BEFORE
THE HON'BLE JHARKHAND STATE ELECTRICITY REGULATORY COMMISSION

FILING OF PETITION FOR BUSINESS PLAN FOR THE MYT CONTROL PERIOD FY 2021-22 TO FY 2025-26

SUBMITTED TO:

JHARKHAND STATE ELECTRICITY REGULATORY COMMISSION, RANCHI

SUBMITTED BY:

JHARKHAND URJA SANCHARAN NIGAM LIMITED,
KUSAI COLONY, RANCHI – 834 010

BEFORE THE JHARKHAND STATE ELECTRICITY REGULATORY COMMISSION, RANCHI

IN THE MATTER OF: Filing of the Petition for submission of Business Plan for MYT Control Period FY 2021-22 to FY 2025-26 under Jharkhand State Electricity Regulatory Commission (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2020 and its amendments thereof and directives issued by the JSERC from time to time and under Section 61, 62, 64 and 86 of The Electricity Act 2003 read with the relevant guidelines.

AND

IN THE MATTER OF: Jharkhand Urja Sancharan Nigam Limited (hereinafter referred to as "JUSNL" or erstwhile “JSEB-Transmission function” which shall mean for the purpose of this petition the Licensee), having its registered office at JUSNL Building, Kusai Colony, Doranda, Ranchi-834002.

…Petitioner

The Petitioner respectfully submits as under: -

1. The erstwhile Jharkhand State Electricity Board (“Board” or “JSEB”) was a statutory body constituted under Section 5 of the Electricity (Supply) Act, 1948 and was engaged in electricity generation, transmission, distribution and related activities in the State of Jharkhand.

2. Jharkhand Urja Vikas Nigam Ltd. (herein after to be referred to as “JUVNL” or “the Holding company”) has been incorporated under Indian Companies Act, 1956 pursuant to decision of Government of Jharkhand to reorganize erstwhile JSEB. The Petitioner submits that the said 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 Holding company or JUVNL has been incorporated on 16th September 2013 and registered with the Registrar of Companies, Jharkhand, Ranchi and has obtained Certificate of Commencement of Business on 12th November 2013.

3. Jharkhand Urja Sancharan Nigam Ltd. (herein after to be referred to as “JUSNL” or “the Petitioner”) has been incorporated on 23rd October 2013 with the Registrar of Companies, Ranchi, Jharkhand, and has obtained Certificate of Commencement of Business on 28th November 2013. 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. The Transmission Company - Jharkhand Urja Sancharan Nigam Ltd. is duly registered with the Registrar of Companies, Ranchi on 23rd October 2013.

4. Pursuant to the enactment of the Electricity Act, 2003, every utility is required to submit its Aggregate Revenue Requirement (ARR) for a particular control period and is also required to file Tariff Petitions as per procedures outlined in section 61, 62 and 64, of Electricity Act 2003, and the governing regulations, thereof, laid down by the respective State Electricity Regulatory Commission. The State transmission utility, JUSNL is also mandated to submit True-up and ARR petitions for respective years for its Transmission Business, as per the JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2020 as notified on 12th November, 2020 and under Section 62 read with Section 86 of the Electricity Act, 2003 and other enabling provisions. The said Regulation are applicable to all Transmission Licensees in the State for filing of Business Plan and Tariff Application for the Third Control Period i.e. FY 2021-22 to FY 2025-26.

5. The instant petition is filed with the Hon'ble Commission for filing of Business Plan for the MYT Control Period FY 2021-22 to FY 2025-26.

6. This Business Plan has been prepared in accordance with the provisions of Sections 61 and 62 of the Electricity Act, 2003 and has taken into consideration the Jharkhand State Electricity Regulatory Commission (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2020, and amendments thereof and orders issued by the Hon'ble Commission from time to time.

7. JUSNL along with this petition is submitting the tariff formats with data & information to an extent applicable and would make available any further information/ additional data required by the Hon'ble Commission during the proceedings.

Prayers before the Hon'ble Commission:

The Petitioner respectfully prays that the Hon'ble Commission may:

a. Admit the instant Petition;
b. Examine the proposal submitted by the Petitioner in the enclosed petition for a favorable dispensation;
c. Approve the Business Plan for the MYT Control Period FY 2021-22 to FY 2025-26 under Jharkhand State Electricity Regulatory Commission (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2020, other amendments and orders issued by the Hon'ble Commission from time to time;
d. Pass suitable Orders with respect to the Business Plan for the Control Period FY 2021-22 to FY 2025-26;

e. Pass separate Order for the Petitioner against the present petition;
f. JUSNL may also be permitted to propose suitable changes to the respective Business Plan, prior to the final approval by the Hon'ble Commission. JUSNL believes that such an approach would go a long way towards providing a fair treatment to all the stakeholders and may eliminate the need for a review or clarification;
g. Condone any inadvertent omissions / errors / shortcomings and permit JUSNL to add / change / modify / alter this filing and make further submissions as may be required at a future date;
h. Pass such Order, as the Hon'ble Commission may deem fit and appropriate keeping in view the facts and circumstances of the case;

For Jharkhand Urja Sancharan Nigam Limited
(Petitioner)

Authorized Signatory

Place: Ranchi
Dated:

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1. Introduction

1.1. Background

1.1.1. The erstwhile Jharkhand State Electricity Board ("Board" or "JSEB") was a statutory body constituted under Section 5 of the Electricity (Supply) Act, 1948 and was engaged in electricity generation, transmission, distribution and related activities in the State of Jharkhand. 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 Jharkhand State Electricity Board (JSEB) was the predominant entity entrusted with the task of generating, transmitting and supplying power in the State.

1.1.2. Jharkhand Urja Vikas Nigam Ltd. (herein after to be referred to as "JUVNL" or "the Holding company") has been incorporated under Indian Companies Act, 1956 pursuant to decision of Government of Jharkhand to reorganize erstwhile Jharkhand State Electricity Board (herein after referred to as "JSEB"). The Petitioner submits that the said 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 Holding company or JUVNL has been incorporated on 16th September 2013 and registered with the Registrar of Companies, Jharkhand, Ranchi and has obtained Certificate of Commencement of Business on 12th November 2013.

