

Jharkhand State Electricity Regulatory Commission



Order on
True-up for FY 2019-20,
Annual Performance Review of FY 2020-21,
Business Plan & Multi Year Tariff for the Control
Period FY 2021-22 to FY 2025-26
for
Jharkhand Urja Sancharan Nigam Limited
June 23, 2023



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List of Abbreviations

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



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Before
Jharkhand State Electricity Regulatory Commission, Ranchi

Case (Tariff) No.: 14 of 2022

In the matter of:

Petition for
True-up for FY 2019-20,
Annual Performance Review of FY 2020-21,
&
Business Plan and Annual Revenue Requirement for the Control Period
FY 2021-22 to FY 2025-26

In the matter:

Jharkhand Urja Sancharan Nigam Limited.....**Petitioner**

PRESENT

Hon'ble Justice Amitav Kumar Gupta

Shri Mahendra Prasad

Shri Atul Kumar

Chairperson

Member (Legal)

Member (Technical)

Order dated June 23, 2023

Jharkhand Urja Sancharan Nigam Limited (hereinafter referred to as 'JUSNL' or the 'Petitioner') filed a petition dated October 17, 2022 for True-up for FY 2019-20, Annual Performance Review of FY 2020-21, and Business Plan & Annual Revenue Requirement for the Control Period FY 2021-22 to FY 2025-26 for the transmission of electricity in the State of Jharkhand.



A 1 Introduction

Jharkhand State Electricity Regulatory Commission

- 1.1 The Jharkhand State Electricity Regulatory Commission (hereinafter referred to as “JSERC” or “the Commission”) was established by the Government of Jharkhand under Section 17 of the Electricity Regulatory Commission Act, 1998 on August 22, 2002. The Commission became operational with effect from April 24, 2003.
- 1.2 The Government of Jharkhand, vide its notification dated August 22, 2002 had defined the functions of JSERC as per Section 22 of the Electricity Regulatory Commission Act, 1998 to be the following, namely: -
 - a) to determine the tariff for electricity, wholesale, bulk, grid or retail, as the case maybe, in the manner provided in Section 29;
 - b) to determine the tariff payable for the use of 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 JSERC is discharging its functions as prescribed in Section 86 of the Act.
- 1.4 In accordance with the provisions of the said 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 advises the State Government on all or any of the following matters, namely: -
- a) promotion of competition, efficiency and economy in activities of the electricity industry;
 - b) promotion of investment in electricity industry;
 - c) reorganisation and restructuring of electricity industry in the State;
 - d) matters concerning generation, transmission, distribution and trading of electricity or any other matter referred to the State Commission by that Government.
- 1.6 The State Commission ensures transparency while exercising its powers and discharging its functions.
- 1.7 In discharge of its functions, the State Commission is guided by the National Tariff Policy framed and published by Government of India under the



provisions of Section 3 of the Act. The objectives of the present 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.

The Petitioner - Jharkhand Urja Sancharan Nigam Ltd. (JUSNL)

1.8 The erstwhile Jharkhand State Electricity Board (JSEB) was constituted on March 10, 2001 under the Electricity (Supply) Act, 1948 as a result of the bifurcation of the erstwhile State of Bihar. Before that, the Bihar State Electricity Board (BSEB) was the predominant entity entrusted with the task of generating, transmitting and supplying power in the State.

1.9 The Energy Department, Government of Jharkhand, vide its Letter No. 1/Board-01-Urja-26/13-1745 dated 28th June 2013 unbundled the erstwhile JSEB into following companies:

- a) Jharkhand Urja Vikas Nigam Ltd (JUVNL) being the holding company;
- b) Jharkhand Urja Utpadan Nigam Ltd (JUUNL) undertaking the generation function of the erstwhile JSEB;
- c) Jharkhand Bijli Vitaran Nigam Ltd (JBVNL) undertaking the distribution function of the erstwhile JSEB;
- d) Jharkhand Urja Sancharan Nigam Ltd (JUSNL) undertaking the transmission function of the erstwhile JSEB.

1.10 Jharkhand Urja Sancharan Nigam Ltd. (herein after to be referred to as JUSNL or the Petitioner or erstwhile JSEB-Transmission function) has been incorporated under Indian Companies Act, 1956 pursuant to the decision of Government of Jharkhand to reorganize erstwhile JSEB. 1.11 Reorganization of the JSEB has been done by Government of Jharkhand pursuant to 'Part XIII-Reorganization of Board' read with Section 131 of The Electricity Act 2003. The Petitioner is a Company constituted under the provisions of Government of Jharkhand, General Resolution as notified by transfer scheme vide



notification no. 8, dated 6th January 2014, and is duly registered with the Registrar of Companies, Ranchi.

- 1.11 Jharkhand Urja Sancharan Nigam Ltd was incorporated on October 23, 2013 with the Registrar of Companies, Jharkhand, Ranchi and obtained Certificate of Commencement of Business on November 28, 2013.
- 1.12 The Petitioner is a Transmission Licensee under the provisions of the Electricity Act, 2003 (EA, 2003) having license to establish or operate transmission lines in the State of Jharkhand.
- 1.13 The Petitioner is functioning in accordance with the provisions envisaged in the Electricity Act, 2003 and is engaged in the business of Transmission of electricity to its consumers situated over the entire State of Jharkhand.

The Petitioner's Prayers

- 1.14 The Petitioner in this petition has made the following prayers before the Commission: -
 - a) Admit the instant petition;
 - b) Examine the proposal submitted by the Petitioner in the enclosed petition for a favorable dispensation;
 - c) Approve the True up for FY 2019-20 under Jharkhand State Electricity Regulatory Commission (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2015, and the amendments/ orders issued, time to time by the Hon'ble Commission;
 - d) Approve the APR for FY 2020-21 under Jharkhand State Electricity Regulatory Commission (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2015, and the amendments/ orders issued, time to time by the Hon'ble Commission;
 - e) Approve the ARR for the MYT Control Period FY 2021-22 to FY 2025-26 and Tariff Proposal for FY 2021-22;
 - f) Pass a separate order for the present petition;
 - g) JUSNL may also be permitted to propose suitable changes to the respective ARR, prior to the final approval by the Hon'ble Commission, as the Petitioner believes that such an approach would go a long way towards providing a fair treatment to all the stakeholders and will eliminate the need for a review or clarification;
 - h) Condone any inadvertent omissions / errors / shortcomings and permit



JUSNL to add / change / modify / alter this petition and make further submissions as may be required in future;

- i) Pass such order, as the Hon'ble Commission may deem fit and appropriate keeping in view the facts and circumstances of the case;

Scope of the Present Order

1.15 The Petitioner has filed the petitions for True-up for FY 2019-20, Annual Performance Review of FY 2020-21, and Business Plan & Multi Year Tariff (MYT) for the Control Period FY 2021-22 to FY 2025-26.

1.16 As per JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2015, the Petitioner was required to submit the True-up petition for FY 2019-20 latest by November 30, 2020, but the Petitioner filed the instant petitions on October 17, 2022, with several deficiencies which were communicated and pointed out by the Commission regarding the deficiencies to the Petitioner.

1.17 The Commission by this order while approving the True-up for FY 2019-20, Annual Performance Review of FY 2020-21, and Business Plan & Multi Year Tariff (MYT) for the Control Period FY 2021-22 to FY 2025-26, has taken into consideration: -

- (a) Material placed on record by the Petitioner;
- (b) Provisions of the Electricity Act, 2003;
- (c) Principles laid down in the National Electricity Policy;
- (d) Principles laid down in the National Tariff Policy;
- (e) JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2015;
- (f) JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2020;

1.18 The Commission has scrutinized the petition in detail and accordingly is issuing the order on True-up for FY 2019-20, Annual Performance Review of FY 2020-21, and Business Plan & Multi Year Tariff (MYT) for the Control Period FY 2021-22 to FY 2025-26.



A 2 Procedural History

Background

- 2.1 The Commission had issued an order on Annual Revenue Requirement for FY 2011-12 and FY 2012-13 for the Transmission Business of erstwhile JSEB on August 02, 2012.
- 2.2 The Commission had issued the Provisional Tariff order on Review of Annual Revenue Requirement for FY 2013-14 (January 06, 2014 to March 31, 2014) & FY 2014-15 and Annual Revenue Requirement and Transmission Tariff for FY 2015-16 on December 14, 2015.
- 2.3 The Commission had issued the order for the approval of Business plan and MYT for the 2nd Control period from FY 2016-17 to FY 2020-21 on February 24, 2018.
- 2.4 The Commission by Order dated February 01, 2019 had issued the True-up for FY 2013-14 (January 06, 2014 to March 31, 2014) and FY 2014-15. The Petitioner had filed a review petition against the order dated February 01, 2019 which was disposed off by the Commission vide order dated December 03, 2020.
- 2.5 In the meantime, the Commission vide order dated February 24, 2018 had directed the Petitioner to file true-up petition for FY 2015-16 & FY 2016-17 and ARR for FY 2017-18 & FY 2018-19 within two months from the date of issuance of the order. However, the Petitioner vide letter no. 255 dated August 02, 2018 had prayed for extension of time of three months for filing the aforesaid petition.
- 2.6 The Commission vide letter no. JSERC/Case(T) no. 17 of 2016 & 03 of 2017/299 allowed extension of time till October 2018 for filing the True-up petition for FY 2015-16 & FY 2016-17 and APR for FY 2017-18 & FY 2018-19 and to submit the compliance request as per directives of the Commission.



- 2.7 Thereafter the Petitioner filed the petition for approval of True-up for FY 2015-16 & FY 2016-17 and Annual Revenue Requirement for FY 2017-18 & FY 2018-19 on October 05, 2018, and Commission passed the order on December 03, 2020.
- 2.8 The Petitioner on February 05, 2021 filed the petition for approval of True-up for FY 2017-18 and the Commission on June 12, 2023 passed the order on the aforesaid petition.
- 2.9 The Petitioner on August 24, 2021 has filed a petition for True-up for FY 2018-19, Annual Performance Review of FY 2019-20, and Annual Revenue Requirement for FY 2020-21 for which a separate order is being passed.
- 2.10 The instant petition has been filed by the Petitioner for True-up for FY 2019-20, Annual Performance Review of FY 2020-21, and Business Plan & Multi Year Tariff (MYT) for the Control Period FY 2021-22 to FY 2025-26 on October 17, 2022, accordingly the Commission is issuing the present order.

Disclaimer: Relevant information provided herein regarding the Commission, the Petitioner, and the Procedural History have been extracted/ reproduced from the previous orders of the Commission. This is for information purpose only and does not in any matter reflect opinion or analysis thereon.

Information Gaps in the Petition

- 2.11 As part of tariff determination exercise, several deficiencies/information gaps were found and noted in the petition submitted by the Petitioner, which were pointed out and communicated vide Letter No. JSERC/Case(T) No. 14 of 2022/302 dt. 02.12.2022 with respect to the petition for True-up for FY 2019-20, Annual Performance Review of FY 2020-21, and Business Plan & Annual Revenue Requirement for the Control Period FY 2021-22 to FY 2025-26.
- 2.12 The Petitioner vide letter no. 20 dt. 16.01.2023 furnished the additional data/information as directed for on the petition for True-up of FY 2019-20, Annual Performance Review of FY 2020-21, and Business Plan & Annual Revenue Requirement for the Control Period FY 2021-22 to FY 2025-26.



- 2.13 The Commission has scrutinized the additional data/ information and has considered the same while passing this order. The Commission has examined the replies and supporting documents as supplied by the Petitioner on the discrepancies pointed out to it on material already on record in the petitions filed by the Petitioner.
- 2.14 In order to provide adequate opportunity to all stakeholders and general public as mandated under Section 64 (3) of the Electricity Act 2003 and in relevant provisions of Regulation(s) framed by the Commission and further in order to ensure transparency in the process of tariff determination, the Commission decided to conduct public hearing on April 15, 2023 in the Conference room of Jharkhand Small Industries Association (JSIA) at Ranchi for inviting comments/ suggestion/ objections.

Inviting Public Comments/Suggestions

- 2.15 The Commission directed the Petitioner to make available copies of the petition to the members of general public on request, and also issued a public notice inviting comments/ suggestions on the above said petition.
- 2.16 The aforesaid public notice was issued by the Petitioner in various newspapers and a period of twenty-one (21) days was given to the members of the general public for submitting their comments/suggestions.

TABLE 1: LIST OF NEWSPAPERS AND DATES OF PUBLICATION OF PUBLIC NOTICE BY THE PETITIONER

True-up for FY 2019-20, APR of FY 2020-21, and Business Plan & ARR of FY 2021-22 to FY 2025-26				
Sl. No.	Newspaper	Edition Name	Version	Date of Publication
1.	Dainik Jagran	Dhanbad Edition	Hindi	22.02.2023 & 23.02.2023
2.	Dainik Jagran	Bhagalpur Edition	Hindi	22.02.2023 & 23.02.2023
3.	Dainik Jagran	Ranchi Edition	Hindi	23.02.2023
4.	Dainik Jagran	Jamshedpur Edition	Hindi	23.02.2023
5.	Prabhat Khabar	Ranchi Edition	Hindi	22.02.2023
6.	Prabhat Khabar	Deoghar Edition	Hindi	22.02.2023
7.	Hindustan	Ranchi Edition	Hindi	23.02.2023
8.	Hindustan	Dhanbad Edition	Hindi	22.02.2023 & 23.02.2023
9.	Hindustan	Bhagalpur Edition	Hindi	22.02.2023 & 23.02.2023
10.	Hindustan	Jamshedpur Edition	Hindi	23.02.2023
11.	Morning India	Jharkhand Edition	English	22.02.2023 & 23.02.2023
12.	Times of India	Patna Edition	English	22.02.2023 & 23.02.2023
13.	Dainik Bhaskar	Jamshedpur Edition	Hindi	22.02.2023
14.	Dainik Bhaskar	Ranchi Edition	Hindi	22.02.2023



2.17 Subsequently, the Commission also issued a notice on its website www.jserc.org and in various newspapers for conducting a public hearing on the petitions filed by the Petitioner. The newspapers wherein the notice for public hearing was issued by the Commission are detailed hereunder:

TABLE 2: LIST OF NEWSPAPERS AND DATES OF PUBLICATION OF PUBLIC NOTICE BY THE COMMISSION

Sl. No.	Newspaper	Version	Date of Publication
1.	Prabhat Khabar	Hindi	07.04.2023, 09.04.2023 & 14.12.2023
2.	Dainik Bhaskar	Hindi	07.04.2023 & 14.12.2023
3.	The Hindustan Times	English	07.04.2023, 09.04.2023 & 14.12.2023
4.	Times of India	English	07.04.2023, 09.04.2023 & 14.12.2023
5.	Hindustan Dainik	Hindi	09.04.2023

Submission of Comments/ Suggestions and Conduct of Public Hearing

2.18 The public hearing was held on April 15, 2023 in the Conference room of Jharkhand Small Industries Association (JSIA) at Ranchi. Comments/Suggestions on the petition were received. The Comments/Suggestions of the Public, Petitioner's responses and Commission's views thereon are detailed in **Chapter A 4** of this order.



A 3 Brief Facts of the Petition

True-up for FY 2019-20

a) Capital Expenditure, CWIP and Capitalization

3.1. The details of Capital Expenditure, CWIP and Capitalization as submitted by the Petitioner is provided in table below:

TABLE 3: CAPEX, CWIP AND CAPITALIZATION FOR FY 2019-20 AS SUBMITTED BY THE PETITIONER (RS. CR.)

Particulars	Opening	Addition	Closing
Capital Expenditure during the Year	4,264.89	912.31	5,177.20
Capitalization	1,543.89	385.96	1,929.85
Capital Works in Progress	2,721.00	526.35	3,247.35
<i>Asset Capital Work in Progress</i>	1,934.53	405.41	2,339.94
<i>Capital Advances</i>	297.13	77.84	374.97
<i>Advance to Suppliers</i>	457.36	44.59	501.95
<i>Stock of Materials at Site</i>	31.98	(1.49)	30.49

b) Gross Fixed Assets

3.2. The details of Gross Fixed Assets as submitted by the Petitioner is provided in table below:

TABLE 4: GROSS FIXED ASSETS FOR FY 2019-20 AS SUBMITTED BY THE PETITIONER (RS. CR.)

Particulars	MYT	Petition
Opening Gross Fixed Asset (GFA)	3209.49	1543.89
Addition to Gross Fixed Asset (GFA)	980.78	385.96
Closing Gross Fixed Asset (GFA)	4190.27	1929.85

c) Aggregate Revenue Requirement (ARR)

3.3. The details of Aggregate Revenue Requirement as submitted by the Petitioner is provided in table below:

TABLE 5: SUMMARY OF ARR COMPONENTS FOR FY 2019-20 AS SUBMITTED BY THE PETITIONER (RS. CR.)

Particulars	MYT	Petition
Operation and Maintenance Expense	121.93	117.27
<i>Employee Expense</i>	41.12	70.13
<i>A&G Expense</i>	9.35	12.57
<i>R&M Expense</i>	71.46	34.56
Depreciation	182.34	128.74
Interest and Finance Charge	133.87	494.38
Return on Equity	55.37	150.96
Interest on Working Capital	14.48	22.27



Particulars	MYT	Petition
Less: Non-tariff Income	(6.83)	(19.88)
Incentive/(Penalty)	-	6.88
Net Aggregate Revenue Requirement	501.16	900.62
Revenue from Operations	-	217.56
Revenue Gap / (Surplus)	-	683.06

Annual Performance Review (APR) for FY 2020-21

d) Capital Expenditure, CWIP and Capitalization

3.4. The details of Capital Expenditure, CWIP and Capitalization as submitted by the Petitioner is provided in table below:

TABLE 6: CAPEX, CWIP AND CAPITALIZATION FOR FY 2020-21 AS SUBMITTED BY THE PETITIONER (RS. CR.)

Particulars	Opening	Addition	Closing
Capital Expenditure during the Year	5,177.20	642.32	5,819.52
Capitalization	1,929.85	682.58	2,612.42
Capital Works in Progress	3,247.35	(40.25)	3,207.10
<i>Asset Capital Work in Progress</i>	2,339.94	(41.69)	2,298.25
<i>Capital Advances</i>	374.97	-	374.97
<i>Advance to Suppliers</i>	501.95	5.47	507.43
<i>Stock of Materials at Site</i>	30.49	(4.04)	26.45

e) Gross Fixed Assets

3.5. The details of Gross Fixed Assets as submitted by the Petitioner is provided in table below:

TABLE 7: GROSS FIXED ASSETS FOR FY 2020-21 AS SUBMITTED BY THE PETITIONER (RS. CR.)

Particulars	MYT	Petition
Opening Gross Fixed Asset (GFA)	4190.27	1929.85
Addition to Gross Fixed Asset (GFA)	2187.4	682.58
Closing Gross Fixed Asset (GFA)	6377.67	2612.42

f) Aggregate Revenue Requirement (ARR)

3.6. The details of Aggregate Revenue Requirement as submitted by the Petitioner is provided in table below:

TABLE 8: SUMMARY OF ARR COMPONENTS FOR FY 2020-21 AS SUBMITTED BY THE PETITIONER (RS. CR.)

Particulars	MYT	Petition
Operation and Maintenance Expense	145.33	107.89
<i>Employee Expense</i>	42.37	67.80
<i>A&G Expense</i>	9.66	10.25
<i>R&M Expense</i>	93.30	29.85
Depreciation	265.98	138.06



Particulars	MYT	Petition
Interest and Finance Charge	190.14	503.26
Return on Equity	91.70	150.96
Interest on Working Capital	19.54	19.30
Less: Non-tariff Income	(7.17)	(12.79)
Net Aggregate Revenue Requirement	705.53	906.69
Revenue from Operations	-	229.58
Revenue Gap / (Surplus)	-	677.10

Capital Expenditure, Capitalisation, and Funding of Business Plan for FY 2021-22 to FY 2025-26

g) Ongoing expenditure by JUSNL

3.7. At present there are 11 transmission lines and 7 GSS which are under construction and are being implemented by the JUSNL. The total cost of these schemes is Rs. 808.51 Crores out of which Rs. 570.19 Crores has already been incurred during the 2nd MYT Control Period. The summary of phasing of capital expenditure and capitalization is given below:

TABLE 9: ONGOING EXPENDITURE FOR JUSNL FROM FY 2021-22 TO 2025-26 (RS. CR.)

