Shakti Scheme Discount for FY 2021-22 and FY 2022-23 is given below.

Table 129: Shakti Scheme Discount (Rs. Crore) as approved by the Commission for FY 2021-22.

Particulars	UoM	Unit-1			Unit-2		
		MYT	Petition	Approved	MYT	Petition	Approved
Shakti scheme Discount Amount attributed JBVNL (25%)	**Rs. Cr.**	**-**	**0.73**	**0.73**	**-**	**0.73**	**0.73**

Table 130: Shakti Scheme Discount (Rs. Crore) as approved by the Commission for FY 2022-23.

Particulars	UoM	Unit-1			Unit-2		
		MYT	Petition	Approved	MYT	Petition	Approved
Shakti scheme Discount Amount attributed JBVNL (25%)	**Rs. Cr.**	**-**	**1.25**	**1.25**	**-**	**1.25**	**1.25**

Non-Tariff Income

Petitioner Submission

6.122 The Petitioner has submitted the non-tariff income as per audited books account for FY 2021-22 and FY 2022-23 as given below:

Table 131: Non-Tariff Income (Rs. Cr) as submitted by the Petitioner.

Particulars	FY 2021-22		FY 2022-23	
	Unit-1	Unit-2	Unit-1	Unit-2
Non-Tariff Income	2.16	2.16	2.44	2.44

Commission Analysis

6.123 On scrutinizing and analyzing the material, information, and audited account, the Commission approves the Non-Tariff Income for FY 2021-22 and FY 2022-23 as given below.

Table 132: Non-Tariff income (Rs. Cr.) as approved by the Commission.

Particulars	FY 2021-22		FY 2022-23	
	Unit-1	Unit-2	Unit-1	Unit-2
Non-Tariff Income	2.16	2.16	2.44	2.44

Incentive

Commission Analysis

6.124 The Commission has observed that the petitioner has claimed higher PLF than the normative PLF. Accordingly, the Commission compute the incentive in accordance with the provision specified in JSERC (Terms & Condition for determination of Tariff) Regulation, 2020 and amendments thereof as computed hereunder.

Table 133: Incentive based on PLF (Rs. Cr.) as approved by the Commission.

Particulars	Unit-1	Unit-2
Net Generation (MU)	538.083	538.083
Net Energy Supplied (MU)	489.73	489.73
Actual PLF	91.01%	91.01%
NAPLF	85%	85%
Excess PLF	6%	6%
Flat rate of Incentive (Rs/unit)	0.5	0.5
Incentive entitled (Rs. Cr.)	**1.62**	**1.62**

Summary of Annual Revenue Requirement

Commission's Analysis

6.125 On consideration of the submission and details furnished by the

Petitioner, the Commission in accordance with clause 15.3 of JSERC Generation Tariff Regulation 2020 approves the Annul Fixed Cost (AFC) for FY 2023-24 as summaries below.

Table 134: Annual Fixed Cost (Rs. Crore) as approved by the Commission for FY 2021-22.

Particulars	Unit-1			Unit-2		
	MYT	Petition	Approved	MYT	Petition	Approved
O&M excl. water, capital spare, ash	69.29	73.62	74.97	69.29	73.62	74.97
Depreciation	82.65	66.50	66.49	66.69	67.11	67.10
Interest on Loan	64.54	43.51	43.50	68.14	46.18	46.11
Return on Equity	68.50	76.51	76.38	69.20	77.14	77.01
Interest on Working Capital	18.53	18.86	18.76	18.77	18.91	18.68
Add: Saving on account of lower interest rate	0.00	8.00	8.00	0.00	8.49	8.48
Less: Non-Tariff Income	0.00	2.16	2.16	0.00	2.16	2.16
Annual Fixed Cost	**303.51**	**284.85**	**285.94**	**292.09**	**289.29**	**290.19**

Table 135: Annual Fixed Cost (Rs. Crore) as approved by the Commission for FY 2022-23.

Particulars	Unit-1			Unit-2		
	MYT	Petition	Approved	MYT	Petition	Approved
O&M excl. water, capital spare, ash	73.50	78.59	79.92	73.50	78.59	79.92
Depreciation	66.18	66.59	66.58	66.85	67.20	67.18
Interest on Loan	56.62	37.65	37.64	60.25	40.27	40.19
Return on Equity	68.62	76.60	76.48	69.37	77.23	77.11
Interest on Working Capital	18.61	21.44	20.98	18.86	21.48	20.87
Add: Saving on account of lower interest rate	0.00	6.92	6.92	0.00	7.40	7.39
Less: Non-Tariff Income	0.00	2.44	2.44	0.00	2.44	2.44
Annual Fixed Cost	**283.53**	**285.36**	**286.08**	**288.83**	**289.73**	**290.22**

Tariff for Unit-1 and Unit-2

Petitioner Submission

6.126 The Petitioner has submitted that in accordance with provisions of Power Purchase Agreement (PPA) executed with Discom, out of the total Contracted Capacity of 122.85 MW, APNRL will supply 63.882 MW capacity at total tariff (i.e., 13% of the total net Capacity at total Tariff (both fixed and Variable Charge) and the balance 58.96 MW capacity, i.e., 12% of the Net capacity at variable cost i.e., Energy Charge as approved by the Commission. Accordingly, the tariff for supply of regulated capacity for JUVNL/JBVNL is summarized below:

Table 136: Tariff for 12% of total net capacity as submitted by the petitioner for FY 2021-22. (Variable Charge)

Particulars	Units	Unit-1		Unit-2	
		MYT	Petition	MYT	Petition
Variable Cost/ Base Energy Charge Rate	**Rs/kWh**	**2.580**	**2.647**	**2.616**	**2.646**

Table 137: Tariff for 12% of total net capacity as submitted by the petitioner for FY 2022-23. (Variable Charge)

