

**FILING OF
MULTI YEAR TARIFF PETITION
FOR
CONTROL PERIOD FY 2021-22 TO FY 2025-26**



Submitted by:



**TENUGHAT VIDYUT NIGAM LIMITED (A Govt. of
Jharkhand Undertaking)
Hinoo, Doranda, Ranchi - 834002**

To:

**Jharkhand State Electricity Regulatory Commission
(JSERC)**



**Jharkhand State
Electricity Regulatory
Commission**

November 2021



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MYT Petition for Tenughat Vidyut Nigam Limited for the Control Period 2021-22 to FY 2025-26

List of Abbreviations

Sl. No.	Abbreviations	Descriptions
1.	MW	Megawatt
2.	TVNL	Tenughat Vidyut Nigam Limited
3.	BU	Billion Units
4.	RES	Renewable Energy Sources
5.	CEA	Central Electricity Authority
6.	FGD	Flue Gas Desulphurization
7.	GW	Gigawatt
8.	NTPC	National Thermal Power Corporation Ltd.
9.	PVUNL	Patratu Vidyut Utpadan Nigam Limited
10.	JBVNL	Jharkhand Bijli Vitran Nigam Limited
11.	DVC	Damodar Valley Corporation
12.	JSERC	Jharkhand State Electricity Regulatory Commission
13.	EA	Electricity Act
14.	SERC	State Electricity Regulatory Commission
15.	TTPS	Tenughat Thermal Power Station
16.	KM	Kilometre
17.	MT	Metric Tonne
18.	DPR	Detailed Project Report
19.	EPC	Engineering, Procurement & Construction
20.	PLF	Plant Load Factor
21.	PAF	Plant Availability Factor
22.	MU	Million Units
23.	ERP	Enterprise Resource Planning
24.	SLDC	State Load Dispatch Centre
25.	SHR	Station Heat Rate
26.	R&M	Repair & Maintenance
27.	MYT	Multi Year Tariff
28.	ARR	Annual Revenue Requirement
29.	A&G	Administrative and General
30.	NAPAF	Normative Annual Plant Availability Factor
31.	SFC	Secondary Fuel Consumption
32.	O&M	Operation & Maintenance
33.	AE	Assistant Engineer
34.	JE	Junior Engineer
35.	CE	Chief Engineer
36.	SE	Superintending Engineer
37.	EE	Executive Engineer
38.	FY	Financial Year
39.	LFC	Landed fuel cost
40.	AFC	Annual Fixed Cost
41.	CWiP	Capital Works In Progress
42.	GCV	Gross Calorific Value
43.	GFA	Gross Fixed Assets
44.	SBI	State Bank of India



MYT Petition for Tenughat Vidyut Nigam Limited for the Control Period 2021-22 to FY 2025-26

BEFORE THE JHARKHAND STATE ELECTRICITY REGULATORY
COMMISSION

Filing No: _____

Case No: _____

IN THE MATTER OF:

Filing of Petition for Multi Year Tariff for Control Period of FY 2021-22 to 2025-26 for TVNL under JSERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020 issued by the Hon'ble Jharkhand State Electricity Regulatory Commission (JSERC), hereinafter referred to as Hon'ble Commission.

AND

IN THE MATTER OF:

Tenughat Vidyut Nigam Limited ("TVNL")

Hinoo, Doranda, Ranchi

Jharkhand – 834 002

.....PETITIONER

The Petitioner respectfully submits



Chapter 1: Introduction

1.1 Introduction

1.1.1. Tenughat Vidyut Nigam Limited is a power generating company incorporated on 26th November 1987 under Indian Company's Act, 1956. With the creation of Jharkhand State on 15th November 2000 from the erstwhile Bihar State, the TVNL became an undertaking of Government of Jharkhand. The TVNL owns and operates an installed power generation capacity of 420 MW with two units of 210 MW each at Tenughat Thermal Power Station located at Lalpania at the banks of Tenughat reservoir in Bokaro district with its head office at Ranchi. The units were under commercial operation as detailed below:

- a) Unit I - September 1996
- b) Unit II - September 1997

1.1.2. TVNL further aims to consolidate its position as the leading thermal power generation company in Jharkhand and to diversify across the power value chain in Jharkhand by considering backward and forward integration into areas such as transmission, distribution, coal mining etc.

1.1.3. Petitioner has over the years made efforts to improve its performance across all the parameters in order to provide reliable and affordable supply. In this endeavour; timely receipt of its energy charges from its client is very important to ensure compliance of good O&M practices and plant betterment plans. As at 31st March 2020, JUVNL/JBVNL owes around INR 4251.97 Cr. as power purchase payable to TVNL which is creating a lot of trouble for it to operate as a going concern.

1.1.4. Petitioner would like to request the Hon'ble Commission to consider this parameter while approving the tariff as late realization of payment affects execution of its O&M Plans which in turn has inherent cost of carry and increases all the associated costs of generation.

1.2. Regulatory Background

1.2.1. Starting from 2003, TVNL has filed Petitions in accordance with Section 62 of EA 2003. The details of the previous Orders issued by JSERC on these Petition are tabulated below:

Table 1: Previous orders for TVNL issued by JSERC

Order	Date
Order on Petition for Multi Year Tariff for the period FY 2017-21 (Including truing-up For FY 2014-15 & provisional true-up of FY 2015-16) For Tenughat Vidyut Nigam Limited (TVNL)	28.02.2020 & 14.10.2020



MYT Petition for Tenughat Vidyut Nigam Limited for the Control Period 2021-22 to FY 2025-26

Order	Date
Order on Petition for Annual Performance Review for FY 2014-15 (Including truing-up For FY 2012-13 & FY 2013-14) for Tenughat Vidyut Nigam Limited (TVNL)	30.09.2016
Order on Petition for Annual Performance Review for FY 2012-13 (including truing-up for FY 2011-12) for Tenughat Vidyut Nigam Limited (TVNL)	02.07.2014
MYT Order on Business Plan and Annual Revenue Requirement and Determination of Generation Tariff for First Control Period of FY 2012-13 to 2015-16 for Tenughat Vidyut Nigam Limited (TVNL).	30.05.2012
Tariff Order on Annual Revenue Requirement and Determination of Generation Tariff for Financial Years FY 2010-11 & 2011-12 for Tenughat Vidyut Nigam Limited (TVNL).	31.05.2011
Tariff Order on Annual Revenue Requirement and Determination of Generation Tariff for Financial Years FY 2009-10 & 2010-11 for Tenughat Vidyut Nigam Limited (TVNL)	22.11.2010
Tariff Order on ARR and Determination of Generation Tariff for FY 2008-09 & 2009-10 for Tenughat Vidyut Nigam Limited (TVNL)	05.03.2010
Tariff Order for TVNL FY 2007-2008	03.01.2008
Tariff Order for Tenughat Vidyut Nigam Limited (TVNL) FY 2005-06	30.03.2006
Tariff Order for TVNL FY 2004-2005	23.08.2004

1.2.2. The Hon'ble Commission has notified the JSERC (Terms and Conditions for determination of Generation Tariff) Regulations, 2020 published on 12th Nov 2020 (Hereinafter referred to as JSERC Generation Tariff Regulations, 2020) in exercise of the powers conferred by Section 61 and 62 read with Section 181 of the Electricity Act, 2003.

1.2.3. Further Regulations A5 and A6 of JSERC Generation Tariff Regulations, 2020 states that:

"The MYT Framework shall commence from April 01, 2021 and unless reviewed earlier or extended by the Commission, shall be applicable till March 31, 2026. The ARR filings for the Control Period shall be done in accordance with the MYT framework contained in these Regulations. The Generating Company shall file MYT Application along with supporting documents before the Commission as per the timelines specified in Section A 39 of these Regulations. The MYT Application shall include statements containing ARR along with its break up for the Years of the previous Control Period based on Audited Accounts for FY 2015-16 to FY 2019-20, revised estimates for Base Year FY 2020-21, and projections for each year of the Control Period."

The Commission shall adopt Multi Year Tariff Framework for approval of ARR and determination of tariff. The ARR shall be determined for each year of the Control Period.

The Multi Year Tariff framework shall be based on the following:-



1. *Business Plan of the Generating Station for the entire Control Period to be filed before the Commission for approval, along with MYT Petition prior to the start of the Control Period or within such period as the Commission may direct;*
2. *Generating Company's forecast of expected tariff for sale of power for each year of the Control Period, based on reasonable assumptions of the underlying financial and operational parameters laid down under these Regulations and on the basis of the Business Plan;*
3. *Trajectory for specific parameters, shall be prescribed by the Commission, for improvement through incentives and disincentives;*
4. *Annual review of performance, which shall be conducted vis-à-vis the approved forecast and categorization of variations in performance into controllable and uncontrollable factors; and*
5. *Mechanism for sharing approved gains or losses on account of controllable and uncontrollable factors.*

1.3. Approach for MYT Petition

- 1.3.1. Regulation A5 of the JSERC Generation Tariff Regulation, 2020 requires licensees to file its MYT Petition for the Control Period for FY 2021-22 to FY 2025-26. In line with the aforesaid provision of the Generation Tariff Regulation, 2020, TVNL is submitting its Business Plan and MYT Petition before Hon'ble Commission for the control period FY 2021-22 to FY 2025-26.
- 1.3.2. The projections for the Control Period FY 2021-22 to FY 2025-26 are based on the provisional accounts available for FY 2015-16 to FY 2019-20 and actual values of FY 2020-21. The forecast of expected ARR for each year of the Control Period are based on reasonable assumptions of the underlying financial and operational principles/parameters laid down under the JSERC Generation Tariff Regulations, 2020 and on the basis of the Business Plan for control period FY 2021-22 to FY 2025-26 as submitted before the Hon'ble Commission for approval. TVNL requests the Hon'ble Commission to consider the same and process the MYT petition accordingly.
- 1.3.3. Further TVNL would also like to submit that since detailed explanation and information regarding capital investment planning and man power/ HR planning for the control period FY 2021-22 to FY 2025-26 is already provided in the Business Plan, the same are not repeated/ reproduced in this MYT petition. However, for the elements, where there have been certain changes in assumptions/ information of preceding year and which has substantial impact are discussed in detail in this MYT petition as well.