Particulars	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	Total
Capital Expenditure	28.68	209.64	-	-	-	238.32
Capitalization	70.35	738.16	-	-	-	808.51

Funding for the capex: The Scheme is 100% funded by the state government in form of state government loan with an applicable interest rate of 13.00% per annum.

h) Ongoing expenditure through PGCIL

3.8. Presently, there are 21 schemes being executed through PGCIL which consist of 17 transmission lines and 4 GSS. The total capital outlay of these schemes is Rs. 1,305.06 Crores out of which 930.54 Crores has already been incurred during the 2nd MYT Control Period.

3.9. The total project cost of the PGCIL schemes is Rs. 1842.25 Crores out of which schemes costing Rs. 537.19 Crores have already been capitalized during the previous years. The summary of phasing of capital expenditure and capitalization is given below:



TABLE 10: ONGOING EXPENDITURE THROUGH PGCIL FOR JUSNL FROM FY 2021-22 TO 2025-26 (RS. CR.)

Particulars	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	Total
Capital Expenditure	100.00	274.52	-	-	-	374.52
Capitalization	290.00	1015.06	-	-	-	1305.06

Funding: The Scheme is 100% funded by the state government in the form of state government loan with an applicable interest rate of 13.00% per annum.

i) DVC command area schemes

3.10. At present JUSNL is implementing various schemes in the DVC command area for reaching out to consumers in that area. Presently, 22 transmission lines and 13 GSS are being implemented in the DVC command area with a total capital outlay of Rs. 1101.91 Crores. Out of this Rs. 423.26 Crores has already been incurred during the 2nd MYT Control Period. The details of its phasing of capital expenditure and capitalization is given below:

TABLE 11: ONGOING EXPENDITURE IN DVC COMMAND AREA FOR JUSNL FROM FY 2021-22 TO 2025-26 (RS. CR.)

Particulars	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	Total
Capital Expenditure	75.35	437.85	165.44	-	-	678.64
Capitalization	-	436.31	474.83	190.77	-	1101.91

Funding: The projects that are to be carried out in DVC command area are part of State Plan and therefore 100% of the funding will be in the form of State Government loan with an applicable interest rate of 13.00% per annum.

j) World bank funded schemes

3.11. The JUSNL is implementing 26 schemes consisting of 66 projects worth Rs. 2192.05 Crores. The projects consist of 35 transmission lines and 31 GSS. Out of this capital outlay, Rs. 249.42 Crores has already been incurred during the 2nd MYT Control Period. Further, total capital outlay of the schemes include an amount of Rs. 400.00 Crores which consists of cost to be incurred towards land acquisition, forest clearance, compensation and PMC. Details of phasing of capital expenditure and capitalization is as provided below:

TABLE 12: ONGOING EXPENDITURE IN WORLD BANK FUNDED SCHEMES FOR JUSNL FROM FY 2021-22 TO 2025-26 (RS. CR.)

Particulars	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	Total
Capital Expenditure	297.18	1394.98	250.46	-	-	1,942.62
Capitalization	-	1757.97	434.08	-	-	2,192.05

Funding: World Bank shall fund 70% of the project cost at an applicable



interest rate of 2.50% and remaining 30% of the funds will be in the form of equity from Govt. of Jharkhand.

k) Planned schemes

3.12. JUSNL has submitted that total investment of Rs. 3,587.36 Cr is proposed, through planned schemes during the third control period. Out of this, majority of investments shall be undertaken in FY 2022-23, FY 2023-24 and FY 2024-25 with the maximum proportion being planned at 400 KV level and at 220 KV level.

TABLE 13: EXPENDITURE IN PLANNED SCHEMES FOR JUSNL FROM FY 2021-22 TO 2025-26 (RS. CR.)

Particulars	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	Total
Capital Expenditure	-	953.05	1117.01	1039.87	477.34	3,587.27
Capitalization	-	49.87	151.30	2366.16	1020.03	3,587.36

l) Augmentation

3.13. JUSNL has submitted that apart from this there is an urgent need to augment existing infrastructure in the transmission network, considering the existing over-loading on the equipment and future increase in load demand. Hence, the JUSNL has planned to invest Rs. 250.00 Crores in augmentation schemes during the next Control Period.

TABLE 14: EXPENDITURE IN AUGMENTATION SCHEMES FOR JUSNL FROM FY 2021-22 TO 2025-26 (RS. CR.)

Particulars	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	Total
Capital Expenditure	50.00	50.00	75.00	50.00	25.00	250.00
Capitalization	50.00	50.00	75.00	50.00	25.00	250.00

m) Renovation & Modernization

3.14. JUSNL has submitted that in JUSNL network, majority of the substations and lines require significant R&M activities for continuous and uninterrupted power supply to DISCOMs and ultimately to the consumers. The major assets are much aged and network is also complex. Hence, the JUSNL has proposed to invest around Rs. 250.00 Crores in R&M activities during the next Control Period.



TABLE 15: EXPENDITURE FOR RENOVATION & MODERNIZATION SCHEMES FOR JUSNL FROM FY 2021-22 TO 2025-26 (RS. CR.)

Particulars	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	Total
Capital Expenditure	50.00	50.00	75.00	50.00	25.00	250.00
Capitalization	50.00	50.00	75.00	50.00	25.00	250.00

n) Capital Investment Plan

TABLE 16: SUMMARY OF CAPITAL EXPENDITURE FROM FY 2021-22 TO 2025-26 AS SUBMITTED BY THE PETITIONER (RS. CR.)

Particulars	Capex till 31.03.2021	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	Total
Ongoing Schemes	2173.42	501.22	2316.99	415.90	-	-	5407.53
Planned Schemes	-	-	953.05	1117.01	1039.87	477.43	3587.36
Augmentation	-	50.00	50.00	75.00	50.00	25.00	250.00
Renovation & modernization	-	50.00	50.00	75.00	50.00	25.00	250.00
Total	2173.42	601.22	3370.04	1682.91	1139.87	527.43	9494.89

o) Capitalization

TABLE 17: SUMMARY OF CAPITALIZATION FROM FY 2021-22 TO 2025-26 AS SUBMITTED BY THE PETITIONER (RS. CR.)

Particulars	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	Total
Ongoing Schemes	360.35	3947.50	908.91	190.77	-	5407.53
Planned Schemes	-	49.87	151.30	2366.16	1020.03	3587.36
Augmentation	50.00	50.00	75.00	50.00	25.00	250.00
Renovation & modernization	50.00	50.00	75.00	50.00	25.00	250.00
Total	460.35	4097.37	1210.21	2656.93	1070.03	9494.89

p) Funding

TABLE 18: SUMMARY OF FUNDING FOR CAPITAL INVESTMENT FROM FY 2021-22 TO 2025-26 AS SUBMITTED BY THE PETITIONER (RS. CR.)

Particulars	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26
Debt	460.35	3569.98	1079.99	2656.93	1070.03
Equity	-	527.39	130.23	-	-
Total Capitalization	460.35	4097.37	1210.21	2656.93	1070.03

Aggregate Revenue Requirement for the Control Period FY 2021-22 to 2025-26

q) Summary of ARR for the Control Period FY 2021-22 to 2025-26

3.15. The summary of ARR for FY 2021-22 to 2025-26 for the transmission business as filed by licensee in the petition has been summarized in the table below:



TABLE 19: SUMMARY OF ARR FROM FY 2021-22 TO 2025-26 AS SUBMITTED BY JUSNL (RS. CR.)

Particulars	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26
Operation & Maintenance Expenses	144.52	163.63	269.62	307.57	380.44
Employee Expenses	71.61	79.13	87.11	95.57	104.55
A&G Expenses	10.86	11.51	12.21	12.94	13.72
R&M Expenses	62.05	72.99	170.31	199.06	262.16
Depreciation Expenses	119.21	215.37	327.36	408.96	487.60
Interest and Finance Charges	553.78	658.92	791.25	950.91	1116.08
Interest on Working Capital	17.08	20.45	27.67	32.27	38.24
Return on Equity Capital	224.13	224.13	224.13	224.13	224.13
Aggregate Revenue Requirement	1058.72	1282.50	1640.04	1923.85	2246.49
Less: Non-Tariff Income	(12.79)	(12.79)	(12.79)	(12.79)	(12.79)
Aggregate Revenue Requirement	1045.94	1269.72	1627.26	1911.07	2233.70

r) Tariff for transmission business

3.16. The summary of monthly transmission charges for FY 2021-22 to 2025-26 for the transmission business, as filed by licensee in the petition, has been summarized in the table below:

TABLE 20: SUMMARY OF MONTHLY TRANSMISSION CHARGES FROM FY 2021-22 TO 2025-26 AS SUBMITTED BY JUSNL (RS. CR.)

Particulars	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26
ARR Proposed	1045.94	1269.72	1627.26	1911.07	2233.70
Monthly Transmission charges (in Rs Cr)	87.16	105.81	135.60	159.25	223.5
Projected Transmission (MUs)	11,000.31	12,513.64	13,358.79	16,007.25	18,844.03

s) Transmission Charges for STOA of FY 2021-22

3.17. The summary of monthly transmission charges for Short Term Open Access Charges (STOA) of FY 2021-22 for the transmission business as filed by the licensee in the petition has been summarized in the table below:

TABLE 21: SUMMARY OF MONTHLY TRANSMISSION CHARGES FROM FY 2021-22 TO 2025-26 AS SUBMITTED BY JUSNL (RS. CR.)

Particulars	UoM	FY 2021-22
AFC (FY 2020-21)	Rs. Crore	705.52
Av_CAP (FY 2020-21)	MW	1122.54
ST Rate	Rs./MW/Day	8609.62
ST Rate	Rs./MWhr	358.73



A 4 Public Consultation Process

- 4.1 The petition filed by the Petitioner evoked responses from several Stakeholders. The Public Hearing was held on April 15, 2023 to ensure maximum Public participation and transparency wherein Stakeholders put forth their comments and suggestions before the Commission in the presence of the Petitioner. The list of the attendees is attached as **Annexure-I** to this order.
- 4.2 The comments and suggestions of the members of the public along with the response thereon of the Petitioner and the view of the Commission are summarized in this Chapter. Some of the issues raised by the stakeholders, which do not relate to True-up, APR, MYT & Business Plan are not discussed in this Chapter.
- 4.3 The Comments/Suggestion of the members of the Public along with the response thereon of the Petitioner and the views of the Commission are detailed hereunder:

Compliance of earlier directives issued by the Commission

Public Comments/Suggestions

- 4.4 The Stakeholder submitted that the Commission may take into account that the Petitioner has not complied with the earlier directives issued by the Commission and requested to check the Compliance status of the directives issued by the Commission.

Petitioner's Response

- 4.5 In reply, the Petitioner has submitted that the directives of the Commission are being complied with from time to time.

View of the Commission

- 4.6 The Commission has gone through the submissions of the Stakeholder and the Petitioner and the details of Commission's earlier Directives and Petitioner's compliance, along with further Directions is dealt in para 7.



Interest and Finance Charges

Public Comments/Suggestions

4.7 The Stakeholder has submitted that the ARR Interest and Finance Charges are 2.75 times higher than the MYT which is the major reason for revenue gap. The funding of the capex is @13% p.a. The capital expenditure at such unreasonably high rate of interest is not a proper business plan.

Petitioner's Response

4.8 The Petitioner has submitted that they are making all efforts for re-financing of loan at the cheapest rate from various sources and submitted that the communication made in this regard has already been submitted to the Commission.

View of the Commission

4.9 The Commission has noted the stakeholder's objection and Petitioner's response on the said issue.

Energy Transmitted

Public Comments/Suggestions

4.10 The Stakeholder has submitted that the Petitioner has not transmitted power as approved by the Commission for each year of the 2nd MYT Control Period i.e. FY 2016-17 to FY 2020-21.

Petitioner's Response

4.11 The Petitioner has submitted that the energy flow through the system of the Petitioner depends upon the demand of its beneficiaries i.e. JBVNL and Railways. Hence, if the energy drawl is less than the allocated power, then the Petitioner is not liable for the same.

View of the Commission

4.12 The Commission has noted the stakeholder's objection and Petitioner's response on the said issue.



Revenue Billed

Public Comments/Suggestions

4.13 The Stakeholder has submitted that the Petitioner's billing is lesser than the revenue as approved by the Commission for each year of the 2nd MYT Control Period i.e. FY 2016-17 to FY 2020-21.

Petitioner's Response

4.14 The Petitioner has submitted that the last hike in the transmission charges was done in the year 2018. Since the last 5 years the cost has risen substantially but the tariff has not increased. Therefore, the Petitioner was not able to bill the revenue as approved by the Commission for each year of 2nd MYT Control Period.

View of the Commission

4.15 The Commission has noted the stakeholder's objection and Petitioner's response on the said issue.

Audit Report

Public Comments/Suggestions

4.16 The Stakeholder has submitted that the Auditors comments have not been addressed by the JUSNL.

Petitioner's Response

4.17 The Petitioner has submitted that all the comments of the auditors have been addressed by the Petitioner and incorporated as deemed necessary.

View of the Commission

4.18 The Commission has noted the stakeholder's objection and Petitioner's response on the said issue.



A 5 True Up for FY 2019-20

- 5.1 The Petitioner has submitted that the true-up petition for FY 2019-20 has been prepared based on the audited accounts taking into consideration the provisions of JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2015, and the methodology adopted by the Commission in the previous orders.
- 5.2 The Commission based on the provisions of the JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2015 has carried out true-up taking into consideration: -
- Audited (Statutory) Accounts for FY 2019-20 and additional details submitted by the Petitioner;
 - JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2015; and;
 - Methodology adopted by the Commission in the earlier orders.

Capital Expenditure, Capitalization and CWIP

Petitioner Submission

- 5.3 The Petitioner has considered the actual capital expenditure and capitalization that has incurred in the books of accounts for truing up of expenses for FY 2019-20. The opening and closing balances of the capital expenditure, capitalization, CWIP are considered as per the audited annual accounts for FY 2019-20. The Petitioner has further submitted that JUSNL has incurred actual capital expenditure of Rs. 912.31 Crore and actual capitalization of Rs. 385.96 Crore in FY 2019-20.
- 5.4 The Capital Expenditure, Capitalization and CWIP as submitted by the Petitioner are given in the tables below:

TABLE 22: CAPEX, CWIP AND CAPITALIZATION FOR FY 2019-20 AS SUBMITTED BY THE PETITIONER (RS. CR.)

Particulars	Opening	Addition	Closing
Capital Expenditure during the Year	4,264.89	912.31	5,177.20
Capitalization	1,543.89	385.96	1,929.85
Capital Works in Progress	2,721.00	526.35	3,247.35
Asset Capital Work in Progress	1,934.53	405.41	2,339.94
Capital Advances	297.13	77.84	374.97



Particulars	Opening	Addition	Closing
Advance to Suppliers	457.36	44.59	501.95
Stock of Materials at Site	31.98	(1.49)	30.49

TABLE 23: CAPEX AND CAPITALIZATION FOR FY 2019-20 AS SUBMITTED BY THE PETITIONER (RS. CR.)

Particulars	MYT	Petition
Capital Expenditure during the Year	896.47	912.31
Asset Capitalized during the year	980.78	385.96

5.5 The Commission, in its Business Plan order dated 24th February 2018, had determined the opening balance of GFA for FY 2019-20 based on the closing balance approved for FY 2018-19 in the same order.

5.6 The Petitioner has claimed opening GFA as per the audited annual accounts for FY 2019-20, after consideration of final transfer scheme. The Petitioner had provided details of capitalization along with DPRs for all projects capitalized during FY 2019-20. The following table shows the opening and closing balance of GFA as per audited annual accounts against that approved by JSERC in the last tariff order.

TABLE 24: GROSS FIXED ASSETS FOR FY 2019-20 AS SUBMITTED BY THE PETITIONER (RS. CR.)

Particulars	MYT	Petition
Opening Gross Fixed Asset	3209.49	1,543.89
Asset Capitalized during the year	980.78	385.96
Closing Gross Fixed Asset	4190.27	1,929.85

Commission Analysis

5.7 The Commission, in its data gap, directed the Petitioner to provide details of capitalization along with DPRs for all projects capitalized during FY 2019-20 along with detailed cost benefit analysis. In compliance to Commission's query, the Petitioner vide its reply submitted the requisite data of assets capitalization for FY 2019-20.

5.8 The Commission has therefore approved the capitalization of Rs. 385.96 Crore, as submitted by the Petitioner.

5.9 The Commission has not approved the CWIP in the previous true-up order dated December 30, 2020 for FY 15-16 & FY 2016-17, review order dated January 11, 2023, true-up for FY 2017-18 and above true-up order, as the Petitioner had not submitted proper justification and scheme-wise and project-wise details of CWIP as directed by the Commission.



- 5.10 The Commission has scrutinized the submission made by the Petitioner and found that the claimed figure of Closing CWIP for FY 2019-20 doesn't linked with the Detailed Project Report. Hence due to the above mentioned reason the Commission has not approved CWIP in this order.
- 5.11 The Commission has considered opening GFA for FY 2019-20 equal to closing GFA for FY 2018-19 as approved while truing-up above.
- 5.12 The Commission has scrutinized the information submitted by the Petitioner and approves the capitalization for FY 2019-20 as shown below.

TABLE 25: GROSS FIXED ASSETS FOR FY 2019-20 AS APPROVED BY THE COMMISSION (RS. CR.)

Particulars	MYT	Petition	Approved
Opening Gross Fixed Asset	3209.49	1,543.89	1,531.08
Asset Capitalized during the year	980.78	385.96	385.96
Closing Gross Fixed Asset	4190.27	1,929.85	1,917.04

Operation and Maintenance Expenses

Petitioner's Submission

- 5.13 The Petitioner has submitted that the Operation and Maintenance (O&M) cost is mainly driven by the length of transmission line and number of substations. Employee Expenses constitute a major portion of the O&M expenses and the expenses include salaries of the staff, payments related to surrender leave, various medical allowances, leave travel allowances and other allowances.
- 5.14 **Employee Expenses:** The Petitioner submits that the employee expenses primarily include costs towards salaries, Dearness Allowances, bonus, staff welfare and medical benefits, leave travel and earned leave encashment, and the terminal benefits in the form of pension, gratuity etc.
- 5.15 The Petitioner has claimed the employee expenses as per the annual audited accounts for FY 2019-20. The major reason for such exceptional increase is due to the following:
- a) **Revision of Pay structure of the employees of JUSNL with effect from 01.01.2016:** Govt. of Jharkhand vide its Resolution No. 11/07 (Ve, Aa)-01/2016-217/F dated 18.01.2017 of Additional Chief Secretary, Planning-cum-Finance Department (Finance Division), Govt. of Jharkhand has issued an order regarding the revision of pay structure for the State Govt. employees



with effect from 01.01.2016. Accordingly, same was also adopted for the employees of JUSNL vide notification no 1848/Nigam HQ, Ranchi dated 10.07.2017 and by way of this the salaries and terminal benefits of the employees of JUSNL was revised w.e.f. 01.01.2016 retrospectively. The arrear for the period from 01.01.2016 to 31.03.2017 was paid during FY 2017-18. Also, the cost on account of terminal benefits was increased due to mass retirement during FY 2017-18.