Particulars	Units	Unit-1		Unit-2	
		MYT	Petition	MYT	Petition
Variable Cost/ Base Energy Charge Rate	**Rs/kWh**	**2.580**	**3.019**	**2.616**	**3.015**

Table 138: Tariff for 13% of total net capacity as submitted by the petitioner for FY 2021-22. (Fixed Charge)

Particulars	Units	Unit-1		Unit-2	
		MYT	Petition	MYT	Petition
Gross Capacity	MW	270.00	270.00	270.00	270.00
Auxiliary Consumption	%	0.09	0.09	0.09	0.09
Net Capacity	MW	245.70	245.70	245.70	245.70
12% of Net Capacity for Supply to JUVNL/JBVNL at Energy Charge	MW	29.48	29.48	29.48	29.48
Remaining Capacity from which Fixed Charges are to be recovered	MW	216.22	216.22	216.22	216.22
Annual Fixed Charge	Rs Cr.	303.51	284.85	292.09	289.29
Annual Fixed Charges/MW	Rs Cr./MW	1.40	1.32	1.35	1.34
13% of Net Capacity for supply to JUVNL at full tariff	MW	31.94	31.94	31.94	31.94
AFC for 13% of Net Capacity	**MW**	**44.84**	**42.08**	**43.15**	**42.74**

Table 139: Tariff for 13% of total net capacity as submitted by the petitioner for FY 2022-23. (Fixed Charge)

Particulars	Units	Unit-1		Unit-2	
		MYT	Petition	MYT	Petition
Gross Capacity	MW	270.00	270.00	270.00	270.00
Auxiliary Consumption	%	0.09	0.09	0.09	0.09
Net Capacity	MW	245.70	245.70	245.70	245.70
12% of Net Capacity for Supply to JUVNL/JBVNL at Energy Charge	MW	29.48	29.48	29.48	29.48
Remaining Capacity from which Fixed Charges are to be recovered	MW	216.22	216.22	216.22	216.22
Annual Fixed Charge	Rs Cr.	283.53	285.36	288.83	289.73
Annual Fixed Charges/MW	Rs Cr./MW	1.31	1.32	1.34	1.34
13% of Net Capacity for supply to JUVNL at full tariff	MW	31.94	31.94	31.94	31.94
AFC for 13% of Net Capacity	MW	**41.89**	**42.16**	**42.67**	**42.80**

Commission's Analysis

6.127 The tariff for 12% of the total net capacity shall be the variable cost (subject to fuel price adjustment in accordance with Generation Tariff Regulations 2020) approves by the Commission, whereas the tariff for next 13% of total net capacity shall be total tariff i.e., variable cost (subject to fuel price adjustment in accordance with Generation Tariff Regulations 2020) and fixed charges as approves by the Commission as tabulated below.

Table 140: Tariff for 12% of total net capacity as approved by the Commission for FY 2021-22. (Variable Charge)

Particulars	Units	Unit-1		Unit-2	
		Petition	Approved	Petition	Approved
Variable Cost/ Base Energy Charge Rate	**Rs/kWh**	**2.647**	**2.626**	**2.646**	**2.625**

Table 141: Tariff for 12% of total net capacity as approved by the Commission for FY 2022-23. (Variable Charge)

Particulars	Units	Unit-1		Unit-2	
		Petition	Approved	Petition	Approved
Variable Cost/ Base Energy Charge Rate	**Rs/kWh**	**3.019**	**2.996**	**3.015**	**2.993**

Table 142: Tariff for 13% of total net capacity for Unit-1 as approved by the Commission for FY 2021-22. (Fixed Charge)

Particulars	Derivation	Units	Unit-1		
			MYT	Petition	Approved
Gross Capacity	A	MW	270.00	270.00	270.00
Auxiliary Consumption	B	%	0.09	0.09	0.09
Net Capacity	C=A x (1-B)	MW	245.70	245.70	245.70
12% of Net Capacity for Supply to JUVNL/JBVNL at Energy Charge	D=C x 12%	MW	29.48	29.48	29.48
Remaining Capacity from which Fixed Charges are to be recovered	E=C-D	MW	216.22	216.22	216.22
Annual Fixed Charge	F	Rs Cr.	303.51	284.85	285.94
Annual Fixed Charges/MW	G=F/E	Rs Cr./MW	1.40	1.32	1.32
13% of Net Capacity for supply to JUVNL at full tariff	H=C x 13%	MW	31.94	31.94	31.94
AFC for 13% of Net Capacity	**I=G x H**	**Rs. Cr.**	**44.84**	**42.08**	**42.24**

Table 143: Tariff for 13% of total net capacity for Unit-2 as approved by the Commission for FY 2021-22. (Fixed Charge)

Particulars	Derivation	Units	Unit-2		
			MYT	Petition	Approved
Gross Capacity	A	MW	270.00	270.00	270.00
Auxiliary Consumption	B	%	0.09	0.09	0.09
Net Capacity	C=A x (1-B)	MW	245.70	245.70	245.70
12% of Net Capacity for Supply to JUVNL/JBVNL at Energy Charge	D=C x 12%	MW	29.48	29.48	29.48
Remaining Capacity from which Fixed Charges are to be recovered	E=C-D	MW	216.22	216.22	216.22
Annual Fixed Charge	F	Rs Cr.	292.09	289.29	290.19
Annual Fixed Charges/MW	G=F/E	Rs Cr./MW	1.35	1.34	1.34
13% of Net Capacity for supply to JUVNL at full tariff	H=C x 13%	MW	31.94	31.94	31.94
AFC for 13% of Net Capacity	**I=G x H**	**Rs. Cr.**	**43.15**	**42.74**	**42.87**

Table 144: Tariff for 13% of total net capacity for Unit-1 as approved by the Commission for FY 2022-23. (Fixed Charge)