Chapter 2: Executive Summary

2.1 Operating Parameters

2.1.1 As per Clause 16.1 of Jharkhand State Electricity Regulatory Commission (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020

"The values for operational norms for the existing generating stations have been decided, based on the past operational data of these plants. The norms of operation as given hereunder shall apply for existing thermal power stations in the State"

2.1.2 The petitioner in the Chapter 4 "Operational Plan" of the Business Plan has considered normative values of operational parameters like Plant Availability Factor (PAF), Plant Load Factor (PLF), Gross Station Heat Rate (SHR), Auxiliary Consumption and Secondary Fuel Consumption as specified by the Commission for the forecast period in JSERC MYT Genera.

2.1.3 Following table summarizes the operating parameters projected for MYT control period for FY 2021-22 to FY 2025-26.

Table 2: Summary of Operating Parameters for Third Control Period

Particular	FY 22	FY 23	FY 24	FY 25	FY 26
PAF (%)	85%	85%	85%	85%	85%
PLF (%)	85%	85%	85%	85%	85%
Station Heat Rate (Kcal/kWh)	2503	2503	2503	2503	2503
Aux. Consumption (%)	9.50%	9.50%	9.50%	9.50%	9.50%
Secondary Fuel consumption (ml/kWh)	1	1	1	1	1
Transit Loss (%)	0.8%	0.8%	0.8%	0.8%	0.8%

2.2 Gross and Net Generation

2.2.1 The petitioner hereby projects Gross Generation of 3127.32 MUs and Net Generation of 2830.22 MUs for each year of the Control Period FY 2021-22 to FY 2025-26 considering normative values of 85% PLF and 9.50% auxiliary consumption having an installed capacity of 420 MW for both units.

2.2.2 Following table summarizes the energy in MUs projected for MYT control period for FY 2021-22 to FY 2025-26:

Table 3: Summary of Projected Generation for Third Control Period

Generation Details	Unit	FY 22	FY 23	FY 24	FY 25	FY 26
Installed Capacity	MW	420	420	420	420	420
Plant Load Factor	%	85%	85%	85%	85%	85%
Gross Generation	MU	3,127.32	3,127.32	3,127.32	3,127.32	3,127.32



Generation Details	Unit	FY 22	FY 23	FY 24	FY 25	FY 26
Auxiliary Consumption	%	9.50%	9.50%	9.50%	9.50%	9.50%
Net Generation	MU	2,830.22	2,830.22	2,830.22	2,830.22	2,830.22

2.3 Energy Charges

2.3.1 As per Clause 15.4 and 17.10 of Jharkhand State Electricity Regulatory Commission (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020

"Energy Charges shall be derived on the basis of the landed fuel cost (LFC) of a generating station (excluding hydro) and shall consist of the following cost:

- (a) Landed Fuel Cost of primary fuel;*
- (b) Cost of secondary fuel oil consumption; and*
- (c) Cost of limestone or any other reagent, as applicable*

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 Control period for existing stations and immediately preceding three months in case of new generating stations shall be taken into account."



- 2.3.2 As per Clause 17.11 of Jharkhand State Electricity Regulatory Commission (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020 a transit loss of 0.8% can be considered for arriving at the landed cost of fuel per months for non-pithead generating plants. Since the operationalization of the railway line, TVNL has been using the same to procure coal from the allocated mines located at a distance of 40-60 kms. Earlier, the same was made available to the plant via road. As such, the transit loss has been considered as 0.8% for non-pithead generating plants which was in the earlier years considered as 0.2% for pithead generating plants.
- 2.3.3 The petitioner in the Chapter 4 "Operational Plan" of the Business Plan has considered normative values of operational parameters like Plant Availability Factor (PAF), Plant Load Factor (PLF), Gross Station Heat Rate (SHR), Auxiliary Consumption and Secondary Fuel Consumption as specified by the Commission for the forecast period.
- 2.3.4 The Petitioner has taken the weighted average values of the preceding three months for consideration of price of primary fuel, secondary fuel and GCV of coal along with specified normative values for Plant Availability Factor (PAF), Plant Load Factor (PLF), Gross Station Heat Rate (SHR), Auxiliary Consumption and Secondary Fuel Oil Consumption.
- 2.3.5 Following table summarizes the energy charges projections for MYT control period for FY 2021-22 to FY 2025-26:

Table 4: Summary of Projected Energy Charges for Third Control Period

Computation of energy charges	Unit	FY 22	FY 23	FY 24	FY 25	FY 26
Gross Generation	MU	3,127.32	3,127.32	3,127.32	3,127.32	3,127.32
Net Generation	MU	2,830.22	2,830.22	2,830.22	2,830.22	2,830.22
Station Heat Rate	Kcal/kWh	2,503.00	2,503.00	2,503.00	2,503.00	2,503.00
Secondary fuel oil consumption	ml/kWh	1.00	1.00	1.00	1.00	1.00
Gross calorific value of coal	Kcal/kg	3,668.15	3,668.15	3,668.15	3,668.15	3,668.15
Gross calorific value of oil	Kcal/Litre	9,359.00	9,359.00	9,359.00	9,359.00	9,359.00
Total heat required	Gcal	78,27,681.96	78,27,681.96	78,27,681.96	78,27,681.96	78,27,681.96



Computation of energy charges	Unit	FY 22	FY 23	FY 24	FY 25	FY 26
Oil consumption	KL	3,127.32	3,127.32	3,127.32	3,127.32	3,127.32
Heat from oil	Gcal	29,268.59	29,268.59	29,268.59	29,268.59	29,268.59
Heat from coal	Gcal	77,98,413.37	77,98,413.37	77,98,413.37	77,98,413.37	77,98,413.37
Transit Loss	%	0.8%	0.8%	0.8%	0.8%	0.8%
Total coal consumption including transit loss	MT/year	21,43,122.95	21,43,122.95	21,43,122.95	21,43,122.95	21,43,122.95
Cost of oil	Rs./KL	40,083.17	40,083.17	40,083.17	40,083.17	40,083.17
Cost of coal	Rs./MT	3,349.81	3,349.81	3,349.81	3,349.81	3,349.81
Total cost of oil	Rs. Cr.	12.54	12.54	12.54	12.54	12.54
Total cost of coal	Rs. Cr.	717.91	717.91	717.91	717.91	717.91
Energy charges	Rs./kWh	2.58	2.58	2.58	2.58	2.58

2.4 Fixed Costs

2.4.1 As per Clause 15.3 of Jharkhand State Electricity Regulatory Commission (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020

"The Capacity Charges shall be derived on the basis of annual fixed cost. The Annual Fixed Cost (AFC) of a generating station shall consist of the following components:

1. Return on Equity;
2. Interest on Loan Capital;
3. Depreciation;
4. Interest on Working Capital;
5. Operation & Maintenance Expenses, and
6. Less: Non-Tariff Income, and
7. Less: Income from Other Business as specified"

2.4.2 The table given below summarises total fixed cost projected for each year of the Control Period FY 2021-22 to FY 2025-26:



Table 5: Summary of Fixed Costs projected for Third Control Period (in Rs. Crores)

Fixed cost summary	Unit	FY22	FY23	FY24	FY25	FY26
O&M Expenses	Rs. Cr.	269.82	288.45	307.54	326.60	347.29
Depreciation	Rs. Cr.	7.15	15.26	22.72	28.61	36.02
Interest on normative loan	Rs. Cr.	20.80	24.60	26.50	27.22	29.32
Interest on long term loan	Rs. Cr.	103.21	103.21	103.21	103.21	103.21
Return on Equity	Rs. Cr.	29.84	32.93	35.29	37.29	40.56
Special Allowance	Rs. Cr.	-	19.95	39.90	39.90	39.90
Water Charges	Rs. Cr.	12.00	12.00	12.00	12.00	12.00
Interest on Working Capital	Rs. Cr.	40.16	41.68	43.17	44.24	45.46
Total Fixed Cost	Rs. Cr.	482.99	538.09	590.33	619.07	653.76

2.5 Capital Investment Plan and Capitalization

2.5.1 As per Clause 6.6 (a) and 6.7 of Jharkhand State Electricity Regulatory Commission (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020 which states that:

"6.6 The Business Plan shall be for the entire Control Period and shall inter-alia Contain:-

a) **Capital Investment Plan:** The Generating Company shall submit the Capital Investment Plan for the entire Control Period, detailing the investments planned by the Generating Company along with the corresponding capitalisation schedule and financing plan. This Plan shall also include capacity enhancement plan, if any, and proposed efficiency improvements and its cost benefit analysis. It shall also submit plant-wise details of Capital Structure and cost of Financing (interest on Debt) and return on equity, after considering the existing market conditions, terms of the existing loan agreements, risk associated in generating business and creditworthiness;

6.7 The Generating Company shall file for the Commission's approval a Capital Investment Plan for the entire Control Period along with the Business Plan. The Capital Investment Plan shall be prepared scheme-wise and each scheme shall include:-

1. Purpose of investment;
2. Approval of Competent Authority;
3. Detailed Project Report;
4. Capital Structure;



5. Capitalisation Schedule;
6. Implementation schedule including timelines;
7. Cost-benefit analysis & Rate reasonability;
8. Improvement in operational efficiency envisaged in the Control Period;
9. On-going schemes that will spill over into next financial year under review along with justification;
10. New schemes that will commence during the Control Period but may be completed within or beyond the Control Period."