- b) **Recruitment drives conducted by JUSNL:** JUSNL is running at 50% of the total sanctioned strength. JUSNL conducted recruitment drives for filling of the vacant positions at various levels vide JUVNL Employment Notification No. 03/2016 and 04/2016. The new recruits are also entitled to the revised pay structure as per the notification of JUVNL vide notification no. 1848/Nigam HQ, Ranchi dated 10.07.2017. The addition of new employees has also contributed to the increase in employee expenses during FY 2019-20 which may further increase after all the vacant positions are fulfilled as per the sanctioned strength.

5.16 The Petitioner submits that from the above fact, it may be inferred that the increase in employee expense was due to change in pay structure and addition of new employees which was not under the control of JUSNL. The Petitioner has thus requested the Commission to allow employee expense as per actual thereby invoking Clause No. 7.36 which provides that the Hon'ble Commission shall consider any variation in Employee Expense due to changes recommended by the Pay Commission and Clause No. 14.6 which provides that the Commission may adopt a procedure, which is at variance with any of the provisions of the notified Regulations.

5.17 **R&M Expenditure:** The Petitioner has submitted that the repairs and maintenance expenses include procurement expenses for various spares used for maintenance purposes as well as labour charges for repairs. The Commission, in its Business Plan order, has approved R&M expenses based on k-Factor of 2.23% which was applied on opening GFA (Rs. 3209.49 Crore) assumed at that time of FY 2019-20.

5.18 The Petitioner has further submitted that the actual opening GFA as per the actual audited accounts of FY 2019-20 is Rs. 1543.89 Crore which is much lower than that assumed in Business Plan order dated 24th February 2018.



The R&M expenses primarily include costs related to repair of different class of fixed assets etc. Accordingly, R&M expense has been claimed as per actual in line with the annual audited accounts for FY 2019-20.

5.19 **A&G Expenses:** The Petitioner has submitted that A&G expenses mainly comprise of costs towards rent charges, telephone and other communication expenses, professional charges, conveyance and travelling allowances and other debits. The Petitioner has claimed the A&G expenses as per the annual audited accounts for FY 2019-20. The actual A&G expense for FY 2019-20 is Rs. 12.57 Crore which is high in comparison to Rs. 9.35 Crore as approved by the Hon'ble Commission in its MYT tariff order dated 24.02.2018. The major contribution to the A&G expense is from Consultancy Charges of Rs. 4.73 Crore. The consultancy services were availed during FY 2019-20 as required for various projects and for expert advice on certain fields of transmission business. The Petitioner therefore, has prayed to allow A&G expense as per actuals thereby invoking Clause No. 14.6 which provides that the Commission may adopt a procedure, which is at variance with any of the provisions of the notified Regulations.

5.20 The summary of the O&M Expenses for FY 2019-20 as approved by the Commission in its MYT order vis-à-vis actually incurred, is as shown in the table below:

TABLE 26: O&M EXPENSE FOR FY 2019-20 AS SUBMITTED BY THE PETITIONER (RS. CR.)

Particulars	MYT	Petition
Emp. Expenses	37.27	65.03
Terminal Benefits	3.85	5.10
A&G Expenses	9.35	12.57
R&M Expenses	71.46	34.56
O&M Expenses	121.93	117.27

Commission's Analysis

A. Employee Expenses

5.21 The Commission in its MYT order dated February 24, 2018 has approved the employee cost for 2nd control period by increasing the provisionally approved employee cost as per tariff order dated December 14, 2015 for FY 2015-16 (excluding the amount of terminal benefits) with an inflation factor of 3.35%



- 5.22 The Commission vide its order dated February 01, 2019 has trued up the Employee Expenses and Terminal Benefits based on actuals for FY 2013-14 (Jan 06, 2014 to Mar 31, 2014) and FY 2014-15 as per audited accounts. Further, the Commission, in its review order dated December 03, 2020 retained the Employee Expenses and Terminal Benefits as approved in order dated February 01, 2019. Further, the Commission, in its order dated December 30, 2020 had approved the Employee Expenses and terminal benefits based on actuals for FY 2015-16 and increased it with the actual inflation factor to determine the employee expenses for FY 2016-17. The terminal benefits for FY 2016-17 was approved on actuals based on audited accounts.
- 5.23 Therefore, the Commission has considered the true up value of employee expenses (excluding terminal benefits) for FY 2019-20 in this order and has increased it with the actual inflation factor to determine the employee expenses. The terminal benefit is approved on actuals based on audited accounts.

B. A&G Expenses

- 5.24 During truing up for FY 2013-14 (Jan 06, 2014 to Mar 31, 2014) and FY 2014-15, the Commission has considered the actual A&G Expenses for approval and the same was retained in Review order dated December 03, 2020. Further, the Commission in its order dated December 30, 2020 had approved the A&G Expenses based on actuals for FY 2015-16 and increased it with the actual inflation factor to determine the A&G expenses for FY 2016-17.

C. R&M Expenses

- 5.25 In its true-up order dated February 01, 2019, the Commission approved the R&M expenses for FY 2013-14 (Jan 06, 2014 to Mar 31, 2014) and FY 2014-15 by multiplying the approved GFA with 'k' factor (2.33%). Further, the Commission in its review order dated December 03, 2020 revised the R&M Expenses based on the approved GFA and 'k' factor (2.33%). Further, the Commission approved the R&M expenses considering the approved opening GFA and 'k' factor as 2.33% for FY 2015-16 and considering the approved opening GFA and 'k' factor as 2.23% approved the R&M expenses for FY 2016-17.



5.26 The O&M expenses as approved by the Commission in MYT order dated February 24, 2018 and submitted by the Petitioner vis-à-vis as approved by the Commission is shown below:

TABLE 27: O&M EXPENSE FOR FY 2019-20 AS APPROVED BY THE COMMISSION (RS. CR.)

Particulars	MYT	Petition	Approved
Emp. Expenses	37.28	65.03	39.70
Terminal Benefits	3.85	5.10	5.10
A&G Expenses	9.35	12.57	8.13
R&M Expenses	71.46	34.56	34.14
O&M Expenses	121.93	117.27	87.08

Depreciation

Petitioner's Submission

5.27 The Petitioner has submitted that it has calculated the depreciation as per the rates prescribed in the schedule attached to the Regulation as Appendix-I of the JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2015.

5.28 The Petitioner has submitted that depreciation expense is less than that approved by the Hon'ble Commission in the Business Plan order. The has Petitioner further submitted that the depreciation expenses claimed is within the limit approved by the Hon'ble Commission in the tariff order dated 24.02.2018 and is also in line with the annual audited accounts for FY 2019-20, as mentioned in the given table:

TABLE 28: DEPRECIATION FOR FY 2019-20 AS SUBMITTED BY THE PETITIONER (RS. CR.)

Particulars	MYT	Petition
Depreciation	182.34	128.74

Commission's Analysis

5.29 The Commission, in its MYT order dated February 24, 2018 has determined asset-wise depreciation with additions in asset during the year, considered as per the approved capitalization for the year. The Commission has considered the depreciation rates for the various asset classes as per the Transmission Tariff Regulations, 2015. Accordingly, the depreciation cost was approved by the Commission for the control period FY 2016-17 to FY 2020-21.



5.30 The Commission, after scrutinizing the submission made by the Petitioner, approves the depreciation based on the depreciation schedule attached as Appendix-I to the JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2015 and the capitalization as approved earlier in this order, as mentioned in the table:

TABLE 29: DEPRECIATION FOR FY 2019-20 AS APPROVED BY THE COMMISSION (RS. CR.)

Particulars	MYT	Petition	Approved
Depreciation	182.34	128.74	128.74

Interest on Loan

Petitioner's Submission

5.31 The Petitioner has submitted that interest on loans include loans against schemes, central and state government loans, Bank Overdrafts, public bonds etc. The Petitioner has further submitted that it has been funding its capital expenditure mostly from State Government loan. In this regard, loan balance has substantially increased with increase in capital expenditure and capitalization for each year. JUSNL has claimed interest on loan of Rs. 494.38 Crore against that approved amount of Rs. 133.87 Crore. The following table shows the interest on loan claimed by JUSNL against that approved in the order:

TABLE 30: INTEREST ON LOAN FOR FY 2019-20 AS SUBMITTED BY THE PETITIONER (RS. CR.)

Particulars	MYT	Petition
Net Loan-Opening	2,278.13	-
Additions during the year	980.78	-
Repayment during the Year	182.34	-
Net Loan- closing	3,076.57	-
Average Loan	2,677.35	-
Interest on Loan (%)	5.00%	-
Interest on Loan	133.87	494.38

Commission's Analysis

5.32 As per Clause 7.10 of JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2015, the Debt : Equity ratio of transmission project will be considered as per the following:-

“For a 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:”

- 5.33 As the Petitioner has submitted that all capitalization is carried out by taking loans from State Government, hence, the Commission has considered the entire capitalization during the year funded through loan (i.e Debt : Equity is 100:0).
- 5.34 The repayment for the year of the tariff period has been considered to be equal to the depreciation allowed for that particular financial year. The closing loan values for the FY 2018-19 has been considered as opening loan value for FY 2019-20.
- 5.35 In the absence of the actual loan portfolio, the Commission has considered the rate of interest as 5.00% as approved in MYT order dated February 24, 2018, as mentioned in the table.

**TABLE 31: INTEREST ON LOAN FOR FY 2019-20 AS APPROVED BY THE COMMISSION
(RS. CR.)**

Particulars	MYT	Petition	Approved
Net Loan-Opening	2,278.13	-	672.50
Additions during the year	980.78	-	385.96
Repayment during the Year	182.34	-	128.74
Net Loan- closing	3,076.57	-	929.72
Average Loan	2,677.35	-	801.11
Interest on Loan (%)	5.00%	-	5.00%
Interest on Loan	133.87	304.68	40.06

Return on Equity

Petitioner’s Submission

- 5.36 The Petitioner has submitted that it has considered equity base of Rs. 974.96 Crore (Rs. 972.96 Crore towards equity share capital + Rs. 2.00 Crore towards restructuring account pending adjustment) for FY 2019-20 as reflected in the annual audited accounts. The applicable return on equity has been calculated considering 15.50% rate of return as per Regulation 7.12 of JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2015. The detailed calculation of return on equity is provided below:



TABLE 32: RETURN ON EQUITY FOR FY 2019-20 AS SUBMITTED BY THE PETITIONER (RS. CR.)

Particulars	MYT	Petition
Opening Equity	357.23	972.96
Additions	-	2.00
Closing Equity	357.23	974.96
Average Equity	357.23	973.96
Rate of Return	15.50%	15.50%
Return on Equity	55.37	150.96

Commission's Analysis

5.37 The Commission is of the view that the Petitioner has computed the equity component more than the normative equity of 30% of the GFA. The Petitioner was required to justify its claim of equity amount of Rs. 972.96 Crore out of the Total Gross Fixed Asset of Rs. 1,929.85 Crore.

5.38 In its reply, the Petitioner has submitted the amount of Rs 972.96 Crore as per the equity amount, reflected in the Audited Annual Account for the FY 2019-20.

5.39 The Commission had directed the Petitioner to submit the justification of claiming equity addition of Rs 2 Crore in FY 2019-20 towards the Restructuring Account Pending Adjustment, and in this regard the Petitioner has failed to submit the proper justification. Hence, the Commission, in the instant petition, disallows the equity addition of Rs 2 Crore in FY 2019-20 towards the Restructuring Account Pending Adjustment.

5.40 As per Clause 7.10 of JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2015, the Debt : Equity ratio of transmission project will be considered as per the following:-

“For a 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:”



- 5.41 The Commission has also observed the equity component considered by the Petitioner as nil, accordingly the Commission has approved equity as nil.
- 5.42 The closing equity for the FY 2018-19 has been considered as opening equity for FY 2019-20. The Commission has accordingly approved the Return on Equity for FY 2019-20.

TABLE 33: RETURN ON EQUITY FOR FY 2019-20 AS APPROVED BY THE COMMISSION (RS. CR.)

Particulars	MYT	Petition	Approved
Opening Equity	357.23	972.96	350.61
Additions	-	2.00	-
Closing Equity	357.23	974.96	350.61
Average Equity	357.23	973.96	350.61
Rate of Return	15.50%	15.50%	15.50%
Return on Equity	55.37	150.96	54.34

Interest on Working Capital

Petitioner's Submission

- 5.43 The Petitioner has submitted that the working capital requirement has been computed according to the applicable norms for Transmission function as provided in the JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2015, the calculation for which has been detailed in the table below. In line with the above Regulations actual SBI base rate prevailing on 1st April 2019 has been taken into account for calculation of interest on Working Capital for FY 2019-20.

TABLE 34: INTEREST ON WORKING CAPITAL FOR FY 2019-20 AS SUBMITTED BY THE PETITIONER (RS. CR.)

Particulars	MYT	Petition
O&M expenses for 1 month	10.16	9.77
Maintenance spares 15% of O&M expenses	18.29	17.59
2 Months Receivables of Annual Fixed Charges	84.66	150.10
Total Working Capital	113.11	177.47
Interest Rate	12.80%	12.55%
Interest on Working Capital in Rs.Core	14.48	22.27

Commission's Analysis

- 5.44 The Commission has considered the Interest on Working Capital (IoWC) as per norms specified in Clause 7.31 to Clause 7.33 of the JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2015.



5.45 The rate of IoWC has been considered to be equal to the Base rate of SBI as applicable on April 01, of the relevant financial year plus 350 basis points as per Clause 7.32 of the JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2015.

TABLE 35: INTEREST ON WORKING CAPITAL FOR FY 2019-20 AS APPROVED BY THE COMMISSION (RS. CR.)

Particulars	MYT	Petition	Approved
O&M expenses for 1 month	10.16	9.77	7.26
Maintenance spares 15% of O&M expenses	18.29	17.59	13.06
2 Months Receivables of Annual Fixed Charges	84.66	150.10	53.24
Total Working Capital	113.11	177.47	73.56
Interest Rate	12.80%	12.55%	12.55%
Interest on Working Capital in Rs.Core	14.48	22.27	9.23

Non-tariff Income

Petitioner's Submission

5.46 The Petitioner has submitted that Regulation 7.38 & 7.39 of the JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2015 provides that non-tariff income derived from disposal of assets, rent, DPS, miscellaneous receipts from the beneficiaries are to be deducted from the ARR. In line with the above Regulations, the Petitioner has claimed the Non-Tariff Income as per the audited annual accounts as follows.

TABLE 36: NON-TARIFF INCOME FOR FY 2019-20 AS SUBMITTED BY THE PETITIONER (RS. CR.)

Particulars	MYT	Petition
Non-tariff Income	6.83	19.88

Commission's Analysis

5.47 The Commission, on evaluation and prudent check has approved the Non-tariff Income based on actuals as summarized in the table below.

TABLE 37: NON-TARIFF INCOME FOR FY 2019-20 AS APPROVED BY THE COMMISSION (RS. CR.)

Particulars	MYT	Petition	Approved
Non-tariff Income	6.83	19.88	19.88



Incentive for Transmission Availability

Petitioner's Submission

5.48 The Petitioner has claimed an incentive for achieving 99.27% availability of transmission network against the normative value of 98.50%, detailed below.

TABLE 38: INCENTIVE FOR FY 2019-20 AS SUBMITTED BY THE PETITIONER (RS. CR.)

Particulars	Petition
Annual Transmission System Availability Factor	99.27%
Annual Transmission System Target Availability Factor for Incentive consideration as per JSERC Regulations	98.50%
Additional Achievement	0.77%
Net Aggregate Revenue Requirement	893.74
Incentive/(Penalty) to be claimed	6.88

Commission's Analysis

5.49 The relevant clauses of the JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2015 related to the incentive calculation and recovery of fixed charges are extracted hereunder,

“8.6 The fixed cost of the Transmission System shall be computed on annual basis, in accordance with norms contained in these Regulations, aggregated as appropriate, and recovered on monthly basis as transmission charge from the users.

8.7 The transmission charge (inclusive of incentive) payable for a calendar month for a Transmission System or part thereof shall be

a. For TAFM < 98%

$$AFC \times (NDM/NDY) \times (TAFM/98\%)$$

b. For TAFM: 98% < TAFM < 98.5%

$$AFC \times (NDM/NDY) \times (1)$$

c. For TAFM: 98.5% < TAFM < 99.75%

$$AFC \times (NDM/NDY) \times (TAFM/98.5\%)$$

d. For TAFM > 99.75%



$$AFC \times (NDM/NDY) \times (99.75\%/98.5\%)$$

Where,

AFC = Annual fixed cost specified for the year, in Rupees;

NDM = Number of days in the month;

NDY = Number of days in the year; and

TAFM = Transmission system availability factor for the month, in Percent, computed in accordance with Appendix –III to these Regulations.”

5.50 Accordingly, the Commission on prudent check has approved the Incentive as summarized in the table below.

TABLE 39: ANNUAL FIXED COST FOR FY 2019-20 AS APPROVED BY THE COMMISSION (RS. CR.)

Particulars	UoM	Petition	Approved
O&M Expenses	Rs. Cr.	117.27	87.08
Interest & Finance Charges	Rs. Cr.	494.38	40.06
Interest on Working Capital	Rs. Cr.	22.27	9.23
Depreciation	Rs. Cr.	128.74	128.74
Return on Equity	Rs. Cr.	150.96	54.34
Annual Fixed Cost	Rs. Cr.	913.62	319.45

TABLE 40: INCENTIVE FOR FY 2019-20 AS APPROVED BY THE COMMISSION (RS. CR.)

Month	No. of Days	TAFM as Certified by the SLDC	ARR including Incentive
April	30.00	99.23%	26.45
May	31.00	98.99%	27.27
June	30.00	98.67%	26.30
July	31.00	97.85%	27.09
August	31.00	99.21%	27.33
September	30.00	98.94%	26.37
October	31.00	97.57%	27.01
November	30.00	98.71%	26.31
December	31.00	98.19%	27.13
January	31.00	98.58%	27.15
February	28.00	98.78%	24.57
March	31.00	98.81%	27.22
Total	365.00		320.21

Particulars	Approved
Annual Fixed Cost	319.45
ARR inclusive of Incentive	320.21
Net Incentive	0.76



Revenue from Operations

Petitioner's Submission

5.51 The Petitioner submits that it has recovered transmission charge as approved by the Hon'ble Commission in its order dated 24th February 2018. The relevant extract of the order is quoted below:

“ 6.64 The Commission approves transmission tariff of Rs 0.25 per kWh for FY 2016-17, which shall remain applicable till amended or modified or extended by an Order of this Commission.”

5.52 In line with the direction of the Hon'ble Commission the Petitioner has recovered transmission charge at a tariff of Rs. 0.25 per kWh wheeled through its transmission network for FY 2019-20. The Petitioner has claimed the revenue from the existing tariff as per actual for FY 2019-20.

TABLE 41: REVENUE FOR FY 2019-20 AS SUBMITTED BY THE PETITIONER (RS. CR.)

Particulars	Petition
Revenue from Existing Tariff	217.56

Commission's Analysis

5.53 The Commission, after scrutinizing and on analysis of the audited accounts approves the revenue from transmission business for FY 2019-20 as tabulated below.

TABLE 42: REVENUE FOR FY 2019-20 AS APPROVED BY THE COMMISSION (RS. CR.)

Particulars	Petition	Approved
Revenue from Existing Tariff	217.56	217.56

Summary of ARR Components and Revenue Gap/(Surplus)

Petitioner's Submission

5.54 The summary of ARR components as submitted by the Petitioner is mentioned in the table below.



TABLE 43: SUMMARY OF ARR COMPONENTS FOR FY 2019-20 AS SUBMITTED BY THE PETITIONER (RS. CR.)

Particulars	MYT	Petition
Operation and Maintenance Expense	121.93	117.27
<i>Employee Expense</i>	41.12	70.13
<i>A&G Expense</i>	9.35	12.57
<i>R&M Expense</i>	71.46	34.56
Depreciation	182.34	128.74
Interest and Finance Charge	133.87	494.38
Return on Equity	55.37	150.96
Interest on Working Capital	14.48	22.27
Less: Non-tariff Income	(6.83)	(19.88)
Incentive	-	6.88
Net Aggregate Revenue Requirement	501.16	900.62
Revenue from Operations	-	217.56
Revenue Gap / (Surplus)	-	683.06

Commission's Analysis

5.55 The summary of ARR components as approved by the Commission is summarized in the table below:

TABLE 44: SUMMARY OF ARR COMPONENTS FOR FY 2019-20 AS APPROVED BY THE COMMISSION (RS. CR.)