Particulars	Derivation	Units	Unit-1		
			MYT	Petition	Approved
Gross Capacity	A	MW	270.00	270.00	270.00
Auxiliary Consumption	B	%	0.09	0.09	0.09
Net Capacity	C=A x (1-B)	MW	245.70	245.70	245.70
12% of Net Capacity for Supply to JUVNL/JBVNL at Energy Charge	D=C x 12%	MW	29.48	29.48	29.48
Remaining Capacity from which Fixed Charges are to be recovered	E=C-D	MW	216.22	216.22	216.22
Annual Fixed Charge	F	Rs Cr.	283.53	285.36	286.08
Annual Fixed Charges/MW	G=F/E	Rs Cr./MW	1.31	1.32	1.32
13% of Net Capacity for supply to JUVNL at full tariff	H=C x 13%	MW	31.94	31.94	31.94
AFC for 13% of Net Capacity	**I=G x H**	**Rs. Cr.**	**41.89**	**42.16**	**42.26**

Table 145: Tariff for 13% of total net capacity for Unit-2 as approved by the Commission for FY 2022-23. (Fixed Charge)

Particulars	Derivation	Units	Unit-2		
			MYT	Petition	Approved
Gross Capacity	A	MW	270.00	270.00	270.00
Auxiliary Consumption	B	%	0.09	0.09	0.09
Net Capacity	C=A x (1-B)	MW	245.70	245.70	245.70
12% of Net Capacity for Supply to JUVNL/JBVNL at Energy Charge	D=C x 12%	MW	29.48	29.48	29.48
Remaining Capacity from which Fixed Charges are to be recovered	E=C-D	MW	216.22	216.22	216.22
Annual Fixed Charge	F	Rs Cr.	288.83	289.73	290.22
Annual Fixed Charges/MW	G=F/E	Rs Cr./MW	1.34	1.34	1.34
13% of Net Capacity for supply to JUVNL at full tariff	H=C x 13%	MW	31.94	31.94	31.94
AFC for 13% of Net Capacity	**I=G x H**	**Rs. Cr.**	**42.67**	**42.80**	**42.87**

Revenue from Sale of Power

Petitioner's Submission

6.128 The Petitioner has submitted the revenue from sale of power comprise of capacity charge, energy charge and fuel cost adjustment bill for FY 2021-22. Accordingly, the petitioner has claimed revenue from sale of power as Rs. 165.41 Crore and Rs. 166.15 Crore for Unit-1 and Unit-2 respectively.

Table 146: Revenue (Rs. Crore) as submitted by the Petitioner for FY 2021-22.

Particulars	Unit-1	Unit-2
	Petition	Petition
Annual Fixed Cost	51.87	52.60
Energy Charge	123.57	123.72
FPA	0.22	-0.05
Total Revenue billed to JUVNL/JBVNL	**175.66**	**176.27**

6.129 Likewise, the Petitioner has submitted the revenue from sale of power comprise of capacity charge, energy charge and fuel cost adjustment bill for FY 2022-23. Accordingly, the petitioner has claimed revenue from sale of power as Rs.156.825 Crore and Rs. 157.58 Crore for Unit-1 and Unit-2 respectively.

Table 147: Revenue (Rs. Crore) as submitted by the Petitioner for FY 2022-23.

Particulars	Unit-1	Unit-2
	Petition	Petition
Annual Fixed Cost	51.87	52.60
Energy Charge	90.34	90.45
FPA	8.58	8.50
Imported Coal Bill	6.03	6.03
Total Revenue billed to JUVNL/JBVNL	**156.825**	**157.58**

Commission's Analysis

6.130 The Commission has examined monthly bill detail submitted in tariff format. Accordingly, the Commission approves the revenue from sale of power for FY 2021-22 & FY 2022-23 is given below.

Table 148: Revenue (Rs. Crore) as approved by the Commission for FY 2021-22.

Particulars	Unit-1		Unit-2	
	Petition	Approved	Petition	Approved
Annual Fixed Cost	51.87	51.87	52.60	52.60
Energy Charge	123.57	123.57	123.72	123.72
FPA	0.22	0.22	-0.05	-0.05
Total Revenue billed to JUVNL/JBVNL	**175.66**	**175.66**	**176.27**	**176.27**

Table 149: Revenue (Rs. Crore) as approved by the Commission for FY 2022-23.

Particulars	Unit-1		Unit-2	
	Petition	Approved	Petition	Approved
Annual Fixed Cost	51.87	51.87	52.60	52.60
Energy Charge	90.34	90.34	90.45	90.45
FPA	8.58	8.58	8.50	8.50
Imported Coal Bill	6.03	6.03	6.03	6.03
Total Revenue billed to JUVNL/JBVNL	**156.825**	**156.825**	**157.58**	**157.58**

Gap/Surplus for FY 2021-22 & FY 2022-23

Petitioner Submission

6.131 The Petitioner has worked out the impact of true up considering the Trued-up annual fixed charges, trued-up per unit variable charges for the year and the actual availability against the contracted capacity to JBVNL for the year, based on the availability

Table 150: Impact of True-up as submitted by the Petitioner for FY 2021-22.

Particulars	Units	FY 2021-22	
		Unit-1	Unit-2
Net Energy Supplied to JUVNL/JBVNL	MU	481.39	481.39
Rate of Energy Charge	Rs/kWh	2.65	2.65
Energy Charges	Rs Cr	42.08	42.74
AFC Entitlement on True Up	Rs Cr	1.62	1.62
Incentives	Rs Cr	127.43	127.38
Energy Charge Entitlement upon True up	Rs Cr	15.65	15.65

Particulars	Units	FY 2021-22	
		Unit-1	Unit-2
Water Charges	Rs Cr	1.32	1.32
Capital Spares	Rs Cr	2.42	2.42
Additional Ash disposal charges	Rs Cr	0.28	0.28
Security Expense	Rs Cr	0.90	0.90
Total Entitlement	Rs Cr	**189.90**	**190.50**
Revenue Billed			
AFC	Rs Cr	51.87	52.60
Energy Charge	Rs Cr	123.57	123.72
FPA	Rs Cr	0.22	-0.05
Incentive	Rs Cr		
Imported Coal Bill	Rs. Cr		
Total Revenue Billed to JUVNL/JBVNL	Rs Cr	**175.662**	**176.27**
Gap/(Surplus)	Rs Cr	14.21	14.20
Less: Shakti Coal discount	Rs Cr	0.73	0.73
Gap/(Surplus) including discount	**Rs Cr**	**13.48**	**13.47**
Carrying Cost	**Rs Cr**	**3.74**	**3.74**
Total Gap/(Surplus)	**Rs Cr**	**17.22**	**17.21**

Table 151: Impact of True-up as submitted by the Petitioner for FY 2022-23.