1.1.3. 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 Bijli Vitran Nigam Ltd**", means the Distribution Company to which the Distribution Undertakings of the Board are transferred in accordance with this Scheme.
b. "**Jharkhand Urja Utpadan Nigam Ltd**" means the Generating Company to which the Generating Undertakings of the Board are transferred in accordance with this Scheme;
c. "**Jharkhand Urja Sancharan Nigam Ltd**" means the Transmission Company to which the Transmission Undertakings of the Board are transferred in accordance with this Scheme;
d. "**Jharkhand Urja Vikas Nigam Ltd**" means the Company that owns all shares of newly incorporated reorganized three companies i.e. Jharkhand Urja Utpadan Nigam Ltd, Jharkhand Urja Sancharan Nigam Ltd and Jharkhand Bijli Vitran Nigam Ltd;

1.1.4. Jharkhand Urja Sancharan Nigam Ltd. (herein after to be referred to as “JUSNL” or “the Petitioner” was incorporated on 23rd October 2013 with the Registrar of Companies, Jharkhand, Ranchi and has obtained Certificate of Commencement of Business on 28th November 2013. 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. The Transmission Company - Jharkhand Urja Sancharan Nigam Ltd. is duly registered with the Registrar of Companies, Ranchi on 23rd October 2013.

1.1.5. JUSNL 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.

1.1.6. Being a State Transmission Utility (STU) (vide. notification no. 384 dated 04.02.2019), it caters to the requirements of the State for transmitting power from the state-owned generation stations and the power purchases from other external sources into the distribution network. The responsibilities of the erstwhile JSEB-Transmission function as a STU have now been transferred to Jharkhand Urja Sancharan Nigam Ltd (JUSNL).

1.1.7. Section 62 of the Electricity Act 2003 requires the STU to furnish details as may be specified by the Appropriate Commission for determination of tariff. In addition, as per the MYT Regulations issued by the Hon'ble Commission, JUSNL is required to file for all reasonable expenses it believes it would incur over the next control period and seek the approval of the Hon'ble Commission for the same. The filing is to be done based on the projections of the expected revenue and costs, which should be arrived at by a reasonable methodology adopted by the petitioner.

1.1.8. The MYT Regulations notified by the Hon’ble Commission also mandates the filing of Business Plan for the MYT Control Period.

1.1.9. The Govt. of India notified the Electricity Act, 2003 on 10th June 2003 repealing the Indian Electricity Act-1910, the Electricity (Supply) Act 1948 and the E.R.C. Act, 1998. Among the tariff related provisions, the State Electricity Regulatory Commission (SERC) has to be guided by National Electricity Policy and National Tariff Policy. The generation, transmission and distribution tariff have to be determined separately. The Jharkhand State Electricity Regulatory Commission (hereinafter referred as “Commission”) has framed Regulations specifying the terms and conditions for determination of transmission tariff.

1.1.10. While submitting this Petition, Jharkhand Urja Sancharan Nigam Limited has placed utmost efforts to adhere to the said Regulations framed by this Hon’ble Commission.

1.2. Procedural History

1.2.1. The procedural history of filing of Petitions by JUSNL (since formation) is tabulated below:

Table 1 Procedural History of JUSNL

Sl. No.	Scope of filing in Petition	Filing Date	Date of Order
1	Review of ARR for FY 2013-14 (6th January 2014 to 31st March 2014) & FY 2014-15 and determination of Aggregate Revenue Requirement (ARR) and Transmission Tariff for FY 2015-16	26.02.2015	14.12.2015
2	Business Plan for MYT Control Period FY 2016-17 to FY 2020-21 for transmission and SLDC business	17.11.2016	24.02.2018
3	ARR & Tariff determination for MYT Control period FY 2016-17 to FY 2020-21	21.03.2017	
4	True-up for FY 2013-14 (6th Jan'14 to 31st Mar'14) and FY 2014-15	11.10.2017	01.02.2019
5	True-up Petition for the FY 2015-16 and FY 2016-17 and determination of Aggregate Revenue Requirement (ARR) and Transmission Tariff for FY 2017-18 and FY 2018-19	05.10.2018	30.12.2020
6	Review of JSERC Order dated 1st February 2019, on True – up for FY 2013-2014 (6th January 2014 to 31st March 2014) and FY 2014-2015 for JUSNL	27.03.2019	03.12.2020
7	Review Petition against True up Order for FY 2015-16 and FY 2016-17	30.03.2022	10.01.2023
8	True-Up Petition for FY 2017-18	04.02.2021	12.06.2023
9	True-Up Petition for FY 2018-19	10.08.2021	23.06.2023
10	Business Plan and ARR for MYT Control Period FY 2021-22 to FY 2025-26 for transmission and business	13.10.2022	23.06.2023

1.3. Rationale for filing of Instant Petition

1.3.1. Section 62 of the Electricity Act, 2003 requires the Transmission Licensee to furnish details as may be specified by the SERC for determination of tariff. In addition, as per the regulations issued by the Hon'ble Commission, JSEB or its unbundled companies are required to file petition for all reasonable expenses which they believe they would incur over the next financial year and seek the approval of the Hon'ble Commission for the same in advance. The filing is to be done based on the projections of expected costs and revenue.

1.3.2. The current petition has been prepared in accordance with the provisions of the following Acts/ Policies/ Regulations:

a. The Electricity Act, 2003;
b. The National Electricity Policy;
c. The National Tariff Policy, and amendments issued therein;
d. JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2020 and its amendments thereof, along with the other guidelines and directives issued by the JSERC from time to time.

1.3.3. The Petitioner has made genuine efforts for compiling all relevant information relating to the Business Plan as required by the regulations issued by the Hon'ble Commission and has also made every effort to ensure that the information provided to the Hon'ble Commission is accurate and free from material errors. The Petitioner therefore prays to the Hon'ble Commission that the information provided be accepted for the current filing.

1.4. Key Objectives of the Business Plan

1.4.1. The key objectives of this business plan have been listed below:

- Providing a tool for strategic planning - The primary objective of the Business Plan is to analyse and anticipate the future requirements in advance and strategically plan for the capital investments, related means of financing and various associated costs and document them which would serve as an effective tool for monitoring and execution of future works. It is important to project the growth in transmission network infrastructure commensurate with the energy demand required for fuelling the economic growth targets of the State.

- Meeting the regulatory compliance of submission of a business plan as mandated by the JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2020.

- Aid in decision making leading to better Operational Efficiency: The Business Plan is prepared so as to be useful for the Managing Board, associated stakeholders, the Hon'ble Commission and various government bodies. The future projections in the Plan would help the transmission utility in decision making and taking proactive actions, and thus improving the overall operational efficiency of the transmission network infrastructure

1.5. Contents of the Petition

1.5.1. This Petition comprises of following sections:

i. Introduction and Background
ii. Profile of the JUSNL
iii. Capital Investment Plan

2. Overall Approach and Provision of Law

2.1. Present Approach

2.1.1. JUSNL is filing its Business Plan for the MYT Control Period FY 2021-22 to FY 2025-26 for the consideration of the Hon'ble Commission.