Particulars	MYT	Petition	Approved
Operation and Maintenance Expense	121.93	117.27	87.08
<i>Employee Expense</i>	41.12	70.13	44.80
<i>A&G Expense</i>	9.35	12.57	8.13
<i>R&M Expense</i>	71.46	34.56	34.14
Depreciation	182.34	128.74	128.74
Interest and Finance Charge	133.87	494.38	40.06
Return on Equity	55.37	150.96	54.34
Interest on Working Capital	14.48	22.27	9.23
Less: Non-tariff Income	(6.83)	(19.88)	(19.88)
Incentive	-	6.88	0.76
Net Aggregate Revenue Requirement	501.16	900.62	300.33
Revenue from Operations		217.56	217.56
Revenue Gap / (Surplus)		683.06	82.76

5.56 The Commission observes that the petition was required to be filed in accordance with Clause A 15 of the JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2015. However, the instant petition was filed on 17th October, 2022, as such, the Commission disallows the Carrying cost for the period of delay.



A 6 Annual Performance Review for FY 2020-21

- 6.1 The Petitioner has submitted that the APR petition for FY 2020-21 has been prepared based on the audited accounts, taking into consideration the provisions of JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2015, and the methodology adopted by the Commission in the previous orders.
- 6.2 The Commission, based on the provisions of the JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2015 has carried out true-up taking into consideration: -
- d) Un-audited Accounts for FY 2019-20 and additional details submitted by the Petitioner;
 - e) JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2015; and;
 - f) Methodology adopted by the Commission in the earlier orders.

Capital Expenditure, Capitalization and CWIP

Petitioner Submission

- 6.3 The Petitioner has considered the actual capital expenditure and capitalization that has incurred in the book of accounts for truing up of expenses for FY 2020-21. The opening and closing balances of the capital expenditure, capitalization, CWIP are considered as per the un-audited annual accounts for FY 2020-21.
- 6.4 The Capital Expenditure, Capitalization and CWIP, as submitted by the Petitioner, are given in the table below:

TABLE 45: CAPEX, CWIP AND CAPITALIZATION FOR FY 2020-21 AS SUBMITTED BY THE PETITIONER (RS. CR.)

Particulars	Opening	Addition	Closing
Capital Expenditure during the Year	5,177.20	642.32	5,819.52
Capitalization	1,929.85	682.58	2,612.42
Capital Works in Progress	3,247.35	(40.25)	3,207.10
Asset Capital Work in Progress	2,339.94	(41.69)	2,298.25



Particulars	Opening	Addition	Closing
Capital Advances	374.97	-	374.97
Advance to Suppliers	501.95	5.47	507.43
Stock of Materials at Site	30.49	(4.04)	26.45

TABLE 46: CAPEX AND CAPITALIZATION FOR FY 2020-21 AS SUBMITTED BY THE PETITIONER (RS. CR.)

Particulars	MYT	Petition
Capital Expenditure during the Year	274.20	642.32
Asset Capitalized during the year	2187.40	682.58

- 6.5 The Commission in its Business Plan order dated 24th February 2018, had determined the opening balance of GFA for FY 2019-20 based on the closing balance approved for FY 2019-20 in the same order.
- 6.6 The Petitioner has claimed the opening GFA as per the un-audited annual accounts for FY 2020-21, after consideration of final transfer scheme. The following table shows the opening and closing balance of GFA as per un-audited annual accounts against that approved by JSERC in the last tariff order.

TABLE 47: GROSS FIXED ASSETS FOR FY 2020-21 AS SUBMITTED BY THE PETITIONER (RS. CR.)

Particulars	MYT	Petition
Opening Gross Fixed Asset	4190.27	1,929.85
Asset Capitalized during the year	2187.40	682.58
Closing Gross Fixed Asset	6377.67	2,612.42

Commission Analysis

- 6.7 The Commission has considered opening GFA for FY 2020-21 equal to closing GFA for FY 2019-20, as approved while truing-up above. Further, since the instant petition for APR of FY 2020-21 has been filed based on un-audited annual accounts, the Commission has disallowed the Capitalization and the Fixed Cost associated with such Capitalization for Plant & Machinery, and Lines & Cable Network for FY 2020-21, subject to final approval of True-up for FY 2020-21 based on Audited Accounts.
- 6.8 The Commission has scrutinized the information submitted by the Petitioner and approves the capitalization for FY 2020-21 as shown below.



TABLE 48: GROSS FIXED ASSETS FOR FY 2020-21 AS APPROVED BY THE COMMISSION (RS. CR.)

Particulars	MYT	Petition	Approved
Opening Gross Fixed Asset	4,190.27	1,929.85	1,917.04
Asset Capitalized during the year	2,187.40	682.58	3.05
Closing Gross Fixed Asset	6,377.67	2,612.42	1,920.09

Operation and Maintenance Expenses

Petitioner's Submission

- 6.9 The Petitioner has submitted that the Operation and Maintenance (O&M) cost is mainly driven by the length of transmission line and number of substations. Employee Expenses constitute a major portion of the O&M expenses which includes salary of the staff, payments related to surrender leave, various medical allowances, leave travel allowances and other allowances.
- 6.10 **Employee Expenses:** The Petitioner submits that the employee expenses primarily include costs towards salaries, Dearness Allowances, bonus, staff welfare and medical benefits, leave travel and earned leave encashment, and the terminal benefits in the form of pension, gratuity etc.
- 6.11 The Petitioner has claimed the employee expenses as per the annual un-audited accounts for FY 2020-21. The major reason for such exceptional increase is due to the following:
- c) **Revision of Pay structure of the employees of JUSNL with effect from 01.01.2016:** Govt. of Jharkhand vide its Resolution No. 11/07 (Ve, Aa)-01/2016-217/F dated 18.01.2017 of Additional Chief Secretary, Planning-cum-Finance Department (Finance Division), Govt. of Jharkhand has issued order regarding the revision of pay structure for the State Govt. employees with effect from 01.01.2016. Accordingly, same was also adopted for the employees of JUSNL vide notification no 1848/Nigam HQ, Ranchi dated 10.07.2017 and by way of this the salary and terminal benefits of the employees of JUSNL was revised w.e.f. 01.01.2016 retrospectively. The arrear for the period from 01.01.2016 to 31.03.2017 was paid during FY 2017-18. Also, the cost on account of terminal benefits was increased due to mass retirement during FY 2017-18.



- d) **Recruitment drives conducted by JUSNL:** JUSNL is running at 50% of the total sanctioned strength. JUSNL conducted recruitment drives for filling of the vacant positions at various levels vide JUVNL Employment Notification No. 03/2016 and 04/2016. The new recruits are also entitled to the revised pay structure as per the notification of JUVNL vide notification no. 1848/Nigam HQ, Ranchi dated 10.07.2017. The addition of new employees has also contributed for the increase in employee expenses during FY 2020-21 which may further increase after all the vacant positions are filled as per the sanctioned strength.
- 6.12 The Petitioner submits that from the above it may be inferred that the increase in employee expense was due to change in pay structure and addition of new employees which was not under the control of JUSNL. The Petitioner has thus requested the Commission to allow employee expense as per actual thereby invoking Clause No. 7.36 which provides that the Hon'ble Commission shall consider any variation in Employee Expense due to changes recommended by the Pay Commission and Clause No. 14.6 which provides that the Commission may adopt a procedure, which is at variance with any of the provisions of the notified Regulations.
- 6.13 **R&M Expenditure:** The Petitioner has submitted that the repairs and maintenance expenses include procurement expenses for various spares used for maintenance purposes as well as labour charges for repairs. The Commission in its Business Plan order has approved R&M expenses based on k-Factor of 2.23% which was applied on opening GFA (Rs. 2286.91 Crore) assumed at that time for FY 2018-19.
- 6.14 The Petitioner has further submitted that the actual opening GFA as per actual audited accounts of FY 2018-19 is Rs. 1435.49 Crore which is much lower than that assumed in Business Plan order dated 24th February 2018. The R&M expenses primarily include costs related to repair of different class of fixed assets etc. Accordingly, R&M expense has been claimed as per actual in line with the annual audited accounts for FY 2018-19.



6.15 **A&G Expenses:** The Petitioner has submitted that A&G expenses mainly comprise of cost towards rent charges, telephone and other communication expenses, professional charges, conveyance and travelling allowances and other debits. The Petitioner has claimed the A&G expenses as per the annual un-audited accounts for FY 2020-21.

6.16 The summary of the O&M Expenses for FY 2020-21 approved by the Commission in its MYT order, vis-à-vis actually incurred is as shown in the table below:

TABLE 49: O&M EXPENSE FOR FY 2020-21 AS SUBMITTED BY THE PETITIONER (RS. CR.)

Particulars	MYT	Petition
Emp. Expenses	38.52	62.47
Terminal Benefits	3.85	5.33
A&G Expenses	9.66	10.25
R&M Expenses	93.30	29.85
O&M Expenses	145.33	107.89

* Includes Rs. 0.20 Cr. of A&G expense of SLDC business

Commission's Analysis

6.17 **Employee Expenses:** The Commission vide its order dated February 01, 2019 has trued up the Employee Expenses and Terminal Benefits based on actuals for FY 2013-14 (Jan 06, 2014 to Mar 31, 2014) and FY 2014-15 as per audited accounts. Further, the Commission in its review order dated December 03, 2020 has retained the Employee Expenses and Terminal Benefits as approved in order dated February 01, 2019. Further, the Commission in its order dated December 30, 2020 had approved the Employee Expenses and terminal benefits based on actuals for FY 2015-16 and increased it with the actual inflation factor to determine the employee expenses for FY 2016-17. The terminal benefits for FY 2016-17 was approved on actuals based on audited accounts.

6.18 **A&G Expenses:** During truing up for FY 2013-14 (Jan 06, 2014 to Mar 31, 2014) and FY 2014-15, the Commission has considered the actual A&G Expenses for approval and the same was retained in review order dated December 03, 2020. Further, the Commission in its order dated December 30, 2020 had approved the A&G Expenses based on actuals for FY 2015-16 and increased it with the actual inflation factor to determine the A&G expenses for FY 2016-17.



- 6.19 **R&M Expenditure:** In its true-up order dated February 01, 2019, the Commission approved the R&M expenses for FY 2013-14 (Jan 06, 2014 to Mar 31, 2014) and FY 2014-15 by multiplying the approved GFA with 'k' factor (2.33%). Further, the Commission in its review order dated December 03, 2020 revised the R&M Expenses based on the approved GFA and 'k' factor (2.33%). Further, the Commission approved the R&M expenses considering the approved opening GFA and 'k' factor as 2.33% for FY 2015-16 and considering the approved opening GFA and 'k' factor as 2.23% approved the R&M expenses for FY 2016-17.
- 6.20 The same methodology has been used in the approval of operational & maintenance expenses for FY 2017-18, FY 2018-19, and FY 2019-20 as approved earlier in this order. Hence, considering the same methodology as adopted in the earlier orders, the Commission has approved the O&M Expenses for FY 2018-19.

TABLE 50: O&M EXPENSE FOR FY 2020-21 AS APPROVED BY THE COMMISSION (RS. CR.)

Particulars	MYT	Petition	Approved
Emp. Expenses	38.52	62.47	41.34
Terminal Benefits	3.85	5.33	5.33
A&G Expenses	9.66	10.25	8.47
R&M Expenses	93.30	29.85	42.75
O&M Expenses	145.33	107.89	97.89

Depreciation

Petitioner's Submission

- 6.21 The Petitioner has submitted that it has calculated the depreciation as per the rates as prescribed in the schedule attached to the Regulation as Appendix-I of the JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2015.

TABLE 51: DEPRECIATION FOR FY 2020-21 AS SUBMITTED BY THE PETITIONER (RS. CR.)

Particulars	MYT	Petition
Depreciation	265.98	138.30
Less: Depreciation on asset made from consumer contribution	-	0.25
Net Depreciation	265.98	138.06



Commission's Analysis

6.22 The Commission, after scrutinizing the submission made by the Petitioner, approves the depreciation based on the depreciation schedule attached as Appendix-I to the JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2015 and the capitalization as approved earlier in this order.

TABLE 52: DEPRECIATION FOR FY 2020-21 AS APPROVED BY THE COMMISSION (RS. CR.)

Particulars	MYT	Petition	Approved
Depreciation	265.98	138.30	1.11
Less: Depreciation on asset made from consumer contribution	-	0.25	0.25
Net Depreciation	265.98	138.06	0.86

Interest on Loan

Petitioner's Submission

6.23 The Petitioner has submitted that interest on loans includes loans against schemes, central and state government loans, Bank Overdrafts, public bonds etc. The Petitioner has further submitted that it has been funding its capital expenditure majorly from State Government loan. In this regard, loan balance has substantially increased with increase in capital expenditure and capitalization for each year.

TABLE 53: INTEREST ON LOAN FOR FY 2020-21 AS SUBMITTED BY THE PETITIONER (RS. CR.)

Particulars	MYT	Petition
Net Loan-Opening	3,076.57	-
Additions during the year	1,718.58	-
Repayment during the Year	265.98	-
Net Loan- closing	4,529.17	-
Average Loan	3,802.87	-
Interest on Loan (%)	5.00%	-
Interest on Loan	190.14	503.26

Commission's Analysis

6.24 As per Clause 7.10 of JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2015, the Debt : Equity ratio of transmission project will be considered as per the following:-



“For a 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:”

Accordingly, the Commission has approved the Debt : Equity ratio for additional capitalization for FY 2018-19 as 100:0.

- 6.25 The repayment for the year of the tariff period has been considered to be equal to the depreciation allowed for that particular financial year. The closing loan values for the FY 2017-18 has been considered as opening loan value for FY 2018-19.
- 6.26 In the absence of the actual loan portfolio, the Commission has considered the rate of interest as 5.00% as approved in MYT order dated February 24, 2018.

**TABLE 54: INTEREST ON LOAN FOR FY 2020-21 AS APPROVED BY THE COMMISSION
(RS. CR.)**

Particulars	MYT	Petition	Approved
Net Loan-Opening	3,076.57	-	929.72
Additions during the year	1,718.58	-	3.05
Repayment during the Year	265.98	-	0.86
Net Loan- closing	4,529.17	-	931.91
Average Loan	3,802.87	-	930.81
Interest on Loan (%)	5.00%	-	5.00%
Interest on Loan	190.14	503.26	46.54

Return on Equity

Petitioner’s Submission

- 6.27 The Petitioner has submitted that it has considered equity base of Rs. 974.96 Crore (Rs. 972.96 Crore towards equity share capital + Rs. 2.00 Crore towards restructuring account pending adjustment) for FY 2018-19 as reflected in the annual audited accounts. The applicable return on equity has been calculated considering 15.50% rate of return as per Regulation 7.12 of JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2015. The detailed calculation of return on equity is provided below:



TABLE 55: RETURN ON EQUITY FOR FY 2020-21 AS SUBMITTED BY THE PETITIONER (RS. CR.)

Particulars	MYT	Petition
Opening Equity	357.23	972.96
Additions	468.83	2.00
Closing Equity	826.06	974.96
Average Equity	591.64	973.96
Rate of Return	15.50%	15.50%
Return on Equity	91.70	150.96

Commission's Analysis

6.28 As per Clause 7.10 of JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2015, the Debt : Equity ratio of transmission project will be considered as per the following:-

“For a 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:”

Accordingly, the Commission has approved the Debt : Equity ratio for additional capitalization for FY 2018-19 as 100:0.

6.29 The closing equity for the FY 2017-18 has been considered as opening equity for FY 2018-19. The Commission has accordingly approved the Return on Equity for FY 2018-19.

TABLE 56: RETURN ON EQUITY FOR FY 2020-21 AS APPROVED BY THE COMMISSION (RS. CR.)

Particulars	MYT	Petition	Approved
Opening Equity	357.23	972.96	350.61
Additions	468.83	2.00	-
Closing Equity	826.06	974.96	350.61
Average Equity	591.64	973.96	350.61
Rate of Return	15.50%	15.50%	15.50%
Return on Equity	91.70	150.96	54.34



Interest on Working Capital

Petitioner's Submission

6.30 The Petitioner has submitted that it has arrived at the working capital requirement according to the applicable norms for Transmission function as provided in the JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2015, the calculation for which has been captured in the following table. In line with the above Regulations actual SBI base rate prevailing on 1st April 2020 has been considered for calculation of interest on Working Capital for FY 2020-21.

TABLE 57: INTEREST ON WORKING CAPITAL FOR FY 2020-21 AS SUBMITTED BY THE PETITIONER (RS. CR.)

Particulars	MYT	Petition
O&M expenses for 1 month	12.11	8.99
Maintenance spares 15% of O&M expenses	21.80	16.18
2 Months Receivables of Annual Fixed Charges	118.78	151.11
Total Working Capital	152.69	176.29
Interest Rate	12.80%	10.95%
Interest on Working Capital in Rs.Core	19.54	19.30

Commission's Analysis

6.31 The Commission has considered the Interest on Working Capital (IoWC) as per norms specified from Clause 7.31 to Clause 7.33 of the JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2015.

6.32 The rate of IoWC has been considered to be equal to the Base rate of SBI as applicable on April 01, of the relevant financial year plus 350 basis points as per Clause 7.32 of the JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2015.

TABLE 58: INTEREST ON WORKING CAPITAL FOR FY 2020-21 AS APPROVED BY THE COMMISSION (RS. CR.)

Particulars	MYT	Petition	Approved
O&M expenses for 1 month	12.11	8.99	8.16
Maintenance spares 15% of O&M expenses	21.80	16.18	14.68
2 Months Receivables of Annual Fixed Charges	118.78	151.11	34.38
Total Working Capital	152.69	176.29	57.22
Interest Rate	12.80%	10.95%	11.65%
Interest on Working Capital in Rs.Core	19.54	19.30	6.67



Non-tariff Income

Petitioner's Submission

6.33 The Petitioner has submitted that Regulation 7.38 & 7.39 of the JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2015 provides that non-tariff income derived from disposal of assets, rent, DPS, miscellaneous receipts from the beneficiaries are to be deducted from the ARR. In line with the above Regulations, the Petitioner has claimed the Non-Tariff Income as per the audited annual accounts as follows,

TABLE 59: NON-TARIFF INCOME FOR FY 2020-21 AS SUBMITTED BY THE PETITIONER (RS. CR.)

Particulars	MYT	Petition
Non-tariff Income	7.17	12.79

Commission's Analysis

6.34 The Commission after due prudence approves the Non-tariff Income based on actuals as summarized in the table below,

TABLE 60: NON-TARIFF INCOME FOR FY 2020-21 AS APPROVED BY THE COMMISSION (RS. CR.)

Particulars	MYT	Petition	Approved
Non-tariff Income	7.17	12.79	12.79

Revenue from Operations

Petitioner's Submission

6.35 The Petitioner submits that it has recovered transmission charge as approved by the Hon'ble Commission in its order dated 24th February 2018. The relevant extract of the order is quoted below:

“ 6.64 The Commission approves transmission tariff of Rs 0.25 per kWh for FY 2016-17, which shall remain applicable till amended or modified or extended by an Order of this Commission.”

6.36 In line with the direction of the Hon'ble Commission the Petitioner has recovered transmission charge at a tariff of Rs. 0.25 per kWh wheeled through its transmission network for FY 2020-21. The Petitioner has claimed the revenue from existing tariff as per actual for FY 2020-21.



TABLE 61: REVENUE FOR FY 2020-21 AS SUBMITTED BY THE PETITIONER (RS. CR.)