Particulars	Units	FY 2022-23	
		Unit-1	Unit-2
Net Energy Supplied to JUVNL/JBVNL	MU	351.94	351.94
Rate of Energy Charge	Rs/kWh	3.02	3.02
Energy Charges	Rs Cr	42.16	42.80
AFC Entitlement on True Up	Rs Cr		
Incentives	Rs Cr	106.28	106.16
Energy Charge Entitlement upon True up	Rs Cr	2.83	2.83
Water Charges	Rs Cr	2.01	2.01
Capital Spares	Rs Cr	1.10	1.10
Additional Ash disposal charges	Rs Cr	0.31	0.31
Security Expense	Rs Cr	0.00	
Total Entitlement	Rs Cr	**154.69**	**155.21**
Revenue Billed			
AFC	Rs Cr	51.87	52.60
Energy Charge	Rs Cr	90.34	90.45
FPA	Rs Cr	8.58	8.50
Incentive	Rs Cr		
Imported Coal Bill	Rs. Cr	6.03	6.03
Total Revenue Billed to	Rs Cr	**156.825**	**157.58**

Particulars	Units	FY 2022-23	
		Unit-1	Unit-2
JUVNL/JBVNL			
Gap/(Surplus)	Rs Cr	(2.17)	(2.30)
Less: Shakti Coal discount	Rs Cr	1.25	1.25
Gap/(Surplus) including discount	**Rs Cr**	(3.42)	(3.64)
Carrying Cost	**Rs Cr**	**(0.59)**	**(0.63)**
Total Gap/(Surplus)	**Rs Cr**	**(4.01)**	**(4.27)**

Commission's Analysis

6.132 The Commission has outlined ***clause 7.2 to 7.4*** of Generation Tariff Regulation 2020 for the approval Gap/Surplus for a generating station as reproduced below:

> *"7.2 Where after the truing up, the revenue recovered exceeds the trued up value approved by the Commission under these Regulations, the Generating Company shall refund to the Beneficiaries, the surplus amount so recovered as specified in Clause 7.4 of these Regulations.*
>
> *7.3 Where after the truing up, the revenue recovered is less than the trued up value approved by the Commission under these Regulations, the Generating Company shall recover from the Beneficiaries, the gap amount in accordance with Clause7.4 of these Regulations.*
>
> *7.4 The amount under-recovered or over-recovered, along with simple interest at the rate equal to Bank Rate as on April 01 of the respective year plus 350 basis points, shall be recovered or refunded by the Generating Company in six equal monthly instalments starting within three months from the date of the Tariff Order issued by the Commission:*
>
> *Provided that no carrying cost on the duration of delay shall be allowed on unrecovered gap if the Generating Company fails to submit the Petition as per timelines stipulated in Section A 39:*
>
> *Provided further that any adverse financial impact on account of variation in uncontrollable items due to lapse on part of the Generating Company or its suppliers/contractors shall not be allowed in truing up".*

6.133 The Commission has observed that the petitioner has claimed amount tuned to Rs 1.62 crore for each unit for FY 2021-22 under Incentive part of annual revenue requirement without giving any reason, computation and details in the petition. Hence, the Commission in his own prudence reject the claimed of petitioner in this regard.

6.134 The Commission has examined the detail submitted by the Petitioner along with audited certificate. Accordingly, this Commission approves the Gap/(Surplus) for FY 2021-22 and FY 2022-23 for Unit-1 and Unit-2 as tabulated hereunder.

Table 152: Revenue Gap/(Surplus) Rs Crore as approved by the Commission for FY 2021-22.

Particulars	MoU	Unit-1		Unit-2	
		Petition	Approved	Petition	Approved
Net Energy Supplied to JUVNL/JBVNL	MU	481.39	481.39	481.39	481.39
Rate of Energy Charge	Rs/kWh	2.65	2.63	2.65	2.63
AFC Entitlement on True Up	Rs. Cr.	42.05	42.24	42.71	42.87
Incentive	Rs. Cr.	1.62	1.62	1.62	1.62
Energy Charge Entitlement upon True up	Rs. Cr.	127.43	126.42	127.38	126.37
Water Charges	Rs. Cr.	15.65	2.63	15.65	2.63
Capital Spares	Rs. Cr.	1.32	1.32	1.32	1.32
Ash Disposal Expenses	Rs. Cr.	2.42	2.42	2.42	2.42
Security Expenses	Rs. Cr.	0.28	0.28	0.28	0.28
Less: sharing of gain on operational parameter	Rs. Cr.	0.90	0.89	0.90	0.89
Total Entitlement	Rs. Cr.	**189.87**	**176.04**	**190.47**	**176.61**
Revenue Billed					
Annual Fixed Cost	Rs. Cr.	51.87	51.87	52.60	52.60
Energy Charge	Rs. Cr.	123.57	123.57	123.72	123.72
FPA	Rs. Cr.	0.22	0.22	-0.05	-0.05
Total Revenue Billed to JUVNL/JBVNL	**Rs. Cr.**	**175.662**	**175.662**	**176.27**	**176.27**
Less: Shakti Discount	**Rs. Cr.**	0.73	0.73	0.73	0.73
Net Revenue Gap/(Surplus) without Carrying Cost	**Rs. Cr.**	**13.48**	**(0.35)**	**13.47**	**(0.39)**

Table 153: Revenue Gap/(Surplus) Rs Crore as approved by the Commission for FY 2022-23.