- 2.5.2 As per Regulation 14.11 of JSERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020 a generating company may opt to avail a special allowance for meeting the requirement of expenses including R&M beyond the Useful Life of the generating station or a Unit thereof, and in such an event revision of the capital cost shall not be allowed and the applicable operational norms shall not be relaxed but the special allowance shall be included in the annual fixed cost.
- 2.5.3 TVNL Unit-I is completing 25 years in FY 2021-22 and Unit-II is reaching its age of 25 years in FY 2022-23. TVNL has decided to opt special allowance for Unit-I from FY 2022-23 onwards and for Unit-II from FY 2023-24 as per Regulation 14.12 of JSERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020. From these years, TVNL is not requesting any capex/capitalization towards renovation & modernization.
- 2.5.4 Additionally, in order to achieve revised emission norms for coal based power plants as issued by MoEFCC; TVNL also proposes installation of FGD, D-NOx and ESP systems as per Regulation 14.13 of JSERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020. These expenditures are due to change in law and hence should not be regarded as Renovation & Modernization capex and hence can be availed along with special allowance.
- 2.5.5 In line with specified provisions of JSERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020, TVNL hereby submits a detailed Capital Investment Plan and Capitalization schedule for MYT control period for FY 2021-22 to FY 2025-26 as tabulated below:

Table 6: Summary of Capital Investment Plan (In Rs. Cr.)

Capital Expenditure	FY 22	FY 23	FY 24	FY 25	FY 26
Control & Instrumentation (C&I)	27.14	1.48	-	-	-
Information Technology (IT)	0.37	4.50	-	-	-
Electrical Maintenance (EM-I)	15.62	3.12	-	-	-
Electrical Maintenance (EM-II)	4.48	6.18	-	-	-
Turbine Maintenance (TMD)	4.86	21.26	-	-	-
Boiler Maintenance (BMD)	4.11	6.25	-	-	-
Coal Handling Plant (CHP-I)	5.25	1.80	-	-	-



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Capital Expenditure	FY 22	FY 23	FY 24	FY 25	FY 26
Coal Handling Plant (CHP-II)	-	0.35	-	-	-
Operation (OPN)	-	0.28	-	-	-
Civil	4.41	2.20	-	-	-
Environmental Management Group (EMG)	29.65	20.10	67.70	50.10	68.10
Total	95.89	67.50	67.70	50.10	68.10

Table 7: Summary of capitalization schedule (In Rs. Cr.)

Capital Expenditure	FY 22	FY 23	FY 24	FY 25	FY 26
Control & Instrumentation (C&I)	27.14	1.48	-	-	-
Information Technology (IT)	0.37	4.50	-	-	-
Electrical Maintenance (EM-I)	15.62	3.12	-	-	-
Electrical Maintenance (EM-II)	4.48	6.18	-	-	-
Turbine Maintenance (TMD)	4.86	21.26	-	-	-
Boiler Maintenance (BMD)	4.11	6.25	-	-	-
Coal Handling Plant (CHP-I)	5.25	1.80	-	-	-
Coal Handling Plant (CHP-II)	-	0.35	-	-	-
Operation (OPN)	-	0.28	-	-	-
Civil	4.41	2.20	-	-	-
Environmental Management Group (EMG)	14.83	18.95	45.81	49.38	106.69
Total	81.07	66.35	45.81	49.38	106.69

Table 8: Summary of capitalization (In Rs. Cr.)

Capital Expenditure	FY 22	FY 23	FY 24	FY 25	FY 26
Opening CWiP	63.16	77.98	79.14	101.03	101.75
Capex added during the year	95.89	67.50	67.70	50.10	68.10
Capex converted to GFA	81.07	66.35	45.81	49.38	106.69
Closing CWiP	77.98	79.14	101.03	101.75	63.16
Opening GFA	1,642.88	1,723.95	1,790.30	1,836.11	1,885.49
GFA conversion from capitalization	81.07	66.35	45.81	49.38	106.69
Closing GFA	1,723.95	1,790.30	1,836.11	1,885.49	1,992.18
Debt (70%)	56.75	46.44	32.07	34.57	74.68
Equity (30%)	24.32	19.90	13.74	14.81	32.01



2.6 Total costs to be covered

2.6.1 As per Clause 15.1 of Jharkhand State Electricity Regulatory Commission (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020

"The tariff for supply of electricity from a thermal generating station shall comprise two parts namely, Capacity Charge (for recovery of Annual Fixed Cost consisting of the components as specified in Clause 15.3 of these Regulations) and Energy Charge (for recovery of primary and secondary fuel cost and cost of limestone and any other reagent, as may be applicable as specified in Clause 15.4 of these Regulations, in case of thermal generating station) as specified in these Regulations."

2.6.2 Following table summarizes the Revenue requirement computations for each year of the Control Period FY 2021-22 to FY 2025-26:

Table 9: Summary of Total Costs projected for Third Control Period

Revenue Requirement	Unit	FY22	FY23	FY24	FY25	FY26
Fixed Charges	Rs. Cr.	482.99	538.09	590.33	619.07	653.76
Other Income	Rs. Cr.	18.00	18.86	19.75	20.69	21.68
Fixed income to be raised through tariff	Rs. Cr.	464.99	519.23	570.58	598.38	632.08
Energy Charge Rate	Rs./kWh	2.58	2.58	2.58	2.58	2.58



Chapter 3: Multi-year tariff projections for FY22 to FY26

This section outlines details of fixed and variable cost components proposed by the TVNL under this MYT petition for the control period of FY 2021-22 to 2025-26.

For the purpose of MYT petition all the expense heads has been categorized into Controllable and Uncontrollable factors as shown in the following sections.

3.1 Categorization of Heads of Expenses

3.1.1 For above purpose, TVNL has categorized the expenditures used for the purpose of the MYT petition into Uncontrollable and Controllable expenses:

Table 10: Controllable and Uncontrollable expenses

Sl. No.	Particular	Category	Remarks
1.	Fuel Expenses	Uncontrollable	
2.	Capital Expenditure	Controllable	
3.	Depreciation	Controllable	
4.	Operations and Maintenance Expenses	Controllable	Uncontrollable to extent of delay in funding and precarious financial situation of TVNL due to non-payment from JBVNL's part.
5.	Interest on loan and finance charges	Controllable	
6.	Interest on working capital	Controllable	
7.	Return on Equity	Controllable	As per JSERC Regulations
8.	Taxes on Income	Uncontrollable	

3.2 Details of proposed operational parameters & Variable Cost for FY 2021-22 to FY 2025-26

3.2.1 The proposed variable cost for TVNL for control period of FY 2021-22 to FY 2025-26 are based on the projected operational parameters, GCV's and cost of different fuels for the given control period. The Petitioner in the following section projects the performance of the plant.

3.2.2 This section deals with the approach adopted by petitioner for projecting the operational parameters & Variable Cost for control period of FY 2021-22 to FY 2025-26 based on actual fuel cost.

3.3 Operational Parameters

3.3.1 Following table summarizes the Operational Parameter's projections for MYT control period for FY 2021-22 to FY 2025-26.

Table 11: Operating parameters projected for Third Control Period

Particular	FY 22	FY 23	FY 24	FY 25	FY 26
PAF (%)	85%	85%	85%	85%	85%
PLF (%)	85%	85%	85%	85%	85%
Station Heat Rate (Kcal/kWh)	2503	2503	2503	2503	2503
Aux. Consumption (%)	9.50%	9.50%	9.50%	9.50%	9.50%



Particular	FY 22	FY 23	FY 24	FY 25	FY 26
Secondary Fuel consumption (ml/kWh)	1	1	1	1	1
Transit Loss (%)	0.8%	0.8%	0.8%	0.8%	0.8%

3.3.2 The detailed description of the same is provided below:

a) Plant Availability

Currently, the Plant is operating at the PAF of 69.66% for FY 2020-21. However, for the Control Period (FY 2021-22 to FY 2025-26), the Petitioner projects to meet the Normative Annual Plant Availability Factor of 85% as per the clause 16.1 of the JSERC Generation Tariff Regulations, 2020.

b) Plant Load Factor

Currently, the Plant is operating at the PLF of 60.82% for FY 2020-21. However, for the Control Period (FY 2021-22 to FY 2025-26), the Petitioner projects to meet the Normative Annual Plant Availability Factor of 85% as per the clause 16.1 of the JSERC Generation Tariff Regulations, 2020.

c) Station Heat Rate

Petitioner in its endeavour of continuously improving the heat rate of its station strives to improve it further. In FY 2020-21, the Petitioner maintained the Station Heat Rate of 2,696.24 Kcal/kWh. However, for the Control Period (FY 2021-22 to FY 2025-26), the Petitioner projects its Station Heat Rate at 2503 kcal/kWh in accordance with the clause 16.1 of the JSERC Generation Tariff Regulations, 2020. The year wise projected Station Heat Rate is tabulated below as:

Table 12: Station Heat Rate projected for Third Control Period

Particular	FY 22	FY 23	FY 24	FY 25	FY 26
Station Heat Rate (kCal/kWh)	2,503.00	2,503.00	2,503.00	2,503.00	2,503.00

d) Auxiliary Consumption

In FY 2020-21, the Auxiliary Consumption of the Plant was 11.39%. The petitioner aims & projects to attain auxiliary consumption of 9.50% for the control period FY 2021-22 to FY 2025-26 as per the clause 16.1 of the JSERC Generation Tariff Regulations, 2020.

e) Secondary fuel oil consumption



In the new regulations, Hon'ble Commission has specified normative secondary fuel oil consumption of 1 ml/kWh for the entire control period. The petitioner would like to submit that average specific oil consumption of TVNL for the past years has been in the range of 1-2 ml/kWh. In FY 2020-21, the Specific Oil Consumption was 1.04 ml/kWh. Petitioner in its endeavour to improve the performance aims to achieve specific oil consumption of 1 ml/kWh for the control FY 2021-22 to FY 2025-26 as per the clause 16.1 of the JSERC Generation Tariff Regulations, 2020 and requests the Hon'ble Commission to approve the same.

f) Transit Loss

Petitioner projects to meet the 0.80% as Transit Loss for the Third MYT Control Period. Thus, TVNL requests the Hon'ble JSERC to approve the Transit Loss of 0.80% which is in line with the clause 17.11 of JSERC Generation Tariff Regulations, 2020 for non-pithead generating stations.