2.1.2. JUSNL had filed the Business Plan for the MYT Control Period FY 2021-22 to FY 2025-26 on 13.10.2022. The Hon'ble Commission had issued the Order for approval of the Business Plan on 23.06.2023 wherein the planned schemes were disallowed. Thereafter, JUSNL filed the review petition of the same along with supplementary revised Business Plan for the MYT Control Period FY 2021-22 to FY 2025-26 on 07.11.2023. The Hon'ble Commission has reserved the order against the supplementary revised Business Plan. Meanwhile, Hon'ble Commission has directed JUSNL vide. Letter No. JSERC/Case (T) No. of 2023/312 dated 17.01.2024 and Letter No. JSERC/Case (T) No. of 2023/313 dated 17.01.2024 to file Business Plan for the MYT Control Period FY 2021-22 to FY 2025-26. Hence, in compliance of the directions provided by the Hon'ble Commission, JUSNL is filing the present petition for approval of Business Plan for the MYT Control Period FY 2021-22 to FY 2025-26.

2.1.3. The Petitioner requests the Hon'ble Commission to kindly approve the Business Plan for the FY 2021-22 to FY 2025-26.

2.2. Data and information sources

2.2.1. In this Petition, appropriate pro-rata projections and escalations have been taken over the previous year. The Business Plan for the FY 2021-22 to FY 2025-26 is based on projections and escalations over the previous year, keeping in mind the historical trends and key initiatives planned, in line with the guidelines provided by the Hon'ble Commission for determining the same. Further, the capital expenditure plan has been proposed based on the new capital expenditure schemes envisaged to be implemented by the JUSNL during the Control Period FY 2021-22 to FY 2025-26.

2.3. Provision of Law

2.3.1. Provisions for Business Plan as provided in the JSERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2020 are as follows:

> *"6.5 The Transmission Licensee shall file for the Commission's approval, a Business Plan approved by an authorised 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*

Capital Investment Plan should also include corresponding capitalisation schedule and financing plan;

The Transmission Licensee shall also submit scheme-wise capital structure and cost of financing (interest on debt) and return on equity, Grant, Deposit Works along with terms of the existing loan agreements, etc., as a part of Capital Investment Plan;

(b) Operational Plan: Actual yearly Transmission Loss in the preceding Control Period along with year wise projection of Transmission Loss for the next Control Period.

(c) Human Resource Plan with manpower planning including details of the estimated year wise manpower addition and retirements for the Control Period to meet the growth in demand;

(d) A set of targets proposed for other controllable items such as transmission system availability, Transmission losses, return on equity, depreciation, working capital requirement, performance targets, Employee, R&M and A&G Expenses etc., along with detailed break up and any other information used for preparing projections of various performance parameters and other components during the Control Period. The targets shall be consistent with the Capital Investment Plan proposed by the Transmission Licensee;

(e) Proposals for Non-Tariff Income with item-wise description and details;

(f) Proposals in respect of income from Other Business; and

(g) Business Plan shall also contain the requisite information for the preceding Control Period:

Provided that requisite information for the preceding Control Period shall include year-wise audited data on Scheme-wise capital investment, capacity enhancement plan, if any, proposed efficiency improvements and its cost benefit analysis, quality improvement measures undertaken, Employee Expenses, Repair & Maintenance Expenses and A&G Expenses along with detailed break up and any other information used for preparing projections of various performance parameters and other components during the Control Period.
"

2.3.2. In line with the above provisions, JUSNL has submitted the Business Plan for the MYT Control Period FY 2021-22 to FY 2025-26.

3. Company Profile

3.1. Profile of JUSNL

3.1.1. JUSNL is engaged primarily in the business of transmission of electricity. It has been vested with the transmission assets, interest in property, rights and liabilities of the erstwhile JSEB necessary for the business of transmission in the state of Jharkhand.

3.1.2. JUSNL has been given the status of a Transmission Licensee as per Section 14 of the Electricity Act 2003, to fulfill the obligations of the Transmission Licensee as mandated under the provisions of "The Jharkhand State Electricity Reforms Revised Transfer Scheme, 2015" and the Electricity Act, 2003.

3.1.3. The Jharkhand State Electricity Reforms Revised Transfer Scheme, 2015 details out the following for the transmission business of JUSNL under Schedule- 'A' Transmission Undertaking:

Part I: Transmission Assets, General Assets, Miscellaneous
Part II: Aggregate Assets and Liabilities
Part III: Functions and Duties of JUSNL

3.1.4. The operation of JUSNL transmission network is majorly divided into 5 Zones, 8 Circles, 13 Divisions and 42 Sub-divisions. Name of Zones are: - Zone I – Ranchi, Zone II – Dumka, Zone III – Jamshedpur, Zone IV – Daltonganj, Zone V – Hazaribagh.

3.2. Current Infrastructure Details

3.2.1. JUSNL handles the load from various Generating Stations including:

- State Generating Stations;
- Allocation from Central Generating Stations;
- Independent Power Producers (IPPs);
- Captive Power Plant;
- Renewable Power Integration including solar;

3.2.2. At the time of creation of JSEB (erstwhile) in 2001, the total transformation capacity was 1435.45 MVA of 220 kV and 132 kV Class in 18 GSS supported by 1502.7 Km. (2122 cKm) transmission line. Over the years new GSS has been constructed and augmentation of existing GSS has been done. New Transmission lines have also been constructed. In addition, DVC has its own transmission network in Jharkhand for transmission of power to its GSS from where it supplies power to JBVNL as well as other HT consumers.