Particulars	MoU	Unit-1		Unit-2	
		Petition	Approved	Petition	Approved
Net Energy Supplied to	MU	351.94	351.94	351.94	351.94

Particulars	MoU	Unit-1		Unit-2	
		Petition	Approved	Petition	Approved
JUVNL/JBVNL					
Rate of Energy Charge	Rs/kWh	3.02	3.00	3.02	2.99
AFC Entitlement on True Up	Rs. Cr.	42.12	42.26	42.77	42.87
Incentive	Rs. Cr.				
Energy Charge Entitlement upon True up	Rs. Cr.	106.28	105.44	106.16	105.32
Water Charges	Rs. Cr.	2.83	2.83	2.83	2.83
Capital Spares	Rs. Cr.	2.01	2.01	2.01	2.01
Ash Disposal Expenses	Rs. Cr.	1.10	1.10	1.10	1.10
Security Expenses	Rs. Cr.	0.31	0.31	0.31	0.31
Less: sharing of gain on operational parameter	Rs. Cr.	0.00	0.00		0.00
Total Entitlement	Rs. Cr.	**154.66**	**153.96**	**155.18**	**154.45**
Revenue Billed					
Annual Fixed Cost	Rs. Cr.	51.87	51.87	52.60	52.60
Energy Charge	Rs. Cr.	90.34	90.34	90.45	90.45
FPA	Rs. Cr.	8.58	8.50	8.50	8.50
Imported Coal Bill	Rs. Cr.	6.03	6.03	6.03	6.03
Total Revenue Billed to JUVNL/JBVNL	**Rs. Cr.**	**156.825**	**156.741**	**157.58**	**157.58**
Less: Shakti Discount	**Rs. Cr.**	**1.25**	**1.25**	**1.25**	**1.25**
Net Revenue Gap/(Surplus) without carrying cost	**Rs. Cr.**	**(3.42)**	**(4.12)**	**(3.64)**	**(4.38)**

Table 154: Revenue Gap/(Surplus) for Unit-1 including Carrying Cost for FY 2021-22.

Particulars	**FY 2021-22**	**FY 2022-23**	**FY 2023-24**
Opening Balance	-	(0.35)	(0.35)
Addition during year	(0.35)	0	0
closing balance	(0.35)	(0.35)	(0.35)
Average balance	(0.35)	(0.35)	(0.35)
carrying cost rate	10.50%	10.50%	12.00%
Carrying cost of respective years	**(0.04)**	**(0.04)**	**(0.04)**

Table 155: Revenue Gap/(Surplus) for Unit-2 including Carrying Cost for FY 2021-22.

Particulars	**FY 2021-22**	**FY 2022-23**	**FY 2023-24**
Opening Balance	-	(0.39)	(0.39)
Addition during year	(0.39)	0	0.00
closing balance	(0.39)	(0.39)	(0.39)
Average balance	(0.39)	(0.39)	(0.39)
carrying cost rate	10.50%	10.50%	12.00%

Particulars	FY 2021-22	FY 2022-23	FY 2023-24
Carrying cost of respective years	**(0.04)**	**(0.04)**	**(0.05)**

Table 156: Cumulative revenue Gap/(Surplus) including Carrying Cost for FY 2021-22.

Particulars	Unit-1		Unit-2	
	Petition	Approved	Petition	Approved
Opening Gap/Surplus for FY 2020-21		0		0
Gap/(Surplus) addition during the FY 2020-21		(0.35)		(0.39)
Closing Gap/ (Surplus) for FY 2020-21		(0.35)		(0.39)
Carrying Cost of FY 2021-22		(0.04)		(0.04)
Carrying Cost of FY 2022-23		(0.04)		(0.04)
Carrying Cost of FY 2023-24		(0.04)		(0.05)
Net Gap/(Surplus) including carrying cost	**17.22**	**(0.47)**	**17.21**	**(0.52)**

Table 157: Revenue Gap/(Surplus) including Carrying Cost for FY 2022-23.

Particulars	Unit-1		Unit-2	
	FY 2022-23	FY 2023-24	FY 2022-23	FY 2023-24
Opening Balance	-	(4.12)	-	(4.38)
Addition during year	(4.12)	0	(4.38)	0
closing balance	(4.12)	(4.12)	(4.38)	(4.38)
Average balance	(4.12)	(4.12)	(4.38)	(4.38)
carrying cost rate	10.50%	12.00%	10.50%	12.00%
Carrying cost of respective years	**(0.43)**	**(0.49)**	**(0.46)**	**(0.53)**

Table 158: Cumulative revenue Gap/(Surplus) including Carrying Cost for FY 2022-23.

Particulars	Unit-1		Unit-2	
	Petition	Approved	Petition	Approved
Opening Gap/Surplus for FY 2022-23		0		0
Gap/(Surplus) addition during the FY 2022-23		(4.12)		(4.38)
Closing Gap/ (Surplus) for FY 2022-23		(4.12)		(4.38)
Carrying Cost of FY 2022-23		(0.43)		(0.46)
Carrying Cost of FY 2023-24		(0.49)		(0.53)

Particulars	Unit-1		Unit-2	
	Petition	Approved	Petition	Approved
Net Gap/(Surplus) including Carrying cost	**(4.01)**	**(5.04)**	**(4.27)**	**(5.36)**

6.135 The Commission would like to clarify the above Gap/(Surplus) is computed based on the information submitted before the Commission. In case there is any other adjustment between the Petitioner and its Beneficiaries, the same need to be taken into account while final adjustment which shall be carried out mutually.