3.4 Variable cost (Energy Charge) computation

3.4.1 As per the clause 15.4 of JSERC Generation Tariff Regulations, 2020:

"Energy Charges shall be derived on the basis of the landed fuel cost (LFC) of a generating station (excluding hydro) and shall consist of the following cost:

- (a) Landed Fuel Cost of primary fuel;*
- (b) Cost of secondary fuel oil consumption*
- (c) Cost of limestone or any other reagent, as applicable*

3.4.2 Accordingly, various assumptions and computation for determination of Energy Charges is given below:

Cost of coal and oil computation

3.4.3 As per the Clause 17.10 of JSERC Generation Tariff Regulations, 2020:

"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 Control period for existing stations and immediately preceding three months in case of new generating stations shall be taken into account."



3.4.4 Thus, in line with the aforesaid regulations, the Petitioner has considered the Cost of Coal and Secondary Fuel for the preceding three months from the start of Control Period (i.e. Dec'21 to Feb'21) and based on the same has computed the weighted average Rate of Coal, the computation of which is provided below:

Table 13: Weighted average rate of coal

Sl. No.	Particulars	Coal consumption (MT)	Rate of coal (INR/MT)
1.	Dec-20	1,09,754	3357.49
2.	Jan-21	1,36,529	3400.12
3.	Feb-21	1,25,394	3288.31
	Weighted Average Rate of coal		3349.81

Table 14: Weighted average rate of Secondary Fuel

Sl. No.	Particulars	Oil consumption (KL)	Rate of oil (INR/KL)
1.	Dec-20	294.20	36749.09
2.	Jan-21	125.80	43548.73
3.	Feb-21	90.60	46097.70
	Weighted Average Rate of Secondary Fuel		40083.17

3.4.5 Thus, as given above, the Petitioner has considered the Rate of Coal as INR 3,349.81/MT and Cost of Secondary Fuel as INR 40,083.17/KL for the Control Period (FY 2021-22 to FY 2025-26) and requests the Hon'ble Commission to approve the same.

Gross Calorific Value of Coal

3.4.6 As per the Clause 17.15 of JSERC Generation Tariff Regulations, 2020,

"Initially the Base value of gross calorific value of fuel oils and gross calorific value of coal incurred by the Generating Company/ generating Station shall be taken based on actuals of the weighted average gross calorific value of the three preceding months and in the absence of weighted average gross calorific value for the three preceding months, latest weighted average gross calorific value for the generating station, before the start of the year."

3.4.7 Thus, in line with the aforesaid regulations, the Petitioner has considered the Gross Calorific Value of Coal and Secondary fuel for the preceding three months from the start of Control Period (i.e. Dec'21 to Feb'21) and based on the same has computed the weighted average GCV of Coal, the computation of which is provided below:

Table 15: Weighted average GCV of coal

Sl. No.	Particulars	Coal consumption (MT)	GCV of coal (kCal/kg)
1.	Dec-20	1,09,754	3646.44
2.	Jan-21	1,36,529	3602.75
3.	Feb-21	1,25,394	3758.37



Sl. No.	Particulars	Coal consumption (MT)	GCV of coal (kCal/kg)
	Weighted Average GCV of coal		3668.15

Table 16: Weighted average GCV of Secondary Fuel

Sl. No.	Particulars	Oil consumption (KL)	GCV of oil (kCal/Litre)
1.	Dec-20	294.20	9359.00
2.	Jan-21	125.80	9359.00
3.	Feb-21	90.60	9359.00
	Weighted Average GCV of Secondary Fuel		9359.00

3.4.8 Thus, as given above, the Petitioner has considered the GCV of Coal and Secondary Fuel as 3668.15 kCal/kg and Rs. 9,359 kCal/Litre respectively for the Control Period (FY 2021-22 to FY 2025-26) and requests the Hon'ble Commission to approve the same.

Energy Charge Rate Computation

3.4.9 As per Clause 17.13 of JSERC Generation Tariff Regulations, 2020 states that,

"Any variation in fuel prices on account of change in the Gross Calorific Value (GCV) of coal or gas or liquid fuel shall be adjusted on a monthly basis on the basis of weighted average GCV of coal or gas or liquid fuel in stock, received and burnt and weighted average landed cost incurred by the Generating Company for procurement of coal, oil, or gas or liquid fuel, as the case may be for a power station."

3.4.10 Further as per the Clause 17.14 of JSERC Generation Tariff Regulations, 2020,

"Initially, the Base value of price of fuel oils, price of coal incurred by the Generating Company/ generating station shall be taken based on actuals of the weighted average price of the three preceding months and in the absence of weighted average landed costs for the three preceding months, latest respective weighted average procurement price for the generating station, before the start of the year."

3.4.11 In view of the aforesaid clauses, the Petitioner has not considered any escalation in Rate of Coal or Secondary Fuel during the Control Period as any escalation in the same may be recovered through Fuel Price Adjustment mechanism for taking into account the escalation in fuel price. This is also in line with the MYT Order dated 28th February 2020 issued by the Hon'ble Commission for previous Control Period

3.4.12 The Energy Charge Rate has been computed as per the Clause 17.8 of JSERC Generation Tariff Regulations 2020 which states that,

"Energy Charge Rate (in Rs./kWh) on ex-power plant basis shall be determined to three decimal places in accordance with the following formulae:



For coal-based stations and lignite fired stations:

$$\text{Energy Charge Rate (ECR)} = \{(SHR - SFC \times CVSF) \times LPPF / CVPF + SFC \times LPSF_i / LC \times LPL\} / (1 - \text{Aux})$$

For gas and liquid fuel-based stations:

$$\text{ECR} = SHR \times LPPF / \{CVPF \times (1 - \text{Aux})\}$$

Where,

Aux: Normative auxiliary energy consumption (%);

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 (kcal/ml);

ECR - Energy Charge Rate (Rs./kWh);

SHR - Gross Station Heat Rate (kcal/kWh);

LC = Normative limestone consumption (kg/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);

LPSF_i = 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."

3.4.13 Based on the aforementioned regulations along with the discussed performance parameters, the Energy Charge Rate MYT control period (FY 22 to FY 26) has been computed and the same is provided in the table given below:



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Table 17: Energy Charge computation for Third Control Period

Computation of energy charges	Unit	FY 22	FY 23	FY 24	FY 25	FY 26
Gross Generation	MU	3,127.32	3,127.32	3,127.32	3,127.32	3,127.32
Net Generation	MU	2,830.22	2,830.22	2,830.22	2,830.22	2,830.22
Station Heat Rate	Kcal/kWh	2,503.00	2,503.00	2,503.00	2,503.00	2,503.00
Secondary fuel oil consumption	MI/kWh	1.00	1.00	1.00	1.00	1.00
Gross calorific value of coal	Kcal/kg	3,668.15	3,668.15	3,668.15	3,668.15	3,668.15
Gross calorific value of oil	Kcal/KL	9,359.00	9,359.00	9,359.00	9,359.00	9,359.00
Total heat required	Kcal	78,27,681.96	78,27,681.96	78,27,681.96	78,27,681.96	78,27,681.96
Oil consumption	KL	3,127.32	3,127.32	3,127.32	3,127.32	3,127.32
Heat from oil	Kcal	29,268.59	29,268.59	29,268.59	29,268.59	29,268.59
Heat from coal	Kcal	77,98,413.37	77,98,413.37	77,98,413.37	77,98,413.37	77,98,413.37
Transit Loss	%	0.8%	0.8%	0.8%	0.8%	0.8%
Total coal consumption including transit loss	MT/year	21,43,122.95	21,43,122.95	21,43,122.95	21,43,122.95	21,43,122.95
Cost of oil	Rs./KL	40,083.17	40,083.17	40,083.17	40,083.17	40,083.17
Cost of coal	Rs./MT	3,349.81	3,349.81	3,349.81	3,349.81	3,349.81
Total cost of oil	Rs. Cr.	12.54	12.54	12.54	12.54	12.54
Total cost of coal	Rs. Cr.	717.91	717.91	717.91	717.91	717.91
Energy charges	Rs./kWh	2.58	2.58	2.58	2.58	2.58



3.5 Details of Fixed Cost for Control Period of FY 2021-22 to 2025-26

3.5.1 This section deals with the approach adopted by petitioner for projecting the fixed cost for control period of FY 2021-22 to 2025-26 based on the provisional accounts for the FY 2016-17 to FY 2019-20. The Revenue Requirement for the control period of FY 2021-22 to FY 2025-26 is projected based on methodologies discussed in detail in subsequent paragraphs.