3.2.3. The total Grid sub-station capacity of JUSNL is 9885 MVA of 400 kV, 220 kV and 132 kV Class in 55 GSS (Up to 31st March, 2022) & transmission line length is 6421.17 CKM. The details of infrastructure of the Petitioner added during recent years is provided in the table below:

Table 2 Infrastructure Details of JUSNL

Description	As on Mar' 15	As on Mar' 16	As on Mar' 17	As on Mar' 18	As on Mar' 19	As on Mar'20	As on Mar'21	As on Mar'22	As on Mar'23
Grid Substations (No.)									
400/220 kV	-	-	-	-	-	-	-	1	1
220/132 kV or 220/132/33 kV	4	6	6	6	6	8	11	13	13
132/33 kV	26	29	30	33	34	35	39	40	41
Total No of GSS (No.)	**30**	**35**	**36**	**39**	**40**	**43**	**50**	**54**	**55**
Transformation Capacity (MVA)									
400/220 kV	-	-	-	-	-	-	-	630	630
220/132 kV	1400	2000	2000	2000	2000	3120	4120	4920	4920
132/33 kV	2290	2745	3295	3555	3655	3785	4185	4335	4435
Total Transformation Capacity (MVA)	**3690**	**4745**	**5295**	**5555**	**5655**	**6905**	**8305**	**9885**	**9985**
Transmission Lines (Ckm.)									
400 kV	180	180	180	180	180	180	180	278	278
220 kV	843	993	989	1069	1081	1395	2022.39	2482.51	2482.51
132 kV	1,792	1900	2019	2019	2742	3156	3660.66	3660.66	3660.66
Total Transmission Lines (Ckm.)	**2815**	**3073**	**3188**	**3268**	**4003**	**4731**	**5860.05**	**6421.17**	**6421.17**

4. Capital Investment Plan

4.1. Proposed Capital Expenditure for FY 2021-22 to FY 2025-26

4.1.1. 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. The detailed breakup of proposed capital expenditure during the second control period FY 2021-22 to 2025-26 has been indicated below:

Table 3 Proposed Capital Expenditure for the MYT Control Period

All figures are in Rs. Crore

Business Plan for Planned Projects								
Sl No.	Project	Estimated Amount (in Cr.)	Capital Expenditure Schedule					
			FY 22	FY 23	FY 24	FY 25	FY 26	
1	220/132/33 kV Grid sub-station, Koderma	43.99			4.40	17.60	22.00	
2	220/132/33 kV Grid sub-station, Patratu	90.44			9.04	36.18	45.22	
3	132/33 KV Grid Sub-Station, Kundhit	44.59			31.21	13.38		
4	132 KV Jamtara - Madhupur Transmission line of propose LILO at Kundhit grid	39.53			27.67	11.86		
5	220/132/33 kV Grid Sub-Station, Hazaribagh	127.53			12.75	51.01	63.77	
6	220 KV D/C Tenughat - Hazaribagh Transmission line	86.96			8.70	34.78	43.48	
7	220/132/33 KV Grid Sub Station, Baliyapur	131.82			13.18	52.73	65.91	
8	LILO of 220 KV D/C Dumka - Govindpur at Baliyapur GSS	42.26			4.23	16.90	21.13	

Business Plan for Planned Projects								
Sl No.	Project	Estimated Amount (in Cr.)	Capital Expenditure Schedule					
			FY 22	FY 23	FY 24	FY 25	FY 26	
9	220 kV Dhanbad (NKTL) – Baliyapur Transmission line	29.48			2.95	11.79	14.74	
10	220/132/33 kV, 2x200+2x80 MVA GSS, Gomia Grid Sub-station	131.82			13.18	52.73	65.91	
11	220 kV D/C TTPS- Gomia Transmission line	29.48			2.95	11.79	14.74	
12	220/132/33 kV Bero Grid Sub-station & associated transmisison line	128.00				25.60	38.40	Spill Over to next contrl perio d
13	220/132/33 Grid Sub Station, Sarwal & associated trasmission line	110.00				22.00	33.00	
14	220/132/33 Grid Sub Station, Palajori & associated trasmission line	103.00				20.60	30.90	

Business Plan for Planned Projects								
Sl No.	Project	Estimated Amount (in Cr.)	Capital Expenditure Schedule					
			FY 22	FY 23	FY 24	FY 25	FY 26	
15	Design, Engineering, Supply, Erection, Testing and Commissioning of 2x200 MVA, 220/132 kV Grid Sub Station (AIS) at Jadugoda (New) (220 KV - TRF Bay-02 Nos. Line Bay-04 nos. B/C-01 nos. Bus Transfer Bay-01 Nos, 132 KV- TRF Bay-02 Nos, Line Bay-04 Nos, Transfer Bus coupler Bay-01 Nos) & 02 Nos of 132 Bay at 132/33 kV Grid Sub Station Dhalbhumgarh (Existing) with dismantling work for 02 Nos 132 KV Bay and 33 KV Bay Sub Station galvanized Steel structure of 132 KV New Jadugoda-Dhalbhumgarh Transmission line at 132/33 kV Grid Sub Station Dhalbhumgarh (Existing).	114.41				45.76	68.65	

Business Plan for Planned Projects								
Sl No.	Project	Estimated Amount (in Cr.)	Capital Expenditure Schedule					
			FY 22	FY 23	FY 24	FY 25	FY 26	
16	Design, Engineering, Supply, Erection, Testing and Commissioning of 220 kV D/C Transmission Line Chandil (New) – Jadugoda (New) (51.3KM), 220 kV D/C Transmission Line Chaibasa (PGCIL) – Jadugoda (New)(47.7 KM).	126.95				50.78	76.17	
17	Design, Engineering, Supply, Erection, Testing and Commissioning of 132 kV D/C Transmission Line Jadugoda (New) – Dhalbhumgarh (63.4KM).	63.93				25.57	38.36	
18	Supply, Installation, Testing & Commissioning of 02 nos. 132 kV bays at 220/132 kV Jasidih GSS, 02 nos. of 132 kV bay at 132/33 kV Chitra GSS, 01 nos 132 kV bay at 132/33 kV Simdega GSS, 02 nos. 132 kV bays at 132/33 kV Latehar GSS.	15.04			7.52	7.52		

Business Plan for Planned Projects								
Sl No.	Project	Estimated Amount (in Cr.)	Capital Expenditure Schedule					
			FY 22	FY 23	FY 24	FY 25	FY 26	
19	132/33 KV GSS, 100 MVA, AIIMS Devipur, Doghar and LILO of 132 KV DC Madhupur Jasidih TL at 132/33 KV Devipur	64.79				38.87	25.92	
	Total	1524.01	0.000	0.000	137.78	547.46	668.28	

4.1.2. It can be seen from the table given above that the JUSNL plans to invest Rs. 1524.01 Crore in various capital expenditure schemes during the 3rd MYT Control Period.