6.136 The Commission has directed the Petitioner to adjust the surplus in the subsequent bills as per ***clause 7.2 & clause 7.4*** of JSERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020.

Chapter 7: ADDITIONAL SUBMISSION

Consideration of Supply of 12% of power only on Variable Basis

Petitioner Submission

7.1 The Petitioner has submitted that it had entered into a PPA with JBVNL (dated September 28, 2012) which provides for supply of 12% power of JBVNL at variable charges. It was further submitted that said consideration was based on certain pre-requisites that were being explore by the Government of Jharkhand.

7.2 The Petitioner has further submitted that as per the PPA, a Policy decision through suitable arrangements was to be taken from the Government of India which would have served the basis for making available 12% of power supply to the State at variable cost of the Seller. The relevant paragraph from the PPA is reproduced below for reference:

> *"D. As per the provisions of MOU, the Government of Jharkhand or distribution licensees authorized by it will have the first right of claim on purchase upto 25% of power delivered to the system by the proposed Power Station under terms of a Power Purchase Agreements to be mutually agreed on the basis of existing laws and regulation in force and the tariff for such purchase will be determined by the appropriate Regulatory Commission.* ***Further, MoU stipulates that the Government of Jharkhand has moved Government of India for the policy decision through suitable arrangements for making available to the State 12% of the total power generated at variable cost by the Seller.***
>
> *E.* ***Pursuant to the aforesaid MoU,*** *the Procurer is desirous of purchasing the Contracted Capacity of 122.85MW (25% of 491.4 MW i.e.• Gross Capacity of 2 units of 270 MW each, totaling to 540 MW less Normative Auxiliary Consumption) from Stage I of the Project on Round The Clock (RTC) basis for long term from Seller and Seller is desirous of selling the Contracted Capacity from the Project on Round*

The Clock (RTC) basis for long term to the Procurer. The Parties have agreed to sign this Agreement setting out the terms and conditions for sale and supply of Contracted Capacity by the Seller to the Procurer. Out of total Contracted Capacity of 122.85 MW from Stage I, the Procurer in proportion will procure 63.882 MW i.e. 13% of total Net Capacity of Stage I at Tariff as approved by Jharkhand State Electricity Regulatory Commission (JSERC) or such other appropriate authority and the Procurer will procure balance 58.968 MW i.e, 12% of total Net Capacity of Stage I at variable cost i.e. Energy Charge as approved by Jharkhand State Electricity Regulatory Commission (JSERC) or such other appropriate authority plus Fuel Price Adjustment."

(Emphasis Supplied)

7.3 The Petitioner has further submitted the relevant paragraph from the referred MoU is reproduced below for the ready reference:

As per MOU signed between Govt. of Jharkhand and ATEL (now APNRL) dt. 31.10.2005 and respective extensions signed on 18.01.2007

NOW THEREFORE IT IS HEREBY AGREED BY AND BETWEEN THE PARTIES HERETO AS FOLLOWS:

1. The parties hereto agree and confirm that the validity period of the MoU dated 31st October 2005 is hereby extended for a further period of 12 months from 31st October 2006 with the following additional clauses.

"10.5: ATEL further understands that the Government of Jharkhand has moved Government of India for the following policy support; namely: -

a) policy decision through suitable arrangements for making available to the State 12% of the total power generated at variable cost by ATEL operating within its territory.

b) An appropriate legal mechanism to allow generating States to levy duty on power produced so that there is equitable distribution of resources generated between consuming and generating States.

Therefore, as and when the Government of Jharkhand succeed in levying such duty as per item (b) above or obtain concession as per item (a) above, such duties or concessions would be applicable to this power plant of ATEL.

7.4 Based on the above excerpt, the petitioner is of view that, from the very basis of APNRL and JBVNL agreeing to such proposal to supply 12% power on variable charges only was on account of envisaged policy decision from the Government of India. This essence has been appropriately captured in the clauses of the PPA as shown in the paragraphs above. However, to the best knowledge of the Petitioner, till date there is no such policy decision available from the Government of India that allows DISCOM in the State of Jharkhand to take up the 12% energy supply only at variable charges from Thermal Power Plants situated in its territory.

7.5 It is apparent to state here that since the commissioning of the projects, petitions have been filed by the Petitioner and approvals have been taken from the Hon'ble Commission for the supply of power as per the initial understanding, i.e., 12% of the power is to be supplied at variable charges only. However, it has been concluded by the Petitioner, after extensive internal research on the subject, that no such policy decision from the Government of India has been made available to the Petitioner by the Respondent till date. It may be appreciated that financial restructuring was undergone by the Petitioner on account of precarious financial conditions. The same can be made evident from the calculations made by the Petitioner, which depict that an amount of Rs.709.37 crore has not been billed by the Petitioner from FY 2012-13 to FY 2022-23 towards the fixed charges for 12% of the capacity.

7.6 The Petitioner has further submitted that the current state of tariff approved by the Hon'ble Commission needs to be aligned with the provision in the PPA which contingent upon the policy decision of the Government of India. In the absence of such policies, it is prayed to approved the full tariff for the entire power supplied to Jharkhand. The relevant prayed has been given below.

a. Recovery of Rs. 523.37 crore capacity charges along with carrying cost against 12% free power supplied for the period FY 13 to FY 20 for 122.85 MW.

b. Recovery of Rs 186 crore capacity charges along with carrying cost against 12% free power supplied for the period under this instant true-up petition for 122.85 MW (FY 21 to FY 23).

c. Similar changes may be allowed for the ensuing period in the control period i.e. FY 24 to FY 26.

d. Put the principle of providing 12 percent of power on variable cost on abeyance for ensuing years, till the respondent shares any documentary evidence for policy decision from Government of India for such projects commissioned in the year of 2013.

7.7 The Petitioner has submitted the detailed working towards each of the above components is provided below for reference.

Table 159: Recovery of Rs 523.37 crore for the period FY 2013 to FY 2020 for FY 122.85 MW as submitted by Petitioner.