3.5.2 As per the clause 15.3 of JSERC Generation Tariff Regulations, 2020 which states that:

"The Capacity Charges shall be derived on the basis of annual fixed cost. The Annual Fixed Cost (AFC) of a generating station shall consist of the following components:

- 1. Return on Equity;*
- 2. Interest on Loan Capital;*
- 3. Depreciation;*
- 4. Interest on Working Capital;*
- 5. Operation & Maintenance Expenses, and*
- 6. Less: Non-Tariff Income, and Less: Income from Other Business"*



- 3.5.3 In the previous MYT Order for the Control Period 2017-2021 (Including true-up for FY 2014-15 & provisional true-up of FY 2015-16) dated 28th February 2020, the Hon'ble Commission had approved GFA of Rs. 1493 Cr. and an accumulated depreciation of Rs. 1213.66 Cr. as on 31.03.2016, based on the provisional accounts for FY 2015-16 submitted by the Petitioner. On the same basis, the Petitioner for purpose of this Petition has hereby considered GFA as on 31.03.2016 at Rs. 1588.50 Cr. and accumulated depreciation at Rs. 1276.88 Cr. as per the final annual accounts of FY 2015-16 subject to final true-up by the Commission.
- 3.5.4 Hon'ble Commission has also not carried out True-up for period FY 2016-17 to FY 2019-20 due to unavailability of audited financial accounts for the period. Therefore, for sake of calculating opening GFA and accumulated depreciation for next Control Period (FY 22 to FY 26), TVNL has considered addition in GFA and annual depreciation for period FY 2015-16 to FY 2019-20 as per its provisional audited accounts for these years.
- 3.5.5 The GFA and accumulated depreciation as on 31.03.2020 as stands at Rs. 1642.88 Cr. and Rs. 1381.08 Cr respectively per provisional account for FY 2019-20. The same is being considered for purpose of this Petition, subject to final True-up by Hon'ble Commission.
- 3.5.6 The addition in GFA and depreciation for the year FY 2020-21 has been considered at 'nil' and Rs. 26.01 Cr respectively as approved by the Commission in the last MYT order dated 28th February 2020 for the FY. Accordingly closing GFA and accumulated depreciation for FY 2020-21 has been considered at Rs.1642.88 Cr and Rs. 1407.09 Cr for purpose of this Petition which forms the opening amount for next Control Period.
- 3.5.7 Further TVNL has calculated year-wise addition in debt and equity (in previous Control Period) in accordance with provisions of 2020 Regulations considering capitalization in each year and normative debt equity ratio of 70: 30 on closing balance of debt and equity for FY 2015-16 as approved by Hon'ble Commission in previous MYT Order dated 28th February 2020.
- 3.5.8 The details of aforesaid ARR components are provided in the subsequent sections.

3.6 Return on Equity

- 3.6.1 The Petitioner has considered an opening equity of Rs. 184.64 Cr. for FY 2016-17 as approved by the Hon'ble Commission in the last MYT Order dated 28th February 2020. The Commission hadn't approved any capital expenditure for the Control Period FY 2016-17 to FY 2020-21 due to delay in submission of detailed justifications in the Order on Petition for Multi Year Tariff For the period FY 2017-21 dated 28th February 2020.



3.6.2 As there hasn't been a true-up after FY 2015-16, the petitioner has considered the capitalization in the previous control period (FY 2016-17 to FY 2019-20) as per the values reflected in the provisional balance sheet for each of the years. The addition in Equity has been considered at 30% of addition in GFA as per Regulation 15.6 and 15.7 of JSERC Generation Tariff Regulations 2020. The Petitioner has further considered no addition in GFA and equity for FY 2020-21 as per previous MYT order dated 28th February 2020. Accordingly Opening Equity for FY 2021-22 has been calculated at Rs. 200.95 Cr. as shown in table below:

Table 18: Addition in Equity during the period FY 17 to FY 20

Return on Equity	Unit	FY17	FY18	FY19	FY20
Asset Capitalization (INR Cr.)	INR Cr.	49.06	0.19	4.08	1.05
Equity Component (%)	%	30%	30%	30%	30%
Equity Addition (INR Cr.)	INR Cr.	14.72	0.06	1.22	0.31

3.6.3 As can be seen from above table, addition in equity in previous Control Period (FY 17-FY 20) was Rs. 16.31 crore and hence the opening equity for FY 2021-22 stands at Rs 200.95 crore (184.64+16.31).

3.6.4 As per the Clause 15.10 of JSERC Generation Tariff Regulations 2020, the Return on Equity shall be computed on post-tax basis at the base rate of 14.00%. Since there is no income tax envisaged to be paid by the Petitioner during the Control Period, the Post Tax Rate of Equity has been considered.

3.6.5 Based on the opening Normative Equity, Normative Equity addition during the Control Period on account of Additional Capitalization and RoE, the Return on Equity during the Second Control Period (FY 2016-17 to FY 2020-21) is provided in the table given below:

Table 19: Computation of Return on Equity for Third Control Period (In Rs. Cr.)

Return on Equity	FY22	FY23	FY24	FY25	FY26
Equity (Opening Balance)	200.95	225.27	245.18	258.92	273.74
Net additions during the year	24.32	19.90	13.74	14.81	32.01
Equity (Closing Balance)	225.27	245.18	258.92	273.74	305.74
Average Equity	213.11	235.23	252.05	266.33	289.74
Rate of return on Equity	14.00%	14.00%	14.00%	14.00%	14.00%
Return on Equity	29.84	32.93	35.29	37.29	40.56



3.6.6 The petitioner requests Hon'ble Commission to approve the Return on Equity as projected above.

3.7 Interest and Financing Charges on Debt

3.7.1 For computation of normative debt for next Control Period, the Petitioner has considered the opening debt of Rs. 288.62 crore for FY 2016-17 as approved by Hon'ble Commission during the last MYT order dated 28th February 2020, and capitalization during the Control Period between years FY 2016-17 and FY 2019-20 as available from the provisional balance sheets of each of the years.

3.7.2 The addition in normative loans has been taken as 70% of the capitalization for the year as per Regulation 15.6 and 15.7 of JSERC Generation Tariff Regulations 2020 and the repayment for a particular year has been considered equal to depreciation considered for that year as per Regulation 15.15 of JSERC Generation Tariff Regulations 2020. The capitalization and depreciation for FY 2020-21 has been taken as the values approved by Hon'ble Commission during the last MYT order dated 28th February 2020 i.e at 'nil' and Rs. 26.01 respectively.

3.7.3 Accordingly opening debt for FY 2021-22 has been calculated as per following table:

Table 20: Addition in Debt and Repayment during the period FY 17 to FY 21

Return on Equity	Unit	FY17	FY18	FY19	FY20	FY21
Opening Debt	INR Cr.	288.62	281.63	253.55	231.58	222.49
Asset Capitalization	INR Cr.	49.06	0.19	4.08	1.05	0.00
Debt Component (%)	%	70%	70%	70%	70%	70%
Debt Addition	INR Cr.	34.34	0.13	2.86	0.73	0.00
Debt Repayment	INR Cr.	41.33	28.21	24.83	9.82	26.01
Closing Debt	INR Cr.	281.63	253.55	231.58	222.49	196.48

3.7.4 As per the Clause 15.10 of JSERC Generation Tariff Regulations 2020 interest of loan is calculated as per following provisions:

The loans arrived at in the manner indicated in Clause 15.6 and Clause 15.7 of these Regulations, shall be considered as gross normative loan for calculation of Interest on Loan.

The normative loan outstanding as on April 01, 2021 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to March 31, 2021 from the gross normative loan.

The repayment for each year of the Control Period shall be deemed to be equal to the depreciation allowed for that financial year.

In case of de-capitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on pro-rata basis and the adjustment should not exceed cumulative depreciation recovered up to the date of de-capitalization of such assets.



Notwithstanding any moratorium period availed by the Generating Company, the repayment of loan shall be considered from the first year of operation of the scheme/asset.

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 Generating Company:

Provided that if there is no actual loan for a particular year but normative loan is still outstanding, then the rate of interest shall be considered on normative basis and shall be equal to Bank Rate as on April 01 of the respective year of the Control Period plus 200 basis points;

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

3.7.5 In the Current Petition, the Petitioner has considered the Interest and Finance Charges for the control Period as given below:

- a) **Interest Charges on the loans outstanding as on 31st March 2021** - Refers to the interest charge payable by the Petitioner on the outstanding loans at the end of FY 21 as calculated in above table
- b) **Interest on additional capitalization** – Interest charges payable for the loans projected to be raised for the additional capitalization projected for the Third Control Period i.e. FY 2021-22 to FY 2025-26. In accordance with the JSERC Generation Tariff Regulations 2020, the Normative Debt on account of Additional Capitalization has been considered as 70%.
- c) **Repayment of Loan** – The repayment has been considered equal to the depreciation computed for the Control Period in accordance with the clause 15.15 of JSERC Generation Tariff Regulations 2020.
- d) **Rate of Interest** – The Interest charges for the on-going loans have been considered as per the actual rate of Interest. For the new loans projected during the Control Period, the Interest Rate has been considered in accordance with clause 15.18 of JSERC Generation Tariff Regulations, 2020, i.e. SBI Base Rate plus 200 basis points. As on 01st April 2020, the SBI Base Rate was 7.00% and accordingly, the Interest Rate on Normative Loan comes out to be 9.00%.

3.7.6 Based on the Opening Normative Debt, Normative Debt addition during the Control Period on account of Additional Capitalization and Rate of Interest, the Interest on Debt during the Third Control Period (FY 2021-22 to FY 2025-26) is calculated in below table:

Table 21: Interest Cost for the Third Control Period (In Rs. Cr.)