Particulars	Petition
Revenue from Existing Tariff	229.58

Commission’s Analysis

6.37 The Commission after scrutinizing the audited accounts approves the revenue from transmission business for FY 2018-19 as tabulated below.

TABLE 62: REVENUE FOR FY 2020-21 AS APPROVED BY THE COMMISSION (RS. CR.)

Particulars	Petition	Approved
Revenue from Existing Tariff	229.58	229.58

Summary of ARR Components and Revenue Gap/(Surplus)

Petitioner’s Submission

6.38 The summary of ARR components, as submitted by the Petitioner, is summarized in the table below.

TABLE 63: SUMMARY OF ARR COMPONENTS FOR FY 2020-21 AS SUBMITTED BY THE PETITIONER (RS. CR.)

Particulars	MYT	Petition
Operation and Maintenance Expense	145.33	107.89
Employee Expense	42.37	67.80
A&G Expense	9.66	10.25
R&M Expense	93.3	29.85
Depreciation	265.98	138.06
Interest and Finance Charge	190.14	503.26
Return on Equity	91.70	150.96
Interest on Working Capital	19.54	19.30
Less: Non-tariff Income	(7.17)	(12.79)
Net Aggregate Revenue Requirement	705.53	906.69
Revenue from Operations	-	229.58
Revenue Gap / (Surplus)	-	677.10

Commission’s Analysis

6.39 The summary of ARR components as approved by the Commission is summarized in the table below:

TABLE 64: SUMMARY OF ARR COMPONENTS FOR FY 2020-21 AS APPROVED BY THE COMMISSION (RS. CR.)

Particulars	MYT	Petition	Approved
Operation and Maintenance Expense	145.33	107.89	97.89
Employee Expense	42.37	67.80	46.67
A&G Expense	9.66	10.25	8.47
R&M Expense	93.3	29.85	42.75



Particulars	MYT	Petition	Approved
Depreciation	265.98	138.06	0.86
Interest and Finance Charge	190.14	503.26	46.54
Return on Equity	91.70	150.96	54.34
Interest on Working Capital	19.54	19.30	6.67
Less: Non-tariff Income	(7.17)	(12.79)	(12.79)
Net Aggregate Revenue Requirement	705.53	906.69	193.52
Revenue from Operations		229.58	229.58
Revenue Gap / (Surplus)		677.10	(36.07)

6.40 The Commission has conducted the Annual Performance Review (APR) based on the un-audited annual accounts for FY 2020-21 and the additional data presented by the Petitioner. However, the same shall be revised while conduction of True-up for FY 2020-21 based on Audited Accounts, in accordance with the provisions of the JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2015.



A 7 Business Plan for Multi Year Tariff from FY 2021-22 to FY 2025-26

7.1 The Petitioner has filed its Business Plan for the MYT Control Period FY 2021-22 to FY 2025-26 in line with the Transmission Tariff Regulations, 2015. The relevant extract of the Regulations is as under:

“6.5 The Transmission Licensee shall file for the Commission’s approval, a Business Plan approved by an authorized signatory, as per the timelines specified in Section A 24 of these Regulations.

6.6 The Business Plan shall be for the entire Control Period and shall, inter alia, contain:

- a) Capital Investment Plan: This should be commensurate with load growth and quality improvement proposed in the Business Plan. The investment plan should also include corresponding capitalization schedule and financing plan;*
- b) The appropriate capital structure and cost of financing (interest on debt) and return on equity, terms of the existing loan agreements, etc;*
- c) Operation and Maintenance (O&M) Expenses: This shall include the costs estimated for the Base Year, the actual expenses incurred in the previous control period and the projected values for each year of the Control Period based on the proposed norms for O&M cost, including indexation and other appropriate mechanisms;*
- d) Depreciation: Based on the fair life of the asset and capitalization schedules for each year of the Control Period;*
- e) Performance Targets: A set of targets proposed for controllable items such as Availability of transmission system, transformer failure rate, and any other parameters for quality of supply. The targets shall be consistent with the capital investment plan proposed by the Transmission Licensee;*
- f) Proposals for Non-Tariff Income with item-wise description and details;*
- g) Proposals in respect of income from Other Business; and*
- h) Other Information: This shall include any other details considered appropriate by the Transmission Licensee for consideration during determination of tariff”*



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

Business Plan and Capital Investment Plan

Overview

Electricity Demand Scenario in Jharkhand from FY 2021-22 to FY 2025-26

Petitioner Submission

7.3 The Petitioner has submitted that the demand for power has been increasing gradually in Jharkhand over the years. For JBVNL alone, which is the State’s largest distribution company, it is expected to increase by almost 78.00% from 10,387.11 MUs (at state periphery) to 18,099.43 MUs during the control period from 2021-22 to 2025-26. The exponential rise in electricity sales is primarily seen as a result of the ambitious efforts to enhance accessibility of electricity to households besides meeting the requirement of industries and other category of consumers.

TABLE 65: ENERGY AVAILABLE AT STATE PERIPHERY (WITHOUT LOSS) FOR JBVNL AS SUBMITTED BY THE PETITIONER FOR FY 2021-22 TO FY 2025-26

Particulars	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26
Energy available at state periphery (JBVNL)	10,387.11	11,834.74	12,614.19	15,262.65	18,099.43

7.4 The projected requirement of power transmission for the said period from FY 2021-22 to FY 2025-26, is expected to increase by more than 70.00% from 11,000.31 MUs to 18,844.03 MUs. The increase over the years is illustrated in the figure below:

TABLE 66: ELECTRICITY TRANSMISSION AT STATE PERIPHERY WITHOUT LOSS AS SUBMITTED BY THE PETITIONER FOR FY 2021-22 TO FY 2025-26

Particulars	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26
Electricity Transmission (MUs)	11,000.31	12,513.64	13,358.79	16,007.25	18,844.03

7.5 The Petitioner has projected the transmission loss trajectory as 5.00%. As JUSNL is primarily transmitting power to JBVNL, hence only their projections have been considered. Such a huge growth in power transmission is expected owing to development of large IPPs in state of Jharkhand, up gradation of grid



sub-station and downstream strengthening of 220/132 KV network which is required to ensure efficient power transfer from interstate generation projects. The large addition in transmission capacity is required to facilitate open access, decongest the transmission system and strengthen the intra state grid to provide the required support to the downstream Discoms.

Capital Expenditure & Capitalization

Petitioner Submission

7.6 The Petitioner has submitted that for improving the transmission network availability and to strengthen the overall transmission network, JUSNL proposes massive Capital Expenditure in construction of new transmission lines and substation along with augmentation and R&M work. The detailed breakup of proposed capital expenditure during the third control period FY 2021-22 to 2025-26 has been:

- a) Meeting demand for power arising from existing and future end-consumers in various load centers/pockets in the State;
- b) Providing connectivity for evacuation of power from various upcoming intra and inter-state power plants and for onward delivery of such power to load centers/ drawl points;
- c) Improving the availability and reliability of the intra-state transmission systems in the state; and
- d) Improving efficiency by way of reducing technical losses in the intra-state transmission systems.

7.7 The petitioner has submitted that for the purpose of this business plan, the planned capital initiatives have been divided into four components as below:

- a) Ongoing Capex Schemes
- b) Planned Capex Schemes
- c) Infrastructure augmentation Schemes
- d) Renovation and Modernization Scheme

7.8 The total project cost for all the ongoing, planned, augmentation and R&M schemes, for the 3rd control period, is Rs 9,494.89 Cr. A summary of the year wise capital expenditure is as follows:



TABLE 67: CAPITAL EXPENDITURE AS PROPOSED BY THE PETITIONER FOR FY 2021-22 TO FY 2025-26

Particulars	Capex till 31.03.2021	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26
Ongoing Schemes	2173.42	501.22	2316.99	415.90	-	-
Planned Schemes	-	-	953.05	1117.01	1039.87	477.43
Augmentation	-	50.00	50.00	75.00	50.00	25.00
R&M	-	50.00	50.00	75.00	50.00	25.00
Total	2173.42	601.22	3370.04	1682.91	1139.87	527.43

7.9 The Petitioner has proposed the transmission line/GSS of capitalization value Rs 9494.89 Crore for 3rd control period (i.e FY 2021-22 to FY 2025-26). This includes the ongoing schemes which are spillover schemes from the 2nd control, planned scheme, augmentation and renovation & modernization of the commissioned element is considered to be capitalized in the same year. A summary of the year wise Capitalization is as follows:

TABLE 68: CAPITALIZATION AS PROPOSED BY THE PETITIONER FOR FY 2021-22 TO FY 2025-26

Particulars	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26
Ongoing Schemes	360.35	3947.50	908.91	190.77	-
Planned Schemes	-	49.87	151.30	2366.16	1020.03
Augmentation	50.00	50.00	75.00	50.00	25.00
R&M	50.00	50.00	75.00	50.00	25.00
Total	460.35	4097.37	1210.21	2656.93	1070.03

i) Ongoing Scheme

A. State Funded scheme

7.10 The Petitioner has submitted that at present there are 11 transmission lines and 7 GSS which are under construction and are being implemented by the JUSNL. The total cost of these schemes is Rs. 808.51 Crores out of which Rs. 570.19 Crores has already been incurred during the 2nd MYT Control Period.

B. DVC Command Area Schemes

7.11 The Petitioner has submitted that at present 22 transmission lines and 13 GSS are being implemented in the DVC command area with a total capital outlay of Rs. 1101.91 Crores. Out of this Rs. 423.26 Crores has already been incurred during the 2nd MYT Control Period.

C. Schemes being implemented by the PGCIL

7.12 The Petitioner has submitted that at present 21 schemes are being executed through PGCIL which consist of 17 transmission lines and 4 GSS. The total



capital outlay of these schemes is Rs. 1,305.06 Crores out of which 930.54 Crores has already been incurred during the 2nd MYT Control Period.

D. World Bank Funded Schemes

7.13 The Petitioner has submitted that at present 26 schemes consisting of 66 projects worth Rs. 2192.05 Crores are underway. The projects consist of 35 transmission lines and 31 GSS. Out of this capital outlay, Rs. 249.42 Crores has already been incurred during the 2nd MYT Control Period. Further, the total capital outlay of the schemes includes an amount of Rs. 400.00 Crores which consists of cost to be incurred towards land acquisition, forest clearance, compensation and PMC.

ii) Planned Scheme

7.14 The Petitioner has also proposed the Planned schemes for 3rd Control Period (FY 2021-22 to FY 2025-26), covering transmission line Grid sub-station is tabulated hereunder: -

TABLE 69: PLANNED SCHEME EXPENDITURE AS PROPOSED BY THE PETITIONER FOR FY 2021-22 TO FY 2025-26

S.No.	Particulars	Estimated Cost (Rs. Cr.)	Reason for Investment
1.	400 KV double circuit Quad Moose Patratu - PVUNL Transmission line and 2no. 400 KV LINE Bay	49.87	All these substations are taken into consideration as per the previous plan of forming a 400kV quad moose ring around Jharkhand including PTPS-PVUNL-Koderma-Dumka New-Dhanbad-Chandil New-PTPS for better power quality.
2.	400/220KV grid sub-station, Chandil and 400 KV D/C 3 Ph QM patratu-chandil transmission line (135 km), 400 KV D/C 3 PH QM Chandil - chaibasa transmission line (100 km) and 220 KV D/C 3 Phase Chandil - Chandil Transmission line (20 km)	916.82	
3.	400/220/132/33 KV Grid sub-Station, Koderma and 400 KV D/C 3 PH QM Patratu - koderma transmission line (150 km), 400 kV D/C lineJasidih – Koderma (135 Km) and 220 kv D/C 3 Phase Koderma-GiridihTransmission line (80 KM)	1152.00	
4.	220/132/33 KV Grid sub-station , Patratu and 220 KV link patrartu (new) -Hatia (new) (2km) and 132kV D/c line Patratu(New) – Hatia (Old) D/c line (with one circuit LILO at Kanke) (2Km)	67.60	



S.No.	Particulars	Estimated Cost (Rs. Cr.)	Reason for Investment
			new D/c from Hatia(old) to kanke is considered.
5.	132/33 KV Grid sub-Station, Kundhit and 132 KV Jamtara - Madhupur Transmission line of propose LILO in Kundhit grid	83.70	To reduce the load from Jamtara 132/33kV, kundhit 132/33 kV S/s is considered.
6.	220/132/33 kv Grid sub-station , Hazaribagh and 220 KV double circuit Tenughat - Hazaribagh Transmission line	170.59	220/132/33 kv Grid sub-station, Hazaribagh is taken into consideration but connectivity is changed according to the new planning study of F.Y 2021-26. D/c from Koderma 400/220kV substation to Hazaribagh is considered. Chatra -PBCMP 220kV D/c is also extended to Hazaribagh for a second source
7.	220/132/33 KV Grid sub-station, Baliyapur and LILO of 220 KV double circuit Dumka - Govindpur at Baliyapur GSS	124.35	Baliyapur 220/33kV or Baliyapur 220/132/33kV substation can be considered to reduce the growing load of Govindpur 220/132/33kV s/s. However, as topchachi is not considered in this planning study hence connectivity of Baliyapur is taken from LILO of D/c GovindpurDhanbad at Baliyapur.
8.	220/132/33 Grid sub-station, Bero and 220 KV double circuit Bero-Mandar(21 Km) and 132 kv Double circuit kamdara - Bero(50km) Transmission line	201.46	Baliyapur 220/33kV or Baliyapur 220/132/33kV substation can be considered to reduce the growing load of Govindpur 220/132/33kV s/s. However, as topchachi is not considered in this planning study hence connectivity of Baliyapur is taken from LILO of D/c GovindpurDhanbad at Baliyapur.
9.	400/220 KV Grid sub- station , Dumka and Jasidih – Dumka 400kV D/c line (131km) and LILO of Dumka – Godda 220kV D/c line at Dumka (New) (5Km)	546.22	Dumka-New 400kV is considered in Planning study (2021-26). The main source in Dumka region is MaithonDumka 220kV D/c. But with rapid increase of power demand in Dumka district, Dumka400kV serves as an important source.
10.	220/132/33 Grid sub-station, Sarwal and 220 KV LILO Ranchi - Chandil Transmission line at sarwal GSS	148.00	Dumka-New 400kV is considered in Planning study (2021-26). The main source in Dumka region is MaithonDumka 220kV D/c. But with rapid increase of power demand in Dumka district, Dumka400kV serves as an important source.
11.	220/132/33 Grid sub station, Palajori and 220 KV LILO Dumka-Gobindpur Transmission line at palajori GSS	126.75	On establishment of Palajori 220/132kV GSS, loading on Maithon-Jamtara 132kV S/c is reduced. Sarath-Chitra 132kV D/c can be LILOed at Palajori 132kV instead of new PalajoriSarath 132kV D/c line .Addition in power source at Deoghar through Chitra-Deoghar. 132kV S/c reduces loading on Jasidihdeoghar 132kV D/c line. Due to high load demand at Jamtara S/s, power flow towards Jamtara is high. Sarath-Chitra 132kV D/c need to be upgraded to panther equivalent



S.No.	Particulars	Estimated Cost (Rs. Cr.)	Reason for Investment
			HTLS conductor. Else if Sarath-Chitra line is LILoed at Palojori, then palojoriChitra portion of the line needs to be upgraded to panther equivalent HTLS conductor. Palojori becomes a strong power source in the region due to its connectivity with Dhanbad 400/220kV GSS
	Total	3587.36	

iii) R&M Scheme

7.15 The Petitioner has submitted that majority of the substations and lines require significant R&M activities for continuous and uninterrupted power supply to DISCOMs and ultimately to the consumers. The major assets are much aged and network is also complex. Hence, the JUSNL has proposed to invest around Rs. 250.00 Crores in R&M activities during the 3rd Control Period.

iv) Augmentation Scheme

7.16 The Petitioner has submitted that there is an urgent need to augment existing infrastructure in the transmission network, considering the existing overloading on the equipment and future increase in load demand. Hence, the JUSNL has planned to invest Rs. 250.00 Crores in augmentation schemes during the 3rd Control Period.

Commission Analysis

7.17 The Commission has scrutinized the capital expenditure plan based on the provisions of the JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2020 and has carried out the approval of Business Plan for the Control Period FY 2021-22 to FY 2025-26. The relevant clause is mentioned in earlier paragraphs of this chapter.

7.18 The Commission has observed various inconsistencies in capital expenditure and capitalization of ongoing scheme, planned scheme, augmentation and renovation & modernization scheme.

7.19 The Commission had directed the Petitioner to provide justification and details of the computation for projecting the transmission loss of 5%. The Petitioner, in its reply, has submitted that energy accounting and transmission losses are



computed on the basis of import data obtained from SLDC and energy exported is to beneficiaries of JUSNL on the basis of meter reading received from field offices, but it fails to provide the computation of transmission loss of 5%. Hence, the Commission has approved the transmission loss for 3rd control period as 2.23%, same as previous control period.

TABLE 70: TRANSMISSION SYSTEM LOSS AS APPROVED BY THE COMMISSION FOR FY 2021-22 TO FY 2025-26

Particulars	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26
Transmission System loss	2.23%	2.23%	2.23%	2.23%	2.23%

7.20 The Commission had directed the Petitioner to confirm whether capital investment plan is in conformity with the perspective plans made by the CEA /CTU and the capital investment plans of the Distribution Licensee and the Generating Company. The Petitioner has submitted that:

“Capital investment plan filed by JUSNL is in conformity with the Power for All plan (PFA) notified by the Government of Jharkhand.

7.21 The Petitioner has projected very aggressive capital expenditure and submitted capitalization plan of Rs 9,494.89 Crore for the 3rd Control Period. However, the Commission has observed that the Petitioner in the 2nd Control Period and has made capital expenditure of Rs 2,173.42 Crore out of Rs 5,705.52 Crore approved by the Commission. Further, the Petitioner was able to capitalize/commission schemes worth Rs 536.97 Crore (approx.) out of Rs 5,186.91 Crore in 2nd Control Period. Moreover, the Commission has observed that the Petitioner was unable to capitalize its assets on time because of inefficiencies on the part of the Petitioner and delays in project execution at various levels.

7.22 With regards to the establishment of new planned project (ring corridor of transmission system) worth Rs 3587.36 Crore in the state of Jharkhand. The Commission had directed the Petitioner to submit load growth study for the 3rd control period, Detailed Project Report (DPR) of each scheme, scheme wise capital expenditure, phasing, capitalization schedule, cost benefit analysis, Purpose of investment (e.g. replacement of existing assets, meeting load growth, improvement in quality and reliability of supply, etc.), improvement in operational efficiency envisaged in the control period. The Petitioner, in its



reply, has failed to submit the detailed project report, cost benefit analysis, and further, the Commission is not satisfied with the load growth analysis as submitted by the Petitioner.

- 7.23 Further, the Commission, on analysis of data submitted by the Petitioner, found that the data does not provide the details of cost-benefit analysis, estimated life extension from a reference date, phasing of expenditure, actual schedule of completion etc.
- 7.24 Further, the Petitioner, in technical validation session, has submitted that the evacuation of power from the Patratu Super Thermal Power Plant to the JUSNL boundary is its responsibility.
- 7.25 Further, the Commission also notes that as per National Tariff Policy, 2016: -

“The tariff policy, insofar as transmission is concerned, seeks to achieve the following objectives:

- 1. Ensuring optimal development of the transmission network to promote efficient utilization of generation and transmission assets in the country;”*

Thus, the Commission does not agree with the Petitioner’s contention that the setting up the transmission network for the purpose of evacuation of Power from the Patratu Super Thermal Power Plant to its boundary is its responsibility. The Commission notes that JUSNL, JBVNL and Patratu Super Thermal Power Plant are separate legal entities and thus JUSNL should prioritize its finances over that of other entities and thus optimally utilize scarce funds available with it. The Petitioner should thus optimally have developed its transmission network for efficient utilization of its assets. The Petitioner should forecast its business plan based on demand growth of state of the Jharkhand, railways and its other open access consumers.