4.2. Proposed Capitalization

4.2.1. The capitalization proposed for the various capital expenditure schemes during the MYT Control Period is provided in the table below:

Table 4 Proposed Capitalization Schedule for the MYT Control Period

All figures are in Rs. Crore

Business Plan for Planned Projects								
Sl No.	Project	Estimated Amount (in Cr.)	(Projected Capitalization Schedule)					
			FY 22	FY 23	FY 24	FY 25	FY 26	
1	220/132/33 kV Grid sub-station, Koderma	43.99					43.99	
2	220/132/33 kV Grid sub-station, Patratu	90.44					90.44	
3	132/33 KV Grid Sub-Station, Kundhit	44.59				44.59		
4	132 KV Jamtara - Madhupur Transmission line of propose LILO at Kundhit grid	39.53				39.53		

Business Plan for Planned Projects								
Sl No.	Project	Estimated Amount (in Cr.)	(Projected Capitalization Schedule)					
			FY 22	FY 23	FY 24	FY 25	FY 26	
5	220/132/33 kV Grid Sub-Station, Hazaribagh	127.53					127.53	
6	220 KV D/C Tenughat - Hazaribagh Transmission line	86.96					86.96	
7	220/132/33 KV Grid Sub Station, Baliyapur	131.82					131.82	
8	LILO of 220 KV D/C Dumka - Govindpur at Baliyapur GSS	42.26					42.26	
9	220 kV Dhanbad (NKTL) – Baliyapur Transmission line	29.48					29.48	
10	220/132/33 kV, 2x200+2x80 MVA GSS, Gomia Grid Sub-station	131.82					131.82	
11	220 kV D/C TTPS- Gomia Transmission line	29.48					29.48	
12	220/132/33 kV Bero Grid Sub-station & associated transmission line	128.00						Spill Over to next control period
13	220/132/33 Grid Sub Station, Sarwal & associated transmission line	110.00						
14	220/132/33 Grid Sub Station, Palajori & associated transmission line	103.00						

Business Plan for Planned Projects								
Sl No.	Project	Estimated Amount (in Cr.)	(Projected Capitalization Schedule)					
			FY 22	FY 23	FY 24	FY 25	FY 26	
15	Design, Engineering, Supply, Erection, Testing and Commissioning of 2x200 MVA, 220/132 kV Grid Sub Station (AIS) at Jadugoda (New) (220 KV - TRF Bay-02 Nos. Line Bay-04 nos. B/C-01 nos. Bus Transfer Bay-01 Nos, 132 KV- TRF Bay-02 Nos, Line Bay-04 Nos, Transfer Bus coupler Bay-01 Nos) & 02 Nos of 132 Bay at 132/33 kV Grid Sub Station Dhalbhumgarh (Existing) with dismantling work for 02 Nos 132 KV Bay and 33 KV Bay Sub Station galvanized Steel structure of 132 KV New Jadugoda-Dhalbhumgarh Transmission line at 132/33 kV Grid Sub Station Dhalbhumgarh (Existing).	114.41					114.41	
16	Design, Engineering, Supply, Erection, Testing and Commissioning of 220 kV D/C	126.95					126.95	

Business Plan for Planned Projects								
Sl No.	Project	Estimated Amount (in Cr.)	(Projected Capitalization Schedule)					
			FY 22	FY 23	FY 24	FY 25	FY 26	
	Transmission Line Chandil (New) – Jadugoda (New) (51.3KM), 220 kV D/C Transmission Line Chaibasa (PGCIL) – Jadugoda (New)(47.7 KM).							
17	Design, Engineering, Supply, Erection, Testing and Commissioning of 132 kV D/C Transmission Line Jadugoda (New) – Dhalbhumgarh (63.4KM).	63.93					63.93	
18	Supply, Installation, Testing & Commissioning of 02 nos. 132 kV bays at 220/132 kV Jasidih GSS, 02 nos. of 132 kV bay at 132/33 kV Chitra GSS, 01 nos 132 kV bay at 132/33 kV Simdega GSS, 02 nos. 132 kV bays at 132/33 kV Latehar GSS.	15.04				15.04		
19	132/33 KV GSS, 100 MVA, AIIMS Devipur, Doghar and LILO of 132 KV DC Madhupur Jasidih TL at 132/33 KV	64.79					64.79	

Business Plan for Planned Projects								
Sl No.	Project	Estimated Amount (in Cr.)	(Projected Capitalization Schedule)					
			FY 22	FY 23	FY 24	FY 25	FY 26	
	Devipur							
	Total	1524.01	0.000	0.000	0.000	99.15	1083.86	

4.2.2. The following schemes shall be taken up for augmentation during the MYT Control Period:

Table 5 Proposed Augmentation Schedule for the MYT Control Period

All figures are in Rs. Crore

Sl No.	Description	Amount
1	Replacement of 1x20 MVA by 1x50 MVA, 132/33 kV Transformer at GSS Gumla.	6.63
2	Replacement of 2x50 MVA by 2x80 MVA, 132/33 kV Transformer at GSS Govindpur.	18.55
3	Addition of 1x50 MVA, 132/33 kV Power transformer at GSS Sariya	5.16
4	Installation of 1x50 MVA 132/33 kV Power Transformer at GSS Deoghar along with repairing of existing transformer.	6.64
5	Replacement of 1x20 MVA by 1x50 MVA, 132/33 kV Transformer at GSS Jadugoda.	5.13
6	Installation of 1x50 MVA 132/33 kV Power Transformer at GSS Adityapur (Ramchandrapur).	5.16
7	Replacement of 220/132 kV 1x150 MVA Auto Transformer at GSS Adityapur (Ramchandrapur).	10.51
8	Augmentation of 132/33kV GSS Lohardaga from 3 nos. x 50 MVA to 2 nos. x 80 MVA + 1no. x 50 MVA along with 4 nos. additional 33 kV Feeder bays etc.	23.57
	Total	81.35

4.2.3. Out of RS. 81.35 Crore, capital expenditure of Rs. 16.27 Crores shall be incurred during FY 2023-24 and the remaining amount shall be incurred during FY 2024-25. Further, all the schemes considered under augmentation shall be capitalized during the FY 2024-25.

4.2.4. The JUSNL will capitalize schemes valuing Rs. 1264.36 Crores during the 3rd MYT Control Period. The total capitalization is summarized as below:

Table 6 Proposed Capitalization Schedule for the MYT Control Period including Augmentation Schemes

All figures are in Rs. Crore

S. No.	Particulars	Scheme Value	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
1	Planned Schemes	1524.01	0.00	0.00	0.00	99.15	1083.86
2	Augmentation	81.35	0.00	0.00	0.00	81.35	0.00
	Total	**1605.36**	**0.00**	**0.00**	**0.00**	**180.50**	**1083.86**

4.3. Rational for Capital Expenditure

4.3.1. The capital expenditure is primarily for establishment of new substations along with associated transmission network to take care of the existing and future load demand. In addition to above, the Capital Expenditure is required for following purposes:

- To reduce load on existing substation and transmission lines.
- To meet demand & load growth.
- To reduce the loading on connecting 11 kV feeders and to maintain % voltage regulation and peak load with permissible limit.
- Due to erection of new sub stations, 11 KV feeders gets bifurcated hence the length of the 11KV line and peak load of 11KV feeder reduces considerably, which results in reduction of T&D losses.
- Some of the substation locations, where augmentation of sub stations / transmission line is not possible due to space constrain in switch yard/ control room to meet the existing and additional load demand, infrastructure is required to be developed.
- 33 KV System is normally developed based on the load requirement of Discoms. To support it, strengthening of 220 kV / 400 kV substations along with associated transmission network become essential.
- One single 33 kV feeder in GSS should not feed power to more than two PSS. This leads to power failure in major areas in case of unavailability of the 33 kV feeder. Therefore, new substations are required to be commissioned to minimize the dependency on a single feeder to ensure reliable power.
- Strengthen the transmission network for system improvement like voltage profile, catering more power and additional reactive compensation.