Interest on loan	FY22	FY23	FY24	FY25	FY26
Opening Balance	196.48	246.08	277.26	286.61	292.57
Loan received during the year	56.75	46.44	32.07	34.57	74.68



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Interest on loan	FY22	FY23	FY24	FY25	FY26
Repayment during the year	7.15	15.26	22.72	28.61	36.02
Balance outstanding at the end of the year	246.08	277.26	286.61	292.57	331.23
Average Loan	221.28	261.67	281.94	289.59	311.90
Rate of Interest	9.40%	9.40%	9.40%	9.40%	9.40%
Interest Cost	20.80	24.60	26.50	27.22	29.32

3.7.7 The outstanding loans of TVNL from the Govt. of Bihar, Govt. of Jharkhand and BSEB as on 31.03.2020 stands at:

Table 22: Long term loans of TVNL outstanding as on 31.03.2020 (In Rs. Cr.)

Particulars	FY17	FY18	FY19	FY20
Loan from Govt. of Bihar	608.90	608.90	608.90	608.90
Loan from Govt. of Jharkhand	57.00	57.00	57.00	57.00
Loan from BSEB	168.40	168.40	168.40	168.40
Interest accrued on Govt. of Bihar loan	2,177.00	2,271.38	2,365.50	2,459.88
Interest accrued on Govt. of Jharkhand loan	107.99	116.83	123.81	132.65
Rate of Interest (%)	15.50%	15.50%	15.50%	15.50%

3.7.8 TVNL has considered a rate of interest as 15.50% to calculate the interest cost on long term outstanding loans for the Control Period FY 2021-22 to FY 2025-26:

Table 23: Interest cost on long term outstanding loans for the Control Period FY 2021-22 to FY 2025-26 (In Rs. Cr.)

Particulars	FY22	FY23	FY24	FY25	FY26
Loan from Govt. of Bihar	608.90	608.90	608.90	608.90	608.90
Loan from Govt. of Jharkhand	57.00	57.00	57.00	57.00	57.00
Rate of Interest	15.50%	15.50%	15.50%	15.50%	15.50%
Yearly interest on Govt. of Bihar loan	94.38	94.38	94.38	94.38	94.38
Yearly interest on Govt. of Jharkhand loan	8.84	8.84	8.84	8.84	8.84
Total Interest Cost	103.21	103.21	103.21	103.21	103.21

3.7.9 The petitioner requests Hon'ble Commission to approve the Interest Cost as projected above.



3.8 Depreciation

3.8.1 As elucidated in paragraph 3.5.6, TVNL has considered GFA and accumulated depreciation at the beginning of FY 2021-22 at Rs.1642.88 Cr and Rs. 1407.09 Cr respectively for purpose of this Petition.

3.8.2 As per the clause 15.28, 15.29 and 15.30 of JSERC Generation Tariff Regulations, 2020:

“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.”

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. 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;”

3.8.3 As per the clause 15.31 of JSERC Generation Tariff Regulations, 2020:

“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.

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”

3.8.4 The petitioner submits the closing GFA of Rs. 1642.88 Cr. For FY 2020-21 and accumulated depreciation of Rs. 1407.09 Cr. The accumulated depreciation as on 31.03.2021 is 85.54% of the GFA.

3.8.5 Considering 10% salvage value, i.e. Rs. 164.29 Cr, the maximum depreciable value on current asset stands Rs. 1478.59 Cr.



- 3.8.6 The CoD of Unit I of the plant is September'1996 and for Unit II is September'1997. As on 01.04.2021, Unit I is in the 25th year and Unit II in the 24th year. Considering life of 35 years, the balance depreciable value of Rs. 71.50 Cr. (1478.59-1407.09) is to be spread out over the balance 10 years i.e at 7.15 Cr./annum. The average depreciation rate comes at 0.44% per annum. The depreciation on other capitalization proposed for the current Control Period has been spread in remaining useful life of the plant (Considering total life as 35 years).
- 3.8.7 The depreciation projected for the Control Period is provided in the table given below:

Table 24: Projected Depreciation for Third Control Period (In Rs. Cr.)

Depreciation	FY22	FY23	FY24	FY25	FY26
Opening Accumulated Depreciation	1,407.09	1,414.24	1,429.50	1,452.22	1,480.83
Annual Depreciation	7.15	15.26	22.72	28.61	36.02
Closing Accumulated Depreciation	1,414.24	1,429.50	1,452.22	1,480.83	1,516.85

3.9 Operation and Maintenance Expenses

- 3.9.1 The O&M expenses include expenditure incurred in the operation and maintenance of the generating station, including employee cost, repairs and maintenance, consumption of stores and spares, water charges, ash disposal, pollution control cess, insurance and other administrative and general expenses of the Petitioner corporate office at Ranchi.
- 3.9.2 As per the clause 15.35, 15.40 and 15.41 of JSERC Generation Tariff Regulations, 2020;

O&M Expenses Comprises of:

- I. Salaries, wages, pension contribution and other employee costs;
- II. Administrative and General costs;
- III. Repairs and maintenance expenses;

The O&M Expenses for the Base Year of the Control Period shall be approved by the Commission taking into account the audited accounts of FY 2015-16 to FY 2019-20, Business Plan filed by the Generating Company, estimates of the actual for the Base Year, prudence check and any other factor considered appropriate by the Commission.

The O&M expenses permissible towards ARR of each year of the Control Period shall be approved based on the formula shown below:

$$\mathbf{O\&M_n = (R\&M_n + EMP_n + A\&G_n) + Terminal Liabilities}$$

Where,



$R\&M_n$ – Repair and Maintenance Costs of the Generating Company for the n^{th} year;

EMP_n – Employee Costs of the Generating Company for the n^{th} year excluding terminal liabilities;

$A\&G_n$ – Administrative and General Costs of the Generating Company for the n^{th} year.

3.9.3 The R&M, Employee and A&G costs for “nth” year shall be indexed by using inflationary factors. The index will be a combination of the Consumer Price Index (CPI) and the Wholesale Price Index (WPI) for immediately preceding year before the base year. As per Regulation 6.6 (c), Inflation Factor is calculated by giving 55% weightage to the CPI index and 45% weightage to the WPI index as per the following formula.

$$INDX_n = 0.55 * CPI_n + 0.45 * WPI_n$$

3.9.4 In line with the above formula, the inflation factor for the Control Period works out as follows:

Table 25: Calculation of combined inflation index

Period	WPI	CPI	Total
Weightage	0.45	0.55	1.00
Avg Indexation for FY 19-20	121.80	322.50	
Avg Indexation n-1 (Index * Wt.)	54.81	177.38	232.19
Avg Indexation for FY18-19	119.79	299.92	
Avg Indexation n (Index * Wt.)	53.91	164.95	218.86
Combined Inflation (Indxn/Indxn-1)	6.09%		

3.9.5 As per the provisions of the JSERC Generation Tariff Regulations, 2020, TVNL has used the same $INDX_n / INDX_{n-1}$ value for all years of the control period for the purpose of estimation. However, TVNL understands that the Hon’ble Commission will consider the actual values in the $INDX_n / INDX_{n-1}$ at the end of each year during the Annual Performance Review exercise and true up the employee cost and A&G expenses on account of this variation, for the Control Period.

3.9.6 Following sections summarizes the O&M expenses projections for the MYT control period:

Employee and A&G Expenses

3.9.7 As per the clause 15.42 (b) and (c) of the JSERC Generation Tariff Regulations, 2020:

$$EMP_n + A\&G_n = [(EMP_{n-1}) * (1+G_n) + (A\&G_{n-1})] * (INDX_n / INDX_{n-1})$$

Where,

EMP_{n-1} – Employee Costs of the Generating Company for the $(n-1)^{th}$ year excluding terminal liabilities;

$A\&G_{n-1}$ – Administrative and General Costs of the Generating Company



for the $(n-1)^{th}$ year excluding legal/litigation expenses;
 $INDX_n$ – Inflation factor to be used for indexing the employee cost and A&G cost. This will be a combination of the Consumer Price Index (CPI) and the Wholesale Price Index (WPI) for immediately preceding year before the base year;

G_n – is a growth factor for the n^{th} year and it can be greater than or lesser than zero based on the actual performance. Value of G_n shall be determined by the Commission in the MYT Order for meeting the additional manpower requirement based on the Generating Company Filing, benchmarking and any other factor that the Commission feels appropriate;

$$INDX_n = 0.55 * CPI_n + 0.45 * WPI_n;$$

For the purpose of estimation, the same $INDX_n/INDX_{n-1}$ value shall be used for all years of the Control Period. However, the Commission will consider the actual values in the $INDX_n/INDX_{n-1}$ at the end of each year during the Annual Performance Review exercise and true up the employee cost and A&G expenses on account of this variation, for the Control Period;

- 3.9.8 As discussed in the Business Plan, TVNL envisages no additional manpower recruitment during the Control Period FY 2021-22 to FY 2025-26 and hence has considered factor G_n as 0 for entire Control Period.
- 3.9.9 The employee costs (except the Terminal Benefits) for next control period has been projected on the basis of an inflationary increase of 6.09% (based on 45% weightage of WPI & 55% weightage of CPI as calculated in Table 25) over actual employee cost of FY 2019-20.
- 3.9.10 As per Note-3 of Regulation 15.42 of the JSERC Generation Tariff Regulations, 2020, TVNL understands that Terminal Liabilities will be approved as per actual submitted by the Generating Company along with documentary evidence such as actuarial studies at time of True-up for relevant year. For purpose of present Petition, TVNL has considered terminal benefits for FY 2019-20 (consisting of Pension, Gratuity and NPS) for projection of Terminal Benefits during the Control Period, without any escalation. The same shall be trued up as per the actual terminal liabilities incurred by the Petitioner after due prudence check by the Commission.
- 3.9.11 Based on the above paragraphs, the Employee Expenses projected for the Control Period (FY 2020-21 to FY 2025-26) is tabulated below:

Table 26: Employee cost for the Control Period (In Rs. Cr.)