- 7.26 In view of the above, the Commission does not find it prudent to approve any new scheme/planned scheme at the moment. Further, the Petitioner is directed to submit, along with the next tariff petition or prior to taking up any capital expenditure, along with the detailed justification for incurring such expenditure, as well as taking into consideration the above mentioned observations of the Commission.



- 7.27 The Commission has observed that the Petitioner has failed to submit the justification for computation of the amount for renovation & modernization and augmentation expenditure against the projected capitalization. Thus, the Commission in this order has disallowed the Capital expenditure as well as capitalization regarding the associated renovation & modernization, and augmentation costs.
- 7.28 Therefore, the Commission, after a thorough prudent check, provisionally approves the capital expenditure as proposed by the Petitioner. This will be subject to true up based on actual data.

TABLE 71: SUMMARY OF CAPITAL EXPENDITURE AS APPROVED BY THE COMMISSION FOR FY 2021-22 TO FY 2025-26

Particulars	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26
Ongoing Schemes	394.03	2016.83	415.90	-	-
Planned Schemes	-	-	-	-	-
Augmentation	-	-	-	-	-
R&M	-	-	-	-	-
Total	394.03	2016.83	415.90	-	-

- 7.29 The Commission directs the Petitioner to make all out efforts to ensure that for every network, upstream and downstream network is also built in synchronization and there is no stranded asset as the transmission infrastructure cannot operate in isolation. The Commission also directs the Petitioner to expeditiously prepare the DPRs of the pending schemes with cost benefit analysis.
- 7.30 With regards to capitalization, the Commission has observed that the Petitioner takes around 5-8 years to commission/capitalize a Transmission line/GSS due to delay at various levels, for example the 220/132/33 kV Grid sub-station at Chatra 2*150 MVA + 2*50 MVA at an estimated cost of Rs 66.69 Cr. was started in 2013 but its expected commissioning date was in 2021 similarly 132 kV Hatia- Kanke transmission line with an estimated cost of Rs. 22.82 Cr. was started in 2013 and was expected to be completed in 2022, etc. Further, the Commission has directed the Petitioner to submit the project progress report of all ongoing schemes, the Petitioner in its reply has submitted the project progress report of world bank funded project, DVC command area project, state government funded project, PGCIL project. The Commission has scrutinized the discrepancies in the reply submitted by the Petitioner and



observed that transmission line of world bank funded project is in nascent phase, forest clearance is in primary stage in the DVC command area project, many technical issues in PGCIL project and state funded project are there. Based on the past track record of the Petitioner the Commission has accordingly approved project-wise capitalization in the control period as mentioned in **Annexure-II** of this order. The Commission, based on its prudence check and submissions made by the Petitioner approves the provisional Capitalization for the Control Period FY 2021-22 to 2025-26. This will be subject to true up based on actual data.

- 7.31 Further, the Commission disallows the capital expenditure of LILO 132 kV D/C Pakur-Rajmahal at Barhet GSS transmission line and 132/33 kV GSS at Barhet (2*50) MVA as the same transmission line and sub-station were not approved by the Commission in the 2nd Control Period.

TABLE 72: SUMMARY OF CAPITALIZATION AS APPROVED BY THE COMMISSION FOR FY 2021-22 TO FY 2025-26

Particulars	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26
Ongoing Schemes	103.26	307.06	29.99	135.38	1163.60
Planned Schemes	-	-	-	-	-
Augmentation	-	-	-	-	-
R&M	-	-	-	-	-
Total	103.26	307.06	29.99	135.38	1163.60

- 7.32 In case if capital expenditure is required for emergency work, which has not been approved in the capital investment plan, the Licensee shall submit an application (containing all relevant information along with reasons justifying emergency nature of the proposed work for seeking approval by the Commission. The Licensee shall take up the work prior to the approval of the Commission provided that the emergency nature of the scheme has been certified by the Board of Directors.



Financing Plan

Petitioner's Submission

7.33 The Petitioner has submitted the following financing plan of the scheme based on five broad categories:

- a) **Ongoing expenditure by JUSNL:** The Scheme is 100% funded by state government in the form of state government loan with an applicable interest rate of 13.00% per annum.
- b) **Ongoing expenditure through PGCIL:** The scheme is 100% funded by state government in the form of state government loan with an applicable interest rate of 13.00% per annum.
- c) **DVC command area schemes:** The projects that are to be carried out in DVC command area are part of State Plan and therefore 100% of the funding will be in the form of State Government loan with an applicable interest rate of 13.00% per annum.
- d) **World Bank Funded Schemes:** World Bank shall fund 70% of the project cost at an applicable interest rate of 2.50% and remaining 30% of the funds will be in the form of equity from Govt. of Jharkhand
- e) **Planned Project Expenditure through JUSNL:** The Scheme is 100% funded by state government in the form of state government loan with an applicable interest rate of 13.00% per annum.

7.34 The Petitioner has estimated the debt: equity requirement of the 3rd Control Period in accordance with the JSERC (Terms and Conditions of Determination of Transmission Tariff) Regulations, 2020. The clause 10.23 and 10.24 of the Regulations states as follows:

“10.23 Existing Schemes - In case of capital expenditure schemes capitalized prior to April 01, 2021, the debt-equity ratio allowed by the Commission for determination of tariff for the period ending March 31, 2021 shall be considered.

10.24 New Scheme – For capital expenditure scheme capitalized on or after April 01,2021;

a) A normative debt-equity ratio of 70:30 shall be considered for the purpose of determination of Tariff;

b) 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;



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

d) The premium, if any raised by the Transmission Licensee while issuing share capital and investment of internal accruals created out of free reserve, shall also be reckoned as paid up capital for the purpose of computing return on equity, provided such premium amount and internal accruals are actually utilized for meeting capital expenditure.”

TABLE 73: FINANCING PLAN AS SUBMITTED BY THE PETITIONER FOR FY 2021-22 TO FY 2025-26

Particulars	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26
Debt	460.35	3569.98	1079.99	2656.93	1070.03
Equity	-	527.39	130.23	-	-
Asset Capitalized during the year	460.35	4097.37	1210.21	2656.93	1070.03

Commission Analysis

7.35 The Commission has enquired from the Petitioner whether it is planning to avail funding for the capital investment plan from the cheapest source possible. The Petitioner has submitted that it is a State transmission utility and its entire holding is with the State Government. Being a State holding Company the loan facilities available are primarily from the Government of Jharkhand. JUSNL has been taking loan from Government of Jharkhand in the past and will continue taking loans from Government of Jharkhand in future as well. JUSNL has mentioned that substantial amount of projects are being carried out through World Bank funding which is the cheapest source available.

7.36 Further, as per the JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2020:

“10.36 The Transmission Licensee 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 borne by the users and the net savings shall be shared between the users and the Transmission Licensee, in the ratio of 50:50”.

7.37 The Commission observes that most of the schemes of the Petitioner are financed at 13.00% rate of interest which is higher than the rates currently prevailing in the market. The Commission also notes that the Petitioner has not taken any step to get these schemes financed from the cheapest source at



the first place. The Commission thus directs the petitioner to make all efforts to re-finance the loan for such schemes from the cheapest source available. The Petitioner may approach the State Government to convert the loans into grant. The Petitioner may also look for Viability Gap Funding. The Petitioner is directed to submit along with the next tariff petition, the steps taken towards refinancing of these schemes.

TABLE 74: FINANCING PLAN AS APPROVED BY THE COMMISSION FOR FY 2021-22 TO FY 2025-26

Particulars	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26
Debt	103.26	307.06	28.97	96.39	1,107.49
Equity	-	-	1.02	38.98	56.10
Asset Capitalized during the year	103.26	307.06	29.99	135.38	1,163.60



A 8 Aggregate Revenue Requirement for MYT Control Period FY 2021- 22 to FY 2025-26.

Gross Fixed Assets

Petitioner Submission

8.1 The Petitioner has considered the closing GFA of FY 2020-21 estimated in APR of FY 2020-21 as the opening GFA for FY 2021-22. Based on the capital expenditure and capitalization proposed for the MYT Control Period, Rs. 460.35 Crore, Rs. 4097.37 Crore, Rs. 1210.21 Crore, Rs. 2656.93 Crore and Rs. 1070.03 Crore is proposed to be capitalized during the 3rd control period. The summary of the Opening and Closing GFA and capitalization has been summarized in the table below.

**TABLE 75: GROSS FIXED ASSETS FOR FY 2021-22 to FY 2025-26 AS SUBMITTED BY
THE PETITIONER (RS. CR.)**

Particulars	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26
Opening Gross Fixed Asset	2,612.42	3,072.78	7,170.15	8,380.36	11,037.29
Asset Capitalized during the year	460.35	4,097.37	1,210.21	2,656.93	1,070.03
Closing Gross Fixed Asset	3,072.78	7,170.15	8,380.36	11,037.29	12,107.32

Commission Analysis

- 8.2 The Commission has considered opening GFA for FY 2021-22 equal to closing GFA for FY 2020-21 as approved in the APR order above.
- 8.3 The Commission observes that majority of the projects as projected to be completed by the Petitioner during the Control Period, will not be able to be completed within the 3rd control period as per the reasons mentioned in Business Plan Chapter.
- 8.4 The schedule for Project-wise Capitalization throughout the Control Period as proposed by the Petitioner, and as approved by the Commission have been detailed in **Annexure – II** of this order.
- 8.5 Based on the information submitted by the Petitioner and the discussions made above, the Commission approves the capitalization for the Control Period as shown below.



TABLE 76: GROSS FIXED ASSETS FOR FY 2021-22 TO FY 2025-26 AS APPROVED BY THE COMMISSION (RS. CR.)

Particulars	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26
Opening Gross Fixed Asset	1,920.09	2,023.35	2,330.41	2,360.40	2,495.78
Asset Capitalized during the year	103.26	307.06	29.99	135.38	1,163.60
Closing Gross Fixed Asset	2,023.35	2,330.41	2,360.40	2,495.78	3,659.38

8.6 The capital expenditure for the MYT Control period is proposed to be funded majorly through debt. The capital expenditure schemes are divided into two broad categories i.e. capital expenditure schemes funded through State Government Funds and schemes funded through World Bank Funds. The State Government Funds are being provided to the JUSNL in the form of Loan at an interest rate of 13.00%. The World Bank Funds are being provided in the form of loan and equity divided in the ratio of 70:30. The rate of interest of the World Bank Loan is 2.5%. The year wise requirement of debt and equity is shown in the table given below:

Operation and Maintenance Expenses

Petitioner's Submission

- 8.7 The Petitioner has submitted that the O&M expenses of JUSNL for the 3rd control period has been projected considering the historical expenses and the projections for the next five years in terms of capitalization etc. The O&M expenses estimated for FY 2020-21 are being used as base figures, which are escalated to arrive at the future projections for 3rd control period.
- 8.8 The Petitioner has further submitted that the Operation and Maintenance expenses comprise of the following heads:
- Employees Expenses which include the salary, dearness allowances, dearness pay, other allowances, incentives and retirement and other benefits to be paid to the employees.
 - Repair and Maintenance (R&M) Expenses, which include all expenditure incurred on the maintenance and upkeep of all assets and regulatory purposes, and
 - Administrative and General Expenses, which include all expenditure incurred in operating a business such as telephone charges, vehicle and other hiring charges, legal expenses, consultancy fees, audit fees, conveyance and travel expenses, water charges and other expenses.



- 8.9 The Petitioner has projected the employee cost and the A&G expenses (excluding the legal expenses) for the Control period by escalating the projected employee cost (excluding the terminal benefits) estimated for FY 2020-21 by the inflation factor of 6.10%. Further, the Petitioner has considered the R&M expenses and the GFA for FY 2019-20 for the computation of the “K” factor, which is computed as 2.24% for the Control Period. The R&M cost for the Control Period is computed by considering the opening GFA as determined for each year of the Control Period, the “K” factor and the inflation factor of 6.10%.
- 8.10 Further, the Petitioner has stated that it is currently understaffed and a number of posts which have been sanctioned by the State Government are presently lying vacant. Further, a number of projects shall be implemented in the 3rd Control Period and therefore a significant number of employees shall be required to run the operations of the JUSNL. At present, a number of posts are vacant in the JUSNL for various positions in the Manager, Junior Manager and the Assistant grade which are required to be filled during the MYT Control Period. In view of this, the JUSNL has made a provision of 200 nos. of personnel in the employee cost for the 3rd Control Period considering the transmission network expansion envisaged by the Corporation. It is also submitted that JUSNL will make all efforts to fill the maximum no. of positions during the MYT Control Period. Hence, the JUSNL requests the Hon’ble Commission to approve the additional employee cost on account of new recruitment of personnel during the MYT Control Period.
- 8.11 The total O&M expenses projected by the Petitioner for the MYT Control Period is shown in the table below,

TABLE 77: O&M EXPENSE FOR FY 2021-22 TO FY 2025-26 AS SUBMITTED BY THE PETITIONER (RS. CR.)

Particulars	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26
Emp. Expenses	71.61	79.13	87.11	95.57	104.55
A&G Expenses	62.05	72.99	170.31	199.06	262.16
R&M Expenses	10.86	11.51	12.21	12.94	13.72
O&M Expenses	144.52	163.63	269.62	307.57	380.44



Commission's Analysis

8.12 For the determination of O&M Expenses, the JSERC (Terms & Conditions for Determination of Transmission Tariff) Regulations, 2020 states,

“10.19 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.

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

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

Where,

R&M_n – Repair and Maintenance Costs of the Generating Company for the nth year;

EMP_n – Employee Costs of the Generating Company for the nth year excluding terminal liabilities;

A&G_n – Administrative and General Costs of the Generating Company for the nth year.

10.21 The above components shall be computed in the manner specified below:

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

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;

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

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 nth 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;

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

8.13 The Commission has accordingly approved the O&M Expenses with an escalation of 6.09% and a K factor of 2.23% as per the provisions of the JSERC (Terms & Conditions for Determination of Transmission Tariff) Regulations, 2020 as tabulated hereunder:

TABLE 78: O&M EXPENSE FOR FY 2021-22 TO FY 2025-26 AS APPROVED BY THE COMMISSION (RS. CR.)

Particulars	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26
Emp. Expenses	43.86	46.53	49.36	52.37	55.56
Terminal Benefits	5.33	5.33	5.33	5.33	5.33
A&G Expenses	8.98	9.53	10.11	10.73	11.38
R&M Expenses	45.42	47.87	55.13	55.84	59.04
O&M Expenses	103.59	109.25	119.93	124.26	131.31



Depreciation

Petitioner's Submission

8.14 The Petitioner has submitted that it has calculated the depreciation as per the rates prescribed in the schedule attached to the Regulation as Appendix-I, and as per clause 10.37 to 10.43 of the JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2020 on the Gross Fixed Assets.

8.15 The following table shows the depreciation claimed by the Petitioner for the Control period.

TABLE 79: DEPRECIATION FOR FY 2021-22 TO FY 2025-26 AS SUBMITTED BY THE PETITIONER (RS. CR.)

Particulars	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26
Opening GFA	2,612.42	3,072.78	7,170.15	8,380.36	11,037.29
Addition during the year	460.35	4,097.37	1,210.21	2,656.93	1,070.03
Closing GFA	3072.78	7170.15	8380.36	11037.29	12107.32
Average GFA	2842.60	5121.46	7775.25	9708.82	11572.30
Depreciation during the year	119.45	215.62	327.61	409.21	487.85
Less: Depreciation on asset made from consumer contribution	0.25	0.25	0.25	0.25	0.25
Net Depreciation	119.21	215.37	327.36	408.96	487.60

Commission's Analysis

8.16 The Commission, after scrutinizing the submission made by the Petitioner approves the depreciation based on the depreciation schedule attached to as Appendix-I to the JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2020 and the capitalization as approved earlier in this order.

TABLE 80: DEPRECIATION FOR FY 2021-22 TO FY 2025-26 AS APPROVED BY THE COMMISSION (RS. CR.)

Particulars	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26
Depreciation during the year	111.92	120.58	127.69	131.18	158.58
Less: Depreciation on asset made from consumer contribution	0.25	0.25	0.25	0.25	0.25
Net Depreciation	111.67	120.33	127.44	130.93	158.34



Interest on Loan

Petitioner's Submission

- 8.17 The Petitioner has submitted that interest on loan has been computed based on the clauses 10.28 to 10.36 of the JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2020.
- 8.18 The Petitioner has submitted that assets that are planned to be capitalized during the MYT Control Period have been funded by the State Government and the World Bank. The State Government Funds are being provided to the JUSNL in the form of Loan at an interest rate of 13.00%. The World Bank Funds are being provided in the form of loan and equity divided in the ratio of 70:30. The rate of interest of the World Bank Loan is 2.50%.

TABLE 81: INTEREST ON LOAN FOR FY 2021-22 TO FY 2025-26 AS SUBMITTED BY THE PETITIONER (RS. CR.)

Particulars	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26
Opening Debt Balance	4560.13	4601.28	6298.98	6790.38	8940.22
Loan for additional Capex (state funded schemes)	160.35	942.42	579.88	2558.81	1070.03
Loan for additional Capex (World Bank funded schemes (70:30))	-	970.65	238.88	-	-
Loan Repayment	119.21	215.37	327.36	408.96	487.60
Closing Debt Balance	4601.28	6298.98	6790.38	8940.22	9522.65
Interest on Loan	553.78	658.92	791.25	950.91	1116.08

- 8.19 The Petitioner has submitted that assets that are planned to be capitalized during the MYT Control Period have been funded by the State Government and the World Bank. The State Government Funds are being provided to the JUSNL in the form of Loan at an interest rate of 13.00%. The World Bank Funds are being provided in the form of loan and equity divided in the ratio of 70:30. The rate of interest of the World Bank Loan is 2.5%.
- 8.20 The rate of interest has been considered as 12.09% which is the weighted average rate of interest calculated on the basis of the actual loan portfolio of the JUSNL for the FY 2020-21. The computation of the interest rate is provided below:



TABLE 82: WEIGHTED AVERAGE RATE OF INTEREST FOR FY 2021-22 TO FY 2025-26 AS SUBMITTED BY THE PETITIONER

Particulars	FY 20-21
Opening Loan	3735.22
Loan for additional Capex	824.91
Loan Repayment	-
Closing Loan	4560.13
Average Loan	4147.68
Interest Expense during the Year	501.43
Interest Rate	12.09%

8.21 The Petitioner has submitted that it had deducted the loan amount from the capitalization proposed for the ongoing schemes for the MYT Control Period which has already been disbursed during the last Control Period in order to determine the average loan for the computation of interest for the MYT Control Period.

Commission's Analysis

8.22 The Commission observes that most of the schemes of the Petitioner are financed at 13% rate of interest which is higher than the rates currently prevailing in the market. The Commission also notes that the Petitioner has not taken any step to get these schemes financed from the cheapest source at the first place. The Commission thus directs the Petitioner to make all efforts to re-finance the loan for such schemes from the cheapest source available. The Petitioner may approach the State Government to convert the loans into grant or equity. The Petitioner may also look for Viability Gap Funding for schemes which may be developed for social cause.

8.23 Accordingly, the Commission has considered a rate of interest of 9.00% (i.e. 7% plus 200 basis points) as per clause 10.33 of the JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2020.

8.24 The Commission has approved the repayment for the year which has been deemed to be equal to the depreciation allowed for that year in accordance with the Transmission Tariff Regulations, 2020.

8.25 The Commission has considered submissions of the Petitioner, and approved the Interest on Loan on the approved debt equity ratio for the control period in



line with Clauses 10.28 to 10.36 of the JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2020 as shown in the table below.

TABLE 83: INTEREST ON LOAN FOR FY 2021-22 TO FY 2025-26 AS APPROVED BY THE COMMISSION (RS. CR.)