Particulars	Units	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19	FY 20	Total
Approved Fixed Cost	**Rs. Crore**	**76.32**	**750.01**	**792.75**	**784.26**	**739.75**	**716.94**	**714.21**	**700.11**	**5274.35**
Net Capacity	MW	245.7	491.4	491.4	491.4	491.4	491.4	491.4	491.4	
12% of Net Capcity	MW	29.48	58.968	58.968	58.968	58.968	58.968	58.968	58.968	
Total Saleable Capacity	MW	216.22	432.432	432.432	432.432	432.432	432.432	432.432	432.432	
Annual Fixed Cost (as per current approval)	Rs. Cr/MW	0.35	1.73	1.83	1.81	1.71	1.66	1.65	1.62	
13% of Net Capacity	MW	31.94	63.882	63.882	63.882	63.882	63.882	63.882	63.882	
Fixed Cost Allocation to JBVNL (as per current approval) (A)	**Rs. Crore**	**11.27**	**110.80**	**117.11**	**115.86**	**109.28**	**105.91**	**105.51**	**103.43**	**779.17**
Annual Fixed Cost (as per APNRL current submission)	Rs. Cr/MW	0.31	1.53	1.61	1.60	1.51	1.46	1.45	1.42	
Total Contracted Capacity	MW	61.43	122.85	122.85	122.85	122.85	122.85	122.85	122.85	
Fixed Cost for 122.85 MW (as per APNRL current submission) (B)	**Rs. Crore**	**19.08**	**187.50**	**198.19**	**196.07**	**184.94**	**179.24**	**178.55**	**175.03**	**1318.59**
Difference (C) = (B)-(A)	**Rs. Crore**	**7.81**	**76.71**	**81.08**	**80.21**	**75.66**	**73.32**	**73.04**	**71.60**	**539.42**
Availability	%			77.97%	98.77%	89.44%	73.09%	82.18%	89.56%	
Difference upon Plant Availability (Amount to be recovered)	**Rs. Crore**	**7.81**	**76.71**	**77.72**	**80.21**	**75.66**	**63.05**	**70.62**	**71.60**	**523.37**

Table 160: Recovery of Rs 186 crore for the period under this instant true-up petition for FY 122.85 MW (FY 21 to FY 23) as submitted by Petitioner.

Particulars	Units	FY 2020-21		FY 2021-22		FY 2022-23		Total	
		Unit-1	Unit-2	Unit-1	Unit-2	Unit-1	Unit-2	Unit-1	Unit-2
Approved Fixed Cost	**Rs. Crore**	**335.82**	**340.67**	**284.84**	**289.29**	**285.25**	**289.62**	**905.91**	**919.58**
Net Capacity	MW	245.7	245.7	245.7	245.7	245.7	245.7		
12% of Net Capcity	MW	29.48	29.48	29.48	29.48	29.48	29.48		
Total Saleable Capacity	MW	216.22	216.22	216.22	216.22	216.22	216.22		
Annual Fixed Cost (as per current approval)	Rs. Cr/MW	1.55	1.58	1.32	1.34	1.32	1.34		
13% of Net Capacity	MW	31.94	31.94	31.94	31.94	31.94	31.94		
Fixed Cost Allocation to JBVNL (as per current approval) (A)	**Rs. Crore**	**49.61**	**50.33**	**42.08**	**42.74**	**42.14**	**42.79**	**133.83**	**135.85**
Annual Fixed Cost (as per APNRL current submission)	Rs. Cr/MW	1.37	1.39	1.16	1.18	1.16	1.18		
Total Contracted Capacity	MW	61.43	61.43	61.43	61.43	61.43	61.43		
Fixed Cost for 122.85 MW (as per APNRL current submission) (B)	**Rs. Crore**	**83.96**	**85.17**	**71.21**	**72.32**	**71.31**	**72.41**	**226.48**	**229.90**
Difference (C) = (B)-(A)	**Rs. Crore**	34.35	34.84	29.13	29.59	29.17	29.62		
Availability	%	84.14%	84.14%	91.07%	91.07%	89.36%	89.36%		
Difference upon Plant Availability (Amount to be recovered)	**Rs. Crore**	**34.00**	**34.49**	**29.13**	**29.59**	**29.17**	**29.62**	**92.30**	**93.70**

Table 161: Similar charge may be allowed for the ensuring period in control period i.e. FY 2024-26 as submitted by the Petitioner.

Particulars	Units	FY 2023-24		FY 2024-25		FY 2025-26		Total	
		Unit-1	Unit-2	Unit-1	Unit-2	Unit-1	Unit-2	Unit-1	Unit-2
Approved Fixed Cost	**Rs. Crore**	**279.96**	**285.39**	**277.52**	**282.88**	**275.30**	**280.58**	**832.78**	**848.85**
Net Capacity	MW	245.7	245.7	245.7	245.7	245.7	245.7	0	0
Annual Fixed Cost (as per APNRL current submission)	Rs. Crore / MW	1.14	1.16	1.13	1.15	1.12	1.14		
Total Contracted Capacity	MW	61.43	61.43	61.43	61.43	61.43	61.43		
Fixed Cost for 122.85 MW (as per APNRL current submission) (B)	**Rs. Crore**	**69.99**	**71.35**	**69.38**	**70.72**	**68.83**	**70.15**	**208.20**	**212.21**

Commission Analysis

7.8 The Commission recognizes the petitioner's concerns regarding the provision of a 12% power supply at variable cost to JBVNL. However, as this obligation stems from a contractual agreement, it falls outside the Commission's authority to modify the terms established in the existing Power Purchase Agreement (PPA). The Commission, in this order, has instructed the petitioner to address this matter with JBVNL and the Energy Department. In case, these discussions not yield a resolution, the Petitioner may to submit a separate petition for additional review before this Commission.