Particulars	FY20	FY22	FY23	FY24	FY25	FY26
Employee Expense - Base Year	86.90					
Inflation Factor		6.09%	6.09%	6.09%	6.09%	6.09%
Employee Expense - Projected		97.80	103.76	110.08	116.78	123.89



Particulars	FY20	FY22	FY23	FY24	FY25	FY26
Terminal Expense	48.11	48.11	48.11	48.11	48.11	48.11
Employee Expenses	135.01	145.92	151.87	158.19	164.89	172.00

3.9.12 TVNL has considered base A&G Expense of Rs. 22.97 crore as per provisional accounts for FY 2019-20. A&G Expense has been projected for next MYT control period for FY 2021-22 to FY 2025-26 at annual inflation rate of 6.09% (based on 45% weightage of WPI & 55% weightage of CPI as calculated in Table 25) for % increase over FY 2019-20 on year-on-year basis. Based on the above, the projected A&G Expenses for the MYT Control Period (FY 22 to FY 26) are provided below:

Table 27: A&G Expenses projected for Third Control Period (in Rs. Cr.)

Particulars	FY20	FY22	FY23	FY24	FY25	FY26
A&G Expense - Base Year	22.97					
Inflation Factor		6.09%	6.09%	6.09%	6.09%	6.09%
A&G Expenses		25.85	27.43	29.10	30.87	32.75

3.9.13 Therefore, the petitioner requests the Hon'ble Commission to approve the A&G expenses as projected above.

R&M Expenses

3.9.14 As per the clause 15.42 (a) of the JSERC Generation Tariff Regulations, 2020 R&M Expense is to be projected as per following formulae:

$$(\text{Repair \& Maintenance})_n = K * GFA * (\text{INDX}_n / \text{INDX}_{n-1})$$

Where,

'K' is a constant (expressed in %) governing the relationship between Repair & Maintenance costs and Gross Fixed Assets (GFA) and shall be calculated based on the % of Repair & Maintenance to GFA of the preceding years of the Base Year in the MYT Order after normalising any abnormal expenses;

'GFA' is the opening value of the gross fixed asset of the nth year;"

3.9.15 The value of K, i.e, R&M expense as a percentage of opening GFA for the preceding year FY 2019-20 has been calculated as 5.30% as per JSERC Generation Tariff Regulations, 2020 as shown in below table:

Table 28: Calculation of 'K Factor'

Particulars	FY17	FY18	FY19	FY20
Opening GFA	1,588.50	1,637.56	1,637.75	1,641.84
R&M expenses	88.31	111.07	79.68	65.74
R&M expenses/ Opening GFA	5.56%	6.78%	4.87%	4.00%
K factor (Average of annual ratios)	5.30%			



3.9.16 The same has been used to project the value of R&M expense for the Control Period FY 2021-22 to FY 2025-26. The costs of MYT control period for FY 2021-22 to FY 2025-26 have been evaluated on the basis of an inflation rate of 6.09% (based on 45% weightage of WPI & 55% weightage of CPI) for % increase in FY 2019-20 on year-on-year basis.

3.9.17 Based on the above, the projected R&M Expenses for the MYT Control Period (FY 22 to FY 26) are provided below:

Table 29: R&M Expenses for Third Control Period (in Rs. Cr.)

R&M Expenses	FY22	FY23	FY24	FY25	FY26
Opening GFA	1,642.88	1,723.95	1,790.30	1,836.11	1,885.49
K Factor	5.30%	5.30%	5.30%	5.30%	5.30%
Indexation Factor	6.09%	6.09%	6.09%	6.09%	6.09%
Total R&M Expenses	98.05	109.16	120.26	130.84	142.54

3.9.18 Therefore, the petitioner requests the Hon'ble Commission to approve the R&M expenses as projected above.

O&M expenses summary

3.9.19 Following tables summarizes the O&M expenses Summary for MYT control period (FY 2021-22 to FY 2025-26):

Table 30: Summary of O&M Expenses for Third Control Period (in Rs. Cr.)

Particulars	FY22	FY23	FY24	FY25	FY26
Employee Expenses	145.92	151.87	158.19	164.89	172.00
A&G Expenses	25.85	27.43	29.10	30.87	32.75
R&M Expenses	98.05	109.16	120.26	130.84	142.54
Total	269.82	288.45	307.54	326.60	347.29

3.9.20 Therefore, the petitioner requests the Hon'ble Commission to approve the O&M expenses as projected above.

3.10 Interest Charges on Working Capital

3.10.1 As per the clause 15.23 of JSERC Generation Tariff Regulations, 2020:

"The Commission shall determine the Working Capital requirement for coal-based generating stations shall contain 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;*



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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 45 days of capacity charges and energy charges for sale of electricity calculated on the Normative Annual Plant Availability Factor:”

3.10.2 Following table summarizes the Working Capital expenses projections for MYT control period calculated as per above Regulations for FY 2021-22 to FY 2025-26:

Table 31: Working Capital Requirement (Rs. Cr.) for Third Control Period

Working Capital	Unit	FY22	FY23	FY24	FY25	FY26
Cost of Coal for 20 days for stocking	Rs. Cr.	39.34	39.34	39.34	39.34	39.34
Cost of Coal for 30 days for generation	Rs. Cr.	59.01	59.01	59.01	59.01	59.01
Cost of Secondary Fuel for 2 months	Rs. Cr.	2.09	2.09	2.09	2.09	2.09
O&M Expenses for 1 month	Rs. Cr.	23.49	25.04	26.63	28.22	29.94
Maintenance Spares @ 20% of O&M	Rs. Cr.	56.36	60.09	63.91	67.72	71.86
Receivable equivalent to 2 months average billing	Rs. Cr.	202.24	211.42	220.13	224.92	230.70
Total Working Capital Requirement	Rs. Cr.	382.52	396.98	411.10	421.29	432.93

3.10.3 As per the clause 15.26 of JSERC Generation Tariff Regulations, 2020, the rate of Interest on Working Capital shall be on normative basis and shall be equal to Bank Rate plus 350 basis points as on September 30 of the financial year in which the MYT Petition is filed or 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:

3.10.4 Based on the above, the Interest on Working Capital computed is tabulated as given below:

Table 32: Interest on Working Capital for Third Control Period (in Rs. Cr.)

Interest on Working Capital	Unit	FY22	FY23	FY24	FY25	FY26
Total Working Capital Requirement	Rs. Cr.	382.52	396.98	411.10	421.29	432.93
Rate of interest	%	10.50%	10.50%	10.50%	10.50%	10.50%



Interest on Working Capital	Unit	FY22	FY23	FY24	FY25	FY26
Interest on Working Capital	Rs. Cr.	40.16	41.68	43.17	44.24	45.46

3.10.5 Therefore, the Petitioner requests the Hon'ble Commission to approve the above-mentioned interest on working capital.

3.11 Tax on Income

3.11.1 The norms of the Hon'ble JSERC and all the other SERCs/ CERC allow the Tax on Income earned from the generation business will be reimbursable from the buyer of the power. Thus, TVNL requests the Hon'ble Commission to approve reimbursement of Tax on Income that shall be levied upon TVNL through the generation business as per the Regulations.

3.11.2 Petitioner does foresee; pending repayment of existing dues by JUVNL / JBVNL; there would be no assessable income for income tax and hence no tax on income has been estimated for the Control Period (FY 2021-22 to FY 2025-26).

3.11.3 At this point, TVNL hasn't estimated the impact of taxes that could become applicable. However, if the TVNL does pays any taxes then, TVNL requests Hon'ble JSERC to approve the same as & when accrued upon.

3.12 Water Charges

3.12.1 The Petitioner in line with its submission and approved values of water charges from last MYT order dated 28th February 2020 projects water charges @Rs. 1 Crore per month during the Control Period of FY 2021-22 to FY 2025-26.

Table 33: Water charges for the Third Control Period (FY 22 to FY26) (In Rs. Cr.)

In Rs. Cr.	FY22	FY23	FY24	FY25	FY26
Water charges	12.00	12.00	12.00	12.00	12.00

3.13 Special Allowance for thermal generating stations

3.13.1 The two units of TVNL (Unit – I and Unit – II) commenced operation in September 1996 and September 1997 respectively. They will be in commercial operation for more than 25 years as on 1st October 2021 and 1st October 2022 respectively. Thus as per Clause 14.2 of JSERC Generation Tariff Regulations, 2020 which states that:

"A Generating Company (coal-based/lignite fired thermal generating station) on opting for Special Allowance shall be allowed@ Rs. 9.50 lakh/MW/year for the Control Period from FY 2021-22 to FY 2025-26, Unit-wise from the financial year



following the completion of useful life of the respective Unit of generating station:

Provided that if a Unit is in commercial operation for more than 25 years as on April 01, 2021, this allowance shall be admissible from FY 2021-22:

Provided further that if special allowance is granted by the Commission, the expenditure incurred or utilized from special allowance shall be maintained separately by the generating station and details of same shall be made available to the Commission immediately thereafter."

3.13.2 The Petitioner thus claims Special Allowance for Unit – I for the period FY 2022-23 to FY 2025-26 and for Unit – II for the period FY 2023-24 to FY 2025-26 as follows:

Table 34: Special Allowance for Units-I and II (In Rs. Cr.)