Particulars	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26
Opening Debt Balance	931.91	923.25	1,109.74	1,011.02	976.24
Loan for additional Capex (state funded schemes)	103.26	307.06	26.59	5.43	976.59
Loan for additional Capex (World Bank funded schemes (85:15))	-	-	2.38	90.96	130.90
Loan Repayment	111.92	120.58	127.69	131.18	158.58
Closing Debt Balance	923.25	1,109.74	1,011.02	976.24	1,925.15
Average	927.58	1,016.49	1,060.38	993.63	1,450.69
Rate of Interest	9.00%	9.00%	9.00%	9.00%	9.00%
Interest on Loan	83.48	91.48	95.43	89.43	130.56

Return on Equity

Petitioner's Submission

8.26 The Petitioner has submitted that it has considered equity base of Rs. 1600.96 Crore (Rs. 1598.96 Crore towards equity share capital + Rs. 2.00 Crore towards restructuring account pending adjustment) for the MYT Control Period. The State Government has infused Rs. 626.00 Crore of equity during the FY 2020-21 in JUSNL. This equity pertains to the equity amount of the World Bank funded schemes being implemented by JUSNL. The applicable return on equity has been calculated considering 14.00% rate of return as per Regulation 10.26 of JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2020. The detailed calculation of return on equity is provided below:

TABLE 84: RETURN ON EQUITY FOR FY 2021-22 TO FY 2025-26 AS SUBMITTED BY THE PETITIONER (RS. CR.)

Particulars	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26
Opening Equity	1600.96	1600.96	1600.96	1600.96	1600.96
Addition in Equity on account of new capitalization	-	-	-	-	-
Closing Equity	1600.96	1600.96	1600.96	1600.96	1600.96
Average Equity	1600.96	1600.96	1600.96	1600.96	1600.96
Return on Equity	224.13	224.13	224.13	224.13	224.13



Commission's Analysis

8.27 The Commission has considered the opening balance of FY 2021-22 as the closing balance approved in the APR order above of FY 2020-21. The Return on Equity for the Control Period as approved by the Commission, and as per Clauses 10.26 & 10.27 of the JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2015, in the Business Plan for the Control Period is given in the following table.

TABLE 85: RETURN ON EQUITY FOR FY 2021-22 TO FY 2025-26 AS APPROVED BY THE COMMISSION (RS. CR.)

Particulars	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26
Opening Equity	350.61	350.61	350.61	351.63	390.61
Addition in Equity on account of new capitalization	-	-	1.02	38.98	56.10
Closing Equity	350.61	350.61	351.63	390.61	446.72
Average Equity	350.61	350.61	351.12	371.12	418.67
Rate of RoE	14.00%	14.00%	14.00%	14.00%	14.00%
Return on Equity	49.09	49.09	49.16	51.96	58.61

Interest on Working Capital

Petitioner's Submission

8.28 The Petitioner has submitted that it has arrived at the working capital requirement according to Clauses 10.44 to 10.46 of the JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2020, the calculation for which has been captured in the following table. In line with the above Regulations actual MCLR rate prevailing on 30th September, 2021 i.e. 7.00% plus 350 basis points has been considered for calculation of interest on Working Capital for the MYT Control Period.

TABLE 86: INTEREST ON WORKING CAPITAL FOR FY 2021-22 TO FY 2025-26 AS SUBMITTED BY THE PETITIONER (RS. CR.)

Particulars	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26
O&M expenses for 1 month	12.04	13.64	22.47	25.63	31.70
Maintenance spares 15% of O&M expenses	21.68	24.54	40.44	46.14	57.07
Receivables equivalent to 45 Days of Annual Fixed Charges	128.95	156.54	200.62	235.61	275.39
Total Working Capital	162.67	194.72	263.53	307.38	364.16
Interest Rate	10.50%	10.50%	10.50%	10.50%	10.50%
Interest on Working Capital	17.08	20.45	27.67	32.27	38.24



Commission's Analysis

- 8.29 The Commission has considered the Interest on Working Capital (IoWC) as per norms specified in Clauses 10.44 to 10.46 of the JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2020.
- 8.30 The rate of IoWC has been considered to be equal to one-year Marginal Cost of Lending Rate (MCLR) of the State Bank of India as on September 30 of the financial year in which the petition is filed plus 350 basis points as per Clause 10.45 of the JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2020.

TABLE 87: INTEREST ON WORKING CAPITAL FOR FY 2021-22 TO FY 2025-26 AS APPROVED BY THE COMMISSION (RS. CR.)

Particulars	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26
O&M expenses for 1 month	8.63	9.10	9.99	10.36	10.94
Maintenance spares 15% of O&M expenses	15.54	16.39	17.99	18.64	19.70
Receivables equivalent to 45 Days of Annual Fixed Charges	42.17	44.97	47.73	48.32	58.61
Total Working Capital	66.34	70.46	75.71	77.31	89.25
Interest Rate	10.50%	10.50%	10.50%	10.50%	10.50%
Interest on Working Capital	6.97	7.40	7.95	8.12	9.37

Non-tariff Income

Petitioner's Submission

- 8.31 The Petitioner has submitted that for projection of the non-tariff income for the Control period, it has considered the non-tariff income estimated for FY 2020-21 for each year of the control period, in line with Clause 10.32 of the JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2020. Accordingly, the non-tariff income projected by the Petitioner for MYT Control Period is summarized in the following table:

TABLE 88: NON-TARIFF INCOME FOR FY 2021-22 TO FY 2025-26 AS SUBMITTED BY THE PETITIONER (RS. CR.)

Particulars	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26
Non-tariff Income	12.79	12.79	12.79	12.79	12.79

Commission's Analysis

- 8.32 The Commission, after due prudence approves the Non-Tariff Income for the Control Period in line with Clauses 10.49 to 10.50 of the JSERC (Terms and



Conditions for Determination of Transmission Tariff) Regulations, 2020 as summarized in the table below.

TABLE 89: NON-TARIFF INCOME FOR FY 2021-22 TO FY 2025-26 AS APPROVED BY THE COMMISSION (RS. CR.)

Particulars	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26
Non-tariff Income	12.79	12.79	12.79	12.79	12.79

Summary of ARR Components for the Control Period

Petitioner's Submission

8.33 The summary of ARR components as submitted by the Petitioner is summarized in the table below.

TABLE 90: SUMMARY OF ARR COMPONENTS FOR FY 2021-22 TO FY 2025-26 AS SUBMITTED BY THE PETITIONER (RS. CR.)

Particulars	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26
Operation and Maintenance Expense	144.52	163.63	269.62	307.57	380.44
Depreciation	119.21	215.37	327.36	408.96	487.60
Interest and Finance Charge	553.78	658.92	791.25	950.91	1,116.08
Interest on Working Capital	17.08	20.45	27.67	32.27	38.24
Return on Equity	224.13	224.13	224.13	224.13	224.13
Less: Non-tariff Income	(12.79)	(12.79)	(12.79)	(12.79)	(12.79)
Aggregate Revenue Requirement	1,045.94	1,269.72	1,627.26	1,911.07	2,233.70

Commission Analysis

8.34 The summary of ARR components as approved by the Commission is summarized in the table below:

TABLE 91: SUMMARY OF ARR COMPONENTS FOR FY 2021-22 TO FY 2025-26 AS APPROVED BY THE COMMISSION (RS. CR.)

Particulars	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26
Operation and Maintenance Expense	103.59	109.25	119.93	124.26	131.31
Depreciation	111.67	120.33	127.44	130.93	158.34
Interest and Finance Charge	83.48	91.48	95.43	89.43	130.56
Interest on Working Capital	6.97	7.40	7.95	8.12	9.37
Return on Equity	49.09	49.09	49.16	51.96	58.61
Less: Non-tariff Income	(12.79)	(12.79)	(12.79)	(12.79)	(12.79)
Aggregate Revenue Requirement	342.01	364.77	387.13	391.91	475.41



Determination of Transmission Tariff for FY 2021-22

Petitioner's Submission

8.35 The Petitioner has submitted that the ARR for the FY 2021-22 has been determined as Rs. 1045.94 Crore in the previous chapter. The same is considered as the Annual Transmission Charge for the FY 2021-22. The JUSNL requests the Hon'ble Commission to approve Rs. 1045.94 Crore as the Annual Transmission Charge for the FY 2021-22. The Transmission Capacity of the system shall be determined by considering the total power purchase capacity allocated to JBVNL and Railway in the state of Jharkhand. The total power purchase capacity allocated to JBVNL presently is 1991.24 MW (excluding DVC) and the total power purchase capacity allocated to Railway is 70 MW. Hence, the total transmission capacity of the system is 2061.24 MW.

TABLE 92: DETERMINATION OF MONTHLY TRANSMISSION CHARGES AS SUBMITTED BY THE PETITIONER (RS. CR.)

Sl. No.	Particulars	FY 21-22
1.	Annual Transmission Charges for FY 2021- 22 (Rs. Crore)	1045.94
2.	Total Transmission Capacity (MW)	2061.24
3.	Total Transmission Capacity allocated to JBVNL (MW)	1991.24
4.	Annual Transmission Charges to be levied to JBVNL (Rs. Crore)	1010.42
5.	Monthly Transmission Charges to be levied to JBVNL (Rs. Crore)	84.20

Sl. No.	Particulars	FY 21-22
1.	Annual Transmission Charges for FY 2021- 22 (Rs. Crore)	1045.94
2.	Total Transmission Capacity (MW)	2061.24
3.	Total Transmission Capacity allocated to Railways (MW)	70.00
4.	Annual Transmission Charges to be levied to Railways (Rs. Crore)	35.52
5.	Monthly Transmission Charges to be levied to Railways (Rs. Crore)	2.96

Commission Analysis

8.36 The Commission, in this order, has approved the Tariff for FY 2021-22, based on the projected demand of JUSNL as submitted in Form S4 of the Tariff Formats on the Approved ARR for the year as shown in the table below,

Table 93: DETERMINATION OF MONTHLY TRANSMISSION CHARGES AS APPROVED BY THE COMMISSION

Particulars	UoM	FY 21-22
Operation and Maintenance Expense	Rs. Cr,	103.59
Depreciation	Rs. Cr,	111.67
Interest and Finance Charge	Rs. Cr,	83.48
Interest on Working Capital	Rs. Cr,	6.97
Return on Equity	Rs. Cr,	49.09
Less: Non-tariff Income	Rs. Cr,	(12.79)



Aggregate Revenue Requirement	Rs. Cr,	342.01
Energy Input into the System	MU	11,000.31
Tariff for Transmission for the year	Rs./kWh	0.31

8.37 The Commission approves transmission tariff of **Rs 0.31/kWh**, which shall be applicable from **July 1, 2023** and shall remain applicable till amended or modified or extended by an order of this Commission.



A 9 Status of Earlier Directives

9.1 The Commission has time and again issued various directives with the object to improve the functioning of the Petitioner and the compliance report submitted by the Petitioner to the Commission as per earlier directions is mentioned hereunder:

Directives	Status	Views of the Commission
Timely submission of the petition before the Commission:		
The Commission observed that the Petitioner failed to submit the petition before the Commission within the timeline specified in the JSERC Tariff Regulations, 2010 and JSERC Tariff Regulations 2015. The Commission directs the Petitioner to ensure timely submission of the petition in future failing which the same shall be treated as noncompliance of direction and may attract penalty.	No response submitted with the petition.	The Commission re-directs the Petitioner to abide by the directives already issued. Failure to comply with the directions may result in appropriate action as per provisions in EA Act, 2003.
True up petition for FY 2017-18, FY 2018-19 & FY 2019-20 and other pending Petitions:		
The Commission directs the Petitioner to file True up petition for FY 2017-18 in next two months from the issue of this order.	The Petitioner has submitted that the Regulation 6.17 of the Jharkhand State Electricity Regulatory Commission (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2015 and as per earlier true-up orders of the Commission Annual Audited Accounts for the year is a bare minimum requirement for filing of the True-Up petition. The Annual Accounts of JUSNL was audited on 21.11.2019 and after compiling and processing all the required information the Petitioner has filed this instant petition.	The Commission observes that the Petitioner failed to timely comply the direction. The Petitioner is directed to speed up the process with the next petition.
Re-financing of State Government Loans:		
The Commission observes that most of the schemes of the Petitioner are financed at 13% rate of interest which is higher than the rates currently	The Petitioner has submitted: They have been in continuously in talks with various funding agencies for replacement of loans for	The Commission noted the reply submitted by the Petitioner. The Commission again directs the Petitioner to make continuous



<p>prevailing in the market. The Commission also notes that the Petitioner has not taken any step to get these schemes financed from the cheapest source at the first place. The Commission thus directs the Petitioner to make all efforts to re-finance the loan for such schemes from the cheapest source available. The Petitioner may approach the State Government to convert the loans into grant or equity. The Petitioner may also look for Viability Gap Funding for schemes which may be developed for social cause. The Petitioner is directed to submit along with the next tariff petition, the steps taken towards refinancing of these schemes and efforts made with the State Government to convert the loans from them to a viability gap funding/ soft loan/grant/ equity</p>	<p>projects to be funded by State Government. Initially, Petitioner were in talks with NABARD for funding of such projects. The correspondence between NABARD and Petitioner was already submitted along with the True-Up Petition for FY 2015-16, FY 2016-17 and ARR petition for FY 2017-18 and FY 2018-19 as Annexure-N. However, talks with NABARD on funding of these projects did not work out and therefore Petitioner is now in talks with PFC/REC for funding of such projects. The latest correspondence between PFC/REC and JUSNL is submitted with the petition. The Petitioner is currently in the phase of negotiation with PFC / REC and therefore will intimate the agreed interest rate to the Commission on completion of negotiation. The Petitioner has been continuously envisaging options for refinancing of high cost loans with lower ones</p>	<p>efforts to re-finance the loan for such schemes from the cheapest source available.</p>
<p>Data Gaps:</p>		
<p>The Commission directs the Petitioner to note the data deficiencies highlighted throughout the present petition and submit required details and certificates along with the next petition</p>	<p>The Petitioner has taken care of capturing all the data deficiencies highlighted in the last petition and submitted the same before the Hon'ble Commission. However, in case the Hon'ble Commission requires any further clarification, justification etc. during the processing of the Petition, same shall be submitted as and when required.</p>	<p>The Commission noted the reply submitted by the Petitioner and directs the Petitioner need to improve the quality and standard of future petitions that need to be submitted before the Commission as per timeline specified in the Regulations.</p>
<p>Metering Status:</p>		
<p>The Commission also directs the petitioner to submit status of meters available and operational at various locations in the JUSNL grid as on 1st April 2017 in the format provided in the MYT order.</p>	<p>The Petitioner has submitted the Status of the Meter with the Petition.</p>	<p>The Commission noted the reply submitted by the Petitioner.</p>



A 10 Directives

Submission of Utilization & Loading Certificates for Transmission Lines and Transformers

10.1 The Commission directs the Petitioner to submit certificates showing line wise actual utilization of its transmission assets, including percentage loading & utilization factor of each transmission line, and percentage loading & utilization factor of each transformer, with detailed calculation and the associated data sheets, while filing the petitions for true-up for further financial years.

Submission of Fixed Asset Register

10.2 The Commission directs the Petitioner to prepare an FAR before filing of the next petition, and also directs that the Petitioner should specifically comply with observations of statutory authorities/auditors on the matter of Verification & Monitoring of Fixed Assets/CAPEX/Inventory and Maintenance of proper records preferably in digital form for observance of statutory provisions. The Petitioner should also put in place a robust Integrated Accounts & Financial Management System to minimize the time for preparation of Annual Accounts and filing of petitions/Business Plans/APR's. in time.

Stores and Scraps

10.3 The Commission directs the Petitioner to submit the Itemized details of scraps and store along with the estimated values within 3 months from the date of present order.

Energy Accounting and Audit

10.4 The Commission had earlier directed JUSNL to conduct energy accounting and audit of its transmission system based on the energy meters presently installed on monthly basis and submit a copy of the report to the Commission by 20th of the succeeding month. However, the Petitioner has failed to comply with the directions of Commission as such the Petitioner is once again directed to comply with the directions/ orders of the Commission, failing which appropriate action will be taken as per provisions in EA, 2003.



Details of Transformer Earthing

10.5 The Commission had directed the Petitioner to submit the status/ value of power transformer earthing every six (6) months to the Commission, and submit the status of bus coupler bays at various voltage levels every six (6) months. However, the Petitioner has failed to comply with the directions of the Commission the Petitioner consequently is again directed to comply with the directions of the Commission, failing which appropriate action will be taken as per provisions in EA, 2003.

Data adequacy in the next Petition

10.6 The Commission has observed that the Petitioner has not submitted the required data/supporting documents in proper format with the petition. In spite of sufficient time and several reminders, the Petitioner couldn't provide justifiable reasons regarding the discrepancy pointed out by the Commission specially in connection with addition of capex expenditure and capitalization during the year. The Commission directs the Petitioner to submit the petition along with relevant formats, failure to do so may lead to non-acceptance of the petition. The Petitioner is also directed to submit its claim with justifiable reasons and documentary proof.

Timeliness and Data Adequacy in the Next Tariff Petition

10.7 The Commission directs the licensee to file the next tariff petition, after removing the deficiencies highlighted in this tariff order. The Petitioner should ensure that the data submitted to the Commission is accurate with proper certification. The Commission also directs the licensee to ensure submission of the next tariff petition within the time frame as stipulated in Section A 24 of the JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2015 and JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2020. Failure to comply with the directions will make the Petitioner liable for appropriate action under the provisions of the Electricity Act, 2003.



This order is signed and issued by the Jharkhand State Electricity Regulatory Commission on June 23, 2023.