Assured Return on Equity as per Regulation

Petitioner Submission

7.9 The Petitioner has submitted that JSERC (Terms and condition for determination of Generation) Regulation 2020, and amendment thereof, states that the Utility after meeting all its expenses including taxes shall be left with an amount that shall not be lower than 15% of the equity invested into the project. This return is essential to promote investments and provide adequate risk reward framework for investors. While the said principles have been adopted by the Hon'ble Commission to determine the ARR which includes such reasonable return, however, the application of 12% of power supply at variable charges disrupts the balance otherwise considered by the Hon'ble Commission so much so that for the entire supply of 122.85 MW together with the discount offered under Shakti scheme skews the overall returns from the investments.

7.10 The Petitioner has further submitted that the Ministry of Coal (MoC), under the SHAKTI (Scheme to Harness and Allocate Koyla Transport in India) has effectively established a mechanism for the allocation of coal linkages to power plants lacking fuel supply agreements (FSAs) through coal auctions. This policy implementation can be construed as the promulgation of an Indian law, thereby as per the CERC Tariff Regulation 2019, SHAKTI Scheme can be considered as a "Change in Law. Furthermore, in Order to obtain coal under the SHAKTI scheme, the generators are required to provide a discount under the competitive bid process. Hence, it had prayed that a discount offered based on the architecture of SHAKTI scheme shall be considered as "Change in Law".

7.11 In addition to the aforementioned, it is important to mentioned here that thermal generating station bears no inherent obligation to acquire coal under the SHAKTI Scheme, as the actual of coal is passed through under the regulatory regime under section 62. However, with the objective of safeguarding the interests of beneficiaries and ensuring a reliable long term coal supply, the generating stations are voluntarily procuring coal under the SHAKTI Scheme. Currently, the entirety of the benefit derived from the SHAKTI Scheme is being passed through, notwithstanding the financial losses incurred by the company that is already grappling with sustainability issues.

7.12 The Petitioner has further submitted that the MoU signed between APNRL and Government of Jharkhand (dated 31.10.2005 and other subsequent amendments), facilitation for getting the linkage of coal within the state was also enshrined. However, the Petitioner vide its regulatory submission has been struggling to arrange the coal required for the operation of the units from various market source. Given the absence of linkage coal, the Petitioner was forced to participate in the coal auctions under the Shakti Scheme which has carved an additional burden on the financial health of the Petitioner.

7.13 The Petitioner has calculated the percentage reduction in the rate of return compared to the normative value of 15.50% allowed in the JSERC Tariff Regulation 2015 and 15.00% allowed in the JSERC Tariff Regulation, 2020. This reduction in RoE is depicted below:

Particulars	FY 2020-21	FY 2021-22	FY 2022-23
ROE	158.29	153.64	153.83
Rate of Return	15.50%	15.00%	15.00%
RoE for 122.85 MW capacity (A)	39.57	38.41	38.46
RoE entitle to APNRL (B)	23.38	22.70	22.72
Actual Rate of Return to APNRL	9.16%	8.86%	8.86%
Shakti Discount (C)	2.07	1.46	2.49
RoE After Shakti Discount	21.32	21.23	20.23
Rate of Return after Shakti Discount (considering RoE for FY 122.85 MW)	8.35%	8.29%	7.89%

Commission Analysis

7.14 The Commission understand that the discount required under the SHAKTI Scheme BII was a pre-condition for participation in the coal auction. APNRL's awareness and acceptance of this discount prior to participation indicate that the financial impact was anticipated and factored into their decision-making process.

7.15 Further, the Commission in accordance with the provision of JSERC (Terms & Condition of Generation Tariff Determination) Regulation, 2020, and amendments thereof granted the RoE to the Petitioner. The observed deterioration in RoE results from the petitioner’s contractual agreements, which were entered into with full awareness of their financial implications.

7.16 In light of the above, the Commission finds no grounds to alter the current RoE calculations as per the petitioner’s prayer. The petitioner is encouraged to pursue the recommended avenues for addressing specific contractual disputes.

Chapter 8: DIRECTIVES

Energy Charge Optimization

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

Start-up

8.2 The Commission had directed to submit monthly details of a number of unit-wise start-ups taken after shutdown. Also, details should include the monthly quantity of secondary fuel consumed during plant start up and flame support if required. The same should be submitted with subsequent APR and True-up Petitions.

DPR of Scheme

8.3 The Commission had directed to submit DPR of schemes that have been proposed along with the petition.

Notice to the Commission

8.4 The Petitioner had hereby directed that during the execution of work pertaining to any pre-approved schemes, any increase in the scope of work, procurement, services, price/cost etc. should be brought to the notice of commission immediately.

Notice to the Commission

8.5 The Commission had directed the Petitioner to ensure that proper planning should be carried out before finalization and submission of Capex plan before the Commission for approval. Further, in case there is need to review/revise any scheme or change in the Scope of Work, the same is required to be submitted before the Commission with proper justification for approval.

Compliance of directives issued in earlier Orders

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

This Order is signed and issued by the Jharkhand State Electricity Regulatory Commission on August 22, 2024.

Date: 22.08.2024

Place: Ranchi

Sd/-	**Sd/-**
Mr. Atul Kumar	**Mr. Mahendra Prasad**
Member (Technical)	**Member (Law)**

Chapter 9: List of Participant

Table 162: List of participant who attend Public Hearing

Sl. No.	Name S/Shri	Address / Organization if any
1	Eshan Singh	APNRL
2	Anita Prasad	JBVNL
3	Amit Griwan	APNRL
4	Radha Krishana Tripathy	PWC/JBVNL
5	Ravishankar Kumar	JBVNL
6	Bhavesh Sahu	APNRL
7	Himanshu Kumar Ghosh	APNRL
8	Bijoy Kumar Ghosh	JBVNL
9	Rajesh Kumar Sharma	APNRL
10	Arun Kumar Mishra	APNRL
11	Birendra Kishu	JBVNL