4.4. Justification for Implementation of the Capital Expenditure Schemes under Business Plan

- **132/33 kV GSS Khundit and associated transmission line:**

Kundhit 132/33kV substation is proposed to be constructed along with LILO of Jamtara-Madhupur D/C line. The time frame is taken to be F.Y 2024-25, when

Narayanpur 132/33 kV substation is also proposed to have already been commissioned with LILO of the same Jamtara-Madhupur D/C line. It is seen that Jamtara 132/33kV GSS is feeding the distribution PSS via long distance 33kV lines, towards the Kundhit area and along the Jharkhand-West Bengal border which results in voltage drop and loss at the 33kV & downstream. **Hence with the proposed network condition it is seen that the voltage profile at 33kV bus and downstream improves due reduction in 33kV line length to the distribution PSS in the region which reduces loss to 0.6-0.7% approximately in the area with provision to meet the future local load growth along the region.**

- **220/132 kV Hazaribagh & associated transmission line:**

Jharkhand Urja Sancharan Nigam Ltd has to provide quality electric supply in Hazaribagh district. At present, there is no transmission network of JUSNL in Hazaribagh. Hazaribagh gets power from very old Grid Sub-station of DVC with daily load shedding of indefinite hours. DVC has not modernized or constructed new grid to reliable & quality supply power to Domestic & Commercial Consumers. In past five years, Domestic & Commercial consumers have been doubled and still DVC is not supplying power to Domestic consumers of the Hazaribagh area.

To overcome this problem, JUSNL has decided to construct a new 220/132/33 kV Grid Sub-station at Hazaribagh having capacity of 2x200+2x50 MVA. The proposed grid will be charged to 220 kV D/C Tenughat- Hazaribagh Transmission line.

After construction of above grid, district headquarter and adjacent area of Hazaribagh i.e. Hazaribagh, Pathargama, Barkagaon, Bishnugarh, Ichak, Tatijhariya, Chouparan, Barhi, Padma, Sadar etc. and other neighboring areas of Hazaribagh will also get quality and stable power. This will facilitate quality & stable power with improved voltage to the above mentioned PSS due to shorter length of 33 kV lines; this will reduce transmission losses also.

- **220/132 kV Baliyapur & associated transmission line:**

Jharkhand Urja Sancharan Nigam Ltd has to provide quality electric supply in Dhanbad district. At present, there is insufficient transmission network of JUSNL in Dhanbad district. Dhanbad gets power from very old Grid Sub-station of DVC with daily load shedding of indefinite hours. DVC has not modernized or constructed new grid to supply reliable & quality power to Domestic & Commercial Consumers. In past five years, Domestic & Commercial consumers have been doubled and still DVC is not supplying power to Domestic consumers of the Dhanbad area.

To overcome this problem, JUSNL has decided to construct a new 220/132/33 kV Grid Sub-station at Baliyapur having capacity of 2x200+2x80 MVA as well as 220

kV D/C 3 Ph Govindpur- Baliyapur and 132 kV D/C 3 Ph Mahuda-Baliyapur transmission line.

Construction of GSS is essential taking consideration of inadequate capacity of transmission network in adjacent area of Dhanbad district due to rapid growth in population, urbanization & industries as well as joint initiative of Govt. of India and Govt. of Jharkhand to meet 24x7 Power For All. Construction of Dhanbad Grid and associated transmission line is also essential for supply in adjacent area of Dhanbad i.e. Dhanbad, Baliyapur, Nirsa, Govindpur, Pathardih Putki, Tundi, Purbi Tundi, etc. This will facilitate quality & stable power with improved voltage to the above mentioned PSS due to shorter length of 33 kV lines. This will reduce transmission losses also.

- **220/132 kV Gomia & associated transmission line:**

Jharkhand Urja Sancharan Nigam Ltd has to provide quality electric supply in Bokaro district. At present, there is no transmission network of JUSNL in Bokaro district. Bokaro gets power from very old Grid Sub-station of DVC with daily load shedding of indefinite hours. DVC has not modernized or constructed new grid to supply reliable & quality power to Domestic & Commercial Consumers. In past five years, Domestic & Commercial consumers have been doubled and still DVC is not supplying power to Domestic consumers of the Bokaro area.

To overcome this problem, JUSNL has decided to construct a new 220/132/33 kV Grid Sub-station at Gomia having capacity of 2x200+2x80 MVA. The proposed grid will be charged by 220 kV D/C 3 Ph TTPS (Tenughat Thermal Power Station)-Gomia Transmission line.

After construction of above grid, adjacent area of Bokaro will get quality JUSNL power. Adjacent area of Bokaro i.e. 1. Dugda, 2. Chas, 3. Chandrapura 4. Bermo, 5. Nawadih, 6. Jaridih, 7. Kasmar, etc. and other neighboring areas of Dugda, etc. will also get quality and stable power. This will facilitate quality & stable power with improved voltage to the above mentioned PSS due to shorter length of 33 kV lines. This will reduce transmission losses also.

Construction of GSS is essential taking consideration of inadequate capacity of transmission network in adjacent area of Purbi Singhbhum district due to rapid growth in population, urbanization & industries as well as joint initiative of Govt. of India and Govt. of Jharkhand to meet 24x7 Power For All target by 2018-19. Construction of Jadugoda Grid and associated transmission line is also essential for supply in adjacent area of Purbi Singhbhum i.e. Chakuliya, Dhalbhumgarh, Bahragora, Gurabanda, Dumaria, Musabani, Ghatshila etc.

This will facilitate quality & stable power with improved voltage to the above-mentioned PSS due to shorter length of 33 kV lines; this will reduce transmission losses also. The following components will be built part the proposed strengthening project.