Date: 23.06.2023

Place: Ranchi

Sd/-	Sd/-	Sd/-
Atul Kumar	Mahendra Prasad	Justice Amitav Kumar Gupta
MEMBER (Technical)	MEMBER (Legal)	CHAIRPERSON



ANNEXURE - I

List of participating members in the Public Hearing

Sl. No	Name	Address/Organization
1.	Amit Banerjee	Director(F) JUSNL
2.	Manoj Kr. Karmali	Director(P) JUSNL
3.	Shayam Mahali	JUSNL
4.	Shailesh Prakash	SLDC, JUSNL
5.	R.K. Tripathy	PWC, JBVNL
6.	Anita Parasad	JBVNL
7.	Ajay Kumar	GM(F&A) JUSNL
8.	Ajay Kumar	GM, JUSNL
9.	Anjay Pachoriwala	President JSIA
10.	Vibha Kumari	JBVNL
11.	Shiv Shakar PD. Singh	JUSNL
12.	Gaurav Lohani	JUSNL
13.	Guarav Kumar	JUSNL
14.	Sanjeev Lakra	JUSNL
15.	Ravi Shankar Kumar	JBVNL
16.	Ujjwala K. Guria	JBVNL
17.	Kedar Nath Lal Das	Ranchi
18.	Shahsi Bhusan Kumar	JBVNL
19.	Akhilash Mishra	MTPCL
20.	Gaurav Lohani	JUSNL
21.	Ashish Kumar	JUSNL
22.	Avinash Kumar	JUSNL
23.	Raj Kumar Jha	JUSNL
24.	Sumit Prasad	JUSNL
25.	Akhil Katiyar	Consultant(JUSNL)
26.	Deepak Kumar	Manager, JUSNL
27.	Avinash Alda	JUSNL
28.	Sami Ahmed	Ranchi



ANNEXURE – II

Project-wise Capitalization for the Control Period

State Funded Transmission Lines (Rs. Cr.)											
Sl. No	Projects	Petition					Approved				
		FY 22	FY 23	FY 24	FY 25	FY 26	FY 22	FY 23	FY 24	FY 25	FY 26
1.	132KV Hatia - Kanke transmission line		22.82								
2.	132KV Garhwa - Japla transmission line		20.2								
3.	LILO of 132 kV S/C Deoghar - Jamtara trans. line at proposed GSS Chitra		1.15								
4.	220 KV D/C Chatra - Latehar transmission line		100.56								
5.	220 KV D/C Chatra - PBCMP (Barkagaon) transmission line		71.81								
6.	132 kV D/C 3 Ph. Chatra(Pratappur)-Chatra(220KV)		31.18								
7.	132 kV D/C, 3 phase Giridih – Saria trans. Line		24.26								
8.	LILO of 220 KV D/C TTPS-Govindpur transmission line at Jainamore Bokaro		24.03								
9.	220KV D/C Ratu - PTPS transmission line		25.03								
10.	220 kV D/C Dumka – Jasidih		47.91								
State Funded Grid Sub-stations (Rs. Cr.)											
Sl. No	Projects	Petition					Approved				
		FY 22	FY 23	FY 24	FY 25	FY 26	FY 22	FY 23	FY 24	FY 25	FY 26
1.	220/132/33 kV Grid Sub-Station at Chatra 2x150 MVA+2x50 MVA,		66.69								
2.	220/132/33KV Grid Sub-Station Bokaro (jainamore) 2x150 MVA+2x50 MVA,		66.85								
3.	220/132/33 kV GSS at Ratu 2x150 MVA+2x50 MVA		74.59								
4.	132/33 KV GSS , Chatra(Pratappur)(2 x50 MVA)		34.36								
5.	132/33 kV GSS at Bahragora(2x50 MVA)	35.39									
6.	132/33 kV GSS at Chandankiyari (2 x 50 MVA)	34.96									
State Funded Transmission Bays (Rs. Cr.)											
Sl. No	Projects	Petition					Approved				
		FY 22	FY 23	FY 24	FY 25	FY 26	FY 22	FY 23	FY 24	FY 25	FY 26
1.	220 kV Rupnarayanpur Substation (Bay Ext.)		4.93								



2.	132 Kv Jamatara Substation (Bay Ext.)		2.38							
3.	132 Kv Jadugoda Substation (Bay Ext.)		3.8							
4.	132 Kv Dhalbhumghar Substation (Bay Ext.)		2.4							
5.	132 Kv Namkum Substation (Bay Ext.)		2.2							
6.	132 Kv Ramchandrapur Substation (Bay Ext.)		0							
7.	400 Kv Bero Substation (Bay Ext.)		13.91							
8.	220 Kv TTPS Bay Extension		1.17							
9.	Dumka 3rd Bay Extension		0.6							
10.	Construction of 02 nos Bays along with 220 kV D/C Link line from 220 Kv Hatia Lohardaga Tr. Line (near existing 132/33 Kv gss, Lohardaga) to 220/132 Kv GSS, Lohardaga		7.81							
11.	132 KV feeder Bay at 132/33 KV GSS Garhwa Road		2.7							
12.	132 KV Transformer BAY at 132/33 KV GSS sindoor, Hazaribagh DVC		2.95							
13.	02 Nos 132 kV Bay and extension of Main & Transfer bus on both side along with Engineering, Supply, Erection, Testing & Commissioning of 04 Nos 132 kV D/C Normal Tower for feeding Power to existing 132 kV D/C Lalmatia- Sahibganj Transmission line at 220/132/33 kV Grid Sub-Station, Lalmatia on turnkey basis		3.46							
14.	Engineering, Supply, Erection, Testing & Commissioning of DD+18 and DD+6 Tower in 132KV Jamtara Maithon Transmission line for getting minimum ground clearance over under construction ROB by RCD dept. between location no. 64 & 65 at Bodma on		1							



	turnkey basis.										
15	Design, Engineering, Supply of Materials, Erection, Testing & Commissioning of 132 kV, 2-Phase, S/C Transmission line from GSS Rajmahal(Old Loc. No. 16/2 of approved tower schedule new AP/17) to Railway TSS Dhamdhamia on Double Circuit Tower(approx line length 8.897 km) on turnkey basis.		8.89								
16	Height raising of conductors of 132 kV D/C Garhwa – Rihand (Pipri) Transmission line between Loc. No. 437 to Loc. No. 438 under transmission sub-division, Garhwa road		0.78								
17	Construction /Rehabilitation of 2 nos 220 KV bay with new equipments/ existing equipments for termination of 220 KV D/C TTPS-Govindpur Transmission line at TTPS Switchyard old bay 4&5.		3.41								
18	Design, Engineering, Supply, Erection, Testing and Commissioning of following works in turnkey project for Railway TSS, Dumka : - (i) 132 kV, One no. Railway Hybrid Switchgear type Bay including extension of 132 kV Main Bus at 220/132 kV GSS, Madanpur.(ii) 132 kV S/C (2 phase) Transmission Line on D/C tower from 220/132 kV GSS, Madanpur - Railway TSS, Dumka .		8.39								
19	Design, Engineering, Supply Erection, Testing and commissioning of 400 kV S/C TTPS – PTPS Transmission line between location no. 19-22 including dismantling and transportation of existing tower to facilitate electrification at North Urimari siding by 25 kV OHE line		2.72								



Transmission Lines in DVC Command Area (Rs. Cr.)											
Sl. No	Projects	Petition					Approved				
		FY 22	FY 23	FY 24	FY 25	FY 26	FY 22	FY 23	FY 24	FY 25	FY 26
	on turnkey basis										
1.	132 kV D/C Ramgarh-Hazaribagh			19.88							
2.	132 kV D/C Ramgarh-Gola			21.46							
3.	132 kV D/C Gola-Peterwar			17.87							
4.	132 kV D/C Nirsa-Baliyapur			13.13							
5.	132 kV D/C 3 Ph. Peterwar - Jaina More (Bokaro) Transmission line			12.46							
6.	132 kV D/C 3 Ph. Ramgarh - PTPS Transmission line			93.97							
7.	132 kV D/C 3 Ph. Barkagaon - PTPS (220 kV) Transmission line			20.12							
8.	132 kV D/C 3 Ph. Silli - Gola Transmission line			28.71							
9.	132 kV D/C 3 Ph. Putki - Govindpur Transmission line		13.27								
10.	132 kV D/C 3 Ph. Chandankyari - Bokaro(Jaina more) Transmission line		20.21								
11.	132 kV D/C 3 Ph. Mahuda - Putki Transmission line		85.64								85.64
12.	132 kV D/C 3 Ph. Gomia - Dugda Transmission line				25.3						
13.	132 kV D/C 3 Ph. Barhi - Chatra Transmission line		18.89								
14.	132 kV D/C 3 Ph. Bishnugarh - Hazaribagh Transmission line				20.94						
15.	132 kV D/C 3 Ph. Saria - Bishnugarh Transmission line		20.45								
16.	132 kV D/C 3 Ph. Gomia - Bishnugarh Transmission line				99.68						
17.	132 kV D/C 3 Ph. Chatra-Simaria		25.73								
18.	132 kV D/C 3 Ph. Barhi - Hazaribagh (220 kV) Transmission line				18.49						
19.	132 kV D/C 3 Ph. Jamua- Gawan Transmission line		33.97								
20.	132 kV D/C 3 Ph. Koderma- Gawan Transmission line				26.36						
21.	132 kV D/C Hunterganj-Itkhori Transmission line			40.03							
22.	132 kV D/C Hunterganj-Chatra Transmission line			18.07							
Grid Sub-stations in DVC Command Area (Rs. Cr.)											



Sl. No	Projects	Petition					Approved				
		FY 22	FY 23	FY 24	FY 25	FY 26	FY 22	FY 23	FY 24	FY 25	FY 26
1.	132/33 KV GSS Nirsa(2x50 MVA)			26.59					26.59		
2.	132/33 kV GSS at Ramgarh(2x50 MVA)			36.22							
3.	132/33 kV GSS at Petarwar(2x50 MVA)			32.5							32.5
4.	132/33 kV GSS at Barkagaon (2x50 MVA)			33.71							
5.	132/33 kV GSS at Gola (2x50 MVA)			25.56							25.56
6.	132/33 kV GSS at Barhi (2 x 50 MVA)		36.74								36.74
7.	132/33 kV GSS at Dugda (2 x 50 MVA)		23.56								23.56
8.	132/33 kV GSS at Putki (2 x 50 MVA)		26.66								26.66
9.	132/33 kV GSS at Mahuda (2 x 50 MVA)		28.85								28.85
10.	132/33 kV GSS at Bishnugarh (2 x 50 MVA)		37.55								37.55
11.	132/33 KV GSS Simaria (2 x 50 MVA)		29.55								
12.	132/33kV GSS at Gawan (2x50 MVA)		35.24					35.24			
13.	132/33kV GSS at Hunterganj (2x50 MVA)			34.55							
Transmission Lines constructed with PGCIL (Rs. Cr.)											
Sl. No	Projects	Petition					Approved				
		FY 22	FY 23	FY 24	FY 25	FY 26	FY 22	FY 23	FY 24	FY 25	FY 26
1.	132 KV D/C Simdega-Manoharpur transmission line	70.99					70.99				
2.	132KV Jadugora – Dalbhumgarh transmission line	30.84					30.84				
3.	132KV Hatia-1 to Hatia-II link line	1.43					1.43				
4.	220 kV D/C 3 Ph. Chaibasa -Chaibasa (PG) Transmission line		0.8					0.8			
5.	220 KV D/C Hatia-Namkum (PGCIL) transmission line		41.78					41.78			
6.	220 KV D/C Link Line from 220 KV Lohardagga- Latehar TL near 132 KV GSS to 220 KV Lohardagga GSS		1.57							1.57	
7.	220 KV D/C Link Line from 400 KV JSEB S/S to existing Lohardagga-Latehar TL near 132 KV Latehar GSS		1.45							1.45	
8.	220 KV D/C TTPS-Govindpur transmission line		79.02					79.02			
9.	220 KV Joda-Ramchandrapur LILO		3.76					3.76			
10.	400 KV D/C Latehar(JSEB) to		199.05								199.05



	400 KV PTPS G/S/S										
11	400 KV D/C ESSAR (Latehar)-JSEB 400 KV G/S/S (Latehar) TL by Quad Moose conductor		138.43								138.43
12	400 KV D/C PTPS-Bero (New Ranchi)Line		74.56				74.56				
13	400 KV Essar-Chandwa link Line including 2 no of Bay		43.67								43.67
14	132 KV S/C Hatia-Sikdri		14.79				14.79				
15	132 KV Lohardaga-Lohardaga link line		1.2							1.2	
16	132 KV Latehar-Latehar link line(at latehar)		1.21							1.21	
17	Stautory Compliance	32.55	130.21								
Grid Sub-stations constructed with PGCIL (Rs. Cr.)											
Sl. No	Projects	Petition					Approved				
		FY 22	FY 23	FY 24	FY 25	FY 26	FY 22	FY 23	FY 24	FY 25	FY 26
1.	220/132/33KV Grid Sub-Station Govindpur (PG)2x150 MVA+2x50 MVA,		57.11					57.11			
2.	220/132 KV, (2x150)MVA GSS at Lohardagga (PG)		82.26							82.26	
3.	400/220 KV GSS at Patratu and 400 KV D/C PTPS-Namkum (PG) TL (PG)51.5KM	154.19									154.19
4.	400/220/132 KV GSS at Latehar (PG)(2x 315 + 2x150 MVA)		144.19								144.19
World Bank Funded Transmission Lines (Rs. Cr.)											
Sl. No	Projects	Petition					Approved				
		FY 22	FY 23	FY 24	FY 25	FY 26	FY 22	FY 23	FY 24	FY 25	FY 26
1.	132 kV D/C 3 Ph. Silli - Angada Transmission line			22.63							
2.	132 kV D/C 3 Ph. Silli - Chouka Transmission line			30.83							
3.	132 kV D/C 3 Ph. Irba - Kanke Transmission line			17.79							
4.	132 kV D/C 3 Ph. Irba - Ratu Transmission line			27.02							
5.	132 kV D/C 3 Ph. Angada - Sikidiri(Irba) Transmission line			24.97							
6.	132 kV D/C 3 Ph. Dumka - Sikaripara Transmission line			32.17							
7.	LILO of 132 kV D/C 3 Ph. Dumka-Deoghar Transmission line at GSS Jarmundi			3.40					3.40		
8.	132 kV D/C 3 Ph. Amrapara - Godda Transmission line			40.07							
9.	132 kV D/C 3 Ph.			16.8							



	Amrapara - Pakur Transmission line			9						
10	132 kV D/C 3 Ph. Naudiha - Chatarpur Transmission line			17.38						
11	132 kV D/C 3 Ph. Nagar Utari - Garhwa(220KV) Transmission line			13.53						
12	132Kv Latehar-Mahuadanr Transmission line			64.36						
13	132 kV D/C 3 phase Surda - Jadugoda transmission line			30.43						
14	132 kV D/C 3 phase Surda - Bharagora transmission line			30.19						
15	132 kV D/C 3 phase Surda - Musabani transmission line			5.51						
16	LILO 1 & 2 of 132 kV D/C 3 Ph. Ramchandarpur-Jadugoda Transmission line at GSS Sundarnagar			26.82						
17	LILO 1 & 2 of 132 kV D/C 3 Ph. Baharagora-Dalbhumgarh Transmission line at GSS Chaukliya			30.09						
18	LILO of one Ckt Of 132 KV D/C 3 ph Chaibasa-Manoharpur Transmission Line at 132/33 KV GS/S at Goelkera including with 2 nos. of 132 kV bay.		3.45						3.45	
19	132 kV D/C 3 Ph. Chauka - Tamar Transmission line		27.78							
20	LILO 132 kV S/C 3 Ph. Chandil - Rajkharsawan line at kandra .		3.77							
21	LILO of 132 kV Dumka - Lalmatia transmission line at GSS Hansdiha		4.26						4.26	
22	132 kV D/C 3 Ph. Sarath - Palajori Transmission line		15.00							15.00
23	132 kV D/C 3 Ph. Sarath - chitra Transmission line		12.89							
24	LILO 1&2 of 132 kV D/C 3 Ph. jamtara-Madhupur Transmission line at GSS Naranpur		21.02						21.02	
25	Hansdiah-Jasidih		31.91							
26	132 kV D/C 3 phase Kurdeg -simdega transmission line		25.44							25.44
27	132 kV D/C 3 Ph. Chainpur-Mahuadanr Transmission line		40.58							



28	LILO 132 kV D/C 3 Ph. Gumla - Simdega Transmission line at chainpur		25.10								
29	132 kV D/C 3 phase Kolebira -Kamdara transmission line		25.98								
30	132 kV D/C 3 phase Kolebira -simdega transmission line		25.44								
31	132 kV D/C 3 Ph. Chhatarpur - Daltonganj 220 kV Transmission line		21.24								
32	132 kV D/C 3 Ph. Chhatarpur - Japla Transmission line		26.33						26.33		
33	132 kV D/C 3 Ph. Chandwa - Latehar Transmission line		18.11								
34	132 kV D/C 3 Ph. Chhatarpur - Panki Transmission line		40.27								
35	132 kV D/C 3 Ph. Ramkanda - Garhwa (220KV) Transmission line		31.82								31.82
World Bank Funded Grid Sub-stations (Rs. Cr.)											
Sl. No	Projects	Petition					Approved				
		FY 22	FY 23	FY 24	FY 25	FY 26	FY 22	FY 23	FY 24	FY 25	FY 26
1.	132/33 kV GSS at Sikaripara(2x50 MVA)		51.18								
2.	132/33 kV GSS at Jarmundi(2x50 MVA)		51.40								
3.	132/33 kV GSS at Amarpara(2x50 MVA)		53.17								
4.	132/33 kV GSS at Angada(2x50 MVA)		51.13								
5.	132/33 kV GSS at Kanke Bay Extn (2x50 MVA)		6.13								
6.	132/33 kV GSS at Silli (2x50 MVA)		61.45								
7.	132/33 kV GSS at Chatarpur (2 x 50 MVA)		74.88						74.88		
8.	132/33 kV GSS at Irba(2x50 MVA)		56.23								
9.	132/33 kV GSS at Sundarnagar (2x50 MVA)		65.85								
10	132/33 kV GSS at Chouka(2x50 MVA)		49.04								
11	132/33 kV GSS at Chandwa (2x50 MVA)		49.36								
12	132/33KV GSS NagarUntari(2x50 MVA)		53.56								
13	132/33KV GSS Meral(2x50 MVA)		37.63								
14	132/33KV GSS Ramkanda(2x50 MVA)		49.43								49.43
15	132/33KV GSS Panki(2x50 MVA)		49.78								
16	132/33KV GSS Mahuadanr(2x50		53.54								



JUSNL True-up for FY 19-20, APR for FY 20-21, and MYT for FY 21-22 to FY 25-26

	MVA)									
17	132/33KV GSS Naudiha(2x50 MVA)		53.62							
18	132/33 kV GSS at Sarath (2x50 MVA)		65.32							65.32
19	132/33 kV GSS at Surda 2x50 MVA)		54.12							
20	132/33 kV GSS at Chakuliya(2x50 MVA)		49.71							
21	132/33 kV GSS at Hansdiha (2x50 MVA)		48.97							
22	132/33 kV GSS at Narayanpur(2x50 MVA)		49.15							
23	132/33 kV GSS at Chainpur (2x50 MVA)		48.34							
24	132/33 kV GSS at Koleibera(2x50 MVA)		48.70							
25	132/33 kV GSS at Kurdeg(2x50 MVA)		48.52							
26	Pakur bay Extn		5.97							
27	Goelkera GSS bay Extn		5.48							
28	Kandra GSS(2x50 MVA)		49.11							
29	Japla GSS Bay Extn		5.48							
30	Kamdara GSS Bay Extn.		5.87							
31	Musabani Bay Extn		5.45							

State Funded Planned Projects (Rs. Cr.)

Sl. No	Projects	Petition					Approved				
		FY 22	FY 23	FY 24	FY 25	FY 26	FY 22	FY 23	FY 24	FY 25	FY 26
1.	400 KV double circuit Quad Moose Patratu - PVUNL Transmission line and 2no. 400 KV LINE Bay		49.87								
2.	400/220KV grid sub-station, Chandil and 400 KV D/C 3 Ph QM patratu-chandil transmission line (135 km), 400 KV D/C 3 PH QM Chandil - chaibasa transmission line (100 km) and 220 KV D/C 3 Phase Chandil - Chandil Transmission line (20 km)				916.82						
3.	400/220/132/33 KV Grid sub-Station, Koderma and 400 KV D/C 3 PH QM Patratu - koderma transmission line (150 km), 400 kV D/C lineJasidih – Koderma (135 Km) and 220 kv D/C 3 Phase Koderma-GiridihTransmission line (80 KM)				1152.00						
4.	220/132/33 KV Grid sub-station , Patratu			67.60							



JUSNL True-up for FY 19-20, APR for FY 20-21, and MYT for FY 21-22 to FY 25-26

	and 220 KV link patrartu (new) -Hatia (new) (2km) and 132kV D/c line Patratu(New) – Hatia (Old) D/c line (with one circuit LILO at Kanke) (2Km)										
5.	132/33 KV Grid sub-Station, Kundhit and 132 KV Jamtara - Madhupur Transmission line of propose LILO in Kundhit grid			83.70							
6.	220/132/33 kv Grid sub-station , Hazaribagh and 220 KV double circuit Tenughat - Hazaribagh Transmission line				170.59						
7.	220/132/33 KV Grid sub station, Baliyapur and LILO of 220 KV double circuit Dumka - Govindpur at Baliyapur GSS					124.35					
8.	220/132/33 Grid sub station, Bero and 220 KV double circuit Bero-Mandar(21 Km) and 132 kv Double circuit kamdara - Bero(50km) Transmission line					201.46					
9.	400/220 KV Grid sub- station , Dumka and Jasidih – Dumka 400kV D/c line (131km) and LILO of Dumka – Godda 220kV D/c line at Dumka (New) (5Km)					546.22					
10.	220/132/33 Grid sub station, Sarwal and 220 KV LILO Ranchi - Chandil Transmission line at sarwal GSS					148.00					
11.	220/132/33 Grid sub station, Palajori and 220 KV LILO Dumka- Gobindpur Transmission line at palajori GSS				126.75						