	FY22	FY23	FY24	FY25	FY26
Special Allowance @9.50 lakh/MW/year	-	19.95	39.90	39.90	39.90

3.14 Summary of Total Fixed Cost for FY 2021-22 to FY 2025-26

3.14.1 Based on above discussed section, the table given below summarises total fixed cost projected for each year of the Control Period (FY 2021-22 to 2025-26):

3.14.2 The Petitioner requests the Hon'ble Commission to approve the fixed cost as summarized above.

Table 35: Fixed Cost projection for Third Control Period

Fixed cost summary	Unit	FY22	FY23	FY24	FY25	FY26
O&M Expenses	Rs. Cr.	269.82	288.45	307.54	326.60	347.29
Depreciation	Rs. Cr.	7.15	15.26	22.72	28.61	36.02
Interest on normative loan	Rs. Cr.	20.80	24.60	26.50	27.22	29.32
Interest on long term loan	Rs. Cr.	103.21	103.21	103.21	103.21	103.21
Return on Equity	Rs. Cr.	29.84	32.93	35.29	37.29	40.56
Special Allowance	Rs. Cr.	-	19.95	39.90	39.90	39.90
Water Charges	Rs. Cr.	12.00	12.00	12.00	12.00	12.00
Interest on Working Capital	Rs. Cr.	40.16	41.68	43.17	44.24	45.46
Total Fixed Cost	Rs. Cr.	482.99	538.09	590.33	619.07	653.76



Chapter 4: Revenue Requirement

4.1 Non-tariff income

4.1.1 As per Clause 15.48 of Jharkhand State Electricity Regulatory Commission (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020 which states that:

"The amount of Non-Tariff Income relating to the generating business as approved by the Commission shall be deducted from the ARR in determining the Tariff of the generating business; Provided that the Generating Company shall submit full details of its forecast of Non-Tariff Income to the Commission in such form as may be stipulated by the Commission"

4.1.2 For calculation of Non-Tariff Income average year on year growth rate of Non-Tariff Income from FY17 to FY20 has been taken, i.e, 4.76%. The Non-Tariff Income for FY 2021-22 has been considered to be halved from previous year level, primarily due to lower of interest rate being offered by banks on fixed deposit. Thereafter, an escalation of 4.76% has been considered for calculating the values of Non-Tariff Income for the Control Period of FY 2021-22 to FY 2025-26.

4.1.3 Following table summarizes the Non-Tariff Computations for MYT control period

Table 36: Non-tariff Income for the Control Period (In Rs. Cr.)

Non-tariff Income	FY22	FY23	FY24	FY25	FY26
Total	18.00	18.86	19.75	20.69	21.68

4.2 Revenue Requirement for Control period

4.2.1 The sum of fixed and energy costs gives the total revenue requirement of the company for MYT control period FY 2021-22 to FY 2025-26. The revenue requirement less other income will be the revenue to be raised through tariff.

4.2.2 Following table summarizes the Revenue requirement Computations for MYT control period (FY 22 to FY 26):

Table 37: Revenue requirement for Third Control Period

Revenue Requirement	Unit	FY22	FY23	FY24	FY25	FY26
Fixed Charges	Rs. Cr.	482.99	538.09	590.33	619.07	653.76
Other Income	Rs. Cr.	18.00	18.86	19.75	20.69	21.68
Fixed income to be raised through tariff	Rs. Cr.	464.99	519.23	570.58	598.38	632.08



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Energy Charge Rate	Rs./kWh	2.58	2.58	2.58	2.58	2.58
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4.2.3 The Petitioner requests the Hon'ble Commission to approve the above revenue requirement projection for the MYT control period.



Chapter 5: Compliance of directives

The following table summarizes the Petitioner's response to directives given by the Hon'ble Commission in the Order on Petition for Multi Year Tariff For the period FY 2017-21 (Including true-up For FY 2014-15 & provisional true-up of FY 2015-16) For Tenughat Vidyut Nigam Limited (TVNL) dated 28th February 2020:

Table 38: Status on existing directives issued by Hon'ble Commission

Directives	Compliance to earlier directives	Views of the commission	Current Situation
Minimization of Outages and Strengthening of evacuation arrangement for TTPS	The Petitioner submits that all works of 400 kV S/C Bihar Sharif Transmission Line except one ICT at TTPS site has been completed successfully. Work on the said transmission line at Bihar Sharif site is ongoing and the line will be charges after completion of all works at Bihar Sharif end. The matter has been raised in the ERPC forum also. ERPC has taken initiative with all stakeholders to charge this line at 400 kV level.	The Commission has noted the submission and directs the Petitioner for follow-up action for completion of upgradation work of above mentioned 400 kV Tenughat Bihar Sharif Transmission line and early commissioning of the 220 kV Tenughat – Govindpur transmission line	The Petitioner would like to submit that the commissioning and charging of the 220 kV Tenughat-Govindpur transmission line has been completed on 03 rd November 2021 and the line has been charged
Filing of True Up Petition for FY 2014-15 and APR for FY 2015-16	The Petitioner submitted that it has submitted its True-up petition for FY 2014-15 and FY 2015-16 on 28.11.2017.	The Petitioner has delayed the submission of the Petitioner and has finally submitted the audited accounts of FY 2014-15 on Oct'19. The Petitioner is directed to ensure compliance in timely filing of Petitions.	The Petitioner submits that it always strives to file Petitions on time before the Commission. However, on certain occasions there are some unavoidable delays in the same.
Data adequacy in next Tariff petition and timelines	The Petitioner submits that it has always strived to provide all the data required by the Hon'ble Commission. TVNL has submitted its petition for True-up of FY 2014-15 and FY 2015-16 after	The Petitioner is directed to submit the audited accounts of FY 2015-16 along with a fresh Petition for True-up within 3 months from the date of this order.	The Petitioner submits that the preparation of audited annual accounts for FY 2015-16 was delayed due to ongoing Covid-19 pandemic and would submit the same within one month of



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	removing the deficiencies highlighted by the Hon'ble Commission in the previous tariff order. However, TVNL was unable to submit audited accounts as the audit was not completed. Subsequently same was submitted for FY 2014-15 on Oct'19.		submission of current Petition.
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Table 39: Status on new directives issued by Hon'ble Commission

Sl. No.	Directive	Status
1.	The Commission directs the Petitioner to submit the True-up Petition for FY 2015-16 based on the audited accounts along with adjustments to be carried out as per Regulation 6.14 of the Generation Tariff Regulation, 2010 within 3 months from the date of this order. Further the petitioner is also directed to submit petition with requisite supporting data so that processing be done within appropriate time and without undue delay.	The Petitioner submits that the preparation of audited annual accounts for FY 2015-16 was delayed due to ongoing Covid-19 pandemic and would submit the same within one month of submission of current Petition. It would also submit the True-up Petition for FY 2015-16 based on the audited accounts along with adjustments to be carried out as per Regulation 6.14 of the Generation Tariff Regulation, 2010
2.	TVNL is directed to reconcile the fixed assets register after physical verification and submit detailed asset wise register along with asset wise depreciation schedule before the Commission. Without the reconciled asset and depreciation schedule, the Commission is unable to approve the fixed assets, additions and calculate correctly the depreciation of assets.	The Petitioner is in the process of appointing an agency for physical asset verification as per the cutover date of 31.03.2016 uploaded in the SAP-FICO module of ERP system.
3.	The Commission directs the Petitioner to submit the True-up Petition for the year FY 2016-17, FY 2017-18 and FY 2018-19 along with audited accounts before the Commission within three months of the order.	The Petitioner submits that the preparation of audited annual accounts for FY 2016-17, FY 2017-18 and FY 2018-19 were delayed due to ongoing Covid-19 pandemic and would submit the same within six months of submission of current Petition. It would also submit the True-up Petition for these years based on the audited accounts
4.	The Commission directs the Petitioner to note the data deficiencies highlighted in this petition and submit required details and certificates while submitting the next Petition.	The Petitioner has strived to submit this Petition along with all relevant data and information. The remaining deficiencies it would cover in True-up Petition to be filed.



Chapter 6: Prayer

TVNL respectfully prays to the Hon'ble Commission:

1. To admit this MYT Petition for Control Period for FY 2021-22 to FY 2025-26.
2. To approve Revenue Requirement and Capital Expenditure for MYT Control Period for FY 2021-22 to FY 2025-26.
3. To approve the operational and financial parameters as proposed by TVNL considering the constraints of the old machines and consider the same for recovery of full fixed cost.
4. To approve the Station's operating parameters viz. PAF, Auxiliary Consumption, Station Heat Rate, Transit Loss, Specific Oil Consumption and actual fuel rate for recovery of variable cost considering the constraints of the old machines as well as site specific constraints.
5. To consider special allowance for Unit-I from FY 2022-23 onwards and for Unit-II from FY 2023-24 onwards
6. To condone the delay in filing this Petition.
7. To grant any other relief as the Hon'ble Commission may consider appropriate.
8. To approve the ARR based on the operating parameters as per the norms provided in the Regulation and allow the Petitioner to retain the gains on account of the efficiency improvement in the Operating Parameters.
9. The Petitioner craves leave of the Hon'ble Commission to allow further submissions, addition and alteration to this Petition as may be necessary from time to time.
10. Pass any other order as the Hon'ble Commission may deem fit and appropriate under the circumstances of the case and in the interest of justice.

Declaration that the subject matter of the petition has not been raised by the petitioner before any other competent forum, and that no other competent forum is currently seized of the matter or has passed any orders in relation thereto.