  - New 220/132kV AIS Substation at Jadugoda

- 132 kV Bay Extension at Dalbhoomgarh
- 100 Km of 220kV D/C 3 Ph. Transmission Line starting PGCIL Chaibasa and passing through New Substations Jadugoda and terminates at New 400/220kV AIS Substation Chandil.
- 64 Km of 132 kV D/C 3 Ph. Transmission Line Jadugoda - Dalbhumgarh (New) (64 KM)

- **Necessity for construction of 07 Nos of bay extension at existing Grid Substation**.

1. 01 Nos. of 132 KV Line bay at 132/33 KV Simdega GSS –

   132/33 KV GSS at Kolebira GSS is being constructed under World bank Funded project and for charging of this grid 132 KV D/C Kolebira Simdega Transmission line is also being constructed under World bank Funded project. For termination of this line at Existing Simdega Grid, one bay is required.

2. 02 Nos. of 132 KV Line bay at 132/33 KV Chitra GSS –

   132/33 KV GSS at Sarath GIS is being constructed under World bank Funded project and for charging of this grid 132 KV D/C Sarath Chitra Transmission line is also being constructed under World bank Funded project. For termination of this line at Existing Chitra Grid, two (02) bays are required.

3. 02 Nos. of 132 KV Line bay at 220/132 KV Jasidih GSS –

   132/33 KV GSS at Hansdiha GSS is being constructed under World bank Funded project and for charging of this grid 132 KV D/C Hansdiha-Jasidih Transmission line is also being constructed under World bank Funded project. For termination of this line at Existing Jasidih Grid, two (02) bays are required.

4. 02 Nos. of 132 KV Line bay at 132/33 KV Latehar GSS –

   132/33 KV GSS at Mahuadanr GSS is being constructed under World bank Funded project and for charging of this grid 132 KV D/C Latehar Mahuadanr Transmission line is also being constructed under World bank Funded project. For termination of this line at Existing Latehar Grid, two (02) bays are required.

- **Augmentation technical report**

  Presently there are 53 nos. of Grid Sub-Station with 9885 MVA transformation capacity of 400 kV, 220 kV & 132 kV voltage class supported by 3775 Km. and work for 43 nos. GSS with 5630 MVA transformation capacity along with 2509 Km. transmission line is under construction.

  To ensure 24x7 continuous power availability, reliable and quality power to the people of Jharkhand, augmentation & upgradation of existing old & over loaded transmission system also become necessary simultaneously with aforesaid ongoing and planned project.

Keeping in view of strengthening of existing old & overload transmission network as well as fulfilment of N-1 criteria as per CEA guidelines, the following augmentation schemes are taken into consideration for F.Y. 2022-23 & 2023-24 : -

1) **Gumla and adjoining area** : Presently Gumla and adjoining area are getting power from 132/33 kV GSS, Gumla through different 33/11 kV PSS and its transformation capacity is 40 MVA (2x20 MVA). But health of existing 01 no. 20 MVA power transformer are not good due to said transformers are very old. The load demand in such areas are gradually increasing. As such 01 no. 50 MVA power transformer is required to meet the load demand.

2) **Dhanbad & adjoining area** :- Presently Dhanbad and adjoining area are getting power from recently commissioned (in year 2021) 220/132/33 kV GSS, Govindpur through different 33/11 kV PSS and its transformation capacity is 100 MVA. The load demand in such areas are gradually increasing. To meet the load demand, it has been proposed for replacing 02 nos. existing 50 MVA power transformer with 02 nos. 80 MVA power transformer.

3) **Saria & adjoining area** :- 132/33 kV Grid Sub-Station, Saria is recently commissioned with 1x50 MVA power transformer instead of 2x50 MVA power transformer due to 01 no. 50 MVA power transformer was diverted to 132/33 kV GSS, Chitra. In compliance of CEA guidelines to fulfillment of N-1 criteria as well as supply of uninterrupted power, 01 no. transformer required to be installed.

4) **AIIMS Deoghar**:- AIIMS hospital is newly constructed near Devipur at Deoghar district. This hospital is getting power from 132/33 kV GSS, Deoghar and its transformation capacity was 3x50 MVA, but 01 no. 50 MVA transformer has recently in breakdown condition. This transformer will be sent to manufacturer for its repairing.

   To achieve reliable and uninterrupted power supply to AIIMS Deoghar, dedicated transformer is required. As such 01 no. 50 MVA power transformer is required to be installed at GSS, Deoghar.

5) **Jadugora and adjoining area** : Presently Jadugora and adjoining area are getting power from 132/33 kV GSS, Jadugora through different 33/11 kV PSS and its transformation capacity is 90 MVA (1x50+2x20 MVA). But health of existing 02 nos. 20 MVA power transformers are not good due to said transformers are very old. The load demand in such areas is gradually increasing since 1988. As such 01 no. 50 MVA power transformer is required to meet the load demand.

6) **Jamshedpur & Adityapur and adjoining area** : Jamshedpur & Adityapur and adjoining area are getting power from 220/132 kV GSS and 132/33 kV GSS at

Adityapur (Ramchandrapur) through different 33/11 kV PSS and its total transformation capacity is 500 MVA (3x150 MVA & 1x50 MVA). The load demand in such areas are gradually increasing. But health of existing 01 nos. 150 MVA power transformer is not in good condition due to said transformers being very old. ERPC protection audit team also suggested for its replacement. As such replacement of this transformer becomes very necessary.

Further, 132/33 kV GSS, Adityapur was commissioned with 2x50 MVA power transformer. Due to urgency, 01 no. 50 MVA power transformer was diverted to 132/33 kV GSS, Golmuri on dated 08.07.2022. In compliance of CEA guidelines to fulfillment of N-1 criteria as well as supply of uninterrupted power, 01 no. transformer is required to be installed.

4.5. Transmission Network necessary to meet the Load Growth

4.5.1. That the peak load of Jharkhand was approx. 2000MW in 2017 (1400MW JBVNL + 600MW DVC). As per earlier projection load growth of Jharkhand was 5161MW (4561MW JBVNL + 600MW DVC) till 2021-22 including DVC command Area.

4.5.2. That the present peak load of Jharkhand has gone up to 2800MW including 600MW of DVC. The present load is in the situation of insufficient Transmission network. A lot of Transmission Projects are under construction, which are delayed due to delay in forest clearances and ROW issues. After completion of these projects, the peak load of Jharkhand will grow substantially up to 3500MW. Further it is expected to grow the peak load of Jharkhand substantially up to 4500-5000MW in next five years.

4.5.3. That Jharkhand is rich state in terms of Forest and other natural resources. In the Jharkhand State, it has been observed that no transmission line is without Forest and forest clearance is very tedious job. It takes substantial time in forest clearance and resolving other ROW issues. From the past experience, it has been observed that forest clearance of Transmission lines takes approx. 4-5 years or even more in some cases. For example, PGCIL is constructing 400KV D/C Latehar- Patratu Transmission line of JUSNL since 2012 and forest clearance of this transmission line has not been given by forest Department. Forest clearance of 132KV D/C Simdega – Gumla Transmission line and 220KV D/C Chatra – Latehar Transmission line took more than 6Years.

4.5.4. In order to meet the above mentioned projected load growth, it is essential to start the construction of required Transmission Projects immediately so that JUSNL may able to cater the load growth of JBVNL in time

4.6. Business Plan in conformity with the CEA

4.6.1. The Business Plan submitted herewith was part of the Perspective Plan submitted by JUSNL with the CEA. The same has been approved by the CEA. The following has been stated in the Minutes of 1st meeting of ERSTC held on 16.07.2018:
"*8.12 After deliberations members of the view that Jharkhand may not be able to attain the demand projected by them for 2021-22 time-frame, considering present trend in demand and also projections in 19th EPS. However, the system proposed by JUSNL at 8.2 was agreed with suggestions that the implementation of system may be done in phased manner matching with the growth of the electricity demand in the state.*"

4.7. Reduction of Technical Losses

4.7.1. The Ministry of Power from time to time has launched several Reform and Modernization (restructuring/modification) schemes to augment and modernize 33/11 kV sub stations. Normally the length of 33 kV line should be less than 30 kms as per the guidelines of R-APDRP Part B scheme launched in 2005.

4.7.2. Also, as per the JSERC (Distribution Licensees Standards of Performance Regulations, 2015) issued by the Hon'ble JSERC, any fault on the 33 kV line has to be rectified within 4 to 6 hrs.

4.7.3. Therefore, keeping in view the above, schemes have been implemented regarding installation and commissioning of the 220/132/33 kV GSS with a view that JUSNL GSS must be in proximity to 33/11 kV substations, so that the length of 33 kV feeder from 132 kV GSS is as per the guidelines of R-APDRP and is around the prescribed line length of 30 kms.

4.7.4. It is further submitted that 625 no. of 33/11 kV sub-stations have been constructed since 2015 in Jharkhand. In order to maintain healthy power system, on a 33 kV feeder, maximum 2 no. of substations are constructed to provide optimum power supply to the consumers from 132 kv Feeder. However, in Jharkhand the average no. of substations constructed on a single 132 kv feeder with 5 no's of 33 kV feeders is way above the standard practice. In case the 132 kv feeder trips, power supply to all the substations is affected resulting in inconvenience to the consumers. Hence, JUSNL is constructing more no. of 132/33 kV grid substations so that so that the network utilization is optimized.

4.8. Board Approval Accorded

4.8.1. The approval for 132/33 kv GSS, Kundhit and 132 kv Jamtara - Madhupur Transmission line of propose LILO at Kundhit grid was accorded in the 46th meeting of the Board of Directors of JUSNL held on 04.05.2022.

4.8.2. The approval for 220/132/33 kv GSS, Hazaribagh, 220/132/33 kv GSS, Gomia and 220/132/33 kv GSS Baliyapur was accorded in the 51st meeting of the Board of Directors of JUSNL held on 14.02.2023.

4.8.3. The approval for 220/132 kv GSS, Jadugoda, 02 Nos of 132 kv Bay at 132/33 kV Grid Sub Station Dhalbhumgarh, 220 kV D/C Transmission Line Chandil (New) – Jadugoda (New), 220 kV D/C Transmission Line Chaibasa (PGCIL) –Jadugoda (New), 132 kV D/C Transmission Line Jadugoda (New) – Dhalbhumgarh was accorded in the 53rd meeting of the Board of Directors of JUSNL held on 26.06.2023.

4.8.4. The approval for 220/132/33 kV GSS, Patratu and 220/132/33 kV Grid sub-station, Koderma was accorded in the 54th meeting of the Board of Directors of JUSNL held on 03.08.2023.

Table 7 Summary of Approval of BOD and Sanction Letters

S. No.	Name of Scheme	Approval of BOD	Sanction letter of State Government
1	• 220/132/33 kV GSS, Patratu • 220/132/33 kV Grid sub-station, Koderma	54th Meeting of BOD held on 03.08.2023	Letter no. 79, dated 19.07.2023 of Energy Department, GoJ
2	• 132/33 kv GSS, Kundhit • LILO of 132 kv Jamtara - Madhupur Transmission line	46th Meeting of BOD held on 04.05.2022	Resolution no. 1622, dated 05.08.2022 of Energy Department, GoJ Letter no. 199 dated 03.03.2023 of Energy Department, GoJ
3	• 220/132/33 kv GSS, Hazaribagh, • 220/132/33 kv GSS, Gomia • 220/132/33 kv GSS Baliyapur	51st Meeting of BOD held on 14.02.2023	Letter no. 81 dated 19.07.2023 of Energy Department, GoJ
4	• 220/132 kv GSS, Jadugoda, • 02 Nos of 132 kv Bay at 132/33 kV Grid Sub Station Dhalbhumgarh, • 220 kV D/C Transmission Line Chandil (New) – Jadugoda (New), • 220 kV D/C Transmission Line Chaibasa (PGCIL) – Jadugoda (New), • 132 kV D/C Transmission	53rd Meeting of BOD held on 26.06.2023	-

S. No.	Name of Scheme	Approval of BOD	Sanction letter of State Government
	Line Jadugoda (New) – Dhalbhumgarh		
5	• Augmentation Schemes	50th Meeting of BOD held on 13.12.2022	Letter No. 78 dated 19.07.2023 of GoJ

4.8.5. For the remaining schemes proposed in the Business Plan, the approval of the Board of Directors of JUSNL shall be sought as and when the schemes are planned to be implemented.

4.8.6. That the petitioner is submitting following documents in support of above transmission schemes:-

- Board of Directors (BoD) approval (Annexure-A)
- Government of Jharkhand Approval (Annexure-B)
- CEA approval (Annexure-C)
- Detailed Project Report (DPR) (Annexure-D)

4.9. Financing Plan

4.9.1. The capital expenditure for the MYT Control period is proposed to be funded through debt. The capital expenditure schemes shall be funded through State Government Funds. The State Government Funds are being provided to the JUSNL in the form of Loan at an interest rate of 13%.